

NORTHEAST NUCLEAR ENERGY COMPANY

MILLSTONE NUCLEAR POWER STATION

UNITS NO. 1 & NO. 2

SEMIANNUAL RADIOACTIVE EFFLUENTS

RELEASE REPORT

January 1, 1982 - June 30, 1982

Operating License No's. DPR-21 & DPR 65

Docket No's. 50-245 & 50-336

August 25, 1982

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INTRODUCTION

1.0 This report is being submitted for Northeast Nuclear Energy Company's, Millstone Nuclear Power Station, Units No. 1 and No. 2 in accordance with the requirements of 10CFR50.36a, and the Technical Specifications and in the format outlined by U. S. NRC Regulatory Guide 1.21.

During the period covered by this report, Unit No. 1 operated with a unit capacity factor of 87.4% and Unit No. 2 with a unit capacity factor of 52.4%.

Unit No. 1 was shutdown for refueling from N/A to N/A.

Unit No. 2 was shutdown for refueling from January 1 to March 15.

A single report is being submitted for both units as the two units share a number of items related to this report. However, release data and dose calculations are presented separately for each unit.

RADIOACTIVE EFFLUENT RELEASES

2.0 The plants were operated in accordance with the Technical Specifications. The liquid and airborne radioactive effluents are given in the attached tables as follows:

Table 2.1-1	Unit 1 Liquid Effluents-Summation
Table 2.1-2	Unit 1 Liquid Effluents-Batch Mode
Table 2.1-3	Unit 1 Gaseous Effluents-Summation
Table 2.1-4	Unit 1 Gaseous Effluents-Elevated Continuous
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Table 2.1-1

MILLSTONE NUCLEAR POWER STATION - UNIT No. 1EFFLUENT AND WASTE DISPOSAL REPORT
LIQUID EFFLUENTS - SUMMATION OF ALL RELEASESYear 1982

Units	JAN.	FEB.	MARCH	QUARTERLY TOTALS	Est. Total Error, %
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A. Fission and Activation Products

1. Total released(not including H-3,Gases, Alpha)	Ci	2.65 E-03	3.44 E-03	1.44 E-03	7.53 E-03	1.50E+01
2. Average diluted concentration during period	μ Ci/ml	3.89 E-10	4.40 E-10	2.97 E-10	3.86 E-10	
3. Percent of applicable limit **	%				** 7.53 E-02	

** Based on limit of 10.0 curies per quarter - E.T.S., 2.4.1.2.E

B. Tritium

1. Total Released	Ci	1.10 E-01	4.50 E-03	8.46 E-03	1.23 E-01	1.50E+01
2. Average diluted concentration during period	μ Ci/ml	1.62 E-08	5.75 E-10	1.74 E-09	6.31 E-09	

C. Dissolved and Entrained Gases

1. Total Released	Ci	2.15 E-02	2.59 E-05	7.87 E-05	2.16 E-02	1.50E+01
2. Average diluted concentration during period	μ Ci/ml	3.16 E-09	3.31 E-12	1.62 E-10	1.11 E-09	

D. Gross Alpha Radioactivity

1. Total Released	Ci	≤ 1.24 E-05	≤ 3.96 E-06	≤ 5.30 E-06	-----	1.50E+01
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E. Volume of waste released(Prior to dilution)	liters	2.48 E+05	1.32 E+05	1.06 E+05	4.86 E+05	1.00E+01
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F. Volume of dilution water used during period	liters	6.81 E+09	7.82 E+09	4.85 E+09	1.95 E+10	1.00E+01
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Table 2.1-1 (Continued)

MILLSTONE NUCLEAR POWER STATION - UNIT No. 1EFFLUENT AND WASTE DISPOSAL REPORT
LIQUID EFFLUENTS - SUMMATION OF ALL RELEASESYear 1982

Units	APRIL	MAY	JUNE	QUARTERLY TOTALS	Est. Total Error, %
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A. Fission and Activation Products

1. Total released(not including H-3,Gases, Alpha)	Ci	3.40 E-04	2.94 E-02	3.77 E-04	3.01 E-02	1.50E+01
2. Average diluted concentration during period	uCi/ml	6.65 E-11	4.22 E-09	1.03 E-10	1.92 E-09	
3. Percent of applicable limit **	%				** 0.30	

** Based on limit of 10.0 curies per quarter - E.T.S., 2.4.1.2.E

B. Tritium

1. Total Released	Ci	1.44 E-02	1.87 E-03	1.08 E-01	1.24 E-01	1.50E+01
2. Average diluted concentration during period	uCi/ml	2.82 E-09	2.68 E-10	2.95 E-08	7.90 E-09	

C. Dissolved and Entrained Gases

1. Total Released	Ci	1.64 E-04	1.76 E-02	2.51 E-04	1.80 E-02	1.50E+01
2. Average diluted concentration during period	uCi/ml	3.21 E-11	2.53 E-09	6.86 E-11	1.15 E-09	

D. Gross Alpha Radioactivity

1. Total Released	Ci	≤5.90 E-06	≤2.95 E-05	≤ 4.57 E-06	-----	1.50E+01
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E. Volume of waste released(Prior to dilution)	liters	1.18 E+05	7.25 E+05	9.18 E+04	9.35 E+05	1.00E+01
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F. Volume of dilution water used during period	liters	5.11 E+09	6.97 E+09	3.66 E+09	1.57 E+10	1.00E+01
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Table 2.1-2

MILLSTONE NUCLEAR POWER STATION UNIT No. 1
 EFFLUENT AND WASTE DISPOSAL REPORT

YEAR 1982

LIQUID EFFLUENTS - BATCH MODE

Nuclides Released	Unit	JAN.	FEB.	MARCH	Quarterly Total
I-131	Ci	$\leq 5.95 \text{ E-}05$	$\leq 3.62 \text{ E-}05$	$\leq 2.81 \text{ E-}05$	-----
Ba, La-140	Ci	$\leq 1.63 \text{ E-}04$	$\leq 5.63 \text{ E-}05$	$\leq 5.79 \text{ E-}05$	-----
Cs-134	Ci	$2.05 \text{ E-}05$	$9.55 \text{ E-}06$	$3.69 \text{ E-}06$	$3.37 \text{ E-}05$
Cs-137	Ci	$4.41 \text{ E-}04$	$4.48 \text{ E-}04$	$1.77 \text{ E-}04$	$1.07 \text{ E-}03$
Co-58	Ci				
Co-60	Ci	$2.13 \text{ E-}03$	$2.85 \text{ E-}03$	$1.21 \text{ E-}03$	$6.19 \text{ E-}03$
Mn-54	Ci	$5.51 \text{ E-}05$	$1.27 \text{ E-}04$	$4.88 \text{ E-}05$	$2.31 \text{ E-}04$
	Ci				
	Ci				
	Ci				
Sr-89	Ci	$\leq 7.44 \text{ E-}06$	$\leq 3.96 \text{ E-}06$	$\leq 3.18 \text{ E-}06$	-----
Sr-90	Ci	$2.53 \text{ E-}06$	$7.65 \text{ E-}06$	$2.07 \text{ E-}06$	$6.19 \text{ E-}06$
	Ci				
	Ci				
	Ci				
	Ci				
	Ci				
	Ci				
	Ci				
	Ci				
	Ci				
	Ci				
	Ci				
Total for period(above)	Ci	$2.65 \text{ E-}03$	$3.44 \text{ E-}03$	$1.44 \text{ E-}03$	$7.53 \text{ E-}03$
xenon-133	Ci	$4.75 \text{ E-}03$	$1.89 \text{ E-}05$	$5.55 \text{ E-}05$	$4.83 \text{ E-}03$
xenon-135	Ci	$1.67 \text{ E-}02$	$6.98 \text{ E-}06$	$2.32 \text{ E-}05$	$1.67 \text{ E-}02$
	Ci				

Table 2.1-2 (Continued)

MILLSTONE NUCLEAR POWER STATION UNIT No. 1
 EFFLUENT AND WASTE DISPOSAL REPORT

YEAR 1982

LIQUID EFFLUENTS - BATCH MODE

Nuclides Released	Unit	APRIL	MAY	JUNE	Quarterly Total
I-131	Ci	2.31 E-05	1.16 E-02	1.84 E-05	1.16 E-02
Ba,La-140	Ci	5.90 E-05	3.62 E-04	4.59 E-05	-----
Cs-134	Ci				
Cs-137	Ci	8.41 E-05	7.55 E-03	7.43 E-05	7.71 E-03
Co-58	Ci				
Co-60	Ci	2.44 E-04	7.93 E-03	2.44 E-04	8.42 E-03
Mn-54	Ci	3.23 E-06	1.24 E-03		1.24 E-03
Cs-138	Ci	7.45 E-06		5.78 E-05	6.53 E-05
I-133	Ci		8.43 E-04		8.43 E-04
	Ci				
	Ci				
	Ci				
Sr-89	Ci	4.30 E-06	1.85 E-04	3.67 E-06	1.85 E-04
Sr-90	Ci	1.06 E-06	1.95 E-05	1.38 E-06	2.19 E-05
	Ci				
	Ci				
	Ci				
	Ci				
	Ci				
	Ci				
	Ci				
	Ci				
	Ci				
	Ci				
Total for period(above)	Ci	3.40 E-04	2.94 E-02	3.77 E-04	3.01 E-02
xenon-133	Ci	9.47 E-05	6.24 E-03	4.87 E-05	6.38 E-03
xenon-135	Ci	6.88 E-05	1.14 E-02	2.02 E-04	1.17 E-02
	Ci				

Table 2.1-3
MILLSTONE NUCLEAR POWER STATION - UNIT No. 1
EFFLUENT AND WASTE DISPOSAL REPORT
GASEOUS EFFLUENTS - SUMMATION OF ALL RELEASES

Year 1982

Units	JAN.	FEB.	MARCH	QUARTERLY TOTALS	Est. Total Error, %
-------	------	------	-------	------------------	---------------------

A. Fission and Activation Gases

1. Total Released	Ci	2.96 E+02	3.83 E+02	5.56 E+02	1.24 E+03	2.50E+01
2. Average Release Rate For Period	uCi/sec	9.81 E+01	1.59 E+02	2.31 E+02	1.58 E+02	
3. Percent of Technical Specification Limit	%				* 5.67 E-02	

* LIMIT AS PER E.T.S. EQUATION 2.4.2.2.B.1

B. Iodines

1. Total Iodine - 131	Ci	1.59 E-02	8.91 E-03	6.97 E-03	3.18 E-02	2.50E+01
2. Average Release Rate For Period	uCi/sec	5.28 E-03	3.70 E-03	2.89 E-03	4.06 E-03	

C. Particulates

1. Particulates With Half-lives > 8 Days	Ci	1.69 E-02	1.10 E-02	1.00 E-02	3.79 E-02	2.50E+01
2. Average Release Rate For Period	uCi/sec	5.61 E-03	4.56 E-03	4.15 E-03	4.84 E-03	
3. Percent of Technical Specification Limit	%				* 9.41 E-01	
4. Gross Alpha Radioactivity	Ci	1.04 E-06	6.04 E-07	6.09 E-07	2.25 E-06	

* LIMIT AS PER E.T.S. EQUATION 2.4.2.2.B.2

D. Tritium

1. Total Released	Ci	7.84 E+00	3.78 E+00	6.98 E+00	1.86 E+01	2.50E+01
2. Average Release Rate For Period	uCi/sec	2.60 E+00	1.57 E+00	2.90 E+00	2.38 E+00	

Table 2.1-3 (Continued)
MILLSTONE NUCLEAR POWER STATION - UNIT No. 1
EFFLUENT AND WASTE DISPOSAL REPORT
GASEOUS EFFLUENTS - SUMMATION OF ALL RELEASES

Year 1982

Units	APRIL	MAY	JUNE	QUARTERLY TOTALS	Est. Total Error, %
-------	-------	-----	------	------------------	---------------------

A. Fission and Activation Gases

1. Total Released	Ci	7.93 E+01	5.62 E+02	4.53 E+02	1.09 E+03	2.50E+01
2. Average Release Rate For Period	uCi/sec	2.63 E+01	2.33 E+02	1.88 E+02	1.39 E+02	
3. Percent of Technical Specification Limit	%				* 2.85 E-01	

* LIMIT AS PER E.T.S. EQUATION 2.4.2.2.B.1

B. Iodines

1. Total Iodine - 131	Ci	9.05 E-03	9.61 E-03	8.67 E-03	2.73 E-02	2.50E+01
2. Average Release Rate For Period	uCi/sec	3.01 E-03	3.99 E-03	3.60 E-03	3.49 E-03	

C. Particulates

1. Particulates With Half-lives > 8 Days	Ci	1.22 E-02	1.05 E-02	9.88 E-03	3.26 E-02	2.50E+01
2. Average Release Rate For Period	uCi/sec	4.05 E-03	4.36 E-03	4.10 E-03	4.16 E-03	
3. Percent of Technical Specification Limit	%				* 6.16	
4. Gross Alpha Radioactivity	Ci	8.86 E-06	3.07 E-07	2.49 E-06	1.17 E-05	

