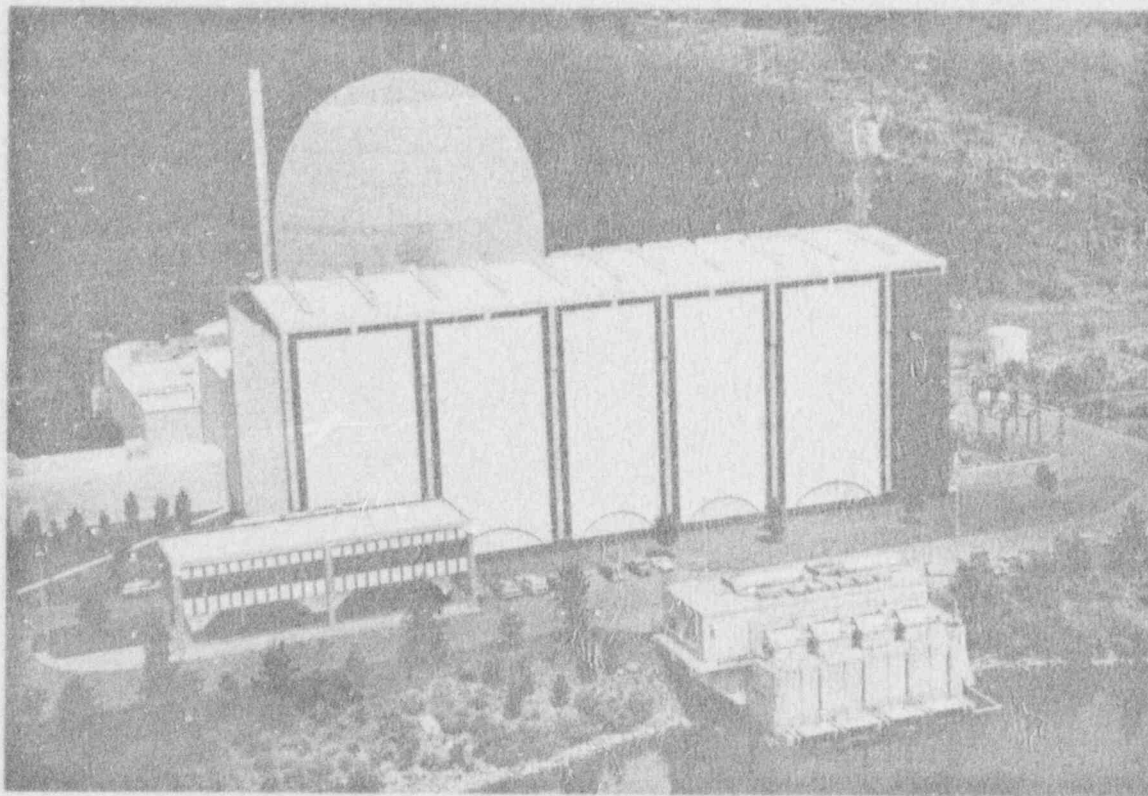


CONNECTICUT YANKEE ATOMIC POWER COMPANY

HADDAM NECK PLANT

HADDAM, CONNECTICUT



SEMIANNUAL RADIOACTIVE EFFLUENT AND WASTE DISPOSAL REPORT

FOR THE PERIOD OF

JULY 1, 1979 TO DECEMBER 31, 1979

DOCKET NO. 50-213

LICENSE DPR-61

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#1) 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:

$$\sum_i \bar{E}_{i\beta} \left[ 5800 Q_{iv} \right] > 1$$

or,

$$\sum_i \bar{E}_{i\gamma} \left[ 2400 Q_{iv} \right] > 1$$

- (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	1.0 E-06
Xe - 138	1.0 E-06
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

	3rd Quarter		4th Quarter	
	$\bar{E}_{\text{beta}}$	$\bar{E}_{\text{Gamma}}$	$\bar{E}_{\text{beta}}$	$\bar{E}_{\text{Gamma}}$
#3) Average Energy ( $\bar{E}$ ) For Fission and Activation Gases	0.214 Mev	0.058 Mev	0.243 Mev	0.02 Mev

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  $\beta$ - $\gamma$ . 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  $^{89}\text{Sr}$  -  $^{90}\text{Sr}$ .
- d. Liquid Effluents: In line scintillation detector monitors waste liquid being released. Prior to discharge a sample is taken. Principal gamma emitters, gross  $\beta$ - $\gamma$  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,  $^{89}\text{Sr}$  and  $^{90}\text{Sr}$  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: 6.90E+01
- 2) Total time period for batch releases: 7.82E+02 Hours
- 3) Maximum time period for a batch release: 2.39E+01 Hours
- 4) Average time period for batch releases: 1.14E+01 Hours
- 5) Minimum time period for a batch release: 4.67E+00 Hours
- 6) Average stream flow during periods of 15,800 Cubic feet  
release of effluent into a flowing stream: 1.58E+04 per second

### b. Caseous

- 1) Number of batch releases: 3.20E+01
- 2) Total time period for batch releases: 9.39E+01 Hours
- 3) Maximum time period for a batch release: 3.07E+01 Hours
- 4) Average time period for batch releases: 1.01E+01 Hours
- 5) Minimum time period for a batch release: 1.70E-01 Hours

## #6 Abnormal Releases

### 1) Degasifier Rupture Diaphragm

Date: 12-16-79

Time: 0548 to 0558

#### Curies of Radioactive Material Released

Xe-133	7.43E+00
Xe-135	4.81E+00
Xe-133M	1.60E-01
Kr-85M	6.09E-01
Kr-87	1.45E+00
Kr-88	1.35E+00
Ar-41	3.11E-02
I-131	6.86E-05
I-133	7.91E-04
Co-58	1.47E-05
Ce-144	3.91E-05

#### Meteorological Data During The Time Of Release

Wind Speed	4.00E-01 mph
Vertical Temp	
Difference	6.00E-01 °F
Wind Direction	3.7E+01 °
Wind Direction	
Variance	1.41E+02 °



EFFLUENT AND WASTE DISPOSAL SEMI-ANNUAL REPORT - 1979

GASEOUS EFFLUENTS-SUMMATION OF ALL RELEASES

	UNIT 1	QUARTER 3rd	QUARTER 4th	EST. TOTAL ERROR %
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A. FISSION & ACTIVATION GASES

1. Total release	Ci	2.24E+02	1.18E+03	1.40E+01
2. Average release rate for period	μCi/sec	2.82E+01	1.48E+02	
3. Percent of Technical Specification limit	%	7.45E-01	5.14E+00	

B. IODINES

1. Total iodine - 131	Ci	2.02E-05	2.29E-03	1.32E+01
2. Average release rate for period	μCi/sec	2.54E-06	2.76E-04	
3. Percent of Technical Specification limit	%	4.04E-03	4.39E-01	

C. PARTICULATES

1. Particulates with half-lives > 8 days	Ci	1.44E-03	4.60E-04	1.46E+01
2. Average release rate for period	μCi/sec	1.81E-04	5.79E-05	
3. Percent of Technical Specification	%	2.72E+00	8.68E-01	
4. Gross alpha radioactivity	Ci	2.60E-07	3.00E-07	

D. TRITIUM

1. Total release	Ci	3.76E+01	6.53E+00	7.80E+00
2. Average release rate for period	μCi/sec	4.73E+00	8.21E-01	
3. Percent of Technical Specification limit	%	9.64E-02	1.67E-02	

GASEOUS EFFLUENTS-ELEVATED RELEASE

CONTINUOUS MODE

BATCH MODE

NUCLIDES RELEASED	UNIT	3rd QUARTER	4th QUARTER	3rd QUARTER	4th QUARTER
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1. FISSION GASES

Krypton-85	Ci	5.46E+00	9.49E+02	1.08E+01	3.16E+00
Krypton-85m	Ci	<1.00E-04	<1.00E-04	1.43E-01	8.46E-01
Krypton-87	Ci	<1.00E-04	<1.00E-04	3.62E-01	2.08E+00
Krypton-88	Ci	<1.00E-04	<1.00E-04	3.19E-01	1.88E+00
Xenon-133	Ci	1.15E+02	3.31E+01	4.16E+01	1.56E+02
Xenon-135	Ci	<1.00E-04	<1.00E-04	1.77E+00	6.60E+00
Xenon-135m	Ci	<1.00E-04	<1.00E-04	2.50E-01	6.55E-02
Xenon-138	Ci	<1.00E-04	<1.00E-04	1.18E+00	2.96E-01
Others (specify) Carbon-14	Ci	3.91E+00	1.80E+01	2.48E+00	4.64E-01
3H	Ci	3.70E+01	6.44E+00	6.11E-01	9.26E-02
Argon 37	Ci	1.27E+00	1.18E+00	4.27E-01	2.99E-01
Argon 41	Ci	<1.00E-04	<1.00E-04	3.87E-03	4.30E-02
Xenon 131M	Ci	<1.00E-04	<1.00E-04	3.03E-01	6.16E-01
Xenon 133M	Ci	<1.00E-04	<1.00E-04	3.97E-02	9.49E-01
Xenon 137	Ci	<1.00E-04	<1.00E-04	1.24E+00	1.71E-01
Total For Period		1.62E+02	1.01E+03	6.15E+01	1.74E+02
2. IODINES				*	*
Iodine-131	Ci	2.02E-05	2.19E-03		
Iodine-133	Ci	<1.00E-10	1.02E-04		
Iodine-135	Ci	<1.00E-10	<1.00E-10		
Total for period		2.02E-05	2.29E-03		

