

THIS DOCUMENT CONTAINS
POOR QUALITY PAGES

50-213

TABLE OF CONTENTS

	<u>PAGE</u>
Supplemental Information	1-7
Gaseous Effluents - Summation of all Releases	8
Gaseous Effluents - Mixed Mode Release (Partially Elevated and Partially Ground)	9
Liquid Effluents - Summation of All Releases	10
Liquid Effluents	11
Solid Waste	12-13
Off-Site Dose Estimates	14-21
Meteorological Data	22-53

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01) REGULATORY LIMITS

Specifications for Gaseous Waste Effluents

- (1) The release rate limit of noble gases from the site shall be:

$$\sum_i Q_{iv} \left[94 \bar{E}_{i\gamma} + 460 \bar{E}_{i\beta} \right] \leq 1$$

where Q_v = release rate from all roof and unit vents in Ci/sec (ground release)

i = the i th individual nuclide

$\bar{E}_{i\gamma}$ = the average gamma energy per disintegration for nuclide i

$\bar{E}_{i\beta}$ = the average beta energy per disintegration for nuclide i

- (2) The release rate limit of all radioiodines and radioactive materials in particulate form with half-lives greater than eight days, released to the environs as part of the gaseous wastes from the site shall be:

$$1.2 \times 10^6 Q_v \leq 1$$

where Q_v is defined above.

- (3) The average release rate of noble gases from the site during any calendar quarter shall be:

$$\sum_i \bar{E}_{i\beta} \left[1450 Q_{iv} \right] \leq 1$$

and,

$$\sum_i \bar{E}_{i\gamma} \left[590 Q_{iv} \right] \leq 1$$

- (4) The average release rate of noble gases from the site during any 12 consecutive months shall be:

$$\sum_i \bar{E}_{i\beta} \left[2900 Q_{iv} \right] \leq 1$$

and,

$$\sum_i \bar{E}_{i\gamma} \left[1180 Q_{iv} \right] \leq 1$$

- (5) The average release rate of all iodines and radioactive materials in particulate form per site with half-lives greater than eight days during any calendar quarter shall be:

$$1.5 \times 10^8 Q_v \leq 1$$

- (6) The average release rate of all iodines and radioactive materials per site in particulate form with half-lives greater than eight days during any period of 12 consecutive months shall be:

$$3.0 \times 10^8 Q_v \leq 1$$

- (7) The amount of iodine-131 released during any calendar quarter shall not exceed 2 Ci/reactor.
- (8) The amount of iodine-131 released during any period of 12 consecutive months shall not exceed 4 Ci/reactor.

Should any of the conditions of (1), (2) or (3) listed below exist, the licensee shall make an investigation to identify the causes of the release rates, define and initiate a program of action to reduce the release rates to design objective levels listed in Env. Tech. Spec., Section 2.4 and report these actions to the Commission within 30 days from the end of the quarter during which the releases occurred.

- (1) If the average release rate of noble gases from the site during any calendar quarter is:

$$\sum_i E_{iB} \quad [5800 \quad Q_{iV}] > 1$$

or,

$$\sum_i E_{iY} \quad [2400 \quad Q_{iV}] > 1$$

- (2) If the average release rate of all iodines and radioactive materials in particulate form per site with half-lives greater than eight days during any calendar quarter is:

$$5.9 \times 10^8 Q_v > 1$$

- (3) If the amount of iodine-131 released during any calendar quarter is greater than 0.5 Ci/reactor.

Specifications for Liquid Waste Effluents

The concentration of radioactive materials released in liquid waste effluents at the site shall not exceed the values specified in 10 CFR Part 20, Appendix B, Table II, Column 2, for unrestricted areas.

The cumulative release of radioactive materials in liquid waste effluents, excluding tritium and dissolved gases, shall not exceed 10 Ci/calendar quarter.

The cumulative release of radioactive materials in liquid waste effluents, excluding tritium and dissolved gases, shall not exceed 20 Ci in any 12 consecutive months.

The equipment installed in the liquid radioactive waste system shall be maintained and shall be operated to process radioactive liquid wastes prior to their discharge when the projected cumulative release could exceed 1.25 Ci/calendar quarter, excluding tritium and dissolved gases.

The maximum radioactivity to be contained in any liquid radwaste tank that can be discharged directly to the environs shall not exceed 10 Ci, excluding tritium and dissolved gases.

If the cumulative release of radioactive materials in liquid effluents, excluding tritium and dissolved gases, exceeds 2.5 Ci/calendar quarter, the licensee shall make an investigation to identify the causes for such releases, define and initiate a program of action to reduce such releases to the design objective levels listed in Section 2.4, and report these actions to the Commission within 30 days from the end of the quarter during which the release occurred.

#2) Maximum Permissible Concentrations (Micro Curies/ml)

a. Fission and Activation Gases

Kr - 85	3.0 E-07
Kr - 85m	1.0 E-07
Kr - 87	2.0 E-08
Kr - 88	2.0 E-08
Xe - 133	3.0 E-07
Xe - 135	1.0 E-07
Xe - 135m	3.0 E-08
Xe - 138	3.0 E-08
Ar - 37	1.0 E-04

b. Iodines

I - 131	1.0 E-10
I - 133	4.0 E-10
I - 135	1.0 E-09

c. Particulates, Half-Lives > 8 Days

Sr - 89	3.0 E-10
Sr - 90	3.0 E-11
Cs - 134	4.0 E-10
Cs - 137	5.0 E-10
Ba - 140	1.0 E-09
La - 140	4.0 E-09

d. Liquid Effluents

Sr - 89	3.0 E-06
Sr - 90	3.0 E-07
Cs - 134	4.0 E-05
Cs - 137	2.0 E-05
I - 131	3.0 E-07

Liquid Effluents (Cont.)

Co - 58	9.0 E-05
Co - 60	3.0 E-05
Fe - 59	5.0 E-05
Zn - 65	1.0 E-04
Mn - 54	1.0 E-04
Cr - 51	2.0 E-03
Zr - 95	6.0 E-05
Nb - 95	1.0 E-04
Mo - 99	4.0 E-05
Tc - 99m	3.0 E-03
Ba - 140	2.0 E-05
La - 140	2.0 E-05
Ce - 141	9.0 E-05
Eu - 154	2.0 E-05
Be - 7	2.0 E-03
Ru - 106	1.0 E-05
Ag - 110m	3.0 E-05
Sb - 124	2.0 E-05
Sb - 125	1.0 E-04
Co - 57	4.0 E-04
Xe - 133	3.0 E-06
Xe - 135	3.0 E-06
Ar - 37	3.0 E-06
Kr - 85	3.0 E-06

#3) Average Energy (\bar{E})	1st Quarter		2nd Quarter	
	\bar{E} Beta Mev	\bar{E} Gamma Mev	\bar{E} Beta Mev	\bar{E} Gamma Mev
For Fission and Activation Gases	2.03E-01	5.41E-02	2.12E-01	3.65E-02

Measurements and Approximation of Total Radioactivity

- #4) a. Fission and Activation Gases: An in-line G. M. detector monitors stack effluent. Gas samples are collected on the stack and are sent to a off site lab for low level fission and activation gas analyses.
- b. Iodines: Continuous in line charcoal filter on main stack effluent. Charcoal filters are then analyzed for iodines.
- c. Particulates: Continuous in line particulate filter on main stack effluent. Particulate samples are then counted for Gross β - γ . Weekly samples are sent to a off site lab for analyses of Low level gamma emitters. A monthly composite is made from these weekly samples. The monthly composite is checked for gross alpha and ^{89}Sr - ^{90}Sr .
- d. Liquid Effluents: In line scintillation detector monitors waste liquid being released. Prior to discharge a sample is taken. Principal gamma emitters, gross β - γ and tritium analysis are performed. Weekly composites are prepared and sent to a off site laboratory. Principal gamma emitters are determined. A monthly composite is made from the weekly samples. Gross Alpha, ^{89}Sr and ^{90}Sr are determined. One batch sample per month is sent out for determination of dissolved and entrained gases.

#5) Batch Releases

a. Liquid

- 1) Number of batch releases: 1.14E+02
- 2) Total time period for batch releases: 1.32E+03 hours
- 3) Maximum time period for a batch release: 3.47E+01 hours
- 4) Average time period for batch releases: 1.13E+01 hours
- 5) Minimum time period for a batch release: 2.17E 00 hours
- 6) Average stream flow during periods of 1.58E+04 Cubic Feet release of effluent into a flowing per second stream:

b. Gaseous

- 1) Number of batch releases: 2.40E+01
- 2) Total time period for batch releases: 3.67E+02 hours
- 3) Maximum time period for a batch release: 1.17E+02 hours
- 4) Average time period for batch releases: 1.53E+01 hours
- 5) Minimum time period for a batch release: 5.58E 00 hours

#6 Abnormal Releases

Ion Exchange Slurry Vent Gas Releases (2)

#1 5-4-80

0755-0759

	Curies Released
Xe-133	2.54E00
Xe-135	9.07E-01
Xe-133M	6.57E-02
Xe-135M	4.01E-03
Kr-85 M	2.10E-02

Metorological Data

Wind speed 1.20E+01 mph
Vertical Temp Diff. -8.00E-01 °F
Wind Direction 3.00E+02 °
Wind Direction Variance 6.00E+01 °

#2 5-4-80

0900-0904

Xe-133	4.24E00
Xe-135	1.52E00
Xe-133M	1.06E-01
Xe-135M	6.67E-03
Kr-85M	3.50E-02

Wind Speed 1.50E+01 mph
Vertical Temp Diff. -1.20E00 °F
Wind Direction 3.00E+02 °
Wind Direction Variance 6.00E+01 °

Waste Gas Surge Tank Relief

5-28-80

0034-0036

Xe-133 1.62E00

Wind Speed 3.00E+00 mph
Vertical Temp. Diff. 1.60E00 °F
Wind Direction 3.60E+02 °
Wind Direction Variance 4.00E+01 °

GASEOUS EFFLUENTS-SUMMATION OF ALL RELEASES

	UNIT 1	QUARTER 1st	QUARTER 2nd	EST. TOTAL ERROR %
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A. FISSION & ACTIVATION GASES

1. Total release	Ci	5.38E+02	2.08E+03	1.40E+01
2. Average release rate for period	μCi/sec	6.92E+01	2.67E+02	
3. Percent of Technical Specification limit	%	2.09E+00	8.09E+00	

B. IODINES

1. Total iodine - 131	Ci	1.93E-04	1.93E-03	1.30E+01
2. Average release rate for period	μCi/sec	2.48E-05	2.48E-04	
3. Percent of Technical Specification limit	%	3.73E-01	3.73E+00	

C. PARTICULATES

1. Particulates with half-lives > 8 days	Ci	2.86E-03	1.78E-03	1.40E+01
2. Average release rate for period	μCi/sec	3.68E-04	2.28E-04	
3. Percent of Technical Specification	%	5.47E+00	3.40E+00	
4. Gross alpha radioactivity	Ci	1.19E-06	9.00E-07	

D. TRITIUM

1. Total release	Ci	1.73E+01	1.78E+03	8.00E+00
2. Average release rate for period	μCi/sec	2.20E+00	2.29E+02	
3. Percent of Technical Specification limit	%	4.48E-02	4.67E+00	