* LIMIT AS PER E.T.S. EQUATION 2.4.2.2.B.2

D. Tritium

1. Total Released	Ci	4.28 E+00	4.83 E+00	2.49 E+00	1.16 E+01	2.50E+01
2. Average Release Rate For Period	uCi/sec	1.42 E+00	2.00 E+00	1.03 E+00	1.48 E+00	

Table 2.1-4

MILLSTONE NUCLEAR POWER STATION - UNIT No. 1

EFFLUENT AND WASTE DISPOSAL REPORT

YEAR 1982

GASEOUS EFFLUENTS-ELEVATED RELEASE - CONTINUOUS MODE

Nuclides Released	Unit	JAN.	FEB.	MARCH	Quarterly Total
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1. Fission gases

Xe-138	Ci		2.40 E+02		2.40 E+02
Kr-87	Ci		1.24 E+01		1.24 E+01
Kr-88	Ci				
Kr-85m	Ci		8.34 E+00		8.34 E+00
Xe-135	Ci	4.64 E+01	5.67 E+01	3.39 E+01	1.37 E+02
Xe-133	Ci				
Kr-89	Ci				
Xe-137	Ci	1.79 E+02		4.30 E+02	6.09 E+02
Xe-135m	Ci	7.04 E+01	6.59 E+01	9.18 E+01	2.28 E+02
Kr-83m	Ci				
Xe-133m	Ci				
Xe-131m	Ci				
Kr-85	Ci				
Ar-37	Ci				
Total For Period	Ci	2.96 E+02	3.83 E+02	5.56 E+02	1.24 E+03

2. Iodines

iodine-131	Ci	1.36 E-02	7.83 E-03	6.09 E-03	2.75 E-02
iodine-133	Ci	5.13 E-02	2.95 E-02	3.24 E-02	1.13 E-01
iodine-135	Ci	1.01 E-01	5.83 E-02	7.80 E-02	2.37 E-01
Total for period	Ci	1.66 E-01	9.56 E-02	1.16 E-01	3.78 E-01

3. Particulates

I-131	Ci	2.27 E-03	7.08 E-03	8.80 E-04	4.23 E-03
Ba,La-140	Ci	1.02 E-02	6.58 E-03	6.46 E-03	2.32 E-02
Mn-54	Ci	1.28 E-04	3.77 E-05	5.02 E-05	2.16 E-04
Co-58	Ci	5.97 E-05	4.43 E-05	1.16 E-05	1.16 E-04
Co-60	Ci	3.20 E-04	2.23 E-04	2.97 E-04	8.40 E-04

Cs-134	Ci				
Cs-137	Ci	6.94 E-05	6.88 E-05	2.23 E-04	3.61 E-04
Fe-59	Ci				
Cr - 51	Ci	2.51 E-03	2.14 E-03	1.09 E-03	5.74 E-03
Ce - 141	Ci	1.98 E-04	4.55 E-05	4.07 E-05	2.84 E-04

Sr-89	Ci	1.09 E-03	7.72 E-04	1.03 E-03	2.89 E-03
Sr-90	Ci	8.94 E-06	5.79 E-06	5.23 E-06	2.00 E-05
	Ci				
	Ci				
	Ci				

Table 2.1-4 (Continued)

MILLSTONE NUCLEAR POWER STATION - UNIT No. 1

EFFLUENT AND WASTE DISPOSAL REPORT

YEAR 1982

GASEOUS EFFLUENTS-ELEVATED RELEASE - CONTINUOUS MODE

Nuclides Released	Unit	APRIL	MAY	JUNE	Quarterly Total
1. Fission gases					
Xe-136	Ci	3.59 E+01			3.59 E+01
Kr-87	Ci		1.99 E+01	2.73 E+01	4.72 E+01
Kr-88	Ci				
Kr-85m	Ci	1.58 E+00	9.62 E+00		1.12 E+01
Xe-135	Ci	2.09 E+01	6.31 E+01	1.28 E+02	2.12 E+02
Xe-133	Ci	4.99 E+00	9.18 E+01	1.66 E+02	2.63 E+02
Kr-89	Ci				
Xe-137	Ci		3.01 E+02		3.01 E+02
Xe-135m	Ci	1.59 E+01	7.66 E+01	1.32 E+02	2.25 E+02
Kr-83m	Ci				
Xe-133m	Ci				
Xe-131m	Ci				
Kr-85	Ci				
Ar-37	Ci				
Total For Period	Ci	7.93 E+01	5.62 E+02	4.53 E+02	1.09 E+03

2. Iodines

iodine-131	Ci	8.13 E-03	8.85 E-03	8.19 E-03	2.52 E-02
iodine-133	Ci	3.82 E-02	5.23 E-02	4.24 E-02	1.33 E-01
iodine-135	Ci	8.70 E-02	1.04 E-01	8.35 E-02	2.75 E-01
Total for period	Ci	1.33 E-01	1.65 E-01	1.34 E-01	4.32 E-01

3. Particulates

I-131	Ci	9.23 E-04	7.63 E-04	4.75 E-04	2.16 E-03
Ba,La-140	Ci	7.53 E-03	6.82 E-03	5.75 E-03	2.01 E-02
Mn-54	Ci	7.30 E-05	1.21 E-05	3.16 E-05	1.17 E-04
Co-58	Ci	2.74 E-05	9.98 E-06		3.74 E-05
Co-60	Ci	2.71 E-04	1.39 E-04	2.47 E-04	6.57 E-04

Cs-134	Ci			4.94 E-05	4.94 E-05
Cs-137	Ci	1.22 E-04	1.38 E-04	4.63 E-04	7.23 E-04
Fe-57	Ci				
Cr-51	Ci	2.19 E-03	1.68 E-03	2.18 E-03	6.05 E-03
Ce-141	Ci	5.46 E-05	5.26 E-05	4.49 E-05	1.52 E-04

Sr-89	Ci	9.89 E-04	9.29 E-04	6.36 E-04	2.55 E-03
Sr-90	Ci	6.27 E-06	4.85 E-06	4.62 E-06	1.57 E-05
	Ci				
	Ci				

Table 2.2-1

MILLSTONE NUCLEAR POWER STATION - UNIT No. 2EFFLUENT AND WASTE DISPOSAL REPORT
LIQUID EFFLUENTS - SUMMATION OF ALL RELEASESYear 1982

Units	JANUARY	FEBRUARY	MARCH	QUARTERLY TOTALS	Est. Total Error, %
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A. Fission and Activation Products

1. Total released(not including H-3,Gases, Alpha)	Ci	1.26E-01	3.62E-01	1.16 E+00	1.65E+00	1.50E+01
2. Average diluted concentration during period	uCi/ml	1.51E-07	1.65E-07	1.98E-08	2.66E-08	
3. Percent of applicable limit **	%	1.26E+00	3.62E-00	1.16E+01	1.65E+01	

** Based on limit of 10.0 curies per quarter - F.T.S., 2.4.1.2.E

B. Tritium

1. Total Released	Ci	2.64E-01	1.42E+00	5.76E+00	7.44E+00	1.50E+01
2. Average diluted concentration during period	uCi/ml	3.16E-07	6.46E-07	9.78E-08	1.20E-07	

C. Dissolved and Entrained Gases

1. Total Released	Ci	≤ 5.10E-04	≤ 4.58E-04	7.28E-02	7.28E-02	1.50E+01
2. Average diluted concentration during period	uCi/ml	-----	-----	1.24E-09	1.24E-09	

D. Gross Alpha Radioactivity

1. Total Released	Ci	≤ 4.40E-06	≤ 1.16E-05	≤ 1.13E-03	-----	1.50E+01
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E. Volume of waste released(Prior to dilution)	liters	1.10E+05	1.19E+06	2.26E+07	2.39E+07	1.00E+01
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F. Volume of dilution water used during period	liters	8.35E+08	2.20E+09	5.89E+10	6.19E+10	1.00E+01
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Table 2.2-1 (Continued)
MILLSTONE NUCLEAR POWER STATION - UNIT No. 2

EFFLUENT AND WASTE DISPOSAL REPORT
LIQUID EFFLUENTS - SUMMATION OF ALL RELEASES

Year 1982

Units	APRIL	MAY	JUNE	QUARTERLY TOTALS	Est. Total Error, %
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A. Fission and Activation Products

1. Total released(not including H-3,Gases, Alpha)	Ci	3.54E+00	3.32E+00	3.08E+00	9.94E+00	1.50E+01
2. Average diluted concentration during period	uCi/ml	4.29E-08	3.91E-08	3.57E-08	3.91E-08	
3. Percent of applicable limit **	%	3.54E+01	3.32E+01	3.08E+01	6.86 E+01	

** Based on limit of 10.0 curies per quarter - E.T.S., 2.4.1.2.E - effective until May 28, 1982 at which time the dose limits indicated in Table 2.3-1 became effective. (E.T.S. 2.4.1.2.D)

B. Tritium

1. Total Released	Ci	2.37E+01	2.56E+01	3.90E+01	8.83E+01	1.50E+01
2. Average diluted concentration during period	uCi/ml	2.87E-07	3.01E-07	4.53E-07	3.48E-07	

C. Dissolved and Entrained Gases

1. Total Released	Ci	5.18E+00	1.80E+00	2.71E+00	9.69E+00	1.50E+01
2. Average diluted concentration during period	uCi/ml	6.27E-08	2.12E-08	3.14E-08	3.82E-08	

D. Gross Alpha Radioactivity

1. Total Released	Ci	≤ 7.19E-04	≤ 3.84E-04	≤ 6.36E-04	- - - -	1.50E+01
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E. Volume of waste released(Prior to dilution)	liters	1.79E+07	1.27E+07	1.26E+07	4.32E+07	1.00E+01
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F. Volume of dilution water used during period	liters	8.26E+10	8.49E+10	8.62E+10	2.54E+11	1.00E+01
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Table 2.2-2

MILLSTONE NUCLEAR POWER STATION - UNIT No. 2

EFFLUENT AND WASTE DISPOSAL REPORT Steam Generator Blowdown

YEAR 1982

LIQUID EFFLUENTS CONTINUOUS MODE

Nuclides Released	Unit	JANUARY	FEBRUARY	MARCH	Quarterly Total
Co-58	Ci		9.32E-04	1.03E-01	1.04E-01
Co-60	Ci		9.34E-04	8.24E-02	8.33E-02
Cs-134	Ci		1.03E-03	8.17E-02	8.27E-02
Cs-137	Ci		1.21E-03	9.95E-02	1.01E-01
Mn-54	Ci		2.42E-04	1.08E-02	1.10E-01
I-131	Ci		- - - -	8.44E-02	8.44E-02
I-132	Ci		- - - -	3.23E-02	3.23E-02
I-133	Ci		- - - -	2.27E-01	2.27E-01
I-134	Ci		- - - -	1.32E-02	1.32E-02
I-135	Ci		- - - -	9.01E-02	9.01E-02
Na-24	Ci		- - - -	2.34E-02	2.34E-02
Cr-51	Ci		- - - -	7.24E-02	7.24E-02
Nb-95	Ci		- - - -	1.79E-02	1.79E-02
	Ci				
	Ci				
	Ci				
Sr-89	Ci		- - - -	≤ 6.54E-04	- - - -
Sr-90	Ci		- - - -	≤ 1.74E-04	- - - -
	Ci				
Total For Period	Ci		4.34E-03	9.39E-01	9.43E-01
Gross Alpha	Ci		- - - -	≤ 1.09E-03	- - - -
	Ci				
H-3	Ci		1.21E-02	3.99E-01	4.11E-01
	Ci				
	Ci				
Total for period (above)	Ci				
xenon-133	Ci		≤ 8.36E-03	≤ 8.84E-03	- - - -
xenon-135	Ci		≤ 1.16E-03	1.83E-03	1.83E-03
Xe-135m	Ci		- - - -	4.69E-02	4.69E-02

Table 2.2-2 (Continued)

MILLSTONE NUCLEAR POWER STATION - UNIT No. 2

EFFLUENT AND WASTE DISPOSAL REPORT

Steam Generator Blowdown

YEAR 1982

LIQUID EFFLUENTS CONTINUOUS MODE

Nuclides Released	Unit	APRIL	MAY	JUNE	Quarterly Total
Na-24	Ci	5.43E-02	3.34E-02	2.08E-04	8.79E-02
Co-58	Ci	3.30E-02	3.33E-02	9.06E-03	7.54E-02
Co-60	Ci	3.50E-02	4.61E-02	9.05E-03	9.02E-02
Cr-51	Ci	3.20E-03	1.55E-01		1.58E-01
Nb-95	Ci	3.02E-04	2.21E-02	2.16E-03	2.46E-02
Tc-99m	Ci	3.42E-03			3.42E-03
I-131	Ci	1.44E+00	1.17E+00	1.28E+00	3.89E+00
I-132	Ci	2.31E-01	1.64E-01	1.01E-01	4.96E-01
I-133	Ci	1.00E+00	7.49E-01	5.95E-01	2.34E+00
I-134	Ci	5.94E-02	3.56E-02	3.26E-02	1.28E-01
I-135	Ci	3.97E-01	2.51E-01	1.88E-01	8.36E-01
Cs-134	Ci	4.04E-02	1.65E-02	1.29E-02	6.98E-02
Cs-136	Ci	3.04E-02			3.04E-02
Cs-137	Ci	8.58E-02	1.99E-02	1.85E-02	1.24E-01
Cs-138	Ci	8.13E-02	5.07E-01	2.19E-01	8.07E-01
Mn-54	Ci		5.66E-03		5.66E-03
Ru-106	Ci			2.01E-02	2.01E-02
Ce-144	Ci		6.34E-03		6.34E-03
Zr-95	Ci		2.78E-02		2.78E-02
W-187	Ci		4.16E-03		4.16E-03
Sr-89	Ci	2.78E-03	6.29E-04	≤ 3.66E-04	3.41E-03
Sr-90	Ci	≤ 8.70E-05	≤ 5.24E-05	≤ 8.54E-05	- - -
Total For Period	Ci	3.50E+00	3.25E+00	2.49E+00	9.23E+00
Gross Alpha	Ci	≤ 6.96E-04	≤ 3.69E-04	≤ 6.10E-04	- - -
H-3	Ci	3.20E+00	3.67E+00	3.14E+00	1.00E+01
Total for period (above)	Ci				
xenon-133	Ci	1.31E-01	1.02E-01	1.40E-01	3.73E-01
xenon-135	Ci	5.39E-02	3.75E-02	1.06E-01	1.97E-01
Xe-135m	Ci	4.78E+00	1.57E+00	2.25E+00	8.60E+00