3. PARTICULATES

Chromium-51	Ci	<1.00E-11	1.52E-05	*	*
Strontium-89	Ci	2.39E-07	1.60E-06		
Strontium-90	Ci	3.41E-06	3.50E-06		
Cesium-134	Ci	5.12E-04	1.19E-04		
Cesium-137	Ci	6.66E-04	6.20E-05		
Barium-lanthanum-140	Ci	<2.00E-13	<6.00E-14		
Cerium-144	Ci	1.24E-04	1.29E-04		
Cobalt-60	Ci	1.89E-05	2.94E-06		
Manganese-54	Ci	3.34E-06	3.44E-06		
Cobalt-58	Ci	4.38E-07	8.74E-06		
Cerium 141	Ci	6.43E-05	1.76E-06		
Ruthenium 103	Ci	4.11E-07	4.00E-06		
Zirconium/Niobium 95	Ci	2.04E-05	2.75E-05		
Ruthenium 106	Ci	2.76E-05	8.15E-05		
Total for Period		1.44E-03	4.60E-04		

\*Reported Under Continuous Mode

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LIQUID EFFLUENTS-SUMMATION OF ALL RELEASES

UNIT 1	QUARTER 3rd	QUARTER 4th	EST. TOTAL ERROR %
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A. FISSION AND ACTIVATION PRODUCTS

1. Total release (not including tritium, gases, alpha)	Ci	3.58E-02	8.70E-02	1.15E+01
2. Average diluted concentration during period	µCi/ml	1.86E-10	4.52E-10	
3. Percent of applicable limit	%	3.58E-01	8.70E-01	

B. TRITIUM

1. Total release	Ci	8.51E+02	8.66E+02	3.55E+00
2. Average diluted concentration during period	µCi/ml	4.43E-06	4.50E-06	
3. Percent of applicable limit	%	1.48E-01	1.50E-01	

C. DISSOLVED AND ENTRAINED GASES

1. Total release	Ci	1.04E-04	5.65E-03	1.89E+01
2. Average diluted concentration during period	µCi/ml	5.41E-13	2.94E-11	
3. Percent of applicable limit	%	1.80E-05	9.80E-04	

D. GROSS ALPHA RADIOACTIVITY

1. Total release	Ci	8.84E-05	8.00E-04	8.00E+00
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E. Volume of waste released (prior to dilution)	Liters	1.09E+07	1.91E+07	3.00E+00
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F. Volume of dilution water used during period	Liters	1.88E+11	1.78E+11	2.60E+00
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EFFLUENT AND WASTE DISPOSAL SEMI-ANNUAL REPORT - 1979

LIQUID EFFLUENTS

NCULIDES RELEASED	UNIT	CONTINUOUS MODE		BATCH MODE	
		QUARTER 3rd	QUARTER 4th	QUARTER 3rd	QUARTER 4th
Strontium-89	Ci	<5.00E-08	1.10E-04	4.45E-05	5.00E-04
Strontium-90	Ci	2.97E-05	2.10E-04	6.13E-05	6.00E-04
Cesium-134	Ci	4.45E-03	<7.00E-08	8.81E-04	7.87E-03
Cesium-137	Ci	6.27E-03	<3.00E-08	2.48E-03	9.80E-03
Iodine-131	Ci	<7.00E-07	<5.00E-07	1.19E-05	<2.00E-07
Cobalt-58	Ci	7.71E-04	<3.00E-08	1.84E-05	1.75E-03
Cobalt-60	Ci	4.35E-03	<3.00E-08	5.86E-03	1.64E-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	<2.00E-08	<2.00E-08	<2.00E-08	2.49E-04
Chromium-51	Ci	<5.00E-07	<5.00E-07	<5.00E-07	1.89E-03
Zirconium-niobium-95	Ci	<3.00E-08	<3.00E-08	2.16E-03	4.46E-03
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	<2.00E-07	<1.00E-07	<2.00E-07	<1.00E-07
Cerium-141	Ci	<7.00E-08	<8.00E-08	1.12E-03	1.42E-04
Europium-154	Ci	<5.00E-07	<5.00E-07	<5.00E-07	<5.00E-07
Beryllium-7	Ci	<3.00E-07	<5.00E-07	<3.00E-07	<5.00E-07
Cerium-144	Ci	<1.00E-07	<2.00E-07	6.27E-03	2.94E-02
Ruthenium-106	Ci	<2.00E-07	<2.00E-07	9.86E-04	1.28E-02
Silver-110m	Ci	<5.00E-07	<5.00E-07	4.94E-05	<5.00E-07
Ruthenium - 103	Ci	<1.00E-08	<4.00E-08	1.21E-04	8.23E-04
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	1.58E-02	3.20E-04	1.99E-02	8.67E-02
Xenon-133	Ci	<1.00E-05	<1.00E-05	2.81E-02	4.77E-03
Xenon-135	Ci	<1.00E-05	<1.00E-05	7.37E-03	7.09E-04
Argon-37	Ci	<2.00E-09	<2.00E-09	<2.30E-09	<3.00E-09
Krypton-85	Ci	1.03E-04	1.50E-04	2.02E-06	2.00E-05
Tritium	Ci	3.01E-01	6.47E-01	8.51E+02	8.65E+02

# 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 bottom, etc.	m <sup>3</sup> C1	5.1882E+01 1.6883E+01	<u>±</u> 1.0 E+01
b. Dry compressible Waste, Contaminated equip., etc.	m <sup>3</sup> C1	5.779E+02 3.205E+00	<u>±</u> 1.0 E+01
c. Irradiated components	N/A	N/A	N/A

## 2. ESTIMATE OF MAJOR NUCLIDE COMPOSITION (BT TYPE OF WASTE)

a. CE-144	%	3.0E+01
CS-134	%	1.7E+01
CS-137	%	1.6E+01
NB-95	%	1.0E+01
ZR-95	%	9.7E+00
RU-103	%	5.4E+00
CO-58	%	3.4E+00
CO-60	%	2.5E+00

b. CE-144	%	4.2E+01
CO-60	%	2.0E+01
CS-137	%	1.2E+01
CS-134	%	1.0E+01
CO-58	%	6.0E+00
NB-95	%	5.0E+00
ZR-95	%	3.0E+00
MN-54	%	2.0E+00



3. SOLID WASTE DISPOSITION

NUMBER OF SHIPMENTS

MODE OF TRANSPORTATION

DESTINATION

26

Truck

Barnwell, S.C.

B. IRRADIATED FUEL SHIPMENTS (DISPOSITION) - None



## 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, 1980.

### 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<sup>(1)</sup>.

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<sup>(2)</sup>.

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 individuals 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<sup>(3)</sup> for a six month period as opposed to the average individual dose within 50 miles of the site of 0.000065 millirem from gaseous

effluents and 0.00024 millirem from liquid effluents during the report period. The maximum individual dose of 0.04 millirem from gases or 0.16 millirem from liquids are less than 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

			1979	
A.	<u>Airborne Effluents</u>	<u>Units</u>	<u>July-Sept</u>	<u>Oct-Dec</u>
1.	Maximum Individual Dose	Millirem		
	a. Whole Body		2.2(-2) <sup>a,b</sup>	1.9(-2) <sup>d</sup>
	b. Skin		6.9(-2) <sup>b</sup>	7.4(-1) <sup>b</sup>
	c. Thyroid		1.7(-1) <sup>c</sup>	2.4(-2) <sup>f</sup>
2.	Population Dose 0-50 Miles	Person-Rem		
	a. Whole Body		1.5(-1)	1.0(-1)
	b. Skin		2.8(-1)	2.4(0)
	c. Thyroid		1.5(-1)	3.0(-1)
3.	Average Dose 0-50 Miles	Millirem		
	a. Whole Body		3.9(-5)	2.6(-5)
	b. Skin		7.3(-5)	6.3(-4)
	c. Thyroid		3.9(-5)	7.8(-5)
B.	<u>Liquid Effluents</u>			
1.	Maximum Individual Dose	Millirem		
	a. Whole Body		7.0(-2)	9.4(-2)
	b. Max Organ (Liver)		9.8(-2) <sup>e</sup>	1.3(-1) <sup>e</sup>
	c. Thyroid		2.2(-3)	2.3(-3)
2.	Population Dose 0-50 Miles	Person-Rem		
	a. Whole Body		4.0(-1)	5.4(-1)
	b. Max Organ (Liver)		6.8(-1)	8.8(-1)
	c. Thyroid		1.4(-2)	1.5(-2)
3.	Average Dose 0-50 Miles	Millirem		
	a. Whole Body		1.0(-4)	1.4(-4)
	b. Max Organ (Liver)		1.8(-4)	2.3(-4)
	c. Thyroid		3.7(-6)	3.9(-6)

