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JERSEY CENTRAL POWER & LIGHT COMPANY  
OYSTER CREEK NUCLEAR GENERATING STATION  
EFFLUENT RELEASE REPORT  
1981-1

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## **I. INTRODUCTION**

## I. INTRODUCTION

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

Section I provides a brief summary of the plant status from December 1, 1980 through June 30, 1981. Included during this seven month summary are dates of a reactor scram, controlled reactor shutdowns, reactor startups, and selected dates showing reactor power levels.

Section II follows the format of regulatory guide 1.21 and provides a summary of gaseous effluents, liquid effluents, solid waste offsite shipments, and meteorological data for the first and second quarter of 1981. The first quarter begins on January 1, 1981 and extends through March 31, 1981. The second quarter starts on April 1, 1981 and ends on June 30, 1981.

Section III provides a summary of the Oyster Creek Radiological Environmental Monitoring Program and its associated sampling data for the period of December 1, 1981 through May 31, 1981 as per the stipulations outlined in Section 6.9.3.3 of the Technical Specifications - Appendix A. This section displays the data in tabular form and includes a correlation of plant effluent releases to the environmental radiological data.

### Plant Operations Summary

|                   |   |
|-------------------|---|
| December 1, 1980  | Operating at approximately 64% rated power  |
| December 15, 1980 | Operating at approximately 95% rated power  |
| January 1, 1981   | Operating at approximately 90% rated power  |
| January 15, 1981  | Operating at approximately 91% rated power  |
| February 1, 1981  | Operating at approximately 99% rated power  |
| February 15, 1981 | Operating at approximately 96% rated power  |
| March 1, 1981     | Operating at approximately 90% rated power  |
| March 13, 1981    | Reactor shutdown                            |
| March 15, 1981    | Reactor shutdown - continued                |
| March 16, 1981    | Reactor startup                             |
| March 27, 1981    | Reactor shutdown                            |
| March 31, 1981    | Reactor startup                             |
| April 1, 1981     | Operating at approximately 36% rated power  |
| April 15, 1981    | Operating at approximately 74% rated power  |
| April 18, 1981    | Reactor shutdown                            |
| May 1, 1981       | Reactor shutdown - continued                |
| May 15, 1981      | Reactor shutdown - continued                |
| May 29, 1981      | Reactor startup                             |
| June 1, 1981      | Operating at approximately 65% rated power  |
| June 15, 1981     | Operating at approximately 100% rated power |
| June 26, 1981     | Reactor scram                               |
| June 30, 1981     | Reactor startup                             |

**II. EFFLUENT AND WASTE DISPOSAL SUMMARY**

## EFFLUENT AND WASTE DISPOSAL SUMMARY

### A. Gaseous Effluents

During the reporting period, January 1, 1981 through June 30, 1981 a total of  $2.74 \times 10^4$  curies of fission and activation gases,  $4.46 \times 10^{-1}$  curies of non-particulate halogens with half-lives greater than eight days,  $3.59 \times 10^{-1}$  curies of particulate activity with half-lives greater than eight days, and  $6.22 \times 10^{-1}$  curies of tritium were released. Totals include effluents released from both an elevated stack and a ground-level radwaste vent. The maximum hourly release rate of gross activity from the stack was  $1.11 \times 10^4$  microcuries per second which occurred at approximately 0900 on March 20, 1981.

The airborne releases are summarized in Table 1.

### B. Liquid Effluents

A total of  $1.62 \times 10^7$  liters of water was processed through the radwaste system. Of this,  $6.27 \times 10^6$  liters containing  $2.04 \times 10^{-1}$  curies of activity were released to the environment. The maximum concentration of gross radio-activity (beta-gamma) released to the unrestricted area (average over the period of release) was  $7.21 \times 10^{-8}$  microcuries per milliliter on January 28, 1981.

The liquid release data are summarized in Table 5.

### C. Solid

During the reporting period, a total volume of  $9.35 \times 10^2$  cubic meters of solid waste containing  $2.57 \times 10^{-2}$  curies of activity was shipped off site in 86 shipments. In addition, one shipment of irradiated material containing  $3.95 \times 10^4$  curies of activity was made.

The solid waste shipment data are summarized in Table 7.

### D. Meteorological Data

During the reporting period, onsite meteorological conditions were monitored and recorded. Joint frequency distribution of wind speed and direction per atmospheric stability class per quarter is summarized. Included is 116 meter and 10 meter data.

The meteorological data are summarized in Table 8.

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

4 uCi/sec

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

4 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 Gases:

1. First Quarter - 3.39 E-3 uCi/cc
2. Second Quarter - 3.44 E-3 uCi/cc

- b. Iodines:

5.20 E-8 uCi/cc

- c. Particulates:

5.20 E-8 uCi/cc

- 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 - uCi/ml

|        |       |         |       |
|--------|-------|---------|-------|
| H-3    | 3 E-3 | Xe-133  | 3 E-6 |
| Cr-51  | 2 E-3 | Xe-133m | 3 E-6 |
| Mn-54  | 1 E-4 | Cs-134  | 9 E-6 |
| Co-57  | 5 E-4 | I-135   | 4 E-6 |
| Co-58  | 1 E-4 | Xe-135  | 3 E-6 |
| Co-60  | 5 E-5 | Cs-137  | 2 E-5 |
| Sr-89  | 3 E-6 | Ba-140  | 3 E-5 |
| Sr-90  | 3 E-7 | La-140  | 2 E-5 |
| Sr-91  | 7 E-5 | Ce-141  | 9 E-5 |
| Tc-99m | 6 E-3 | Ce-143  | 4 E-5 |
| Ru-103 | 8 E-5 | Ce-144  | 1 E-5 |
| Sb-125 | 1 E-4 | Pa-233  | 1 E-4 |
| I-131  | 3 E-7 | Np-239  | 1 E-6 |
| I-133  | 1 E-6 |         |       |

3. Average Energy

- a. First Quarter - 8.04 E-1 mev
- b. Second Quarter - 7.94 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 - 88 releases
  - b. Second Quarter - 44 releases
2. Total time period for batch releases:
  - a. First Quarter - 1.47 E4 minutes
  - b. Second Quarter - 8.21 E3 minutes
3. Maximum time period for a batch release:
  - a. First Quarter - 1.23 E3 minutes
  - b. Second Quarter - 5.05 E2 minutes
4. Average time period for a batch release:
  - a. First Quarter - 1.67 E2 minutes
  - b. Second Quarter - 1.87 E2 minutes
5. Minimum time period for a batch release:
  - a. First Quarter - 1.00 minutes
  - b. Second Quarter - 6.00 E1 minutes
6. Average stream flow during periods of release of effluent in a flowing stream:
  - a. First Quarter - 3.57 E6 liters/minute
  - b. Second Quarter - 2.94 E6 liters/minute

b. Gaseous

Not applicable (batch releases)

6. Abnormal Releases

a. Liquid

1. Number of releases:  
One
2. Total activity released:  
1.67 E-3 Ci as documented in RO 50-219/81-16/3L,  
dated May 21, 1981

b. Gaseous

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

**TABLE 1**  
**EFFLUENT AND WASTE DISPOSAL SEMI-ANNUAL REPORT 1981-1**  
**GASEOUS EFFLUENTS-SUMMATION OF ALL RELEASES**

|  | Unit | First<br>Quarter | Second<br>Quarter | Est. Total<br>Error % |
|--|------|------------------|-------------------|-----------------------|
|--|------|------------------|-------------------|-----------------------|

**A. Fission & activation gases**

|                                    |         |          |          |         |
|------------------------------------|---------|----------|----------|---------|
| 1. Total release                   | Ci      | 1.39 E 4 | 1.35 E 4 | 3.0 E 1 |
| 2. Average release rate for period | μCi/sec | 1.83 E 3 | 3.35 E 3 |         |
| 3. Percent of Tech Spec limit      | %       | 6.98 E-1 | 1.26     |         |

**B. Iodines**

|                                    |         |          |          |         |
|------------------------------------|---------|----------|----------|---------|
| 1. Total iodine-131                | Ci      | 1.79 E-1 | 2.67 E-1 | 2.5 E 1 |
| 2. Average release rate for period | μCi/sec | 2.30 E-2 | 3.40 E-2 |         |
| 3. Percent of Tech Spec limit      | %       | 5.75 E-1 | 8.50 E-1 |         |

**C. Particulates**

|  |         |          |          |         |
|--|---------|----------|----------|---------|
| 1. Particulates with<br>half-lives >8 days | Ci      | 2.07 E-1 | 1.52 E-1 | 2.5 E 1 |
| 2. Average release rate for period         | μCi/sec | 2.66 E-2 | 1.94 E-2 |         |
| 3. Percent of Tech Spec limit              | %       | 6.65 E-1 | 4.85 E-1 |         |
| 4. Gross alpha radioactivity               | Ci      | 6.05 E-6 | 6.19 E-6 |         |

**D. Tritium**

|                                    |         |          |          |         |
|------------------------------------|---------|----------|----------|---------|
| 1. Total release                   | Ci      | 4.65 E-1 | 1.57 E-1 | 4.0 E 1 |
| 2. Average release rate for period | μCi/sec | 5.98 E-2 | 2.00 E-2 |         |

**TABLE 2**  
**EFFLUENT AND WASTE DISPOSAL SEMIANNUAL REPORT**  
**GASEOUS EFFLUENTS-ELEVATED RELEASE**

**CONTINUOUS MODE**

| Nuclides Released | Unit | First Quarter | Second Quarter |  | MDL |
|-------------------|------|---------------|----------------|--|-----|
|-------------------|------|---------------|----------------|--|-----|

**1. Fission gases**

|                  |    |          |          |  |           |
|------------------|----|----------|----------|--|-----------|
| krypton-85m      | Ci | 3.89 E 2 | 5.19 E 2 |  | 8.92 E-11 |
| krypton-87       | Ci | 1.50 E 3 | 1.87 E 3 |  | 1.55 E-10 |
| krypton-88       | Ci | 1.24 E 3 | 1.37 E 3 |  | 2.09 E-10 |
| xenon-133        | Ci | 2.02 E 2 | 3.00 E 2 |  | 7.31 E-11 |
| xenon-135        | Ci | 2.33 E 3 | 3.22 E 3 |  | 5.31 E-11 |
| xenon-135m       | Ci | 1.00 E 3 | 1.27 E 3 |  | 1.26 E-10 |
| xenon-138        | Ci | 4.59 E 3 | 4.21 E 3 |  | 2.44 E-10 |
| others           |    |          |          |  |           |
| krypton-89       | Ci | MDL      | 1.67 E-1 |  | 1.14 E-9  |
| xenon-133m       | Ci | 3.32 E 1 | MDL      |  | 5.96 E-10 |
| xenon-137        | Ci | 1.43 E 3 | 3.88     |  | 7.87 E-10 |
|                  |    |          |          |  |           |
|                  |    |          |          |  |           |
|                  |    |          |          |  |           |
| Total for period | Ci | 1.27 E 4 | 1.28 E 4 |  |           |

**2. Iodines**

|                  |    |          |          |  |          |
|------------------|----|----------|----------|--|----------|
| Iodine-131       | Ci | 1.68 E 5 | 2.59 E 5 |  | 1.61 E-4 |
| Iodine-133       | Ci | 7.71 E 5 | 9.36 E 5 |  | 1.23 E-4 |
| Iodine-135       | Ci | 1.15 E 6 | 1.17 E 6 |  | 7.31 E-4 |
| Total for period | Ci | 2.09 E 6 | 2.37 E 6 |  |          |

**TABLE 3**  
**EFFLUENT AND WASTE DISPOSAL SEMIANNUAL REPORT**  
**GASEOUS EFFLUENTS-ELEVATED RELEASE**

CONTINUOUS MODE

| Nuclides Released  | Unit | First Quarter | Second Quarter |  | MDL       |
|--------------------|------|---------------|----------------|--|-----------|
| Strontium - 89     | Ci   | 4.36 E-2      | 3.21 E-2       |  | 1.95 E-9  |
| Strontium - 90     | Ci   | 1.94 E-3      | 2.66 E-3       |  | 2.38 E-10 |
| Cesium - 137       | Ci   | 1.28 E-3      | 9.78 E-4       |  | 8.12 E-11 |
| Barium - 140       | Ci   | 1.35 E-1      | 1.05 E-1       |  | 3.03 E-10 |
| Lanthanum - 140    | Ci   | 1.11 E-1      | 7.65 E-2       |  | 1.43 E-10 |
|                    |      |               |                |  |           |
|                    |      |               |                |  |           |
| Others             |      |               |                |  |           |
| Chromium - 51      | Ci   | 2.22 E-3      | 6.71 E-4       |  | 3.97 E-10 |
| Manganese - 54     | Ci   | 3.87 E-3      | 6.02 E-3       |  | 1.59 E-10 |
| Cobalt - 58        | Ci   | 7.76 E-4      | 1.90 E-4       |  | 1.81 E-10 |
| Cobalt - 60        | Ci   | 1.04 E-3      | 7.66 E-4       |  | 1.29 E-10 |
| Strontium - 91     | Ci   | 5.94 E-1      | 4.87 E-1       |  | 3.41 E-10 |
| Niobium - 95       | Ci   | 4.96 E-3      | MDL            |  | 1.50 E-10 |
| Molybdenum - 99    | Ci   | 1.13 E-2      | MDL            |  | 5.04 E-10 |
| Technetium - 99m   | Ci   | 2.79 E-1      | 3.35 E-3       |  | 4.69 E-11 |
| Iodine - 131       | Ci   | 1.12 E-2      | 1.54 E-3       |  | 1.23 E-10 |
| Iodine - 133       | Ci   | 1.07 E-1      | 1.54 E-2       |  | 7.61 E-11 |
| Iodine - 135       | Ci   | 2.03 E-1      | 2.25 E-2       |  | 5.30 E-10 |
| Cerium - 141       | Ci   | 4.07 E-4      | 1.22 E-4       |  | 2.14 E-9  |
| Cerium - 143       | Ci   | 1.38 E-3      | MDL            |  | 7.23 E-11 |
| Cerium - 144       | Ci   | 9.92 E-4      | 5.29 E-4       |  | 2.27 E-10 |
| Protactinium - 233 | Ci   | 9.89 E-5      | MDL            |  | 9.30 E-11 |
| Neptunium - 239    | Ci   | 2.62 E-3      | 9.33 E-3       |  | 1.28 E-10 |
|                    |      |               |                |  |           |
|                    |      |               |                |  |           |
|                    |      |               |                |  |           |
|                    |      |               |                |  |           |
| Total              | Ci   | 1.52          | 7.65 E-1       |  |           |

TABLE 4  
EFFLUENT AND WASTE DISPOSAL SEMIANNUAL REPORT 1981-1  
GASEOUS EFFLUENTS-GROUND LEVEL RELEASES

| Nuclides Released       | Unit | First<br>Quarter | Second<br>Quarter |  | MDL       |
|-------------------------|------|------------------|-------------------|--|-----------|
| <b>1. Fission Gases</b> |      |                  |                   |  |           |
| Total for Period        | C1   | 1.24 E-3         | 6.57 E-2          |  |           |
| <b>2. Iodines</b>       |      |                  |                   |  |           |
| I-131                   | C1   | 1.05 E-2         | 8.37 E-3          |  | 5.85 E-11 |
| I-133                   | C1   | 1.69 E-2         | 1.83 E-2          |  | 1.23 E-10 |
| I-135                   | C1   | 5.00 E-3         | 1.93 E-2          |  | 1.27 E-9  |
| Total for Period        | C1   | 3.24 E-2         | 4.60 E-2          |  |           |
| <b>3. Particulates</b>  |      |                  |                   |  |           |
| Ce-51                   | C1   | 3.67 E-6         | 4.87 E-5          |  | 4.83 E-10 |
| Mn-54                   | C1   | 3.02 E-5         | 9.75 E-5          |  | 2.08 E-10 |
| Ce-57                   | C1   | 2.06 E-6         | 2.38 E-4          |  | 1.88 E-11 |
| Ce-58                   | C1   | <MDL             | 4.32 E-5          |  | 2.10 E-10 |
| Ce-60                   | C1   | 1.53 E-4         | 6.23 E-4          |  | 2.08 E-10 |
| Sr-89                   | C1   | <MDL             | <MDL              |  | 1.10 E-10 |
| Sr-90                   | C1   | <MDL             | <MDL              |  | 7.15 E-12 |
| Tc-99m                  | C1   | 2.62 E-6         | 8.93 E-5          |  | 6.72 E-10 |
| Ce-137                  | C1   | 2.90 E-5         | 4.75 E-5          |  | 1.10 E-10 |
| Ce-141                  | C1   | <MDL             | 2.44 E-5          |  | 8.72 E-11 |
| Ce-143                  | C1   | <MDL             | 1.75 E-5          |  | 1.11 E-10 |
| Ba-140                  | C1   | <MDL             | 2.11 E-6          |  | 4.66 E-10 |
| Rp-239                  | C1   | 8.51 E-6         | 3.47 E-6          |  | 7.20 E-11 |
| Total for Period        | C1   | 2.29 E-4         | 1.24 E-3          |  |           |

TABLE 5  
EFFLUENT AND WASTE DISPOSAL SEMIANNUAL REPORT 1981-1  
LIQUID EFFLUENTS-SUMMATION OF ALL RELEASES

|  | Unit | First<br>Quarter | Second<br>Quarter | Est. Total<br>Error % |
|--|------|------------------|-------------------|-----------------------|
|--|------|------------------|-------------------|-----------------------|

A. Fission and activation products

|   |        |           |          |         |
|---|--------|-----------|----------|---------|
| 1. Total releases (not including tritium, gases, alpha) | Ci     | 8.80 E-2  | 1.14 E-1 | 3.0 E 1 |
| 2. Average diluted concentration during period          | μCi/ml | 7.30 E-10 | 1.22 E-9 |         |
| 3. Percent of applicable limit                          | %      | 1.83 E-2  | 1.69 E-2 |         |

B. Tritium

|  |        |          |          |         |
|--|--------|----------|----------|---------|
| 1. Total release                               | Ci     | 1.37 E 1 | 6.19     | 3.0 E 1 |
| 2. Average diluted concentration during period | μCi/ml | 1.14 E-7 | 6.63 E-8 |         |
| 3. Percent of applicable limit                 | %      | 3.79 E-3 | 2.21 E-3 |         |

C. Dissolved and entrained gases

|  |        |          |           |         |
|--|--------|----------|-----------|---------|
| 1. Total release                               | Ci     | 2.75 E-1 | 5.13 E-2  | 3.0 E 1 |
| 2. Average diluted concentration during period | μCi/ml | 2.28 E-9 | 5.50 E-10 |         |
| 3. Percent of applicable limit                 | %      | 7.60 E-2 | 1.83 E-2  |         |

D. Gross alpha radioactivity

|                  |    |          |          |         |
|------------------|----|----------|----------|---------|
| 1. Total release | Ci | 8.04 E-5 | 6.46 E-5 | 3.0 E 1 |
|------------------|----|----------|----------|---------|

|   |        |          |          |         |
|---|--------|----------|----------|---------|
| E. Volume of waste released (prior to dilution) | liters | 3.58 E 6 | 2.69 E 6 | 1.0 E 1 |
|---|--------|----------|----------|---------|

|  |        |           |           |         |
|--|--------|-----------|-----------|---------|
| F. Volume of dilution water used during period | liters | 4.53 E 11 | 3.51 E 11 | 1.0 E 1 |
|--|--------|-----------|-----------|---------|

TABLE 6  
EFFLUENT AND WASTE DISPOSAL REPORT 1981-1  
LIQUID EFFLUENTS

|                | UNIT | FIRST<br>QUARTER | SECOND<br>QUARTER |  | MDL       |
|----------------|------|------------------|-------------------|--|-----------|
| Strontium-89   | C1   | 4.37 E-3         | 2.28 E-3          |  | 2.04 E-11 |
| Strontium - 90 | C1   | 2.89 E-4         | 2.67 E-4          |  | 5.47 E-12 |
| Iodine-131     | C1   | 2.83 E-3         | 3.84 E-4          |  | 3.68 E-10 |
| Cesium-134     | C1   | 8.75 E-5         | 2.99 E-4          |  | 4.73 E-10 |
| Cesium - 137   | C1   | 1.99 E-3         | 4.17 E-3          |  | 5.53 E-10 |

|              |    |          |          |  |           |
|--------------|----|----------|----------|--|-----------|
| Cobalt-57    | C1 | 1.11 E-4 | 7.29 E-4 |  | 1.86 E-10 |
| Cobalt-58    | C1 | 6.13 E-5 | MDL      |  | 8.99 E-10 |
| Cobalt-60    | C1 | 2.87 E-2 | 3.06 E-2 |  | 7.85 E-10 |
| Manganese-54 | C1 | 2.47 E-3 | 3.44 E-3 |  | 7.68 E-10 |
| Chromium-51  | C1 | 2.23 E-2 | 1.54 E-2 |  | 2.77 E-9  |
|              |    |          |          |  |           |

|                  |    |          |          |  |           |
|------------------|----|----------|----------|--|-----------|
| Strontium-91     | C1 | 1.48 E-4 | 6.66 E-4 |  | 1.74 E-9  |
| Technetium-99m   | C1 | 3.62 E-3 | 3.38 E-3 |  | 2.95 E-10 |
| Ruthenium-103    | C1 | 7.56 E-5 | 3.74 E-5 |  | 5.63 E-10 |
| Antimony-125     | C1 | 1.85 E-4 | 1.63 E-4 |  | 1.64 E-9  |
| Iodine-133       | C1 | 7.95 E-3 | 7.52 E-4 |  | 5.55 E-10 |
| Iodine-135       | C1 | 4.43 E-3 | 4.72 E-2 |  | 1.75 E-9  |
| Barium-140       | C1 | 2.43 E-3 | 2.27 E-4 |  | 2.38 E-9  |
| Lanthanum-140    | C1 | 3.48 E-3 | 1.33 E-3 |  | 8.58 E-10 |
| Cerium-141       | C1 | 2.53 E-4 | 3.02 E-4 |  | 4.97 E-10 |
| Cerium-143       | C1 | MDL      | 1.44 E-4 |  | 6.30 E-10 |
| Cerium-144       | C1 | 1.85 E-3 | 2.41 E-3 |  | 2.38 E-9  |
| Protactinium-233 | C1 | 4.04 E-5 | MDL      |  | 8.07 E-10 |
| Neptunium-239    | C1 | 3.13 E-4 | 1.30 E-4 |  | 4.58 E-10 |
| Total            | C1 | 8.80 E-2 | 1.14 E-1 |  |           |

|            |    |          |          |  |           |
|------------|----|----------|----------|--|-----------|
| Xenon-133  | C1 | 6.76 E-2 | 1.81 E-2 |  | 6.79 E-10 |
| Xenon-133m | C1 | 8.74 E-5 | 3.00 E-4 |  | 1.99 E-9  |
| Xenon-135  | C1 | 2.07 E-1 | 3.29 E-2 |  | 2.81 E-10 |
|            |    |          |          |  |           |
| Total      | C1 | 2.75 E-1 | 5.13 E-2 |  |           |

TABLE 7  
EFFLUENT AND WASTE DISPOSAL SEMIANNUAL REPORT 1981-1  
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 <sup>3</sup> | 3.57 E 2       | 5.0 E 1             |
| b. Drycompressible waste contaminated equip., etc.        | m <sup>3</sup> | 5.78 E 2       | 5.0 E 1             |
| c. Irradiated components, control rods, etc.              | m <sup>3</sup> | 1.03 E 2       | 5.0 E 1             |
| d. Other (describe)                                       | m <sup>3</sup> | 3.95 E 4       | 5.0 E 1             |

| 2. Estimate of major nuclide composition (by type of waste) | Percentage | Activity (Ci) | MDL (Ci)  |
|---|------------|---------------|-----------|
| a. Co-60  | 5.4 E 1    | 8.32 E 1      | 4.12 E-10 |
| Sr-89   | 1.3 E 1    | 2.00 E 1      | 5.00 E-11 |
| Cs-137  | 8.2        | 1.26 E 1      | 2.29 E-10 |
| Mn-54   | 7.9        | 1.22 E 1      | 4.12 E-10 |
| La-140  | 4.3        | 6.62          | 4.32 E-10 |
| b. Mn-54  | 3.4 E 1    | 3.50 E 1      |           |
| Co-60   | 2.8 E 1    | 2.88 E 1      |           |
| Cs-137  | 1.0 E 1    | 1.03 E 1      |           |
| Sr-89   | 7.2        | 7.42          |           |
| Co-58   | 5.5        | 5.67          |           |
| c.  |            |               |           |
|   |            |               |           |
|   |            |               |           |
|   |            |               |           |
| d.  |            |               |           |
|   |            |               |           |
|   |            |               |           |

| 3. Solid Waste Disposition<br>Number of Shipments | Mode of Transportation | Destination                 |
|---|------------------------|-----------------------------|
| 78  | Motor Vehicle          | Spartanburg, South Carolina |
| 7   | Motor Vehicle          | Richmond, Washington        |
| 1   | Motor Vehicle          | Beatty, Nevada              |

B. Irradiated Fuel Shipments (Disposition)

| Number of Shipments | Mode of Transportation | Destination    |
|---------------------|------------------------|----------------|
| 1                   | Motor Vehicle          | Columbus, Ohio |
|                     |                        |                |

**TABLE 8**  
**Meteorological Classification of Atmospheric Stability**

| <u>Stability Classification</u> | <u>Pasquill Categories</u> | <u>Degrees</u> | <u>Temperature Change with height (°C/100m)</u> |
|---------------------------------|----------------------------|----------------|---|
| Extremely unstable              | A                          | 25.3°          | LT -1.9   |
| Moderately unstable             | B                          | 20.3°          | -1.9 to -1.7                                    |
| Slightly unstable               | C                          | 15.3°          | -1.7 to -1.5                                    |
| Neutral                         | D                          | 10.3°          | -1.5 to -0.5                                    |
| Slightly Stable                 | E                          | 5.3°           | -0.5 to 1.5                                     |
| Moderately stable               | F                          | 2.5°           | 1.5 to 4.0                                      |
| Extremely stable                | G                          | 1.7            | GT 4.0  |

**TABLE 9**  
**Oyster Creek Joint Frequency Tables of Wind Speed and Direction 33ft**  
**versus Delta Temperature 150-33ft**

1 of 4

01/01/81-03/31/81  
HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD: 01 1 1 1-01 33184

STABILITY CLASS: A

ELEVATION: SPEED:SPB33 DIRECTION:DIR33 LAPSE:DT150

-----  
WIND SPEED(MPH)

| WIND<br>DIRECTION | 1-3 | 3-4 | 5-12 | 13-18 | 19-24 | >24 | TOTAL |
|-------------------|-----|-----|------|-------|-------|-----|-------|
| N                 | 0   | 4   | 6    | 0     | 0     | 0   | 10    |
| NNE               | 0   | 8   | 15   | 1     | 0     | 0   | 24    |
| NE                | 2   | 3   | 18   | 4     | 0     | 0   | 27    |
| NNE               | 0   | 7   | 25   | 2     | 0     | 0   | 34    |
| E                 | 0   | 8   | 10   | 1     | 0     | 0   | 19    |
| ESE               | 2   | 10  | 5    | 2     | 0     | 0   | 19    |
| SE                | 1   | 8   | 18   | 0     | 0     | 0   | 26    |
| SSE               | 3   | 3   | 7    | 3     | 0     | 0   | 16    |
| S                 | 2   | 8   | 18   | 7     | 1     | 0   | 36    |
| SSW               | 0   | 2   | 13   | 10    | 0     | 2   | 27    |
| SW                | 1   | 8   | 7    | 1     | 0     | 1   | 18    |
| WSW               | 2   | 8   | 24   | 18    | 0     | 2   | 54    |
| W                 | 2   | 8   | 38   | 9     | 0     | 1   | 59    |
| WNW               | 3   | 13  | 78   | 38    | 1     | 0   | 133   |
| NW                | 3   | 11  | 57   | 41    | 3     | 0   | 115   |
| NNW               | 8   | 18  | 18   | 8     | 0     | 0   | 32    |
| VARIABLE          | 8   | 0   | 0    | 0     | 0     | 0   | 10    |

TOTAL 830  
PERIODS OF CALM(HOURS): 0  
HOURS OF MISSING DATA: 100

HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD: 01 1 1 1-01 33184

STABILITY CLASS: B

ELEVATION: SPEED:SPB33 DIRECTION:DIR33 LAPSE:DT150

-----  
WIND SPEED(MPH)

| WIND<br>DIRECTION | 1-3 | 3-4 | 5-12 | 13-18 | 19-24 | >24 | TOTAL |
|-------------------|-----|-----|------|-------|-------|-----|-------|
| N                 | 1   | 0   | 0    | 0     | 0     | 0   | 1     |
| NNE               | 0   | 0   | 2    | 1     | 0     | 0   | 3     |
| NE                | 0   | 0   | 5    | 0     | 0     | 0   | 5     |
| NNE               | 0   | 1   | 5    | 1     | 0     | 0   | 7     |
| E                 | 0   | 1   | 1    | 0     | 0     | 0   | 2     |
| ESE               | 0   | 1   | 1    | 0     | 0     | 0   | 2     |
| SE                | 0   | 2   | 1    | 0     | 0     | 0   | 3     |
| SSE               | 0   | 0   | 2    | 0     | 0     | 0   | 2     |
| S                 | 0   | 2   | 2    | 0     | 0     | 0   | 4     |
| SSW               | 0   | 1   | 5    | 2     | 1     | 0   | 9     |
| SW                | 1   | 0   | 3    | 0     | 0     | 0   | 4     |
| WSW               | 0   | 1   | 0    | 1     | 0     | 0   | 2     |
| W                 | 0   | 0   | 4    | 0     | 0     | 0   | 4     |
| WNW               | 3   | 2   | 8    | 2     | 0     | 0   | 13    |
| NW                | 1   | 1   | 2    | 2     | 0     | 0   | 6     |
| NNW               | 1   | 1   | 1    | 0     | 0     | 0   | 3     |
| VARIABLE          | 1   | 0   | 0    | 0     | 0     | 0   | 1     |

TOTAL 88  
PERIODS OF CALM(HOURS): 0  
HOURS OF MISSING DATA: 100

TABLE 9

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## HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD- 01 1 1 1-01 33184

STABILITY CLASS: 0

ELEVATION: SPEED: 0P033 DIRECTION: 01233 LAPSE: 07100

WIND SPEED(MPH)

| WIND<br>DIRECTION | 1-3 | 3-4 | 4-10 | 10-15 | 15-24 | 24 | TOTAL |
|-------------------|-----|-----|------|-------|-------|----|-------|
| N                 | 0   | 0   | 3    | 0     | 0     | 0  | 3     |
| NNE               | 0   | 1   | 5    | 0     | 0     | 0  | 6     |
| NE                | 0   | 2   | 1    | 0     | 0     | 0  | 4     |
| NNE               | 0   | 0   | 0    | 1     | 0     | 0  | 1     |
| E                 | 1   | 0   | 0    | 0     | 0     | 0  | 1     |
| ESE               | 1   | 0   | 1    | 0     | 0     | 0  | 2     |
| SE                | 0   | 1   | 0    | 0     | 0     | 0  | 1     |
| SSE               | 0   | 0   | 3    | 0     | 0     | 0  | 3     |
| S                 | 0   | 0   | 1    | 1     | 0     | 0  | 2     |
| SSW               | 0   | 1   | 0    | 2     | 0     | 0  | 3     |
| SW                | 0   | 0   | 0    | 0     | 0     | 0  | 0     |
| WSW               | 0   | 0   | 1    | 0     | 0     | 0  | 1     |
| W                 | 0   | 1   | 4    | 3     | 0     | 0  | 8     |
| WSW               | 0   | 1   | 1    | 4     | 0     | 0  | 6     |
| W                 | 1   | 2   | 2    | 3     | 0     | 0  | 8     |
| WNW               | 0   | 2   | 0    | 0     | 0     | 0  | 2     |
| UNRECORDED        | 2   | 0   | 0    | 0     | 0     | 0  | 2     |

TOTAL 55  
PERIODS OF CALM(HOURS): 0  
HOURS OF MISSING DATA: 100

## HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD- 01 1 1 1-01 33184

STABILITY CLASS: 0

ELEVATION: SPEED: 0P033 DIRECTION: 01233 LAPSE: 07100

WIND SPEED(MPH)

| WIND<br>DIRECTION | 1-3 | 3-4 | 4-10 | 10-15 | 15-24 | 24 | TOTAL |
|-------------------|-----|-----|------|-------|-------|----|-------|
| N                 | 3   | 0   | 2    | 0     | 0     | 0  | 11    |
| NNE               | 1   | 0   | 2    | 1     | 0     | 0  | 4     |
| NE                | 0   | 0   | 5    | 2     | 0     | 0  | 15    |
| NNE               | 1   | 0   | 5    | 0     | 0     | 0  | 11    |
| E                 | 1   | 1   | 0    | 0     | 0     | 0  | 2     |
| ESE               | 1   | 0   | 4    | 0     | 0     | 0  | 11    |
| SE                | 1   | 0   | 4    | 0     | 0     | 0  | 15    |
| SSE               | 0   | 0   | 4    | 0     | 4     | 0  | 22    |
| S                 | 2   | 0   | 0    | 7     | 12    | 3  | 30    |
| SSW               | 1   | 0   | 24   | 0     | 3     | 0  | 40    |
| SW                | 3   | 0   | 13   | 1     | 0     | 0  | 23    |
| WSW               | 3   | 0   | 5    | 0     | 0     | 0  | 17    |
| W                 | 1   | 10  | 10   | 2     | 0     | 0  | 37    |
| WSW               | 2   | 34  | 22   | 17    | 2     | 0  | 107   |
| W                 | 3   | 20  | 25   | 10    | 0     | 0  | 107   |
| WNW               | 4   | 10  | 14   | 3     | 0     | 0  | 31    |
| UNRECORDED        | 7   | 0   | 0    | 0     | 0     | 0  | 7     |

TOTAL 497  
PERIODS OF CALM(HOURS): 0  
HOURS OF MISSING DATA: 100

TABLE 9

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## HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD: 01 1 1 1-01 22104

STABILITY CLASS: E

ELEVATION: SPEED:0-23 DIRECTION:0-183 LAPSE:0-100

WIND SPEED(MPH)

| WIND<br>DIRECTION | 1-3 | 3-4 | 4-10 | 10-15 | 15-24 | 24 | TOTAL |
|-------------------|-----|-----|------|-------|-------|----|-------|
| N                 | 0   | 1   | 0    | 0     | 0     | 0  | 1     |
| NNE               | 2   | 0   | 0    | 0     | 0     | 0  | 2     |
| NE                | 0   | 2   | 0    | 0     | 0     | 0  | 2     |
| ENE               | 0   | 0   | 0    | 0     | 0     | 0  | 0     |
| E                 | 0   | 2   | 0    | 0     | 0     | 0  | 2     |
| ESE               | 0   | 1   | 0    | 0     | 0     | 0  | 1     |
| SE                | 0   | 0   | 1    | 0     | 0     | 0  | 1     |
| SSE               | 0   | 4   | 0    | 1     | 0     | 0  | 5     |
| S                 | 0   | 2   | 2    | 0     | 0     | 0  | 4     |
| SSW               | 4   | 10  | 20   | 0     | 0     | 0  | 34    |
| SW                | 8   | 22  | 10   | 0     | 0     | 0  | 40    |
| WSW               | 4   | 20  | 11   | 0     | 0     | 1  | 36    |
| W                 | 2   | 34  | 10   | 0     | 0     | 0  | 46    |
| WSW               | 4   | 24  | 14   | 0     | 0     | 0  | 42    |
| W                 | 2   | 22  | 17   | 0     | 0     | 0  | 41    |
| WNW               | 2   | 0   | 4    | 0     | 0     | 0  | 6     |
| W                 | 2   | 0   | 0    | 0     | 0     | 0  | 2     |

TOTAL 250  
PERIODS OF CALM(HOURS): 0  
HOURS OF MISSING DATA: 100

## HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD: 01 1 1 1-01 22104

STABILITY CLASS: F

ELEVATION: SPEED:0-23 DIRECTION:0-183 LAPSE:0-100

WIND SPEED(MPH)

| WIND<br>DIRECTION | 1-3 | 3-4 | 4-10 | 10-15 | 15-24 | 24 | TOTAL |
|-------------------|-----|-----|------|-------|-------|----|-------|
| N                 | 2   | 1   | 0    | 0     | 0     | 0  | 3     |
| NNE               | 2   | 0   | 0    | 0     | 0     | 0  | 2     |
| NE                | 0   | 0   | 0    | 0     | 0     | 0  | 0     |
| ENE               | 1   | 0   | 0    | 0     | 0     | 0  | 1     |
| E                 | 0   | 0   | 0    | 0     | 0     | 0  | 0     |
| ESE               | 2   | 0   | 0    | 0     | 0     | 0  | 2     |
| SE                | 0   | 1   | 0    | 0     | 0     | 0  | 1     |
| SSE               | 1   | 0   | 0    | 0     | 0     | 0  | 1     |
| S                 | 2   | 2   | 0    | 0     | 0     | 0  | 4     |
| SSW               | 5   | 5   | 0    | 0     | 0     | 0  | 10    |
| SW                | 4   | 10  | 1    | 0     | 0     | 0  | 15    |
| WSW               | 0   | 22  | 0    | 0     | 0     | 0  | 22    |
| W                 | 5   | 17  | 2    | 0     | 0     | 0  | 24    |
| WNW               | 0   | 21  | 2    | 0     | 0     | 0  | 23    |
| W                 | 4   | 10  | 2    | 0     | 0     | 0  | 16    |
| WNW               | 2   | 10  | 0    | 0     | 0     | 0  | 12    |
| W                 | 0   | 0   | 0    | 0     | 0     | 0  | 0     |