GASEOUS EFFLUENTS-ELEVATED RELEASE

NUCLIDES RELEASED	UNIT	CONTINUOUS MODE		BATCH MODE	
		1st QUARTER	2nd QUARTER	1st QUARTER	2nd QUARTER
1. FISSION GASES					
Krypton-85	Ci	1.37E+01	5.66E+02	1.06E+01	9.41E+00
Krypton-85m	Ci	2.84E-03	<1.00E-04	3.11E-01	4.28E-01
Krypton-87	Ci	5.74E-03	<1.00E-04	7.04E-01	3.68E-01
Krypton-88	Ci	5.61E-03	<1.00E-04	6.70E-01	3.99E-01
Xenon-133	Ci	3.43E+02	4.20E+02	7.74E+01	1.02E+03
Xenon-135	Ci	2.14E-02	8.89E-03	2.60E+00	2.07E+01
Xenon-135m	Ci	4.08E-03	<1.00E-04	5.08E-01	2.71E-01
Xenon-138	Ci	1.59E-02	<1.00E-04	1.74E+00	7.30E-01
Others (specify) Carbon-14	Ci	8.39E+01	8.31E+00	5.58E-01	8.62E-01
3H	Ci	1.72E+01	1.78E+01	1.07E-01	7.07E-02
Argon 37	Ci	<7.00E-09	2.39E+01	5.56E-01	5.60E-01
Argon 41	Ci	<1.00E-04	<1.00E-04	3.17E-03	8.27E-03
Xenon 131M	Ci	1.07E-02	<1.00E-04	1.07E+00	4.87E-01
Xenon 133M	Ci	6.76E-04	1.72E+00	7.38E-02	3.48E+00
Xenon 137	Ci	1.40E-02	<1.00E-04	9.36E-01	3.66E-01
Total For Period		4.40E+02	1.02E+03	9.77E+01	1.06E+03
Iodine-131	Ci	5.86E-05	1.93E-03	*	*
Iodine-133	Ci	1.34E-04	<1.00E-10	*	*
Iodine-135	Ci	<1.00E-10	<1.00E-10	*	*
Total for period	Ci	1.93E-04	1.93E-03	*	*

3. PARTICULATES

Strontium-89	Ci	2.14E-06	6.00E-06	*	*
Strontium-90	Ci	1.02E-06	8.00E-07	*	*
Cesium-134	Ci	3.87E-06	8.27E-05	*	*
Cesium-137	Ci	6.31E-06	1.18E-04	*	*
Barium-lanthanum-140	Ci	<1.00E-11	<1.00E-11	*	*
Cerium-144	Ci	3.57E-04	3.04E-04	*	*
Cobalt-60	Ci	2.96E-04	3.35E-04	*	*
Manganese-54	Ci	9.23E-05	6.78E-05	*	*
Cobalt-58	Ci	1.35E-03	2.78E-04	*	*
Cerium 141	Ci	2.17E-05	1.34E-05	*	*
Ruthenium 103	Ci	6.15E-05	5.21E-05	*	*
Zirconium/Niobium 95	Ci	6.72E-05	5.94E-05	*	*
Ruthenium-106	Ci	1.82E-04	1.3E-04	*	*
Chromium-51	Ci	4.16E-04	3.16E-04	*	*

*Reported Under Continuous Mode

EFFLUENT AND WASTE DISPOSAL SEMI-ANNUAL REPORT - 1980

LIQUID EFFLUENTS-SUMMATION OF ALL RELEASES

UNIT	QUARTER	QUARTER	EST. TOTAL
1	1st	2nd	ERROR %

A. FISSION AND ACTIVATION PRODUCTS

1. Total release (not including tritium, gases, alpha)	Ci	4.42E-02	8.00E-02	1.10E+01
2. Average diluted concentration during period	uCi/ml	2.34E-10	1.27E-09	
3. Percent of applicable limit	%	4.42E-01	8.00E-01	

B. TRITIUM

1. Total release	Ci	1.81E+03	1.10E+03	3.50E+00
2. Average diluted concentration during period	uCi/ml	9.62E-06	1.08E-05	
3. Percent of applicable limit	%	3.20E-01	3.60E-01	

C. DISSOLVED AND ENTRAINED GASES

1. Total release	Ci	6.16E-03	3.94E-02	1.90E+01
2. Average diluted concentration during period	uCi/ml	3.27E-11	2.09E-10	
3. Percent of applicable limit	%	1.90E-03	6.98E-03	

D. GROSS ALPHA RADIOACTIVITY

1. Total release	Ci	8.10E-04	7.20E-04	8.00E+00
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E. Volume of waste released (prior to dilution)	Liters	2.24E+07	3.37E+07	3.00E+00
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F. Volume of dilution water used during period	Liters	1.90E+11	1.02E+11	2.5E+00
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EFFLUENT AND WASTE DISPOSAL SEMI-ANNUAL REPORT - 1980

LIQUID EFFLUENTS

NUCLIDES RELEASED	UNIT	CONTINUOUS MODE		BATCH MODE	
		QUARTER 1st	QUARTER 2nd	QUARTER 1st	QUARTER 2nd
Strontium-89	Ci	6.00E-04	7.50E-04	1.10E-04	1.50E-04
Strontium-90	Ci	1.00E-03	7.60E-04	1.20E-04	1.80E-04
Cesium-134	Ci	<5.00E-07	<5.00E-07	7.34E-03	1.88E-02
Cesium-137	Ci	<5.00E-07	5.24E-04	1.03E-02	2.86E-02
Iodine-131	Ci	<1.00E-06	<1.00E-06	<1.00E-06	3.88E-03
Cobalt-58	Ci	<5.00E-07	<5.00E-07	2.33E-04	2.52E-03
Cobalt-60	Ci	2.57E-03	1.77E-04	1.01E-02	1.06E-02
Iron-59	Ci	<5.00E-07	<5.00E-07	<5.00E-07	<5.00E-07
Zinc-65	Ci	<5.00E-07	<5.00E-07	<5.00E-07	<5.00E-07
Manganese-54	Ci	<5.00E-07	<5.00E-07	<5.00E-07	3.21E-04
Chromium-51	Ci	<5.00E-07	<5.00E-07	<5.00E-07	<5.00E-07
Zirconium-niobium-95	Ci	<5.00E-07	<5.00E-07	4.14E-04	<5.00E-07
Molybdenum-99	Ci	<5.00E-07	<5.00E-07	<5.00E-07	<5.00E-07
Technetium-99m	Ci	<5.00E-07	<5.00E-07	<5.00E-07	<5.00E-07
Barium-lanthanum-140	Ci	<1.00E-06	<1.00E-06	<1.00E-06	<5.00E-07
Cerium-141	Ci	<6.00E-07	<5.00E-07	<5.00E-07	<1.00E-06
Europium-154	Ci	<5.00E-07	<5.00E-07	<5.00E-07	<5.00E-07
Beryllium-7	Ci	<5.00E-07	<5.00E-07	<5.00E-07	<5.00E-07
Cerium-144	Ci	<5.00E-07	<5.00E-07	1.14E-02	6.48E-03
Ruthenium-106	Ci	<5.00E-07	<5.00E-07	<5.00E-07	6.28E-03
Silver-110m	Ci	<5.00E-07	<5.00E-07	<5.00E-07	<5.00E-07
Ruthenium 103	Ci	<5.00E-07	<5.00E-07	<5.00E-07	<5.00E-07
Antimony-125	Ci	<5.00E-07	<5.00E-07	<5.00E-07	<5.00E-07
Cobalt-57	Ci	<5.00E-07	<5.00E-07	<5.00E-07	<5.00E-07
Iodine-133	Ci	<5.00E-07	<5.00E-07	<5.00E-07	<5.00E-07
Total for Period (above)	Ci	4.17E-03	2.21E-03	4.00E-02	7.78E-02

Xenon-133	Ci	<1.00E-05	<1.00E-05	5.23E-03	3.75E-02
Xenon-135	Ci	<1.00E-05	<1.00E-05	4.38E-04	1.36E-03
Argon-37	Ci	4.00E-05	5.00E-05	4.20E-06	4.00E-06
Krypton-85	Ci	4.10E-04	4.00E-04	4.20E-05	5.00E-05
Tritium	Ci	2.26E-01	5.09E-02	1.81E+03	1.10E+03

SOLID WASTE AND IRRADIATED FUEL SHIPMENTS

January 1, 1980 - June 30, 1980

A. Solid Waste Shipped Offsite for Burial or Disposal (Not irradiated fuel)

1. Type of Waste	Unit	6-month Period	Est. Error %
a. Spent resin, filter sludges, evaporator bottoms, etc.	m ³	9.3011 E + 01	+ 1.0 E + 01
	Ci	1.1872 E + 02	
b. Dry compressible waste, contaminated equip., etc.	m ³	4.7019 E + 02	+ 1.0 E + 01
	Ci	7.4818	
c. Irradiated components	N/A	N/A	N/A

2. Estimate of Major Nuclide Composition (By type of waste)

a.	Cs-137	4.07 E + 01	%
	Cs-134	3.35 E + 01	%
	Ce-144	1.01 E + 01	%
	Co-58	5.52 E 00	%
	Co-60	4.53 E 00	%
	Nb-95	8.15 E - 01	%
	Zr-95	4.56 E - 01	%
	Mn-54	2.76 E 00	%

b.	Cs-137	2.9 E + 01	%
	Cs-134	2.41 E + 01	%
	Co-58	1.37 E + 01	%
	Ru-106	1.29 E + 01	%
	Ce-144	9.06 E 00	%
	Co-60	5.82 E 00	%
	Mn-54	2.75 E 00	%
	Nb-95	1.17 E 00	%

3. <u>Number of Shipments</u>	<u>Mode of Transport</u>	<u>Destination</u>
29	Truck	Barnwell, SC

B. Irradiated Fuel Shipments (Disposition)

<u>Number of Shipments</u>	<u>Mode of Transport</u>	<u>Destination</u>
3	Truck	Battelle Columbus Facility West Jefferson, Ohio

OFFSITE DOSE ESTIMATES

In accordance with the requirements of Section 5.6.1.b of the Environmental Technical Specifications and Regulatory Guide 1.21, the off-site dose to humans from the gaseous and liquid radioactive effluents of Connecticut Yankee have been estimated.

These estimations are performed using measured effluent data, measured meteorological data, and calculational models developed by the U.S. Nuclear Regulatory Commission.

The dose estimates generally tend to be conservative due to the use of conservative assumptions in the calculational models. More realistic estimates of the off-site dose are obtained by analysis of the environmental monitoring data. A comparison of the doses estimated by each of the above methods will be presented in the Annual Radiological Environmental Monitoring Report due to be published March 31, 1981.

1. Dose Models

a. Airborne Effluents

Maximum individual and population doses due to the release of noble gases, radioiodines and particulates were calculated using the computer code GASPAR⁽¹⁾.

The code uses the semi-infinite cloud model to implement the dose models of U.S.N.R.C. Regulatory Guide 1.109 (October, 1977). The values of average relative effluent concentration (X/Q) and average relative deposition (D/Q) used in the GASPAR code were generated using a meteorological computer code which implements the assumptions given in Section C of NRC Regulatory Guide 1.111, "Methods for Estimating Atmospheric Transport and Dispersion of Gaseous Effluents in Routine Releases from Light-Water-Cooled Reactors".

Releases from the CY 175 foot stack were considered as a mixed mode release (partially elevated and partially ground). The Pasquill stability classes were determined using the temperature gradient between the 33 foot and 196 foot levels of the meteorological tower.

The GASPAR code was run separately for continuous releases (building ventilation) and batch releases (waste gas tanks). The resulting doses were then summed to determine the total dose.

b. Liquid Effluents

Maximum individual and population doses due to the release of radioactive liquid effluents were calculated using the computer code LADTAP⁽²⁾.

The code implements the dose models and parameters given in Regulatory Guide 1.109 (October 1977).

2. Results

a. Airborne Effluents

The calculated doses are presented in Table 5.1.

For population doses, the GASPAR code calculates the dose to the whole body, GI-tract, bone, liver, kidney, thyroid, lung and skin from each of the following pathways: direct exposure from the plume, direct exposure from ground deposition, inhalation, vegetation, cow's milk and meat.

The values presented in the attached table are a total from all pathways, but only the whole body, skin and thyroid dose are presented.

For the maximum individual, the GASPAR program calculates the dose to the same organs listed above for the following pathways: direct exposure from the plume, direct exposure from ground deposition, inhalation, vegetation, meat, cow's milk and goat's milk. The doses are calculated for adults, teenagers, children and infants separately. Unless otherwise noted in the table the doses given are for adults.

For the plume, ground deposition and inhalation pathways, the maximum individual dose is calculated at the offsite location of maximum decayed X/Q where a potential for dose exists.