a.  $2.2(-2) = 2.2 \times 10^{-2}$

b. At a location 0.3 miles NNW

c. Child thyroid dose at critical goat and vegetable farm 1.3 miles NW

d. At a location 0.4 miles NNE

e. Teenager dose - all other doses are adult doses

f. Child thyroid dose at critical location - 0.3 miles NNW

HADDAM NECK

METEOROLOGICAL

JOINT FREQUENCY

DATA FOR

WASTE GAS TANK RELEASES

## LURE YANKEE NUCLEAR POWER STATION / UNIT 1

## WIND SPEED/WIND DIRECTION/STABILITY JOINT FREQUENCY DISTRIBUTION

WIND LEVEL = 196 FT

DELTA T INTERVAL = 196 - 25 FT

PASQUILL STABILITY CLASSES / CLASS DETERMINATION METHOD = DELTA T

DATA PERIOD = 12 JUL 79/1700 - 13 SEP 79/1715

DATA ACQUISITION INTERVAL = MINUTES 00-59 OF EACH HOUR

PASQUILL STABILITY # -- DELTA T LESS THAN OR EQUAL TO -1.5 DELTA T PER 100 METERS

DIRECTION	SPEED IN METERS PER SECOND										ALL
	0.5-1.5	1.6-3.3	3.4-5.2	5.6-8.2	8.3-10.8	10.9-13.0	13.1-16.0	16.1-20.0	20.1-25.0	25.1-30.0	
NNE	1	0	0	0	0	0	0	0	0	0	1
NL	2	0	0	0	0	0	0	0	0	0	2
ENE	3	0	0	0	0	0	0	0	0	0	3
E	1	0	1	0	0	0	0	0	0	0	2
ESE	0	0	14	0	0	0	0	0	0	0	21
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	1	0	0	0	0	0	0	0	0	1
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	0	0	0	0	0	0	0	0	0	0
W	1	2	1	0	0	0	0	0	0	0	4
WNW	0	5	3	0	0	0	0	0	0	0	8
NW	1	2	1	0	0	0	0	0	0	0	4
NNW	0	2	0	0	0	0	0	0	0	0	2
N	1	0	0	0	0	0	0	0	0	0	1
ALL SECTOR	10	10	28	0	0	0	0	0	0	0	0

NO. OF VALID OBSERVATION = 57 NO. OF CALMS (WS LT 0.5M/SEC) = 1 NO. OF MISSING WS/MS = 0

## CORN YANKEE NUCLEAR POWER STATION / UNIT 1

## WIND SPEED/WIND DIRECTION/STABILITY JOINT FREQUENCY DISTRIBUTION

WIND LEVEL = 190 FT

DELTA T INTERVAL = 15 - 30 FT

PASQUILL STABILITY CLASSES / CLASS OF TERMINATION METHOD = DELTA T

DATA PERIOD = 12 JUL 19/1730 - 13 SEP 79/1715

DATA ACQUISITION INTERVAL = MINUTES 60-30 OF EACH HOUR

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

DIRECTION	SPEED IN METERS PER SECOND						GT 10.1	ALL
	0.5-1.5	1.6-3.3	3.4-5.2	5.3-8.2	8.3-10.0	10.1-15.0	15.1-20.0	
NNE	0	0	0	0	0	0	0	0
NIE	0	1	0	0	0	0	0	1
ENE	1	0	0	0	0	0	0	1
E	0	0	0	0	0	0	0	0
ESE	0	0	0	0	0	0	0	0
SE	0	0	1	0	0	0	0	1
SSE	0	0	0	0	0	0	0	0
S	0	0	0	0	0	0	0	0
SSW	0	0	2	0	0	0	0	2
SW	0	0	0	0	0	0	0	0
WSW	0	0	0	0	0	0	0	0
W	0	3	0	0	0	0	0	3
WNW	0	2	0	0	0	0	0	2
NW	0	2	0	0	0	0	0	2
NNW	0	0	0	0	0	0	0	0
N	0	0	0	0	0	0	0	0
ALL SECTOR	1	6	3	0	0	0	0	0

NU. OF VALID OBSERVATION = 12

NU. OF CALMS (WS LT 0.5M/SEC) = 0

NU. OF MISSING MD/MS = 0

## LONG RANGE NUCLEAR POWER STATION / UNIT 1

## WIND SPEED/WIND DIRECTION/STABILITY JOINT FREQUENCY DISTRIBUTION

WIND LEVEL = 190 FT  
 DELTA T INTERVAL = 150 - 30 FT

PASQUILL STABILITY CLASSES / CLASS DETERMINATION METHOD = DELTA T

DATA PERIOD = 12 JUL 79/1730 - 13 SEP 79/1715

DATA ACQUISITION INTERVAL = MINUTES 00-50 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	3.4-5.2	5.3-8.2	8.3-10.8	10.9-15.0	15.1-20.0	20.1-25.0	25.1-30.0	30.1-35.0	
NNE	0	0	0	0	0	0	0	0	0	0	0
NE	2	0	0	0	0	0	0	0	0	0	2
ENE	1	0	0	0	0	0	0	0	0	0	1
E	1	0	0	0	0	0	0	0	0	0	1
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	1	0	0	0	0	0	0	0	0	1
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	1	0	0	0	0	0	0	0	0	1
NW	0	0	0	0	0	0	0	0	0	0	0
NNW	1	1	0	0	0	0	0	0	0	0	2
N	1	0	0	0	0	0	0	0	0	0	1
ALL SECTOR	0	3	0	0	0	0	0	0	0	0	0

NO. OF VALID OBSERVATION = 9 NO. OF CALMS (MS LT 0.5M/SEC) = 0 NO. OF MISSING RUNS = 0



## LORD YARBLE NUCLEAR POWER STATION / UNIT 1

## WIND SPEED/WIND DIRECTION/STABILITY JOINT FREQUENCY DISTRIBUTION

WIND LEVEL = 192 FT

DELTA T INTERVAL = 150 - 25 FT

PASQUILL STABILITY CLASS / CLASS DETERMINATION METHOD = DELTA T

DATA PERIOD = 12 JUL 79/1730 - 13 SEP 79/1715

DATA ACQUISITION INTERVAL = MINUTES 00-20 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	1.6-3.5	3.6-5.5	5.6-8.5	8.6-10.5	10.6-15.0	15.1-20.0	GT 20.1	
NNE	2	0	0	0	0	0	0	2	
NE	4	0	0	0	0	0	0	4	
ENE	5	0	0	0	0	0	0	5	
E	0	1	0	0	0	0	0	1	
ESE	0	0	0	0	0	0	0	0	
SE	0	0	3	0	0	0	0	3	
SSE	0	0	0	0	0	0	0	0	
S	0	0	0	0	0	0	0	0	
SSW	0	2	1	0	0	0	0	3	
SW	0	0	0	0	0	0	0	0	
WSW	0	0	0	0	0	0	0	0	
W	0	1	0	0	0	0	0	1	
WNW	0	0	0	0	0	0	0	0	
NW	0	0	0	0	0	0	0	0	
NNW	0	0	0	0	0	0	0	0	
N	0	2	0	0	0	0	0	2	
ALL SECTOR	11	6	4	0	0	0	0	0	

NO. OF VALID OBSERVATION = 42      NO. OF CALMS HMS LT 1.5M/SEC = 1      NO. OF MISSING MD/WS = 0

## CUNY YANKEE NUCLEAR POWER STATION / UNIT 1

## WIND SPEED/WIND DIRECTION/STABILITY JOINT FREQUENCY DISTRIBUTION

WIND LEVEL = 196 FT

DELTA T INTERVAL = 196 - 20 FT

PASQUILL STABILITY CLASSES / CLASS DETERMINATION METHOD = DELTA T

DATA PERIOD = 12 JUL 79/175 - 13 SEP 79/175

DATA ACQUISITION INTERVAL = MINUTES 00-30 UP EACH HOUR

PASQUILL STABILITY 1 -- DELTA T LESS THAN OR EQUAL TO 1.0 AND GREATER THAN 0.2 0.2-1.0 PER 100 METERS

DIRECTION	SPEED IN METERS PER SECOND										ALL
	0.5-1.0	1.0-2.0	2.0-3.0	3.0-4.0	4.0-5.0	5.0-6.0	6.0-7.0	7.0-8.0	8.0-9.0	9.0-10.0	
NNE	12	0	0	0	0	0	0	0	0	0	12
NEL	3	0	0	0	0	0	0	0	0	0	3
ENE	4	0	0	0	0	0	0	0	0	0	4
E	1	0	0	0	0	0	0	0	0	0	1
ESE	0	2	0	0	0	0	0	0	0	0	2
SE	0	0	1	0	0	0	0	0	0	0	1
SSE	2	1	0	0	0	0	0	0	0	0	3
S	1	0	0	0	0	0	0	0	0	0	1
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	1	0	0	0	0	0	0	0	0	0	1
WNW	1	0	0	0	0	0	0	0	0	0	1
NW	3	0	0	0	0	0	0	0	0	0	3
NNW	5	0	0	0	0	0	0	0	0	0	5
N	14	0	0	0	0	0	0	0	0	0	14
ALL SECTON	78	2	1	1	0	0	0	0	0	0	82