TOTAL 103  
PERIODS OF CALM(HOURS): 0  
HOURS OF MISSING DATA: 100

TABLE 9

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## HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD- 01 1 1 1-01 23184

STABILITY CLASS: 0

ELEVATION: SPEED:SPD33 DIRECTION:DIR33 LAPSE:DT100  
WIND SPEED(MPH)

| WIND<br>DIRECTION | 1-3 | 3-4 | 4-10 | 10-16 | 16-24 | 24 | TOTAL |
|-------------------|-----|-----|------|-------|-------|----|-------|
| N                 | 8   | 4   | 0    | 0     | 0     | 0  | 8     |
| NNE               | 3   | 1   | 0    | 0     | 0     | 0  | 4     |
| NE                | 1   | 0   | 0    | 0     | 0     | 0  | 1     |
| NNE               | 2   | 0   | 0    | 0     | 0     | 0  | 2     |
| E                 | 1   | 0   | 0    | 0     | 0     | 0  | 1     |
| ESE               | 4   | 0   | 0    | 0     | 0     | 0  | 4     |
| SE                | 2   | 0   | 0    | 0     | 0     | 0  | 2     |
| SSE               | 3   | 0   | 0    | 0     | 0     | 0  | 3     |
| S                 | 3   | 1   | 0    | 0     | 0     | 0  | 4     |
| SSW               | 3   | 1   | 0    | 0     | 0     | 0  | 4     |
| SW                | 10  | 12  | 0    | 0     | 0     | 0  | 22    |
| WSW               | 34  | 00  | 0    | 0     | 0     | 0  | 34    |
| W                 | 21  | 24  | 0    | 0     | 0     | 0  | 45    |
| WNW               | 18  | 0   | 0    | 0     | 0     | 0  | 18    |
| WW                | 10  | 23  | 0    | 0     | 0     | 0  | 33    |
| WNW               | 14  | 10  | 0    | 0     | 0     | 0  | 24    |
| WINDY             | 12  | 0   | 0    | 0     | 0     | 0  | 12    |

TOTAL 894  
PERIODS OF CALM(HOURS): 0  
HOURS OF MISSING DATA: 100

## HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD- 01 1 1 1-01 23184

STABILITY CLASS: ALL

ELEVATION: SPEED:SPD33 DIRECTION:DIR33 LAPSE:DT100  
WIND SPEED(MPH)

| WIND<br>DIRECTION | 1-3 | 3-4 | 4-10 | 10-16 | 16-24 | 24 | TOTAL |
|-------------------|-----|-----|------|-------|-------|----|-------|
| N                 | 0   | 10  | 11   | 0     | 0     | 0  | 21    |
| NNE               | 0   | 15  | 24   | 3     | 0     | 0  | 38    |
| NE                | 3   | 22  | 20   | 0     | 0     | 0  | 45    |
| NNE               | 4   | 13  | 35   | 4     | 0     | 0  | 56    |
| E                 | 3   | 12  | 11   | 1     | 0     | 0  | 27    |
| ESE               | 10  | 12  | 11   | 8     | 0     | 0  | 41    |
| SE                | 4   | 10  | 22   | 5     | 0     | 0  | 41    |
| SSE               | 7   | 13  | 16   | 12    | 4     | 0  | 52    |
| S                 | 10  | 24  | 30   | 15    | 13    | 3  | 95    |
| SSW               | 12  | 30  | 72   | 81    | 4     | 8  | 197   |
| SW                | 27  | 63  | 43   | 8     | 0     | 1  | 139   |
| WSW               | 40  | 111 | 43   | 10    | 0     | 3  | 207   |
| W                 | 30  | 100 | 80   | 14    | 0     | 1  | 225   |
| WNW               | 30  | 144 | 143  | 50    | 3     | 0  | 268   |
| WW                | 34  | 102 | 130  | 65    | 3     | 0  | 234   |
| WNW               | 20  | 55  | 34   | 8     | 0     | 0  | 117   |
| WINDY             | 20  | 0   | 0    | 0     | 0     | 0  | 20    |

TOTAL 894  
PERIODS OF CALM(HOURS): 0  
HOURS OF MISSING DATA: 100

TABLE 10  
Oyster Creek Joint Frequency Tables of Wind Speed and Direction 33ft  
versus Delta Temperature 150-33ft  
04/01/81-06/30/81

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HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD- 01 4 1 1-81 83084

STABILITY CLASS: A

ELEVATION: SPEED:SP33 DIRECTION:DIR33 LAPSE:DT150

WIND SPEED(MPH)

| WIND<br>DIRECTION | 1-3 | 3-4 | 5-12 | 13-18 | 19-24 | 25+ | TOTAL |
|-------------------|-----|-----|------|-------|-------|-----|-------|
|-------------------|-----|-----|------|-------|-------|-----|-------|

|          |   |    |    |    |   |   |    |
|----------|---|----|----|----|---|---|----|
| N        | 0 | 2  | 10 | 11 | 0 | 0 | 23 |
| NNE      | 1 | 4  | 8  | 1  | 0 | 0 | 14 |
| NE       | 1 | 6  | 20 | 0  | 0 | 0 | 27 |
| NNE      | 1 | 3  | 33 | 10 | 0 | 0 | 47 |
| E        | 1 | 5  | 20 | 2  | 0 | 0 | 28 |
| ESE      | 0 | 0  | 20 | 2  | 0 | 0 | 22 |
| SE       | 0 | 11 | 23 | 0  | 0 | 0 | 34 |
| SSE      | 1 | 3  | 22 | 17 | 1 | 0 | 44 |
| S        | 0 | 5  | 26 | 30 | 2 | 0 | 63 |
| SSW      | 1 | 4  | 17 | 15 | 2 | 0 | 39 |
| SW       | 0 | 2  | 12 | 5  | 0 | 0 | 19 |
| WSW      | 1 | 5  | 12 | 5  | 0 | 0 | 23 |
| W        | 1 | 3  | 17 | 9  | 1 | 0 | 31 |
| WNW      | 0 | 11 | 20 | 26 | 1 | 0 | 58 |
| NW       | 0 | 4  | 20 | 12 | 1 | 0 | 37 |
| NNW      | 1 | 4  | 12 | 0  | 0 | 0 | 17 |
| VARIABLE | 5 | 0  | 0  | 0  | 0 | 0 | 5  |

TOTAL 833  
PERIOD OF CALM(HOURS): 0  
HOURS OF MISSING DATA: 830

HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD- 01 4 1 1-81 83084

STABILITY CLASS: B

ELEVATION: SPEED:SP33 DIRECTION:DIR33 LAPSE:DT150

WIND SPEED(MPH)

| WIND<br>DIRECTION | 1-3 | 3-4 | 5-12 | 13-18 | 19-24 | 25+ | TOTAL |
|-------------------|-----|-----|------|-------|-------|-----|-------|
|-------------------|-----|-----|------|-------|-------|-----|-------|

|          |   |   |   |   |   |   |   |
|----------|---|---|---|---|---|---|---|
| N        | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| NNE      | 0 | 1 | 2 | 0 | 0 | 0 | 3 |
| NE       | 0 | 0 | 0 | 1 | 0 | 0 | 1 |
| NNE      | 0 | 0 | 0 | 1 | 0 | 0 | 1 |
| E        | 0 | 0 | 2 | 0 | 0 | 0 | 2 |
| ESE      | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| SE       | 0 | 0 | 2 | 0 | 0 | 0 | 2 |
| SSE      | 0 | 0 | 3 | 0 | 0 | 0 | 3 |
| S        | 1 | 1 | 0 | 4 | 0 | 0 | 6 |
| SSW      | 0 | 0 | 5 | 2 | 0 | 0 | 7 |
| SW       | 1 | 1 | 1 | 2 | 0 | 0 | 5 |
| WSW      | 0 | 1 | 3 | 0 | 0 | 0 | 4 |
| W        | 0 | 0 | 1 | 0 | 0 | 0 | 1 |
| WNW      | 0 | 1 | 1 | 0 | 0 | 0 | 2 |
| NW       | 0 | 1 | 1 | 0 | 0 | 0 | 2 |
| NNW      | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| VARIABLE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

TOTAL 41  
PERIOD OF CALM(HOURS): 0  
HOURS OF MISSING DATA: 830

TABLE 10

2 of 4

| HOURS AT EACH WIND SPEED AND DIRECTION             |     |     |      |       |       |     |       |
|--|-----|-----|------|-------|-------|-----|-------|
| PERIOD OF RECORD- 01 4 1 1-01 03004                |     |     |      |       |       |     |       |
| STABILITY CLASS: 0                                 |     |     |      |       |       |     |       |
| ELEVATION: SPEED:SPD33 DIRECTION:DIR33 LAPSE:DT100 |     |     |      |       |       |     |       |
| WIND SPEED(MPH)                                    |     |     |      |       |       |     |       |
| WIND<br>DIRECTION                                  | 1-3 | 3-4 | 4-10 | 10-16 | 16-24 | >24 | TOTAL |
| N  | 1   | 0   | 0    | 0     | 0     | 0   | 1     |
| NNE  | 0   | 0   | 0    | 0     | 0     | 0   | 0     |
| NE   | 0   | 0   | 0    | 0     | 0     | 0   | 0     |
| ENE  | 0   | 0   | 2    | 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   | 4    | 1     | 0     | 0   | 5     |
| S  | 0   | 0   | 3    | 1     | 1     | 0   | 5     |
| SSW  | 0   | 1   | 2    | 1     | 0     | 0   | 4     |
| SW   | 0   | 1   | 1    | 2     | 0     | 0   | 4     |
| WSW  | 0   | 1   | 1    | 0     | 0     | 0   | 2     |
| W  | 0   | 0   | 0    | 0     | 0     | 0   | 0     |
| WW   | 0   | 1   | 1    | 1     | 0     | 0   | 3     |
| NW   | 0   | 0   | 1    | 0     | 0     | 0   | 1     |
| NNW  | 0   | 0   | 1    | 0     | 0     | 0   | 1     |
| VARIABLE   | 0   | 0   | 0    | 0     | 0     | 0   | 0     |
| TOTAL 31   |     |     |      |       |       |     |       |
| PERIODS OF CALM(HOURS): 0                          |     |     |      |       |       |     |       |
| HOURS OF MISSING DATA: 030                         |     |     |      |       |       |     |       |

| HOURS AT EACH WIND SPEED AND DIRECTION             |     |     |      |       |       |     |       |
|--|-----|-----|------|-------|-------|-----|-------|
| PERIOD OF RECORD- 01 4 1 1-01 03004                |     |     |      |       |       |     |       |
| STABILITY CLASS: 0                                 |     |     |      |       |       |     |       |
| ELEVATION: SPEED:SPD33 DIRECTION:DIR33 LAPSE:DT100 |     |     |      |       |       |     |       |
| WIND SPEED(MPH)                                    |     |     |      |       |       |     |       |
| WIND<br>DIRECTION                                  | 1-3 | 3-4 | 4-10 | 10-16 | 16-24 | >24 | TOTAL |
| N  | 2   | 0   | 1    | 1     | 0     | 0   | 4     |
| NNE  | 0   | 0   | 1    | 0     | 0     | 0   | 1     |
| NE   | 2   | 10  | 0    | 0     | 0     | 0   | 12    |
| ENE  | 0   | 0   | 7    | 0     | 1     | 0   | 8     |
| E  | 0   | 0   | 11   | 3     | 0     | 0   | 14    |
| ESE  | 0   | 0   | 0    | 0     | 0     | 0   | 0     |
| SE   | 0   | 0   | 0    | 0     | 0     | 0   | 0     |
| SSE  | 1   | 11  | 10   | 3     | 0     | 0   | 25    |
| S  | 0   | 11  | 12   | 0     | 3     | 0   | 26    |
| SSW  | 0   | 12  | 17   | 11    | 4     | 0   | 44    |
| SW   | 3   | 10  | 17   | 2     | 0     | 0   | 32    |
| WSW  | 2   | 0   | 14   | 1     | 0     | 0   | 17    |
| W  | 1   | 10  | 4    | 2     | 0     | 0   | 17    |
| WW   | 1   | 7   | 10   | 1     | 0     | 0   | 19    |
| NW   | 3   | 7   | 0    | 0     | 0     | 0   | 10    |
| NNW  | 1   | 4   | 3    | 2     | 0     | 0   | 10    |
| VARIABLE   | 0   | 0   | 0    | 0     | 0     | 0   | 0     |
| TOTAL 240  |     |     |      |       |       |     |       |
| PERIODS OF CALM(HOURS): 0                          |     |     |      |       |       |     |       |
| HOURS OF MISSING DATA: 030                         |     |     |      |       |       |     |       |

TABLE 10

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## HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD- 01 4 1 1-01 03004

STABILITY CLASS: E

ELEVATION: SPEED:SPD33 DIRECTION:DIR33 LAPSE:DT100

WIND SPEED(MPH)

| WIND<br>DIRECTION | 1-2 | 3-4 | 5-12 | 13-18 | 19-24 | >24 | TOTAL |
|-------------------|-----|-----|------|-------|-------|-----|-------|
| N                 | 1   | 4   | 0    | 0     | 0     | 0   | 5     |
| NNE               | 1   | 4   | 0    | 0     | 0     | 0   | 5     |
| NE                | 2   | 10  | 4    | 0     | 0     | 0   | 16    |
| ENE               | 0   | 0   | 4    | 1     | 0     | 0   | 11    |
| E                 | 2   | 10  | 8    | 0     | 0     | 0   | 20    |
| ESE               | 4   | 7   | 3    | 0     | 0     | 0   | 14    |
| SE                | 0   | 12  | 7    | 0     | 0     | 0   | 25    |
| SSE               | 5   | 0   | 17   | 0     | 0     | 0   | 40    |
| S                 | 5   | 26  | 22   | 11    | 0     | 0   | 64    |
| SSW               | 7   | 27  | 41   | 12    | 0     | 0   | 87    |
| SW                | 8   | 20  | 20   | 0     | 0     | 0   | 68    |
| WSW               | 3   | 17  | 14   | 0     | 0     | 0   | 34    |
| W                 | 0   | 0   | 11   | 1     | 0     | 0   | 20    |
| WNW               | 1   | 24  | 20   | 2     | 0     | 0   | 55    |
| NW                | 1   | 21  | 12   | 1     | 0     | 0   | 35    |
| NNW               | 1   | 3   | 0    | 0     | 0     | 0   | 10    |
| VARIABLE          | 3   | 0   | 0    | 0     | 0     | 0   | 3     |

TOTAL 504

PERIODS OF CALM(HOURS): 0

HOURS OF MISSING DATA: 030

## HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD- 01 4 1 1-01 03004

STABILITY CLASS: F

ELEVATION: SPEED:SPD33 DIRECTION:DIR33 LAPSE:DT100

WIND SPEED(MPH)

| WIND<br>DIRECTION | 1-2 | 3-4 | 5-12 | 13-18 | 19-24 | >24 | TOTAL |
|-------------------|-----|-----|------|-------|-------|-----|-------|
| N                 | 0   | 2   | 0    | 0     | 0     | 0   | 2     |
| NNE               | 0   | 1   | 0    | 0     | 0     | 0   | 1     |
| NE                | 1   | 0   | 0    | 0     | 0     | 0   | 1     |
| ENE               | 1   | 0   | 0    | 0     | 0     | 0   | 1     |
| E                 | 2   | 0   | 0    | 0     | 0     | 0   | 2     |
| ESE               | 0   | 0   | 0    | 0     | 0     | 0   | 0     |
| SE                | 1   | 0   | 0    | 0     | 0     | 0   | 1     |
| SSE               | 1   | 3   | 1    | 0     | 0     | 0   | 5     |
| S                 | 0   | 3   | 2    | 0     | 0     | 0   | 5     |
| SSW               | 1   | 2   | 5    | 0     | 0     | 0   | 8     |
| SW                | 0   | 20  | 9    | 0     | 0     | 0   | 29    |
| WSW               | 2   | 19  | 4    | 0     | 0     | 0   | 25    |
| W                 | 2   | 25  | 3    | 0     | 0     | 0   | 31    |
| WNW               | 1   | 0   | 0    | 0     | 0     | 0   | 10    |
| NW                | 2   | 2   | 0    | 0     | 0     | 0   | 4     |
| NNW               | 3   | 5   | 0    | 0     | 0     | 0   | 8     |
| VARIABLE          | 2   | 0   | 0    | 0     | 0     | 0   | 2     |

TOTAL 137

PERIODS OF CALM(HOURS): 0

HOURS OF MISSING DATA: 030

TABLE 10

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## HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD- 01 4 1 1-01 03004

STABILITY CLASS: 0

ELEVATION: SPEED:SPD33 DIRECTION:DIR23 LAPSE:DT100

WIND SPEED(MPH)

| WIND<br>DIRECTION | 1-3 | 3-4 | 5-10 | 10-15 | 15-24 | >24 | TOTAL |
|-------------------|-----|-----|------|-------|-------|-----|-------|
| N                 | 3   | 1   | 0    | 0     | 0     | 0   | 4     |
| NNE               | 0   | 0   | 0    | 0     | 0     | 0   | 0     |
| NE                | 0   | 0   | 2    | 0     | 0     | 0   | 2     |
| NNE               | 0   | 0   | 2    | 0     | 0     | 0   | 2     |
| E                 | 1   | 1   | 1    | 0     | 0     | 0   | 3     |
| ESE               | 1   | 0   | 3    | 0     | 0     | 0   | 4     |
| SE                | 2   | 1   | 2    | 0     | 0     | 0   | 5     |
| SSE               | 0   | 1   | 2    | 0     | 0     | 0   | 3     |
| S                 | 1   | 1   | 0    | 2     | 1     | 0   | 5     |
| SSW               | 1   | 0   | 2    | 1     | 2     | 0   | 10    |
| SW                | 0   | 10  | 2    | 0     | 0     | 0   | 22    |
| WSW               | 10  | 40  | 2    | 0     | 0     | 0   | 57    |
| W                 | 17  | 20  | 0    | 0     | 0     | 0   | 43    |
| WNW               | 7   | 17  | 0    | 0     | 0     | 0   | 24    |
| NW                | 11  | 40  | 0    | 0     | 0     | 0   | 51    |
| NNW               | 2   | 12  | 0    | 0     | 0     | 0   | 14    |
| VARIABLE          | 0   | 0   | 0    | 0     | 0     | 0   | 0     |

TOTAL 222  
PERIODS OF CALM (HOURS): 0  
HOURS OF MISSING DATA: 220

## HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD- 01 4 1 1-01 03004

STABILITY CLASS: ALL

ELEVATION: SPEED:SPD33 DIRECTION:DIR23 LAPSE:DT100

WIND SPEED(MPH)

| WIND<br>DIRECTION | 1-3 | 3-4 | 5-10 | 10-15 | 15-24 | >24 | TOTAL |
|-------------------|-----|-----|------|-------|-------|-----|-------|
| N                 | 13  | 10  | 11   | 12    | 0     | 0   | 56    |
| NNE               | 4   | 10  | 8    | 1     | 0     | 0   | 32    |
| NE                | 0   | 20  | 35   | 1     | 0     | 0   | 70    |
| NNE               | 2   | 17  | 40   | 10    | 1     | 0   | 86    |
| E                 | 0   | 25  | 42   | 5     | 0     | 0   | 78    |
| ESE               | 5   | 26  | 52   | 2     | 0     | 0   | 85    |
| SE                | 9   | 33  | 30   | 0     | 0     | 0   | 89    |
| SSE               | 0   | 27  | 67   | 30    | 1     | 0   | 133   |
| S                 | 7   | 47  | 65   | 81    | 7     | 0   | 187   |
| SSW               | 10  | 52  | 80   | 42    | 10    | 0   | 203   |
| SW                | 15  | 81  | 67   | 12    | 0     | 0   | 175   |
| WSW               | 10  | 94  | 50   | 0     | 0     | 0   | 174   |
| W                 | 27  | 73  | 30   | 12    | 1     | 0   | 148   |
| WNW               | 10  | 70  | 70   | 30    | 1     | 0   | 189   |
| NW                | 17  | 70  | 50   | 22    | 1     | 0   | 177   |
| NNW               | 0   | 20  | 22   | 0     | 0     | 0   | 62    |
| VARIABLE          | 24  | 0   | 0    | 0     | 0     | 0   | 24    |

TOTAL 1048  
PERIODS OF CALM (HOURS): 0  
HOURS OF MISSING DATA: 220

TABLE 11  
Oyster Creek Joint Frequency Tables of Wind Speed and Direction 380ft  
versus Delta Temperature 380-33ft  
01/01/81-03/31/81

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HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD- 01 1 1 1-01 33184

STABILITY CLASS: A

ELEVATION: SPEED:SP3300 DIRECTION:DIR300 LAPSE:DT300

WIND SPEED(MPH)

| WIND<br>DIRECTION | 1-3 | 3-4 | 6-12 | 12-18 | 18-24 | >24 | TOTAL |
|-------------------|-----|-----|------|-------|-------|-----|-------|
| N                 | 0   | 0   | 0    | 0     | 1     | 0   | 1     |
| NNE               | 0   | 0   | 0    | 0     | 0     | 0   | 0     |
| NE                | 0   | 0   | 0    | 0     | 1     | 0   | 1     |
| NNE               | 0   | 1   | 0    | 0     | 1     | 0   | 2     |
| E                 | 0   | 0   | 1    | 0     | 0     | 0   | 1     |
| ENE               | 1   | 0   | 0    | 0     | 0     | 0   | 1     |
| SE                | 0   | 0   | 1    | 0     | 0     | 0   | 1     |
| SSE               | 0   | 0   | 0    | 2     | 0     | 0   | 2     |
| S                 | 0   | 0   | 0    | 1     | 0     | 0   | 1     |
| SSW               | 0   | 0   | 0    | 0     | 0     | 0   | 0     |
| SW                | 0   | 0   | 0    | 0     | 0     | 0   | 0     |
| WSW               | 0   | 0   | 0    | 0     | 2     | 0   | 2     |
| W                 | 0   | 0   | 0    | 4     | 0     | 0   | 4     |
| WNW               | 0   | 0   | 0    | 2     | 2     | 4   | 8     |
| W                 | 1   | 0   | 2    | 4     | 2     | 4   | 20    |
| WNW               | 0   | 0   | 0    | 0     | 1     | 0   | 1     |
| W                 | 0   | 0   | 0    | 0     | 0     | 0   | 0     |

TOTAL 80  
PERIODS OF CALM(HOURS): 0  
HOURS OF MISSING DATA: 00

HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD- 01 1 1 1-01 33124

STABILITY CLASS: B

ELEVATION: SPEED:SP3300 DIRECTION:DIR300 LAPSE:DT300

WIND SPEED(MPH)

| WIND<br>DIRECTION | 1-3 | 3-4 | 6-12 | 12-18 | 18-24 | >24 | TOTAL |
|-------------------|-----|-----|------|-------|-------|-----|-------|
| N                 | 0   | 0   | 1    | 2     | 0     | 0   | 3     |
| NNE               | 0   | 0   | 0    | 0     | 0     | 0   | 0     |
| NE                | 0   | 0   | 1    | 1     | 0     | 0   | 2     |
| NNE               | 0   | 0   | 4    | 1     | 0     | 0   | 5     |
| E                 | 0   | 0   | 1    | 0     | 0     | 0   | 1     |
| ESE               | 0   | 0   | 0    | 0     | 0     | 0   | 0     |
| SE                | 0   | 0   | 0    | 0     | 0     | 0   | 0     |
| SSE               | 0   | 0   | 1    | 1     | 0     | 0   | 2     |
| 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   | 1    | 2     | 4     | 1   | 8     |
| W                 | 0   | 0   | 0    | 0     | 4     | 0   | 4     |
| WNW               | 0   | 0   | 1    | 5     | 7     | 3   | 16    |
| W                 | 0   | 0   | 1    | 2     | 5     | 3   | 11    |
| WNW               | 0   | 0   | 1    | 0     | 1     | 0   | 2     |
| W                 | 0   | 0   | 0    | 0     | 0     | 0   | 0     |

TOTAL 80  
PERIODS OF CALM(HOURS): 0  
HOURS OF MISSING DATA: 00

TABLE 11

2 of 4

## HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD- 01 1 1 1-01 22104

STABILITY CLASS: 0

ELEVATION: SPEED:SP300 DIRECTION:DIR300 LAPSE:LT300

WIND SPEED(MPH)

| WIND<br>DIRECTION | 1-3 | 3-4 | 4-10 | 10-15 | 15-24 | 24 | TOTAL |
|-------------------|-----|-----|------|-------|-------|----|-------|
| N                 | 0   | 0   | 1    | 2     | 1     | 0  | 4     |
| NNE               | 0   | 0   | 0    | 0     | 0     | 0  | 0     |
| NE                | 0   | 0   | 2    | 0     | 0     | 0  | 4     |
| NNE               | 0   | 0   | 4    | 1     | 1     | 1  | 7     |
| E                 | 0   | 1   | 0    | 0     | 0     | 0  | 1     |
| ESE               | 0   | 2   | 1    | 0     | 0     | 0  | 3     |
| SE                | 0   | 0   | 1    | 1     | 0     | 0  | 2     |
| SSE               | 0   | 0   | 0    | 1     | 0     | 0  | 1     |
| S                 | 0   | 0   | 0    | 0     | 0     | 0  | 0     |
| SSW               | 0   | 0   | 1    | 1     | 1     | 0  | 3     |
| SW                | 0   | 1   | 1    | 0     | 0     | 0  | 2     |
| WSW               | 0   | 0   | 2    | 1     | 5     | 2  | 10    |
| W                 | 0   | 0   | 2    | 5     | 7     | 1  | 15    |
| WSW               | 0   | 0   | 1    | 0     | 10    | 0  | 11    |
| NW                | 0   | 0   | 4    | 10    | 2     | 14 | 30    |
| NW                | 0   | 0   | 1    | 4     | 2     | 1  | 8     |
| VARIABLE          | 0   | 0   | 0    | 0     | 0     | 0  | 0     |

TOTAL 120

PERIOD OF CALM(HOURS): 00

HOURS OF MISSING DATA: 00

## HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD- 01 1 1 1-01 22104

STABILITY CLASS: 0

ELEVATION: SPEED:SP300 DIRECTION:DIR300 LAPSE:LT300

WIND SPEED(MPH)

| WIND<br>DIRECTION | 1-3 | 3-4 | 4-10 | 10-15 | 15-24 | 24 | TOTAL |
|-------------------|-----|-----|------|-------|-------|----|-------|
| N                 | 0   | 2   | 5    | 4     | 4     | 1  | 16    |
| NNE               | 1   | 2   | 0    | 0     | 1     | 0  | 10    |
| NE                | 0   | 3   | 12   | 15    | 11    | 2  | 43    |
| NNE               | 0   | 4   | 11   | 0     | 5     | 2  | 22    |
| E                 | 1   | 3   | 5    | 0     | 0     | 0  | 9     |
| ESE               | 0   | 3   | 2    | 0     | 0     | 0  | 5     |
| SE                | 1   | 4   | 3    | 1     | 5     | 0  | 14    |
| SSE               | 0   | 1   | 0    | 1     | 0     | 1  | 11    |
| S                 | 1   | 1   | 0    | 10    | 2     | 1  | 20    |
| SSW               | 0   | 4   | 0    | 22    | 15    | 2  | 49    |
| SW                | 0   | 0   | 5    | 0     | 4     | 2  | 17    |
| WSW               | 1   | 4   | 5    | 7     | 10    | 5  | 32    |
| W                 | 2   | 2   | 7    | 13    | 13    | 0  | 37    |
| WSW               | 0   | 5   | 0    | 31    | 36    | 47 | 120   |
| NW                | 0   | 2   | 0    | 20    | 37    | 47 | 120   |
| NNW               | 3   | 1   | 10   | 10    | 10    | 11 | 65    |
| VARIABLE          | 4   | 0   | 0    | 0     | 0     | 0  | 4     |

TOTAL 613

PERIOD OF CALM(HOURS): 00

HOURS OF MISSING DATA: 00

TABLE 11

## HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD: 01 1 1 1-01 23184

STABILITY CLASS: E

ELEVATION: SPEED:SPD300 DIRECTION:DIR300 LAPSE:DT300

WIND SPEED(MPH)

| WIND<br>DIRECTION | 1-3 | 3-4 | 5-12 | 13-18 | 19-24 | 25+ | TOTAL |
|-------------------|-----|-----|------|-------|-------|-----|-------|
| N                 | 0   | 4   | 5    | 5     | 0     | 5   | 25    |
| NNE               | 1   | 2   | 10   | 3     | 2     | 0   | 18    |
| NE                | 2   | 2   | 7    | 10    | 7     | 0   | 28    |
| ENE               | 1   | 3   | 2    | 5     | 0     | 1   | 12    |
| E                 | 1   | 2   | 3    | 2     | 0     | 7   | 15    |
| ESE               | 1   | 0   | 3    | 1     | 0     | 10  | 15    |
| SE                | 1   | 1   | 0    | 2     | 2     | 7   | 13    |
| SSE               | 0   | 0   | 2    | 0     | 0     | 11  | 23    |
| S                 | 0   | 0   | 5    | 2     | 0     | 17  | 24    |
| SSW               | 1   | 1   | 0    | 10    | 20    | 25  | 57    |
| SW                | 0   | 3   | 3    | 12    | 21    | 15  | 54    |
| WSW               | 0   | 1   | 3    | 12    | 10    | 10  | 36    |
| W                 | 0   | 0   | 5    | 15    | 25    | 13  | 58    |
| WNW               | 0   | 1   | 11   | 44    | 68    | 10  | 134   |
| NW                | 0   | 4   | 7    | 42    | 61    | 25  | 149   |
| NNW               | 1   | 1   | 7    | 10    | 24    | 3   | 46    |
| UNRECORDED        | 4   | 0   | 0    | 0     | 0     | 0   | 4     |

TOTAL 750  
PERIODS OF CALM(HOURS): 0  
HOURS OF MISSING DATA: 00

## HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD: 01 1 1 1-01 23184

STABILITY CLASS: F

ELEVATION: SPEED:SPD300 DIRECTION:DIR300 LAPSE:DT300

WIND SPEED(MPH)

| WIND<br>DIRECTION | 1-3 | 3-4 | 5-12 | 13-18 | 19-24 | 25+ | TOTAL |
|-------------------|-----|-----|------|-------|-------|-----|-------|
| N                 | 0   | 2   | 0    | 13    | 1     | 0   | 26    |
| NNE               | 1   | 0   | 3    | 0     | 0     | 0   | 10    |
| NE                | 0   | 1   | 5    | 3     | 2     | 0   | 11    |
| ENE               | 0   | 1   | 0    | 1     | 0     | 0   | 2     |
| E                 | 0   | 0   | 1    | 0     | 0     | 0   | 1     |
| ESE               | 1   | 0   | 0    | 0     | 0     | 0   | 1     |
| SE                | 0   | 1   | 2    | 2     | 1     | 2   | 8     |
| SSE               | 0   | 2   | 4    | 1     | 1     | 0   | 8     |
| S                 | 1   | 2   | 1    | 2     | 2     | 0   | 8     |
| SSW               | 0   | 0   | 3    | 4     | 0     | 4   | 20    |
| SW                | 0   | 2   | 0    | 2     | 7     | 5   | 31    |
| WSW               | 0   | 1   | 3    | 3     | 4     | 5   | 16    |
| W                 | 0   | 2   | 0    | 11    | 0     | 11  | 41    |
| WNW               | 0   | 0   | 2    | 11    | 13    | 0   | 36    |
| NW                | 0   | 2   | 5    | 13    | 12    | 4   | 36    |
| NNW               | 0   | 5   | 5    | 11    | 24    | 0   | 65    |
| UNRECORDED        | 1   | 0   | 0    | 0     | 0     | 0   | 1     |

TOTAL 333  
PERIODS OF CALM(HOURS): 0  
HOURS OF MISSING DATA: 00

TABLE 11

4 of 4

## HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD- 01 1 1 1-01 23124

STABILITY CLASS: 0

ELEVATION: SPEED:0P0300 DIRECTION:014300 LAPSE:0T300

WIND SPEED(MPH)

| WIND<br>DIRECTION | 1-3 | 3-4 | 5-10 | 12-15 | 16-24 | >24 | TOTAL |
|-------------------|-----|-----|------|-------|-------|-----|-------|
| N                 | 4   | 3   | 0    | 0     | 1     | 0   | 8     |
| NNE               | 0   | 3   | 4    | 1     | 0     | 0   | 8     |
| NE                | 1   | 5   | 3    | 2     | 0     | 0   | 11    |
| NNE               | 0   | 5   | 2    | 1     | 0     | 0   | 8     |
| E                 | 1   | 3   | 4    | 1     | 0     | 0   | 9     |
| ESE               | 0   | 0   | 0    | 0     | 0     | 0   | 0     |
| SE                | 0   | 0   | 2    | 1     | 0     | 0   | 3     |
| SSE               | 0   | 1   | 1    | 4     | 0     | 0   | 6     |
| S                 | 0   | 0   | 4    | 10    | 0     | 0   | 14    |
| SSW               | 0   | 1   | 1    | 5     | 0     | 0   | 7     |
| SW                | 0   | 1   | 2    | 5     | 3     | 1   | 12    |
| WSW               | 0   | 1   | 3    | 0     | 0     | 0   | 13    |
| W                 | 0   | 2   | 1    | 0     | 1     | 1   | 5     |
| WSW               | 0   | 2   | 3    | 7     | 4     | 1   | 17    |
| W                 | 0   | 2   | 4    | 0     | 0     | 2   | 23    |
| WNW               | 0   | 2   | 4    | 0     | 0     | 1   | 16    |
| VARIABLE          | 2   | 0   | 0    | 0     | 0     | 0   | 2     |

TOTAL 178

PERIODS OF CALM(HOURS): 0

HOURS OF MISSING DATA: 00

## HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD- 01 1 1 1-01 23124

STABILITY CLASS: ALL

ELEVATION: SPEED:0P0300 DIRECTION:014300 LAPSE:0T300

WIND SPEED(MPH)

| WIND<br>DIRECTION | 1-3 | 3-4 | 5-10 | 12-15 | 16-24 | >24 | TOTAL |
|-------------------|-----|-----|------|-------|-------|-----|-------|
| N                 | 4   | 11  | 20   | 32    | 14    | 0   | 80    |
| NNE               | 3   | 7   | 25   | 10    | 3     | 0   | 54    |
| NE                | 3   | 11  | 30   | 31    | 23    | 2   | 100   |
| NNE               | 1   | 14  | 23   | 9     | 13    | 4   | 64    |
| E                 | 3   | 9   | 15   | 3     | 0     | 7   | 37    |
| ESE               | 3   | 5   | 0    | 1     | 2     | 10  | 27    |
| SE                | 2   | 0   | 0    | 7     | 0     | 0   | 41    |
| SSE               | 0   | 4   | 16   | 15    | 10    | 12  | 57    |
| S                 | 2   | 3   | 10   | 31    | 10    | 10  | 66    |
| SSW               | 1   | 6   | 17   | 42    | 54    | 41  | 161   |
| SW                | 0   | 7   | 20   | 31    | 35    | 23  | 116   |
| WSW               | 1   | 7   | 17   | 35    | 35    | 23  | 118   |
| W                 | 2   | 0   | 23   | 48    | 50    | 28  | 164   |
| WSW               | 0   | 0   | 27   | 100   | 145   | 77  | 349   |
| W                 | 1   | 10  | 31   | 100   | 130   | 103 | 391   |
| WNW               | 4   | 9   | 22   | 52    | 70    | 24  | 187   |
| VARIABLE          | 11  | 0   | 0    | 0     | 0     | 0   | 11    |

TOTAL 2071

PERIODS OF CALM(HOURS): 0

HOURS OF MISSING DATA: 00

**TABLE 12**  
**Oyster Creek Joint Frequency Tables of Wind Speed and Direction 380ft**  
**versus Delta Temperature 380-33ft**  
**04/01/81-06/30/81**