Table 2.2-3

MILLSTONE NUCLEAR POWER STATION UNIT No. 2
EFFLUENT AND WASTE DISPOSAL REPORTYEAR 1982

LIQUID EFFLUENTS - BATCH MODE

Liquid Rad Waste

Nuclides Released	Unit	JANUARY	FEBRUARY	MARCH	Quarterly Total
I-131	ci	2.91E-04	≤ 1.68E-04	3.29E-05	3.24E-04
Ba, La-140	ci	≤ 3.55E-04	≤ 3.21E-04	≤ 3.46E-04	- - - -
Cs-134	ci	4.69E-02	1.66E-02	3.18E-04	6.38E-02
Cs-137	ci	6.19E-02	2.20E-02	6.96E-04	8.46E-02
Co-58	ci	1.60E-02	7.05E-02	4.98E-02	1.36E-01
Co-60	ci	1.44E-04	1.18E-01	1.19E-01	2.37E-01
Mn-54	ci	4.18E-04	3.68E-03	2.92E-03	7.02E-03
Sr-92	ci	1.30E-05	1.02E-02	3.90E-03	1.41E-02
Sb-125	ci	5.27E-05	4.11E-05	1.03E-03	1.12E-03
Nb-97	ci	6.57E-05	4.26E-02	1.93E-02	6.20E-02
Cr-51	ci	- - - -	3.70E-02	6.11E-03	4.31E-02
Zr-95	ci	- - - -	2.46E-03	1.03E-03	3.49E-03
Nb-95	ci	- - - -	3.75E-03	3.63E-03	7.38E-03
Fe-95	ci	- - - -	1.31E-03	9.26E-05	1.40E-03
Co-57	ci	- - - -	1.66E-04	9.79E-05	2.64E-04
Ag-110m	ci	- - - -	2.98E-02	1.42E-02	4.40E-02
Ce-144	ci	- - - -	1.68E-04	- - - -	1.68E-04
Ru-106	ci	- - - -	- - - -	1.90E-03	1.90E-03
I-133	ci	- - - -	- - - -	9.32E-06	9.32E-06
	ci				
Sr-89	ci	≤ 4.40E-06	2.56E-05	≤ 4.15E-05	2.56E-05
Sr-90	ci	≤ 7.70E-07	1.82E-06	≤ 4.15E-06	1.82E-06
	ci				
Total For Period	ci	1.26E-01	3.58E-01	2.24E-01	7.08E-01
	ci				
H-3	ci	2.64E-01	1.41E+00	5.36E+00	7.03E+00
	ci				
Gross Alpha	ci	≤ 4.40E-06	≤ 1.16E-05	≤ 4.14E-05	- - - -
	ci				
	ci				
xenon-133	ci	≤ 3.68E-04	≤ 3.45E-04	5.37E-04	5.37E-04
xenon-135	ci	≤ 1.42E-04	≤ 1.13E-04	2.35E-02	2.35E-02
	ci				

Table 2.2-3 (Continued)

HILLSTONE NUCLEAR POWER STATION UNIT No. 2

EFFLUENT AND WASTE DISPOSAL REPORT

YEAR 1982

LIQUID EFFLUENTS - BATCH MODE

Liquid Rad Waste

Nuclides Released	Unit	APRIL	MAY	JUNE	Quarterly Total
I-131	ci	6.44E-03	3.16E-02	9.80E-02	1.36E-01
Ba,La-140	ci	9.61E-06	≤ 3.50E-04	4.17E-05	5.13E-05
Cs-134	ci	4.87E-04	6.90E-04	1.45E-01	1.46E-01
Cs-137	ci	8.62E-04	7.77E-04	2.00E-01	2.02E-01
Co-58	ci	5.42E-03	3.07E-03	6.85E-03	1.53E-02
Co-60	ci	1.57E-02	1.16E-02	6.31E-02	9.04E-02
Mn-54	ci	3.37E-04	1.07E-04	8.91E-04	1.34E-03
Ag-110m	ci	9.28E-04	4.58E-03	1.94E-02	2.49E-02
Nb-97	ci	2.62E-03	8.02E-03	3.65E-02	4.71E-02
I-133	ci	8.29E-04	4.83E-03	5.51E-03	1.12E-02
Sr-92	ci	3.59E-04	1.66E-03	6.80E-03	8.82E-03
Sb-125	ci	8.43E-04	4.47E-05	8.68E-05	9.75E-04
Nb-95	ci	1.08E-04	3.11E-04	1.32E-04	5.51E-04
Tc-99M	ci	5.79E-05			5.79E-05
Rb-88	ci		1.46E-04	1.34E-03	1.49E-03
Ba-139	ci		8.35E-04		8.35E-04
I-135	ci		5.24E-04		5.24E-04
Na-24	ci			1.37E-03	1.37E-03
Cs-136	ci			1.82E-03	1.82E-03
	ci				
Sr-89	ci	≤ 1.40E-05	≤ 1.52E-05	1.03E-04	1.03E-04
Sr-90	ci	≤ 3.26E-06	≤ 1.52E-06	≤ 4.29E-06	- - - -
	ci				
Total For Period	ci	3.50E-02	6.88E-02	5.87E-01	6.91E-01
H-3	ci	2.05E+01	2.19E+01	3.59E+01	7.83E+01
Gross Alpha	ci	≤ 2.33E-05	≤ 1.52E-05	≤ 2.57E-05	- - - -
	ci				
	ci				
	ci				
	ci				
Xenon-132	ci	2.08E-01	7.33E-02	1.85E-01	4.66E-01
Xenon-135	ci	6.88E-03	1.08E-02	2.45E-02	4.94E-02
	ci				

EFFLUENT AND WASTE DISPOSAL REPORT
GASEOUS EFFLUENTS - SUMMATION OF ALL RELEASES

Year 1982

Units	JANUARY	FEBRUARY	MARCH	QUARTERLY TOTALS	Est. Total Error, %
-------	---------	----------	-------	------------------	---------------------

A. Fission and Activation Gases

1. Total Released	Ci	1.39E+01	1.20E+01	1.71E+01	4.30E+01	2.50E+01
2. Average Release Rate For Period	uCi/sec	5.19E+00	4.97E+00	6.38E+00	5.52E+00	
3. Percent of Technical Specification Limit	%	-----	-----	-----	-----	

B. Iodines

1. Total Iodine - 131	Ci	1.59E-04	1.66E-05	4.44E-03	4.62E-03	2.50E+01
2. Average Release Rate For Period	uCi/sec	5.93E-05	6.86E-06	1.66E-03	5.93E-04	

C. Particulates

1. Particulates With Half-lives > 8 Days	Ci	2.06E-04	1.27E-04	9.82E-05	4.31E-04	2.50E+01
2. Average Release Rate For Period	uCi/sec	7.70E-05	5.25E-05	3.66E-05	5.54E-05	
3. Percent of Technical Specification Limit	%	-----	-----	-----	-----	
4. Gross Alpha Radioactivity	Ci	≤ 5.15E-08	≤ 8.24E-08	≤ 6.14E-08	-----	

D. Tritium

1. Total Released	Ci	5.68E+00	6.00E+00	2.12E+00	1.38E+01	2.50E+01
2. Average Release Rate For Period	uCi/sec	2.12E+00	2.48E+00	7.91E-01	1.77E+00	

Table 2.2-4 (Continued)
MILLSTONE NUCLEAR POWER STATION - UNIT No. 2

EFFLUENT AND WASTE DISPOSAL REPORT
GASEOUS EFFLUENTS - SUMMATION OF ALL RELEASES

Year 1982

Units	April	May	June	QUARTERLY TOTALS	Est. Total Error, %
-------	-------	-----	------	---------------------	------------------------

A. Fission and Activation Gases

1. Total Released	Ci	7.32E+02	8.38E+02	3.24E+03	4.81E+03	2.50E+01
2. Average Release Rate For Period	uCi/sec	2.83E+02	3.12E+02	1.25E+03	6.12E+02	
3. Percent of Technical Specification Limit	%	-----	-----	-----	-----	

B. Iodines

1. Total Iodine - 131	Ci	7.56E-02	8.40E-02	7.27E-02	2.32E-01	2.50E+01
2. Average Release Rate For Period	uCi/sec	2.92E-02	3.12E-02	2.81E-02	2.94E-02	

C. Particulates

1. Particulates With Half-lives > 8 Days	Ci	1.92E-05	1.43E-05	1.94E-05	5.36E-05	2.50E+01
2. Average Release Rate For Period	uCi/sec	7.41E-06	5.32E-06	7.49E-06	6.82E-06	
3. Percent of Technical Specification Limit	%	-----	-----	-----	-----	
4. Gross Alpha Radioactivity	Ci	≤ 7.52E-08	≤ 4.06E-08	≤ 4.08E-08	-----	

D. Tritium

1. Total Released	Ci	2.15E+00	2.75E+00	4.20E+00	9.10E+00	2.50E+01
2. Average Release Rate For Period	uCi/sec	8.30E-01	1.02E+00	1.62E+00	1.16E+00	

Table 2.2-5

MILLSTONE NUCLEAR POWER STATION - UNIT No. 2

EFFLUENT AND WASTE DISPOSAL REPORT

Unit No. 2 Ventilation
and S.G. Blowdown Tank ReleasesYEAR 1982

GASEOUS EFFLUENTS - GROUND-LEVEL RELEASES - CONTINUOUS MODE

Nuclides Released	Unit	JANUARY	FEBRUARY	MARCH	Quarterly Total
-------------------	------	---------	----------	-------	--------------------

1. Fission gases

Xe-133	Ci				
Kr-85	Ci				
Ar-37	Ci				
Xe-135	Ci	1.39E+01	1.20E+01	1.56E+01	4.15E+01
	Ci				
	Ci				
	Ci				
	Ci				
	Ci				
	Ci				
Total for period	Ci	1.39E+01	1.20E+01	1.56E+01	4.15E+01

2. Iodines

iodine-131	Ci	1.58E-04	1.66E-05	4.44E-03	4.62E-03
iodine-133	Ci	2.12E-05	2.44E-05	1.35E-04	1.81E-04
iodine-135	Ci	2.29E-04	8.48E-06	1.09E-03	1.33E-03
Total for period	Ci	4.08E-04	4.95E-05	5.66E-03	6.13E-03

3. Particulates

I-131	Ci	9.37E-07	≤1.73E-06	4.17E-07	1.35E-06
Ba,La-140	Ci	≤1.00E-06	≤9.73E-07	≤7.71E-07	- - - -
Co-58	Ci	7.23E-05	- - - -	- - - -	7.23E-05
Co-60	Ci	1.11E-04	1.19E-04	1.23E-05	2.42E-04
Mn-54	Ci	1.94E-06	- - - -	1.45E-07	2.08E-06

Cs-137	Ci	- - - - -	6.59E-06	2.46E-06	9.05E-06
Cr-51	Ci	2.02E-05	- - - -	- - - -	2.02E-05
Cs-134	Ci	- - - -	1.30E-06	1.06E-06	2.36E-06
Sr-89	Ci	2.47E-07	1.65E-07	≤1.75E-07	4.12E-07
Sr-90	Ci	≤2.06E-08	≤2.06E-08	≤1.75E-08	- - - -

Total For Period	Ci	2.06E-04	1.27E-04	1.64E-05	3.49E-04
	Ci				
	Ci				
P-3	Ci	5.68E+00	6.00E+00	2.12E+00	1.38E+01
Gross Alpha	Ci	≤5.15E-08	≤8.24E-08	≤6.14E-08	- - - -

Table 2.2-5 (Continued)

MILLSTONE NUCLEAR POWER STATION - UNIT No. 2

EFFLUENT AND WASTE DISPOSAL REPORT

Unit No. 2 Ventilation
and S.G. Blowdown Tank Releases

YEAR 1982 GASEOUS EFFLUENTS - GROUND-LEVEL RELEASES - CONTINUOUS MODE

Nuclides Released	Unit	APRIL	MAY	JUNE	Quarterly Total
-------------------	------	-------	-----	------	-----------------