For the vegetation pathway the maximum individual dose is calculated at the vegetable garden of highest depleted X/Q.

For the meat, cow's milk and goat's milk pathways, the calculated dose is included as the maximum individual's dose only at locations and times where these pathways actually exist.

Doses were calculated at the cow farm and goat farm of maximum deposition. The doses presented in Table 5.1 are the maximum doses observed.

b. Liquid Effluents

The calculated doses are presented in Table 5.1

The LADTAP code performs calculations for the following pathways: fish, shellfish, algae, drinking water, irrigated food, shore-line activity, swimming and boating. At Connecticut Yankee, the algae, shellfish, drinking water and irrigated food pathways do not exist, and thus only the other pathways are included in the totals given in Table 5.1.

Doses are calculated for the whole body, skin, thyroid, GI-LLI, bone, liver, kidney, and lungs.

Table 5.1 presents the doses to the whole body, thyroid, and the maximum organ dose. The dose to all other organs was less than those values presented for the liver.

Calculations are performed for adults, teenagers, children and infants separately. Unless otherwise noted in the table the doses given are adult doses.

3. Analysis of Results

The doses are well below permissible levels and are of no significance as far as effects on the general population. For perspective, the average whole body dose to an individual from natural background radiation in the vicinity of Connecticut Yankee is about 40 millirem⁽³⁾ for a six month period as opposed to the average individual dose within 50 miles of the site of 0.00012 millirem from gaseous

effluents and 0.00082 millirem from liquid effluents during the report period. The maximum individual dose of 0.14 millirem from gases or 0.55 millirem from liquids are approximately one percent of the background dose.

REFERENCES

- (1) GASPAR Dose Code, K. F. Eckerman, Radiological Assessment Branch, U.S. Nuclear Regulatory Commission, Wash. D.C. - Revised 2/20/76.
- (2) LADTAP - U.S. Nuclear Regulatory Commission; Washington, D.C.
- (3) Does not include an average additional dose of approximately 30 mrem due to internal radiation, fallout, etc.

TABLE 5.1
Off-Site Dose Estimates
Connecticut Yankee

		1980		
A.	<u>Airborne Effluents</u>	<u>Units</u>	<u>Jan-Mar</u>	<u>Apr-June</u>
1.	Maximum Individual Dose	Millirem		
	a. Whole Body		2.5(-2) ^{a,b}	1.1(-1) ^f
	b. Skin		7.5(-2) ^b	5.6(-1) ^f
	c. Thyroid		6.3(-3) ^{c,d}	2.7(-1) ^g
2.	Population Dose 0-50 Miles	Person-Rem		
	a. Whole Body		7.7(-2)	3.7(-1)
	b. Skin		2.9(-1)	2.2(0)
	c. Thyroid		2.5(-2)	5.4(-1)
3.	Average Dose 0-50 Miles	Millirem		
	a. Whole Body		2.0(-5)	9.7(-5)
	b. Skin		7.6(-5)	5.7(-4)
	c. Thyroid		6.5(-6)	1.4(-4)
B.	<u>Liquid Effluents</u>			
1.	Maximum Individual Dose	Millirem		
	a. Whole Body		9.8(-2)	4.5(-1)
	b. Max Organ (Liver)		1.3(-1) ^e	6.3(-1) ^e
	c. Thyroid		4.9(-3)	1.1(-2)
2.	Population Dose 0-50 Miles	Person-Rem		
	a. Whole Body		5.7(-1)	2.6(0)
	b. Max Organ (Liver)		9.2(-1)	4.3(0)
	c. Thyroid		3.2(-2)	5.6(-2)
3.	Average Dose 0-50 Miles	Millirem		
	a. Whole Body		1.5(-4)	6.7(-4)
	b. Max Organ (Liver)		2.4(-4)	1.1(-3)
	c. Thyroid		8.3(-6)	1.5(-5)

a. 4.6(-2) = 4.6 x 10⁻²

b. At a location 1300 meters SE

c. Teenage thyroid dose at critical location 1300 meters SE

d. Teenage lung dose at critical location is 8.1(-3); however thyroid doses are limiting over the year

e. Teenager dose - all other doses are adult doses

f. At a location 550 meters NW

g. Infant thyroid dose at critical goat and vegetable farm 2100 meters NW

HADDAM NECK

METEOROLOGICAL

JOINT FREQUENCY

DATA FOR

WASTE GAS TANK RELEASES

COAST GUARD NUCLEAR POWER STATION / UNIT 1

WIND SPEED/DIR/DIRECTION/STABILITY JOINT FREQUENCY DISTRIBUTION

WIND LEVEL = 196 FT
 DELTA T INTERVAL = 196 - 33 FT
 PASQUILL STABILITY CLASSES / CLASS DETERMINATION METHOD = DELTA T
 DATA PERIOD = 13 FEB 62/1900 - 1 APR 60/0945
 DATA ACQUISITION INTERVAL = MINUTES 00-00 OF EACH HOUR

PASQUILL STABILITY B -- DELTA T LESS THAN OR EQUAL TO -1.7 AND GREATER THAN -1.9 DEG C PER 100 METERS

DIRECTION	SPEED IN METERS PER SECOND										ALL
	0.5-1.5	1.6-3.3	3.4-5.5	5.6-8.2	8.3-10.8	10.9-15.0	15.1-20.0	GT 20.1			
ENE	0	1	0	0	0	0	0	0	0	0	1
NE	1	0	0	0	0	0	0	0	0	0	1
ENE	0	4	0	0	0	0	0	0	0	0	4
E	0	0	0	0	0	0	0	0	0	0	0
ESE	0	0	0	0	0	0	0	0	0	0	0
SE	0	0	0	0	0	0	0	0	0	0	0
SSE	0	0	0	0	0	0	0	0	0	0	0
S	0	0	0	0	0	0	0	0	0	0	0
SSH	0	1	0	0	0	0	0	0	0	0	0
SW	0	0	0	0	0	0	0	0	0	0	0
WSW	0	0	0	0	0	0	0	0	0	0	0
W	0	0	0	0	0	0	0	0	0	0	0
WNW	0	0	0	0	0	0	0	0	0	0	0
NW	0	0	0	0	0	0	0	0	0	0	0
NRW	0	0	0	0	0	0	0	0	0	0	0
N	0	0	0	0	0	0	0	0	0	0	0
ALL SECTOR	1	5	0	0	0	0	0	0	0	0	0

NO. OF VALID OBSERVATION = 6 NO. OF CALMS (WS LT 0.5M/SEC) = 0 NO. OF MISSING WD/HS = 0

CCHN YANKEE NUCLEAR POWER STATION / UNIT 1
 WIND SPEED/WIND DIRECTION/STABILITY JOINT FREQUENCY DISTRIBUTION

WIND LEVEL = 196 FT
 DELTA T INTERVAL = 196 - 33 FT
 PASQUILL STABILITY CLASSES / CLASS DETERMINATION METHOD = DELTA T
 DATA PERIOD = 13 FEB 80/1900 - 1 APR 80/0945
 DATA ACQUISITION INTERVAL = MINUTES 00-00 OF EACH HOUR
 PASQUILL STABILITY C -- DELTA T LESS THAN OR EQUAL TO -1.5 AND GREATER THAN -1.7 DEG C PER 100 METERS

DIRECTION	SPEED IN METERS PER SECOND										ALL	
	0.5-1.5	1.6-3.3	3.4-5.5	5.6-8.2	8.3-10.8	10.9-15.0	15.1-20.0	GT 20.1				
NNE	0	1	0	0	0	0	0	0	0	0	0	1
NE	2	1	0	0	0	0	0	0	0	0	0	3
ENE	0	4	0	0	0	0	0	0	0	0	0	4
E	0	0	0	0	0	0	0	0	0	0	0	0
ESE	0	0	0	0	0	0	0	0	0	0	0	0
SE	0	0	0	0	0	0	0	0	0	0	0	0
SSE	0	0	0	0	0	0	0	0	0	0	0	0
S	0	0	0	0	0	0	0	0	0	0	0	0
SSH	0	0	0	0	0	0	0	0	0	0	0	0
SH	0	0	0	0	0	0	0	0	0	0	0	0
MSH	0	1	0	0	0	0	0	0	0	0	0	1
M	0	0	0	0	0	0	0	0	0	0	0	0
MWH	0	0	0	0	0	0	0	0	0	0	0	0
MW	0	0	4	1	0	0	0	0	0	0	0	5
MWH	0	2	4	0	0	0	0	0	0	0	0	6
M	0	8	1	0	0	0	0	0	0	0	0	9
ALL SECTOR	2	17	9	1	0	0	0	0	0	0	0	0

NO. OF VALID OBSERVATION = 29 NO. OF CALMS (WS LT 0.5M/SEC) = 0 NO. OF MISSING WD/HS = 0

CORN YANKEE NUCLEAR POWER STATION / UNIT 1

WIND SPEED/WIND DIRECTION/STABILITY JOINT FREQUENCY DISTRIBUTION

WIND LEVEL = 195 FT

DELTA T INTERVAL = 176 - 33 FT

PASQUILL STABILITY CLASSES / CLASS DETERMINATION METHOD = DELTA T

DATA PERIOD = 13 FEB 80/1900 - 1 APR 80/0945

DATA ACQUISITION INTERVAL = MINUTES 00-00 OF EACH HOUR

PASQUILL STABILITY 0 -- DELTA T LESS THAN OR EQUAL TO -0.5 AND GREATER THAN -1.5 DEG C PER 100 METERS

DIRECTION	SPEED IN METERS PER SECOND										ALL
	0.5-1.5	1.6-3.3	3.4-5.5	5.6-8.2	8.3-10.8	10.9-15.0	15.1-20.0	GT 20.1			
NNE	4	21	0	0	0	0	0	0	0	0	25
NE	16	4	0	0	0	0	0	0	0	0	20
ENE	6	23	16	0	0	0	0	0	0	0	45
E	0	4	8	1	0	0	0	0	0	0	13
ESE	0	0	0	0	0	0	0	0	0	0	0
SE	0	0	0	0	0	0	0	0	0	0	0
SSE	0	0	0	0	0	0	0	0	0	0	0
S	0	0	0	0	0	0	0	0	0	0	0
SSH	0	0	0	0	0	0	0	0	0	0	0
SW	0	0	0	0	0	0	0	0	0	0	0
WSW	0	0	0	0	0	0	0	0	0	0	0
W	0	0	0	0	0	0	0	0	0	0	0
WGH	0	0	2	0	0	0	0	0	0	0	2
WH	1	12	8	0	0	0	0	0	0	0	21
WSH	0	24	4	0	0	0	0	0	0	0	28
N	2	26	2	0	0	0	0	0	0	0	30
ALL SECTOR	29	114	40	1	0	0	0	0	0	0	0

NO. OF VALID OBSERVATION = 185 NO. OF CALMS (MS LT 0.5M/SEC) = 1 NO. OF MISSING WD/WS = 33

COIN WAKE NUCLEAR POWER STATION / UNIT 1
 WIND SPEED/DIR/DIRECTION/STABILITY JOINT FREQUENCY DISTRIBUTION

WIND LEVEL = 195 FT
 DELTA T INTERVAL = 196 -- 33 FT
 PASQUILL STABILITY CLASSES / CLASS DETERMINATION METHOD = DELTA T
 DATA PERIOD = 13 FEB 80/1900 - 1 APR 80/0945
 DATA ACQUISITION INTERVAL = MINUTES 00-00 OF EACH HOUR
 PASQUILL STABILITY E -- DELTA T LESS THAN OR EQUAL TO 1.5 AND GREATER THAN -0.5 DEG C PER 100 METERS