1 of 4

**HOURS AT EACH WIND SPEED AND DIRECTION**

**PERIOD OF RECORD-** 01 4 1 1-01 03004

**STABILITY CLASS:** A

**ELEVATION:** SPEED:SP0300 DIRECTION:DIR0300 LAPSE:DT300

**WIND SPEED(MPH)**

| <u>WIND<br/>DIRECTION</u> | <u>1-3</u> | <u>3-4</u> | <u>4-10</u> | <u>10-15</u> | <u>15-24</u> | <u>&gt;24</u> | <u>TOTAL</u> |
|---------------------------|------------|------------|-------------|--------------|--------------|---------------|--------------|
| N                         | 0          | 0          | 0           | 0            | 3            | 0             | 3            |
| NNE                       | 0          | 0          | 1           | 0            | 1            | 0             | 2            |
| NE                        | 0          | 0          | 2           | 2            | 0            | 0             | 4            |
| ENE                       | 0          | 0          | 3           | 0            | 2            | 3             | 14           |
| E                         | 0          | 0          | 3           | 1            | 1            | 0             | 5            |
| ESE                       | 0          | 0          | 2           | 1            | 0            | 0             | 3            |
| SE                        | 0          | 0          | 0           | 1            | 0            | 0             | 1            |
| SSE                       | 0          | 0          | 1           | 1            | 0            | 0             | 2            |
| S                         | 0          | 0          | 1           | 1            | 0            | 0             | 2            |
| SSW                       | 0          | 0          | 1           | 0            | 0            | 0             | 1            |
| SW                        | 0          | 1          | 0           | 2            | 1            | 0             | 4            |
| WSW                       | 0          | 0          | 0           | 2            | 1            | 1             | 4            |
| W                         | 0          | 1          | 0           | 1            | 0            | 0             | 2            |
| WSW                       | 0          | 0          | 0           | 7            | 3            | 7             | 17           |
| WW                        | 0          | 0          | 1           | 7            | 5            | 7             | 20           |
| WNW                       | 0          | 0          | 1           | 1            | 1            | 2             | 5            |
| UNTABLE                   | 0          | 0          | 0           | 0            | 0            | 0             | 0            |

**TOTAL** 55  
**PERIODS OF CALM(HOURS):** 0  
**HOURS OF MISSING DATA:** 187

**HOURS AT EACH WIND SPEED AND DIRECTION**

**PERIOD OF RECORD-** 01 4 1 1-01 03004

**STABILITY CLASS:** B

**ELEVATION:** SPEED:SP0300 DIRECTION:DIR0300 LAPSE:DT300

**WIND SPEED(MPH)**

| <u>WIND<br/>DIRECTION</u> | <u>1-3</u> | <u>3-4</u> | <u>4-10</u> | <u>10-15</u> | <u>15-24</u> | <u>&gt;24</u> | <u>TOTAL</u> |
|---------------------------|------------|------------|-------------|--------------|--------------|---------------|--------------|
| N                         | 0          | 0          | 0           | 2            | 4            | 0             | 6            |
| NNE                       | 0          | 0          | 0           | 1            | 0            | 0             | 1            |
| NE                        | 0          | 0          | 2           | 1            | 0            | 0             | 3            |
| ENE                       | 0          | 0          | 1           | 3            | 0            | 0             | 4            |
| E                         | 0          | 0          | 2           | 0            | 0            | 0             | 2            |
| ESE                       | 0          | 0          | 4           | 1            | 0            | 0             | 5            |
| SE                        | 0          | 1          | 4           | 1            | 0            | 0             | 6            |
| SSE                       | 0          | 0          | 1           | 4            | 0            | 0             | 5            |
| S                         | 0          | 0          | 1           | 4            | 1            | 1             | 7            |
| SSW                       | 0          | 0          | 0           | 1            | 3            | 0             | 4            |
| SW                        | 0          | 0          | 0           | 1            | 0            | 0             | 1            |
| WSW                       | 0          | 0          | 0           | 1            | 0            | 0             | 1            |
| W                         | 0          | 0          | 1           | 2            | 2            | 1             | 6            |
| WNW                       | 0          | 0          | 0           | 1            | 1            | 5             | 7            |
| WW                        | 0          | 1          | 0           | 2            | 3            | 2             | 14           |
| WNW                       | 0          | 0          | 1           | 2            | 2            | 0             | 5            |
| UNTABLE                   | 0          | 0          | 0           | 0            | 0            | 0             | 0            |

**TOTAL** 77  
**PERIODS OF CALM(HOURS):** 0  
**HOURS OF MISSING DATA:** 187

TABLE 12

2 of 4

## HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD: 01 4 1 1-01 03004

STABILITY CLASS: 0

ELEVATION: SPEED:SPB300 DIRECTION:DIR300 LAPSE:DT300

WIND SPEED(MPH)

| WIND<br>DIRECTION | 1-3 | 3-4 | 5-12 | 13-18 | 19-24 | >24 | TOTAL |
|-------------------|-----|-----|------|-------|-------|-----|-------|
| N                 | 0   | 0   | 0    | 0     | 2     | 0   | 2     |
| NNE               | 0   | 1   | 0    | 0     | 0     | 0   | 1     |
| NE                | 0   | 0   | 0    | 1     | 0     | 0   | 1     |
| ENE               | 0   | 0   | 2    | 2     | 2     | 0   | 6     |
| E                 | 0   | 1   | 0    | 2     | 0     | 0   | 3     |
| ESE               | 0   | 0   | 2    | 0     | 0     | 0   | 2     |
| SE                | 0   | 2   | 2    | 0     | 0     | 0   | 4     |
| SSE               | 0   | 1   | 1    | 2     | 1     | 0   | 5     |
| S                 | 0   | 1   | 0    | 14    | 2     | 0   | 17    |
| SSW               | 0   | 0   | 2    | 10    | 5     | 1   | 21    |
| SW                | 0   | 0   | 0    | 2     | 0     | 0   | 2     |
| WSW               | 0   | 0   | 1    | 0     | 0     | 0   | 1     |
| W                 | 0   | 1   | 0    | 5     | 1     | 2   | 9     |
| WNW               | 0   | 0   | 1    | 7     | 5     | 2   | 15    |
| W                 | 0   | 0   | 1    | 5     | 5     | 5   | 22    |
| WNW               | 0   | 1   | 4    | 2     | 0     | 4   | 11    |
| VARIABLE          | 0   | 0   | 0    | 0     | 0     | 0   | 0     |

TOTAL 138

PERIODS OF CALM(HOURS): 0

HOURS OF MISSING DATA: 157

## HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD: 01 4 1 1-01 03004

STABILITY CLASS: 0

ELEVATION: SPEED:SPB300 DIRECTION:DIR300 LAPSE:DT300

WIND SPEED(MPH)

| WIND<br>DIRECTION | 1-3 | 3-4 | 5-12 | 13-18 | 19-24 | >24 | TOTAL |
|-------------------|-----|-----|------|-------|-------|-----|-------|
| N                 | 0   | 1   | 0    | 7     | 2     | 0   | 10    |
| NNE               | 0   | 1   | 11   | 5     | 2     | 0   | 19    |
| NE                | 0   | 2   | 11   | 7     | 2     | 0   | 22    |
| ENE               | 0   | 2   | 14   | 11    | 5     | 7   | 49    |
| E                 | 0   | 2   | 11   | 11    | 4     | 2   | 40    |
| ESE               | 1   | 2   | 21   | 5     | 0     | 0   | 39    |
| SE                | 0   | 4   | 20   | 5     | 0     | 0   | 39    |
| SSE               | 0   | 0   | 20   | 23    | 5     | 0   | 54    |
| S                 | 1   | 0   | 17   | 22    | 5     | 5   | 60    |
| SSW               | 0   | 0   | 5    | 24    | 22    | 13  | 70    |
| SW                | 1   | 3   | 1    | 14    | 14    | 10  | 52    |
| WSW               | 0   | 2   | 0    | 14    | 21    | 4   | 51    |
| W                 | 0   | 2   | 4    | 14    | 5     | 0   | 25    |
| WNW               | 0   | 2   | 0    | 10    | 14    | 5   | 40    |
| W                 | 0   | 0   | 10   | 20    | 20    | 14  | 64    |
| WNW               | 0   | 2   | 2    | 5     | 5     | 4   | 18    |
| VARIABLE          | 0   | 0   | 0    | 0     | 0     | 0   | 0     |

TOTAL 638

PERIODS OF CALM(HOURS): 0

HOURS OF MISSING DATA: 157

TABLE 12

3 of 4

## HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD- 01 4 1 1-01 03004

STABILITY CLASS: E

ELEVATION: SPEED:0P0300 DIRECTION:DIR300 LAPSE:07300

WIND SPEED(MPH)

| WIND<br>DIRECTION | 1-3 | 3-4 | 5-10 | 12-18 | 19-24 | 25+ | TOTAL |
|-------------------|-----|-----|------|-------|-------|-----|-------|
| N                 | 0   | 1   | 2    | 1     | 1     | 0   | 5     |
| NNE               | 1   | 0   | 5    | 1     | 0     | 0   | 6     |
| NE                | 1   | 4   | 22   | 10    | 2     | 0   | 39    |
| ENE               | 0   | 1   | 17   | 0     | 0     | 1   | 27    |
| E                 | 1   | 2   | 6    | 8     | 1     | 0   | 18    |
| ESE               | 0   | 3   | 7    | 6     | 0     | 0   | 16    |
| SE                | 0   | 6   | 7    | 8     | 2     | 0   | 23    |
| SSE               | 0   | 6   | 10   | 10    | 10    | 0   | 36    |
| S                 | 2   | 6   | 11   | 13    | 4     | 0   | 46    |
| SSW               | 0   | 4   | 13   | 40    | 40    | 14  | 117   |
| SW                | 1   | 9   | 7    | 23    | 51    | 30  | 121   |
| WSW               | 1   | 1   | 9    | 20    | 31    | 5   | 66    |
| W                 | 1   | 0   | 0    | 12    | 10    | 0   | 23    |
| WNW               | 0   | 1   | 6    | 14    | 20    | 10  | 51    |
| NW                | 0   | 2   | 7    | 10    | 20    | 0   | 39    |
| NNW               | 0   | 3   | 3    | 6     | 10    | 3   | 25    |
| UNREABLE          | 1   | 1   | 0    | 0     | 0     | 0   | 2     |

TOTAL 787  
 PERIODS OF CALM(HOURS): 0  
 HOURS OF MISSING DATA: 187

## HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD- 01 4 1 1-01 03004

STABILITY CLASS: F

ELEVATION: SPEED:0P0300 DIRECTION:DIR300 LAPSE:07300

WIND SPEED(MPH)

| WIND<br>DIRECTION | 1-3 | 3-4 | 5-10 | 12-18 | 19-24 | 25+ | TOTAL |
|-------------------|-----|-----|------|-------|-------|-----|-------|
| N                 | 0   | 0   | 1    | 7     | 3     | 2   | 13    |
| NNE               | 0   | 1   | 2    | 0     | 0     | 0   | 3     |
| NE                | 0   | 0   | 3    | 0     | 0     | 0   | 3     |
| ENE               | 1   | 0   | 1    | 0     | 0     | 0   | 2     |
| E                 | 0   | 0   | 1    | 1     | 0     | 0   | 2     |
| ESE               | 0   | 0   | 1    | 0     | 0     | 0   | 1     |
| SE                | 0   | 0   | 1    | 0     | 0     | 0   | 1     |
| SSE               | 0   | 1   | 2    | 1     | 0     | 0   | 4     |
| S                 | 0   | 0   | 1    | 1     | 1     | 0   | 3     |
| SSW               | 0   | 0   | 1    | 1     | 3     | 0   | 5     |
| SW                | 0   | 0   | 2    | 4     | 10    | 4   | 20    |
| WSW               | 1   | 1   | 5    | 5     | 8     | 4   | 24    |
| W                 | 0   | 0   | 2    | 2     | 4     | 0   | 12    |
| WNW               | 0   | 1   | 2    | 10    | 17    | 3   | 33    |
| NW                | 1   | 2   | 5    | 2     | 10    | 1   | 30    |
| NNW               | 0   | 0   | 1    | 5     | 0     | 3   | 10    |
| UNREABLE          | 0   | 0   | 0    | 0     | 0     | 0   | 0     |

TOTAL 177  
 PERIODS OF CALM(HOURS): 0  
 HOURS OF MISSING DATA: 187

TABLE 12

4 of 4

## HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD- 01 4 1 1-01 03004

STABILITY CLASS: 0

ELEVATION: SPEED:SP0300 DIRECTION:DIR300 LAPSE:DT300

WIND SPEED(MPH)

| WIND<br>DIRECTION | 1-3 | 3-4 | 5-12 | 13-18 | 19-24 | >24 | TOTAL |
|-------------------|-----|-----|------|-------|-------|-----|-------|
| N                 | 0   | 4   | 3    | 0     | 12    | 4   | 23    |
| NNE               | 1   | 1   | 4    | 0     | 2     | 0   | 10    |
| NE                | 1   | 5   | 0    | 1     | 0     | 0   | 10    |
| NNE               | 0   | 2   | 2    | 0     | 1     | 0   | 5     |
| E                 | 0   | 2   | 0    | 0     | 0     | 0   | 2     |
| ESE               | 0   | 1   | 0    | 0     | 0     | 0   | 1     |
| SE                | 0   | 1   | 5    | 0     | 0     | 0   | 6     |
| SSE               | 0   | 0   | 3    | 0     | 0     | 0   | 3     |
| S                 | 0   | 1   | 0    | 1     | 0     | 0   | 2     |
| SSW               | 0   | 1   | 1    | 2     | 1     | 0   | 5     |
| SW                | 0   | 1   | 1    | 3     | 0     | 1   | 11    |
| WSW               | 1   | 2   | 3    | 5     | 3     | 0   | 20    |
| W                 | 1   | 2   | 4    | 1     | 3     | 5   | 16    |
| WNW               | 0   | 0   | 4    | 4     | 4     | 0   | 12    |
| NW                | 0   | 0   | 3    | 4     | 0     | 4   | 17    |
| NNW               | 0   | 1   | 4    | 3     | 1     | 1   | 10    |
| VARIABLE          | 2   | 0   | 0    | 0     | 0     | 0   | 2     |

TOTAL 177

PERIODS OF CALM(HOURS): 0

HOURS OF MISSING DATA: 107

## HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD- 01 4 1 1-01 03004

STABILITY CLASS: ALL

ELEVATION: SPEED:SP0300 DIRECTION:DIR300 LAPSE:DT300

WIND SPEED(MPH)

| WIND<br>DIRECTION | 1-3 | 3-4 | 5-12 | 13-18 | 19-24 | >24 | TOTAL |
|-------------------|-----|-----|------|-------|-------|-----|-------|
| N                 | 2   | 0   | 10   | 20    | 20    | 0   | 51    |
| NNE               | 2   | 0   | 23   | 21    | 5     | 0   | 57    |
| NE                | 2   | 12  | 51   | 22    | 4     | 0   | 91    |
| NNE               | 1   | 5   | 41   | 31    | 14    | 11  | 103   |
| E                 | 1   | 7   | 20   | 24    | 0     | 2   | 54    |
| ESE               | 1   | 0   | 37   | 10    | 0     | 0   | 48    |
| SE                | 0   | 13  | 40   | 10    | 0     | 0   | 70    |
| SSE               | 0   | 14  | 20   | 41    | 24    | 0   | 100   |
| S                 | 3   | 13  | 31   | 50    | 10    | 12  | 130   |
| SSW               | 0   | 5   | 23   | 70    | 00    | 20  | 223   |
| SW                | 2   | 14  | 11   | 40    | 21    | 54  | 211   |
| WSW               | 3   | 7   | 27   | 47    | 64    | 10  | 168   |
| W                 | 2   | 11  | 10   | 41    | 30    | 0   | 100   |
| WNW               | 0   | 5   | 22   | 51    | 74    | 33  | 190   |
| NW                | 1   | 0   | 27   | 00    | 00    | 43  | 230   |
| NNW               | 0   | 7   | 10   | 24    | 33    | 17  | 97    |
| VARIABLE          | 3   | 1   | 0    | 0     | 0     | 0   | 4     |

TOTAL 807

PERIODS OF CALM(HOURS): 0

HOURS OF MISSING DATA: 107

### **III. ENVIRONMENTAL SUMMARY**

## Radiological Environmental Monitoring

The environmental monitoring program was conducted during the reporting period in accordance with Technical Specification 4.6.B.3. A single exception was vendor failure to perform some of the required analyses on May clam samples from stations 23, 24, 25.

Also, it should be noted that the freezing of Barnegat Bay during January and February prevented the collection of some clam, silt and surface water samples.

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 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 scheduled collection period covered by this monitoring extended from December 1, 1980 through May 31, 1981. The sampling locations are listed in Table 13 and are depicted in Figure 1.

TABLE 13  
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                     | Pinevald, N.J. - Route #9 at JCP&L Company Pinevald 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 Northbound 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 Supplied"                 | RG                      |
| 11                    | Harvey Cedars, N.J. - Long Beach Blvd. and East 70th Street, Long Beach Island             | RG                      |
| 12                    | Cedar Run, 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                      |

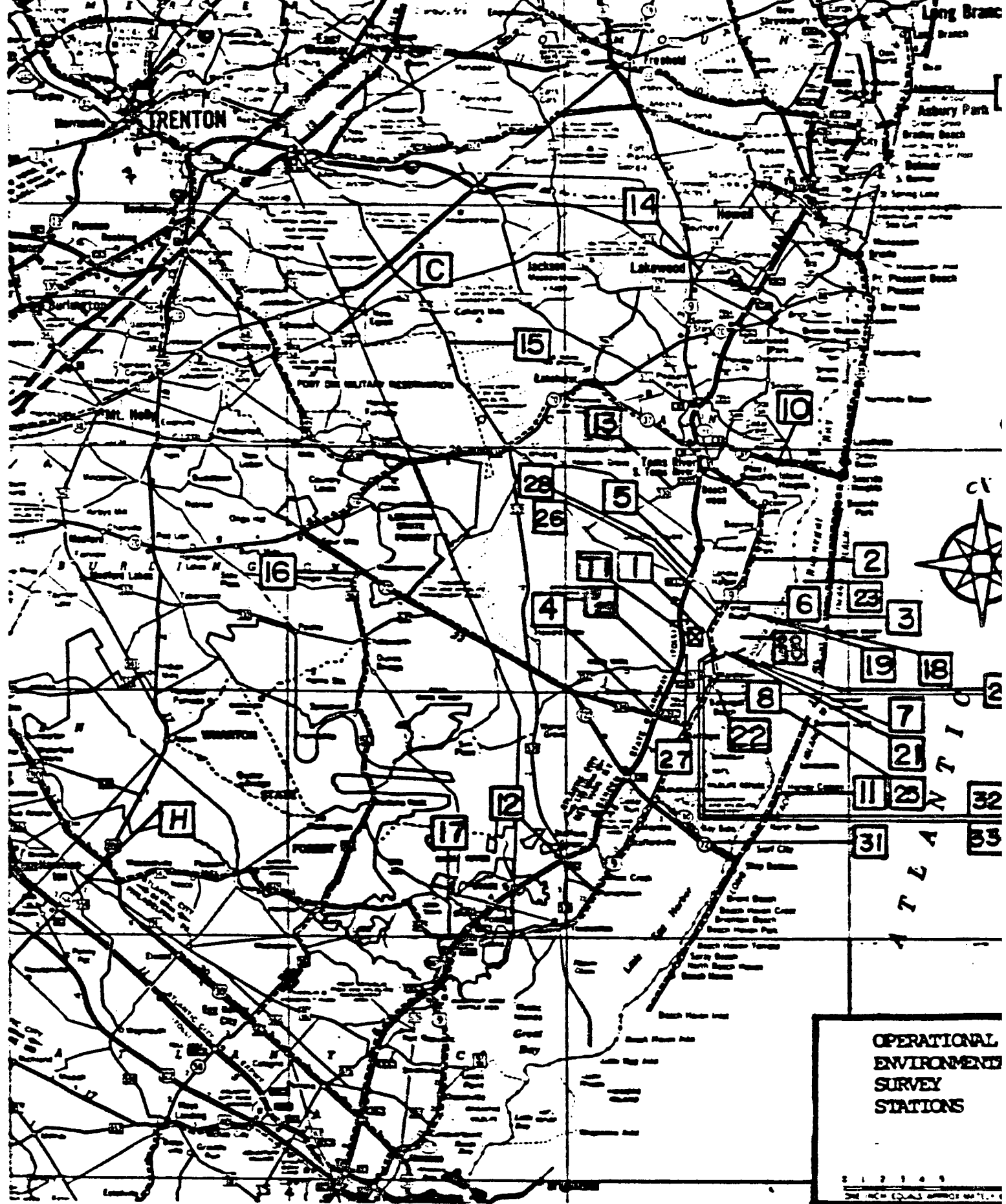
TABLE 13 (Con't)  
OYSTER CREEK STATION  
ENVIRONMENTAL MONITORING STATIONS  
LOCATION AND TYPE SAMPLE COLLECTED

| <u>STATION NUMBER</u> |   | <u>SAMPLE COLLECTED</u> |
|-----------------------|---|-------------------------|
| 15                    | New Egypt, N.J. - Route #539, last pole on South side, adjacent to "Bomark" Site                  | RG                      |
| 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 Scouts Creek, approximately 400 yards SE (150°) of FL "1" (Heading on BWS "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                     |

TABLE 13 (Con't)  
OYSTER CREEK STATION  
ENVIRONMENTAL MONITORING STATIONS  
LOCATION AND TYPE SAMPLE COLLECTED

| <u>STATION NUMBER</u> |  | <u>SAMPLE COLLECTED</u> |
|-----------------------|--|-------------------------|
| 29                    | Barnegat, N.J. - Route #534 and the Garden State Parkway   | FPV                     |
| 30                    | Forked River, N.J. - Finninger Farm along Fence  | FPV                     |
| 31                    | Manahawkin Bay - Approximately 25 yards SE (140°) of C "23" and H "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 Company District Dispatcher  | RG, AP, RW              |
| H                     | Hammonton, N.J. - Egg Harbor Road, at the Atlantic City Electric District Dispatcher   | RG, AP, RW              |

AP - Air Particulate  
 RG - Radiogas/Direct Radiation  
 RW - Precipitation  
 WW - Well Water  
 SW - Surface Water  
 AQS - Silt  
 AQL - Clams  
 FPV - Pasture/Crops  
 V - Vegetation  
 E - Soil



OYSTER CREEK NUCLEAR GENERATING STATION

FIGURE 1

Table 14  
Radiogas Film Badges  
Scheduled Collection Period  
December 1, 1980 through May 31, 1981

| Collection Date |          | 12-8-80 | 1-5-81 | 2-2-81 |  | Three<br>Month<br>Total | 3-2-81 | 3-30-81 | 4-27-81 | 5-26-81 | Three<br>Month<br>Total | Six<br>Month<br>Total |
|-----------------|----------|---------|--------|--------|--|-------------------------|--------|---------|---------|---------|-------------------------|-----------------------|
| Station         | Unit     |         |        |        |  |                         |        |         |         |         |                         |                       |
| 1               | Millirem | 3       | 0      | 0      |  | 3                       | 0      | 4       | 3       | 0       | 7                       | 10                    |
| T1              | Millirem | 0       | 0      | 4      |  | 4                       | 0      | 0       | 0       | 0       | 0                       | 4                     |
| 2               | Millirem | 0       | 0      | 0      |  | 0                       | 0      | 0       | 2       | 0       | 2                       | 2                     |
| 3               | Millirem | 0       | 0      | 0      |  | 0                       | 0      | 0       | 2       | 0       | 2                       | 2                     |
| 4               | Millirem | 0       | 0      | 0      |  | 0                       | 0      | 0       | 2       | 0       | 2                       | 2                     |
| 5               | Millirem | 0       | 0      | 0      |  | 0                       | 0      | 0       | 2       | 0       | 2                       | 2                     |
| 6               | Millirem | 0       | 0      | 0      |  | 0                       | 0      | 0       | 2       | 0       | 2                       | 2                     |
| 7               | Millirem | 0       | 0      | 0      |  | 0                       | 0      | 0       | 2       | 0       | 2                       | 2                     |
| 8               | Millirem | 0       | 0      | 0      |  | 0                       | 0      | 0       | 0       | 0       | 0                       | 0                     |
| 9               | Millirem | 0       | 0      | 0      |  | 0                       | 0      | 0       | 0       | 0       | 0                       | 0                     |
| 10              | Millirem | 0       | 0      | 0      |  | 0                       | 0      | 0       | 0       | 0       | 0                       | 0                     |
| 11              | Millirem | 0       | 0      | 4      |  | 4                       | 0      | 0       | 0       | 0       | 4                       | 4                     |
| 12              | Millirem | 0       | 0      | 0      |  | 0                       | 0      | 0       | 0       | 0       | 0                       | 0                     |
| 13              | Millirem | 0       | 0      | 0      |  | 0                       | 0      | 0       | 0       | 0       | 0                       | 0                     |
| 14              | Millirem | 0       | 0      | 0      |  | 0                       | 0      | 8       | 0       | 0       | 8                       | 8                     |
| 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       | 0       | 0       | 0                       | 0                     |
| A               | Millirem | 0       | 0      | 0      |  | 0                       | 0      | 0       | 0       | 0       | 0                       | 0                     |
| C               | Millirem | 0       | 0      | 0      |  | 0                       | 0      | 0       | 2       | 0       | 2                       | 2                     |
| H               | Millirem | 0       | 0      | 0      |  | 0                       | 0      | 4       | 0       | 0       | 4                       | 4                     |

FOR  
DECEMBER 1980 THRU MAY 1981

| ANALYSIS |              | 17DEC80 |              | 16JAN81 |              | 11FEB81 |            | 16MAR81      |      | 09APR81      |      | 07MAY81      |      | 10JUN81      |      |            |            |
|----------|--------------|---------|--------------|---------|--------------|---------|------------|--------------|------|--------------|------|--------------|------|--------------|------|------------|------------|
| DATE     |              |         |              |         |              |         |            |              |      |              |      |              |      |              |      |            |            |
| STATION  | COLLECT DATE | DOSE    | COLLECT DATE | DOSE    | COLLECT DATE | DOSE    | 3-MO TOTAL | COLLECT DATE | DOSE | COLLECT DATE | DOSE | COLLECT DATE | DOSE | COLLECT DATE | DOSE | 3-MO TOTAL | 6-MO TOTAL |
| A        | 09DEC80      | 5.06    | 06JAN81      | 5.35    | 03FEB81      | 6.77    | 17.18      | 03MAR81      | 6.55 | 01APR81      | 5.12 | 28APR81      | 4.39 | 04JUN81      | 4.55 | 20.91      | 58.09      |
| C        | 08DEC80      | 4.04    | 05JAN81      | 4.56    | 02FEB81      | 5.56    | 14.16      | 03MAR81      | 5.61 | 31MAR81      | 4.47 | 27APR81      | 3.83 | 05JUN81      | 4.56 | 16.49      | 32.65      |
| H        | 08DEC80      | 3.86    | 05JAN81      | 3.81    | 02FEB81      | 4.88    | 12.55      | 02MAR81      | 5.32 | 31MAR81      | 3.86 | 27APR81      | 4.40 | 05JUN81      | 3.26 | 17.56      | 30.11      |
| 1        | 10DEC80      | 5.54    | 08JAN81      | 6.05    | 04FEB81      | 8.25    | 19.84      | 10MAR81      | 8.11 | 02APR81      | 6.67 | 30APR81      | 5.56 | 05JUN81      | 5.65 | 25.69      | 45.83      |
| 2        | 11DEC80      | 3.58    | 08JAN81      | 4.44    | 03FEB81      | 4.96    | 12.98      | 04MAR81      | 5.56 | 03APR81      | 3.94 | 30APR81      | 5.76 | 04JUN81      | 4.23 | 19.49      | 32.47      |
| 3        | 09DEC80      | 3.64    | 06JAN81      | 4.55    | 03FEB81      | 5.12    | 13.31      | 04MAR81      | 5.16 | 01APR81      | 3.84 | 28APR81      | 4.76 | 04JUN81      | 4.12 | 17.39      | 30.69      |
| 4        | 08DEC80      | 3.88    | 09JAN81      | 4.14    | 04FEB81      | 4.95    | 12.97      | 02MAR81      | 4.92 | 31MAR81      | 3.57 | 27APR81      | 4.19 | 03JUN81      | 4.39 | 17.07      | 30.04      |
| 5        | 11DEC80      | 3.88    | 08JAN81      | 3.99    | 05FEB81      | 5.54    | 13.41      | 09MAR81      | 5.16 | 03APR81      | 4.26 | 30APR81      | 4.03 | 04JUN81      | 4.60 | 18.05      | 31.46      |
| 6        | "            | "       | 08JAN81      | 4.20    | 03FEB81      | 5.37    | 9.57       | 03MAR81      | 5.60 | 03APR81      | 3.97 | 30APR81      | 4.47 | 04JUN81      | 3.99 | 18.03      | 27.60      |
| 7        | 11DEC80      | 3.89    | 08JAN81      | 4.15    | 04FEB81      | 6.02    | 14.06      | 02MAR81      | 5.49 | 02APR81      | 4.15 | 29APR81      | 4.44 | "            | "    | 14.08      | 23.14      |
| 8        | 10DEC80      | 3.76    | 09JAN81      | 4.00    | 04FEB81      | 5.11    | 12.87      | 02MAR81      | 5.28 | 02APR81      | 3.77 | 29APR81      | 4.03 | 03JUN81      | 3.63 | 16.76      | 29.63      |
| 9        | 11DEC80      | 4.17    | 09JAN81      | 4.74    | 04FEB81      | 5.62    | 14.53      | 02MAR81      | 5.67 | 02APR81      | 4.82 | 29APR81      | 4.71 | 03JUN81      | 4.43 | 19.62      | 34.15      |
| Y1       | 10DEC80      | 5.94    | 08JAN81      | 6.87    | 04FEB81      | 7.89    | 20.70      | 10MAR81      | 8.46 | 02APR81      | 5.85 | 30APR81      | 5.65 | 05JUN81      | 4.98 | 24.54      | 45.64      |
| 10       | 09DEC80      | 3.80    | 06JAN81      | 4.73    | 03FEB81      | 5.02    | 13.55      | 04MAR81      | 5.64 | 01APR81      | 4.64 | 28APR81      | 4.27 | 04JUN81      | 4.24 | 18.79      | 32.34      |
| 11       | 10DEC80      | 3.84    | 08JAN81      | 4.30    | 04FEB81      | 5.07    | 13.21      | 02MAR81      | 5.83 | 02APR81      | 4.37 | 29APR81      | 3.28 | 03JUN81      | 3.66 | 17.34      | 30.55      |
| 12       | 10DEC80      | 3.81    | 05JAN81      | 4.29    | 02FEB81      | 4.64    | 12.74      | 02MAR81      | 5.45 | 31MAR81      | 3.67 | 29APR81      | 4.19 | 05JUN81      | 4.19 | 17.50      | 30.24      |
| 13       | 09DEC80      | 3.64    | 08JAN81      | 4.39    | 03FEB81      | 4.84    | 12.87      | 05MAR81      | 5.08 | 01APR81      | 4.07 | 28APR81      | 5.20 | 04JUN81      | 4.17 | 18.52      | 31.39      |
| 14       | 09DEC80      | 4.95    | 06JAN81      | 5.78    | 03FEB81      | 6.01    | 16.74      | 03MAR81      | 7.31 | 01APR81      | 5.67 | 28APR81      | 5.70 | 04JUN81      | 5.62 | 24.30      | 41.04      |
| 15       | 08DEC80      | 3.81    | 05JAN81      | 3.97    | 02FEB81      | 5.06    | 12.84      | 03MAR81      | 4.83 | 31MAR81      | 4.27 | 27APR81      | 5.35 | 05JUN81      | 4.37 | 18.62      | 31.66      |
| 16       | 10DEC80      | 3.61    | 09JAN81      | 4.13    | 04FEB81      | 5.28    | 13.02      | 02MAR81      | 5.22 | 02APR81      | 3.84 | 29APR81      | 3.78 | 03JUN81      | 4.30 | 17.14      | 30.16      |
| 17       | 08DEC80      | 3.92    | 05JAN81      | 4.41    | 02FEB81      | 5.37    | 13.70      | 02MAR81      | 5.42 | 31MAR81      | 4.41 | 27APR81      |      |              |      |            |            |

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**TABLE 16**  
**RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM SUMMARY**  
**OYSTER CREEK NUCLEAR GENERATING STATION**  
**DECEMBER, 1980 THROUGH MAY, 1981**

THE FOLLOWING PAGES ARE A SUMMARY OF REMP DATA FOR THE SCHEDULED COLLECTION PERIOD DECEMBER, 1980 THRU MAY, 1981. DATA IS SUMMARIZED ON A SEMI-ANNUAL AND QUARTERLY BASIS, WHERE

- 1.) XXX=MEAN(N/TOTAL); MEAN AND RANGE BASED ON  
RANGE  
DETECTABLE ACTIVITIES OF  
ALL XXX STATIONS
- 2.) XXX=BACKGROUND OR INDICATOR STATIONS
- 3.) (N/TOTAL)=FRACTION OF DETECTABLE ACTIVITIES/  
TOTAL NUMBER OF ANALYSES PERFORMED
- 4.) STATION=STATION WITH HIGHEST SEMI-ANNUAL MEAN
- 5.) BACKGROUND STATIONS USED ARE:

|                |  |                                |
|----------------|--|--------------------------------|
| STATION        | A.C.H  | 31                             |
| SAMPLE<br>TYPE | AIR PARTICULATE<br>AIR IODINE<br>PRECIPITATION | SILT<br>CLAMS<br>SURFACE WATER |

TABLE 17  
 RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM SUMMARY  
 OYSTER CREEK NUCLEAR GENERATING STATION  
 DECEMBER, 1980 THROUGH MAY, 1981  
 SEMI-ANNUAL SUMMARY

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| SAMPLE TYPE                  | ANALYSIS    | ISOTOPE | NUMBER<br>OF<br>ANALYSES<br>PERFORMED | LLD      | INDICATOR-MEAN(N/TOTAL)<br>RANGE               | BACKGROUND-MEAN(N/TOTAL)<br>RANGE              | STATIONS USED<br>FOR INDICATOR MEAN |
|------------------------------|-------------|---------|---------------------------------------|----------|--|--|-------------------------------------|
|                              |             |         |                                       |          | STATION  | STATION-MEAN(N/TOTAL)<br>RANGE                 |                                     |
| VEGETATION<br>(PCI/GM(WET))  | GROSS BETA  |         | 35                                    | 4.87E-02 | 4.80E+00 (35 / 35 )<br>( 6.25E-01 - 9.88E+00 ) | ( . / . )<br>( . - . )                         | 1 2 3 4 5                           |
|                              |             |         |                                       |          | 1  | 9.92E+00 (7 / 7 )<br>( 6.25E-01 - 9.88E+00 )   |                                     |
| AIR PARTICULATE<br>(PCI/M3 ) | GROSS ALPHA |         | 24                                    | 3.22E-02 | 9.80E-04 (8 / 15 )<br>( 9.43E-04 - 1.40E-03 )  | 1.11E-03 (4 / 9 )<br>( 8.38E-04 - 1.55E-03 )   | 1 2 3 4 5                           |
|                              |             |         |                                       |          | 4  | 1.40E-03 (1 / 3 )<br>( 1.40E-03 - 1.40E-03 )   |                                     |
| AIR PARTICULATE<br>(PCI/M3 ) | GROSS BETA  |         | 104                                   | 9.64E-02 | 1.16E-01 (65 / 65 )<br>( 3.42E-02 - 3.46E-01 ) | 9.08E-02 (39 / 39 )<br>( 2.55E-02 - 2.79E-01 ) | 1 2 3 4 5                           |
|                              |             |         |                                       |          | 2  | 1.30E-01 (13 / 13 )<br>( 4.41E-02 - 3.24E-01 ) |                                     |
| AIR PARTICULATE<br>(PCI/M3 ) | GELI GAMMA  | CE-144  | 104                                   | 1.40E+00 | 9.67E-02 (11 / 65 )<br>( 9.70E-03 - 1.10E-01 ) | 4.95E-02 (4 / 39 )<br>( 3.50E-02 - 9.20E-02 )  | 1 2 3 4 5                           |
|                              |             |         |                                       |          | 4  | 7.60E-02 (2 / 13 )<br>( 4.20E-02 - 1.10E-01 )  |                                     |
| AIR PARTICULATE<br>(PCI/M3 ) | GELI GAMMA  | AG-110M | 104                                   | 2.70E-01 | < LLD (0 / 65 )                                | < LLD (0 / 39 )                                | 1 2 3 4 5                           |
|                              |             |         |                                       |          | 5  | < LLD (0 / 13 )                                |                                     |
| AIR PARTICULATE<br>(PCI/M3 ) | GELI GAMMA  | TE-120M | 104                                   | 9.70E+00 | < LLD (0 / 65 )                                | 1.00E-01 (1 / 19 )<br>( 1.00E-01 - 1.00E-01 )  | 1 2 3 4 5                           |
|                              |             |         |                                       |          | 5  | < LLD (0 / 13 )                                |                                     |
| AIR PARTICULATE<br>(PCI/M3 ) | GELI GAMMA  | MO-99   | 71                                    | 3.70E+00 | < LLD (0 / 48 )                                | < LLD (0 / 23 )                                | 1 2 3 4 5                           |
|                              |             |         |                                       |          | 5  | < LLD (0 / 10 )                                |                                     |