NO. OF WIND OBSERVATION = 644 NO. OF CALMS (MS LT 0.5M/SEC) = 12 NO. OF MISSING WD/MS = 0

## LIGN YAKLE NOLLAR PINKLE STATION / UNIT 1

## WIND SPEED/WIND DIRECTION/STABILITY JOINT FREQUENCY DISTRIBUTION

WIND LEVEL = 195 FT

DELTA T INTERVAL = 140 - 33 FT

PASQUILL STABILITY CLASSES / CLASS DETERMINATION METHOD = DELTA T

DATA PERIOD = 12 JUL 19/1730 - 13 SEP 19/1715

DATA ACQUISITION INTERVAL = MINUTES 00-50 OF EACH HOUR

PASQUILL STABILITY F -- DELTA T LESS THAN OR EQUAL TO 4.0 AND GREATER THAN 1.5 DEGC PER 100 METERS

DIRECTION	SPEED IN METERS PER SECOND							ALL
	0.5-1.5	1.0-3.3	3.4-5.5	5.6-8.2	8.3-10.6	10.9-15.0	15.1-20.0	GT 20.1
NNE	3	0	0	0	0	0	0	3
NE	0	0	0	0	0	0	0	0
ENE	1	0	0	0	0	0	0	1
E	0	0	0	0	0	0	0	0
ESE	0	0	0	0	0	0	0	0
SE	0	0	0	0	0	0	0	0
SSE	0	0	0	0	0	0	0	0
S	0	0	0	0	0	0	0	0
SSW	0	0	0	0	0	0	0	0
SW	0	0	0	0	0	0	0	0
WSW	0	0	0	0	0	0	0	0
W	0	0	0	0	0	0	0	0
WNW	0	0	0	0	0	0	0	0
NW	5	0	0	0	0	0	0	5
NNW	1	0	0	0	0	0	0	1
N	1	0	0	0	0	0	0	1
ALL SECTOR	11	0	0	0	0	0	0	0

NU. OF VALID OBSERVATION = 11      NU. OF CALMS (WS LT 0.5M/SEC) = 0      NU. OF MISSING MU/MS = 0

## LURE YALREE NUCLEAR POWER STATION / UNIT 1

## WIND SPEED/WIND DIRECTION/STABILITY JOINT FREQUENCY DISTRIBUTION

WIND LEVEL = 196 FT

DELTA T INTERVAL = 196 - 35 FT

PASQUILL STABILITY CLASSES / CLASS DETERMINATION METHOD = DELTA T

DATA PERIOD = 12 JUL 197300 - 13 SEP 197115

DATA ACQUISITION INTERVAL = MINUTES 00-50 OF EACH HOUR

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

DIRECTION	0.5-1.5	1.6-3.3	3.4-5.2	5.3-8.2	8.3-10.0	10.1-15.0	15.1-20.0	20.1	ALL
NNE	0	0	0	0	0	0	0	0	0
NE	0	0	0	0	0	0	0	0	0
ENE	0	0	0	0	0	0	0	0	0
E	0	0	0	0	0	0	0	0	0
ESE	0	0	0	0	0	0	0	0	0
SE	0	0	0	0	0	0	0	0	0
SSE	0	0	0	0	0	0	0	0	0
S	0	0	0	0	0	0	0	0	0
SSW	0	0	0	0	0	0	0	0	0
SW	0	0	0	0	0	0	0	0	0
WSW	0	0	0	0	0	0	0	0	0
W	0	0	0	0	0	0	0	0	0
WNW	0	0	0	0	0	0	0	0	0
NW	0	0	0	0	0	0	0	0	0
NNW	0	0	0	0	0	0	0	0	0
N	0	0	0	0	0	0	0	0	0
ALL SECTOR	0	0	0	0	0	0	0	0	0

NU. OF VALID OBSERVATION = 0

NU. OF CALMS (WS LT 0.5M/SEC) = 0

NO. OF MISSING WD/WS = 0

## LONG YANKEE NUCLEAR POWER STATION / UNIT 1

## WIND SPEED/WIND DIRECTION/STABILITY JOINT FREQUENCY DISTRIBUTION

WIND LEVEL = 190 FT

DELTA T INTERVAL = 190 - 23 FT

PASQUILL STABILITY CLASSES / CLASS DETERMINATION METHOD = DELTA T

DATA PERIOD = 12 JUL 79/1730 - 13 SEP 79/1715

DATA ACQUISITION INTERVAL = MINUTES 00-20 OF EACH HOUR

## ALL STABILITY CLASSES

DIRECTION	0.5-1.5	1.6-3.3	3.4-5.2	5.3-8.2	8.3-11.8	10.9-15.0	15.1-20.0	GF 20.1	ALL
NNE	10	0	0	0	0	0	0	0	10
NE	11	1	0	0	0	0	0	0	12
ENE	15	0	0	0	0	0	0	0	15
E	3	1	1	0	0	0	0	0	5
ESE	0	0	14	0	0	0	0	0	22
SE	0	0	13	0	0	0	0	0	13
SSE	2	1	0	0	0	0	0	0	3
S	1	1	0	0	0	0	0	0	2
SSW	0	3	3	0	0	0	0	0	6
SW	1	0	0	0	0	0	0	0	1
WSW	0	0	0	0	0	0	0	0	0
W	2	0	1	0	0	0	0	0	3
WNW	1	8	3	0	0	0	0	0	12
NW	9	2	1	0	0	0	0	0	12
NNW	7	3	0	0	0	0	0	0	10
N	17	2	0	0	0	0	0	0	19
ALL SECTOR	87	36	36	0	0	0	0	0	0

NO. OF POSSIBLE OBSERVATIONS = 175  
 NO. OF VALID OBSERVATIONS = 14  
 NO. OF MISSING NUMBERS = 0  
 NO. OF CALMS (WS LT 0.5M/SEC) = 14  
 NO. OF MISSING DELTA T = 0

## LIMN YANKEE NUCLEAR POWER STATION / UNIT 1

## WIND SPEED/WIND DIRECTION/STABILITY JOINT FREQUENCY DISTRIBUTION

WIND LEVEL = 196 FT

WIND T INTERVAL = 196 - 23 FT

PASQUILL STABILITY CLASS / CLASS DETERMINATION METHOD = DELTA T

DATA PERIOD = 8 OCT 79/1745 - 18 OCT 79/0600

DATA ACQUISITION INTERVAL = MINUTES 00-45 UP EACH HOUR

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

DIRECTION	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	20.1	ALL
NNE	0	0	0	0	0	0	0	0	0
NE	0	0	0	0	0	0	0	0	0
ENE	0	0	0	0	0	0	0	0	0
E	0	0	0	0	0	0	0	0	0
ESE	0	0	0	0	0	0	0	0	0
SE	0	0	0	0	0	0	0	0	0
SSE	0	0	0	0	0	0	0	0	0
S	0	0	0	0	0	0	0	0	0
SSW	0	0	0	0	0	0	0	0	0
SW	0	0	0	0	0	0	0	0	0
WSW	0	0	0	0	0	0	0	0	0
W	0	0	0	0	3	0	0	0	3
WNW	0	0	0	0	5	4	0	0	9
NW	0	0	0	0	0	0	0	0	0
NNW	0	0	0	0	0	0	0	0	0
N	0	0	0	0	0	0	0	0	0
ALL SECTOR	0	0	0	0	8	4	0	0	0

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



## CUNN YANKEE NUCLEAR POWER STATION / UNIT 1

## WIND SPEED/WIND DIRECTION/STABILITY JOINT FREQUENCY DISTRIBUTION

WIND LEVEL = 196 FT  
 DELTA T INTERVAL = 196 - 35 FT  
 PASQUILL STABILITY CLASSES / CLASS DETERMINATION METHOD = DELTA T  
 DATA PERIOD = 8 OCT 79/1245 - 16 OCT 79/0600  
 DATA ACQUISITION INTERVAL = MINUTES 00-45 OF EACH HOUR

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

DIRECTION	0.5-1.5	1.6-3.3	3.4-5.5	5.6-9.2	8.3-10.8	10.9-15.0	15.1-20.0	GT 20.1	ALL
NNE	0	0	0	0	0	0	0	0	0
NE	0	0	0	0	0	0	0	0	0
ENE	0	0	0	0	0	0	0	0	0
E	0	0	0	0	0	0	0	0	0
ESE	0	0	0	0	0	0	0	0	0
SE	0	0	0	0	0	0	0	0	0
SSE	0	0	0	0	0	0	0	0	0
S	0	0	0	0	0	0	0	0	0
SSW	0	0	0	0	0	0	0	0	0
SW	0	0	0	0	0	0	0	0	0
WSW	0	0	0	0	0	0	0	0	0
W	0	0	0	0	0	0	0	0	0
WNW	0	0	0	0	2	1	0	0	3
NW	0	0	0	0	0	0	0	0	0
NNW	0	0	0	0	0	0	0	0	0
N	0	0	0	0	0	0	0	0	0
ALL SECTOR	0	0	0	0	2	1	0	0	0