1. Fission gases

Xe-133	Ci	6.25E+02	6.91E+02	9.44E+02	2.26E+03
Xe-135	Ci	7.16E+01	4.44E+01	1.18E+02	2.43E+02
Kr-87	Ci	- - - -	- - - -	1.04E+01	1.04E+01
Kr-85m	Ci	- - - -	- - - -	1.45E+01	1.45E+01
	Ci				
	Ci				
	Ci				
	Ci				
	Ci				
	Ci				
Total for period	Ci	6.97E+02	7.35E+02	1.09E+03	2.53E+03

2. Iodines

iodine-131	Ci	5.64E-03	6.26E-03	5.42E-03	1.73E-02
iodine-133	Ci	6.50E-04	3.00E-03	4.50E-03	8.15E-03
iodine-135	Ci	1.79E-04	5.27E-04	2.45E-04	9.51E-04
Total for period	Ci	6.47E-03	9.79E-03	1.02E-02	2.64E-02

3. Particulates

I-131	Ci	5.77E-06	5.82E-06	7.29E-06	1.89E-05
Ba,La-140	Ci	≤9.34E-07	≤7.38E-07	≤1.05E-06	- - - -
Co-58	Ci				
Co-60	Ci	1.18E-05	7.89E-06	1.13E-05	3.09E-05
Mn-54	Ci				

Cs-137	Ci	1.65E-06	- - - -	- - - -	1.65E-06
	Ci				
	Ci				
	Ci				
	Ci				

Sr-89	Ci	6.77E-07	6.21E-07	8.06E-07	2.10E-06
Sr-90	Ci	≤1.88E-08	≤1.46E-08	≤2.86E-08	- - - -
Total For Period	Ci	1.99E-05	1.43E-05	1.94E-05	5.36E-05
H-3	Ci	2.15E+00	2.75E+00	4.20E+00	9.10E+00
Cross Alpha	Ci	≤7.52E-08	≤4.06E-08	≤4.08E-08	- - - -

Table 2.2-6
MILLSTONE NUCLEAR POWER STATION - UNIT No. 2

EFFLUENT AND WASTE DISPOSAL REPORT

SJAE

YEAR 1982

GASEOUS EFFLUENTS-ELEVATED RELEASE - CONTINUOUS MODE

Nuclides Released	Unit	JANUARY	FEBRUARY	MARCH	Quarterly Total
-------------------	------	---------	----------	-------	-----------------

1. Fission gases

Xe-138	Ci			5.21E-02	5.21E-02
Kr-87	Ci			5.37E-02	5.37E-02
Kr-88	Ci			1.14E-01	1.14E-01
Kr-85m	Ci			5.07E-02	5.07E-02
Xe-135	Ci			2.57E-01	2.57E-01
Xe-133	Ci			6.85E-02	6.85E-02
Kr-89	Ci				
Xe-137	Ci				
Xe-135m	Ci			6.98E-02	6.98E-02
Kr-83m	Ci				
Xe-133m	Ci				
Xe-131m	Ci				
Kr-85	Ci				
Ar-41	Ci			1.05E-01	1.05E-01
Total For Period	Ci			7.71E-01	7.71E-01

NO DISCHARGES THIS PERIOD

NO DISCHARGES THIS PERIOD

2. Iodines

iodine-131	Ci				
iodine-133	Ci				
iodine-135	Ci				
Total for period	Ci				

3. Particulates

I-131	Ci				
Ba, La-140	Ci				
Mn-54	Ci				
Co-58	Ci				
Co-60	Ci				

Cs-134	Ci				
Cs-137	Ci				
Fe-59	Ci				
	Ci				
	Ci				

Sr-89	Ci				
Sr-90	Ci				
	Ci				
H-3	Ci			2.95E-04	2.95E-04
	Ci				

Table 2.2-6 (Continued)

MILLSTONE NUCLEAR POWER STATION - UNIT No. 2

EFFLUENT AND WASTE DISPOSAL REPORT

SJAE

YEAR 1982 GASEOUS EFFLUENTS-ELEVATED RELEASE - CONTINUOUS MODE

Nuclides Released	Unit	APRIL	MAY	JUNE	Quarterly Total
-------------------	------	-------	-----	------	-----------------

1. Fission gases

Xe-138	Ci	9.49E-01	1.55E+00	9.05E+00	1.16E+01
Kr-87	Ci	9.84E-01	1.33E-03	4.55E+01	4.65E+01
Kr-88	Ci	2.03E+00	4.86E+00	9.07E+01	9.76E+01
Kr-85m	Ci	1.01E+00	2.19E+00	5.17E+01	5.49E+01
Xe-135	Ci	5.94E+00	1.54E+01	3.09E+02	3.30E+02
Xe-133	Ci	2.09E+01	7.18E+01	1.48E+03	1.57E+03
Kr-89	Ci				
Xe-137	Ci	2.10E-01	1.66E-01		3.76E-01
Xe-135m	Ci	1.95E+00	4.22E+00	5.33E+01	5.95E+01
Kr-83m	Ci				
Xe-132m	Ci	4.17E-01	1.55E+00	2.86E+01	3.06E+01
Xe-131m	Ci		7.91E-01		7.91E-01
Kr-85	Ci			7.78E+01	7.78E+01
Ar- ⁴¹	Ci	2.91E-01	1.22E-01		4.13E-01
Total For Period	Ci	3.47E+01	1.03E+02	2.15E+03	2.28E+03

2. Iodines

iodine-131	Ci				
iodine-133	Ci				
iodine-135	Ci				
Total for period	Ci				

3. Particulates

I-131	Ci				
Ba,La-140	Ci				
Mn-54	Ci				
Co-58	Ci				
Co-60	Ci				

Cs-134	Ci				
Cs-137	Ci				
Fe-5 ₉	Ci				
	Ci				
	Ci				

Sr-89	Ci				
Sr-90	Ci				
	Ci				
H-3	Ci	7.12E-04	1.33E-03	3.17E-02	3.37E-02
	Ci				

Table 2.2-8

MILLSTONE NUCLEAR POWER STATION - UNIT No. 2

EFFLUENT AND WASTE DISPOSAL REPORT

Waste Gas Decay Tanks

YEAR 1982

GASEOUS EFFLUENTS-ELEVATED RELEASE - BATCH MODE

Nuclides Released	Unit	JANUARY	FEBRUARY	MARCH	Quarterly Total
-------------------	------	---------	----------	-------	-----------------

1. Fission gases

Xe-133	Ci		-----	5.79E-04	5.79E-04
Xe-135	Ci				
Xe-131m	Ci				
Xe-135m	Ci				
Kr-85	Ci		3.68E-02	7.29E-01	7.66E-01
	Ci				
	Ci				
	Ci				
	Ci				
	Ci				
Total for period	Ci		3.68E-02	7.30E-01	7.66E-01

2. Iodines

iodine-131	Ci				
iodine-133	Ci				
iodine-135	Ci				
Total for period	Ci				

3. Particulates

	Ci				
	Ci				
H-3	Ci		2.45E-05	8.18E-05	1.06E-04
	Ci				
	Ci				

	Ci				
	Ci				
	Ci				
	Ci				
	Ci				

	Ci				
	Ci				
	Ci				
	Ci				
	Ci				
	Ci				

NO DISCHARGES THIS PERIOD

TABLE 2.3-1

EFFLUENT AND WASTE DISPOSAL SEMIANNUAL REPORT
SUPPLEMENTAL INFORMATION

FACILITY: Millstone Unit No's. 1 and 2

1. REGULATORY LIMITS

a. Noble Gases

$$\sum_i Q_{is} [3.2 \bar{E}_{i\gamma} + 0.04 \bar{E}_{i\beta}] + Q_v [23 \bar{E}_{i\gamma} + 58 \bar{E}_{i\beta}] \leq 1$$

where,

Q_{is} = release rate from the main stack of Unit 1 in Ci/sec
(elevated releases)

Q_v = release rate from unit 2 vent in Ci/sec (mixed release)

i = the individual nuclide

$\bar{E}_{i\gamma}$ = the average gamma energy per disintegration (MeV)

$\bar{E}_{i\beta}$ = the average beta energy per disintegration (MeV)

b. All radioiodines and particulates with half lives greater than eight days.

$$7.9 \times 10^4 Q_s + 3.04 \times 10^6 Q_v \leq 1$$

c. Liquid effluents

- 10 Ci per calendar quarter per unit excluding tritium and dissolved gases. (prior to May 28, 1982)
- 1.5 mrem and 5.0 mrem per calendar quarter per unit excluding noble gases for whole body and organs, respectively (after May 28, 1982)

2. MAXIMUM PERMISSIBLE CONCENTRATIONS

All maximum permissible concentrations for airborne and liquid releases are as specified in 10CFR20, Appendix B, Table II for the soluble form of the nuclide.

3. AVERAGE ENERGY

Millstone Environmental Technical Specifications, Table 2.4-5.

TABLE 2.3-1 (continued)

4. MEASUREMENTS AND APPROXIMATIONS OF TOTAL RADIOACTIVITY

a. Unit 1 Stack - Gaseous Releases

(1) Fission and Activation Gases

Stack monitors continuously record the effluent activity and flow rate. During periods when the augmented off-gas system is not operable, the radiation monitor reading is related to μCi by off-gas sampling at the steam jet air ejectors and subsequent isotopic analysis. The isotopic activity at the SJAE is mathematically decayed to establish the activity in the stack using the known holdup time. During periods of augmented off-gas system operation, samples are taken directly from the stack with a subsequent isotopic analysis. In both cases, the calculated activity in the stack is then correlated to the monitor reading. The isotopic concentrations at the release point are multiplied by the total stack flow to obtain total μCi release for each isotope.

(2) Iodines and Particulates

Charcoal cartridges and particulate filters are used to collect iodines and particulates, respectively. The filters are then analyzed for isotopic content using a gamma spectrometer; particulate filters are also analyzed for strontium. Isotopic concentrations are multiplied by the release flow rate to determine the total amount of activity released.

b. Unit 1 & Unit 2 Liquid Effluents

There are eight tanks which are used to discharge liquids containing radioactivity to the environs; they are:

- Unit 1 - Decontamination Solution Tank
- Unit 1 - Floor Drain Sample Tanks (2)
- Unit 1 - Waste Sample Tanks (2)
- Unit 2 - Clean Waste Monitor Tanks (2)
- Unit 2 - Aerated Waste Monitor Tank

Prior to release, a tank is recirculated for two equivalent tank volumes, a sample is drawn and analysed on the Ge(Li) gamma spectrometer for individual radionuclide composition. An aliquot of the sample is analyzed for tritium. Isotopic concentrations are multiplied by the volume released to obtain the total activity released.

A proportional aliquot of each discharge is retained for composite analysis for strontium and gross alpha.

TABLE 2.3-1 (continued)

c. Unit 2 Vent

Total cc's out the Unit 2 Vent per month is multiplied by the isotopic concentrations as measured by gamma spectrometer GE(Li) analysis of grab samples of gases, iodine and particulates to obtain total μCi released from the Vent.

d. Unit 2 Containment Purges

Grab samples are taken for gaseous, particulate, and iodine. These are analyzed on GE(Li) gamma spectrometer and concentrations computed. Computed concentrations are then multiplied by the purge volume for total μCi released.

Tritium collection is by the gas washing bottle method. The sample is counted on a liquid scintillation counter. Concentration is computed using worst possible case, 100% humidity. Concentration is multiplied by volume purged to give total μCi released.

e. Unit 2 Steam Generator Blowdown

Grab samples are taken of steam generator blowdown water, and are analyzed by gamma spectrometry, Ge(Li). Total volume of blowdown is multiplied by the isotopic concentrations to determine the total activity released via blowdown. The calculated activity released out of the blowdown tank vent is accounted for pending the point of blowdown sampling.

Tritium is determined through liquid scintillation counting and strontiums are analyzed by radiochemical separations and appropriate counting techniques.

f. Unit 2 Steam Generator Blowdown Tank Vent

A decontamination factor (DF) across the steam generator blowdown tank vent has been determined for iodines by comparison of the results of gamma spectrometry, Ge(Li), analysis of steam generator blowdown water and grab samples of condensed steam exiting the blowdown tank vent. This DF was then applied to the total iodine releases via the steam generator blowdown water to determine the iodine releases out of the blowdown tank vent. An additional factor of 0.33 was also utilized to account for the fraction of blowdown volume actually flashing to steam in the blowdown tank.

Table 2.3-1 (Continued)

g. Estimates of Errors

Estimates of errors associated with radioactivity measurements were estimated using the following guidelines:

- (1) Sampling and Data Collection - 10% accounts for variation in personnel obtaining required data.
- (2) Calibration - 5% instrument calibration to NBS standards.
- (3) Counting of Samples - 10% maximum error due to counting statistics.
- (4) Flow and Level Measurements - 10% maximum errors on volumes released.