TABLE 17  
 RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM SUMMARY  
 OYSTER CREEK NUCLEAR GENERATING STATION  
 DECEMBER, 1980 THROUGH MAY, 1981  
 SEMI-ANNUAL SUMMARY

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| SAMPLE TYPE                 | ANALYSTS   | ISOTOPE | NUMBER<br>OF<br>ANALYSES<br>PERFORMED | LLD      | INDICATOR-MEAN(N/TOTAL)<br>RANGE |                                | BACKGROUND-MEAN(N/TOTAL)<br>RANGE |                | STATIONS USED<br>FOR INDICATOR MEAN |   |   |   |   |
|-----------------------------|------------|---------|---------------------------------------|----------|----------------------------------|--------------------------------|-----------------------------------|----------------|-------------------------------------|---|---|---|---|
|                             |            |         |                                       |          | STATION                          | STATION-MEAN(N/TOTAL)<br>RANGE |                                   |                |                                     |   |   |   |   |
| AIR PARTICULATE<br>(PCI/M3) | GELI GAMMA | CS-134  | 104                                   | 2.90E-01 | < LLD                            | (0 /65 )                       | < LLD                             | (0 /39 )       | 1                                   | 2 | 3 | 4 | 5 |
|                             |            |         |                                       |          |                                  |                                | 5                                 | < LLD (0 /13 ) |                                     |   |   |   |   |
| AIR PARTICULATE<br>(PCI/M3) | GELI GAMMA | CO-58   | 104                                   | 3.10E-01 | < LLD                            | (0 /65 )                       | < LLD                             | (0 /39 )       | 1                                   | 2 | 3 | 4 | 5 |
|                             |            |         |                                       |          |                                  |                                | 5                                 | < LLD (0 /13 ) |                                     |   |   |   |   |
| AIR PARTICULATE<br>(PCI/M3) | GELI GAMMA | MN-54   | 104                                   | 3.80E-01 | < LLD                            | (0 /65 )                       | < LLD                             | (0 /39 )       | 1                                   | 2 | 3 | 4 | 5 |
|                             |            |         |                                       |          |                                  |                                | 5                                 | < LLD (0 /13 ) |                                     |   |   |   |   |
| AIR PARTICULATE<br>(PCI/M3) | GELI GAMMA | TH-232  | 104                                   | 1.20E+00 | < LLD                            | (0 /65 )                       | < LLD                             | (0 /39 )       | 1                                   | 2 | 3 | 4 | 5 |
|                             |            |         |                                       |          |                                  |                                | 5                                 | < LLD (0 /13 ) |                                     |   |   |   |   |
| AIR PARTICULATE<br>(PCI/M3) | GELI GAMMA | FE-59   | 104                                   | 6.20E-01 | < LLD                            | (0 /65 )                       | < LLD                             | (0 /39 )       | 1                                   | 2 | 3 | 4 | 5 |
|                             |            |         |                                       |          |                                  |                                | 5                                 | < LLD (0 /13 ) |                                     |   |   |   |   |
| AIR PARTICULATE<br>(PCI/M3) | GELI GAMMA | CS-136  | 104                                   | 6.20E-01 | < LLD                            | (0 /65 )                       | < LLD                             | (0 /39 )       | 1                                   | 2 | 3 | 4 | 5 |
|                             |            |         |                                       |          |                                  |                                | 5                                 | < LLD (0 /13 ) |                                     |   |   |   |   |
| AIR PARTICULATE<br>(PCI/M3) | GELI GAMMA | ZM-69   | 104                                   | 8.10E-01 | < LLD                            | (0 /65 )                       | < LLD                             | (0 /39 )       | 1                                   | 2 | 3 | 4 | 5 |
|                             |            |         |                                       |          |                                  |                                | 5                                 | < LLD (0 /13 ) |                                     |   |   |   |   |

TABLE 17  
RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM SUMMARY  
OYSTER CREEK NUCLEAR GENERATING STATION  
DECEMBER, 1980 THROUGH MAY, 1981  
SEMI-ANNUAL SUMMARY

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| SAMPLE TYPE                 | ANALYSIS   | ISOTOPE | NUMBER<br>OF<br>ANALYSES<br>PERFORMED | LLD      | INDICATOR-MEAN(N/TOTAL)<br>RANGE              |          | BACKGROUND-MEAN(N/TOTAL)<br>RANGE            |  | STATIONS USED<br>FOR INDICATOR MEAN |   |   |   |   |
|-----------------------------|------------|---------|---------------------------------------|----------|---|----------|--|--|-------------------------------------|---|---|---|---|
|                             |            |         |                                       |          |   | STATION  | STATION-MEAN(N/TOTAL)<br>RANGE               |  |                                     |   |   |   |   |
| AIR PARTICULATE<br>(PCI/M3) | GELI GAMMA | CO-60   | 104                                   | 3.90E-01 | < LLD   | (0 /65 ) |  | 3.10E-02(1 /39 )<br>( 3.10E-02 - 3.10E-02 )  | 1                                   | 2 | 3 | 4 | 5 |
|                             |            |         |                                       |          |   | 5        | < LLD (0 /13 )                               |  |                                     |   |   |   |   |
| AIR PARTICULATE<br>(PCI/M3) | GELI GAMMA | K-40    | 104                                   | 5.50E+00 | < LLD   | (0 /65 ) |  | < LLD (0 /39 )                               | 1                                   | 2 | 3 | 4 | 5 |
|                             |            |         |                                       |          |   | 5        | < LLD (0 /13 )                               |  |                                     |   |   |   |   |
| AIR PARTICULATE<br>(PCI/M3) | GELI GAMMA | DE-7    | 104                                   | 2.90E+00 | 9.64E-02 (18 /65 )<br>( 4.90E-02 - 2.20E-01 ) |          |  | 9.15E-02(6 /39 )<br>( 5.20E-02 - 1.30E-01 )  | 1                                   | 2 | 3 | 4 | 5 |
|                             |            |         |                                       |          |   | 2        | 1.38E-01(2 /13 )<br>( 5.70E-02 - 2.20E-01 )  |  |                                     |   |   |   |   |
| AIR PARTICULATE<br>(PCI/M3) | GELI GAMMA | ZR-95   | 104                                   | 4.70E-01 | 4.44E-02 (22 /65 )<br>( 1.80E-02 - 8.50E-02 ) |          |  | 3.32E-02(12 /39 )<br>( 2.80E-02 - 5.10E-02 ) | 1                                   | 2 | 3 | 4 | 5 |
|                             |            |         |                                       |          |   | 2        | 5.52E-02(4 /13 )<br>( 4.40E-02 - 7.10E-02 )  |  |                                     |   |   |   |   |
| AIR PARTICULATE<br>(PCI/M3) | GELI GAMMA | HB-95   | 104                                   | 4.40E-01 | 6.13E-02 (52 /65 )<br>( 1.20E-02 - 1.70E-01 ) |          |  | 5.22E-02(30 /39 )<br>( 6.40E-03 - 1.30E-01 ) | 1                                   | 2 | 3 | 4 | 5 |
|                             |            |         |                                       |          |   | 2        | 6.88E-02(12 /13 )<br>( 1.40E-02 - 1.40E-01 ) |  |                                     |   |   |   |   |
| AIR PARTICULATE<br>(PCI/M3) | GELI GAMMA | SB-125  | 104                                   | 8.20E-01 | < LLD   | (0 /65 ) |  | < LLD (0 /39 )                               | 1                                   | 2 | 3 | 4 | 5 |
|                             |            |         |                                       |          |   | 5        | < LLD (0 /13 )                               |  |                                     |   |   |   |   |
| AIR PARTICULATE<br>(PCI/M3) | GELI GAMMA | CE-141  | 104                                   | 1.40E-01 | 1.21E-02 (8 /65 )<br>( 3.20E-03 - 2.10E-02 )  |          |  | 1.11E-02(3 /39 )<br>( 7.30E-03 - 1.40E-02 )  | 1                                   | 2 | 3 | 4 | 5 |
|                             |            |         |                                       |          |   | 4        | 1.70E-02(2 /13 )<br>( 1.30E-02 - 2.10E-02 )  |  |                                     |   |   |   |   |

TABLE 17  
RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM SUMMARY  
OYSTER CREEK NUCLEAR GENERATING STATION  
DECEMBER, 1980 THROUGH MAY, 1981  
SEMI-ANNUAL SUMMARY

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| SAMPLE TYPE                  | ANALYSIS   | ISOTOPE | NUMBER<br>OF<br>ANALYSES<br>PERFORMED | LLD      | INDICATOR-MEAN(N/TOTAL)<br>RANGE              |                                | BACKGROUND-MEAN(N/TOTAL)<br>RANGE            |  | STATIONS USED<br>FOR INDICATOR MEAN |   |   |   |   |
|------------------------------|------------|---------|---------------------------------------|----------|---|--------------------------------|--|--|-------------------------------------|---|---|---|---|
|                              |            |         |                                       |          | STATION                                       | STATION-MEAN(N/TOTAL)<br>RANGE |  |  |                                     |   |   |   |   |
| AIR PARTICULATE<br>(PCI/M3 ) | GELI GAMMA | RU-103  | 104                                   | 3.00E-01 | 1.89E-02 (31 /65 )<br>( 7.40E-03 - 3.80E-02 ) |                                | 1.99E-02(12 /39 )<br>( 2.80E-03 - 2.90E-02 ) |  | 1                                   | 2 | 3 | 4 | 5 |
|                              |            |         |                                       |          |   |                                |  |  |                                     |   |   |   |   |
| AIR PARTICULATE<br>(PCI/M3 ) | GELI GAMMA | CR-91   | 104                                   | 2.70E+00 | < LLD (0 /65 )                                |                                | < LLD (0 /39 )                               |  | 1                                   | 2 | 3 | 4 | 5 |
|                              |            |         |                                       |          |   |                                |  |  |                                     |   |   |   |   |
| AIR PARTICULATE<br>(PCI/M3 ) | GELI GAMMA | BA-140  | 104                                   | 2.20E+00 | < LLD (0 /65 )                                |                                | < LLD (0 /39 )                               |  | 1                                   | 2 | 3 | 4 | 5 |
|                              |            |         |                                       |          |   |                                |  |  |                                     |   |   |   |   |
| AIR PARTICULATE<br>(PCI/M3 ) | GELI GAMMA | LA-140  | 96                                    | 2.40E-01 | < LLD (0 /62 )                                |                                | < LLD (0 /34 )                               |  | 1                                   | 2 | 3 | 4 | 5 |
|                              |            |         |                                       |          |   |                                |  |  |                                     |   |   |   |   |
| AIR PARTICULATE<br>(PCI/M3 ) | GELI GAMMA | RA-226  | 104                                   | 6.50E-01 | < LLD (0 /65 )                                |                                | < LLD (0 /39 )                               |  | 1                                   | 2 | 3 | 4 | 5 |
|                              |            |         |                                       |          |   |                                |  |  |                                     |   |   |   |   |
| AIR PARTICULATE<br>(PCI/M3 ) | GELI GAMMA | I-131   | 104                                   | 6.50E-01 | < LLD (0 /65 )                                |                                | < LLD (0 /39 )                               |  | 1                                   | 2 | 3 | 4 | 5 |
|                              |            |         |                                       |          |   |                                |  |  |                                     |   |   |   |   |
| AIR PARTICULATE<br>(PCI/M3 ) | GELI GAMMA | HP-239  | 45                                    | 2.30E+01 | < LLD (0 /28 )                                |                                | < LLD (0 /17 )                               |  | 1                                   | 2 | 3 | 4 | 5 |
|                              |            |         |                                       |          |   |                                |  |  |                                     |   |   |   |   |

**TABLE 17**  
**RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM SUMMARY**  
**OYSTER CREEK NUCLEAR GENERATING STATION**  
**DECEMBER, 1930 THROUGH MAY, 1931**  
**SEMI-ANNUAL SUMMARY**

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| SAMPLE TYPE                 | ANALYSIS      | ISOTOPE | NUMBER<br>OF<br>ANALYSES<br>PERFORMED | LLD      | INDICATOR-MEAN(N/TOTAL)<br>RANGE             |                                | BACKGROUND-MEAN(N/TOTAL)<br>RANGE           |           | STATIONS USED<br>FOR INDICATOR MEAN |   |   |   |   |
|-----------------------------|---------------|---------|---------------------------------------|----------|--|--------------------------------|---|-----------|-------------------------------------|---|---|---|---|
|                             |               |         |                                       |          | STATION                                      | STATION-MEAN(N/TOTAL)<br>RANGE |   |           |                                     |   |   |   |   |
| AIR PARTICULATE<br>(PCI/M3) | GELI GAMMA    | RU-106  | 104                                   | 2.00E+00 | < LLD  | (0 /65 )                       | < LLD                                       | (0 /39 )  | 1                                   | 2 | 3 | 4 | 5 |
|                             |               |         |                                       |          |  |                                |   |           |                                     |   |   |   |   |
| AIR PARTICULATE<br>(PCI/M3) | GELI GAMMA    | CO-57   | 104                                   | 1.50E-01 | < LLD  | (0 /65 )                       | < LLD                                       | (0 /39 )  | 1                                   | 2 | 3 | 4 | 5 |
|                             |               |         |                                       |          |  |                                |   |           |                                     |   |   |   |   |
| AIR PARTICULATE<br>(PCI/M3) | GELI GAMMA    | I-133   | 1                                     | 1.40E+00 | < LLD  | (0 /1 )                        | ( . . . )                                   | ( . . . ) | 1                                   |   |   |   |   |
|                             |               |         |                                       |          |  |                                |   |           |                                     |   |   |   |   |
| AIR PARTICULATE<br>(PCI/M3) | GELI GAMMA    | CS-137  | 104                                   | 2.70E-01 | 6.80E-03 (1 /65 )<br>( 6.80E-03 - 6.80E-03)  |                                | < LLD                                       | (0 /39 )  | 1                                   | 2 | 3 | 4 | 5 |
|                             |               |         |                                       |          |  |                                |   |           |                                     |   |   |   |   |
| PRECIPITATION<br>(NCI/M2)   | GROSS BETA-SS |         | 56                                    | 9.41E+01 | 2.24E-01 (25 /35 )<br>( 4.18E-02 - 1.82E+00) |                                | 1.14E-01(16 /21 )<br>( 2.50E-02 - 3.68E-01) |           | 1                                   | 2 | 3 | 4 | 5 |
|                             |               |         |                                       |          |  |                                |   |           |                                     |   |   |   |   |
| PRECIPITATION<br>(NCI/M2)   | GROSS BETA-DS |         | 56                                    | 2.33E+02 | 1.05E+00 (35 /35 )<br>( 1.93E-01 - 3.61E+00) |                                | 8.57E-01(21 /21 )<br>( 2.36E-01 - 2.61E+00) |           | 1                                   | 2 | 3 | 4 | 5 |
|                             |               |         |                                       |          |  |                                |   |           |                                     |   |   |   |   |
| AIR IODINE<br>(PCI/M3)      | IODINE-131    |         | 104                                   | 2.97E-01 | < LLD  | (0 /65 )                       | < LLD                                       | (0 /39 )  | 1                                   | 2 | 3 | 4 | 5 |
|                             |               |         |                                       |          |  |                                |   |           |                                     |   |   |   |   |

TABLE 17  
RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM SUMMARY  
OYSTER CREEK NUCLEAR GENERATING STATION  
DECEMBER, 1980 THROUGH MAY, 1981  
SEMI-ANNUAL SUMMARY

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| SAMPLE TYPE              | ANALYSIS       | ISOTOPE NUMBER<br>OF<br>ANALYSES<br>PERFORMED | LLD      | INDICATOR-MEAN(N/TOTAL)<br>RANGE              | BACKGROUND-MEAN(N/TOTAL)<br>RANGE          | STATIONS USED<br>FOR INDICATOR MEAN |
|--------------------------|----------------|---|----------|---|--|-------------------------------------|
|                          |                |   |          |   |  |                                     |
|                          |                |   |          | STATION                                       | STATION-MEAN(N/TOTAL)<br>RANGE             |                                     |
| SURFACE WATER<br>(PCI/L) | GROSS ALPHA-SS | 53  | 3.80E-01 | 3.98E-01 (7 /48 )<br>( 1.67E-01 - 9.83E-01 )  | 2.29E-01(1 /5 )<br>( 2.29E-01 - 2.29E-01 ) | 23 24 25 26 27<br>32 33             |
|                          |                |   |          | 23 9.83E-01(1 /4 )<br>( 9.83E-01 - 9.83E-01 ) |  |                                     |
| SURFACE WATER<br>(PCI/L) | GROSS ALPHA-DS | 53  | 3.42E+00 | 2.43E+00 (8 /48 )<br>( 1.40E+00 - 2.93E+00 )  | 2.29E+00(2 /5 )<br>( 1.59E+00 - 3.00E+00 ) | 23 24 25 26 27<br>32 33             |
|                          |                |   |          | 24 2.83E+00(1 /7 )<br>( 2.83E+00 - 2.83E+00 ) |  |                                     |
| SURFACE WATER<br>(PCI/L) | GROSS BETA-SS  | 53  | 4.41E-01 | 4.75E-01 (21 /48 )<br>( 1.86E-01 - 1.16E+00 ) | 2.67E-01(3 /5 )<br>( 1.97E-01 - 3.41E-01 ) | 23 24 25 26 27<br>32 33             |
|                          |                |   |          | 24 5.81E-01(4 /7 )<br>( 2.61E-01 - 1.10E+00 ) |  |                                     |
| SURFACE WATER<br>(PCI/L) | GROSS BETA-DS  | 53  | 1.11E+01 | 8.93E+01 (45 /48 )<br>( 1.91E+00 - 2.48E+02 ) | 1.56E+02(5 /5 )<br>( 8.08E+01 - 2.13E+02 ) | 23 24 25 26 27<br>32 33             |
|                          |                |   |          | 32 1.25E+02(7 /7 )<br>( 8.22E+00 - 2.48E+02 ) |  |                                     |
| SURFACE WATER<br>(MG/L)  | CALCIUM BY AA  | 24  | 8.00E-02 | 1.53E+02 (21 /21 )<br>( 1.50E-01 - 2.60E+02 ) | 1.88E+02(3 /3 )<br>( 1.23E+02 - 2.60E+02 ) | 23 24 25 26 27<br>32 33             |
|                          |                |   |          | 24 1.88E+02(3 /3 )<br>( 1.40E+02 - 2.40E+02 ) |  |                                     |
| SURFACE WATER<br>(PCI/L) | TRITIUM        | 53  | 2.11E+02 | 1.69E+02 (9 /48 )<br>( 8.22E+01 - 3.71E+02 )  | < LLD (0 /5 )                              | 23 24 25 26 27<br>32 33             |
|                          |                |   |          | 23 3.06E+02(2 /6 )<br>( 2.41E+02 - 3.71E+02 ) |  |                                     |

TABLE 17  
RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM SUMMARY  
OYSTER CREEK NUCLEAR GENERATING STATION  
DECEMBER, 1980 THROUGH MAY, 1981  
SEMI-ANNUAL SUMMARY

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| SAMPLE TYPE              | ANALYSIS      | ISOTOPE | NUMBER<br>OF<br>ANALYSES<br>PERFORMED | LLD      | INDICATOR-MEAN(N/TOTAL)<br>RANGE             | BACKGROUND-MEAN(N/TOTAL)<br>RANGE          | STATIONS USED<br>FOR INDICATION MEAN |
|--------------------------|---------------|---------|---------------------------------------|----------|--|--|--------------------------------------|
|                          |               |         |                                       |          | STATION                                      | STATION-MEAN(N/TOTAL)<br>RANGE             |                                      |
| SURFACE WATER<br>(PCI/L) | TOTAL URANIUM |         | 93                                    | 2.04E+00 | 1.63E+00 (8 /48 )<br>( 1.16E+00 - 2.41E+00 ) | 1.16E+00(1 /5 )<br>( 1.16E+00 - 1.16E+00 ) | 23 24 25 26 27<br>32 33              |
|                          |               |         |                                       |          | 23   | 1.92E+00(2 /6 )<br>( 1.62E+00 - 2.22E+00 ) |                                      |
| SURFACE WATER<br>(PCI/L) | NAI GAMMA     | CE-140  | 91                                    | 8.90E+01 | < LLD (8 /46 )                               | < LLD (8 /5 )                              | 23 24 25 26 27<br>32 33              |
|                          |               |         |                                       |          | 33   | < LLD (8 /6 )                              |                                      |
| SURFACE WATER<br>(PCI/L) | NAI GAMMA     | AG-110M | 93                                    | 8.60E+00 | < LLD (8 /48 )                               | < LLD (8 /5 )                              | 23 24 25 26 27<br>32 33              |
|                          |               |         |                                       |          | 33   | < LLD (8 /7 )                              |                                      |
| SURFACE WATER<br>(PCI/L) | NAI GAMMA     | TE-129M | 93                                    | 2.30E+02 | < LLD (8 /48 )                               | < LLD (8 /5 )                              | 23 24 25 26 27<br>32 33              |
|                          |               |         |                                       |          | 33   | < LLD (8 /7 )                              |                                      |
| SURFACE WATER<br>(PCI/L) | NAI GAMMA     | MO-99   | 93                                    | 1.40E+04 | < LLD (8 /48 )                               | < LLD (8 /5 )                              | 23 24 25 26 27<br>32 33              |
|                          |               |         |                                       |          | 33   | < LLD (8 /7 )                              |                                      |
| SURFACE WATER<br>(PCI/L) | NAI GAMMA     | ZRND-95 | 93                                    | 7.80E+00 | < LLD (8 /48 )                               | < LLD (8 /5 )                              | 23 24 25 26 27<br>32 33              |
|                          |               |         |                                       |          | 33   | < LLD (8 /7 )                              |                                      |
| SURFACE WATER<br>(PCI/L) | NAI GAMMA     | CS-134  | 93                                    | 7.90E+00 | < LLD (8 /48 )                               | < LLD (8 /5 )                              | 23 24 25 26 27<br>32 33              |
|                          |               |         |                                       |          | 33   | < LLD (8 /7 )                              |                                      |

TABLE 17  
 RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM SUMMARY  
 OYSTER CREEK NUCLEAR GENERATING STATION  
 DECEMBER, 1980 THROUGH MAY, 1981  
 SEMI-ANNUAL SUMMARY

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| SAMPLE TYPE              | ANALYSIS  | ISOTOPE | NUMBER<br>OF<br>ANALYSES<br>PERFORMED | LLD      | INDICATOR-MEAN(N/TOTAL)<br>RANGE |                                | BACKGROUND-MEAN(N/TOTAL)<br>RANGE |                | STATIONS USED<br>FOR INDICATOR MEAN |          |    |    |    |
|--------------------------|-----------|---------|---------------------------------------|----------|----------------------------------|--------------------------------|-----------------------------------|----------------|-------------------------------------|----------|----|----|----|
|                          |           |         |                                       |          | STATION                          | STATION-MEAN(N/TOTAL)<br>RANGE |                                   |                |                                     |          |    |    |    |
| SURFACE WATER<br>(PCI/L) | NAI GAMMA | CO-58   | 53                                    | 8.80E+00 | < LLD                            | (0 / 48 )                      | < LLD                             | (0 / 5 )       | 23<br>32                            | 24<br>33 | 25 | 26 | 27 |
|                          |           |         |                                       |          |                                  |                                | 33                                | < LLD (0 / 7 ) |                                     |          |    |    |    |
| SURFACE WATER<br>(PCI/L) | NAI GAMMA | MH-54   | 53                                    | 8.80E+00 | < LLD                            | (0 / 48 )                      | < LLD                             | (0 / 5 )       | 23<br>32                            | 24<br>33 | 25 | 26 | 27 |
|                          |           |         |                                       |          |                                  |                                | 33                                | < LLD (0 / 7 ) |                                     |          |    |    |    |
| SURFACE WATER<br>(PCI/L) | NAI GAMMA | TH-232  | 53                                    | 3.10E+01 | < LLD                            | (0 / 48 )                      | < LLD                             | (0 / 5 )       | 23<br>32                            | 24<br>33 | 25 | 26 | 27 |
|                          |           |         |                                       |          |                                  |                                | 33                                | < LLD (0 / 7 ) |                                     |          |    |    |    |
| SURFACE WATER<br>(PCI/L) | NAI GAMMA | FE-59   | 53                                    | 2.20E+01 | < LLD                            | (0 / 48 )                      | < LLD                             | (0 / 5 )       | 23<br>32                            | 24<br>33 | 25 | 26 | 27 |
|                          |           |         |                                       |          |                                  |                                | 33                                | < LLD (0 / 7 ) |                                     |          |    |    |    |
| SURFACE WATER<br>(PCI/L) | NAI GAMMA | CS-136  | 53                                    | 6.10E+01 | < LLD                            | (0 / 48 )                      | < LLD                             | (0 / 5 )       | 23<br>32                            | 24<br>33 | 25 | 26 | 27 |
|                          |           |         |                                       |          |                                  |                                | 33                                | < LLD (0 / 7 ) |                                     |          |    |    |    |
| SURFACE WATER<br>(PCI/L) | NAI GAMMA | TE-132  | 53                                    | 7.60E+03 | < LLD                            | (0 / 48 )                      | < LLD                             | (0 / 5 )       | 23<br>32                            | 24<br>33 | 25 | 26 | 27 |
|                          |           |         |                                       |          |                                  |                                | 33                                | < LLD (0 / 7 ) |                                     |          |    |    |    |
| SURFACE WATER<br>(PCI/L) | NAI GAMMA | ZN-69   | 53                                    | 1.70E+01 | < LLD                            | (0 / 48 )                      | < LLD                             | (0 / 5 )       | 23<br>32                            | 24<br>33 | 25 | 26 | 27 |
|                          |           |         |                                       |          |                                  |                                | 33                                | < LLD (0 / 7 ) |                                     |          |    |    |    |

**TABLE 17**  
**RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM SUMMARY**  
**OYSTER CREEK NUCLEAR GENERATING STATION**  
**DECEMBER, 1980 THROUGH MAY, 1981**  
**SEMI-ANNUAL SUMMARY**

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| SAMPLE TYPE               | ANALYSIS  | ISOTOPE  | NUMBER<br>OF<br>ANALYSES<br>PERFORMED | LLD      | INDICATOR-MEAN(N/TOTAL)<br>RANGE             |                                | BACKGROUND-MEAN(N/TOTAL)<br>RANGE         |   | STATIONS USED<br>FOR INDICATOR MEAN |          |    |    |    |
|---------------------------|-----------|----------|---------------------------------------|----------|--|--------------------------------|---|---|-------------------------------------|----------|----|----|----|
|                           |           |          |                                       |          | STATION                                      | STATION-MEAN(N/TOTAL)<br>RANGE |   |   |                                     |          |    |    |    |
| SURFACE WATER<br>(PCI/L ) | NAI GAMMA | CO-60    | 53                                    | 7.80E+00 | < LLD  | (0 /48 )                       | < LLD                                     | (0 /5 )                                   | 23<br>32                            | 24<br>33 | 25 | 26 | 27 |
|                           |           |          |                                       |          |  |                                | 33  | < LLD (0 /7 )                             |                                     |          |    |    |    |
| SURFACE WATER<br>(PCI/L ) | NAI GAMMA | K-40     | 53                                    | 1.20E+02 | 2.44E+02 (33 /48 )<br>( 1.30E+02 - 3.90E+02) |                                | 3.02E+02(5 /5 )<br>( 1.40E+02 - 4.30E+02) |   | 23<br>32                            | 24<br>33 | 25 | 26 | 27 |
|                           |           |          |                                       |          |  |                                | 33  | 2.77E+02(6 /7 )<br>( 2.40E+02 - 3.10E+02) |                                     |          |    |    |    |
| SURFACE WATER<br>(PCI/L ) | NAI GAMMA | BALA-140 | 53                                    | 5.30E+01 | < LLD  | (0 /48 )                       | < LLD                                     | (0 /5 )                                   | 23<br>32                            | 24<br>33 | 25 | 26 | 27 |
|                           |           |          |                                       |          |  |                                | 33  | < LLD (0 /7 )                             |                                     |          |    |    |    |
| SURFACE WATER<br>(PCI/L ) | NAI GAMMA | BE-7     | 7                                     | 7.40E+01 | < LLD  | (0 /6 )                        | < LLD                                     | (0 /1 )                                   | 23<br>32                            | 24       | 25 | 26 | 27 |
|                           |           |          |                                       |          |  |                                | 32  | < LLD (0 /1 )                             |                                     |          |    |    |    |
| SURFACE WATER<br>(PCI/L ) | NAI GAMMA | CR-51    | 53                                    | 1.90E+02 | < LLD  | (0 /48 )                       | < LLD                                     | (0 /5 )                                   | 23<br>32                            | 24<br>33 | 25 | 26 | 27 |
|                           |           |          |                                       |          |  |                                | 33  | < LLD (0 /7 )                             |                                     |          |    |    |    |
| SURFACE WATER<br>(PCI/L ) | NAI GAMMA | RA-226   | 53                                    | 1.60E+01 | < LLD  | (0 /48 )                       | < LLD                                     | (0 /5 )                                   | 23<br>32                            | 24<br>33 | 25 | 26 | 27 |
|                           |           |          |                                       |          |  |                                | 33  | < LLD (0 /7 )                             |                                     |          |    |    |    |
| SURFACE WATER<br>(PCI/L ) | NAI GAMMA | I-131    | 53                                    | 1.60E+02 | < LLD  | (0 /48 )                       | < LLD                                     | (0 /5 )                                   | 23<br>32                            | 24<br>33 | 25 | 26 | 27 |
|                           |           |          |                                       |          |  |                                | 33  | < LLD (0 /7 )                             |                                     |          |    |    |    |

TABLE 17  
RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM SUMMARY  
OYSTER CREEK NUCLEAR GENERATING STATION  
DECEMBER, 1980 THROUGH MAY, 1981  
SEMI-ANNUAL SUMMARY

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| SAMPLE TYPE              | ANALYSIS     | ISOTOPE | NUMBER<br>OF<br>ANALYSES<br>PERFORMED | LLD      | INDICATOR-MEAN(N/TOTAL)<br>RANGE             |                                | BACKGROUND-MEAN(N/TOTAL)<br>RANGE         |   | STATIONS USED<br>FOR INDICATOR MEAN |    |    |    |    |
|--------------------------|--------------|---------|---------------------------------------|----------|--|--------------------------------|---|---|-------------------------------------|----|----|----|----|
|                          |              |         |                                       |          | STATION                                      | STATION-MEAN(N/TOTAL)<br>RANGE |   |   |                                     |    |    |    |    |
| SURFACE WATER<br>(PCI/L) | NAI GAMMA    | NA-22   | 53                                    | 8.00E+00 | < LLD  | (0 /48 )                       | < LLD                                     | (0 /5 )                                   | 23                                  | 24 | 25 | 26 | 27 |
|                          |              |         |                                       |          |  |                                | 32  | 33  |                                     |    |    |    |    |
|                          |              |         |                                       |          |  |                                | 33  | < LLD (0 /7 )                             |                                     |    |    |    |    |
| SURFACE WATER<br>(PCI/L) | NAI GAMMA    | RU-106  | 53                                    | 8.00E+01 | < LLD  | (0 /48 )                       | < LLD                                     | (0 /5 )                                   | 23                                  | 24 | 25 | 26 | 27 |
|                          |              |         |                                       |          |  |                                | 32  | 33  |                                     |    |    |    |    |
|                          |              |         |                                       |          |  |                                | 33  | < LLD (0 /7 )                             |                                     |    |    |    |    |
| SURFACE WATER<br>(PCI/L) | NAI GAMMA    | I-133   | 53                                    | 9.30E+00 | < LLD  | (0 /48 )                       | < LLD                                     | (0 /5 )                                   | 23                                  | 24 | 25 | 26 | 27 |
|                          |              |         |                                       |          |  |                                | 32  | 33  |                                     |    |    |    |    |
|                          |              |         |                                       |          |  |                                | 33  | < LLD (0 /7 )                             |                                     |    |    |    |    |
| SURFACE WATER<br>(PCI/L) | NAI GAMMA    | CS-137  | 53                                    | 7.80E+00 | < LLD  | (0 /48 )                       | < LLD                                     | (0 /5 )                                   | 23                                  | 24 | 25 | 26 | 27 |
|                          |              |         |                                       |          |  |                                | 32  | 33  |                                     |    |    |    |    |
|                          |              |         |                                       |          |  |                                | 33  | < LLD (0 /7 )                             |                                     |    |    |    |    |
| SURFACE WATER<br>(PCI/L) | RADIUM-226   |         | 53                                    | 2.15E-01 | 4.24E-01 (35 /48 )<br>( 1.31E-01 - 1.33E+00) |                                | 1.43E-01(5 /5 )<br>( 9.27E-02 - 2.42E-01) |   | 23                                  | 24 | 25 | 26 | 27 |
|                          |              |         |                                       |          |  |                                |   |   | 32                                  | 33 |    |    |    |
|                          |              |         |                                       |          |  |                                | 26  | 7.68E-01(7 /7 )<br>( 5.00E-01 - 1.06E+00) |                                     |    |    |    |    |
| SURFACE WATER<br>(PCI/L) | RADIUM-228   |         | 53                                    | 5.41E+00 | 3.52E-01 (2 /48 )<br>( 3.24E-01 - 3.81E-01)  |                                | 2.05E+01(1 /5 )<br>( 2.05E+01 - 2.05E+01) |   | 23                                  | 24 | 25 | 26 | 27 |
|                          |              |         |                                       |          |  |                                |   |   | 32                                  | 33 |    |    |    |
|                          |              |         |                                       |          |  |                                | 33  | 3.81E-01(1 /7 )<br>( 3.81E-01 - 3.81E-01) |                                     |    |    |    |    |
| SURFACE WATER<br>(PCI/L) | STRONTIUM-90 |         | 53                                    | 2.37E+00 | 8.30E-01 (17 /48 )<br>( 2.47E-01 - 3.45E+00) |                                | < LLD (0 /5 )                             |   | 23                                  | 24 | 25 | 26 | 27 |
|                          |              |         |                                       |          |  |                                |   |   | 32                                  | 33 |    |    |    |
|                          |              |         |                                       |          |  |                                | 32  | 1.94E+00(2 /7 )<br>( 4.29E-01 - 3.45E+00) |                                     |    |    |    |    |

**TABLE 17**  
**RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM SUMMARY**  
**OYSTER CREEK NUCLEAR GENERATING STATION**  
**DECEMBER, 1980 THROUGH MAY, 1981**  
**SEMI-ANNUAL SUMMARY**

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| SAMPLE TYPE           | ANALYSIS       | ISOTOPE NUMBER<br>OF<br>ANALYSES<br>PERFORMED | LLD      | INDICATOR-MEAN(N/TOTAL)<br>RANGE             | STATION | BACKGROUND-MEAN(N/TOTAL)<br>RANGE | STATION-MEAN(N/TOTAL)<br>RANGE | STATIONS USED<br>FOR INDICATOR MEAN |
|-----------------------|----------------|---|----------|--|---------|-----------------------------------|--------------------------------|-------------------------------------|
|                       |                |   |          |  |         |                                   |                                |                                     |
| WELL WATER<br>(PCI/L) | GROSS ALPHA-SS | 42  | 2.90E-01 | 6.34E-01 (3 /42 )<br>( 1.98E-01 - 1.50E+00)  | 1       | ( . . - . / . )                   | ( 2.44E-01 - 1.50E+00)         | 1 18 19 20 21<br>22                 |
|                       |                |   |          |  | 22      |                                   |                                |                                     |
| WELL WATER<br>(PCI/L) | GROSS ALPHA-DS | 42  | 9.70E+00 | 2.21E+00 (17 /42 )<br>( 8.82E-01 - 5.21E+00) | 1       | ( . . - . / . )                   | ( 4.88E+00 - 4.88E+00)         | 1 18 19 20 21<br>22                 |
|                       |                |   |          |  | 21      |                                   |                                |                                     |
| WELL WATER<br>(PCI/L) | GROSS BETA-SS  | 42  | 9.06E-01 | 8.71E-01 (3 /42 )<br>( 8.46E-01 - 8.92E-01)  | 1       | ( . . - . / . )                   | ( 8.92E-01 - 8.92E-01)         | 1 18 19 20 21<br>22                 |
|                       |                |   |          |  | 18      |                                   |                                |                                     |
| WELL WATER<br>(PCI/L) | GROSS BETA-DS  | 42  | 7.71E-01 | 2.89E+00 (42 /42 )<br>( 3.68E-01 - 8.92E+00) | 1       | ( . . - . / . )                   | ( 2.67E+00 - 7.58E+00)         | 1 18 19 20 21<br>22                 |
|                       |                |   |          |  | 20      |                                   |                                |                                     |
| WELL WATER<br>(PCI/L) | POTASSIUM-40   | 18  | 8.60E-01 | 2.31E+00 (18 /18 )<br>( 4.94E-01 - 7.28E+00) | 1       | ( . . - . / . )                   | ( 5.45E+00 - 7.28E+00)         | 1 18 19 20 21<br>22                 |
|                       |                |   |          |  | 20      |                                   |                                |                                     |
| WELL WATER<br>(PCI/L) | TRITIUM        | 18  | 2.00E+02 | 1.95E+02 (9 /18 )<br>( 1.24E+02 - 3.65E+02)  | 1       | ( . . - . / . )                   | ( 1.24E+02 - 3.65E+02)         | 1 18 19 20 21<br>22                 |
|                       |                |   |          |  | 20      |                                   |                                |                                     |