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



## CUMM 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 = 08179/1245 - 16 DEC 79/0600

DATA ACQUISITION INTERVAL = MINUTES 60-85 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	20.1-25.0	25.1-30.0	30.1-35.0	
NNE	0	0	0	0	0	0	0	0	0	0	0
NE	0	0	0	0	0	0	0	0	0	0	0
ENE	0	0	0	0	0	0	0	0	0	0	0
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	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	2	0	0	0	0	0	2
WNW	0	0	0	1	0	0	0	0	0	0	1
NNW	0	0	0	0	0	0	0	0	0	0	0
NNN	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	0	0	0	1	2	0	0	0	0	0	0

NO. OF VALID OBSERVATION = 3      NO. OF CALMS (WIND LT 0.5M/SEC) = 0      NO. OF MISSING MU/MS = 0

## CORN 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 = 8 JUL 79/1245 - 16 DEC 79/0600  
 DATA ACQUISITION INTERVAL = MINUTES 00-45 OF EACH HOUR  
 PASQUILL STABILITY U -- DELTA T LESS THAN OR EQUAL TO -0.5 AND GREATER THAN -1.5 DEG C PER 100 METERS

DIRECTION	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	ALL
NNE	0	0	0	0	0	0	0	0	0
NE	0	0	0	0	0	0	0	0	0
ENE	0	0	0	0	0	0	0	0	0
E	0	0	0	0	0	0	0	0	0
ESE	0	0	0	0	0	0	0	0	0
SE	0	0	0	0	0	0	0	0	0
SSE	0	0	0	0	0	0	0	0	0
S	0	0	0	0	0	0	0	0	0
SSW	0	0	0	0	0	0	0	0	0
SW	0	0	0	0	0	0	0	0	0
WSW	0	0	0	0	0	0	0	0	0
W	0	0	0	0	0	0	0	0	0
WNW	0	0	1	4	0	0	0	0	5
NW	0	0	3	0	0	0	0	0	3
NNW	0	12	2	0	0	0	0	0	14
N	1	3	0	0	0	0	0	0	4
ALL SECTOR	1	15	6	4	0	0	0	0	0

NO. OF VALID OBSERVATION = 26 NO. OF CALMS (WS LT 0.5M/SEC) = 0 NO. OF MISSING M/D/MS = 0

## SUNN 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 CLASSES / CLASS DETERMINATION METHOD = DELTA T

DATA PERIOD = 8 AM 79/1245 - 16 DEC 1970000

DATA ACQUISITION INTERVAL = MINUTES 00-45 OF EACH HOUR

PASQUILL STABILITY F -- DELTA T LESS THAN OR EQUAL TO 1.5 AND GREATER THAN -0.5 DIG 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	20.1-30.0	30.1-40.0	40.1-50.0	
NNE	4	0	0	0	0	0	0	0	0	4	
NE	5	0	0	0	0	0	0	0	0	5	
ENE	1	0	0	0	0	0	0	0	0	1	
E	1	0	0	0	0	0	0	0	0	1	
ESE	0	0	0	0	0	0	0	0	0	0	
SF	0	0	0	0	0	0	0	0	0	0	
SSE	1	0	0	0	0	0	0	0	0	1	
S	0	0	0	0	0	0	0	0	0	0	
SSW	1	0	0	0	0	0	0	0	0	1	
SW	1	0	0	0	0	0	0	0	0	1	
WSW	1	0	0	0	0	0	0	0	0	1	
W	0	0	0	0	0	0	0	0	0	0	
WNW	0	0	1	0	0	0	0	0	0	1	
NW	0	0	0	0	0	0	0	0	0	0	
NNW	3	0	0	0	0	0	0	0	0	3	
N	1	0	0	0	0	0	0	0	0	1	
ALL SECTOR	19	0	1	0	0	0	0	0	0	0	

NO. OF VALID OBSERVATIONS = 21 NO. OF CALMS (MS LT 0.5M/SEC) = 1 NO. OF MISSING RUNS = 0

## LUREN 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 = 8 OCT 7-1245 - 16 DEC 7-0600

DATA ACQUISITION INTERVAL = MINUTES 00-45 OF EACH HOUR

PASQUILL STABILITY F -- DELTA T LESS THAN OR EQUAL TO 4.0 AND GREATER THAN 1.5 DIG 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	20.1-25.0	25.1-30.0	30.1-35.0	
NNE	2	0	0	0	0	0	0	0	0	0	2
NE	1	0	0	0	0	0	0	0	0	0	1
ENE	1	0	0	0	0	0	0	0	0	0	1
E	2	0	0	0	0	0	0	0	0	0	2
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	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	1	0	0	0	0	0	0	0	0	1
NW	1	0	0	0	0	0	0	0	0	0	1
NNW	0	0	0	0	0	0	0	0	0	0	0
N	1	0	0	0	0	0	0	0	0	0	1
ALL SECTOR	8	1	0	0	0	0	0	0	0	0	11

NO. OF VALID OBSERVATION = 9 NO. OF CALMS (MS LT 0.5M/SEC) = 0 NO. OF MISSING MU/M5 = 2

## LOHN YARBLE 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 = 8 OCT 79/1245 - 16 DEC 79/0600

DATA ACQUISITION INTERVAL = MINUTES 00-45 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	0	0	0	0	0	0	0	0	0
NE	0	0	0	0	0	0	0	0	0
ENE	0	0	0	0	0	0	0	0	0
E	0	0	0	0	0	0	0	0	0
ESE	0	0	0	0	0	0	0	0	0
SE	0	0	0	0	0	0	0	0	0
SSE	0	0	0	0	0	0	0	0	0
S	0	0	0	0	0	0	0	0	0
SSW	0	0	0	0	0	0	0	0	0
SW	0	0	0	0	0	0	0	0	0
WSW	0	0	0	0	0	0	0	0	0
W	0	0	0	0	0	0	0	0	0
WNW	0	2	0	0	0	0	0	0	2
NW	0	1	0	0	0	0	0	0	1
NNW	0	0	0	0	0	0	0	0	0
N	1	0	0	0	0	0	0	0	1
ALL SECTOR	1	3	0	0	0	0	0	0	

NO. OF VALID OBSERVATION = 4

NO. OF CALMS (WS LT 0.5M/SEC) = 0

NO. OF MISSING WD/WS = 0

## LOWIN TANK NUCLEAR POWER PLANT / UNIT 1

## WIND SPEED/WIND DIRECTION/STABILITY JOINT FREQUENCY DISTRIBUTION

WIND LEVEL = 196 FT  
 DELTA T INTERVAL = 196 - 33 FT  
 PASQUILL STABILITY CLASSIS / WIND DETERMINATION METHOD = DELTA T  
 DATA PERIOD = 8 OCT 79/1245 - 16 DEC 79/0600  
 DATA ACQUISITION INTERVAL = MINUTES 60-45 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	0	0	0	0	0	0	0	0	0	0	
NE	0	0	0	0	0	0	0	0	0	0	
ENE	2	0	0	0	0	0	0	0	0	2	
E	3	0	0	0	0	0	0	0	0	3	
ESE	0	0	0	0	0	0	0	0	0	0	
SE	0	0	0	0	0	0	0	0	0	0	
SSE	1	0	0	0	0	0	0	0	0	1	
S	0	0	0	0	0	0	0	0	0	0	
SSW	1	0	0	0	0	0	0	0	0	1	
SW	1	0	0	0	0	0	0	0	0	1	
WSW	1	0	0	0	0	0	0	0	0	1	
W	0	0	0	0	5	0	0	0	0	5	
WNW	0	3	2	5	7	5	0	0	0	72	
NW	1	1	3	0	0	0	0	0	0	2	
NNW	3	12	2	0	0	0	0	0	0	17	
N	4	3	0	0	0	0	0	0	0	7	
ALL SECTOR	29	19	7	5	12	5	0	0	0		

NO. OF POSSIBLE OBSERVATIONS = 115 NO. OF VALID NON-CALM CONCURRENT WINDS/DI = 77 NO. OF MISSING WINDS = 37  
 NO. OF VALID OBSERVATIONS = 76 NO. OF CALMS (MS LT 0.5M/SEC) = 1 NO. OF MISSING DIRECTION = 37