5. BATCH RELEASES

	Unit 1 Liquids	Unit 2 Liquids	Unit 2 Waste Gas Tanks	Unit 2 Cont. Vents
a. Number of Batch Releases	86	136	3	21
b. Total Time (Minutes)	20,317	15,320	1,602	4,120
c. Maximum Time-One Batch (Minutes)	370	334	853	600
d. Average Time (Minutes)	236	113	534	196
e. Minimum Time-One Batch (Minutes)	75	46	300	15

Liquids - Average Stream Flow - Not Applicable - Ocean Site

6. ABNORMAL RELEASES

None

3.0 Radioactive Solid Waste

The units were operated in accordance with Environmental Technical Specification Section 2.4.3. Summaries of solid waste shipments for each unit are given in the attached Tables 3.1 and 3.2

TABLE 3.1

EFFLUENT AND WASTE DISPOSAL SEMIANNUAL REPORT (1982)

SOLID WASTE AND IRRADIATED FUEL SHIPMENTS

MILLSTONE UNIT 1

(January 1, 1982 - June 30, 1982)

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

1. Type of Waste	Unit	6-Month Period	Est. Total Error, %
Spent Resins, Filter Sludges, a) Evaporator Bottoms, Etc.	M ³ Ci	1.03 E+2 7.20 E+2	2.5 E+1
Dry Compressable Waste, b) Contaminated Equipment, Etc.	M ³ Ci	3.68 E+2 1.00 E+1	3.0 E+1
Irradiated Components, c) Control Rods, Etc.	M ³ Ci	None	NA
d) Other (Describe)	M ³ Ci	None	NA

Table 3.1 (Continued)

2. Estimate of Major Nuclide Composition (By Type of Waste)

a)	60 CO	%	4.17 E+1
	137 CS	%	2.43 E+1
	55 FE	%	1.38 E+1
	54 MN	%	5.24 E+0
	89 SR	%	3.92 E+0
	51 CR	%	3.72 E+0
	134 CS	%	2.93 E+0
	58 CO	%	1.10 E+0
	140 BA	%	8.10 E-1
	140 LA	%	7.20 E-1
	131 141 90 99M 65 97 59 95 95 106 63 I, CE, SR, TC, ZN, NB, FE, ZR, NB, RU, NI	%	1.76 E+0
b)	60 Co	%	4.11 E+1
	55 FE	%	2.34 E+1
	137 CS	%	2.15 E+1
	54 MN	%	6.69 E+0
	134 CS	%	3.60 E+0
	89 SR	%	3.50 E+0
	63 90 NI, SR	%	2.10 E-1

Table 3.1 (Continued)

3. Solid Waste Disposition

<u>Number of Shipments</u>	<u>Mode of Transportation</u>	<u>Destination</u>
37	Truck (Sole use vehicle)	Barnwell, S.C.

B. Irradiated Fuel Shipments

None

Table 3.2

MILLSTONE UNIT 2

(January 1, 1982 - June 30, 1982)

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

1. Type of Waste	Unit	6-Month Period	Est. Total Error, %
a) Spent Resins, Filter Sludges, Evaporator Bottoms, Etc.	M ³ Ci	6.85 E+0 4.84 E+2	2.5 E+1
b) Dry Compressible Waste, Contaminated Equipment, Etc.	M ³ Ci	*Note	*Note
c) Irradiated Components, Control Rods, Etc.	M ³ Ci	None	NA
d) Other (Describe)	M ³ Ci	None	NA

* Note: Millstone Unit 2 Type (b) waste is included in Millstone Unit 1 Report.

2. Estimate of major nuclide composition (by type of waste).

a) 58 CO	%	4.07 E+1
60 CO	%	2.80 E+1
137 CS	%	1.44 E+1
134 CS	%	1.09 E+1
54 MN	%	4.98 E+0
55 57 89 90 63 97 92 FE, CO, SR, SR, Ni, NB, SR,	%	1.02 E+0

Table 3.2 (Continued)

3. Solid Waste Disposition

<u>Number of Shipments</u>	<u>Mode of Transportation</u>	<u>Destination</u>
2	Truck (sole use vehicle)	Barnwell, S.C.

B. Irradiated Fuel Shipments

None

METEOROLOGY - JOINT FREQUENCY DISTRIBUTION

4.0 The joint-frequency distributions for the continuous and batch releases are given in the tables at the end of this report.

OFFSITE DOSE ESTIMATES

5.0 In accordance with the requirements of the Technical Specifications and Regulatory Guide 1.21, the off-site dose to humans from the gaseous and liquid radioactive effluents of Millstone 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 during the first half of 1983.

1. Dose Models

a. Airborne Effluents

Maximum individual doses and population doses due to the release of noble gases, radioiodines and particulates were calculated using the computer code GASPAR⁽¹⁾, with the exception of Unit 1 noble gas doses. The maximum individual dose due to direct exposure from the Unit 1 noble gas plume was calculated using the computer code AIREM⁽²⁾.

The Gaspar 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 effluent concentration (X/Q) and average relative deposition (D/Q) used in the GASPAC 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 Routing Releases from Light-Water-Cooled Reactors."

Releases from the Millstone Unit 1 375-foot stack are considered to be elevated at all times. The Pasquill stability classes were determined using the temperature gradient between the 33-foot and 447-foot levels of the meteorological tower.

Releases from the Unit 2, 145-foot vent 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 142-foot levels of the meteorological tower.

The GASPAC code was run separately for continuous releases from the MP2 vent (building ventilation) and steam generator blowdown tank flashed gases, MP2 batch releases from the MP1 stack (containment vents) and MP2 batch releases from the MP1 stack (waste gas tanks). Doses due to MP2 steam jet air ejector continuous releases from the MP1 stack were calculated using the computer code, AIREM. The resulting doses were then summed to determine the total Unit 2 dose.

The Unit 1 releases are from a 375-foot elevated stack and the use of the GASPAC semi-infinite cloud model would lead to an underestimate of the dose due to direct exposure from the plume at distances within 2 miles of the stack. Therefore, the AIREM code was implemented to determine the maximum individual exposure from an overhead finite gamma cloud.

The AIREM code uses a sector averaged Gaussian diffusion model and includes ground and inversion lid reflections, radionuclide decay, first daughter in-growth, ground deposition and cloud depletion, and contributions to dose from radionuclides in clouds at all azimuths. The finite cloud model used is a modified version of R. E. Cooper's EGAD code (3).

b. Liquid Effluents

Maximum individual and population doses due to the release of radioactive liquid effluents were calculated using the computer code LADTAP(4).

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 Tables 5.1.1 and 5.1.2.

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 maximum organ dose are presented. The maximum organ dose in all cases was to the thyroid, and thus, the dose to all other organs was less than that shown for the thyroid.

For the dose to the maximum individual, the GASPAR program calculates the dose to the same organs listed above for the following pathways: direct exposure to the plume (except for Unit 1 finite cloud doses), 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. Again, the maximum organ dose was to the thyroid.

For the ground deposition and inhalation pathways, the maximum individual dose is calculated at the off-site 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 D/Q. For the meat, cow's milk and goat's milk pathways, the calculated dose is included as the maximum individual 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 Tables 5.1.1 and 5.1.2, are the maximum doses observed.

The AIREM code calculates the individual whole body and skin dose for each sector-segment. The maximum individual dose is obtained by taking the maximum AIREM result at the off-site location where a potential for dose exists and multiplying by a factor of 0.7 to compensate for building shielding and occupancy.

b. Liquid Effluents

The calculated doses are presented in Tables 5.1.1 and 5.1.2.

The LADTAP code performs calculations for the following pathways: fish, shellfish, algae, drinking water, irrigated food, shoreline activity, swimming and boating. At Millstone, the algae, drinking water and irrigated food pathways do not exist, and thus, only the other pathways are included in the totals given in Tables 5.1.1 and 5.1.2.

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

Tables 5.1.1 and 5.1.2 present the doses to the whole body, thyroid, and the maximum organ dose, which was to the Gastro-Intestinal tract - lower large intestine (GI-LLI). The dose to all other organs was less than those given for the GI tract.

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, Table 5.2 presents a comparison between the doses due to plant operation and doses received from other sources such as the naturally occurring background levels. The Table also presents the legally allowed levels.

Clearly the plant effects are insignificant when compared to radiation received from other sources.

It should be noted that the thyroid doses attributable to Millstone Unit 2 during the second quarter of 1982 are somewhat higher than doses typically observed during previous quarters. This increase is attributable to the fact that Unit 2 has experienced some minor fuel degradation along with primary to secondary leakage.

This has resulted in measurable radioiodine releases from the steam generator blowdown liquid and gaseous release points. These blowdown iodine releases are the primary contributor to the maximum individual thyroid dose of 1.1 mrem from gaseous releases and 0.36 mrem from liquid releases as noted on Table 5.1.2.

These doses are still within the design guidelines of 10CFR50 Appendix I, and hence are of no consequence to public health and safety. Additionally, analysis of environmental samples of goat milk have indicated an average I-131 concentration of 0.12 pCi/l. This concentration of I-131 would produce a dose of 0.14 mrem per calendar quarter. This sampling verifies that estimation of I-131 releases and dose calculational methodology remains conservative.

FOOTNOTES

- (1) GASPAR Dose Code, K. F. Eckerman, Radiological Assessment Branch, U. S. Nuclear Regulatory Commission, Washington, D. C., - Revised 2/20/76.
- (2) AIREM Program Manual - A computer Code for Calculating Doses, Population Doses; and Ground Depositions due to Atmospheric Emissions of Radionuclides, J. A. Marlin, Jr., C. B. Nelson and P. A. Cuny, U. S. EPA Office of Radiation Programs, Washington, D. C., May, 1974.
- (3) Cooper, R. E., EGAD - A Computer Program to Compute Dose Integrals from External Gamma Emitters, DP-1304. Mathematics and Computers (TID-4500, VC32), Savannah River Laboratory, Aiken, S. C., September, 1972.
- (4) LADTAP - U. S. Nuclear Regulatory Commission; Washington, D. C.

TABLE 5.1.1
Off-Site Dose Estimates
Millstone Unit No. 1

		<u>1982</u>		
A.	<u>Airborne Effluents</u>	<u>Units</u>	<u>Jan-Mar</u>	<u>Apr-June</u>
1.	Maximum Individual Dose	Millirem		
	a. Whole Body		4.2(-3) ^{a, b}	4.2(-2) ^b
	b. Skin		4.2(-3) ^b	4.2(-2) ^b
	c. Thyroid		1.8(-3) ^c	2.3(-1) ^d
2.	Population Dose 0-50 Miles	Person-Rem		
	a. Whole Body		4.0(-1)	4.0(-1)
	b. Skin		2.2(0)	2.1(0)
	c. Thyroid		1.2(-1)	8.8(-1)
3.	Average Dose 0-50 Miles	Millirem		
	a. Whole Body		1.2(-4)	1.2(-4)
	b. Skin		6.7(-4)	6.4(-4)
	c. Thyroid		3.7(-5)	2.7(-4)
B.	<u>Liquid Effluents</u>			
1.	Maximum Individual Dose	Millirem		
	a. Whole Body		1.2(-4) ^e	1.8(-4) ^e
	b. Max Organ (GI-LLI)		2.6(-4)	3.1(-4) ^e
	c. Thyroid		8.4(-5) ^e	1.0(-3) ^e
2.	Population Dose 0-50 Miles	Person-Rem		
	a. Whole Body		1.1(-3)	1.6(-3)
	b. Max Organ (GI-LLI)		1.4(-3)	1.6(-3)
	c. Thyroid		8.1(-4)	4.9(-3)
3.	Average Dose 0-50 Miles	Millirem		
	a. Whole Body		3.4(-7)	4.9(-7)
	b. Max Organ (GI-LLI)		4.3(-7)	4.9(-7)
	c. Thyroid		2.5(-7)	1.5(-6)

a. $4.2(-3) = 4.2 \times 10^{-3}$

b. At the critical location - 780 meters NE

c. Child thyroid at the critical residence - 2544 meters E

d. Infant thyroid at the critical goat milk and vegetable farm - 4000 meters W

e. Teenager doses; all other doses are adult doses unless indicated otherwise.

TABLE 5.1.2
Off-Site Dose Estimates
Millstone Unit No.2

		<u>1982</u>		
A.	<u>Airborne Effluents</u>	<u>Units</u>	<u>Jan-Mar</u>	<u>Apr-June</u>
1.	Maximum Individual Dose	Millirem		
	a. Whole Body		1.3(-2) ^{a,b}	1.8(-1) ^b
	b. Skin		2.2(-2) ^b	4.9(-1) ^b
	c. Thyroid		8.5(-3) ^{b,c}	1.1(0) ^d
2.	Population Dose 0-50 Miles	Person-Rem		
	a. Whole Body		3.8(-2)	1.2(0)
	b. Skin		8.1(-2)	3.5(0)
	c. Thyroid		3.6(-2)	2.1(0)
3.	Average Dose 0-50 Miles	Millirem		
	a. Whole Body		1.2(-5)	3.7(-4)
	b. Skin		2.5(-5)	1.1(-3)
	c. Thyroid		1.1(-5)	6.4(-4)
B.	<u>Liquid Effluents</u>			
1.	Maximum Individual Dose	Millirem		
	a. Whole Body		1.0(-2)	8.4(-3)
	b. Max Organ (GI-LLI)		9.6(-2) ^e	5.8(-2) ^e
	c. Thyroid		1.7(-2)	3.6(-1) ^e
2.	Population Dose 0-50 Miles	Person-Rem		
	a. Whole Body		8.6(-2)	6.5(-2)
	b. Max Organ (GI-LLI)		3.5(-1)	2.0(-1)
	c. Thyroid		9.3(-2)	1.4(0)
3.	Average Dose 0-50 Miles	Millirem		
	a. Whole Body		2.6(-5)	2.0(-5)
	b. Max Organ (GI-LLI)		1.1(-4)	6.1(-5)
	c. Thyroid		2.8(-5)	4.1(-4)

a. $1.3(-2) = 1.3 \times 10^{-2}$

b. At the critical residence - 620 meters NE

c. Child thyroid dose - all other doses from airborne effluents are adult doses unless indicated otherwise.

d. Infant thyroid dose at the critical vegetable and goat milk farm - 2400 meters NNE

e. Adult organ doses - all other doses from liquid effluents are teenager doses.