DIRECTION	SPEED IN METERS PER SECOND										ALL
	0.5-1.5	1.6-3.3	3.4-5.5	5.6-8.2	8.3-10.8	10.9-15.0	15.1-20.0	GT 20.1			
NNE	16	0	0	0	0	0	0	0	0	0	16
NE	11	0	0	0	0	0	0	0	0	0	11
ENE	5	1	0	0	0	0	0	0	0	0	6
E	0	0	0	0	0	0	0	0	0	0	0
ESE	0	0	0	0	0	0	0	0	0	0	0
SE	0	0	0	0	0	0	0	0	0	0	0
SSE	1	0	0	0	0	0	0	0	0	0	1
S	0	0	0	0	0	0	0	0	0	0	0
SSH	0	0	0	0	0	0	0	0	0	0	0
SH	0	0	0	0	0	0	0	0	0	0	0
WSH	0	0	0	0	0	0	0	0	0	0	0
W	0	0	0	0	0	0	0	0	0	0	0
WNW	0	0	0	0	0	0	0	0	0	0	0
NW	0	2	7	0	0	0	0	0	0	0	9
NNW	1	11	0	0	0	0	0	0	0	0	12
N	2	6	0	0	0	0	0	0	0	0	10
ALL SECTOR	36	22	7	0	0	0	0	0	0	0	0

NO. OF VALID OBSERVATION = 82 NO. OF CALMS (WS LT 0.5M/SEC) = 17 NO. OF MISSING HD/WS = 3

CORN YARREE NUCLEAR POWER STATION / UNIT 1
 WIND SPEED/WIND DIRECTION/STABILITY JOINT FREQUENCY DISTRIBUTION

WIND LEVEL = 196 FT
 DELTA T INTERVAL = 196 - 33 FT
 PASQUILL STABILITY CLASSES / CLASS DETERMINATION METHOD = DELTA T
 DATA PERIOD = 13 FEB 00/1900 - 1 APR 00/0945
 DATA ACQUISITION INTERVAL = MINUTES 00-00 OF EACH HOUR
 PASQUILL STABILITY F -- DELTA T LESS THAN OR EQUAL TO 4.0 AND GREATER THAN 1.5 DEG C PER 100 METERS

DIRECTION	SPEED IN METERS PER SECOND										ALL	
	0.5-1.5	1.6-3.3	3.4-5.5	5.6-8.2	8.3-10.8	10.9-15.0	15.1-20.0	GT 20.1				
NNE	5	1	0	0	0	0	0	0	0	0	0	6
NE	3	0	0	0	0	0	0	0	0	0	0	3
ENE	0	0	0	0	0	0	0	0	0	0	0	0
E	0	0	0	0	0	0	0	0	0	0	0	0
ESE	1	0	0	0	0	0	0	0	0	0	0	1
SE	0	0	0	0	0	0	0	0	0	0	0	0
SSE	0	0	0	0	0	0	0	0	0	0	0	0
S	0	0	0	0	0	0	0	0	0	0	0	0
SSH	0	0	0	0	0	0	0	0	0	0	0	0
SW	0	0	0	0	0	0	0	0	0	0	0	0
WSW	0	0	0	0	0	0	0	0	0	0	0	0
W	0	0	0	0	0	0	0	0	0	0	0	0
WRW	0	0	0	0	0	0	0	0	0	0	0	0
NW	0	0	0	0	0	0	0	0	0	0	0	0
NRW	0	0	0	0	0	0	0	0	0	0	0	0
N	0	1	0	0	0	0	0	0	0	0	0	1
ALL SECTOR	9	2	0	0	0	0	0	0	0	0	0	0

NO. OF VALID OBSERVATION = 14 NO. OF CALMS (WS LT 0.5M/SEC) = 3 NO. OF MISSING WD/WS = 0

CORN YANKEE NUCLEAR POWER STATION / UNIT 1
 WIND SPEED/WIND DIRECTION/STABILITY JOINT FREQUENCY DISTRIBUTION

WIND LEVEL = 196 FT
 DELTA T INTERVAL = 1% - 33 FT
 PASQUILL STABILITY CLASSES / CLASS DETERMINATION METHOD = DELTA T
 DATA PERIOD = 13 FEB 60/1900 - 1 APR 60/0945
 DATA ACQUISITION INTERVAL = MINUTES 00-00 OF EACH HOUR
 PASQUILL STABILITY 6 -- DELTA T GREATER THAN 4.0 DEG C PER 100 METERS

DIRECTION	SPEED IN METERS PER SECOND										ALL	
	0.5-1.5	1.6-3.3	3.4-5.5	5.6-8.2	8.3-10.8	10.9-15.0	15.1-20.0	GT 20.1				
NNE	0	0	0	0	0	0	0	0	0	0	0	0
NE	0	0	0	0	0	0	0	0	0	0	0	0
ENE	0	0	0	0	0	0	0	0	0	0	0	0
E	0	0	0	0	0	0	0	0	0	0	0	0
ESE	0	0	0	0	0	0	0	0	0	0	0	0
SE	0	0	0	0	0	0	0	0	0	0	0	0
SSE	0	0	0	0	0	0	0	0	0	0	0	0
S	0	0	0	0	0	0	0	0	0	0	0	0
SSH	0	0	0	0	0	0	0	0	0	0	0	0
SH	0	0	0	0	0	0	0	0	0	0	0	0
WSH	0	0	0	0	0	0	0	0	0	0	0	0
W	0	0	0	0	0	0	0	0	0	0	0	0
WSH	0	0	0	0	0	0	0	0	0	0	0	0
WSH	0	0	0	0	0	0	0	0	0	0	0	0
N	0	0	0	0	0	0	0	0	0	0	0	0
ALL SECTOR	0	0	0	0	0	0	0	0	0	0	0	0

NO. OF VALID OBSERVATION = 0 NO. OF CALMS (WS LT 0.5M/SEC) = 0 NO. OF MISSING WD/WS = 0

CONYANSEE NUCLEAR POWER STATION / UNIT 1

WIND SPEED/WIND DIRECTION/STABILITY JOINT FREQUENCY DISTRIBUTION

WIND LEVEL 1% FT
 DELTA T INT ρ_{val} = 196 - 33 FT
 PASQUILL STABILITY CLASSES / CLASS DETERMINATION METHOD = DELTA T
 DATA PERIOD = 13 FEB 60/1900 - 1 APR 60/0745
 DATA ACQUISITION INTERVAL = MINUTES 00-00 OF EACH HOUR

ALL STABILITY CLASSES

DIRECTION	SPEED IN METERS PER SECOND										ALL
	0.5-1.5	1.6-3.3	3.4-5.5	5.6-8.2	8.3-10.8	10.9-15.0	15.1-20.0	GT 20.1			
NRE	25	36	2	0	0	0	0	0	0	0	63
NE	33	6	0	0	0	0	0	0	0	0	39
ENE	11	32	16	0	0	0	0	0	0	0	59
E	0	4	8	1	0	0	0	0	0	0	13
ESE	1	0	0	0	0	0	0	0	0	0	1
SE	0	0	0	0	0	0	0	0	0	0	0
SSE	1	0	0	0	0	0	0	0	0	0	1
S	0	0	0	0	0	0	0	0	0	0	0
SSW	0	0	0	0	0	0	0	0	0	0	0
SW	0	0	0	0	0	0	0	0	0	0	0
WSW	0	1	0	0	0	0	0	0	0	0	1
W	0	0	0	0	0	0	0	0	0	0	0
WSW	0	0	2	0	0	0	0	0	0	0	2
WSW	1	14	19	1	0	0	0	0	0	0	35
WSW	1	39	9	0	0	0	0	0	0	0	49
N	4	53	9	0	0	0	0	0	0	0	66
ALL SECTOR	77	185	65	2	0	0	0	0	0	0	

NO. OF POSSIBLE OBSERVATIONS = 386
 NO. OF VALID OBSERVATIONS = 350
 NO. OF CALMS (WS LT 0.5M/SEC) = 21
 NO. OF VALID NON-CALM CONCURRENT WD/HS/DI = 329
 NO. OF MISSING WJ/HS = 36
 NO. OF MISSING DELTA T = 0

CONN YANKEE NUCLEAR POWER STATION / UNIT 1
 WIND SPEED/WIND DIRECTION/STABILITY JOINT FREQUENCY DISTRIBUTION

WIND LEVEL = 196 FT
 DELTA T INTERVAL = 156 - 33 FT
 PASQUILL STABILITY CLASSES / CLASS DETERMINATION METHOD = DELTA T
 DATA PERIOD = 15 APR 80/1330 - 16 MAY 80/0015
 DATA ACQUISITION INTERVAL = MINUTES 00-30 OF EACH HOUR

PASQUILL STABILITY A -- DELTA T LESS THAN OR EQUAL TO -1.9 DEG C PER 100 METERS

DIRECTION	SPEED IN METERS PER SECOND										ALL
	0.5-1.5	1.6-3.3	3.4-5.5	5.6-8.2	8.3-10.8	10.9-15.0	15.1-20.0	GT 20.1			
NNE	1	0	0	0	0	0	0	0	0	0	1
NE	1	0	0	0	0	0	0	0	0	0	1
ENE	0	1	0	0	0	0	0	0	0	0	9
E	2	4	1	0	0	0	0	0	0	0	7
ESE	0	7	1	0	0	0	0	0	0	0	8
SE	0	2	4	11	0	0	0	0	0	0	17
SSE	0	0	0	0	0	0	0	0	0	0	0
S	0	0	0	0	0	0	0	0	0	0	0
SSW	0	1	0	0	0	0	0	0	0	0	1
SW	0	1	0	0	0	0	0	0	0	0	1
WSW	0	0	0	0	0	0	0	0	0	0	0
W	1	0	0	0	0	0	0	0	0	0	1
WNW	0	2	4	0	0	0	0	0	0	0	6
NNW	0	2	0	0	0	0	0	0	0	0	2
NNW	0	0	0	0	0	0	0	0	0	0	0
N	0	1	0	0	0	0	0	0	0	0	1
ALL SECTOR	13	21	10	11	0	0	0	0	0	0	0

NO. OF VALID OBSERVATION = 55 NO. OF CALMS (WS LT 0.5M/SEC) = 0 NO. OF MISSING HD/MS = 0

CONN YANKEE NUCLEAR POWER STATION / UNIT 1

WIND SPEED/WIND DIRECTION/STABILITY JOINT FREQUENCY DISTRIBUTION

WIND LEVEL = 196 FT
 DELTA T INTERVAL = 195 - 33 FT
 PASQUILL STABILITY CLASSES / CLASS DETERMINATION METHOD = DELTA T
 DATA PERIOD = 15 APR 00/1130 - 16 MAY 90/0015
 DATA ACQUISITION INTERVAL = MINUTES 00-30 OF EACH HOUR
 PASQUILL STABILITY B -- DELTA T LESS THAN OR EQUAL TO -1.7 AND GREATER THAN -1.9 DEG C PER 100 METERS

DIRECTION	SPEED IN METERS PER SECOND										ALL
	0.5-1.5	1.6-3.3	3.4-5.5	5.6-8.2	8.3-10.6	10.9-15.0	15.1-20.0	GT 20.1			
NNE	0	1	0	0	0	0	0	0	0	0	1
NE	2	0	0	0	0	0	0	0	0	0	2
ENE	1	3	0	0	0	0	0	0	0	0	4
E	0	3	0	0	0	0	0	0	0	0	3
ESE	0	0	0	0	0	0	0	0	0	0	0
SE	0	0	4	6	0	0	0	0	0	0	10
SSE	0	0	0	0	0	0	0	0	0	0	0
S	0	0	0	0	0	0	0	0	0	0	0
SSW	0	0	0	0	0	0	0	0	0	0	0
SW	0	0	0	1	0	0	0	0	0	0	1
WSW	0	0	0	0	0	0	0	0	0	0	0
W	0	3	0	0	0	0	0	0	0	0	3
WNW	0	2	3	1	0	0	0	0	0	0	6
NW	0	0	2	0	0	0	0	0	0	0	2
NNW	0	1	0	1	0	0	0	0	0	0	2
N	1	1	0	0	0	0	0	0	0	0	2
ALL SECTOR	4	14	9	9	0	0	0	0	0	0	0