HADDAM NECK

METEOROLOGICAL

JOINT FREQUENCY

DATA FOR

CONTINUOUS RELEASES



## LOWE TOWNALL NUCLEAR POWER STATION / UNIT 1

## WIND SPEED/WIND DIRECTION/STABILITY JOINT FREQUENCY DISTRIBUTION

WIND LEVEL = 100 FT

DUELLA T INTERVAL = 100 - 25 FT

PASCULL STABILITY CLASSIFICATION METHOD = DUELLA T

DATA PERIOD = 1 JUL 1978 TO - 30 SEP 1978

DATA ACQUISITION INTERVAL = MINUTES 0-15 OF EACH HOUR

PASCULL STABILITY A -- DUELLA T LESS THAN OR EQUAL TO -1.9 DEG C PER 100 METERS

DIRECTION	SPEED IN METERS PER SECOND										ALL
	0.5-1.5	1.6-3.5	3.6-5.5	5.6-8.5	8.6-10.5	10.6-15.0	15.1-20.0	20.1			
NONE	2	1	1	0	0	0	0	0	0	0	4
NE	1	0	0	0	0	0	0	0	0	0	1
ENE	5	1	0	0	0	0	0	0	0	0	5
E	4	5	0	0	0	0	0	0	0	0	9
ESE	1	10	4	0	0	0	0	0	0	0	15
SE	0	4	20	2	0	0	0	0	0	0	26
SSE	0	8	20	4	0	0	0	0	0	0	32
S	2	7	23	4	0	0	0	0	0	0	36
SSW	1	5	24	4	1	0	0	0	0	0	35
SW	3	6	5	0	0	0	0	0	0	0	14
WSW	1	5	4	1	0	0	0	0	0	0	11
W	2	10	5	0	0	0	0	0	0	0	17
WNW	5	20	20	11	0	0	0	0	0	0	66
NW	5	0	10	0	1	0	0	0	0	0	16
NNW	5	4	4	0	0	0	0	0	0	0	13
N	2	1	1	0	0	0	0	0	0	0	4
ALL SECTION	55	141	164	33	2	1	0	0	0	0	303

NO. OF WIND DIRECTION = 30 NO. OF CALMS (MS LT 0.4M/S) = 2 NO. OF MISSING REIMS = 0

## COIN FERRY NUCLEAR POWER STATION / UNIT 1

## WIND SPEED/WIND DIRECTION/STABILITY JOINT FREQUENCY DISTRIBUTION

WIND LEVEL = 190 FT

DELTA T INTERVAL = 150 - 25 FT

PASQUILL STABILITY CLASS / CLASS DETERMINATION METHOD = DELTA T

DATA PERIOD = 1 JUL 1970-15 - 30 SEP 1972/2315

DATA ACQUISITION INTERVAL = MINUTES 05-15 OF EACH HOUR

PASQUILL STABILITY B -- DELTA T LESS THAN OR EQUAL TO -1.7 AND GREATER THAN -1.0 DIG C PER 100 METERS

DIRECTION	SPEED IN METERS PER SECOND						ALL
	0.0-1.0	1.0-2.0	2.0-3.0	3.0-4.0	4.0-5.0	5.0-6.0	
NHL	0	3	0	0	0	0	3
NE	0	0	0	0	0	0	0
ENE	0	0	0	0	0	0	0
E	1	1	1	1	0	0	3
ESE	0	1	1	0	0	0	0
SEL	0	1	1	1	0	0	0
SSE	1	1	1	1	0	0	3
S	0	1	1	1	0	0	0
SSW	0	1	1	1	0	0	0
SW	0	1	1	1	0	0	0
WSW	0	1	1	1	0	0	0
W	0	0	0	0	0	0	0
WNW	1	0	1	1	0	0	0
NW	0	0	0	0	0	0	0
N	0	0	0	0	0	0	0
NNE	1	0	1	1	0	0	0
NEE	0	0	0	0	0	0	0
NNE	0	0	0	0	0	0	0
N	0	0	0	0	0	0	0
ALL SECTORS	0	0	0	0	0	0	0

NO. OF VALID OBSERVATION = 130

NO. OF CALMS (MS LT 0.5M/SEC) = 0

NO. OF MISSING MIN/MS = 0

## LUNN YANKEE NUCLEAR POWER STATION / UNIT 1

## WIND SPEED/WIND DIRECTION/SPEED/STABILITY JOINT FREQUENCY DISTRIBUTION

WIND LEVEL = 196 FT

DELTA T INTERVAL = 150 - 30 FT

PASQUILL STABILITY CLASSES / CLASS DETERMINATION METHOD = DELTA T

DATA PERIOD = 1 JUL 1970/015 - 30 SEP 1970/2015

DATA ACQUISITION INTERVAL = MINUTES 60-15 OF EACH HOUR

PASQUILL STABILITY C -- DELTA T LESS THAN OR EQUAL TO -1.0 AND GREATER THAN -1.7 DEC C PER 100 METERS

DIRECTION	SPEED IN METERS PER SECOND										ALL
	0.5-1.0	1.0-2.0	2.0-3.0	3.0-4.0	4.0-5.0	5.0-6.0	6.0-7.0	7.0-8.0	8.0-9.0	9.0-10.0	
NNE	2	1	0	0	0	0	0	0	0	0	3
NE	1	1	0	0	0	0	0	0	0	0	2
ENE	1	0	0	0	0	0	0	0	0	0	4
E	2	0	0	0	0	0	0	0	0	0	3
ESE	1	0	0	0	0	0	0	0	0	0	2
SE	0	2	0	0	0	0	0	0	0	0	4
SSE	0	0	0	0	0	0	0	0	0	0	3
S	0	0	0	0	0	0	0	0	0	0	1
SSW	0	0	0	0	0	0	0	0	0	0	10
SW	0	0	0	0	0	0	0	0	0	0	1
WSW	0	0	0	0	0	0	0	0	0	0	3
W	1	0	0	0	0	0	0	0	0	0	3
WNW	0	0	0	0	0	0	0	0	0	0	20
WN	0	0	0	0	0	0	0	0	0	0	10
NNW	0	0	0	0	0	0	0	0	0	0	5
N	2	0	0	0	0	0	0	0	0	0	6
ALL SECTOR	20	30	20	20	20	20	20	20	20	20	20

NO. OF VALID OBSERVATION = 100 NO. OF CALMS (MS LT 0.5M/SEC) = 1 NO. OF MISSING MU/MS = 0

## JOHN YARBLE NUCLEAR POWER STATION / UNIT 1

## WIND SPEED/WIND DIRECTION/STABILITY JOINT FREQUENCY DISTRIBUTION

WIND LEVEL = 196 FT

DELTA T INTERVAL = 19.5 - 20.5

PASQUILL STABILITY CLASSES / CLASS DETERMINATION METHOD = DELTA T

DATA PERIOD = 1 JUL 1972 - 31 SEP 1972

DATA ACQUISITION INTERVAL = MINUTES 0-15 OF EACH HOUR

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

DIRECTION	0.5-1.5	1.6-3.3	3.4-5.5	5.6-8.4	8.5-11.6	11.7-15.0	15.1-20.0	GT 20.1	ALL
NRE	17	1	0	0	0	0	0	0	17
NE	14	3	0	0	0	0	0	0	17
ENE	13	7	3	0	0	0	0	0	23
E	7	0	0	0	0	0	0	0	13
ESE	9	12	1	0	0	0	0	0	22
SE	5	40	23	2	0	3	0	0	63
SSE	5	17	21	2	4	0	0	0	49
S	1	10	35	1	3	0	0	0	50
SSW	0	10	31	3	0	0	0	0	44
SW	2	9	7	0	0	0	0	0	18
WSW	1	5	2	0	0	0	0	0	10
W	1	4	3	4	1	0	0	0	13
WNW	5	15	10	3	0	0	0	0	33
NW	0	27	10	3	0	0	0	0	40
NNW	15	13	6	0	0	0	0	0	44
N	15	25	2	0	0	0	0	0	42
ALL SECTOR	110	237	106	20	0	3	0	0	

NO. OF VALID OBSERVATION = 554

NO. OF CALMS (WS LT 0.5M/SEC) = 7

NO. OF MISSING WINDS = 0



## CLIFF YANKEE NUCLEAR POWER STATION / UNIT 1

## WIND SPEED/WIND DIRECTION/STABILITY JOINT FREQUENCY DISTRIBUTION

WIND LEVEL = 196 FT

DELTA T INTERVAL = 196 - 00 FT

PANSOIL STABILITY CLASS / CLASS DETERMINATION METHOD = DELTA T

DATA PERIOD = 1 JUL 1970/12 - 30 SEP 1970/15

DATA ACQUISITION INTERVAL = MINUTES 00-15 OF EACH HOUR

PANSOIL STABILITY = -- DELTA T LESS THAN OR EQUAL TO 4% AND GREATER THAN 1.5 DEG C PER 10 METERS

DIRECTION	SPEED IN METERS PER SECOND						ALL
	0.0-1.0	1.0-2.0	2.0-3.0	3.0-4.0	4.0-5.0	5.0-6.0	
NPE	0	0	0	0	0	0	0
NE	1	0	0	0	0	0	1
ENE	0	0	0	0	0	0	0
E	4	1	0	0	0	0	5
ESE	2	0	0	0	0	0	2
SE	1	0	0	0	0	0	1
SSE	1	0	0	0	0	0	1
S	1	0	0	0	0	0	1
SSW	1	0	0	0	0	0	1
SW	0	1	0	0	0	0	1
WSW	0	0	0	0	0	0	0
W	2	0	0	0	0	0	2
WNW	1	0	0	0	0	0	1
W	1	0	0	0	0	0	1
NW	4	0	0	0	0	0	4
NNW	4	0	0	0	0	0	4
N	2	0	0	0	0	0	2
ALL SECTOR	40	20	0	2	0	0	62