**TABLE 17**  
**RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM SUMMARY**  
**OYSTER CREEK NUCLEAR GENERATING STATION**  
**DECEMBER, 1980 THROUGH MAY, 1981**  
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| SAMPLE TYPE            | ANALYSIS      | ISOTOPE NUMBER<br>OF<br>ANALYSES<br>PERFORMED | LLD      | INDICATOR-MEAN(N/TOTAL)<br>RANGE               | STATION | BACKGROUND-MEAN(N/TOTAL)<br>RANGE            | STATION-MEAN(N/TOTAL)<br>RANGE | STATIONS USED<br>FOR INDICATOR MEAN |
|------------------------|---------------|---|----------|--|---------|--|--------------------------------|-------------------------------------|
|                        |               |   |          |  |         |  |                                |                                     |
| WELL WATER<br>(PCI/L)  | TOTAL URANIUM | 18  | 5.48E-01 | 5.06E-01 (1 / 18 )<br>( 5.06E-01 - 5.06E-01 )  | 18      | ( . . . - . . . )                            | ( . . . )                      | 1 18 19 20 21<br>22                 |
|                        |               |   |          |  | 22      |  |                                |                                     |
| WELL WATER<br>(PCI/L)  | RADIUM-226    | 18  | 1.99E-01 | 6.90E-01 (15 / 18 )<br>( 1.45E-01 - 2.09E+00 ) | 18      | ( . . . - . . . )                            | ( . . . )                      | 1 18 19 20 21<br>22                 |
|                        |               |   |          |  | 21      |  |                                |                                     |
| WELL WATER<br>(PCI/L)  | RADIUM-228    | 18  | 9.00E+00 | 1.12E+00 (6 / 18 )<br>( 9.92E-01 - 1.61E+00 )  | 18      | ( . . . - . . . )                            | ( . . . )                      | 1 18 19 20 21<br>22                 |
|                        |               |   |          |  | 20      |  |                                |                                     |
| CLAMS<br>(PCI/GM(WET)) | GROSS ALPHA   | 21  | 2.99E-01 | 1.89E-01 (17 / 17 )<br>( 4.84E-02 - 6.30E-01 ) | 21      | 1.41E-01 (4 / 4 )<br>( 7.18E-03 - 3.40E-01 ) | ( 7.18E-03 - 3.40E-01 )        | 23 24 25                            |
|                        |               |   |          |  | 25      |  |                                |                                     |
| CLAMS<br>(PCI/GM(WET)) | GROSS BETA    | 21  | 5.08E-02 | 1.42E+00 (17 / 17 )<br>( 4.51E-01 - 3.37E+00 ) | 21      | 1.21E+00 (4 / 4 )<br>( 1.19E-01 - 2.22E+00 ) | ( 1.19E-01 - 2.22E+00 )        | 23 24 25                            |
|                        |               |   |          |  | 23      |  |                                |                                     |
| CLAMS<br>(MG/GM(WET))  | CALCIUM BY AA | 8   | 1.39E+00 | 2.99E+03 (6 / 6 )<br>( 1.81E+03 - 3.14E+03 )   | 8       | 2.58E+03 (2 / 2 )<br>( 2.37E+03 - 2.39E+03 ) | ( 2.37E+03 - 2.39E+03 )        | 23 24 25                            |
|                        |               |   |          |  | 25      |  |                                |                                     |

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| SAMPLE TYPE            | ANALYSIS  | ISOTOPE | NUMBER<br>OF<br>ANALYSES<br>PERFORMED | LLD      | INDICATOR-MEAN(N/TOTAL)<br>RANGE |                                | BACKGROUND-MEAN(N/TOTAL)<br>RANGE |                | STATIONS USED<br>FOR INDICATOR MEAN |    |    |
|------------------------|-----------|---------|---------------------------------------|----------|----------------------------------|--------------------------------|-----------------------------------|----------------|-------------------------------------|----|----|
|                        |           |         |                                       |          | STATION                          | STATION-MEAN(N/TOTAL)<br>RANGE |                                   |                |                                     |    |    |
| CLAMS<br>(PCI/GM(WET)) | NAI GAMMA | CE-144  | 12                                    | 1.10E-01 | < LLD                            | (0 / 9 )                       | < LLD                             | (0 / 3 )       | 23                                  | 24 | 25 |
|                        |           |         |                                       |          |                                  |                                | 25                                | < LLD (0 / 3 ) |                                     |    |    |
| CLAMS<br>(PCI/GM(WET)) | NAI GAMMA | AO-110M | 12                                    | 3.20E-02 | < LLD                            | (0 / 9 )                       | < LLD                             | (0 / 3 )       | 23                                  | 24 | 25 |
|                        |           |         |                                       |          |                                  |                                | 25                                | < LLD (0 / 3 ) |                                     |    |    |
| CLAMS<br>(PCI/GM(WET)) | NAI GAMMA | TE-129M | 12                                    | 8.60E-01 | < LLD                            | (0 / 9 )                       | < LLD                             | (0 / 3 )       | 23                                  | 24 | 25 |
|                        |           |         |                                       |          |                                  |                                | 25                                | < LLD (0 / 3 ) |                                     |    |    |
| CLAMS<br>(PCI/GM(WET)) | NAI GAMMA | MO-99   | 12                                    | 3.30E+01 | < LLD                            | (0 / 9 )                       | < LLD                             | (0 / 3 )       | 23                                  | 24 | 25 |
|                        |           |         |                                       |          |                                  |                                | 25                                | < LLD (0 / 3 ) |                                     |    |    |
| CLAMS<br>(PCI/GM(WET)) | NAI GAMMA | ZRMB-95 | 12                                    | 3.10E-02 | < LLD                            | (0 / 9 )                       | < LLD                             | (0 / 3 )       | 23                                  | 24 | 25 |
|                        |           |         |                                       |          |                                  |                                | 25                                | < LLD (0 / 3 ) |                                     |    |    |
| CLAMS<br>(PCI/GM(WET)) | NAI GAMMA | CS-134  | 12                                    | 3.20E-02 | < LLD                            | (0 / 9 )                       | < LLD                             | (0 / 3 )       | 23                                  | 24 | 25 |
|                        |           |         |                                       |          |                                  |                                | 25                                | < LLD (0 / 3 ) |                                     |    |    |
| CLAMS<br>(PCI/GM(WET)) | NAI GAMMA | CO-58   | 12                                    | 3.60E-02 | < LLD                            | (0 / 9 )                       | < LLD                             | (0 / 3 )       | 23                                  | 24 | 25 |
|                        |           |         |                                       |          |                                  |                                | 25                                | < LLD (0 / 3 ) |                                     |    |    |

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| SAMPLE TYPE            | ANALYSIS  | ISOTOPE | NUMBER<br>OF<br>ANALYSES<br>PERFORMED | LLD      | INDICATOR-MEAN(N/TOTAL)<br>RANGE             |                                | BACKGROUND-MEAN(N/TOTAL)<br>RANGE |  | STATIONS USED<br>FOR INDICATOR MEAN |    |    |
|------------------------|-----------|---------|---------------------------------------|----------|--|--------------------------------|-----------------------------------|--|-------------------------------------|----|----|
|                        |           |         |                                       |          | STATION                                      | STATION-MEAN(N/TOTAL)<br>RANGE |                                   |  |                                     |    |    |
| CLAMS<br>(PCI/GM(WET)) | NAI GAMMA | MH-54   | 12                                    | 3.20E-02 | < LLD  | (0 / 9 )                       | < LLD (0 / 3 )                    |  | 23                                  | 24 | 25 |
|                        |           |         |                                       |          |  |                                | 25                                | < LLD (0 / 3 )                               |                                     |    |    |
| CLAMS<br>(PCI/GM(WET)) | NAI GAMMA | TH-232  | 12                                    | 1.40E-01 | < LLD  | (0 / 9 )                       | < LLD (0 / 3 )                    |  | 23                                  | 24 | 25 |
|                        |           |         |                                       |          |  |                                | 25                                | < LLD (0 / 3 )                               |                                     |    |    |
| CLAMS<br>(PCI/GM(WET)) | NAI GAMMA | PE-59   | 12                                    | 9.90E-02 | < LLD  | (0 / 9 )                       | < LLD (0 / 3 )                    |  | 23                                  | 24 | 25 |
|                        |           |         |                                       |          |  |                                | 25                                | < LLD (0 / 3 )                               |                                     |    |    |
| CLAMS<br>(PCI/GM(WET)) | NAI GAMMA | CS-136  | 12                                    | 1.60E-01 | < LLD  | (0 / 9 )                       | < LLD (0 / 3 )                    |  | 23                                  | 24 | 25 |
|                        |           |         |                                       |          |  |                                | 25                                | < LLD (0 / 3 )                               |                                     |    |    |
| CLAMS<br>(PCI/GM(WET)) | NAI GAMMA | TE-132  | 12                                    | 1.30E+00 | < LLD  | (0 / 9 )                       | < LLD (0 / 3 )                    |  | 23                                  | 24 | 25 |
|                        |           |         |                                       |          |  |                                | 25                                | < LLD (0 / 3 )                               |                                     |    |    |
| CLAMS<br>(PCI/GM(WET)) | NAI GAMMA | ZM-65   | 12                                    | 9.70E-02 | < LLD  | (0 / 9 )                       | < LLD (0 / 3 )                    |  | 23                                  | 24 | 25 |
|                        |           |         |                                       |          |  |                                | 25                                | < LLD (0 / 3 )                               |                                     |    |    |
| CLAMS<br>(PCI/GM(WET)) | NAI GAMMA | CO-60   | 12                                    | 4.70E-02 | 5.70E-02 (3 / 9 )<br>( 3.20E-02 - 1.00E-01 ) |                                | 1.70E-02 (1 / 3 )                 |  | 23                                  | 24 | 25 |
|                        |           |         |                                       |          |  |                                | ( 1.70E-02 - 1.70E-02 )           |  |                                     |    |    |
|                        |           |         |                                       |          |  |                                | 23                                | 1.00E-01 (1 / 3 )<br>( 1.00E-01 - 1.00E-01 ) |                                     |    |    |

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| SAMPLE TYPE            | ANALYSIS  | ISOTOPE  | NUMBER<br>OF<br>ANALYSES<br>PERFORMED | LLD      | INDICATOR-MEAN(N/TOTAL)<br>RANGE           |   | BACKGROUND-MEAN(N/TOTAL)<br>RANGE |    | STATIONS USED<br>FOR INDICATOR MEAN |    |  |
|------------------------|-----------|----------|---------------------------------------|----------|--|---|-----------------------------------|----|-------------------------------------|----|--|
|                        |           |          |                                       |          | STATION                                    | STATION-MEAN(N/TOTAL)<br>RANGE            |                                   |    |                                     |    |  |
| CLAMS<br>(PCI/GM(WET)) | NAI GAMMA | K-40     | 12                                    | 6.20E-01 | 1.73E+00 (9 /9 )<br>( 7.70E-01 - 4.30E+00) | 2.10E+00(3 /3 )<br>( 1.50E+00 - 2.80E+00) |                                   | 23 | 24                                  | 25 |  |
|                        |           |          |                                       |          | 23   | 2.33E+00(3 /3 )<br>( 1.20E+00 - 4.30E+00) |                                   |    |                                     |    |  |
| CLAMS<br>(PCI/GM(WET)) | NAI GAMMA | BALA-140 | 12                                    | 1.30E-01 | < LLD (0 /9 )                              | < LLD (0 /3 )                             |                                   | 23 | 24                                  | 25 |  |
|                        |           |          |                                       |          | 25   | < LLD (0 /3 )                             |                                   |    |                                     |    |  |
| CLAMS<br>(PCI/GM(WET)) | NAI GAMMA | BE-7     | 4                                     | 1.10E-01 | < LLD (0 /3 )                              | < LLD (0 /1 )                             |                                   | 23 | 24                                  | 25 |  |
|                        |           |          |                                       |          | 25   | < LLD (0 /1 )                             |                                   |    |                                     |    |  |
| CLAMS<br>(PCI/GM(WET)) | NAI GAMMA | CR-91    | 12                                    | 2.30E-01 | < LLD (0 /9 )                              | < LLD (0 /3 )                             |                                   | 23 | 24                                  | 25 |  |
|                        |           |          |                                       |          | 25   | < LLD (0 /3 )                             |                                   |    |                                     |    |  |
| CLAMS<br>(PCI/GM(WET)) | NAI GAMMA | RA-226   | 12                                    | 6.20E-02 | < LLD (0 /9 )                              | < LLD (0 /3 )                             |                                   | 23 | 24                                  | 25 |  |
|                        |           |          |                                       |          | 25   | < LLD (0 /3 )                             |                                   |    |                                     |    |  |
| CLAMS<br>(PCI/GM(WET)) | NAI GAMMA | I-131    | 12                                    | 4.00E-01 | < LLD (0 /9 )                              | < LLD (0 /3 )                             |                                   | 23 | 24                                  | 25 |  |
|                        |           |          |                                       |          | 25   | < LLD (0 /3 )                             |                                   |    |                                     |    |  |
| CLAMS<br>(PCI/GM(WET)) | NAI GAMMA | NA-22    | 12                                    | 4.70E-02 | < LLD (0 /9 )                              | < LLD (0 /3 )                             |                                   | 23 | 24                                  | 25 |  |
|                        |           |          |                                       |          | 25   | < LLD (0 /3 )                             |                                   |    |                                     |    |  |

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| SAMPLE TYPE            | ANALYSIS     | ISOTOPE | NUMBER<br>OF<br>ANALYSES<br>PERFORMED | LLD      | INDICATOR-MEAN(N/TOTAL)<br>RANGE |                                | BACKGROUND-MEAN(N/TOTAL)<br>RANGE |   | STATIONS USED<br>FOR INDICATOR MEAN |    |       |
|------------------------|--------------|---------|---------------------------------------|----------|----------------------------------|--------------------------------|-----------------------------------|---|-------------------------------------|----|-------|
|                        |              |         |                                       |          | STATION                          | STATION-MEAN(N/TOTAL)<br>RANGE |                                   |   |                                     |    |       |
| CLAMS<br>(PCI/GM(WET)) | NAI GAMMA    | RU-106  | 12                                    | 3.20E-01 | < LLD                            | ( 0 / 9 )                      | < LLD                             | ( 0 / 3 )                                   | 23                                  | 24 | 25    |
|                        |              |         |                                       |          |                                  |                                | 25                                | < LLD ( 0 / 3 )                             |                                     |    |       |
| CLAMS<br>(PCI/GM(WET)) | NAI GAMMA    | I-133   | 12                                    | 3.10E-02 | < LLD                            | ( 0 / 9 )                      | < LLD                             | ( 0 / 3 )                                   | 23                                  | 24 | 25    |
|                        |              |         |                                       |          |                                  |                                | 25                                | < LLD ( 0 / 3 )                             |                                     |    |       |
| CLAMS<br>(PCI/GM(WET)) | NAI GAMMA    | CS-137  | 12                                    | 4.70E-02 | < LLD                            | ( 0 / 9 )                      | < LLD                             | ( 0 / 3 )                                   | 23                                  | 24 | 25    |
|                        |              |         |                                       |          |                                  |                                | 25                                | < LLD ( 0 / 3 )                             |                                     |    |       |
| CLAMS<br>(PCI/GM(WET)) | STRONTIUM-90 |         | 12                                    | 1.28E-01 | < LLD                            | ( 0 / 9 )                      | < LLD                             | ( 0 / 3 )                                   | 23                                  | 24 | 25    |
|                        |              |         |                                       |          |                                  |                                | 25                                | < LLD ( 0 / 3 )                             |                                     |    |       |
| SOIL<br>(PCI/GM(DRY))  | GROSS BETA   |         | 35                                    | 1.16E+00 | ( 1.52E+00 - 2.41E+01 )          | 6.97E+00 (35 / 35 )            | ( . / . )                         |   | 1                                   | 2  | 3 4 5 |
|                        |              |         |                                       |          |                                  |                                | 5                                 | 1.28E+01(7 / 7 )<br>( 6.95E+00 - 2.41E+01 ) |                                     |    |       |
| SOIL<br>(PCI/GM(DRY))  | GELI GAMMA   | CE-144  | 1                                     | 6.50E-01 | < LLD                            | ( 0 / 1 )                      | ( . / . )                         |   | 5                                   |    |       |
|                        |              |         |                                       |          |                                  |                                | 5                                 | < LLD ( 0 / 1 )                             |                                     |    |       |
| SOIL<br>(PCI/GM(DRY))  | GELI GAMMA   | AO-110M | 1                                     | 2.00E-01 | < LLD                            | ( 0 / 1 )                      | ( . / . )                         |   | 5                                   |    |       |
|                        |              |         |                                       |          |                                  |                                | 5                                 | < LLD ( 0 / 1 )                             |                                     |    |       |

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| SAMPLE TYPE | ANALYSIS | ISOTOPE NUMBER        | LTD | INDICATOR-MEAN(N/TOTAL) | BACKGROUND-MEAN(N/TOTAL) | STATIONS USED FOR INDICATOR MEAN |
|-------------|----------|-----------------------|-----|-------------------------|--------------------------|----------------------------------|
|             |          |                       |     | RANGE                   | RANGE                    |                                  |
|             |          | OF ANALYSES PERFORMED |     | STATION                 | STATION-MEAN(N/TOTAL)    |                                  |
|             |          |                       |     |                         | RANGE                    |                                  |

|                    |            |         |   |          |                  |                       |   |         |                  |   |
|--------------------|------------|---------|---|----------|------------------|-----------------------|---|---------|------------------|---|
| SOIL (PCI/GM(DRY)) | GELI GAMMA | TE-129M | 1 | 2.50E+01 | < LLD            | (0 / 1)               | 5 | (. / .) | < LLD (0 / 1)    | 5 |
| SOIL (PCI/GM(DRY)) | GELI GAMMA | CS-134  | 1 | 1.60E-01 | < LLD            | (0 / 1)               | 5 | (. / .) | < LLD (0 / 1)    | 5 |
| SOIL (PCI/GM(DRY)) | GELI GAMMA | CO-58   | 1 | 2.90E-01 | < LLD            | (0 / 1)               | 5 | (. / .) | < LLD (0 / 1)    | 5 |
| SOIL (PCI/GM(DRY)) | GELI GAMMA | MN-54   | 1 | 1.50E-01 | < LLD            | (0 / 1)               | 5 | (. / .) | < LLD (0 / 1)    | 5 |
| SOIL (PCI/GM(DRY)) | GELI GAMMA | TH-232  | 1 | 4.90E-01 | 9.50E-01 (1 / 1) | (9.50E-01 - 9.50E-01) | 5 | (. / .) | 9.50E-01 (1 / 1) | 5 |
| SOIL (PCI/GM(DRY)) | GELI GAMMA | FE-59   | 1 | 9.10E-01 | < LLD            | (0 / 1)               | 5 | (. / .) | < LLD (0 / 1)    | 5 |
| SOIL (PCI/GM(DRY)) | GELI GAMMA | CS-136  | 1 | 1.40E+01 | < LLD            | (0 / 1)               | 5 | (. / .) | < LLD (0 / 1)    | 5 |

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| SAMPLE TYPE           | ANALYSIS   | ISOTOPE | NUMBER<br>OF<br>ANALYSES<br>PERFORMED | LLD      | INDICATOR-MEAN(N/TOTAL)<br>RANGE            |         | BACKGROUND-MEAN(N/TOTAL)<br>RANGE          |   | STATIONS USED<br>FOR INDICATOR MEAN |
|-----------------------|------------|---------|---------------------------------------|----------|---|---------|--|---|-------------------------------------|
|                       |            |         |                                       |          |   | STATION | STATION-MEAN(N/TOTAL)<br>RANGE             |   |                                     |
| SOIL<br>(PCI/GM(DRY)) | GELI GAMMA | ZM-65   | 1                                     | 4.30E-01 | < LLD                                       | (0 /1 ) | ( . . - . / . )                            | 5 |                                     |
|                       |            |         |                                       |          |   |         | < LLD (0 /1 )                              |   |                                     |
| SOIL<br>(PCI/GM(DRY)) | GELI GAMMA | CO-60   | 1                                     | 1.40E-01 | < LLD                                       | (0 /1 ) | ( . . - . / . )                            | 5 |                                     |
|                       |            |         |                                       |          |   |         | < LLD (0 /1 )                              |   |                                     |
| SOIL<br>(PCI/GM(DRY)) | GELI GAMMA | K-40    | 1                                     | 9.70E-01 | 1.90E+01 (1 /1 )<br>( 1.90E+01 - 1.90E+01 ) |         | ( . . - . / . )                            | 5 |                                     |
|                       |            |         |                                       |          |   |         | 1.90E+01(1 /1 )<br>( 1.90E+01 - 1.90E+01 ) |   |                                     |
| SOIL<br>(PCI/GM(DRY)) | GELI GAMMA | BE-7    | 1                                     | 3.30E+00 | < LLD                                       | (0 /1 ) | ( . . - . / . )                            | 5 |                                     |
|                       |            |         |                                       |          |   |         | < LLD (0 /1 )                              |   |                                     |
| SOIL<br>(PCI/GM(DRY)) | GELI GAMMA | ZR-95   | 1                                     | 6.10E-01 | < LLD                                       | (0 /1 ) | ( . . - . / . )                            | 5 |                                     |
|                       |            |         |                                       |          |   |         | < LLD (0 /1 )                              |   |                                     |
| SOIL<br>(PCI/GM(DRY)) | GELI GAMMA | MB-95   | 1                                     | 7.80E-01 | < LLD                                       | (0 /1 ) | ( . . - . / . )                            | 5 |                                     |
|                       |            |         |                                       |          |   |         | < LLD (0 /1 )                              |   |                                     |
| SOIL<br>(PCI/GM(DRY)) | GELI GAMMA | SB-125  | 1                                     | 3.90E-01 | < LLD                                       | (0 /1 ) | ( . . - . / . )                            | 5 |                                     |
|                       |            |         |                                       |          |   |         | < LLD (0 /1 )                              |   |                                     |

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SAMPLE TYPE ANALYSIS ISOTOPE NUMBER OF ANALYSES PERFORMED INDICATOR-MEAN(N/TOTAL) RANGE BACKROUND-MEAN(N/TOTAL) RANGE STATIONS USED MEAN FOR INDICATOR MEAN

|                    |             |        |   |          |                  |                         |           |   |                 |
|--------------------|-------------|--------|---|----------|------------------|-------------------------|-----------|---|-----------------|
| SOIL (PCI/GM(DRY)) | CEL I GAMMA | CE-141 | 1 | 9.60E-01 | < LLD            | (0 / 1)                 | ( . / . ) | 5 | < LLD (0 / 1)   |
| SOIL (PCI/GM(DRY)) | CEL I GAMMA | RU-103 | 1 | 6.20E-01 | < LLD            | (0 / 1)                 | ( . / . ) | 5 | < LLD (0 / 1)   |
| SOIL (PCI/GM(DRY)) | CEL I GAMMA | CR-51  | 1 | 9.80E+00 | < LLD            | (0 / 1)                 | ( . / . ) | 5 | < LLD (0 / 1)   |
| SOIL (PCI/GM(DRY)) | CEL I GAMMA | BA-140 | 1 | 6.90E+01 | < LLD            | (0 / 1)                 | ( . / . ) | 5 | < LLD (0 / 1)   |
| SOIL (PCI/GM(DRY)) | CEL I GAMMA | LA-140 | 1 | 1.80E+01 | < LLD            | (0 / 1)                 | ( . / . ) | 5 | < LLD (0 / 1)   |
| SOIL (PCI/GM(DRY)) | CEL I GAMMA | NA-226 | 1 | 8.70E-01 | 9.00E-01 (1 / 1) | ( 9.00E-01 - 9.00E-01 ) | ( . / . ) | 5 | 9.00E-01(1 / 1) |
| SOIL (PCI/GM(DRY)) | CEL I GAMMA | RU-106 | 1 | 1.30E+00 | < LLD            | (0 / 1)                 | ( . / . ) | 5 | < LLD (0 / 1)   |

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| SAMPLE TYPE              | ANALYSIS      | ISOTOPE | NUMBER<br>OF<br>ANALYSES<br>PERFORMED | LLD      | INDICATOR-MEAN(N/TOTAL)<br>RANGE             | STATION | BACKGROUND-MEAN(N/TOTAL)<br>RANGE  | STATIONS USED<br>FOR INDICATOR MEAN |
|--------------------------|---------------|---------|---------------------------------------|----------|--|---------|--|-------------------------------------|
|                          |               |         |                                       |          |  |         | STATION-MEAN(N/TOTAL)<br>RANGE   |                                     |
| SOIL<br>(PCI/GM(DRY))    | GELI GAMMA    | CO-57   | 1                                     | 8.40E-02 | < LLD (0 /1 )                                | 5       | ( . / . )<br>< LLD (0 /1 )   | 5                                   |
| SOIL<br>(PCI/GM(DRY))    | GELI GAMMA    | CS-137  | 1                                     | 1.20E-01 | 3.20E-01 (1 /1 )<br>( 3.20E-01 - 3.20E-01)   | 5       | ( . / . )<br>3.20E-01(1 /1 )<br>( 3.20E-01 - 3.20E-01)                                 | 5                                   |
| PASTURE<br>(PCI/GM(WET)) | GROSS BETA    |         | 9                                     | 1.56E-01 | 1.06E+01 (9 /9 )<br>( 4.25E+00 - 2.74E+01)   | 30      | ( . / . )<br>1.46E+01(3 /3 )<br>( 7.85E+00 - 2.74E+01)                                 | 28 29 30                            |
| PASTURE<br>(UO/GM(WET) ) | CALCIUM BY AA |         | 9                                     | 2.87E+00 | 3.88E+03 (9 /9 )<br>( 1.12E+03 - 9.45E+03)   | 30      | ( . / . )<br>5.15E+03(3 /3 )<br>( 1.14E+03 - 9.45E+03)                                 | 28 29 30                            |
| PASTURE<br>(PCI/GM(WET)) | STRONTIUM-90  |         | 9                                     | 3.56E-02 | 2.09E-01 (9 /9 )<br>( 1.54E-02 - 3.56E-01)   | 29      | ( . / . )<br>2.97E-01(3 /3 )<br>( 1.81E-01 - 3.56E-01)                                 | 28 29 30                            |
| SILT<br>(PCI/GM(DRY))    | GROSS ALPHA   |         | 24                                    | 4.85E+00 | 6.05E+00 (12 /21 )<br>( 2.86E+00 - 1.05E+01) | 32      | 2.60E+00(1 /3 )<br>( 2.60E+00 - 2.60E+00)<br>7.51E+00(2 /3 )<br>( 7.36E+00 - 7.66E+00) | 23 24 25 26 27<br>32 33             |

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| SAMPLE TYPE           | ANALYSIS   | ISOTOPE NUMBER<br>OF<br>ANALYSES<br>PERFORMED | LLD      | INDICATOR-MEAN(N/TOTAL)<br>RANGE             |                | BACKGROUND-MEAN(N/TOTAL)<br>RANGE         |    | STATIONS USED<br>FOR INDICATOR MEAN |  |  |  |  |
|-----------------------|------------|---|----------|--|----------------|---|----|-------------------------------------|--|--|--|--|
|                       |            |   |          |  |                |   |    |                                     |  |  |  |  |
|                       |            |   |          |  | STATION        | STATION-MEAN(N/TOTAL)<br>RANGE            |    |                                     |  |  |  |  |
| SILT<br>(PCI/GM(DRY)) | GROSS BETA | 24  | 1.31E+00 | 6.82E+00 (21 /21 )<br>( 1.04E+00 - 1.74E+01) |                | 1.07E+01(3 /3 )<br>( 7.86E+00 - 1.34E+01) |    | 23 24 25 26 27                      |  |  |  |  |
|                       |            |   |          |  | 33             | 1.98E+01(3 /3 )<br>( 1.47E+01 - 1.74E+01) |    | 32 33                               |  |  |  |  |
| SILT<br>(PCI/GM(DRY)) | GELI GAMMA | CE-144  | 39       | 6.60E-01                                     | < LLD (0 /34 ) | < LLD (0 /5 )                             |    | 23 24 25 32 33                      |  |  |  |  |
|                       |            |   |          |  |                |   | 33 | < LLD (0 /7 )                       |  |  |  |  |
| SILT<br>(PCI/GM(DRY)) | GELI GAMMA | AG-110M                                       | 39       | 1.90E-01                                     | < LLD (0 /34 ) | < LLD (0 /5 )                             |    | 23 24 25 32 33                      |  |  |  |  |
|                       |            |   |          |  |                |   | 33 | < LLD (0 /7 )                       |  |  |  |  |
| SILT<br>(PCI/GM(DRY)) | GELI GAMMA | TE-129M                                       | 39       | 7.70E+00                                     | < LLD (0 /34 ) | < LLD (0 /5 )                             |    | 23 24 25 32 33                      |  |  |  |  |
|                       |            |   |          |  |                |   | 33 | < LLD (0 /7 )                       |  |  |  |  |
| SILT<br>(PCI/GM(DRY)) | GELI GAMMA | MD-99   | 25       | 1.40E+01                                     | < LLD (0 /22 ) | < LLD (0 /3 )                             |    | 23 24 25 32 33                      |  |  |  |  |
|                       |            |   |          |  |                |   | 33 | < LLD (0 /1 )                       |  |  |  |  |
| SILT<br>(PCI/GM(DRY)) | GELI GAMMA | CS-134  | 39       | 1.20E-01                                     | < LLD (0 /34 ) | < LLD (0 /5 )                             |    | 23 24 25 32 33                      |  |  |  |  |
|                       |            |   |          |  |                |   | 33 | < LLD (0 /7 )                       |  |  |  |  |
| SILT<br>(PCI/GM(DRY)) | GELI GAMMA | CO-58   | 39       | 1.70E-01                                     | < LLD (0 /34 ) | < LLD (0 /5 )                             |    | 23 24 25 32 33                      |  |  |  |  |
|                       |            |   |          |  |                |   | 33 | < LLD (0 /7 )                       |  |  |  |  |

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| SAMPLE TYPE           | ANALYSIS   | ISOTOPE | NUMBER<br>OF<br>ANALYSES<br>PERFORMED | LLD      | INDICATOR-MEAN(N/TOTAL)<br>RANGE             | BACKGROUND-MEAN(N/TOTAL)<br>RANGE         | STATION | STATION-MEAN(N/TOTAL)<br>RANGE            | STATIONS USED<br>FOR INDICATOR MEAN |
|-----------------------|------------|---------|---------------------------------------|----------|--|---|---------|---|-------------------------------------|
| SILT<br>(PCI/GM(DRY)) | GELI GAMMA | MN-54   | 39                                    | 1.40E-01 | 1.11E-01 (9 /34 )<br>( 4.80E-02 - 1.80E-01)  | < LLD (0 /5 )                             | 23      | 24 25 32 33                               |                                     |
|                       |            |         |                                       |          |  |   | 33      | 1.26E-01(4 /7 )<br>( 7.70E-02 - 1.80E-01) |                                     |
| SILT<br>(PCI/GM(DRY)) | GELI GAMMA | TM-232  | 39                                    | 4.50E-01 | 4.27E-01 (21 /34 )<br>( 1.80E-01 - 8.70E-01) | 4.87E-01(4 /5 )<br>( 3.90E-01 - 6.90E-01) | 23      | 24 25 32 33                               |                                     |
|                       |            |         |                                       |          |  |   | 33      | 6.20E-01(3 /7 )<br>( 5.30E-01 - 7.70E-01) |                                     |
| SILT<br>(PCI/GM(DRY)) | GELI GAMMA | FE-59   | 39                                    | 4.40E-01 | < LLD (0 /34 )                               | < LLD (0 /5 )                             | 23      | 24 25 32 33                               |                                     |
|                       |            |         |                                       |          |  |   | 33      | < LLD (0 /7 )                             |                                     |
| SILT<br>(PCI/GM(DRY)) | GELI GAMMA | CS-136  | 39                                    | 1.00E+00 | < LLD (0 /34 )                               | < LLD (0 /5 )                             | 23      | 24 25 32 33                               |                                     |
|                       |            |         |                                       |          |  |   | 33      | < LLD (0 /7 )                             |                                     |
| SILT<br>(PCI/GM(DRY)) | GELI GAMMA | ZN-65   | 39                                    | 3.10E-01 | < LLD (0 /34 )                               | < LLD (0 /5 )                             | 23      | 24 25 32 33                               |                                     |
|                       |            |         |                                       |          |  |   | 33      | < LLD (0 /7 ) ,                           |                                     |
| SILT<br>(PCI/GM(DRY)) | GELI GAMMA | CO-60   | 39                                    | 1.70E-01 | 5.51E-01 (22 /34 )<br>( 3.20E-02 - 2.10E+00) | 5.40E-01(1 /5 )<br>( 5.40E-01 - 5.40E-01) | 23      | 24 25 32 33                               |                                     |
|                       |            |         |                                       |          |  |   | 33      | 1.25E+00(7 /7 )<br>( 8.90E-01 - 2.10E+00) |                                     |
| SILT<br>(PCI/GM(DRY)) | GELI GAMMA | K-40    | 39                                    | 1.20E+00 | 5.48E+00 (34 /34 )<br>( 5.20E-01 - 1.40E+01) | 9.54E+00(5 /5 )<br>( 7.10E+00 - 1.10E+01) | 23      | 24 25 32 33                               |                                     |
|                       |            |         |                                       |          |  |   | 33      | 1.01E+01(7 /7 )<br>( 8.90E+00 - 1.30E+01) |                                     |

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| SAMPLE TYPE           | ANALYSIS   | ISOTOPE | NUMBER<br>OF<br>ANALYSES<br>PERFORMED | LLD      | INDICATOR-MEAN(N/TOTAL)<br>RANGE             |                                | BACKGROUND-MEAN(N/TOTAL)<br>RANGE         |         | STATIONS USED<br>FOR INDICATOR MEAN |    |    |    |    |
|-----------------------|------------|---------|---------------------------------------|----------|--|--------------------------------|---|---------|-------------------------------------|----|----|----|----|
|                       |            |         |                                       |          | STATION                                      | STATION-MEAN(N/TOTAL)<br>RANGE |   |         |                                     |    |    |    |    |
| SILT<br>(PCI/GM(DRY)) | GELI GAMMA | DE-7    | 39                                    | 1.40E+00 | 6.60E-01 (1 /34 )<br>( 6.60E-01 - 6.60E-01)  |                                | < LLD                                     | (0 /5 ) | 23                                  | 24 | 25 | 32 | 33 |
|                       |            |         |                                       |          |  | 33                             | 6.60E-01(1 /7 )<br>( 6.60E-01 - 6.60E-01) |         |                                     |    |    |    |    |
| SILT<br>(PCI/GM(DRY)) | GELI GAMMA | ZR-95   | 39                                    | 3.40E-01 | < LLD (0 /34 )                               |                                | < LLD                                     | (0 /5 ) | 23                                  | 24 | 25 | 32 | 33 |
|                       |            |         |                                       |          |  | 33                             | < LLD (0 /7 )                             |         |                                     |    |    |    |    |
| SILT<br>(PCI/GM(DRY)) | GELI GAMMA | NB-95   | 39                                    | 2.60E-01 | 1.66E-01 (16 /34 )<br>( 4.50E-02 - 4.40E-01) |                                | 1.17E-01(3 /5 )<br>( 5.00E-02 - 1.70E-01) |         | 23                                  | 24 | 25 | 32 | 33 |
|                       |            |         |                                       |          |  | 33                             | 2.30E-01(3 /7 )<br>( 1.20E-01 - 4.40E-01) |         |                                     |    |    |    |    |
| SILT<br>(PCI/GM(DRY)) | GELI GAMMA | SB-125  | 39                                    | 3.00E-01 | < LLD (0 /34 )                               |                                | < LLD                                     | (0 /5 ) | 23                                  | 24 | 25 | 32 | 33 |
|                       |            |         |                                       |          |  | 33                             | < LLD (0 /7 )                             |         |                                     |    |    |    |    |
| SILT<br>(PCI/GM(DRY)) | GELI GAMMA | CE-141  | 39                                    | 3.00E-01 | < LLD (0 /34 )                               |                                | < LLD                                     | (0 /5 ) | 23                                  | 24 | 25 | 32 | 33 |
|                       |            |         |                                       |          |  | 33                             | < LLD (0 /7 )                             |         |                                     |    |    |    |    |
| SILT<br>(PCI/GM(DRY)) | GELI GAMMA | RU-103  | 39                                    | 2.00E-01 | < LLD (0 /34 )                               |                                | < LLD                                     | (0 /5 ) | 23                                  | 24 | 25 | 32 | 33 |
|                       |            |         |                                       |          |  | 33                             | < LLD (0 /7 )                             |         |                                     |    |    |    |    |
| SILT<br>(PCI/GM(DRY)) | GELI GAMMA | CR-51   | 39                                    | 2.00E+00 | < LLD (0 /34 )                               |                                | < LLD                                     | (0 /5 ) | 23                                  | 24 | 25 | 32 | 33 |
|                       |            |         |                                       |          |  | 33                             | < LLD (0 /7 )                             |         |                                     |    |    |    |    |