TABLE 5.2

Comparison of Whole Body Doses

I. <u>Doses Due to Millstone (Jan-Jun.1982)</u>	<u>6 Month Dose</u>
A. Maximum Individual - Unit 1 Liquids	0.0003 mrem
B. Maximum Individual - Unit 1 Gases	0.0462 mrem
C. Maximum Individual -Unit 2 Liquids	0.0184 mrem
D. Maximum Individual - Unit 2 Gases	0.1930 mrem
E. Average Individual (0-50 miles) - Unit 1 Liquids	0.0000008 mrem
F. Average Individual (0-50 miles) - Unit 1 Gases	0.00024 mrem
G. Average Individual (0-50 miles) - Unit 2 Liquids	0.00005 mrem
H. Average Individual (0-50 miles) - Unit 2 Gases	0.00038 mrem
II. <u>Legal Limits from Nuclear Power Plants</u>	<u>Annual Limit</u>
A. Maximum Individual	25 mrem
III. <u>Doses from Other Sources</u>	<u>6 Month Dose</u>
A. Natural Background in Connecticut- Cosmic, Terrestrial and Food Products	62 mrem
B. Radioactivity from Building Materials (varies from Wood to Stone House)	6-17 mrem
C. Medical Use (per capita)	51 mrem
D. Air Travel (round trip - Cross Country)	4 mrem

MILLSTONE NO. 1

METEOROLOGICAL

JOINT FREQUENCY

DATA FOR

CONTINUOUS RELEASES

MILLSTONE NUCLEAR POWER STATION / UNIT 1

WIND SPEED/WIND DIRECTION/STABILITY JOINT FREQUENCY DISTRIBUTION

WIND LEVEL = 447 FT

DELTA T INTERVAL = 447 - 33 FT

PASQUILL STABILITY CLASSES / CLASS DETERMINATION METHOD = DELTA T

DATA PERIOD = 1 JAN 82/0015 - 31 MAR 82/2315

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	0	0	0	0	0	0	0	0	0	0	0
NE	0	0	1	0	0	0	0	0	0	0	1
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	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
NNW	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	1	0	0	0	0	0	0	0	0

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

MILLSTONE NUCLEAR POWER STATION / UNIT 1

WIND SPEED/WIND DIRECTION/STABILITY JOINT FREQUENCY DISTRIBUTION

WIND LEVEL = 447 FT
 DELTA T INTERVAL = 447 -- 33 FT
 PASQUILL STABILITY CLASSES / CLASS DETERMINATION METHOD = DELTA T
 DATA PERIOD = 1 JAN 82/0015 - 31 MAR 82/2315
 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	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
SSW	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	1	0	0	0	1
W	0	0	0	0	2	0	10	1	0	0	0	13
WNW	0	0	0	0	2	0	1	0	0	0	0	3
NW	0	0	0	1	1	0	2	0	0	0	0	4
NNW	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	1	5	14	1	0	0	0	0	0

NO. OF VALID OBSERVATION = 21 NO. OF CALMS (WS LT 0.5M/SEC) = 0 NO. OF MISSING WD/WS = 5

MILLSTONE NUCLEAR POWER STATION / UNIT 1

WIND SPEED/WIND DIRECTION/STABILITY JOINT FREQUENCY DISTRIBUTION

WIND LEVEL = 447 FT
 DELTA T INTERVAL = 447 - 33 FT
 PASQUILL STABILITY CLASSES / CLASS DETERMINATION METHOD = DELTA T
 DATA PERIOD = 1 JAN 82/0015 - 31 MAR 82/2315
 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	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	2	2	0	0	0	0	0	0	0	4
E	0	0	0	0	0	0	0	0	0	0	0	0
ESE	0	1	0	5	0	0	0	0	0	0	0	6
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	0	0	0	0	0	0	0	0	0	0
SSW	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	1	0	0	4	1	0	0	0	6
W	0	0	0	3	20	12	1	0	0	0	0	36
WNW	0	0	1	4	21	10	0	0	0	0	0	36
NW	0	0	4	19	9	2	0	0	0	0	0	34
NRW	0	0	0	1	0	0	0	0	0	0	0	1
N	0	0	0	0	0	0	0	0	0	0	0	0
ALL SECTOR	0	1	7	36	50	28	2	0	0	0	0	0

NO. OF VALID OBSERVATION = 124 NO. OF CALMS (WS LT 0.5M/SEC) = 0 NO. OF MISSING WD/WS = 27

MILLSTONE NUCLEAR POWER STATION / UNIT 1

WIND SPEED/WIND DIRECTION/STABILITY JOINT FREQUENCY DISTRIBUTION

WIND LEVEL = 447 FT
 DELTA T INTERVAL = 447 - 33 FT
 PASQUILL STABILITY CLASSES / CLASS DETERMINATION METHOD = DELTA T
 DATA PERIOD = 1 JAN 82/0015 - 31 MAR 82/2315
 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	1	8	27	34	7	6	0	0	83
NE	1	5	34	13	3	0	0	0	56
ENE	1	3	17	22	4	0	0	0	47
E	0	7	10	13	9	9	0	0	48
ESE	0	1	7	8	3	7	3	0	29
SE	0	2	4	8	3	0	0	0	17
SSE	2	1	2	1	2	0	0	0	8
S	0	0	5	3	1	0	0	0	9
SSW	1	7	3	2	3	1	0	0	17
SW	2	5	4	13	15	4	0	0	43
WSW	1	5	7	23	23	33	3	0	95
W	0	5	19	42	35	26	4	0	131
WNW	0	6	28	78	51	25	3	0	191
NW	1	10	30	67	49	24	0	0	181
NNW	2	10	27	59	37	3	1	0	139
N	2	5	31	32	13	4	0	0	87
ALL SECTOR	14	80	255	418	258	142	14	0	

NO. OF VALID OBSERVATION = 1181

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

NO. OF MISSING WD/WS = 6

MILLSTONE NUCLEAR POWER STATION / UNIT 1

WIND SPEED/WIND DIRECTION/STABILITY JOINT FREQUENCY DISTRIBUTION

WIND LEVEL = 447 FT
 DELTA T INTERVAL = 447 - 33 FT
 PASQUILL STABILITY CLASSES / CLASS DETERMINATION METHOD = DELTA T
 DATA PERIOD = 1 JAN 82/0015 - 31 MAR 82/2315
 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	
MNE	0	2	4	5	2	0	0	0	13
NE	3	3	3	2	0	0	0	0	11
ENE	1	6	7	10	4	4	0	0	32
E	2	2	8	8	7	8	1	0	36
ESE	1	2	8	16	4	6	2	0	39
SE	1	2	9	12	2	1	1	0	28
SSE	1	3	7	1	5	2	0	3	22
S	0	6	11	8	2	1	1	4	33
SSW	1	6	10	6	3	3	0	1	30
SW	2	8	10	21	23	14	0	1	79
WSW	0	6	12	16	9	17	0	0	60
W	0	2	11	24	15	3	1	0	56
WNW	2	2	11	12	4	0	0	0	31
NW	1	0	13	18	2	1	0	0	35
NNW	0	5	2	13	8	1	2	0	31
N	1	3	6	12	7	1	0	0	30
ALL SECTOR	16	58	132	184	97	62	8	9	

NO. OF VALID OBSERVATION = 566

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

NO. OF MISSING WD/WS = 0

MILLSTONE NUCLEAR POWER STATION / UNIT 1

WIND SPEED/WIND DIRECTION/STABILITY JOINT FREQUENCY DISTRIBUTION

WIND LEVEL = 447 FT
 DELTA T INTERVAL = 447 - 33 FT
 PASQUILL STABILITY CLASSES / CLASS DETERMINATION METHOD = DELTA T
 DATA PERIOD = 1 JAN 82/0015 - 31 MAR 82/2315
 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	8.3-10.6	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	1	0	0	0	0	0	0	0	0	0	1
ENE	0	3	2	0	0	0	0	0	0	0	0	5
E	0	2	4	0	0	0	0	0	0	0	0	6
ESE	1	2	1	1	0	0	0	0	0	0	0	5
SE	0	0	2	1	0	0	0	0	0	0	0	3
SSE	0	0	3	1	0	0	1	0	0	0	0	5
S	1	3	11	2	3	2	2	7	5	5	5	34
SSW	0	2	4	1	4	6	3	3	2	2	2	22
SW	0	2	1	2	2	16	2	2	1	1	1	26
WSW	0	0	4	2	2	2	5	1	1	1	1	16
W	0	0	1	1	3	0	0	0	0	0	0	5
WNW	0	0	3	2	0	0	0	0	0	0	0	5
NW	0	0	1	0	0	0	0	0	0	0	0	1
NNW	1	0	0	2	1	0	0	0	0	0	0	4
N	0	0	1	0	0	0	0	0	0	0	0	1
ALL SECTOR	3	15	38	15	15	27	17	9	9	9	9	155

NO. OF VALID OBSERVATION = 139 NO. OF CALMS (WS LT 0.5M/SEC) = 0 NO. OF MISSING WD/WS = 0

MILLSTONE NUCLEAR POWER STATION / UNIT 1

WIND SPEED/WIND DIRECTION/STABILITY JOINT FREQUENCY DISTRIBUTION

WIND LEVEL = 447 FT
 DELTA T INTERVAL = 447 - 33 FT
 PASQUILL STABILITY CLASSES / CLASS DETERMINATION METHOD = DELTA T
 DATA PERIOD = 1 JAN 82/0015 - 31 MAR 82/2315
 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	8.3-10.8	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
SSW	0	0	0	1	0	0	0	0	0	0	1	0
SW	0	0	0	0	0	0	0	0	0	0	0	0
WSW	0	0	0	0	0	0	2	0	0	0	2	0
W	0	0	0	0	0	0	0	0	0	0	0	0
WNW	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
NNW	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	1	0	2	0	0	0	0	0	0

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

MILLSTONE NUCLEAR POWER STATION / UNIT 1

WIND SPEED/WIND DIRECTION/STABILITY JOINT FREQUENCY DISTRIBUTION

WIND LEVEL = 447 FT
 DELTA T INTERVAL = 447 - 33 FT
 PASQUILL STABILITY CLASSES / CLASS DETERMINATION METHOD = DELTA T
 DATA PERIOD = 1 JAN 82/0015 - 31 MAR 82/2315
 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	1	10	33	39	9	6	0	0	98
NE	4	9	38	15	3	0	0	0	69
ENE	2	12	28	35	8	4	0	0	89
E	2	11	22	21	16	17	1	0	90
ESE	2	6	16	30	7	13	5	0	79
SE	1	4	15	22	5	1	1	0	49
SSE	3	4	12	3	7	3	0	3	35
S	1	9	27	13	6	3	8	9	76
SSW	2	15	17	10	10	10	3	3	70
SW	4	15	15	36	40	34	2	2	148
WSW	1	11	23	42	35	59	9	1	181
W	0	7	31	70	77	52	7	0	244
WNW	2	8	43	97	78	36	3	0	267
NW	2	10	49	107	62	29	0	0	259
NNW	3	16	29	78	47	4	3	0	180
N	3	8	38	44	20	5	0	0	118
ALL SECTOR	33	155	436	662	430	276	42	18	

NO. OF POSSIBLE OBSERVATIONS = 2160
 NO. OF VALID OBSERVATIONS = 2052

NO. OF VALID NON-CALM CONCURRENT WD/WS/DT = 2035
 NO. OF CALMS (WS LT 0.5M/SEC) = 0

NO. OF MISSING WD/WS = 108
 NO. OF MISSING DELTA T = 87

MTLLSTONE NUCLEAR POWER STATION / UNIT 1

WIND SPEED / WIND DIRECTION / STABILITY JOINT FREQUENCY DISTRIBUTION

WIND LEVEL = 447 FT
 DELTA T INTERVAL = 447 - 33 FT
 PASQUILL STABILITY CLASSES / CLASS DETERMINATION METHOD = DELTA T
 DATA PERIOD = 1 APR 82/0015 - 30 JUN 82/2315
 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								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	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	0	0	0	0	0	0	0	0	0	0
E	0	0	0	0	0	1	0	0	0	1
ESE	0	0	0	0	0	0	0	0	0	0
SE	0	0	1	0	0	0	0	0	0	1
SSE	0	0	0	0	0	0	0	0	0	0
S	0	0	0	0	0	0	0	0	0	0
SSW	0	0	0	0	0	0	0	0	0	0
SW	0	0	0	0	0	0	0	0	0	0
WSW	0	0	0	0	0	0	0	0	0	0
W	0	0	0	0	0	1	0	0	0	1
WNW	0	0	0	0	0	1	0	0	0	1
NW	0	0	0	0	0	0	0	0	0	0
NNW	0	0	0	0	0	0	0	0	0	0
N	0	0	0	0	0	0	0	0	0	0
ALL SECTOR	0	0	1	0	0	3	0	0	0	0