NO. OF VALID OBSERVATION = 61 NO. OF CALMS (WS LT 1.5M/SEC) = 2 NO. OF MISSING MEAS = 0



## LONG TARKER NUCLEAR POWER STATION / UNIT 1

## WIND SPEED/WIND DIRECTION/STABILITY JOINT FREQUENCY DISTRIBUTION

WIND LEVEL = 150 FT

DELTA T INTERVAL = 19. - 35 FT

PASQUILL STABILITY CLASSES / CLASS DETERMINATION METHOD = DELTA T

DATA PERIOD = 1 JUL 1969-15 - 30 SEP 1970

DATA ACQUISITION INTERVAL = MINUTES 00-15 OF EACH HOUR

PASQUILL STABILITY U -- DELTA T GREATER THAN 400 DEG C PER 100 METERS

DIRECTION	0.5-1.5	1.6-3.0	3.1-5.5	5.6-8.0	8.1-10.0	10.1-15.0	15.1-20.0	20.1	ALL
NNE	0	0	0	0	0	0	0	0	0
NE	2	0	0	0	0	0	0	0	2
ENE	2	0	0	0	0	0	0	0	2
E	1	0	0	0	0	0	0	0	1
ESE	1	0	0	0	0	0	0	0	1
SE	0	0	0	0	0	0	0	0	0
SSE	0	0	0	0	0	0	0	0	0
S	0	0	0	0	0	0	0	0	0
SSW	0	0	0	0	0	0	0	0	0
SW	0	0	0	0	0	0	0	0	0
WSW	0	0	0	0	0	0	0	0	0
W	0	0	0	0	0	0	0	0	0
WNW	0	0	0	0	0	0	0	0	0
WN	1	0	0	0	0	0	0	0	1
NNW	0	1	0	0	0	0	0	0	1
N	0	0	0	0	0	0	0	0	0
ALL SECTOR	7	3	0	0	0	0	0	0	0

NO. OF VALID OBSERVATION = 11 NO. OF CALMS HRS LT 0.5M/SEC = 1 PPL. OF MISSING WINDS =



## LUNA YARKER NUCLEAR POWER STATION / UNIT 1

## WIND SPEED/WIND DIRECTION/STABILITY JUNE FREQUENCY DISTRIBUTION

WIND LEVEL = 190 FT  
 WIND T INTERVAL = 150 - 25 FT  
 PEQUILL STABILITY CLASSES / CLASS DETERMINATION METHOD = DELTA T  
 DATA PERIOD = 1 JUL 1978/15 - 30 SEP 1978/15  
 DATA ACQUISITION INTERVAL = MINUTES 00-15 OF EACH HOUR

## ALL STABILITY CLASSES

DIRECTION	0.0-1.0	1.0-3.0	3.0-5.0	5.0-8.0	8.0-10.0	10.0-15.0	15.0-20.0	GT 20.0	ALL
NNE	115	9	1	0	0	0	0	0	125
NE	80	0	0	0	0	0	0	0	94
ENE	76	11	7	0	0	0	0	0	94
E	43	22	2	0	0	0	0	0	67
ESE	51	04	14	0	0	0	0	0	159
SE	10	120	71	9	1	3	0	0	220
SSE	10	14	13	8	5	0	0	0	100
S	9	45	77	9	9	0	0	0	149
SSW	6	43	30	13	1	0	0	0	149
SW	13	30	20	3	0	0	0	0	66
WSW	4	19	12	5	0	0	0	0	40
W	22	29	12	8	1	0	0	0	72
WNW	22	105	72	25	1	0	0	0	225
NW	34	00	10	15	1	0	0	0	26
NNW	01	57	19	0	0	0	0	0	157
N	70	59	0	0	0	0	0	0	121
ALL SECTOR	552	751	542	95	19	5	0	0	

NO. OF POSSIBLE OBSERVATIONS = 2400  
 NO. OF VALID OBSERVATIONS = 4112  
 NO. OF VALID NON-CALM CONCURRENT WINDS/UT = 2060  
 NO. OF CALMS (WS LT 0.5M/SEC) = 30  
 NO. OF MISSING WINDS = 90  
 NO. OF MISSING DELTA T = 90

## CORN VANDER NUCKLE POWER STATION / UNIT 1

## WIND SPEED/WIND DIRECTION/STABILITY JOINT FREQUENCY DISTRIBUTION

WIND LEVEL = 196 FT

DELTA T INTERVAL = 195 - 35 FT

PASQUILL STABILITY CLASS / CLASS DETERMINATION METHOD = DELTA T

DATA PERIOD = 1 DEC 79/0015 - 31 DEC 79/2315

DATA ACQUISITION INTERVAL = MINUTES 00-15 OF EACH HOUR

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

DIRECTION	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	ALL
NNE	2	0	0	0	0	0	0	0	2
NE	2	0	0	0	0	0	0	0	2
ENE	0	0	0	0	0	0	0	0	0
E	0	0	0	0	0	0	0	0	0
ESE	1	2	0	0	0	0	0	0	3
SE	0	1	1	0	0	0	0	0	2
SSE	0	2	3	0	0	0	0	0	5
S	0	1	2	0	0	0	0	0	3
SSW	0	0	1	3	0	0	0	0	4
SW	0	0	4	2	0	0	0	0	6
WSW	0	1	7	2	0	0	0	0	10
W	0	0	3	2	0	0	0	0	5
WNW	0	2	5	7	8	1	0	0	23
NW	0	0	2	3	5	2	0	0	12
NNW	0	1	2	0	0	0	0	0	3
N	1	0	0	0	0	0	0	0	1
ALL SECTOR	6	10	30	19	13	3	0	0	

NO. OF VALID OBSERVATION = 51      NO. OF CALMS INS LT 0.5M/SEC = 0      NO. OF MISSING ND/MS = 1

## LONG 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 DEC 79/0015 - 31 DEC 79/2315

DATA ACQUISITION INTERVAL = MINUTES (0-15 UP EACH HOUR)

PASQUILL STABILITY 0 -- 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	20.1-25.0	25.1-30.0	30.1-35.0	
NNE	1	0	0	0	0	0	0	0	0	0	1
N	1	0	0	0	0	0	0	0	0	0	1
NNE	1	0	0	0	0	0	0	0	0	0	1
E	0	0	0	0	0	0	0	0	0	0	0
ESE	0	1	0	0	0	0	0	0	0	0	1
SE	0	5	2	0	0	0	0	0	0	0	7
SSE	0	0	2	0	0	0	0	0	0	0	2
S	1	0	1	0	0	0	0	0	0	0	2
SSW	0	0	1	0	0	0	0	0	0	0	1
SW	0	2	4	0	0	0	0	0	0	0	6
WSW	0	1	1	1	0	0	0	0	0	0	3
W	1	2	3	5	0	0	0	0	0	0	11
WNW	0	0	0	4	4	1	0	0	0	0	21
NW	0	0	0	4	4	1	0	0	0	0	15
NNW	2	1	3	0	0	0	0	0	0	0	6
N	1	0	1	0	0	0	0	0	0	0	2
ALL SECTOR	1	16	20	14	8	2	0	0	0	0	0

NU. OF VALID OBSERVATION = 80

NU. OF CALMS (MS LT 3.5M/SEC) = 0

NU. OF MISSING WINDS = 1

## LUMI YAKKEE NUCLEAR POWER STATION / UNIT 1

## WIND SPEED/WIND DIRECTION/STABILITY JOINT FREQUENCY DISTRIBUTION

WIND LEVEL = 190 FT

DELTA T INTERVAL = 190 - 33 FT

PASQUILL STABILITY CLASS DETERMINATION METHOD = DELTA T

DATA PERIOD = 1 JUL 79/0015 - 31 DEC 79/2315

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 DUG 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	21.1-26.1	27.1-32.1	33.1-38.1	
NNE	1	0	0	0	0	0	0	0	0	0	1
NE	2	0	0	0	0	0	0	0	0	0	2
ENE	2	0	0	0	0	0	0	0	0	0	2
E	1	0	0	0	0	0	0	0	0	0	1
ESE	0	0	1	1	0	0	0	0	0	0	2
SE	1	1	6	0	0	0	0	0	0	0	10
SSE	0	0	4	0	0	0	0	0	0	0	4
S	0	1	2	0	0	0	0	0	0	0	3
SSW	0	1	3	2	0	0	0	0	0	0	6
SW	0	0	2	0	0	0	0	0	0	0	2
WSW	1	0	8	1	0	0	0	0	0	0	10
W	0	0	6	7	0	2	0	0	0	0	15
WNW	2	1	5	7	5	3	0	0	0	0	23
WW	1	5	10	12	12	1	0	0	0	0	41
NNW	0	3	1	1	0	0	0	0	0	0	5
N	1	5	0	0	0	0	0	0	0	0	6
ALL SECTOR	12	17	50	31	17	6	0	0	0	0	