TABLE 17  
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| SAMPLE TYPE           | ANALYSIS   | ISOTOPE | NUMBER<br>OF<br>ANALYSES<br>PERFORMED | LLD      | INDICATOR-MEAN(N/TOTAL)<br>RANGE               |                                | BACKGROUND-MEAN(N/TOTAL)<br>RANGE           |                | STATIONS USED<br>FOR INDICATOR MEAN |    |    |    |   |
|-----------------------|------------|---------|---------------------------------------|----------|--|--------------------------------|---|----------------|-------------------------------------|----|----|----|---|
|                       |            |         |                                       |          | STATION  | STATION-MEAN(N/TOTAL)<br>RANGE |   |                |                                     |    |    |    |   |
| SILT<br>(PCI/GM(DRY)) | GELI GAMMA | BA-140  | 39                                    | 4.10E+00 | < LLD  | (0 / 34 )                      | < LLD                                       | (0 / 5 )       | 23                                  | 24 | 25 | 32 | 33  |
|                       |            |         |                                       |          |  |                                | 33  | < LLD (0 / 7 ) |                                     |    |    |    |   |
| SILT<br>(PCI/GM(DRY)) | GELI GAMMA | LA-140  | 39                                    | 1.80E+00 | < LLD  | (0 / 34 )                      | < LLD                                       | (0 / 5 )       | 23                                  | 24 | 25 | 32 | 33  |
|                       |            |         |                                       |          |  |                                | 33  | < LLD (0 / 7 ) |                                     |    |    |    |   |
| SILT<br>(PCI/GM(DRY)) | GELI GAMMA | RA-226  | 39                                    | 2.70E-01 | 3.43E-01 (32 / 34 )<br>( 1.80E-01 - 5.90E-01 ) |                                | 3.22E-01(5 / 5 )<br>( 3.00E-01 - 3.90E-01 ) | 23             | 24                                  | 25 | 32 | 33 |   |
|                       |            |         |                                       |          |  |                                | 33  |                |                                     |    |    |    | 4.26E-01(5 / 7 )<br>( 2.80E-01 - 5.20E-01 ) |
| SILT<br>(PCI/GM(DRY)) | GELI GAMMA | I-131   | 39                                    | 4.10E+00 | < LLD  | (0 / 34 )                      | < LLD                                       | (0 / 5 )       | 23                                  | 24 | 25 | 32 | 33  |
|                       |            |         |                                       |          |  |                                | 33  | < LLD (0 / 7 ) |                                     |    |    |    |   |
| SILT<br>(PCI/GM(DRY)) | GELI GAMMA | HP-239  | 9                                     | 2.90E+01 | < LLD  | (0 / 7 )                       | < LLD                                       | (0 / 2 )       | 23                                  | 24 | 25 | 32 |   |
|                       |            |         |                                       |          |  |                                | 32  | < LLD (0 / 1 ) |                                     |    |    |    |   |
| SILT<br>(PCI/GM(DRY)) | GELI GAMMA | RU-106  | 39                                    | 1.00E+00 | < LLD  | (0 / 34 )                      | < LLD                                       | (0 / 5 )       | 23                                  | 24 | 25 | 32 | 33  |
|                       |            |         |                                       |          |  |                                | 33  | < LLD (0 / 7 ) |                                     |    |    |    |   |
| SILT<br>(PCI/GM(DRY)) | GELI GAMMA | CO-57   | 39                                    | 8.10E-02 | < LLD  | (0 / 34 )                      | < LLD                                       | (0 / 5 )       | 23                                  | 24 | 25 | 32 | 33  |
|                       |            |         |                                       |          |  |                                | 33  | < LLD (0 / 7 ) |                                     |    |    |    |   |

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 DECEMBER, 1980 THROUGH MAY, 1981  
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| SAMPLE TYPE           | ANALYSIS   | ISOTOPE | NUMBER<br>OF<br>ANALYSES<br>PERFORMED | LLD      | INDICATOR-MEAN(N/TOTAL) | BACKGROUND-MEAN(N/TOTAL)       | STATIONS USED<br>FOR INDICATOR MEAN |    |    |    |    |
|-----------------------|------------|---------|---------------------------------------|----------|-------------------------|--------------------------------|-------------------------------------|----|----|----|----|
|                       |            |         |                                       |          | RANGE                   | RANGE                          |                                     |    |    |    |    |
|                       |            |         |                                       |          | STATION                 | STATION-MEAN(N/TOTAL)<br>RANGE |                                     |    |    |    |    |
| SILT<br>(PCI/GM(DRY)) | GELI GAMMA | CS-137  | 39                                    | 1.40E-01 | 1.92E-01 (12 /34 )      | 8.60E-02(4 /5 )                | 23                                  | 24 | 25 | 32 | 33 |
|                       |            |         |                                       |          | ( 7.40E-02 - 2.80E-01)  | ( 3.10E-02 - 2.00E-01)         |                                     |    |    |    |    |
|                       |            |         |                                       |          | 33                      | 2.17E-01(7 /7 )                |                                     |    |    |    |    |
|                       |            |         |                                       |          |                         | ( 1.40E-01 - 2.80E-01)         |                                     |    |    |    |    |

TABLE 18  
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| SAMPLE TYPE                  | ANALYSIS    | ISOTOPE | NUMBER<br>OF<br>ANALYSES<br>PERFORMED | LLD      | INDICATOR-MEAN(H/TOTAL)<br>RANGE             | BACKGROUND-MEAN(H/TOTAL)<br>RANGE           | STATIONS USED<br>FOR INDICATOR MEAN |   |   |   |   |
|------------------------------|-------------|---------|---------------------------------------|----------|--|---|-------------------------------------|---|---|---|---|
| VEGETATION<br>(PCI/OM(WET))  | GROSS BETA  |         | 15                                    | 4.87E-02 | 3.34E+00 (15 /15 )<br>( 6.25E-01 - 9.08E+00) | ( . . - . . )                               | 1                                   | 2 | 3 | 4 | 5 |
| AIR PARTICULATE<br>(PCI/M3 ) | GROSS ALPHA |         | 8                                     | 9.49E-04 | 1.11E-03 (5 /5 )<br>( 8.71E-04 - 1.40E-03)   | 1.19E-03(2 /3 )<br>( 8.38E-04 - 1.55E-03)   | 1                                   | 2 | 3 | 4 | 5 |
| AIR PARTICULATE<br>(PCI/M3 ) | GROSS BETA  |         | 48                                    | 9.19E-03 | 6.29E-02 (30 /30 )<br>( 3.42E-02 - 1.16E-01) | 5.48E-02(18 /18 )<br>( 2.55E-02 - 9.44E-02) | 1                                   | 2 | 3 | 4 | 5 |
| AIR PARTICULATE<br>(PCI/M3 ) | GELI GAMMA  | CE-144  | 48                                    | 1.80E-01 | < LLD (0 /30 )                               | < LLD (0 /18 )                              | 1                                   | 2 | 3 | 4 | 5 |
| AIR PARTICULATE<br>(PCI/M3 ) | GELI GAMMA  | AO-110M | 48                                    | 2.50E-02 | < LLD (0 /30 )                               | < LLD (0 /18 )                              | 1                                   | 2 | 3 | 4 | 5 |
| AIR PARTICULATE<br>(PCI/M3 ) | GELI GAMMA  | TE-129M | 48                                    | 1.40E+00 | < LLD (0 /30 )                               | < LLD (0 /18 )                              | 1                                   | 2 | 3 | 4 | 5 |
| AIR PARTICULATE<br>(PCI/M3 ) | GELI GAMMA  | MO-99   | 25                                    | 1.70E+00 | < LLD (0 /19 )                               | < LLD (0 /6 )                               | 1                                   | 2 | 3 | 4 | 5 |
| AIR PARTICULATE<br>(PCI/M3 ) | GELI GAMMA  | CS-134  | 48                                    | 2.60E-02 | < LLD (0 /30 )                               | < LLD (0 /18 )                              | 1                                   | 2 | 3 | 4 | 5 |
| AIR PARTICULATE<br>(PCI/M3 ) | GELI GAMMA  | CO-58   | 48                                    | 3.30E-02 | < LLD (0 /30 )                               | < LLD (0 /18 )                              | 1                                   | 2 | 3 | 4 | 5 |
| AIR PARTICULATE<br>(PCI/M3 ) | GELI GAMMA  | MM-54   | 48                                    | 2.60E-02 | < LLD (0 /30 )                               | < LLD (0 /18 )                              | 1                                   | 2 | 3 | 4 | 5 |
| AIR PARTICULATE<br>(PCI/M3 ) | GELI GAMMA  | TH-232  | 48                                    | 8.90E-02 | < LLD (0 /30 )                               | < LLD (0 /18 )                              | 1                                   | 2 | 3 | 4 | 5 |
| AIR PARTICULATE<br>(PCI/M3 ) | GELI GAMMA  | FE-59   | 48                                    | 8.90E-02 | < LLD (0 /30 )                               | < LLD (0 /18 )                              | 1                                   | 2 | 3 | 4 | 5 |

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DECEMBER, 1980 THROUGH FEBRUARY, 1981  
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| SAMPLE TYPE                 | ANALYSIS   | ISOTOPE | NUMBER<br>OF<br>ANALYSES<br>PERFORMED | LLD      | INDICATOR-MEAN(N/TOTAL)<br>RANGE             | BACKGROUND-MEAN(N/TOTAL)<br>RANGE           | STATIONS USED<br>FOR INDICATOR MEAN |
|-----------------------------|------------|---------|---------------------------------------|----------|--|---|-------------------------------------|
| AIR PARTICULATE<br>(PCI/M3) | GELI GAMMA | CS-136  | 48                                    | 1.10E-01 | < LLD (0 /30 )                               | < LLD (0 /18 )                              | 1 2 3 4 5                           |
| AIR PARTICULATE<br>(PCI/M3) | GELI GAMMA | ZH-65   | 48                                    | 6.80E-02 | < LLD (0 /30 )                               | < LLD (0 /18 )                              | 1 2 3 4 5                           |
| AIR PARTICULATE<br>(PCI/M3) | GELI GAMMA | CO-60   | 48                                    | 3.50E-02 | < LLD (0 /30 )                               | < LLD (0 /18 )                              | 1 2 3 4 5                           |
| AIR PARTICULATE<br>(PCI/M3) | GELI GAMMA | K-40    | 48                                    | 3.80E-01 | < LLD (0 /30 )                               | < LLD (0 /18 )                              | 1 2 3 4 5                           |
| AIR PARTICULATE<br>(PCI/M3) | GELI GAMMA | DE-7    | 48                                    | 3.60E-01 | 8.04E-02 (8 /30 )<br>( 4.90E-02 - 1.10E-01)  | 8.90E-02(3 /18 )<br>( 6.10E-02 - 1.20E-01)  | 1 2 3 4 5                           |
| AIR PARTICULATE<br>(PCI/M3) | GELI GAMMA | ZR-95   | 48                                    | 6.20E-02 | 2.90E-02 (2 /30 )<br>( 1.80E-02 - 4.00E-02)  | 2.60E-02(1 /18 )<br>( 2.60E-02 - 2.60E-02)  | 1 2 3 4 5                           |
| AIR PARTICULATE<br>(PCI/M3) | GELI GAMMA | MB-95   | 48                                    | 6.30E-02 | 2.45E-02 (10 /30 )<br>( 1.20E-02 - 4.70E-02) | 2.70E-02(10 /18 )<br>( 6.40E-03 - 8.90E-02) | 1 2 3 4 5                           |
| AIR PARTICULATE<br>(PCI/M3) | GELI GAMMA | SB-125  | 48                                    | 7.90E-02 | < LLD (0 /30 )                               | < LLD (0 /18 )                              | 1 2 3 4 5                           |
| AIR PARTICULATE<br>(PCI/M3) | GELI GAMMA | CE-141  | 48                                    | 6.70E-02 | 1.35E-02 (2 /30 )<br>( 1.20E-02 - 1.50E-02)  | 1.20E-02(1 /18 )<br>( 1.20E-02 - 1.20E-02)  | 1 2 3 4 5                           |
| AIR PARTICULATE<br>(PCI/M3) | GELI GAMMA | RU-103  | 48                                    | 4.10E-02 | 1.22E-02 (8 /30 )<br>( 7.40E-03 - 1.60E-02)  | 1.20E-02(1 /18 )<br>( 1.20E-02 - 1.20E-02)  | 1 2 3 4 5                           |
| AIR PARTICULATE<br>(PCI/M3) | GELI GAMMA | CR-51   | 48                                    | 4.40E-01 | < LLD (0 /30 )                               | < LLD (0 /18 )                              | 1 2 3 4 5                           |
| AIR PARTICULATE<br>(PCI/M3) | GELI GAMMA | BA-140  | 48                                    | 5.00E-01 | < LLD (0 /30 )                               | < LLD (0 /18 )                              | 1 2 3 4 5                           |

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| SAMPLE TYPE                 | ANALYSIS       | ISOTOPE | NUMBER<br>OF<br>ANALYSES<br>PERFORMED | LLD      | INDICATOR-MEAN(N/TOTAL)<br>RANGE             | BACKGROUND-MEAN(N/TOTAL)<br>RANGE         | STATIONS USED<br>FOR INDICATOR MEAN |
|-----------------------------|----------------|---------|---------------------------------------|----------|--|---|-------------------------------------|
| AIR PARTICULATE<br>(PCI/M3) | GELI GAMMA     | LA-148  | 48                                    | 2.40E-01 | < LLD (0 /30 )                               | < LLD (0 /18 )                            | 1 2 3 4 5                           |
| AIR PARTICULATE<br>(PCI/M3) | GELI GAMMA     | HA-226  | 48                                    | 9.60E-02 | < LLD (0 /30 )                               | < LLD (0 /18 )                            | 1 2 3 4 5                           |
| AIR PARTICULATE<br>(PCI/M3) | GELI GAMMA     | I-131   | 48                                    | 4.80E-01 | < LLD (0 /30 )                               | < LLD (0 /18 )                            | 1 2 3 4 5                           |
| AIR PARTICULATE<br>(PCI/M3) | GELI GAMMA     | WP-239  | 16                                    | 4.90E+00 | < LLD (0 /10 )                               | < LLD (0 /6 )                             | 1 2 3 4 5                           |
| AIR PARTICULATE<br>(PCI/M3) | GELI GAMMA     | RU-106  | 48                                    | 2.70E-01 | < LLD (0 /30 )                               | < LLD (0 /18 )                            | 1 2 3 4 5                           |
| AIR PARTICULATE<br>(PCI/M3) | GELI GAMMA     | CO-57   | 48                                    | 2.20E-02 | < LLD (0 /30 )                               | < LLD (0 /18 )                            | 1 2 3 4 5                           |
| AIR PARTICULATE<br>(PCI/M3) | GELI GAMMA     | I-133   | 1                                     | 1.40E+00 | < LLD (0 /1 )                                | ( . . . )                                 | 1                                   |
| AIR PARTICULATE<br>(PCI/M3) | GELI GAMMA     | CS-137  | 48                                    | 2.90E-02 | < LLD (0 /30 )                               | < LLD (0 /18 )                            | 1 2 3 4 5                           |
| PRECIPITATION<br>(NCI/M2)   | GROSS BETA-SS  |         | 24                                    | 9.41E+01 | 1.21E-01 (12 /15 )<br>( 4.18E-02 - 2.69E-01) | 5.68E-02(6 /9 )<br>( 2.90E-02 - 9.92E-02) | 1 2 3 4 5                           |
| PRECIPITATION<br>(NCI/M2)   | GROSS BETA-DS  |         | 24                                    | 9.56E+01 | 9.82E-01 (15 /15 )<br>( 1.53E-01 - 9.95E-01) | 4.57E-01(9 /9 )<br>( 2.36E-01 - 7.33E-01) | 1 2 3 4 5                           |
| AIR IODINE<br>(PCI/M3)      | IODINE-131     |         | 48                                    | 3.10E-02 | < LLD (0 /30 )                               | < LLD (0 /18 )                            | 1 2 3 4 5                           |
| SURFACE WATER<br>(PCI/L)    | GROSS ALPHA-SS |         | 21                                    | 3.04E-01 | 1.90E-01 (3 /20 )<br>( 1.47E-01 - 2.32E-01)  | < LLD (0 /1 )                             | 23 24 25 26 27                      |

TABLE 18

RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM SUMMARY  
OYSTER CREEK NUCLEAR DEMONSTRATION STATION  
DECEMBER, 1980 THROUGH FEBRUARY, 1981  
FIRST QUARTER SUMMARY

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| SAMPLE TYPE              | ANALYSIS       | ISOTOPE NUMBER<br>OF<br>ANALYSES<br>PERFORMED | LLD      | INDICATOR-MEAN(N/TOTAL)<br>RANGE             | BACKGROUND-MEAN(N/TOTAL)<br>RANGE         | STATIONS USED<br>FOR INDICATOR MEAN |
|--------------------------|----------------|---|----------|--|---|-------------------------------------|
| SURFACE WATER<br>(PCI/L) | GROSS ALPHA-DS | 21  | 3.42E+00 | 2.39E+00 (4 /20 )<br>( 1.40E+00 - 2.93E+00)  | < LLD (0 /1 )                             | 23 24 25 26 27<br>32 33             |
| SURFACE WATER<br>(PCI/L) | GROSS BETA-SS  | 21  | 4.41E-01 | 5.03E-01 (11 /20 )<br>( 1.86E-01 - 1.10E+00) | < LLD (0 /1 )                             | 23 24 25 26 27<br>32 33             |
| SURFACE WATER<br>(PCI/L) | GROSS BETA-DS  | 21  | 1.11E+01 | 6.05E+01 (17 /20 )<br>( 2.17E+00 - 2.09E+02) | 1.51E+02(1 /1 )<br>( 1.51E+02 - 1.51E+02) | 23 24 25 26 27<br>32 33             |
| SURFACE WATER<br>(MO/L)  | CALCIUM BY AA  | 8   | 8.00E-02 | 1.20E+02 (7 /7 )<br>( 2.00E-01 - 1.83E+02)   | 1.80E+02(1 /1 )<br>( 1.80E+02 - 1.80E+02) | 23 24 25 26 27<br>32 33             |
| SURFACE WATER<br>(PCI/L) | TRITIUM        | 21  | 2.06E+02 | 1.81E+02 (6 /20 )<br>( 9.42E+01 - 3.71E+02)  | < LLD (0 /1 )                             | 23 24 25 26 27<br>32 33             |
| SURFACE WATER<br>(PCI/L) | TOTAL URANIUM  | 21  | 1.83E+00 | 1.68E+00 (5 /20 )<br>( 1.16E+00 - 2.41E+00)  | < LLD (0 /1 )                             | 23 24 25 26 27<br>32 33             |
| SURFACE WATER<br>(PCI/L) | NAI GAMMA      | CE-144  | 21       | 8.50E+01 < LLD (0 /20 )                      | < LLD (0 /1 )                             | 23 24 25 26 27<br>32 33             |
| SURFACE WATER<br>(PCI/L) | NAI GAMMA      | AO-110M                                       | 21       | 8.60E+00 < LLD (0 /20 )                      | < LLD (0 /1 )                             | 23 24 25 26 27<br>32 33             |
| SURFACE WATER<br>(PCI/L) | NAI GAMMA      | TE-129M                                       | 21       | 2.30E+02 < LLD (0 /20 )                      | < LLD (0 /1 )                             | 23 24 25 26 27<br>32 33             |
| SURFACE WATER<br>(PCI/L) | NAI GAMMA      | MO-99   | 21       | 6.10E+01 < LLD (0 /20 )                      | < LLD (0 /1 )                             | 23 24 25 26 27<br>32 33             |
| SURFACE WATER<br>(PCI/L) | NAI GAMMA      | ZRMB-95                                       | 21       | 6.20E+00 < LLD (0 /20 )                      | < LLD (0 /1 )                             | 23 24 25 26 27<br>32 33             |
| SURFACE WATER<br>(PCI/L) | NAI GAMMA      | CS-134  | 21       | 7.90E+00 < LLD (0 /20 )                      | < LLD (0 /1 )                             | 23 24 25 26 27<br>32 33             |

TABLE 18  
RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM SUMMARY  
OYSTER CREEK NUCLEAR GENERATING STATION  
DECEMBER, 1980 THROUGH FEBRUARY, 1981  
FIRST QUARTER SUMMARY

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| SAMPLE TYPE              | ANALYSIS  | ISOTOPE  | NUMBER<br>OF<br>ANALYSES<br>PERFORMED | LLD      | INDICATOR-MEAN(N/TOTAL)<br>RANGE             | BACKGROUND-MEAN(N/TOTAL)<br>RANGE         | STATIONS USED<br>FOR INDICATOR MEAN |
|--------------------------|-----------|----------|---------------------------------------|----------|--|---|-------------------------------------|
| SURFACE WATER<br>(PCI/L) | HAI GAMMA | CO-58    | 21                                    | 8.80E+00 | < LLD (0 /20 )                               | < LLD (0 /1 )                             | 23 24 25 26 27<br>32 33             |
| SURFACE WATER<br>(PCI/L) | HAI GAMMA | MN-54    | 21                                    | 6.70E+00 | < LLD (0 /20 )                               | < LLD (0 /1 )                             | 23 24 25 26 27<br>32 33             |
| SURFACE WATER<br>(PCI/L) | HAI GAMMA | TH-232   | 21                                    | 3.10E+01 | < LLD (0 /20 )                               | < LLD (0 /1 )                             | 23 24 25 26 27<br>32 33             |
| SURFACE WATER<br>(PCI/L) | HAI GAMMA | FE-59    | 21                                    | 2.20E+01 | < LLD (0 /20 )                               | < LLD (0 /1 )                             | 23 24 25 26 27<br>32 33             |
| SURFACE WATER<br>(PCI/L) | HAI GAMMA | CS-136   | 21                                    | 6.10E+01 | < LLD (0 /20 )                               | < LLD (0 /1 )                             | 23 24 25 26 27<br>32 33             |
| SURFACE WATER<br>(PCI/L) | HAI GAMMA | TE-132   | 21                                    | 7.60E+03 | < LLD (0 /20 )                               | < LLD (0 /1 )                             | 23 24 25 26 27<br>32 33             |
| SURFACE WATER<br>(PCI/L) | HAI GAMMA | ZN-65    | 21                                    | 1.70E+01 | < LLD (0 /20 )                               | < LLD (0 /1 )                             | 23 24 25 26 27<br>32 33             |
| SURFACE WATER<br>(PCI/L) | HAI GAMMA | CO-60    | 21                                    | 7.80E+00 | < LLD (0 /20 )                               | < LLD (0 /1 )                             | 23 24 25 26 27<br>32 33             |
| SURFACE WATER<br>(PCI/L) | HAI GAMMA | K-40     | 21                                    | 1.10E+02 | 2.68E+02 (14 /20 )<br>( 1.80E+02 - 3.90E+02) | 4.30E+02(1 /1 )<br>( 4.30E+02 - 4.30E+02) | 23 24 25 26 27<br>32 33             |
| SURFACE WATER<br>(PCI/L) | HAI GAMMA | BALA-140 | 21                                    | 5.30E+01 | < LLD (0 /20 )                               | < LLD (0 /1 )                             | 23 24 25 26 27<br>32 33             |
| SURFACE WATER<br>(PCI/L) | HAI GAMMA | CR-51    | 21                                    | 1.90E+02 | < LLD (0 /20 )                               | < LLD (0 /1 )                             | 23 24 25 26 27<br>32 33             |
| SURFACE WATER<br>(PCI/L) | HAI GAMMA | RA-226   | 21                                    | 1.40E+01 | < LLD (0 /20 )                               | < LLD (0 /1 )                             | 23 24 25 26 27<br>32 33             |

TABLE 18  
RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM SUMMARY  
OYSTER CREEK NUCLEAR GENERATING STATION  
DECEMBER, 1980 THROUGH FEBRUARY, 1981  
FIRST QUARTER SUMMARY

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| SAMPLE TYPE              | ANALYSIS       | ISOTOPE | NUMBER<br>OF<br>ANALYSES<br>PERFORMED | LLD      | INDICATOR-MEAN(N/TOTAL)<br>RANGE             | BACKGROUND-MEAN(N/TOTAL)<br>RANGE         | STATIONS USED<br>FOR INDICATOR MEAN |          |    |    |    |
|--------------------------|----------------|---------|---------------------------------------|----------|--|---|-------------------------------------|----------|----|----|----|
| SURFACE WATER<br>(PCI/L) | NAI GAMMA      | I-131   | 21                                    | 1.60E+02 | < LLD (0 /20 )                               | < LLD (0 /1 )                             | 23<br>32                            | 24<br>33 | 25 | 26 | 27 |
| SURFACE WATER<br>(PCI/L) | NAI GAMMA      | NA-22   | 21                                    | 8.00E+00 | < LLD (0 /20 )                               | < LLD (0 /1 )                             | 23<br>32                            | 24<br>33 | 25 | 26 | 27 |
| SURFACE WATER<br>(PCI/L) | NAI GAMMA      | RU-106  | 21                                    | 6.60E+01 | < LLD (0 /20 )                               | < LLD (0 /1 )                             | 23<br>32                            | 24<br>33 | 25 | 26 | 27 |
| SURFACE WATER<br>(PCI/L) | NAI GAMMA      | I-133   | 21                                    | 7.80E+00 | < LLD (0 /20 )                               | < LLD (0 /1 )                             | 23<br>32                            | 24<br>33 | 25 | 26 | 27 |
| SURFACE WATER<br>(PCI/L) | NAI GAMMA      | CS-137  | 21                                    | 7.80E+00 | < LLD (0 /20 )                               | < LLD (0 /1 )                             | 23<br>32                            | 24<br>33 | 25 | 26 | 27 |
| SURFACE WATER<br>(PCI/L) | RADIUM-226     |         | 21                                    | 2.12E-01 | 4.02E-01 (17 /20 )<br>( 1.70E-01 - 1.06E+00) | 1.39E-01(1 /1 )<br>( 1.39E-01 - 1.39E-01) | 23<br>32                            | 24<br>33 | 25 | 26 | 27 |
| SURFACE WATER<br>(PCI/L) | RADIUM-228     |         | 21                                    | 5.41E+00 | < LLD (0 /20 )                               | 2.05E+01(1 /1 )<br>( 2.05E+01 - 2.05E+01) | 23<br>32                            | 24<br>33 | 25 | 26 | 27 |
| SURFACE WATER<br>(PCI/L) | STRONTIUM-90   |         | 21                                    | 6.19E-01 | 4.47E-01 (6 /20 )<br>( 2.47E-01 - 6.82E-01)  | < LLD (0 /1 )                             | 23<br>32                            | 24<br>33 | 25 | 26 | 27 |
| WELL WATER<br>(PCI/L)    | GROSS ALPHA-SS |         | 18                                    | 1.95E-01 | 8.29E-01 (2 /18 )<br>( 1.50E-01 - 1.50E+00)  | ( . - . )                                 | 1<br>22                             | 18       | 19 | 20 | 21 |
| WELL WATER<br>(PCI/L)    | GROSS ALPHA-DS |         | 18                                    | 4.09E+00 | 2.02E+00 (10 /18 )<br>( 9.54E-01 - 4.88E+00) | ( . - . )                                 | 1<br>22                             | 18       | 19 | 20 | 21 |
| WELL WATER<br>(PCI/L)    | GROSS BETA-SS  |         | 18                                    | 5.06E-01 | < LLD (0 /18 )                               | ( . - . )                                 | 1<br>22                             | 18       | 19 | 20 | 21 |
| WELL WATER<br>(PCI/L)    | GROSS BETA-DS  |         | 18                                    | 6.59E-01 | 2.97E+00 (18 /18 )<br>( 3.68E-01 - 7.58E+00) | ( . - . )                                 | 1<br>22                             | 18       | 19 | 20 | 21 |

**TABLE 18**  
**RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM SUMMARY**  
**OYSTER CREEK NUCLEAR GENERATING STATION**  
**DECEMBER, 1980 THROUGH FEBRUARY, 1981**  
**FIRST QUARTER SUMMARY**

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| SAMPLE TYPE            | ANALYSIS      | ISOTOPE | NUMBER<br>OF<br>ANALYSES<br>PERFORMED | LLD      | INDICATOR-MEAN(N/TOTAL)<br>RANGE           | BACKGROUND-MEAN(N/TOTAL)<br>RANGE         | STATIONS USED<br>FOR INDICATOR MEAN |
|------------------------|---------------|---------|---------------------------------------|----------|--|---|-------------------------------------|
| WELL WATER<br>(PCI/L)  | POTASSIUM-40  |         | 6                                     | 8.60E-01 | 2.35E+00 (6 /6 )<br>( 7.20E-01 - 6.26E+00) | ( . . - . / . )                           | 1 18 19 20 21<br>22                 |
| WELL WATER<br>(PCI/L)  | TRITIUM       |         | 6                                     | 2.00E+02 | 2.66E+02 (2 /6 )<br>( 1.67E+02 - 3.65E+02) | ( . . - . / . )                           | 1 18 19 20 21<br>22                 |
| WELL WATER<br>(PCI/L)  | TOTAL URANIUM |         | 6                                     | 5.20E-01 | 5.06E-01 (1 /6 )<br>( 5.06E-01 - 5.06E-01) | ( . . - . / . )                           | 1 18 19 20 21<br>22                 |
| WELL WATER<br>(PCI/L)  | RADIUM-226    |         | 6                                     | 1.60E-01 | 7.71E-01 (6 /6 )<br>( 2.14E-01 - 2.09E+00) | ( . . - . / . )                           | 1 18 19 20 21<br>22                 |
| WELL WATER<br>(PCI/L)  | RADIUM-228    |         | 6                                     | 5.08E+00 | 9.87E-01 (1 /6 )<br>( 9.87E-01 - 9.87E-01) | ( . . - . / . )                           | 1 18 19 20 21<br>22                 |
| CLAMS<br>(PCI/GM(WET)) | GROSS ALPHA   |         | 9                                     | 5.63E-02 | 9.99E-02 (8 /8 )<br>( 4.84E-02 - 1.83E-01) | 5.93E-02(1 /1 )<br>( 5.93E-02 - 5.93E-02) | 23 24 25                            |
| CLAMS<br>(PCI/GM(WET)) | GROSS BETA    |         | 9                                     | 5.08E-02 | 1.77E+00 (8 /8 )<br>( 6.15E-01 - 3.37E+00) | 1.04E+00(1 /1 )<br>( 1.04E+00 - 1.04E+00) | 23 24 25                            |
| CLAMS<br>(MO/GM(WET))  | CALCIUM BY AA |         | 4                                     | 7.70E-01 | 2.66E+03 (3 /3 )<br>( 2.35E+03 - 3.06E+03) | 2.39E+03(1 /1 )<br>( 2.39E+03 - 2.39E+03) | 23 24 25                            |
| CLAMS<br>(PCI/GM(WET)) | NAI GAMMA     | CE-144  | 4                                     | 3.50E-02 | < LLD (0 /3 )                              | < LLD (0 /1 )                             | 23 24 25                            |
| CLAMS<br>(PCI/GM(WET)) | NAI GAMMA     | AO-110M | 4                                     | 1.20E-02 | < LLD (0 /3 )                              | < LLD (0 /1 )                             | 23 24 25                            |
| CLAMS<br>(PCI/GM(WET)) | NAI GAMMA     | TE-129M | 4                                     | 3.80E-01 | < LLD (0 /3 )                              | < LLD (0 /1 )                             | 23 24 25                            |
| CLAMS<br>(PCI/GM(WET)) | NAI GAMMA     | MO-99   | 4                                     | 7.80E-02 | < LLD (0 /3 )                              | < LLD (0 /1 )                             | 23 24 25                            |

**TABLE 18**  
**RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM SUMMARY**  
**OYSTER CREEK NUCLEAR GENERATING STATION**  
**DECEMBER, 1980 THROUGH FEBRUARY, 1981**  
**FIRST QUARTER SUMMARY**

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| SAMPLE TYPE            | ANALYSIS  | ISOTOPE NUMBER<br>OF<br>ANALYSES<br>PERFORMED | LLD      | INDICATOR-MEAN(N/TOTAL)<br>RANGE             | BACKGROUND-MEAN(N/TOTAL)<br>RANGE            | STATIONS USED<br>FOR INDICATOR MEAN |
|------------------------|-----------|---|----------|--|--|-------------------------------------|
| CLAMS<br>(PCI/GM(WET)) | NAI GAMMA | ZRNB-95 4                                     | 1.10E-02 | < LLD (0 / 3 )                               | < LLD (0 / 1 )                               | 23 24 25                            |
| CLAMS<br>(PCI/GM(WET)) | NAI GAMMA | CS-134 4                                      | 1.10E-02 | < LLD (0 / 3 )                               | < LLD (0 / 1 )                               | 23 24 25                            |
| CLAMS<br>(PCI/GM(WET)) | NAI GAMMA | CO-58 4                                       | 1.70E-02 | < LLD (0 / 3 )                               | < LLD (0 / 1 )                               | 23 24 25                            |
| CLAMS<br>(PCI/GM(WET)) | NAI GAMMA | MN-54 4                                       | 1.20E-02 | < LLD (0 / 3 )                               | < LLD (0 / 1 )                               | 23 24 25                            |
| CLAMS<br>(PCI/GM(WET)) | NAI GAMMA | TH-232 4                                      | 4.70E-02 | < LLD (0 / 3 )                               | < LLD (0 / 1 )                               | 23 24 25                            |
| CLAMS<br>(PCI/GM(WET)) | NAI GAMMA | FE-59 4                                       | 6.10E-02 | < LLD (0 / 3 )                               | < LLD (0 / 1 )                               | 23 24 25                            |
| CLAMS<br>(PCI/GM(WET)) | NAI GAMMA | CS-136 4                                      | 1.60E-01 | < LLD (0 / 3 )                               | < LLD (0 / 1 )                               | 23 24 25                            |
| CLAMS<br>(PCI/GM(WET)) | NAI GAMMA | TE-132 4                                      | 7.80E-03 | < LLD (0 / 3 )                               | < LLD (0 / 1 )                               | 23 24 25                            |
| CLAMS<br>(PCI/GM(WET)) | NAI GAMMA | ZN-65 4                                       | 3.50E-02 | < LLD (0 / 3 )                               | < LLD (0 / 1 )                               | 23 24 25                            |
| CLAMS<br>(PCI/GM(WET)) | NAI GAMMA | CO-60 4                                       | 1.40E-02 | < LLD (0 / 3 )                               | < LLD (0 / 1 )                               | 23 24 25                            |
| CLAMS<br>(PCI/GM(WET)) | NAI GAMMA | K-40 4  | 1.60E-01 | 1.42E+00 (3 / 3 )<br>( 8.70E-01 - 1.90E+00 ) | 1.50E+00 (1 / 1 )<br>( 1.50E+00 - 1.50E+00 ) | 23 24 25                            |
| CLAMS<br>(PCI/GM(WET)) | NAI GAMMA | BALA-140 4                                    | 1.30E-01 | < LLD (0 / 3 )                               | < LLD (0 / 1 )                               | 23 24 25                            |

**TABLE 18**  
**RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM SUMMARY**  
**OYSTER CREEK NUCLEAR GENERATING STATION**  
**DECEMBER, 1980 THROUGH FEBRUARY, 1981**  
**FIRST QUARTER SUMMARY**