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

MILLSTONE NUCLEAR POWER STATION / UNIT 1

WIND SPEED/WIND DIRECTION/STABILITY JOINT FREQUENCY DISTRIBUTION

WIND LEVEL = 447 FT
 DELTA T INTERVAL = 447 - 33 FT
 PASQUILL STABILITY CLASSES / CLASS DETERMINATION METHOD = DELTA T
 DATA PERIOD = 1 APR 82/0015 - 30 JUN 82/2315
 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							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	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	1	0	0	0	1
ESE	0	0	0	0	0	0	0	0	0
SE	0	0	2	1	0	0	0	0	3
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	4	3	0	0	7
NW	0	0	0	1	0	0	0	0	1
NNW	0	0	0	0	0	0	0	0	0
N	0	0	0	0	0	0	0	0	0
ALL SECTOR	0	0	2	2	5	3	0	0	0

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

MILLSTONE NUCLEAR POWER STATION / UNIT 1

WIND SPEED/WIND DIRECTION/STABILITY JOINT FREQUENCY DISTRIBUTION

WIND LEVEL = 447 FT
 DELTA T INTERVAL = 447 - 33 FT
 PASQUILL STABILITY CLASSES / CLASS DETERMINATION METHOD = DELTA T
 DATA PERIOD = 1 APR 82/0015 - 30 JUN 82/2315
 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										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	GT 20.1		ALL		
NNE	0	0	0	1	3	2	0	0	0	0	0	6
NE	0	1	0	0	2	0	0	0	0	0	0	3
ENE	0	0	0	0	1	0	0	0	0	0	0	1
E	0	1	1	5	2	0	0	0	0	0	0	9
ESE	0	0	3	6	0	0	0	0	0	0	0	9
SE	0	0	5	1	0	0	0	0	0	0	0	6
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
SSW	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	1	0	0	0	0	0	1
WNW	0	0	0	1	10	2	0	0	0	0	0	13
NW	0	0	0	2	1	2	0	0	0	0	0	5
NNW	0	0	1	3	0	0	0	0	0	0	0	4
N	0	0	1	6	0	0	0	0	0	0	0	7
ALL SECTOR	0	2	11	25	19	7	0	0	0	0	0	7

NO. OF VALID OBSERVATION = 64 NO. OF CALMS (WS LT 0.5M/SEC) = 0 NO. OF MISSING WD/WS = 0

MILLSTONE NUCLEAR POWER STATION / UNIT 1

WIND SPEED/WIND DIRECTION/STABILITY JOINT FREQUENCY DISTRIBUTION

WIND LEVEL = 447 FT
 DELTA T INTERVAL = 447 - 33 FT
 PASQUILL STABILITY CLASSES / CLASS DETERMINATION METHOD = DELTA T
 DATA PERIOD = 1 APR 82/0015 - 30 JUN 82/2315
 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	0	4	11	21	28	13	0	0	0	0	77
NE	1	6	20	27	6	0	0	0	0	0	60
ENE	0	9	18	18	11	5	1	0	0	0	62
E	0	3	10	17	23	11	5	0	0	0	69
ESE	1	3	12	8	2	0	0	0	0	0	26
SE	0	2	16	5	0	0	0	0	0	0	23
SSE	0	4	6	0	0	0	0	0	0	0	10
S	0	2	3	1	0	0	0	0	0	0	6
SSW	0	3	1	1	1	0	0	0	0	0	6
SW	0	0	1	2	4	2	3	0	0	0	12
WSW	1	1	5	4	2	6	1	0	0	0	20
W	0	0	1	4	6	4	1	0	0	0	16
WNW	0	4	6	18	21	4	0	0	0	0	53
NW	0	0	10	17	16	4	0	0	0	0	47
NNW	2	7	4	12	11	5	0	0	0	0	41
N	0	4	11	23	13	3	0	0	0	0	54
ALL SECTOR	5	52	135	178	144	57	11	0	0	0	

NO. OF VALID OBSERVATION = 582 NO. OF CALMS (WS LT 0.5M/SEC) = 0 NO. OF MISSING WD/WS = 0

MILLSTONE NUCLEAR POWER STATION / UNIT 1

WIND SPEED/WIND DIRECTION/STABILITY JOINT FREQUENCY DISTRIBUTION

WIND LEVEL = 447 FT
 DELTA T INTERVAL = 447 - 33 FT
 PASQUILL STABILITY CLASSES / CLASS DETERMINATION METHOD = DELTA T
 DATA PERIOD = 1 APR 82/0015 - 30 JUN 82/2315
 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	1	2	4	4	1	0	0	0	12
NE	1	7	3	3	0	0	0	0	14
ENE	4	10	9	3	1	0	0	0	27
E	0	3	16	10	3	0	1	0	33
ESE	1	0	19	28	2	4	1	0	55
SE	0	7	26	16	1	0	0	1	51
SSE	3	19	19	11	1	3	0	1	57
S	2	11	21	9	5	4	1	0	53
SSW	3	10	26	28	23	11	3	1	105
SW	2	14	29	29	19	16	3	0	112
WSW	3	11	19	28	14	12	2	0	89
W	1	6	14	18	9	4	0	0	52
WNW	3	6	9	20	3	0	0	0	41
NW	2	3	9	17	5	0	0	0	36
NNW	0	4	7	5	9	1	0	0	26
N	0	4	9	8	6	0	0	0	27
ALL SECTOR	26	117	239	237	102	55	11	3	

NO. OF VALID OBSERVATION = 791

NO. OF CALMS (WS LT 0.5M/SEC) = 1

NO. OF MISSING WD/WS = 23

MILLSTONE NUCLEAR POWER STATION / UNIT 1

WIND SPEED/WIND DIRECTION/STABILITY JOINT FREQUENCY DISTRIBUTION

WIND LEVEL = 447 FT
 DELTA T INTERVAL = 447 - 33 FT
 PASQUILL STABILITY CLASSES / CLASS DETERMINATION METHOD = DELTA T
 DATA PERIOD = 1 APR 82/0015 - 30 JUN 82/2315
 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	GT 20.1			
NNE	0	0	4	2	0	0	0	0	0	0	0	6
NE	2	3	5	0	0	0	0	0	0	0	0	10
ENE	2	1	2	3	0	0	0	0	0	0	0	8
E	1	0	2	1	0	0	0	0	0	0	0	4
ESE	0	1	3	0	0	0	0	0	0	0	0	4
SE	0	3	3	0	1	1	1	0	0	1	1	9
SSE	0	2	9	6	6	3	3	1	0	0	0	27
S	0	9	14	6	14	12	2	1	1	1	1	58
SSW	0	7	24	12	7	5	0	0	0	0	0	55
SW	0	6	15	21	22	14	0	0	1	1	1	79
WSW	1	3	9	18	14	2	0	0	0	0	0	47
W	1	6	10	10	5	0	0	0	0	0	0	32
WRW	2	7	4	2	0	0	0	0	0	0	0	15
NW	0	2	4	1	0	0	0	0	0	0	0	7
NNW	1	2	2	11	2	0	0	0	0	0	0	18
N	2	4	4	7	2	0	0	0	0	0	0	19
ALL SECTOR	12	56	114	100	73	37	3	3	3	3	3	373

NO. OF VALID OBSERVATION = 399 NO. OF CALMS (WS LT 0.5M/SEC) = 1 NO. OF MISSING WD/WS = 13

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

WIND LEVEL = 447 FT
 DELTA T INTERVAL = 447 - 33 FT
 PASQUILL STABILITY CLASSES / CLASS DETERMINATION METHOD = DELTA T
 DATA PERIOD = 1 APR 82/0015 - 30 JUN 82/2315
 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				
NNE	1	0	0	0	0	0	0	0	0	0	0	1
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	2	1	0	0	0	0	0	0	0	0	3
S	0	1	2	0	0	2	0	0	0	0	0	5
SSW	0	0	0	1	2	0	0	0	0	0	0	3
SW	0	1	2	1	1	2	0	0	0	0	0	7
WSW	0	0	2	2	0	1	0	0	0	0	0	5
W	0	0	1	1	1	0	0	0	0	0	0	3
WNW	0	0	0	0	2	0	0	0	0	0	0	2
NW	0	0	0	0	0	0	0	0	0	0	0	0
NNW	0	0	1	2	1	0	0	0	0	0	0	4
N	0	0	0	0	0	0	0	0	0	0	0	0
ALL SECTOR	1	4	9	7	7	5	0	0	0	0	0	0

NO. OF VALID OBSERVATION = 34 NO. OF CALMS (WS LT 0.5M/SEC) = 1 NO. OF MISSING WD/WS = 3

MILLSTONE NUCLEAR POWER STATION / UNIT 1

WIND SPEED/WIND DIRECTION/STABILITY JOINT FREQUENCY DISTRIBUTION

WIND LEVEL = 447 FT
 DELTA T INTERVAL = 447 - 33 FT
 PASQUILL STABILITY CLASSES / CLASS DETERMINATION METHOD = DELTA T
 DATA PERIOD = 1 APR 82/0015 - 30 JUN 82/2315
 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	2	6	19	28	32	15	0	0	102
NE	4	17	28	30	8	0	0	0	87
ENE	6	20	29	24	13	5	1	0	98
E	1	7	29	33	29	12	6	0	117
ESE	2	4	37	42	4	4	1	0	94
SE	0	12	53	23	2	1	0	2	93
SSE	3	27	35	17	7	6	1	1	97
S	2	23	40	16	19	18	3	1	122
SSW	3	20	51	42	33	16	3	1	169
SW	2	21	47	53	46	34	6	1	210
WSW	5	15	35	52	30	21	3	0	161
W	2	12	26	33	21	10	1	0	105
WNW	5	17	19	41	40	10	0	0	132
NW	2	5	23	38	22	6	0	0	96
NNW	3	13	15	33	23	6	0	0	93
N	2	12	25	44	21	3	0	0	107
ALL SECTOR	44	231	511	549	350	167	25	6	

NO. OF POSSIBLE OBSERVATIONS = 2184
 NO. OF VALID OBSERVATIONS = 1886

NO. OF VALID NON-CALM CONCURRENT WD/WS/DT = 1883
 NO. OF CALMS (WS LT 0.5M/SEC) = 3

NO. OF MISSING WD/WS = 298
 NO. OF MISSING DELTA T = 259

MILLSTONE NO. 2
METEOROLOGICAL
JOINT FREQUENCY
DATA FOR
CONTINUOUS RELEASES

MILLSTONE NUCLEAR POWER STATION / UNIT 2
 WIND SPEED/WIND DIRECTION/STABILITY JOINT FREQUENCY DISTRIBUTION

WIND LEVEL = 142 FT
 DELTA T INTERVAL = 142 - 33 FT
 PASQUILL STABILITY CLASSES / CLASS DETERMINATION METHOD = DELTA T
 DATA PERIOD = 1 JAN 82/0015 - 31 MAR 82/2315
 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	8.3-10.6	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	1	6	1	0	0	0	0	0	0	0	8
ENE	0	0	0	0	0	0	0	0	0	0	0	0
E	0	0	1	0	0	0	0	0	0	0	0	1
ESE	0	0	0	2	0	0	0	0	0	0	0	2
SE	0	1	0	1	0	0	0	0	0	0	0	2
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
SSW	0	1	0	0	0	0	0	0	0	0	0	1
SH	0	1	0	1	0	0	0	0	0	0	0	2
WSW	0	0	0	0	0	0	3	0	0	0	0	3
W	0	0	0	3	8	10	10	0	0	0	0	21
WNW	0	0	0	1	21	13	13	1	0	0	0	36
NW	0	0	0	10	14	10	0	0	0	0	0	34
NNW	0	1	3	7	2	1	0	0	0	0	0	14
N	0	0	0	2	2	0	0	0	0	0	0	4
ALL SECTOR	0	5	10	28	47	37	1	0	0	0	0	4

NO. OF VALID OBSERVATION = 128 NO. OF CALMS (WS LT 0.5M/SEC) = 0 NO. OF MISSING HD/WS = 0

MILLSTONE NUCLEAR POWER STATION / UNIT 2

WIND SPEED/WIND DIRECTION/STABILITY JOINT FREQUENCY DISTRIBUTION

WIND LEVEL = 142 FT
 DELTA T INTERVAL = 142 - 33 FT
 PASQUILL STABILITY CLASSES / CLASS DETERMINATION METHOD = DELTA T
 DATA PERIOD = 1 JAN 62/0015 - 31 MAR 62/2315
 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	0	0	1	0	0	0	0	0	0	1
NE	0	2	1	0	0	0	0	0	0	0	3
ENE	0	0	0	0	0	0	0	0	0	0	0
E	0	0	1	0	0	0	0	0	0	0	1
ESE	0	0	0	0	0	1	0	0	0	0	1
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	2	0	0	0	0	0	0	2
WSW	0	0	0	0	2	0	0	0	0	0	2
W	0	0	0	1	7	7	7	0	0	0	15
WNW	0	0	0	7	8	10	10	0	0	0	25
NH	0	0	0	2	10	1	1	0	0	0	3
NNW	0	0	2	1	0	0	0	0	0	0	3
N	0	0	3	4	0	0	0	0	0	0	7
ALL SECTOR	0	2	7	16	27	19	0	0	0	0	0