NO. OF WIND OBSERVATION = 133 NO. OF CALMS (WS LT 0.5M/SEC) = 0 NO. OF MISSING WS/WS = 7

## LUNN YAMBLE 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 OCT 79/0015 - 31 DEC 79/2315

DATA ACQUISITION INTERVAL = MINUTES 60-15 OF EACH HOUR

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

DIRECTION	0.5-1.5	1.0-3.3	3.4-5.5	5.6-8.2	8.3-10.8	10.9-15.0	15.1-20.0	GT 20.1	ALL
NNE	42	11	0	0	0	0	0	0	53
NE	26	6	0	0	0	0	0	0	32
ENE	8	5	1	6	6	0	0	0	14
E	9	1	1	0	0	0	0	0	11
ESE	12	12	5	0	0	0	0	0	29
SE	2	20	19	4	1	0	0	0	46
SSE	0	11	10	6	6	0	0	0	21
S	1	17	24	5	0	0	0	0	41
SSW	0	12	22	2	1	0	0	0	37
SW	0	5	26	6	0	0	0	0	37
WSW	3	6	37	14	1	0	0	0	63
W	3	14	44	21	2	1	0	0	65
WNW	4	21	25	14	1	0	0	0	65
WW	14	25	95	52	7	2	0	0	225
NNW	22	51	7	1	0	6	0	0	81
N	20	31	0	0	0	0	0	0	51
ALL SECTORS	366	260	316	119	13	3	0	0	

NO. OF VALID OBSERVATION = 910

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

NO. OF MISSING WD/MS = 4

## LENN YANKEE NUCLEAR POWER STATION / UNIT 1

## WIND SPEED/WIND DIRECTION/STABILITY JOINT FREQUENCY DISTRIBUTION

WIND LEVEL = 196 FT

DELTA T INTERVAL = 196 - 33 FT

PASCALL STABILITY CLASSES / CLASS DETERMINATION METHOD = DELTA T

DATA PERIOD = 1 JAN 79/0015 - 31 DEC 79/2315

DATA ACQUISITION INTERVAL = MINUTES 00-15 OF EACH HOUR

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

DIRECTION	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	ALL
NNE	35	1	0	0	0	0	0	0	36
NL	37	3	0	0	0	0	0	0	40
ENE	32	2	0	0	0	0	0	0	34
E	18	0	0	0	0	0	0	0	18
ESE	9	16	0	0	0	0	0	0	25
SE	8	51	25	12	4	0	0	0	100
SSE	4	16	18	2	1	2	0	0	43
S	1	11	13	4	1	0	0	0	30
SSW	2	8	5	5	1	0	0	0	21
SW	6	7	2	1	0	0	0	0	16
WSW	0	0	7	1	0	0	0	0	14
W	2	5	5	1	1	0	0	0	14
WNW	1	7	6	2	1	0	0	0	17
NW	14	28	17	3	0	0	0	0	71
NNW	12	6	1	0	0	0	0	0	19
N	12	2	0	0	0	0	0	0	14
ALL SECTOR	103	176	99	31	9	2	0	0	

NU. OF VALID OBSERVATION = 556 NU. OF CALMS (WS LT 0.5M/SEC) = 44 NU. OF MISSING MU/MS = 0



## LINN YANKEE NUCLEAR POWER STATION / UNIT 1

## WIND SPEED/WIND DIRECTION/STABILITY JOINT FREQUENCY DISTRIBUTION

WIND LEVEL = 190 FT

DUE TO INTERVAL = 196 - 35 FT

PASQUILL STABILITY CLASS / CROSS DETERMINATION METHOD = DATA 1

DATA PERIOD = 1 JUL 79/0015 - 31 DEC 79/2315

DATA ACQUISITION INTERVAL = MINUTES 00-15 OF CALM HOUR

PASQUILL STABILITY F -- DATA 1 LESS THAN OR EQUAL TO 4.0 AND GREATER THAN 1.5 DEC C PER 100 METERS

DIRECTION	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	ALL
NNE	14	0	0	0	0	0	0	0	14
NE	14	1	0	0	0	0	0	0	15
ENE	33	1	0	0	0	0	0	0	34
E	17	2	0	0	0	0	0	0	19
ESE	5	3	0	0	0	0	0	0	8
SE	1	11	3	0	0	0	0	0	15
SSE	0	3	2	0	0	0	0	0	5
S	0	1	3	0	0	0	0	0	4
SSW	1	2	0	0	0	0	0	0	3
SW	2	3	1	0	0	0	0	0	6
WSW	0	2	2	0	0	0	0	0	4
W	1	8	1	0	0	0	0	0	10
WNW	3	9	2	0	0	0	0	0	14
NW	4	10	3	0	0	0	0	0	17
NNW	8	2	1	0	0	0	0	0	11
N	6	1	0	0	0	0	0	0	7
ALL SECTOR	109	59	18	0	0	0	0	0	

NU. OF VALID OBSERVATION = 196      NU. OF CALMS (WS LT 0.5 M/SEC) = 10      NU. OF MISSING WINDS = 0



## LUNN TANKER NUCLEAR PUMK STATION / UNIT 1

## WIND SPEED/WIND DIRECTION/STABILITY JOINT FREQUENCY DISTRIBUTION

WIND LEVEL = 190 FT

WIND Y INTERVAL = 190 - 33 FT

PASQUILL STABILITY CLASS / CLASS DETERMINATION METHOD = DELTA T

DATA PERIOD = 1 OCT 1973/15 - 31 DEC 1973/15

WIND ACQUISITION INTERVAL = MINUTES 00-15 UP EACH HOUR

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

DIRECTION	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	20.1	ALL
NNE	3	0	0	0	0	0	0	0	3
N	4	0	0	0	0	0	0	0	4
ENE	6	1	0	0	0	0	0	0	7
E	3	3	0	1	0	0	0	0	7
ESE	2	3	0	0	0	0	0	0	5
SE	3	12	3	0	0	0	0	0	18
SSE	2	7	2	0	0	0	0	0	11
S	1	1	1	0	0	0	0	0	3
SSW	1	2	0	0	0	0	0	0	3
SW	2	1	0	0	0	0	0	0	3
WSW	0	1	0	0	0	0	0	0	1
W	0	0	0	0	0	0	0	0	0
WNW	2	3	0	0	0	0	0	0	5
W	2	6	0	0	0	0	0	0	8
WNW	3	0	0	0	0	0	0	0	3
N	0	0	0	0	0	0	0	0	0
ALL SECTOR	40	40	6	1	0	0	0	0	0

NU. OF VALID OBSERVATION = 87 NU. OF CALMS (MS LT 0.5 M/S) = 4 NU. OF MISSING RUNS = 0

## LOUN YAMNER NUCLEAR POWER STATION / UNIT 1

## WIND SPEED/WIND DIRECTION/STABILITY JOINT FREQUENCY DISTRIBUTION

WIND LEVEL = 150 FT  
 DELTA T INTERVAL = 196 - 32 FT  
 P/SQUARED STABILITY CLASSES / CLASS DETERMINATION METHOD = DELTA T  
 DATA PERIOD = 1 JUL 79/0015 - 31 DEC 79/2315  
 DATA ACQUISITION INTERVAL = MINUTES 00-15 OF EACH HOUR

## ALL STABILITY CLASSES

DIRECTION	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	20.1	ALL
NNE	96	12	0	0	0	0	0	0	110
NE	86	10	0	0	0	0	0	0	96
ENE	22	9	1	0	0	0	0	0	92
E	50	6	1	1	0	0	0	0	58
ESE	29	27	6	1	0	0	0	0	73
SE	15	101	61	16	5	0	0	0	198
SSE	6	39	41	2	1	2	0	0	91
S	4	32	46	9	1	0	0	0	92
SSW	4	25	32	12	2	0	0	0	75
SW	10	18	39	9	0	0	0	0	76
WSW	4	19	62	19	1	0	0	0	105
W	7	30	63	36	5	3	0	0	142
WNW	13	49	49	34	19	5	0	0	169
WW	35	113	133	74	28	6	0	0	369
NNW	47	64	15	2	0	0	0	0	128
N	41	39	1	0	0	0	0	0	81
ALL SECTOR	531	603	550	215	60	16	0	0	

NO. OF POSSIBLE OBSERVATIONS = 2708  
 NO. OF VALID OBSERVATIONS = 2046  
 NO. OF VALID HUN-CALM CURRENT MU/MS/DUT = 71  
 NO. OF MISSING MU/MS = 167  
 NO. OF MISSING DUT = 152