NO. OF VALID OBSERVATION = 37 NO. OF CALMS (WS LT 0.5M/SEC) = 1 NO. OF MISSING WD/WS = 0

CONN YANKEE NUCLEAR POWER STATION / UNIT 1
 WIND SPEED/WIND DIRECTION/STABILITY JOINT FREQUENCY DISTRIBUTION

WIND LEVEL = 196 FT
 DELTA T INTERVAL = 156 - 33 FT
 PASQUILL STABILITY CLASSES / CLASS DETERMINATION METHOD = DELTA T
 DATA PERIOD = 15 APR 00/1330 - 16 MAY 00/0015
 DATA ACQUISITION INTERVAL = MINUTES 00-30 OF EACH HOUR

PASQUILL STABILITY C -- DELTA T LESS THAN OR EQUAL TO -1.5 AND GREATER THAN -1.7 DEG C PER 100 METERS

DIRECTION	SPEED IN METERS PER SECOND										ALL
	0.5-1.5	1.6-3.3	3.4-5.5	5.6-8.2	8.3-10.3	10.9-15.0	15.1-20.0	GT 20.1			
NNE	3	3	0	0	0	0	0	0	0	0	6
NE	0	1	0	0	0	0	0	0	0	0	1
ENE	1	0	0	0	0	0	0	0	0	0	1
E	0	1	0	0	0	0	0	0	0	0	1
ESE	0	0	0	0	0	0	0	0	0	0	0
SE	0	1	8	10	0	0	0	0	0	0	19
SSE	0	0	0	0	0	0	0	0	0	0	0
S	0	0	0	0	0	0	0	0	0	0	0
SSH	0	0	0	0	0	0	0	0	0	0	0
SH	0	0	0	0	0	0	0	0	0	0	0
WSH	0	1	0	0	0	0	0	0	0	0	1
W	0	0	0	0	0	0	0	0	0	0	0
WNW	0	2	11	5	1	0	0	0	0	0	19
NW	0	4	0	1	0	0	0	0	0	0	5
NNW	0	3	3	8	0	0	0	0	0	0	14
N	1	0	0	0	0	0	0	0	0	0	1
ALL SECTOR	5	16	22	24	1	0	0	0	0	0	68

NO. OF VALID OBSERVATION = 68 NO. OF CALMS (WS LT 0.5M/SEC) = 0 NO. OF MISSING NO./NS = 0

COHEN YAIKKEE NUCLEAR POWER STATION / UNIT 1
 WIND SPEED/WIND DIRECTION/STABILITY JOINT FREQUENCY DISTRIBUTION

WIND LEVEL = 196 FT
 DELTA T INTERVAL = 196 - 33 FT
 PASQUILL STABILITY CLASSES / CLASS DETERMINATION METHOD = DELTA T
 DATA PERIOD = 15 APR 80/1330 - 16 MAY 80/0015
 DATA ACQUISITION INTERVAL = MINUTES 00-30 OF EACH HOUR

PASQUILL STABILITY D -- DELTA T LESS THAN OR EQUAL TO -0.5 AND GREATER THAN -1.5 DEG C PER 100 METERS

DIRECTION	SPEED IN METERS PER SECOND										ALL
	0.5-1.5	1.6-3.3	3.4-5.5	5.6-8.2	8.3-10.8	10.9-15.0	15.1-20.0	GT 20.1			
NNE	15	12	0	0	0	0	0	0	0	0	27
NE	30	7	1	0	0	0	0	0	0	0	38
ENE	11	9	0	0	0	0	0	0	0	0	20
E	6	9	1	0	0	0	0	0	0	0	16
ESE	1	7	2	0	0	0	0	0	0	0	10
SE	0	7	20	12	2	0	0	0	0	0	41
SSE	0	3	2	2	0	0	0	0	0	0	7
S	0	1	0	9	0	0	0	0	0	0	10
SSH	0	3	7	7	1	0	0	0	0	0	15
SW	0	0	3	2	0	0	0	0	0	0	5
WSW	1	0	1	6	0	0	0	0	0	0	8
W	0	0	3	2	0	0	0	0	0	0	5
WPM	1	1	8	6	2	0	0	0	0	0	18
NW	1	4	25	8	0	0	0	0	0	0	38
NNW	1	5	7	2	0	0	0	0	0	0	15
N	1	11	0	0	0	0	0	0	0	0	12
ALL SECTOR	60	76	80	56	5	0	0	0	0	0	

NO. OF VALID OBSERVATION = 289 NO. OF CALMS (MS LT 0.5M/SEC) = 4 NO. OF MISSING MC/MS = 0

CONN YANKEE NUCLEAR POWER STATION / UNIT 1

WIND SPEED/WIND DIRECTION/STABILITY JOINT FREQUENCY DISTRIBUTION

WIND LEVEL = 196 FT
 DELTA T INTERVAL = 155 - 33 FT
 PASQUILL STABILITY CLASSES / CLASS DETERMINATION METHOD = DELTA T
 DATA PERIOD = 15 APR 80/1330 - 15 MAY 80/0015
 DATA ACQUISITION INTERVAL = MINUTES 60-30 OF EACH HOUR

PASQUILL STABILITY E -- DELTA T LESS THAN OR EQUAL TO 1.5 AND GREATER THAN -0.5 DEG C PER 100 METERS

DIRECTION	SPEED IN METERS PER SECOND										ALL
	0.5-1.5	1.6-3.3	3.4-5.5	5.6-8.2	8.3-10.8	10.9-15.0	15.1-20.0	GT 20.1			
NNE	26	4	0	0	0	0	0	0	0	0	33
NE	42	2	1	0	0	0	0	0	0	0	45
ENE	11	5	1	0	0	0	0	0	0	0	17
E	2	4	0	0	0	0	0	0	0	0	6
ESE	0	2	0	0	0	0	0	0	0	0	2
SE	0	2	2	0	0	0	0	0	0	0	4
SSE	0	3	3	1	0	0	0	0	0	0	7
S	0	1	2	0	0	0	0	0	0	0	3
SSW	0	1	4	0	0	0	0	0	0	0	5
SW	0	0	4	0	0	0	0	0	0	0	4
WSW	0	4	3	3	0	0	0	0	0	0	10
W	0	0	0	3	0	0	0	0	0	0	3
WGW	0	2	3	0	0	0	0	0	0	0	5
W	0	14	17	1	0	0	0	0	0	0	12
WNW	1	11	15	0	0	0	0	0	0	0	27
N	5	3	0	0	0	0	0	0	0	0	9
ALL SECTOR	97	58	55	13	0	0	0	0	0	0	

NO. OF VALID OBSERVATION = 225 NO. OF CALMS (WS LT 0.5M/SEC) = 12 NO. OF MISSING NO/MS = 0

CONN YANKEE NUCLEAR POWER STATION / UNIT 1
 WIND SPEED/WIND DIRECTION/STABILITY JOINT FREQUENCY DISTRIBUTION

WIND LEVEL = 196 FT
 DELTA T INTERVAL = 196 - 33 FT
 PASQUILL STABILITY CLASSES / CLASS DETERMINATION METHOD = DELTA T
 DATA PERIOD = 15 APR 80/1330 - 16 MAY 80/0015
 DATA ACQUISITION INTERVAL = MINUTES 00-30 OF EACH HOUR
 PASQUILL STABILITY F -- DELTA T LESS THAN OR EQUAL TO 4.0 AND GREATER THAN 1.5 DEG C PER 100 METERS

DIRECTION	SPEED IN METERS PER SECOND										ALL	
	0.5-1.5	1.6-3.3	3.4-5.5	5.6-8.2	8.3-10.8	10.9-15.0	15.1-20.0	GT 20.1				
NNE	11	2	0	0	0	0	0	0	0	0	0	13
NE	7	0	0	0	0	0	0	0	0	0	0	7
ENE	9	0	0	0	0	0	0	0	0	0	0	9
E	3	3	0	0	0	0	0	0	0	0	0	6
ESE	0	0	0	0	0	0	0	0	0	0	0	0
SE	0	1	0	0	0	0	0	0	0	0	0	1
SSE	0	0	0	0	0	0	0	0	0	0	0	0
S	0	0	0	0	0	0	0	0	0	0	0	0
SSH	0	0	0	0	0	0	0	0	0	0	0	0
SW	0	0	0	0	0	0	0	0	0	0	0	0
WSW	0	2	0	0	0	0	0	0	0	0	0	2
W	0	1	0	0	0	0	0	0	0	0	0	1
WRW	0	5	0	0	0	0	0	0	0	0	0	5
NW	1	2	1	0	0	0	0	0	0	0	0	4
NRW	1	6	1	0	0	0	0	0	0	0	0	8
N	11	6	0	0	0	0	0	0	0	0	0	17
ALL SECTOR	43	28	2	0	0	0	0	0	0	0	0	

NO. OF VALID OBSERVATION = 76 NO. OF CALMS (HS LT 0.5M/SEC) = 5 NO. OF MISSING WD/HS = 0

CONN YANKEE NUCLEAR POWER STATION / UNIT 1

WIND SPEED/WIND DIRECTION/STABILITY JOINT FREQUENCY DISTRIBUTION

WIND LEVEL = 196 FT
 DELTA T INTERVAL = 196 - 33 FT
 PASQUILL STABILITY CLASSES / CLASS DETERMINATION METHOD = DELTA T
 DATA PERIOD = 15 APR 80/1330 - 16 MAY 80/0015
 DATA ACQUISITION INTERVAL = MINUTES 00-30 OF EACH HOUR

PASQUILL STABILITY G -- DELTA T GREATER THAN 4.0 DEG C PER 100 METERS

DIRECTION	SPEED IN METERS PER SECOND										ALL
	0.5-1.5	1.6-3.3	3.4-5.5	5.6-8.2	8.3-10.8	10.9-15.0	15.1-20.0	GT 20.1			
NNE	5	0	0	0	0	0	0	0	0	0	5
NE	4	0	0	0	0	0	0	0	0	0	4
ENE	3	0	0	0	0	0	0	0	0	0	3
E	0	0	0	0	0	0	0	0	0	0	0
ESE	0	0	0	0	0	0	0	0	0	0	0
SE	0	0	0	0	0	0	0	0	0	0	0
SSE	0	0	0	0	0	0	0	0	0	0	0
S	0	0	0	0	0	0	0	0	0	0	0
SSW	0	0	0	0	0	0	0	0	0	0	0
SW	1	0	0	0	0	0	0	0	0	0	1
WSW	0	0	0	0	0	0	0	0	0	0	0
W	0	0	0	0	0	0	0	0	0	0	0
WNW	0	0	0	0	0	0	0	0	0	0	0
NW	0	2	6	0	0	0	0	0	0	0	15
NNW	0	4	0	0	0	0	0	0	0	0	4
N	0	2	0	0	0	0	0	0	0	0	2
ALL SECTOR	13	15	6	0	0	0	0	0	0	0	0

NO. OF VALID OBSERVATION = 36 NO. OF CALMS (HS LT 0.5M/SEC) = 2 NO. OF MISSING WD/HS = 0

CONN YARKEE NUCLEAR POWER STATION / UNIT 1
 WIND SPEED/WIND DIRECTION/STABILITY JOINT FREQUENCY DISTRIBUTION

WIND LEVEL = 196 FT
 DELTA T INTERVAL = 196 - 33 FT
 PACQUILL STABILITY CLASSES / CLASS DETERMINATION METHOD = DELTA T
 DATA PERIOD = 15 APR 80/1330 - 16 MAY 80/0015
 DATA ACQUISITION INTERVAL = MINUTES 00-30 OF EACH HOUR