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| SAMPLE TYPE            | ANALYSIS     | ISOTOPE | NUMBER<br>OF<br>ANALYSES<br>PERFORMED | LLD      | INDICATOR-MEAN(N/TOTAL)<br>RANGE               | BACKGROUND-MEAN(N/TOTAL)<br>RANGE | STATIONS USED<br>FOR INDICATOR MEAN |
|------------------------|--------------|---------|---------------------------------------|----------|--|-----------------------------------|-------------------------------------|
| CLAMS<br>(PCI/GM(WET)) | NAI GAMMA    | CR-51   | 4                                     | 2.50E-01 | < LLD (0 / 3 )                                 | < LLD (0 / 1 )                    | 23 24 25                            |
| CLAMS<br>(PCI/GM(WET)) | NAI GAMMA    | RA-226  | 4                                     | 1.60E-02 | < LLD (0 / 3 )                                 | < LLD (0 / 1 )                    | 23 24 25                            |
| CLAMS<br>(PCI/GM(WET)) | NAI GAMMA    | I-131   | 4                                     | 4.00E-01 | < LLD (0 / 3 )                                 | < LLD (0 / 1 )                    | 23 24 25                            |
| CLAMS<br>(PCI/GM(WET)) | NAI GAMMA    | NA-22   | 4                                     | 1.40E-02 | < LLD (0 / 3 )                                 | < LLD (0 / 1 )                    | 23 24 25                            |
| CLAMS<br>(PCI/GM(WET)) | NAI GAMMA    | RU-106  | 4                                     | 1.20E-01 | < LLD (0 / 3 )                                 | < LLD (0 / 1 )                    | 23 24 25                            |
| CLAMS<br>(PCI/GM(WET)) | NAI GAMMA    | I-133   | 4                                     | 1.20E-02 | < LLD (0 / 3 )                                 | < LLD (0 / 1 )                    | 23 24 25                            |
| CLAMS<br>(PCI/GM(WET)) | NAI GAMMA    | CS-137  | 4                                     | 1.20E-02 | < LLD (0 / 3 )                                 | < LLD (0 / 1 )                    | 23 24 25                            |
| CLAMS<br>(PCI/GM(WET)) | STRONTIUM-90 |         | 4                                     | 8.81E-03 | < LLD (0 / 3 )                                 | < LLD (0 / 1 )                    | 23 24 25                            |
| SOIL<br>(PCI/GM(DRY))  | GROSS BETA   |         | 15                                    | 1.03E+00 | 7.20E+00 (15 / 15 )<br>( 1.52E+00 - 2.41E+01 ) | ( . . - . / . )                   | 1 2 3 4 5                           |
| SOIL<br>(PCI/GM(DRY))  | GELI GAMMA   | CE-144  | 1                                     | 6.50E-01 | < LLD (0 / 1 )                                 | ( . . - . / . )                   | 5                                   |
| SOIL<br>(PCI/GM(DRY))  | GELI GAMMA   | AO-110M | 1                                     | 2.00E-01 | < LLD (0 / 1 )                                 | ( . . - . / . )                   | 5                                   |
| SOIL<br>(PCI/GM(DRY))  | GELI GAMMA   | TE-129M | 1                                     | 2.50E+01 | < LLD (0 / 1 )                                 | ( . . - . / . )                   | 5                                   |

TABLE 18  
RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM SUMMARY  
OYSTER CREEK NUCLEAR GENERATING STATION  
DECEMBER, 1980 THROUGH FEBRUARY, 1981  
FIRST QUARTER SUMMARY

| SAMPLE TYPE | ANALYSIS | ISOTOPE NUMBER | NUMBER OF ANALYSES PERFORMED | LTD | INDICATOR-MEAN(N/TOTAL)<br>RANGE | BACKGROUND-MEAN(N/TOTAL)<br>RANGE | STATIONS USED FOR INDICATOR MEAN |
|-------------|----------|----------------|------------------------------|-----|----------------------------------|-----------------------------------|----------------------------------|
|-------------|----------|----------------|------------------------------|-----|----------------------------------|-----------------------------------|----------------------------------|

|      |             |        |   |          |   |           |   |
|------|-------------|--------|---|----------|---|-----------|---|
| SOIL | CELLI GAMMA | CS-134 | 1 | 1.60E-01 | < LTD   | (0 / 1)   | 5 |
| SOIL | CELLI GAMMA | CO-58  | 1 | 2.90E-01 | < LTD   | (0 / 1)   | 5 |
| SOIL | CELLI GAMMA | KM-54  | 1 | 1.50E-01 | < LTD   | (0 / 1)   | 5 |
| SOIL | CELLI GAMMA | TH-232 | 1 | 4.90E-01 | ( 9.50E-01 ( 1 / 1 )<br>9.50E-01 - 9.50E-01 ) | ( 0 / 1 ) | 5 |
| SOIL | CELLI GAMMA | FE-59  | 1 | 9.10E-01 | < LTD   | (0 / 1)   | 5 |
| SOIL | CELLI GAMMA | CS-136 | 1 | 1.40E+01 | < LTD   | (0 / 1)   | 5 |
| SOIL | CELLI GAMMA | ZM-65  | 1 | 4.30E-01 | < LTD   | (0 / 1)   | 5 |
| SOIL | CELLI GAMMA | CO-60  | 1 | 1.40E-01 | < LTD   | (0 / 1)   | 5 |
| SOIL | CELLI GAMMA | K-40   | 1 | 9.70E-01 | ( 1.90E+01 ( 1 / 1 )<br>1.90E+01 - 1.90E+01 ) | ( 0 / 1 ) | 5 |
| SOIL | CELLI GAMMA | BE-7   | 1 | 3.30E+00 | < LTD   | (0 / 1)   | 5 |
| SOIL | CELLI GAMMA | ZR-95  | 1 | 6.10E-01 | < LTD   | (0 / 1)   | 5 |
| SOIL | CELLI GAMMA | MB-95  | 1 | 7.80E-01 | < LTD   | (0 / 1)   | 5 |

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| SAMPLE TYPE              | ANALYSIS      | ISOTOPE | NUMBER<br>OF<br>ANALYSES<br>PERFORMED | LLD      | INDICATOR-MEAN(N/TOTAL)<br>RANGE             | BACKGROUND-MEAN(N/TOTAL)<br>RANGE | STATIONS USED<br>FOR INDICATOR MEAN |
|--------------------------|---------------|---------|---------------------------------------|----------|--|-----------------------------------|-------------------------------------|
| SOIL<br>(PCI/GM(DRY))    | GELI GAMMA    | SB-125  | 1                                     | 3.90E-01 | < LLD (0 / 1 )                               | ( . . - . / . )                   | 5                                   |
| SOIL<br>(PCI/GM(DRY))    | GELI GAMMA    | GE-141  | 1                                     | 9.60E-01 | < LLD (0 / 1 )                               | ( . . - . / . )                   | 5                                   |
| SOIL<br>(PCI/GM(DRY))    | GELI GAMMA    | RU-103  | 1                                     | 6.20E-01 | < LLD (0 / 1 )                               | ( . . - . / . )                   | 5                                   |
| SOIL<br>(PCI/GM(DRY))    | GELI GAMMA    | CR-51   | 1                                     | 9.80E+00 | < LLD (0 / 1 )                               | ( . . - . / . )                   | 5                                   |
| SOIL<br>(PCI/GM(DRY))    | GELI GAMMA    | BA-140  | 1                                     | 6.50E+01 | < LLD (0 / 1 )                               | ( . . - . / . )                   | 5                                   |
| SOIL<br>(PCI/GM(DRY))    | GELI GAMMA    | LA-140  | 1                                     | 1.80E+01 | < LLD (0 / 1 )                               | ( . . - . / . )                   | 5                                   |
| SOIL<br>(PCI/GM(DRY))    | GELI GAMMA    | RA-226  | 1                                     | 2.70E-01 | 9.00E-01 (1 / 1 )<br>( 9.00E-01 - 9.00E-01 ) | ( . . - . / . )                   | 5                                   |
| SOIL<br>(PCI/GM(DRY))    | GELI GAMMA    | RU-106  | 1                                     | 1.30E+00 | < LLD (0 / 1 )                               | ( . . - . / . )                   | 5                                   |
| SOIL<br>(PCI/GM(DRY))    | GELI GAMMA    | CO-57   | 1                                     | 8.40E-02 | < LLD (0 / 1 )                               | ( . . - . / . )                   | 5                                   |
| SOIL<br>(PCI/GM(DRY))    | GELI GAMMA    | CS-137  | 1                                     | 1.20E-01 | 3.20E-01 (1 / 1 )<br>( 3.20E-01 - 3.20E-01 ) | ( . . - . / . )                   | 5                                   |
| PASTURE<br>(PCI/GM(NET)) | GROSS BETA    |         | 3                                     | 1.56E-01 | 1.45E+01 (3 / 3 )<br>( 4.25E+00 - 2.74E+01 ) | ( . . - . / . )                   | 28 29 30                            |
| PASTURE<br>(UG/GM(NET))  | CALCIUM BY AA |         | 3                                     | 2.87E+00 | 6.42E+03 (3 / 3 )<br>( 5.12E+03 - 9.45E+03 ) | ( . . - . / . )                   | 28 29 30                            |

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| SAMPLE TYPE              | ANALYSIS     | ISOTOPE | NUMBER<br>OF<br>ANALYSES<br>PERFORMED | LLD      | INDICATOR-MEAN(N/TOTAL)<br>RANGE               | BACKGROUND-MEAN(N/TOTAL)<br>RANGE           | STATIONS USED<br>FOR INDICATOR MEAN |
|--------------------------|--------------|---------|---------------------------------------|----------|--|---|-------------------------------------|
| PASTURE<br>(PCI/GM(WET)) | STRONTIUM-90 |         | 3                                     | 2.82E-02 | 2.13E-01 (3 / 3 )<br>( 1.54E-02 - 3.56E-01 )   | ( . . . )                                   | 28 29 30                            |
| SILT<br>(PCI/GM(DRY))    | GROSS ALPHA  |         | 8                                     | 4.63E+00 | 6.08E+00 (2 / 7 )<br>( 4.91E+00 - 7.26E+00 )   | < LLD (0 / 1 )                              | 23 24 25 26 27<br>32 33             |
| SILT<br>(PCI/GM(DRY))    | GROSS BETA   |         | 8                                     | 1.31E+00 | 7.74E+00 (7 / 7 )<br>( 1.22E+00 - 1.74E+01 )   | 1.34E+01(1 / 1 )<br>( 1.34E+01 - 1.34E+01 ) | 23 24 25 26 27<br>32 33             |
| SILT<br>(PCI/GM(DRY))    | GELI GAMMA   | CE-144  | 15                                    | 4.48E-01 | < LLD (0 / 14 )                                | < LLD (0 / 1 )                              | 23 24 25 32 33                      |
| SILT<br>(PCI/GM(DRY))    | GELI GAMMA   | AG-110M | 15                                    | 1.10E-01 | < LLD (0 / 14 )                                | < LLD (0 / 1 )                              | 23 24 25 32 33                      |
| SILT<br>(PCI/GM(DRY))    | GELI GAMMA   | TE-129M | 15                                    | 6.50E+00 | < LLD (0 / 14 )                                | < LLD (0 / 1 )                              | 23 24 25 32 33                      |
| SILT<br>(PCI/GM(DRY))    | GELI GAMMA   | MO-99   | 6                                     | 8.28E+00 | < LLD (0 / 6 )                                 | ( . . . )                                   | 23 24 25 32                         |
| SILT<br>(PCI/GM(DRY))    | GELI GAMMA   | CS-134  | 15                                    | 9.30E-02 | < LLD (0 / 14 )                                | < LLD (0 / 1 )                              | 23 24 25 32 33                      |
| SILT<br>(PCI/GM(DRY))    | GELI GAMMA   | CO-58   | 15                                    | 1.40E-01 | < LLD (0 / 14 )                                | < LLD (0 / 1 )                              | 23 24 25 32 33                      |
| SILT<br>(PCI/GM(DRY))    | GELI GAMMA   | MH-54   | 15                                    | 1.10E-01 | 8.30E-02 (2 / 14 )<br>( 7.70E-02 - 8.90E-02 )  | < LLD (0 / 1 )                              | 23 24 25 32 33                      |
| SILT<br>(PCI/GM(DRY))    | GELI GAMMA   | TH-232  | 15                                    | 3.80E-01 | 4.05E-01 (10 / 14 )<br>( 1.80E-01 - 7.70E-01 ) | 4.90E-01(1 / 1 )<br>( 4.90E-01 - 4.90E-01 ) | 23 24 25 32 33                      |
| SILT<br>(PCI/GM(DRY))    | GELI GAMMA   | FE-59   | 15                                    | 3.80E-01 | < LLD (0 / 14 )                                | < LLD (0 / 1 )                              | 23 24 25 32 33                      |

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| SAMPLE TYPE           | ANALYSIS   | ISOTOPE | NUMBER<br>OF<br>ANALYSES<br>PERFORMED | LLD      | INDICATOR-MEAN(H/TOTAL)<br>RANGE             | BACKGROUND-MEAN(H/TOTAL)<br>RANGE         | STATIONS USED<br>FOR INDICATOR MEAN |
|-----------------------|------------|---------|---------------------------------------|----------|--|---|-------------------------------------|
| SILT<br>(PCI/GM(DRY)) | GELI GAMMA | CS-136  | 15                                    | 9.40E-01 | < LLD (0 /14 )                               | < LLD (0 /1 )                             | 23 24 25 32 33                      |
| SILT<br>(PCI/GM(DRY)) | GELI GAMMA | ZN-65   | 15                                    | 3.10E-01 | < LLD (0 /14 )                               | < LLD (0 /1 )                             | 23 24 25 32 33                      |
| SILT<br>(PCI/GM(DRY)) | GELI GAMMA | CO-60   | 15                                    | 1.90E-01 | 3.44E-01 (10 /14 )<br>( 3.90E-02 - 1.00E+00) | < LLD (0 /1 )                             | 23 24 25 32 33                      |
| SILT<br>(PCI/GM(DRY)) | GELI GAMMA | K-40    | 15                                    | 1.20E+00 | 5.98E+00 (14 /14 )<br>( 8.00E-01 - 1.40E+01) | 1.10E+01(1 /1 )<br>( 1.10E+01 - 1.10E+01) | 23 24 25 32 33                      |
| SILT<br>(PCI/GM(DRY)) | GELI GAMMA | BE-7    | 15                                    | 1.10E+00 | 6.60E-01 (1 /14 )<br>( 6.60E-01 - 6.60E-01)  | < LLD (0 /1 )                             | 23 24 25 32 33                      |
| SILT<br>(PCI/GM(DRY)) | GELI GAMMA | ZR-95   | 15                                    | 2.20E-01 | < LLD (0 /14 )                               | < LLD (0 /1 )                             | 23 24 25 32 33                      |
| SILT<br>(PCI/GM(DRY)) | GELI GAMMA | MB-95   | 15                                    | 2.30E-01 | 4.90E-02 (1 /14 )<br>( 4.90E-02 - 4.90E-02)  | < LLD (0 /1 )                             | 23 24 25 32 33                      |
| SILT<br>(PCI/GM(DRY)) | GELI GAMMA | SB-125  | 15                                    | 2.10E-01 | < LLD (0 /14 )                               | < LLD (0 /1 )                             | 23 24 25 32 33                      |
| SILT<br>(PCI/GM(DRY)) | GELI GAMMA | CE-141  | 15                                    | 2.10E-01 | < LLD (0 /14 )                               | < LLD (0 /1 )                             | 23 24 25 32 33                      |
| SILT<br>(PCI/GM(DRY)) | GELI GAMMA | RU-103  | 15                                    | 1.60E-01 | < LLD (0 /14 )                               | < LLD (0 /1 )                             | 23 24 25 32 33                      |
| SILT<br>(PCI/GM(DRY)) | GELI GAMMA | CR-51   | 15                                    | 1.80E+00 | < LLD (0 /14 )                               | < LLD (0 /1 )                             | 23 24 25 32 33                      |
| SILT<br>(PCI/GM(DRY)) | GELI GAMMA | BA-140  | 15                                    | 4.10E+00 | < LLD (0 /14 )                               | < LLD (0 /1 )                             | 23 24 25 32 33                      |

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| SAMPLE TYPE           | ANALYSIS   | ISOTOPE | NUMBER<br>OF<br>ANALYSES<br>PERFORMED | LLD      | INDICATOR-MEAN(N/TOTAL)<br>RANGE             | BACKGROUND-MEAN(N/TOTAL)<br>RANGE         | STATIONS USED<br>FOR INDICATOR MEAN |
|-----------------------|------------|---------|---------------------------------------|----------|--|---|-------------------------------------|
| SILT<br>(PCI/GM(DRY)) | GELI GAMMA | LA-140  | 15                                    | 1.80E+00 | < LLD (0 /14 )                               | < LLD (0 /1 )                             | 23 24 25 32 33                      |
| SILT<br>(PCI/GM(DRY)) | GELI GAMMA | RA-226  | 15                                    | 2.50E-01 | 3.50E-01 (14 /14 )<br>( 1.90E-01 - 5.50E-01) | 3.10E-01(1 /1 )<br>( 3.10E-01 - 3.10E-01) | 23 24 25 32 33                      |
| SILT<br>(PCI/GM(DRY)) | GELI GAMMA | I-131   | 15                                    | 4.10E+00 | < LLD (0 /14 )                               | < LLD (0 /1 )                             | 23 24 25 32 33                      |
| SILT<br>(PCI/GM(DRY)) | GELI GAMMA | HP-239  | 1                                     | 2.30E+01 | < LLD (0 /1 )                                | ( . . - . / . )                           | 25                                  |
| SILT<br>(PCI/GM(DRY)) | GELI GAMMA | RU-106  | 15                                    | 7.00E-01 | < LLD (0 /14 )                               | < LLD (0 /1 )                             | 23 24 25 32 33                      |
| SILT<br>(PCI/GM(DRY)) | GELI GAMMA | CO-57   | 15                                    | 5.40E-02 | < LLD (0 /14 )                               | < LLD (0 /1 )                             | 23 24 25 32 33                      |
| SILT<br>(PCI/GM(DRY)) | GELI GAMMA | CS-137  | 15                                    | 8.90E-02 | 1.56E-01 (4 /14 )<br>( 7.40E-02 - 2.30E-01)  | 3.60E-02(1 /1 )<br>( 3.60E-02 - 3.60E-02) | 23 24 25 32 33                      |

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RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM SUMMARY  
OYSTER CREEK NUCLEAR GENERATING STATION  
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| SAMPLE TYPE                  | ANALYSIS    | ISOTOPE | NUMBER<br>OF<br>ANALYSES<br>PERFORMED | LLD      | INDICATOR-MEAN(N/TOTAL)<br>RANGE             | BACKGROUND-MEAN(N/TOTAL)<br>RANGE           | STATIONS USED<br>FOR INDICATOR MEAN |   |   |   |   |
|------------------------------|-------------|---------|---------------------------------------|----------|--|---|-------------------------------------|---|---|---|---|
| VEGETATION<br>(PCI/GH(WET))  | GROSS BETA  |         | 20                                    | 4.74E-02 | 5.75E+00 (20 /20 )<br>( 2.18E+00 - 9.88E+00) | ( . / . )<br>( - )                          | 1                                   | 2 | 3 | 4 | 5 |
| AIR PARTICULATE<br>(PCI/M3 ) | GROSS ALPHA |         | 16                                    | 3.22E-02 | 7.62E-04 (3 /10 )<br>( 5.43E-04 - 1.19E-03)  | 1.02E-03(2 /6 )<br>( 9.54E-04 - 1.09E-03)   | 1                                   | 2 | 3 | 4 | 5 |
| AIR PARTICULATE<br>(PCI/M3 ) | GROSS BETA  |         | 56                                    | 9.64E-02 | 1.62E-01 (35 /35 )<br>( 7.47E-02 - 3.46E-01) | 1.22E-01(21 /21 )<br>( 5.56E-02 - 2.79E-01) | 1                                   | 2 | 3 | 4 | 5 |
| AIR PARTICULATE<br>(PCI/M3 ) | GELI GAMMA  | CE-144  | 56                                    | 1.40E+00 | 5.67E-02 (11 /35 )<br>( 9.70E-03 - 1.10E-01) | 4.95E-02(4 /21 )<br>( 3.50E-02 - 9.20E-02)  | 1                                   | 2 | 3 | 4 | 5 |
| AIR PARTICULATE<br>(PCI/M3 ) | GELI GAMMA  | AO-110M | 56                                    | 2.70E-01 | < LLD (0 /35 )                               | < LLD (0 /21 )                              | 1                                   | 2 | 3 | 4 | 5 |
| AIR PARTICULATE<br>(PCI/M3 ) | GELI GAMMA  | TE-129M | 56                                    | 9.70E+00 | < LLD (0 /35 )                               | 1.00E-01(1 /21 )<br>( 1.00E-01 - 1.00E-01)  | 1                                   | 2 | 3 | 4 | 5 |
| AIR PARTICULATE<br>(PCI/M3 ) | GELI GAMMA  | MO-99   | 46                                    | 3.70E+00 | < LLD (0 /29 )                               | < LLD (0 /17 )                              | 1                                   | 2 | 3 | 4 | 5 |
| AIR PARTICULATE<br>(PCI/M3 ) | GELI GAMMA  | CS-134  | 56                                    | 2.90E-01 | < LLD (0 /35 )                               | < LLD (0 /21 )                              | 1                                   | 2 | 3 | 4 | 5 |

TABLE 19  
RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM SUMMARY  
OYSTER CREEK NUCLEAR GENERATING STATION  
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| SAMPLE TYPE                 | ANALYSIS   | ISOTOPE | NUMBER<br>OF<br>ANALYSES<br>PERFORMED | LLD      | INDICATOR-MEAN(N/TOTAL)<br>RANGE | BACKGROUND-MEAN(N/TOTAL)<br>RANGE          | STATIONS USED<br>FOR INDICATOR MEAN |
|-----------------------------|------------|---------|---------------------------------------|----------|----------------------------------|--|-------------------------------------|
| AIR PARTICULATE<br>(PCI/M3) | GELI GAMMA | CO-58   | 56                                    | 3.10E-01 | < LLD (0 /35 )                   | < LLD (0 /21 )                             | 1 2 3 4 5                           |
| AIR PARTICULATE<br>(PCI/M3) | GELI GAMMA | MN-54   | 56                                    | 3.80E-01 | < LLD (0 /35 )                   | < LLD (0 /21 )                             | 1 2 3 4 5                           |
| AIR PARTICULATE<br>(PCI/M3) | GELI GAMMA | TH-232  | 56                                    | 1.20E+00 | < LLD (0 /35 )                   | < LLD (0 /21 )                             | 1 2 3 4 5                           |
| AIR PARTICULATE<br>(PCI/M3) | GELI GAMMA | FE-59   | 56                                    | 6.20E-01 | < LLD (0 /35 )                   | < LLD (0 /21 )                             | 1 2 3 4 5                           |
| AIR PARTICULATE<br>(PCI/M3) | GELI GAMMA | CS-136  | 56                                    | 6.20E-01 | < LLD (0 /35 )                   | < LLD (0 /21 )                             | 1 2 3 4 5                           |
| AIR PARTICULATE<br>(PCI/M3) | GELI GAMMA | ZN-65   | 56                                    | 8.10E-01 | < LLD (0 /35 )                   | < LLD (0 /21 )                             | 1 2 3 4 5                           |
| AIR PARTICULATE<br>(PCI/M3) | GELI GAMMA | CO-60   | 56                                    | 3.90E-01 | < LLD (0 /35 )                   | 3.10E-02(1 /21 )<br>( 3.10E-02 - 3.10E-02) | 1 2 3 4 5                           |
| AIR PARTICULATE<br>(PCI/M3) | GELI GAMMA | K-40    | 56                                    | 9.90E+00 | < LLD (0 /35 )                   | < LLD (0 /21 )                             | 1 2 3 4 5                           |

TABLE 19  
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| SAMPLE TYPE                 | ANALYSIS   | ISOTOPE | NUMBER<br>OF<br>ANALYSES<br>PERFORMED | LLD      | INDICATOR-MEAN(N/TOTAL)<br>RANGE             | BACKGROUND-MEAN(N/TOTAL)<br>RANGE           | STATIONS USED<br>FOR INDICATOR MEAN |
|-----------------------------|------------|---------|---------------------------------------|----------|--|---|-------------------------------------|
| AIR PARTICULATE<br>(PCI/M3) | GELI GAMMA | BE-7    | 56                                    | 2.90E+00 | 1.09E-01 (10 /35 )<br>( 5.70E-02 - 2.20E-01) | 9.40E-02(3 /21 )<br>( 5.20E-02 - 1.30E-01)  | 1 2 3 4 5                           |
| AIR PARTICULATE<br>(PCI/M3) | GELI GAMMA | ZR-95   | 56                                    | 4.70E-01 | 4.99E-02 (20 /35 )<br>( 2.30E-02 - 8.50E-02) | 3.30E-02(11 /21 )<br>( 2.00E-02 - 5.10E-02) | 1 2 3 4 5                           |
| AIR PARTICULATE<br>(PCI/M3) | GELI GAMMA | HB-95   | 56                                    | 4.40E-01 | 8.25E-02 (33 /35 )<br>( 4.00E-02 - 1.70E-01) | 6.48E-02(20 /21 )<br>( 2.20E-02 - 1.30E-01) | 1 2 3 4 5                           |
| AIR PARTICULATE<br>(PCI/M3) | GELI GAMMA | SB-125  | 56                                    | 8.20E-01 | < LLD (0 /35 )                               | < LLD (0 /21 )                              | 1 2 3 4 5                           |
| AIR PARTICULATE<br>(PCI/M3) | GELI GAMMA | CE-141  | 56                                    | 3.60E-01 | 1.16E-02 (6 /35 )<br>( 3.20E-03 - 2.10E-02)  | 1.06E-02(2 /21 )<br>( 7.30E-03 - 1.40E-02)  | 1 2 3 4 5                           |
| AIR PARTICULATE<br>(PCI/M3) | GELI GAMMA | RU-103  | 56                                    | 3.00E-01 | 2.13E-02 (23 /35 )<br>( 7.80E-03 - 3.80E-02) | 1.63E-02(11 /21 )<br>( 2.80E-03 - 2.90E-02) | 1 2 3 4 5                           |
| AIR PARTICULATE<br>(PCI/M3) | GELI GAMMA | CR-51   | 56                                    | 2.70E+00 | < LLD (0 /35 )                               | < LLD (0 /21 )                              | 1 2 3 4 5                           |
| AIR PARTICULATE<br>(PCI/M3) | GELI GAMMA | BA-140  | 56                                    | 2.20E+00 | < LLD (0 /35 )                               | < LLD (0 /21 )                              | 1 2 3 4 5                           |

**TABLE 19**  
**RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM SUMMARY**  
**OYSTER CREEK NUCLEAR GENERATING STATION**  
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| SAMPLE TYPE                 | ANALYSIS      | ISOTOPE NUMBER | OF ANALYSES PERFORMED | LLD      | INDICATOR-MEAN(N/TOTAL)<br>RANGE             | BACKGROUND-MEAN(N/TOTAL)<br>RANGE           | STATIONS USED<br>FOR INDICATOR MEAN |
|-----------------------------|---------------|----------------|-----------------------|----------|--|---|-------------------------------------|
| AIR PARTICULATE<br>(PCI/M3) | GELI GAMMA    | LA-140         | 48                    | 8.70E-02 | < LLD (0 /32 )                               | < LLD (0 /16 )                              | 1 2 3 4 5                           |
| AIR PARTICULATE<br>(PCI/M3) | GELI GAMMA    | RA-226         | 56                    | 6.50E-01 | < LLD (0 /35 )                               | < LLD (0 /21 )                              | 1 2 3 4 5                           |
| AIR PARTICULATE<br>(PCI/M3) | GELI GAMMA    | I-131          | 56                    | 6.50E-01 | < LLD (0 /35 )                               | < LLD (0 /21 )                              | 1 2 3 4 5                           |
| AIR PARTICULATE<br>(PCI/M3) | GELI GAMMA    | HP-239         | 29                    | 2.30E+01 | < LLD (0 /18 )                               | < LLD (0 /11 )                              | 1 2 3 4 5                           |
| AIR PARTICULATE<br>(PCI/M3) | GELI GAMMA    | RU-106         | 56                    | 2.00E+00 | < LLD (0 /35 )                               | < LLD (0 /21 )                              | 1 2 3 4 5                           |
| AIR PARTICULATE<br>(PCI/M3) | GELI GAMMA    | CO-57          | 56                    | 1.50E-01 | < LLD (0 /35 )                               | < LLD (0 /21 )                              | 1 2 3 4 5                           |
| AIR PARTICULATE<br>(PCI/M3) | GELI GAMMA    | CS-137         | 56                    | 2.70E-01 | 6.80E-03 (1 /35 )<br>( 6.80E-03 - 6.80E-03)  | < LLD (0 /21 )                              | 1 2 3 4 5                           |
| PRECIPITATION<br>(NCI/M2)   | GROSS BETA-SS |                | 32                    | 5.95E+01 | 3.20E-01 (13 /20 )<br>( 7.63E-02 - 1.82E+00) | 1.48E-01(10 /12 )<br>( 4.83E-02 - 3.68E-01) | 1 2 3 4 5                           |

TABLE 19

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OYSTER CREEK NUCLEAR GENERATING STATION  
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| SAMPLE TYPE               | ANALYSIS       | ISOTOPE NUMBER<br>OF<br>ANALYSES<br>PERFORMED | LLD      | INDICATOR-MEAN(N/TOTAL)<br>RANGE             | BACKGROUND-MEAN(N/TOTAL)<br>RANGE           | STATIONS USED<br>FOR INDICATOR MEAN |          |    |    |    |
|---------------------------|----------------|---|----------|--|---|-------------------------------------|----------|----|----|----|
| PRECIPITATION<br>(NCI/M2) | GROSS BETA-DS  | 32  | 2.33E+02 | 1.40E+00 (20 /20 )<br>( 6.88E-01 - 3.61E+00) | 1.16E+00(12 /12 )<br>( 5.22E-01 - 2.61E+00) | 1                                   | 2        | 3  | 4  | 5  |
| AIR IODINE<br>(PCI/M3)    | IODINE-131     | 56  | 2.97E-01 | < LLD (0 /35 )                               | < LLD (0 /21 )                              | 1                                   | 2        | 3  | 4  | 5  |
| SURFACE WATER<br>(PCI/L)  | GROSS ALPHA-SS | 32  | 3.80E-01 | 4.83E-01 (4 /28 )<br>( 2.06E-01 - 9.83E-01)  | 2.29E-01(1 /4 )<br>( 2.29E-01 - 2.29E-01)   | 23<br>32                            | 24<br>33 | 25 | 26 | 27 |
| SURFACE WATER<br>(PCI/L)  | GROSS ALPHA-DS | 32  | 2.56E+00 | 2.46E+00 (4 /28 )<br>( 2.28E+00 - 2.61E+00)  | 2.29E+00(2 /4 )<br>( 1.59E+00 - 3.00E+00)   | 23<br>32                            | 24<br>33 | 25 | 26 | 27 |
| SURFACE WATER<br>(PCI/L)  | GROSS BETA-SS  | 32  | 3.04E-01 | 4.44E-01 (10 /28 )<br>( 2.40E-01 - 1.16E+00) | 2.67E-01(3 /4 )<br>( 1.97E-01 - 3.41E-01)   | 23<br>32                            | 24<br>33 | 25 | 26 | 27 |
| SURFACE WATER<br>(PCI/L)  | GROSS BETA-DS  | 32  | 7.01E+00 | 1.07E+02 (28 /28 )<br>( 1.91E+00 - 2.48E+02) | 1.97E+02(4 /4 )<br>( 8.08E+01 - 2.13E+02)   | 23<br>32                            | 24<br>33 | 25 | 26 | 27 |
| SURFACE WATER<br>(MG/L)   | CALCIUM BY AA  | 16  | 8.00E-02 | 1.69E+02 (14 /14 )<br>( 1.50E-01 - 2.60E+02) | 1.91E+02(2 /2 )<br>( 1.23E+02 - 2.60E+02)   | 23<br>32                            | 24<br>33 | 25 | 26 | 27 |
| SURFACE WATER<br>(PCI/L)  | TRITIUM        | 32  | 2.11E+02 | 1.46E+02 (3 /28 )<br>( 8.22E+01 - 2.41E+02)  | < LLD (0 /4 )                               | 23<br>32                            | 24<br>33 | 25 | 26 | 27 |

**TABLE 19**  
**RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM SUMMARY**  
**OYSTER CREEK NUCLEAR GENERATING STATION**  
**MARCH, 1981 THROUGH MAY, 1981**  
**SECOND QUARTER SUMMARY**

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| SAMPLE TYPE              | ANALYSIS      | ISOTOPE | NUMBER<br>OF<br>ANALYSES<br>PERFORMED | LLD      | INDICATOR-MEAN(N/TOTAL)<br>RANGE            | BACKGROUND-MEAN(N/TOTAL)<br>RANGE         | STATIONS USED<br>FOR INDICATOR MEAN |          |    |    |    |
|--------------------------|---------------|---------|---------------------------------------|----------|---|---|-------------------------------------|----------|----|----|----|
| SURFACE WATER<br>(PCI/L) | TOTAL URANIUM |         | 32                                    | 2.04E+00 | 1.55E+00 (3 /28 )<br>( 1.42E+00 - 1.62E+00) | 1.16E+00(1 /4 )<br>( 1.16E+00 - 1.16E+00) | 23<br>32                            | 24<br>33 | 25 | 26 | 27 |
| SURFACE WATER<br>(PCI/L) | HAI GAMMA     | CE-144  | 30                                    | 8.10E+01 | < LLD (0 /26 )                              | < LLD (0 /4 )                             | 23<br>32                            | 24<br>33 | 25 | 26 | 27 |
| SURFACE WATER<br>(PCI/L) | HAI GAMMA     | AO-110M | 32                                    | 8.20E+00 | < LLD (0 /28 )                              | < LLD (0 /4 )                             | 23<br>32                            | 24<br>33 | 25 | 26 | 27 |
| SURFACE WATER<br>(PCI/L) | HAI GAMMA     | TE-129M | 32                                    | 1.70E+02 | < LLD (0 /28 )                              | < LLD (0 /4 )                             | 23<br>32                            | 24<br>33 | 25 | 26 | 27 |
| SURFACE WATER<br>(PCI/L) | HAI GAMMA     | MO-99   | 32                                    | 1.40E+04 | < LLD (0 /28 )                              | < LLD (0 /4 )                             | 23<br>32                            | 24<br>33 | 25 | 26 | 27 |
| SURFACE WATER<br>(PCI/L) | HAI GAMMA     | ZRMB-95 | 32                                    | 7.80E+00 | < LLD (0 /28 )                              | < LLD (0 /4 )                             | 23<br>32                            | 24<br>33 | 25 | 26 | 27 |
| SURFACE WATER<br>(PCI/L) | HAI GAMMA     | CS-134  | 32                                    | 7.90E+00 | < LLD (0 /28 )                              | < LLD (0 /4 )                             | 23<br>32                            | 24<br>33 | 25 | 26 | 27 |
| SURFACE WATER<br>(PCI/L) | HAI GAMMA     | CO-58   | 32                                    | 8.80E+00 | < LLD (0 /28 )                              | < LLD (0 /4 )                             | 23<br>32                            | 24<br>33 | 25 | 26 | 27 |

TABLE 19  
RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM SUMMARY  
OYSTER CREEK NUCLEAR GENERATING STATION  
MARCH, 1981 THROUGH MAY, 1981  
SECOND QUARTER SUMMARY

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| SAMPLE TYPE              | ANALYSIS  | ISOTOPE | NUMBER<br>OF<br>ANALYSES<br>PERFORMED | LLD      | INDICATOR-MEAN(N/TOTAL)<br>RANGE             | BACKGROUND-MEAN(N/TOTAL)<br>RANGE         | STATIONS USED<br>FOR INDICATOR MEAN |          |    |    |    |
|--------------------------|-----------|---------|---------------------------------------|----------|--|---|-------------------------------------|----------|----|----|----|
| SURFACE WATER<br>(PCI/L) | NAI GAMMA | MM-54   | 32                                    | 8.00E+00 | < LLD (0 /28 )                               | < LLD (0 /4 )                             | 23<br>32                            | 24<br>33 | 25 | 26 | 27 |
| SURFACE WATER<br>(PCI/L) | NAI GAMMA | TH-232  | 32                                    | 3.10E+01 | < LLD (0 /28 )                               | < LLD (0 /4 )                             | 23<br>32                            | 24<br>33 | 25 | 26 | 27 |
| SURFACE WATER<br>(PCI/L) | NAI GAMMA | FE-59   | 32                                    | 2.10E+01 | < LLD (0 /28 )                               | < LLD (0 /4 )                             | 23<br>32                            | 24<br>33 | 25 | 26 | 27 |
| SURFACE WATER<br>(PCI/L) | NAI GAMMA | CS-136  | 32                                    | 2.60E+01 | < LLD (0 /28 )                               | < LLD (0 /4 )                             | 23<br>32                            | 24<br>33 | 25 | 26 | 27 |
| SURFACE WATER<br>(PCI/L) | NAI GAMMA | TE-132  | 32                                    | 1.30E+03 | < LLD (0 /28 )                               | < LLD (0 /4 )                             | 23<br>32                            | 24<br>33 | 25 | 26 | 27 |
| SURFACE WATER<br>(PCI/L) | NAI GAMMA | ZN-65   | 32                                    | 1.60E+01 | < LLD (0 /28 )                               | < LLD (0 /4 )                             | 23<br>32                            | 24<br>33 | 25 | 26 | 27 |
| SURFACE WATER<br>(PCI/L) | NAI GAMMA | CO-60   | 32                                    | 7.80E+00 | < LLD (0 /28 )                               | < LLD (0 /4 )                             | 23<br>32                            | 24<br>33 | 25 | 26 | 27 |
| SURFACE WATER<br>(PCI/L) | NAI GAMMA | K-40    | 32                                    | 1.20E+02 | 2.26E+02 (19 /28 )<br>( 1.30E+02 - 3.10E+02) | 2.70E+02(4 /4 )<br>( 1.60E+02 - 3.50E+02) | 23<br>32                            | 24<br>33 | 25 | 26 | 27 |