ALL STABILITY CLASSES

DIRECTION	SPEED IN METERS PER SECOND										ALL
	0.5-1.5	1.6-3.3	3.4-5.5	5.6-8.2	8.3-10.8	10.9-15.0	15.1-20.0	GT 20.1			
ENE	61	22	0	0	0	0	0	0	0	0	33
NE	86	10	2	0	0	0	0	0	0	0	98
ENE	44	18	1	0	0	0	0	0	0	0	53
E	13	24	2	0	0	0	0	0	0	0	39
ESE	1	16	3	0	0	0	0	0	0	0	20
SE	0	13	36	39	2	0	0	0	0	0	92
SSE	0	6	5	3	0	0	0	0	0	0	14
S	0	2	2	9	0	0	0	0	0	0	13
SSW	0	2	11	7	1	0	0	0	0	0	21
SW	1	1	7	3	0	0	0	0	0	0	12
WSW	1	7	4	9	0	0	0	0	0	0	21
W	1	4	3	10	0	0	0	0	0	0	18
WNW	1	14	29	12	3	0	0	0	0	0	59
NW	2	35	51	10	0	0	0	0	0	0	93
NNW	3	30	26	11	0	0	0	0	0	0	70
N	19	24	0	0	0	0	0	0	0	0	43
ALL SECTOR	233	228	184	113	6	0	0	0	0	0	

NO. OF POSSIBLE OBSERVATIONS = 954
 NO. OF VALID OBSERVATIONS = 798
 NO. OF VALID NON-CALM CONCURRENT MD/MS/DT = 764
 NO. OF MISSING MD/MS = 166
 NO. OF CALMS (WS LT 0.5M/SEC) = 24
 NO. OF MISSING DELTA T = 166

HADDAM NECK

METEOROLOGICAL
JOINT FREQUENCY
DATA FOR
CONTINUOUS RELEASES

COON YANKEE NUCLEAR POWER STATION / UNIT 1
 WIND SPEED/WIND DIRECTION/STABILITY JOINT FREQUENCY DISTRIBUTION

WIND LEVEL = 196 FT
 DELTA T INTERVAL = 196 - 33 FT
 PASQUILL STABILITY CLASSES / CLASS DETERMINATION METHOD = DELTA T
 DATA PERIOD = 1 JAN 80/0015 - 31 MAR 80/2315
 DATA ACQUISITION INTERVAL = MINUTES 00-15 OF EACH HOUR
 PASQUILL STABILITY A -- DELTA T LESS THAN OR EQUAL TO -1.9 DEG C PER 100 METERS

DIRECTION	SPEED IN METERS PER SECOND										ALL	
	0.5-1.5	1.6-3.3	3.4-5.5	5.6-6.2	6.3-10.6	10.9-15.0	15.1-20.0	GT 20.1				
NNE	0	2	1	0	0	0	0	0	0	0	0	3
NE	0	0	0	0	0	0	0	0	0	0	0	0
ENE	0	0	0	0	0	0	0	0	0	0	0	0
E	1	0	0	0	0	0	0	0	0	0	0	1
ESE	0	0	0	0	0	0	0	0	0	0	0	0
SE	0	0	0	1	0	0	0	0	0	0	0	1
SSE	0	0	0	0	0	0	0	0	0	0	0	0
S	0	0	1	0	0	0	0	0	0	0	0	1
SSW	0	1	0	0	0	0	0	0	0	0	0	1
SH	0	0	1	0	0	0	0	0	0	0	0	1
WSW	0	1	1	0	0	0	0	0	0	0	0	2
H	0	1	4	2	2	1	1	0	0	0	0	10
WSH	0	1	7	13	9	9	0	0	0	0	0	39
NH	1	0	5	6	3	0	0	0	0	0	0	15
NWSH	1	0	0	1	0	0	0	0	0	0	0	2
N	1	4	1	0	0	0	0	0	0	0	0	6
ALL SECTOR	4	10	21	23	14	10	0	0	0	0	0	

NO. OF VALID OBSERVATION = 83 NO. OF CALMS (WS LT 0.5M/SEC) = 1 NO. OF MISSING WD/HS = 0

COIN YANKEE NUCLEAR POWER STATION / UNIT 1
 WIND SPEED/WIND DIRECTION/STABILITY JOINT FREQUENCY DISTRIBUTION

WIND LEVEL = 196 FT
 DELTA T INTERVAL = 194 - 33 FT
 PASQUILL STABILITY CLASSES / CLASS DETERMINATION METHOD = DELTA T
 DATA PERIOD = 1 JAN 80/0015 - 31 MAR 80/2315
 DATA ACQUISITION INTERVAL = MINUTES 00-15 OF EACH HOUR
 PASQUILL STABILITY B -- DELTA T LESS THAN OR EQUAL TO -1.7 AND GREATER THAN -1.9 DEG C PER 100 METERS

DIRECTION	SPEED IN METERS PER SECOND										ALL
	0.5-1.5	1.6-3.3	3.4-5.5	5.6-8.2	8.3-10.6	10.9-15.0	15.1-20.0	GT 20.1			
NNE	0	2	0	0	0	0	0	0	0	0	2
NE	1	1	0	0	0	0	0	0	0	0	2
ENE	0	2	0	0	0	0	0	0	0	0	2
E	0	0	0	1	0	0	0	0	0	0	1
ESE	0	1	1	0	0	0	0	0	0	0	2
SE	0	1	1	0	0	0	0	0	0	0	2
SSE	0	1	0	0	0	0	0	0	0	0	1
S	0	0	2	0	0	0	0	0	0	0	2
SSH	0	0	0	0	0	0	0	0	0	0	0
SH	0	0	0	0	0	0	0	0	0	0	0
MSW	0	0	2	1	0	0	0	0	0	0	3
W	0	4	4	1	3	2	0	0	0	0	14
WSW	1	7	12	20	7	4	0	0	0	0	51
NW	0	4	17	14	10	2	0	0	0	0	47
NRW	0	0	6	1	0	0	0	0	0	0	7
N	0	0	0	0	0	0	0	0	0	0	0
ALL SECTOR	2	23	45	38	20	8	0	0	0	0	0

NO. OF VALID OBSERVATION = 136 NO. OF CALMS (MS LT 0.5M/SEC) = 0 NO. OF MISSING HD/MS = 0

CONN YANKEE NUCLEAR POWER STATION / UNIT 1
 WIND SPEED/WIND DIRECTION/STABILITY JOINT FREQUENCY DISTRIBUTION

WIND LEVEL = 196 FT
 DELTA T INTERVAL = 196 - 33 FT
 PASQUILL STABILITY CLASSES / CLASS DETERMINATION METHOD - DELTA T
 DATA PERIOD = 1 JAN 80/0015 - 31 MAR 80/2315
 DATA ACQUISITION INTERVAL = MINUTES 00-15 OF EACH HOUR
 PASQUILL STABILITY C -- DELTA T LESS THAN OR EQUAL TO -1.5 AND GREATER THAN -1.7 DEG C PER 100 METERS

DIRECTION	SPEED IN METERS PER SECOND										ALL
	0.5-1.5	1.6-3.3	3.4-5.5	5.6-8.2	8.3-10.8	10.9-15.0	15.1-20.0	GT 20.1			
NNE	3	0	0	0	0	0	0	0	0	0	3
NE	1	0	0	0	0	0	0	0	0	0	1
ENE	0	2	0	0	0	0	0	0	0	0	2
E	0	0	2	1	0	0	0	0	0	0	3
ESE	0	1	1	0	0	0	0	0	0	0	2
SE	0	0	2	0	0	0	0	0	0	0	2
SSE	0	2	4	0	0	0	0	0	0	0	6
S	0	1	0	0	0	0	0	0	0	0	1
SSH	0	0	2	0	0	0	0	0	0	0	2
SH	0	0	0	0	0	0	0	0	0	0	0
WSH	0	0	5	1	0	0	0	0	0	0	6
W	1	1	6	4	3	1	0	0	0	0	16
WNW	0	5	23	14	6	5	0	0	0	0	54
NW	0	7	25	42	8	4	0	0	0	0	86
NNW	3	3	16	0	0	0	0	0	0	0	22
N	0	3	3	0	0	0	0	0	0	0	6
ALL SECTOR	8	25	89	62	17	11	0	0	0	0	

NO. OF VALID OBSERVATION = 212 NO. OF CALMS (WS LT 0.5M/SEC) = 0 NO. OF MISSING WD/WS = 1

CONN YANKEE NUCLEAR POWER STATION / UNIT 1
 WIND SPEED/WIND DIRECTION/STABILITY JOINT FREQUENCY DISTRIBUTION

WIND LEVEL = 196 FT
 DELTA T INTERVAL = 196 - 33 FT
 PASQUILL STABILITY CLASSES / CLASS DETERMINATION METHOD = DELTA T
 DATA PERIOD = 1 JAN 80/0015 - 31 MAR 80/2315
 DATA ACQUISITION INTERVAL = MINUTES 00-15 OF EACH HOUR

PASQUILL STABILITY D -- DELTA T LESS THAN OR EQUAL TO -0.5 AND GREATER THAN -1.5 DEG C PER 100 METERS

DIRECTION	SPEED IN METERS PER SECOND							ALL	
	0.5-1.5	1.6-3.3	3.4-5.5	5.6-8.2	8.3-10.8	10.9-15.0	15.1-20.0		GT 20.1
NNE	18	14	3	0	0	0	0	0	35
NE	14	5	1	0	0	0	0	0	20
ENE	12	17	14	2	1	0	0	0	46
E	9	7	9	4	0	0	0	0	29
ESE	4	13	4	1	1	2	0	0	25
SE	0	13	8	6	1	0	0	0	28
SSE	1	7	8	7	7	0	0	0	30
S	2	4	15	11	2	0	0	0	34
SSH	0	7	13	8	2	0	0	0	30
SH	3	8	18	4	0	0	0	0	33
NSH	2	6	10	3	0	0	0	0	21
W	3	16	15	6	5	0	0	0	45
WSW	2	31	48	47	21	10	0	0	159
NW	8	70	154	83	13	0	0	0	323
NNW	18	56	56	12	0	0	0	0	142
N	14	29	19	3	0	0	0	0	65
ALL SECTOR	110	303	395	197	53	12	0	0	

NO. OF VALID OBSERVATION = 1093

NO. OF CALMS (WS LT 0.5M/SEC) = 13

NO. OF MISSING WD/WS = 17

CORR YANKEE NUCLEAR POWER STATION / UNIT 1
 WIND SPEED/WIND DIRECTION/STABILITY JOINT FREQUENCY DISTRIBUTION

WIND LEVEL = 156 FT
 DELTA T INTERVAL = 166. - 33 FT
 PASQUILL STABILITY CLASSES / CLASS DETERMINATION METHOD = DELTA T
 DATA PERIOD = 1 JAN 80/0015 - 31 MAR 80/2315
 DATA ACQUISITION INTERVAL = MINUTES 00-15 OF EACH HOUR
 PASQUILL STABILITY E -- DELTA T LESS THAN OR EQUAL TO 1.5 AND GREATER THAN -0.5 DEG C PER 100 METERS

DIRECTION	SPEED IN METERS PER SECOND										ALL
	0.5-1.5	1.6-3.3	3.4-5.5	5.6-8.2	8.3-10.8	10.9-15.0	15.1-20.0	GT 20.1			
ENE	33	0	0	0	0	0	0	0	0	0	33
NE	24	1	0	0	0	0	0	0	0	0	25
ENE	32	1	2	0	0	0	0	0	0	0	35
E	12	1	0	0	3	3	0	0	0	0	19
ESE	5	15	1	0	0	3	0	0	0	0	24
SE	2	19	10	1	2	0	0	0	0	0	34
SSE	1	2	3	3	1	0	0	0	0	0	10
S	2	2	0	0	1	0	0	0	0	0	5
SSH	2	6	1	2	0	0	0	0	0	0	13
SH	1	3	3	0	0	0	0	0	0	0	7
WSH	0	1	2	0	0	0	0	0	0	0	3
W	0	6	1	2	2	0	0	0	0	0	13
WSH	1	16	3	0	0	0	0	0	0	0	20
NH	3	39	32	1	0	0	0	0	0	0	75
NH	13	20	1	0	0	0	0	0	0	0	34
N	21	4	1	0	0	0	0	0	0	0	26
ALL SECTOR	152	140	60	9	9	6	0	0	0	0	

NO. OF VALID OBSERVATION = 422 NO. OF CALMS (WS LT 0.5M/SEC) = 46 NO. OF MISSING WD/WS = 7

COIN YARKEE NUCLEAR POWER STATION / UNIT 1
 WIND SPEED/WIND DIRECTION/STABILITY JOINT FREQUENCY DISTRIBUTION

WIND LEVEL = 196 FT
 DELTA T INTERVAL = 16 -- 33 FT
 PASQUILL STABILITY CLASSES / CLASS DETERMINATION METHOD = DELTA T
 DATA PERIOD = 1 JAN 00/0015 - 31 MAR 60/2315
 DATA ACQUISITION INTERVAL = MINUTES 00-15 OF EACH HOUR
 PASQUILL STABILITY F -- DELTA T LESS THAN OR EQUAL TO 4.0 AND GREATER THAN 1.5 DEG C PER 100 METERS

DIRECTION	SPEED IN METERS PER SECOND											ALL		
	0.5-1.5	1.6-3.3	3.4-5.5	5.6-8.2	8.3-10.8	10.9-15.0	15.1-20.0	GT 20.1						
NNE	10	1	0	0	0	0	0	0	0	0	0	0	0	11
NE	5	0	0	0	0	0	0	0	0	0	0	0	0	5
ENE	16	0	0	0	0	0	0	0	0	0	0	0	0	16
E	10	0	0	0	0	0	0	0	0	0	0	0	0	10
ESE	1	2	0	0	0	0	0	0	0	0	0	0	0	3
SE	1	4	2	0	0	0	0	0	0	0	0	0	0	7
SSE	2	1	1	0	0	0	0	0	0	0	0	0	0	4
S	0	1	0	0	0	0	0	0	0	0	0	0	0	1
SSW	0	1	1	0	0	0	0	0	0	0	0	0	0	2
SW	2	2	0	0	0	0	0	0	0	0	0	0	0	4
WSW	0	0	0	0	0	0	0	0	0	0	0	0	0	0
W	1	2	0	0	0	0	0	0	0	0	0	0	0	3
WSW	1	9	0	0	0	0	0	0	0	0	0	0	0	10
NW	3	13	5	0	0	0	0	0	0	0	0	0	0	21
NWS	6	6	2	0	0	0	0	0	0	0	0	0	0	14
N	5	0	0	0	0	0	0	0	0	0	0	0	0	5
ALL SECTOR	65	42	11	0	0	0	0	0	0	0	0	0	0	0

NO. OF VALID OBSERVATION = 132 NO. OF CALMS (WS LT 0.5M/SEC) = 14 NO. OF MISSING MD/MS = 1

CONN YANKEE NUCLEAR POWER STATION / UNIT 1
 WIND SPEED/WIND DIRECTION/STABILITY JOINT FREQUENCY DISTRIBUTION

WIND LEVEL = 196 FT
 DELTA T INTERVAL = 194 - 33 FT
 PASQUILL STABILITY CLASSES / CLASS DETERMINATION METHOD = DELTA T
 DATA PERIOD = 1 JAN 80/0015 - 31 MAR 60/2315
 DATA ACQUISITION INTERVAL = MINUTES 00-15 OF EACH HOUR

PASQUILL STABILITY G -- DELTA T GREATER THAN 4.0 DEG C PER 100 METERS

DIRECTION	SPEED IN METERS PER SECOND										ALL
	0.5-1.5	1.6-3.3	3.4-5.5	5.6-8.2	8.3-10.6	10.9-15.0	15.1-20.0	GT 20.1			
NNW	4	0	0	0	0	0	0	0	0	0	4
NNE	2	0	0	0	0	0	0	0	0	0	2
ENE	2	0	0	0	0	0	0	0	0	0	2
E	2	0	0	0	0	0	0	0	0	0	2
ESE	2	1	0	0	0	0	0	0	0	0	3
SE	0	0	0	0	0	0	0	0	0	0	0
SSE	0	0	0	0	0	0	0	0	0	0	0
S	1	1	0	0	0	0	0	0	0	0	2
SSH	1	1	0	0	0	0	0	0	0	0	2
SH	0	2	0	0	0	0	0	0	0	0	2
WSH	3	0	0	0	0	0	0	0	0	0	3
W	1	2	0	0	0	0	0	0	0	0	3
WNW	0	3	0	0	0	0	0	0	0	0	3
NW	1	5	1	0	0	0	0	0	0	0	7
NWN	0	4	0	0	0	0	0	0	0	0	4
N	6	1	0	0	0	0	0	0	0	0	7
ALL SECTOR	25	20	1	0	0	0	0	0	0	0	0

NO. OF VALID OBSERVATION = 49 % OF CALMS (WS LT 0.5M/SEC) = 3 NO. OF MISSING WD/WS = 0

CONN YANKEE NUCLEAR POWER STATION / UNIT 1
 WIND SPEED/WIND DIRECTION/STABILITY JOINT FREQUENCY DISTRIBUTION

WIND LEVEL = 196 FT
 DELTA T INTERVAL = 196. - 33 FT
 PASQUILL STABILITY CLASSES / CLASS DETERMINATION METHOD = DELTA T
 DATA PERIOD = 1 JAN 80/0015 - 31 MAR 80/2315
 DATA ACQUISITION INTERVAL = MINUTES 00-15 OF EACH HOUR

ALL STABILITY CLASSES

DIRECTION	SPEED IN METERS PER SECOND							ALL	
	0.5-1.5	1.6-3.3	3.4-5.5	5.6-8.2	8.3-10.8	10.9-15.0	15.1-20.0		GT 20.1
NNE	68	19	4	0	0	0	0	0	91
NE	47	7	1	0	0	0	0	0	55
ENE	64	22	16	2	1	0	0	0	105
E	34	8	11	6	3	3	0	0	65
ESE	12	33	7	1	1	5	0	0	59
SE	3	37	23	8	3	0	0	0	74
SSE	4	13	16	10	8	0	0	0	51
S	5	9	18	11	3	0	0	0	46
SSW	3	18	17	10	2	0	0	0	50
SW	6	15	22	4	0	0	0	0	47
WSW	5	8	20	5	0	0	0	0	38
W	6	34	30	15	15	4	0	0	104
WNW	5	72	93	94	43	29	0	0	336
NW	16	138	239	146	34	6	0	0	579
NNW	41	89	81	14	0	0	0	0	225
N	47	41	24	3	0	0	0	0	115
ALL SECTOR	366	563	622	329	113	47	0	0	

NO. OF POSSIBLE OBSERVATIONS = 2184
 NO. OF VALID OBSERVATIONS = 2117

NO. OF VALID NON-CALM CONCURRENT WD/WS/DT = 2040
 NO. OF CALMS (WS LT 0.5M/SEC) = 77

NO. OF MISSING WD/WS = 67
 NO. OF MISSING DELTA T = 41

CONN YARKEE NUCLEAR POWER STATION / UNIT 1
 WIND SPEED/WIND DIRECTION/STABILITY JOINT FREQUENCY DISTRIBUTION

WIND LEVEL = 196 FT
 DELTA T INTERVAL = 196 - 33 FT
 PASQUILL STABILITY CLASSÉS / CLASS DETERMINATION METHOD = DELTA T
 DATA PERIOD = 1 APR 00/0015 - 30 JUN 00/2315
 DATA ACQUISITION INTERVAL = MINUTES 00-15 OF EACH HOUR
 PASQUILL STABILITY A -- DELTA T LESS THAN OR EQUAL TO -1.9 DEG C PER 100 METERS

DIRECTION	SPEED IN METERS PER SECOND										ALL
	0.5-1.5	1.6-3.3	3.4-5.5	5.6-8.2	8.3-10.8	10.9-15.0	15.1-20.0	GT 20.1			
NNE	5	1	0	0	0	0	0	0	0	0	6
NE	2	2	0	0	0	0	0	0	0	0	4
ENE	3	4	3	1	0	0	0	0	0	0	11
E	0	3	2	0	1	0	0	0	0	0	6
ESE	0	15	6	0	0	0	0	0	0	0	23
SE	0	5	15	16	0	0	0	0	0	0	35
SSE	0	0	9	3	0	0	0	0	0	0	12
S	1	1	1	2	0	0	0	0	0	0	5
SSH	0	3	3	1	0	0	0	0	0	0	7
SH	0	2	3	1	0	0	0	0	0	0	6
MSW	0	1	1	1	0	0	0	0	0	0	3
W	0	1	7	2	0	0	0	0	0	0	10
WRW	0	4	24	14	1	0	0	0	0	0	43
NW	0	4	17	9	0	0	0	0	0	0	30
NRW	0	3	6	1	0	0	0	0	0	0	12
N	2	1	1	1	0	0	0	0	0	0	5
ALL SECTOR	13	50	102	54	2	0	0	0	0	0	

NO. OF VALID OBSERVATION = 221 NO. OF CALMS (WS LT 0.5M/SEC) = 0 NO. OF MISSING HO/HS = 6

CONP YANKEE NUCLEAR POWER STATION / UNIT 1
 WIND SPEED/DIR/DIRECTION/STABILITY JOINT FREQUENCY DISTRIBUTION

WIND LEVEL = 196 FT
 DELTA T INTERVAL = 196 - 33 FT
 PASQUILL STABILITY CLASSES / CLASS DETERMINATION METHOD = DELTA T
 DATA PERIOD = 1 APR 00/0015 - 30 JUL 80/2315
 DATA ACQUISITION INTERVAL = MINUTES 00-15 OF EACH HOUR
 PASQUILL STABILITY B -- DELTA T LESS THAN OR EQUAL TO -1.7 AND GREATER THAN -1.9 DEG C PER 100 METERS

DIRECTION	SPEED IN METERS PER SECOND										ALL
	0.5-1.5	1.6-3.3	3.4-5.5	5.6-8.2	8.3-10.8	10.9-15.0	15.1-20.0	GT 20.1			
NNE	0	2	0	0	0	0	0	0	0	0	2
NE	3	0	0	0	0	0	0	0	0	0	3
ENE	2	2	1	2	0	0	0	0	0	0	7
E	0	3	0	0	0	0	0	0	0	0	3
ESE	0	2	2	0	0	0	0	0	0	0	4
SE	0	4	5	3	0	0	0	0	0	0	12
SSE	0	0	3	1	0	0	0	0	0	0	4
S	1	1	1	0	0	0	0	0	0	0	3
SSW	0	0	0	0	0	0	0	0	0	0	0
SH	0	0	0	0	0	0	0	0	0	0	0
MSW	0	2	1	0	0	0	0	0	0	0	3
W	0	1	2	2	0	0	0	0	0	0	5
WSW	0	4	7	6	2	0	0	0	0	0	19
WNW	0	3	6	5	1	0	0	0	0	0	17
WNW	0	2	3	2	0	0	0	0	0	0	7
W	0	0	1	1	0	0	0	0	0	0	2
ALL SECTOR	6	26	34	22	3	0	0	0	0	0	2

NO. OF VALID OBSERVATION = 91 NO. OF CALMS (WS LT 0.5M/SEC) = 0 NO. OF MISSING WD/H/S = 0

COIN YANKEE NUCLEAR POWER STATION / UNIT 1

WIND SPEED/WIND DIRECTION/STABILITY JOINT FREQUENCY DISTRIBUTION

WIND LEVEL = 196 FT
 DELTA T INTERVAL = 196 - 33 FT
 PASQUILL STABILITY CLASSES / CLASS DETERMINATION METHOD = DELTA T
 DATA PERIOD = 1 APR 80/0015 - 30 JUN 80/2315
 DATA ACQUISITION INTERVAL = MINUTES 00-15 OF EACH HOUR
 PASQUILL STABILITY C -- DELTA T LESS THAN OR EQUAL TO -1.5 AND GREATER THAN -1.7 DEG C PER 100 METERS