**TABLE 19**  
**RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM SUMMARY**  
**OYSTER CREEK NUCLEAR GENERATING STATION**  
**MARCH, 1981 THROUGH MAY, 1981**  
**SECOND QUARTER SUMMARY**

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| SAMPLE TYPE              | ANALYSIS  | ISOTOPE  | NUMBER<br>OF<br>ANALYSES<br>PERFORMED | LLD      | INDICATOR-MEAN(N/TOTAL)<br>RANGE | BACKGROUND-MEAN(N/TOTAL)<br>RANGE | STATIONS USED<br>FOR INDICATOR MEAN |
|--------------------------|-----------|----------|---------------------------------------|----------|----------------------------------|-----------------------------------|-------------------------------------|
| SURFACE WATER<br>(PCI/L) | HAI GAMMA | BALA-140 | 32                                    | 2.10E+01 | < LLD (0 /28 )                   | < LLD (0 /4 )                     | 23 24 25 26 27<br>32 33             |
| SURFACE WATER<br>(PCI/L) | HAI GAMMA | BE-7     | 7                                     | 7.40E+01 | < LLD (0 /6 )                    | < LLD (0 /1 )                     | 23 24 25 26 27<br>32                |
| SURFACE WATER<br>(PCI/L) | HAI GAMMA | CR-51    | 32                                    | 1.90E+02 | < LLD (0 /28 )                   | < LLD (0 /4 )                     | 23 24 25 26 27<br>32 33             |
| SURFACE WATER<br>(PCI/L) | HAI GAMMA | RA-226   | 32                                    | 1.60E+01 | < LLD (0 /28 )                   | < LLD (0 /4 )                     | 23 24 25 26 27<br>32 33             |
| SURFACE WATER<br>(PCI/L) | HAI GAMMA | I-131    | 32                                    | 6.70E+01 | < LLD (0 /28 )                   | < LLD (0 /4 )                     | 23 24 25 26 27<br>32 33             |
| SURFACE WATER<br>(PCI/L) | HAI GAMMA | NA-22    | 32                                    | 7.90E+00 | < LLD (0 /28 )                   | < LLD (0 /4 )                     | 23 24 25 26 27<br>32 33             |
| SURFACE WATER<br>(PCI/L) | HAI GAMMA | RU-106   | 32                                    | 8.00E+01 | < LLD (0 /28 )                   | < LLD (0 /4 )                     | 23 24 25 26 27<br>32 33             |
| SURFACE WATER<br>(PCI/L) | HAI GAMMA | I-133    | 32                                    | 9.30E+00 | < LLD (0 /28 )                   | < LLD (0 /4 )                     | 23 24 25 26 27<br>32 33             |

TABLE 19  
RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM SUMMARY  
OYSTER CREEK NUCLEAR GENERATING STATION  
MARCH, 1981 THROUGH MAY, 1981  
SECOND QUARTER SUMMARY

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| SAMPLE TYPE              | ANALYSIS       | ISOTOPE | NUMBER<br>OF<br>ANALYSES<br>PERFORMED | LLD      | INDICATOR-MEAN(N/TOTAL)<br>RANGE             | BACKGROUND-MEAN(N/TOTAL)<br>RANGE          | STATIONS USED<br>FOR INDICATOR MEAN |          |    |    |    |
|--------------------------|----------------|---------|---------------------------------------|----------|--|--|-------------------------------------|----------|----|----|----|
| SURFACE WATER<br>(PCI/L) | NAI GAMMA      | CS-137  | 32                                    | 7.80E+00 | < LLD (0 /28 )                               | < LLD (0 /4 )                              | 23<br>32                            | 24<br>33 | 25 | 26 | 27 |
| SURFACE WATER<br>(PCI/L) | RADIUM-226     |         | 32                                    | 2.19E-01 | 4.44E-01 (18 /28 )<br>( 1.31E-01 - 1.33E+00) | 1.43E-01 (4 /4 )<br>( 9.27E-02 - 2.42E-01) | 23<br>32                            | 24<br>33 | 25 | 26 | 27 |
| SURFACE WATER<br>(PCI/L) | RADIUM-228     |         | 32                                    | 3.09E+00 | 3.92E-01 (2 /28 )<br>( 3.24E-01 - 3.81E-01)  | < LLD (0 /4 )                              | 23<br>32                            | 24<br>33 | 25 | 26 | 27 |
| SURFACE WATER<br>(PCI/L) | STROMTIUM-90   |         | 31                                    | 2.37E+00 | 1.04E+00 (11 /27 )<br>( 3.36E-01 - 3.45E+00) | < LLD (0 /4 )                              | 23<br>32                            | 24<br>33 | 25 | 26 | 27 |
| WELL WATER<br>(PCI/L)    | GROSS ALPHA-S9 |         | 24                                    | 2.90E-01 | 2.44E-01 (1 /24 )<br>( 2.44E-01 - 2.44E-01)  | ( . / . )<br>( . - . )                     | 1<br>22                             | 18       | 19 | 20 | 21 |
| WELL WATER<br>(PCI/L)    | GROSS ALPHA-D9 |         | 24                                    | 5.70E+00 | 2.46E+00 (7 /24 )<br>( 8.82E-01 - 5.21E+00)  | ( . / . )<br>( . - . )                     | 1<br>22                             | 18       | 19 | 20 | 21 |
| WELL WATER<br>(PCI/L)    | GROSS BETA-S9  |         | 24                                    | 4.65E-01 | 8.71E-01 (3 /24 )<br>( 8.46E-01 - 8.92E-01)  | ( . / . )<br>( . - . )                     | 1<br>22                             | 18       | 19 | 20 | 21 |
| WELL WATER<br>(PCI/L)    | GROSS BETA-D9  |         | 24                                    | 7.71E-01 | 2.83E+00 (24 /24 )<br>( 9.08E-01 - 8.92E+00) | ( . / . )<br>( . - . )                     | 1<br>22                             | 18       | 19 | 20 | 21 |

TABLE 19

RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM SUMMARY  
OYSTER CREEK NUCLEAR GENERATING STATION  
MARCH, 1981 THROUGH MAY, 1981  
SECOND QUARTER SUMMARY

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| SAMPLE TYPE            | ANALYSIS      | ISOTOPE NUMBER<br>OF<br>ANALYSES<br>PERFORMED | LLD      | INDICATOR-MEAN(N/TOTAL)<br>RANGE             | BACKGROUND-MEAN(N/TOTAL)<br>RANGE         | STATIONS USED<br>FOR INDICATOR MEAN |
|------------------------|---------------|---|----------|--|---|-------------------------------------|
| WELL WATER<br>(PCI/L)  | POTASSIUM-40  | 12  | 8.60E-01 | 2.30E+00 (12 /12 )<br>( 4.94E-01 - 7.28E+00) | ( . / . )<br>( . - . )                    | 1 18 19 20 21<br>22                 |
| WELL WATER<br>(PCI/L)  | TRITIUM       | 12  | 1.79E+02 | 1.40E+02 (3 /12 )<br>( 1.24E+02 - 1.87E+02)  | ( . / . )<br>( . - . )                    | 1 18 19 20 21<br>22                 |
| WELL WATER<br>(PCI/L)  | TOTAL URANIUM | 12  | 5.48E-01 | < LLD (0 /12 )                               | ( . / . )<br>( . - . )                    | 1 18 19 20 21<br>22                 |
| WELL WATER<br>(PCI/L)  | RADIUM-226    | 12  | 1.99E-01 | 6.36E-01 (9 /12 )<br>( 1.45E-01 - 1.33E+00)  | ( . / . )<br>( . - . )                    | 1 18 19 20 21<br>22                 |
| WELL WATER<br>(PCI/L)  | RADIUM-228    | 12  | 1.33E+00 | 1.15E+00 (3 /12 )<br>( 9.52E-01 - 1.61E+00)  | ( . / . )<br>( . - . )                    | 1 18 19 20 21<br>22                 |
| CLAMS<br>(PCI/GM(WET)) | GROSS ALPHA   | 12  | 2.55E-01 | 2.68E-01 (9 /9 )<br>( 6.20E-02 - 6.30E-01)   | 1.68E-01(3 /3 )<br>( 7.18E-03 - 3.40E-01) | 23 24 25                            |
| CLAMS<br>(PCI/GM(WET)) | GROSS BETA    | 12  | 3.46E-02 | 1.40E+00 (9 /9 )<br>( 4.51E-01 - 3.02E+00)   | 1.26E+00(3 /3 )<br>( 1.19E-01 - 2.22E+00) | 23 24 25                            |
| CLAMS<br>(MG/GM(WET))  | CALCIUM BY AA | 4   | 1.39E+00 | 2.51E+03 (3 /3 )<br>( 1.81E+03 - 3.14E+03)   | 2.37E+03(1 /1 )<br>( 2.37E+03 - 2.37E+03) | 23 24 25                            |

TABLE 19

RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM SUMMARY  
OYSTER CREEK NUCLEAR GENERATING STATION  
MARCH, 1981 THROUGH MAY, 1991  
SECOND QUARTER SUMMARY

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| SAMPLE TYPE            | ANALYSIS  | ISOTOPE | NUMBER<br>OF<br>ANALYSES<br>PERFORMED | LLD      | INDICATOR-MEAN(N/TOTAL)<br>RANGE |         | BACKGROUND-MEAN(N/TOTAL)<br>RANGE |         | STATIONS USED<br>FOR INDICATOR MEAN |    |    |
|------------------------|-----------|---------|---------------------------------------|----------|----------------------------------|---------|-----------------------------------|---------|-------------------------------------|----|----|
| CLAMS<br>(PCI/GM(WET)) | NAI GAMMA | CE-144  | 8                                     | 1.10E-01 | < LLD                            | (0 /6 ) | < LLD                             | (0 /2 ) | 23                                  | 24 | 25 |
| CLAMS<br>(PCI/GM(WET)) | NAI GAMMA | AO-110M | 8                                     | 3.20E-02 | < LLD                            | (0 /6 ) | < LLD                             | (0 /2 ) | 23                                  | 24 | 25 |
| CLAMS<br>(PCI/GM(WET)) | NAI GAMMA | TE-129M | 8                                     | 0.60E-01 | < LLD                            | (0 /6 ) | < LLD                             | (0 /2 ) | 23                                  | 24 | 25 |
| CLAMS<br>(PCI/GM(WET)) | NAI GAMMA | MO-99   | 8                                     | 3.30E+01 | < LLD                            | (0 /6 ) | < LLD                             | (0 /2 ) | 23                                  | 24 | 25 |
| CLAMS<br>(PCI/GM(WET)) | NAI GAMMA | IRMB-95 | 8                                     | 3.10E-02 | < LLD                            | (0 /6 ) | < LLD                             | (0 /2 ) | 23                                  | 24 | 25 |
| CLAMS<br>(PCI/GM(WET)) | NAI GAMMA | CS-134  | 8                                     | 3.20E-02 | < LLD                            | (0 /6 ) | < LLD                             | (0 /2 ) | 23                                  | 24 | 25 |
| CLAMS<br>(PCI/GM(WET)) | NAI GAMMA | CO-58   | 8                                     | 3.60E-02 | < LLD                            | (0 /6 ) | < LLD                             | (0 /2 ) | 23                                  | 24 | 25 |
| CLAMS<br>(PCI/GM(WET)) | NAI GAMMA | MN-54   | 8                                     | 3.20E-02 | < LLD                            | (0 /6 ) | < LLD                             | (0 /2 ) | 23                                  | 24 | 25 |

TABLE 19  
RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM SUMMARY  
OYSTER CREEK NUCLEAR GENERATING STATION  
MARCH, 1981 THROUGH MAY, 1981  
SECOND QUARTER SUMMARY

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| SAMPLE TYPE            | ANALYSIS  | ISOTOPE  | NUMBER<br>OF<br>ANALYSES<br>PERFORMED | LLD      | INDICATOR-MEAN(N/TOTAL)<br>RANGE             | BACKGROUND-MEAN(N/TOTAL)<br>RANGE           | STATIONS USED<br>FOR INDICATOR MEAN |
|------------------------|-----------|----------|---------------------------------------|----------|--|---|-------------------------------------|
| CLAMS<br>(PCI/GM(WET)) | NAI GAMMA | TH-232   | 8                                     | 1.40E-01 | < LLD (0 / 6 )                               | < LLD (0 / 2 )                              | 23 24 25                            |
| CLAMS<br>(PCI/GM(WET)) | NAI GAMMA | FE-59    | 8                                     | 9.90E-02 | < LLD (0 / 6 )                               | < LLD (0 / 2 )                              | 23 24 25                            |
| CLAMS<br>(PCI/GM(WET)) | NAI GAMMA | CS-136   | 8                                     | 1.10E-01 | < LLD (0 / 6 )                               | < LLD (0 / 2 )                              | 23 24 25                            |
| CLAMS<br>(PCI/GM(WET)) | NAI GAMMA | TE-132   | 8                                     | 1.30E+00 | < LLD (0 / 6 )                               | < LLD (0 / 2 )                              | 23 24 25                            |
| CLAMS<br>(PCI/GM(WET)) | NAI GAMMA | ZN-65    | 8                                     | 9.70E-02 | < LLD (0 / 6 )                               | < LLD (0 / 2 )                              | 23 24 25                            |
| CLAMS<br>(PCI/GM(WET)) | NAI GAMMA | CO-60    | 8                                     | 4.70E-02 | 5.70E-02 (3 / 6 )<br>( 3.20E-02 - 1.00E-01 ) | 1.70E-02(1 / 2 )<br>( 1.70E-02 - 1.70E-02 ) | 23 24 25                            |
| CLAMS<br>(PCI/GM(WET)) | NAI GAMMA | K-40     | 8                                     | 6.20E-01 | 1.80E+00 (6 / 6 )<br>( 7.70E-01 - 4.30E+00 ) | 2.40E+00(2 / 2 )<br>( 2.00E+00 - 2.80E+00 ) | 23 24 25                            |
| CLAMS<br>(PCI/GM(WET)) | NAI GAMMA | BALA-140 | 8                                     | 1.10E-01 | < LLD (0 / 6 )                               | < LLD (0 / 2 )                              | 23 24 25                            |

TABLE 19  
RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM SUMMARY  
OYSTER CREEK NUCLEAR GENERATING STATION  
MARCH, 1981 THROUGH MAY, 1981  
SECOND QUARTER SUMMARY

SAMPLE TYPE ANALYSIS ISOTOPE NUMBER OF ANALYSES PERFORMED  
INDICATOR-MEAN(N/TOTAL) RANGE  
BACKGROUND-MEAN(N/TOTAL) RANGE  
STATIONS USED FOR INDICATOR MEAN

|                        |           |        |   |          |       |          |       |          |    |    |    |
|------------------------|-----------|--------|---|----------|-------|----------|-------|----------|----|----|----|
| CLAMS<br>(PCI/GM(MET)) | NAI GAMMA | BE-7   | 4 | 1.10E-01 | < LLD | (0 / 3 ) | < LLD | (0 / 1 ) | 23 | 24 | 25 |
| CLAMS<br>(PCI/GM(MET)) | NAI GAMMA | CR-91  | 8 | 2.30E-01 | < LLD | (0 / 6 ) | < LLD | (0 / 2 ) | 23 | 24 | 25 |
| CLAMS<br>(PCI/GM(MET)) | NAI GAMMA | RA-226 | 8 | 6.20E-02 | < LLD | (0 / 6 ) | < LLD | (0 / 2 ) | 23 | 24 | 25 |
| CLAMS<br>(PCI/GM(MET)) | NAI GAMMA | I-131  | 8 | 2.90E-01 | < LLD | (0 / 6 ) | < LLD | (0 / 2 ) | 23 | 24 | 25 |
| CLAMS<br>(PCI/GM(MET)) | NAI GAMMA | NA-22  | 8 | 4.70E-02 | < LLD | (0 / 6 ) | < LLD | (0 / 2 ) | 23 | 24 | 25 |
| CLAMS<br>(PCI/GM(MET)) | NAI GAMMA | RU-106 | 8 | 3.20E-01 | < LLD | (0 / 6 ) | < LLD | (0 / 2 ) | 23 | 24 | 25 |
| CLAMS<br>(PCI/GM(MET)) | NAI GAMMA | I-133  | 8 | 3.10E-02 | < LLD | (0 / 6 ) | < LLD | (0 / 2 ) | 23 | 24 | 25 |
| CLAMS<br>(PCI/GM(MET)) | NAI GAMMA | CS-137 | 8 | 4.70E-02 | < LLD | (0 / 6 ) | < LLD | (0 / 2 ) | 23 | 24 | 25 |

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OYSTER CREEK NUCLEAR GENERATING STATION  
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| SAMPLE TYPE              | ANALYSIS      | ISOTOPE NUMBER<br>OF<br>ANALYSES<br>PERFORMED | LLD      | INDICATOR-MEAN(N/TOTAL)<br>RANGE             | BACKGROUND-MEAN(N/TOTAL)<br>RANGE         | STATIONS USED<br>FOR INDICATOR MEAN |
|--------------------------|---------------|---|----------|--|---|-------------------------------------|
| CLAMS<br>(PCI/OM(WET))   | STRONTIUM-90  | 8   | 1.28E-01 | < LLD (0 /6 )                                | < LLD (0 /2 )                             | 23 24 25                            |
| SOIL<br>(PCI/OM(DRY))    | GROSS BETA    | 20  | 1.16E+00 | 6.79E+00 (20 /20 )<br>( 2.25E+00 - 1.26E+01) | ( . / . )<br>( . - . )                    | 1 2 3 4 5                           |
| PASTURE<br>(PCI/OM(WET)) | GROSS BETA    | 6   | 2.84E-02 | 8.68E+00 (6 /6 )<br>( 9.00E+00 - 1.31E+01)   | ( . / . )<br>( . - . )                    | 28 29 30                            |
| PASTURE<br>(MO/OM(WET) ) | CALCIUM BY AA | 6   | 1.02E+00 | 2.51E+03 (6 /6 )<br>( 1.12E+03 - 4.86E+03)   | ( . / . )<br>( . - . )                    | 28 29 30                            |
| PASTURE<br>(PCI/OM(WET)) | STRONTIUM-90  | 6   | 3.56E-02 | 2.06E-01 (6 /6 )<br>( 4.39E-02 - 3.55E-01)   | ( . / . )<br>( . - . )                    | 28 29 30                            |
| SILT<br>(PCI/OM(DRY))    | GROSS ALPHA   | 16  | 4.85E+00 | 6.04E+00 (10 /14 )<br>( 2.86E+00 - 1.05E+01) | 2.60E+00(1 /2 )<br>( 2.60E+00 - 2.60E+00) | 23 24 25 26 27<br>32 33             |
| SILT<br>(PCI/OM(DRY))    | GROSS BETA    | 16  | 1.17E+00 | 6.36E+00 (14 /14 )<br>( 1.04E+00 - 1.54E+01) | 9.38E+00(2 /2 )<br>( 7.86E+00 - 1.09E+01) | 23 24 25 26 27<br>32 33             |
| SILT<br>(PCI/OM(DRY))    | GELI GAMMA    | CE-144  | 24       | 6.60E-01 < LLD (0 /20 )                      | < LLD (0 /4 )                             | 23 24 25 32 33                      |

TABLE 19  
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SECOND QUARTER SUMMARY

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| SAMPLE TYPE           | ANALYSIS   | ISOTOPE NUMBER | OF<br>ANALYSES<br>PERFORMED | LLD      | INDICATOR-MEAN(N/TOTAL)<br>RANGE               | BACKGROUND-MEAN(N/TOTAL)<br>RANGE            | STATIONS USED<br>FOR INDICATOR MEAN |
|-----------------------|------------|----------------|-----------------------------|----------|--|--|-------------------------------------|
| SILT<br>(PCI/GM(DRY)) | GELI GAMMA | AO-110M        | 24                          | 1.50E-01 | < LLD (0 / 20 )                                | < LLD (0 / 4 )                               | 23 24 25 32 33                      |
| SILT<br>(PCI/GM(DRY)) | GELI GAMMA | TE-129M        | 24                          | 7.70E+00 | < LLD (0 / 20 )                                | < LLD (0 / 4 )                               | 23 24 25 32 33                      |
| SILT<br>(PCI/GM(DRY)) | GELI GAMMA | MO-99          | 10                          | 1.40E+01 | < LLD (0 / 16 )                                | < LLD (0 / 3 )                               | 21 24 25 32 33                      |
| SILT<br>(PCI/GM(DRY)) | GELI GAMMA | CS-134         | 24                          | 1.20E-01 | < LLD (0 / 20 )                                | < LLD (0 / 4 )                               | 23 24 25 32 33                      |
| SILT<br>(PCI/GM(DRY)) | GELI GAMMA | CO-58          | 24                          | 1.70E-01 | < LLD (0 / 20 )                                | < LLD (0 / 4 )                               | 23 24 25 32 33                      |
| SILT<br>(PCI/GM(DRY)) | GELI GAMMA | MN-54          | 24                          | 1.40E-01 | 1.29E-01 (3 / 20 )<br>( 4.80E-02 - 1.80E-01 )  | < LLD (0 / 4 )                               | 23 24 25 32 33                      |
| SILT<br>(PCI/GM(DRY)) | GELI GAMMA | TM-232         | 24                          | 4.50E-01 | 4.46E-01 (11 / 20 )<br>( 2.40E-01 - 8.70E-01 ) | 4.87E-01 (3 / 4 )<br>( 3.50E-01 - 6.90E-01 ) | 23 24 25 32 33                      |
| SILT<br>(PCI/GM(DRY)) | GELI GAMMA | FE-59          | 24                          | 4.40E-01 | < LLD (0 / 20 )                                | < LLD (0 / 4 )                               | 23 24 25 32 33                      |

TABLE 19  
RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM SUMMARY  
OYSTER CREEK NUCLEAR GENERATING STATION  
MARCH, 1981 THROUGH MAY, 1981  
SECOND QUARTER SUMMARY

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| SAMPLE TYPE           | ANALYSIS   | ISOTOPE | NUMBER<br>OF<br>ANALYSES<br>PERFORMED | LLD      | INDICATOR-MEAN(N/TOTAL)<br>RANGE             | BACKGROUND-MEAN(N/TOTAL)<br>RANGE         | STATIONS USED<br>FOR INDICATOR MEAN |
|-----------------------|------------|---------|---------------------------------------|----------|--|---|-------------------------------------|
| SILT<br>(PCI/GM(DRY)) | GELI GAMMA | CS-136  | 24                                    | 1.00E+00 | < LLD (0 /20 )                               | < LLD (0 /4 )                             | 23 24 25 32 33                      |
| SILT<br>(PCI/GM(DRY)) | GELI GAMMA | ZN-65   | 24                                    | 3.10E-01 | < LLD (0 /20 )                               | < LLD (0 /4 )                             | 23 24 25 32 33                      |
| SILT<br>(PCI/GM(DRY)) | GELI GAMMA | CO-60   | 24                                    | 1.70E-01 | 7.23E-01 (12 /20 )<br>( 3.20E-02 - 2.10E+00) | 5.40E-01(1 /4 )<br>( 5.40E-01 - 5.40E-01) | 23 24 25 32 33                      |
| SILT<br>(PCI/GM(DRY)) | GELI GAMMA | K-40    | 24                                    | 9.30E-01 | 5.14E+00 (20 /20 )<br>( 5.20E-01 - 1.30E+01) | 9.17E+00(4 /4 )<br>( 7.10E+00 - 1.10E+01) | 23 24 25 32 33                      |
| SILT<br>(PCI/GM(DRY)) | GELI GAMMA | DE-7    | 24                                    | 1.40E+00 | < LLD (0 /20 )                               | < LLD (0 /4 )                             | 23 24 25 32 33                      |
| SILT<br>(PCI/GM(DRY)) | GELI GAMMA | ZR-95   | 24                                    | 3.40E-01 | < LLD (0 /20 )                               | < LLD (0 /4 )                             | 23 24 25 32 33                      |
| SILT<br>(PCI/GM(DRY)) | GELI GAMMA | HD-95   | 24                                    | 2.60E-01 | 1.74E-01 (15 /20 )<br>( 5.60E-02 - 4.40E-01) | 1.17E-01(3 /4 )<br>( 5.00E-02 - 1.70E-01) | 23 24 25 32 33                      |
| SILT<br>(PCI/GM(DRY)) | GELI GAMMA | SB-125  | 24                                    | 3.00E-01 | < LLD (0 /20 )                               | < LLD (0 /4 )                             | 23 24 25 32 33                      |

TABLE 19  
RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM SUMMARY  
OYSTER CREEK NUCLEAR GENERATING STATION  
MARCH, 1981 THROUGH MAY, 1981  
SECOND QUARTER SUMMARY

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| SAMPLE TYPE           | ANALYSIS   | ISOTOPE NUMBER | OF ANALYSES PERFORMED | LLD      | INDICATOR-MEAN(N/TOTAL)<br>RANGE             | BACKGROUND-MEAN(N/TOTAL)<br>RANGE         | STATIONS USED<br>FOR INDICATOR MEAN |
|-----------------------|------------|----------------|-----------------------|----------|--|---|-------------------------------------|
| SILT<br>(PCI/GM(DRY)) | GELI GAMMA | CE-141         | 24                    | 3.00E-01 | < LLD (0 /20 )                               | < LLD (0 /4 )                             | 23 24 25 32 33                      |
| SILT<br>(PCI/GM(DRY)) | GELI GAMMA | RU-103         | 24                    | 2.00E-01 | < LLD (0 /20 )                               | < LLD (0 /4 )                             | 23 24 25 32 33                      |
| SILT<br>(PCI/GM(DRY)) | GELI GAMMA | CR-51          | 24                    | 2.00E+00 | < LLD (0 /20 )                               | < LLD (0 /4 )                             | 23 24 25 32 33                      |
| SILT<br>(PCI/GM(DRY)) | GELI GAMMA | BA-140         | 24                    | 4.00E+00 | < LLD (0 /20 )                               | < LLD (0 /4 )                             | 23 24 25 32 33                      |
| SILT<br>(PCI/GM(DRY)) | GELI GAMMA | LA-140         | 24                    | 8.00E-01 | < LLD (0 /20 )                               | < LLD (0 /4 )                             | 23 24 25 32 33                      |
| SILT<br>(PCI/GM(DRY)) | GELI GAMMA | RA-226         | 24                    | 2.70E-01 | 3.31E-01 (10 /20 )<br>( 1.80E-01 - 5.20E-01) | 3.25E-01(4 /4 )<br>( 3.00E-01 - 3.90E-01) | 23 24 25 32 33                      |
| SILT<br>(PCI/GM(DRY)) | GELI GAMMA | I-131          | 24                    | 4.10E+00 | < LLD (0 /20 )                               | < LLD (0 /4 )                             | 23 24 25 32 33                      |
| SILT<br>(PCI/GM(DRY)) | GELI GAMMA | HP-239         | 8                     | 2.90E+01 | < LLD (0 /6 )                                | < LLD (0 /2 )                             | 23 24 25 32                         |

TABLE 19  
RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM SUMMARY  
OYSTER CREEK NUCLEAR GENERATING STATION  
MARCH, 1981 THROUGH MAY, 1981  
SECOND QUARTER SUMMARY

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| SAMPLE TYPE           | ANALYSIS   | ISOTOPE NUMBER | OF<br>ANALYSES<br>PERFORMED | LLD      | INDICATOR-MEAN(N/TOTAL)<br>RANGE            | BACKGROUND-MEAN(N/TOTAL)<br>RANGE         | STATIONS USED<br>FOR INDICATOR MEAN |
|-----------------------|------------|----------------|-----------------------------|----------|---|---|-------------------------------------|
| SILT<br>(PCI/GM(DRY)) | GELI GAMMA | RU-106         | 24                          | 1.00E+00 | < LLD (0 /20 )                              | < LLD (0 /4 )                             | 23 24 25 32 33                      |
| SILT<br>(PCI/GM(DRY)) | GELI GAMMA | CO-57          | 24                          | 8.10E-02 | < LLD (0 /20 )                              | < LLD (0 /4 )                             | 23 24 25 32 33                      |
| SILT<br>(PCI/GM(DRY)) | GELI GAMMA | CS-137         | 24                          | 1.40E-01 | 2.10E-01 (8 /20 )<br>( 1.20E-01 - 2.80E-01) | 1.03E-01(3 /4 )<br>( 3.10E-02 - 2.00E-01) | 23 24 25 32 33                      |

## Discussion of REMP Data

A statistical analysis of the REMP data revealed certain environmental media having higher than expected levels of radioactivity. Data comparisons were conducted to determine if correlations existed between facility releases and elevated environmental levels of radioactivity. A discussion of the findings follows:

December 8, 1980

During December, higher than expected concentrations of Potassium -40 were observed at surface water stations 31 and 32. The K-40 concentration at station 31 exceeded the concentration at station 32. Station 31 is a surface water background station which is outside the influence of the plant. In addition, these results are not considered to be plant related as K-40 is a naturally occurring radioactive isotope in estuarine environments.

A surface water sample collected at station 27 had a higher than normal gross beta-dissolved concentration. Station 27 is located in fresh water Oyster Creek (proper) upstream of the plant, consequently this elevated result is not considered to be plant related.

Surface water station 31 exhibited a higher than normal quantity of Ra-228. Station 31 is a surface water background station outside of plant influence therefore this higher than normal concentration is not considered to be plant related.

An elevated concentration of tritium was observed at surface water station 23. This station is located 2.5 miles north of the mouth of the discharge canal. The average tritium concentration from facility liquid releases at the site boundary added to the average tritium concentration at this station does not account for the elevated result. This higher than normal result is not considered to be plant related.

A well water Radium-226 concentration reported at station 18 was found to be higher than normal. Station 18 is located on the plant intake canal. Varying quantities of Radium-226 are found in well water because Radium-226 is a naturally occurring isotope in the subsurface environment. Considering the location of the well and the fact that this isotope occurs naturally it is unlikely that this higher concentration was due to plant operations.

A higher than normal tritium result was observed at well water station 20. The average tritium released via plant liquid releases added to the average level of tritium observed at this station cannot account for the elevated result. This station has a documented history of salt water intrusion and it is believed the higher than average H-3 concentration was due to salt water seeping into this well.

A pasture sample collected at station 30 had a higher than normal gross beta activity. This elevated result was due to an abnormally small aliquot size which was used for sample analysis. This result is not considered to be plant related.

A slightly higher than normal gross beta activity was reported for soil station 5. A gamma isotopic analysis was performed on this sample. From the range of isotopes shown by the isotopic gamma analysis, it can be concluded that the cause of the elevated result was weapons fallout.

February 2, 1981

An elevated gross beta activity was reported for clam station 23. This sampling station is located 2.5 miles north of station 24, which is located at the mouth of Oyster Creek. Comparing the gross beta results of station 23 and station 24, the concentration at station 24 is lower than the concentration detected at station 23. On this basis, assuming normal dilution in Barnegat Bay, it is unlikely that the elevated result reported for station 23 was plant related.

March 2, 1981

A higher than normal gross alpha concentration was observed at clam stations 23 and 25. Sampling station 23 is located 2.5 miles north of the mouth of Oyster Creek, and station 25 is located one mile south of the mouth of Oyster Creek. Station 24 is located in the mouth of Oyster Creek. The alpha concentration reported for station 24 was lower than the reported result of either station 23 or 25. Assuming normal dilution in Barnegat Bay, it is unlikely that these elevated concentrations were the result of plant operations.

An elevated gross beta activity and Potassium-40 concentration were observed at clam station 23. Due to the station location and assuming normal dilution in Barnegat Bay, this anomalous result is not considered to be plant related.

All clam stations exhibited slightly higher than normal concentrations of Cobalt-60. Because the background station result was higher than normal, it is believed that all elevated results were not plant related, but due to fluctuation in ambient environmental levels of Cobalt-60.

A surface water gross alpha-insoluble concentration at station 23 was found to be higher than normal. The calculated gross alpha concentration from liquid releases at the site boundary is far less than the anomalous result. This elevated result is not considered to be plant related. A Radium-228 concentration at station 20 was slightly higher than expected. This well has a documented history of salt water intrusion and it is believed that the elevated Ra-228 concentration is a result of seeping salt water. An elevated gross beta concentration was observed in vegetation at station 5. This elevated concentration was caused by weapons fallout.

March 16, 1981

An air particulate gross beta concentration reported at station 1 was found to be slightly elevated. Weapons fallout and a low sample volume combined to make this result higher than normal.

March 30, 1981

Higher than expected gross beta concentrations were reported at air particulate stations at 1, 2, 3, and C, vegetation at station 1, and soil at station 2. These elevated results were due to weapons fallout and are not considered to be plant related. A gross alpha activity for station 24 was reported to be higher than normal. There were thirteen facility liquid releases during the sample collection period. No alpha activity was released to the environment via liquid release. This higher than normal gross alpha concentration is not considered to be plant related.

A strontium 90 result at surface water station 33 was reported to be slightly higher than expected. The offsite Strontium 90 concentration at the site boundary was calculated to be much lower than the elevated result. It is unlikely that this higher than normal result was facility related.

April 13, 1981

Higher than normal gross beta concentrations were reported at air particulate stations 1, 3, 4, 5, C, and E. These elevated concentrations were the result of weapons fallout and not facility related.

April 27, 1981

Stations 1, 3, A, and C, exhibited higher than expected gross beta concentrations. These elevated results were the result of weapons fallout and not facility related.

May 11, 1981

A higher than normal gross beta concentration was reported at air particulate station 3. This elevated concentration was caused by weapons fallout.

May 26, 1981

An elevated Strontium 90 result was reported at station 32. There were fourteen liquid releases during the sample collection period. The calculated strontium 90 concentration at the offsite boundary is far less than the result reported for station 32. This elevated result is not considered facility related.

Gross beta concentrations reported for air particulate stations 1, 2, 3, 4, 5, A, and C were higher than expected. These elevated results were due to weapons fallout and not considered plant related.

## RADIOLOGICAL IMPACT ON MAN

Environmental monitoring results for the period 12/80 - 5/81 indicate that intakes of Oyster Creek effluent isotopes did not exceed 1% of the intakes equivalent to exposure at 10CFR20, 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.

Several isotopes were present in air samples collected in early spring in concentrations slightly exceeding minimum detectable concentration. These isotopes -- Ru-103, Zr-95, Nb-95, Ce-141 and Ce-144 are fission products produced in power reactor operations but are also products of atmospheric nuclear weapon tests. The small quantities released from Oyster Creek suggest that weapons tests are the source of the material measured. The uniform distribution of the isotopes over the whole array of air sampling locations, including those distant from the plant, also indicate that weapons testing is the source. Nonetheless, the measured concentrations were low and for purposes of estimating upper limits to intake of isotopes through inhalation, contributions from those isotopes were based on measured values.

Concentrations of plant effluent isotopes in clams were below minimum detectable concentrations for all isotopes except Co-60. Because these minimum detectable concentrations are low, it was possible to simplify the analysis by conservatively assuming that plant effluent isotopes other than Co-60 were present at minimum detectable concentrations. Measured values of Co-60 were below 0.1 pCi/gram.

Intakes from inhalation, fish ingestion, and shellfish ingestion were estimated from air and clam sample results. (Fish concentrations were estimated from clam measurements.) Intakes were less than 1% of intakes equivalent to exposure to concentrations in 10CFR20, Appendix B, Table II.

The U.S. EPA regulation 40 CFR190 requires that doses to any real person from certain uranium fuel cycle activities will not exceed in one year 25 mrem for the whole body and other organs except that 75 mrem is the limit for the thyroid. The regulation applies to nuclear power plants. Since there is no other uranium fuel cycle activity likely to contribute doses that are a significant fraction of the EPA limit to people in the vicinity of Oyster Creek, it may be assumed for purposes of this assessment that the full limits apply to Oyster Creek.

The doses equivalent to intakes equivalent to that from 1% of 10CFR20, Appendix B, Table II limits are 5 mrem/yr for the whole body and 15 mrem/yr for other internal organs except for 30 mrem/yr for the bone and the thyroid as recommended in ICRP2. (Concentration limits for I-131 and Sr-80 and Sr-90 reflect Federal Radiation Council guidance and equivalent doses are lower than ICRP recommendations.) The analyses herein shows that the doses from food pathways fall below 40 CFR190 limits by a wide margin. Measurements from

the thermoluminescent dosimeters show no clear contribution of plant effluents to direct radiation dose and indicate that any contribution does not exceed about five mrem. Therefore, it is clear that 40CFR190 dose limits were met in the period under consideration.