DIRECTION	SPEED IN METERS PLR SECOND										ALL
	0.5-1.5	1.6-3.3	3.4-5.5	5.6-8.2	8.3-10.8	10.9-15.0	15.1-20.0	GT 20.1			
NRE	2	3	0	0	0	0	0	0	0	0	5
NE	2	1	0	0	0	0	0	0	0	0	3
ENE	1	3	2	1	0	0	0	0	0	0	7
E	0	2	3	0	0	0	0	0	0	0	5
ESE	0	7	2	0	0	0	0	0	0	0	9
SE	0	3	6	3	0	0	0	0	0	0	12
SSE	0	0	1	1	0	0	0	0	0	0	2
S	0	1	5	0	0	0	0	0	0	0	6
SSW	0	0	4	0	0	0	0	0	0	0	4
SW	0	3	2	0	0	0	0	0	0	0	5
WSW	1	3	2	0	0	0	0	0	0	0	6
W	0	3	1	1	0	0	0	0	0	0	5
WSW	0	8	11	4	4	1	0	0	0	0	28
NW	0	5	5	3	5	0	0	0	0	0	18
NNW	0	7	5	2	0	0	0	0	0	0	14
N	3	1	7	2	0	0	0	0	0	0	13
ALL SECTOR	9	50	56	17	9	1	0	0	0	0	

NO. OF VALID OBSERVATION = 142 NO. OF CALMS (WS LT 0.5M/SEC) = 0 NO. OF MISSING HD/MS = 0

CONN YANKEE NUCLEAR POWER STATION / UNIT 1

WIND SPEED/WIND DIRECTION/STABILITY JOINT FREQUENCY DISTRIBUTION

WIND LEVEL = 196 FT
 DELTA T INTERVAL = 196 - 33 FT
 PASQUILL STABILITY CLASSES / CLASS DETERMINATION METHOD = DELTA T
 DATA PERIOD = 1 APR 80/0015 - 30 JUN 80/2315
 DATA ACQUISITION INTERVAL = MINUTES 00-15 OF EACH HOUR

PASQUILL STABILITY D -- DELTA T LESS THAN OR EQUAL TO -0.5 AND GREATER THAN -1.5 DEG C PER 100 METERS

DIRECTION	SPEED IN METERS PER SECOND							ALL	
	0.5-1.5	1.6-3.3	3.4-5.5	5.6-8.2	8.3-10.8	10.9-15.0	15.1-20.0		GT 20.1
NNE	29	18	0	0	0	0	0	0	47
NE	35	10	3	0	0	0	0	0	48
ENE	30	12	8	2	0	0	0	0	52
E	23	10	5	3	0	0	0	0	41
ESE	3	44	8	0	0	0	0	0	55
SE	1	35	49	20	1	0	0	0	106
SSE	1	14	19	5	1	0	0	0	40
S	0	11	11	6	1	0	0	0	29
SSW	2	5	15	8	1	0	0	0	31
SW	0	1	13	1	1	0	0	0	16
WSW	1	3	8	1	0	0	0	0	13
W	1	6	12	5	0	0	0	0	24
WNW	3	14	26	13	1	0	0	0	57
NW	1	20	36	4	2	0	0	0	74
NNW	2	24	19	2	0	0	0	0	47
N	4	22	5	1	0	0	0	0	32
ALL SECTOR	136	249	237	82	8	0	0	0	

NO. OF VALID OBSERVATION = 723

NO. OF CALMS (WS LT 0.5M/SEC) = 11

NO. OF MISSING WD/WS = 0

CONN YANKEE NUCLEAR POWER STATION / UNIT 1

WIND SPEED/WIND DIRECTION/STABILITY JOINT FREQUENCY DISTRIBUTION

WIND LEVEL = 196 FT
 DELTA T INTERVAL = 196 - 33 FT
 PASQUILL STABILITY CLASSES / CLASS DETERMINATION METHOD = DELTA T
 DATA PERIOD = 1 APR 80/0015 - 30 JUN 80/2315
 DATA ACQUISITION INTERVAL = MINUTES 00-15 OF EACH HOUR
 PASQUILL STABILITY E -- DELTA T LESS THAN OR EQUAL TO 1.5 AND GREATER THAN -0.5 DEG C PER 100 METERS

DIRECTION	SPEED IN METERS PER SECOND										ALL
	0.5-1.5	1.6-3.3	3.4-5.5	5.6-8.2	8.3-10.8	10.9-15.0	15.1-20.0	GT 20.1			
NNE	59	7	0	0	0	0	0	0	0	0	66
NE	64	1	0	0	0	0	0	0	0	0	65
ENE	27	7	1	0	0	0	0	0	0	0	35
E	21	9	0	0	0	0	0	0	0	0	30
ESE	6	14	1	0	0	0	0	0	0	0	21
SE	1	18	12	1	0	0	0	0	0	0	32
SSE	0	5	6	4	0	0	0	0	0	0	15
S	0	5	10	0	0	0	0	0	0	0	15
SSW	0	4	13	3	0	0	0	0	0	0	20
SW	1	0	9	1	0	0	0	0	0	0	11
WSW	0	3	0	2	0	0	0	0	0	0	5
W	0	5	6	1	0	0	0	0	0	0	12
WSW	1	10	5	1	0	0	0	0	0	0	17
W	2	17	24	0	0	0	0	0	0	0	43
WSW	4	28	10	0	0	0	0	0	0	0	42
N	19	12	0	0	0	0	0	0	0	0	31
ALL SECTOR	205	145	97	13	0	0	0	0	0	0	

NO. OF VALID OBSERVATION = 485 NO. OF CALMS (WS LT 0.5M/SEC) = 25 NO. OF MISSING HD/HS = 2

CONN YANKEE NUCLEAR POWER STATION / UNIT 1
 WIND SPEED/WIND DIRECTION/STABILITY JOINT FREQUENCY DISTRIBUTION

WIND LEVEL = 196 FT
 DELTA T INTERVAL = 196 - 33 FT
 PASQUILL STABILITY CLASSES / CLASS DETERMINATION METHOD = DELTA T
 DATA PERIOD = 1 APR 60/0015 - 30 JUN 60/2315
 DATA ACQUISITION INTERVAL = MINUTES 00-15 OF EACH HOUR
 PASQUILL STABILITY F -- DELTA T LESS THAN OR EQUAL TO 4.0 AND GREATER THAN 1.5 DEG C PER 100 METERS

DIRECTION	SPEED IN METERS PER SECOND										ALL	
	0.5-1.5	1.6-3.3	3.4-5.5	5.6-8.2	8.3-10.8	10.9-15.0	15.1-20.0	GT 20.1				
NBE	20	1	0	0	0	0	0	0	0	0	0	21
NE	27	0	0	0	0	0	0	0	0	0	0	27
ENE	19	0	0	0	0	0	0	0	0	0	0	19
E	5	2	0	0	0	0	0	0	0	0	0	7
ESE	0	8	0	0	0	0	0	0	0	0	0	8
SE	0	4	0	0	0	0	0	0	0	0	0	4
SSE	0	0	0	0	0	0	0	0	0	0	0	0
S	0	1	0	0	0	0	0	0	0	0	0	1
SSH	0	2	0	0	0	0	0	0	0	0	0	2
SW	0	1	1	0	0	0	0	0	0	0	0	2
WSW	0	2	0	0	0	0	0	0	0	0	0	2
W	0	1	0	0	0	0	0	0	0	0	0	1
WNW	0	4	1	0	0	0	0	0	0	0	0	5
NW	1	6	2	0	0	0	0	0	0	0	0	9
NNW	2	10	0	0	0	0	0	0	0	0	0	12
N	11	8	0	0	0	0	0	0	0	0	0	19
ALL SECTOR	85	50	4	0	0	0	0	0	0	0	0	0

NO. OF VALID OBSERVATION = 146 NO. OF CALMS (WS LT 0.5M/SEC) = 7 NO. OF MISSING HD/HS = 0

CORNB YANKEE NUCLEAR POWER STATION / UNIT 1
 WIND SPEED/WIND DIRECTION/STABILITY JOINT FREQUENCY DISTRIBUTION

WIND LEVEL = 196 FT
 DELTA T INTERVAL = 196 -- 33 FT
 PASQUILL STABILITY CLASSES / CLASS DETERMINATION METHOD = DELTA T
 DATA PERIOD = 1 APR 80/0015 -- 30 JUN 80/2315
 DATA ACQUISITION INTERVAL = MINUTES 00-15 OF EACH HOUR
 PASQUILL STABILITY G -- DELTA T GREATER THAN 4.0 DEG C PER 100 METERS

DIRECTION	SPEED IN METERS PER SECOND										GT 20.1	ALL
	0.5-1.5	1.6-3.3	3.4-5.5	5.6-8.2	8.3-10.8	10.9-15.0	15.1-20.0					
NNE	11	1	0	0	0	0	0	0	0	0	0	12
NE	20	3	0	0	0	0	0	0	0	0	0	23
ENE	7	1	0	0	0	0	0	0	0	0	0	8
E	2	1	0	0	0	0	0	0	0	0	0	3
ESE	1	0	0	0	0	0	0	0	0	0	0	1
SE	1	0	0	0	0	0	0	0	0	0	0	1
SSE	0	0	0	0	0	0	0	0	0	0	0	0
S	1	0	0	0	0	0	0	0	0	0	0	1
SSW	0	0	0	0	0	0	0	0	0	0	0	0
SW	1	0	0	0	0	0	0	0	0	0	0	1
WSW	0	0	0	0	0	0	0	0	0	0	0	0
W	0	0	0	0	0	0	0	0	0	0	0	0
WNW	1	1	2	0	0	0	0	0	0	0	0	4
NW	0	6	1	0	0	0	0	0	0	0	0	7
NNW	0	5	0	0	0	0	0	0	0	0	0	5
N	6	1	0	0	0	0	0	0	0	0	0	7
ALL SECTOR	51	19	3	0	0	0	0	0	0	0	0	97

NO. OF VALID OBSERVATION = 77 NO. OF CALHS (HS LT 0.5M/SEC) = 4 NO. OF MISSING HD/WS = 0

COBI YANKEE NUCLEAR POWER STATION / UNIT 1
 WIND SPEED/DIR-D DIRECTION/STABILITY JOINT FREQUENCY DISTRIBUTION

WIND LEVEL = 196 FT
 DELTA T INTERVAL = 196 - 33 FT
 PASQUILL STABILITY CLASSES / CLASS DETERMINATION METHOD = DELTA T
 DATA PERIOD = 1 APR 80/0015 - 30 JUN 80/2315
 DATA ACQUISITION INTERVAL = MINUTES 00-15 OF EACH HOUR

ALL STABILITY CLASSES

DIRECTION	SPEED IN METERS PER SECOND										ALL
	0.5-1.5	1.6-3.3	3.4-5.5	5.6-8.2	8.3-10.8	10.9-15.0	15.1-20.0	GT 20.1			
NNE	126	33	0	0	0	0	0	0	0	0	159
NE	153	17	2	0	0	0	0	0	0	0	173
ENE	89	29	15	6	0	0	0	0	0	0	139
E	51	30	10	3	1	0	0	0	0	0	95
ESE	10	90	21	0	0	0	0	0	0	0	121
SE	3	69	87	45	1	0	0	0	0	0	205
SSE	1	14	38	14	1	0	0	0	0	0	73
S	3	20	28	8	1	0	0	0	0	0	60
SSW	2	14	35	12	1	0	0	0	0	0	64
SW	2	7	28	3	1	0	0	0	0	0	41
WSW	2	14	12	4	0	0	0	0	0	0	32
W	1	17	28	11	0	0	0	0	0	0	57
WSW	5	45	76	38	8	1	0	0	0	0	173
W	4	61	93	32	8	0	0	0	0	0	199
WSW	8	79	45	7	0	0	0	0	0	0	139
W	45	45	14	5	0	0	0	0	0	0	107
ALL SECTOR	505	597	533	183	22	1	0	0	0	0	

NO. OF POSSIBLE OBSERVATIONS = 2184
 NO. OF VALID OBSERVATIONS = 1865
 NO. OF VALID NON-CALM CONCURRENT MD/MS/DT = 1836
 NO. OF CALMS (MS LY 0.5M/SEC) = 47
 NO. OF MISSING MD/MS = 299
 NO. OF MISSING DELTA T = 297