NO. OF VALID OBSERVATION = 73 NO. OF CALMS (WS LT 0.5M/SEC) = 0 NO. OF MISSING WD/MS = 0

MILLSTONE NUCLEAR POWER STATION / UNIT 2

WIND SPEED/WIND DIRECTION/STABILITY JOINT FREQUENCY DISTRIBUTION

WIND LEVEL = 142 FT
 DELTA T INTERVAL = 142 - 33 FT
 PASQUILL STABILITY CLASSES / CLASS DETERMINATION METHOD = DELTA T
 DATA PERIOD = 1 JAN 82/0015 - 31 MAR 82/2315
 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	0	2	19	5	2	0	0	0	0	0	28
NE	1	8	13	15	0	0	0	0	0	0	37
ENE	0	2	5	0	0	0	0	0	0	0	7
E	0	0	3	3	0	0	0	0	0	0	6
ESE	0	0	1	2	0	0	0	0	0	0	3
SE	0	0	7	8	1	0	0	0	0	0	16
SSE	0	1	4	2	0	0	0	0	0	0	7
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	2	0	0	0	0	0	0	2
WSW	0	0	1	1	7	0	0	0	0	0	9
W	0	0	0	6	3	5	0	0	0	0	14
WNW	0	0	3	16	4	1	0	0	0	0	24
NW	0	1	8	19	14	4	0	0	0	0	46
NNW	0	1	16	15	6	0	0	0	0	0	38
N	0	10	17	10	5	1	0	0	0	0	43
ALL SECTOR	1	25	97	104	42	11	0	0	0	0	

NO. OF VALID OBSERVATION = 280 NO. OF CALMS (WS LT 0.5M/SEC) = 0 NO. OF MISSING MD/WS = 1

WIND SPEED/WIND DIRECTION/STABILITY JOINT FREQUENCY DISTRIBUTION

WIND LEVEL = 142 FT
 DELTA T INTERVAL = 142 - 33 FT
 PASQUILL STABILITY CLASSES / CLASS DETERMINATION METHOD = DELTA T
 DATA PERIOD = 1 JAN 82/0015 - 31 MAR 82/2315
 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	3	11	32	7	3	1	0	0	57
NE	0	20	25	1	0	0	0	0	46
ENE	4	9	28	11	1	0	0	0	53
E	1	2	16	24	7	7	0	0	57
ESE	2	4	13	5	3	7	0	0	34
SE	0	3	11	7	0	0	0	0	21
SSE	0	4	1	5	0	0	0	0	10
S	1	5	2	3	0	0	0	0	11
SSW	2	5	4	1	0	0	0	0	12
SW	3	6	9	6	10	0	0	0	34
WSW	2	12	17	12	13	17	1	0	74
W	3	7	27	42	15	9	1	0	104
WNW	1	12	47	35	11	9	2	0	117
NW	1	18	54	54	30	4	1	0	162
NNW	2	18	58	46	9	2	0	0	135
N	2	19	38	25	3	0	0	0	87
ALL SECTOR	27	155	382	284	105	56	5	0	

NO. OF VALID OBSERVATION = 1014

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

NO. OF MISSING WD/WS = 1

MILLSTONE NUCLEAR POWER STATION / UNIT 2

WIND SPEED/WIND DIRECTION/STABILITY JOINT FREQUENCY DISTRIBUTION

WIND LEVEL = 142 FT
 DELTA T INTERVAL = 142 - 33 FT
 PASQUILL STABILITY CLASSES / CLASS DETERMINATION METHOD = DELTA T
 DATA PERIOD = 1 JAN 82/0015 - 31 MAR 82/2315
 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	0	7	3	3	0	0	0	0	0	0	13
NE	2	5	5	0	0	0	0	0	0	0	12
ENE	0	4	5	1	3	0	0	0	0	0	13
E	2	0	5	3	0	1	0	0	0	0	11
ESE	0	1	3	5	1	7	0	0	0	0	17
SE	0	2	5	6	1	0	0	0	0	0	14
SSE	0	1	6	2	0	0	0	0	0	0	9
S	1	3	1	1	0	0	3	0	0	0	9
SSW	0	4	3	3	2	1	0	1	1	1	14
SW	0	1	4	2	2	1	0	0	0	0	10
WSW	1	7	8	16	17	1	0	0	0	0	50
W	0	7	6	3	6	5	0	0	0	0	27
WNW	2	6	15	6	6	5	1	0	0	0	41
NW	2	8	12	5	0	1	0	0	0	0	28
NNW	1	2	13	2	1	1	0	0	0	0	20
N	2	3	16	0	0	0	0	0	0	0	21
ALL SECTOR	13	61	110	58	39	23	4	1	1	1	

NO. OF VALID OBSERVATION = 310 NO. OF CALMS (WS LT 0.5M/SEC) = 1 NO. OF MISSING WD/WS = 0

WIND SPEED/WIND DIRECTION/STABILITY JOINT FREQUENCY DISTRIBUTION

WIND LEVEL = 142 FT
 DELTA T INTERVAL = 142 - 33 FT
 PASQUILL STABILITY CLASSES / CLASS DETERMINATION METHOD = DELTA T
 DATA PERIOD = 1 JAN 82/0015 - 31 MAR 82/2315
 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	1	5	1	0	0	0	0	0	7
NE	1	1	2	0	0	0	0	0	4
ENE	1	2	0	0	0	0	0	0	3
E	0	1	2	0	0	0	0	0	3
ESE	0	3	5	1	0	0	0	0	9
SE	1	2	3	3	0	0	1	0	10
SSE	0	1	2	1	0	1	2	0	7
S	2	2	3	2	1	1	1	0	12
SSW	0	2	5	1	0	7	2	0	17
SW	3	1	2	5	6	1	1	0	19
WSW	1	7	5	20	4	1	0	0	38
W	2	1	6	6	3	1	0	0	19
WNW	3	2	1	0	0	0	0	0	6
NW	2	5	1	0	0	0	0	0	8
NNW	4	3	3	0	0	0	0	0	10
N	0	4	3	0	0	0	0	0	7
ALL SECTOR	21	42	44	39	14	12	7	0	

NO. OF VALID OBSERVATION = 181

NO. OF CALMS (WS LT 0.5M/SEC) = 2

NO. OF MISSING WD/WS = 0

MILLSTONE NUCLEAR POWER STATION / UNIT 2

WIND SPEED/WIND DIRECTION/STABILITY JOINT FREQUENCY DISTRIBUTION

WIND LEVEL = 142 FT
 DELTA T INTERVAL = 142 - 33 FT
 PASQUILL STABILITY CLASSES / CLASS DETERMINATION METHOD = DELTA T
 DATA PERIOD = 1 JAN 82/0015 - 31 MAR 82/2315
 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			
NNE	0	0	0	0	0	0	0	0	0	0	0
NE	0	1	1	0	0	0	0	0	0	0	2
ENE	0	1	0	0	0	0	0	0	0	0	1
E	1	1	0	0	0	0	0	0	0	0	2
ESE	0	7	2	1	0	0	0	0	0	0	10
SE	0	3	1	0	0	0	0	0	0	0	4
SSE	1	5	2	0	0	0	0	0	0	0	8
S	1	2	0	0	0	2	0	0	0	0	5
SSW	0	3	1	2	6	2	2	2	0	0	16
SW	0	1	2	6	6	0	1	0	0	0	16
WSW	0	0	0	2	0	0	0	0	0	0	2
W	1	1	4	2	1	1	0	0	0	0	10
WNW	1	2	1	0	0	0	0	0	0	0	4
NW	0	2	0	0	0	0	0	0	0	0	2
NNW	0	1	0	0	0	0	0	0	0	0	1
N	0	1	0	0	0	0	0	0	0	0	1
ALL SECTOR	5	31	14	13	13	5	3	0	0	0	0

NO. OF VALID OBSERVATION = 84 NO. OF CALMS (WS LT 0.5M/SEC) = 0 NO. OF MISSING WD/WS = 0

WIND SPEED/WIND DIRECTION/STABILITY JOINT FREQUENCY DISTRIBUTION

WIND LEVEL = 142 FT
 DELTA T INTERVAL = 142 - 33 FT
 PASQUILL STABILITY CLASSES / CLASS DETERMINATION METHOD = DELTA T
 DATA PERIOD = 1 JAN 82/0015 - 31 MAR 82/2315
 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	4	25	56	16	5	1	0	0	107
NE	4	38	54	17	0	0	0	0	113
ENE	5	18	38	12	4	0	0	0	77
E	4	4	29	30	7	8	0	0	82
ESE	2	15	24	16	4	15	0	0	76
SE	1	11	27	25	2	0	1	0	67
SSE	1	12	15	10	0	1	2	0	41
S	5	12	6	6	1	3	4	0	37
SSW	2	15	13	7	8	10	4	1	60
SW	6	10	17	24	25	2	2	0	86
WSW	4	26	31	51	44	22	1	0	179
W	6	16	43	64	44	38	1	0	212
WNW	7	22	68	65	50	38	4	0	254
NW	5	34	77	92	68	20	1	0	297
NNW	7	26	95	74	19	4	0	0	225
N	4	38	78	41	10	1	0	0	172
ALL SECTOR	67	322	671	550	291	163	20	1	

NO. OF POSSIBLE OBSERVATIONS = 2160
 NO. OF VALID OBSERVATIONS = 2068

NO. OF VALID NON-CALM CONCURRENT WD/WS/DT = 2067
 NO. OF CALMS (WS LT 0.5M/SEC) = 3

NO. OF MISSING WD/WS = 72
 NO. OF MISSING DELTA T = 88

MILLSTONE NUCLEAR POWER STATION / UNIT 2

WIND SPEED/WIND DIRECTION/STABILITY JOINT FREQUENCY DISTRIBUTION

WIND LEVEL = 142 FT
 DELTA T INTERVAL = 142 - 33 FT
 PASQUILL STABILITY CLASSES / CLASS DETERMINATION METHOD = DELTA T
 DATA PERIOD = 1 APR 82/0015 - 30 JUN 82/2315
 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	0	1	2	5	5	0	0	0	0	0	13
NE	1	3	6	0	2	0	0	0	0	0	12
ENE	0	1	0	0	4	0	0	0	0	0	5
E	0	1	0	1	1	0	0	0	0	0	3
ESE	0	0	1	3	0	0	0	0	0	0	4
SE	0	0	11	6	0	0	0	0	0	0	17
SSE	0	2	1	0	0	0	0	0	0	0	3
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	1	0	1	0	0	0	0	0	2
WSW	1	0	1	0	0	0	0	0	0	0	2
W	0	0	0	0	0	0	0	0	0	0	0
WNW	1	0	0	0	2	2	0	0	0	0	5
NW	0	0	0	4	5	2	0	0	0	0	11
NNW	0	0	0	4	1	0	0	0	0	0	5
N	0	1	9	8	1	0	0	0	0	0	19
ALL SECTOR	3	9	32	31	22	4	0	0	0	0	

NO. OF VALID OBSERVATION = 101 NO. OF CALMS (WS LT 0.5M/SEC) = 0 NO. OF MISSING WD/WS = 0

MILLSTONE NUCLEAR POWER STATION / UNIT 2

WIND SPEED/WIND DIRECTION/STABILITY JOINT FREQUENCY DISTRIBUTION

WIND LEVEL = 142 FT
 DELTA T INTERVAL = 142 - 33 FT
 PASQUILL STABILITY CLASSES / CLASS DETERMINATION METHOD = DELTA T
 DATA PERIOD = 1 APR 82/0015 - 30 JUN 82/2315
 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	12	15	15	1	0	0	0	0	45
NE	0	2	6	7	2	0	0	0	0	0	19
ENE	1	3	2	2	1	0	0	0	0	0	9
E	0	5	9	5	3	2	0	0	0	0	24
ESE	0	1	11	9	0	0	0	0	0	0	21
SE	0	0	8	0	0	0	0	0	0	0	8
SSE	0	0	2	0	0	0	0	0	0	0	2
S	0	0	0	0	0	0	0	0	0	0	0
SSH	0	1	0	0	0	0	0	0	0	0	1
SW	0	0	0	0	2	0	0	0	0	0	2
WSW	0	0	0	0	0	2	0	0	0	0	2
W	0	1	1	0	0	0	0	0	0	0	2
WNW	0	2	1	0	0	0	0	0	0	0	3
NW	0	0	3	12	6	1	0	0	0	0	22
NNW	0	0	1	6	4	1	0	0	0	0	12
N	0	3	9	14	2	0	0	0	0	0	28
ALL SECTOR	1	20	67	70	35	7	0	0	0	0	

NO. OF VALID OBSERVATION = 200 NO. OF CALMS (WS LT 0.5M/SEC) = 0 NO. OF MISSING WD/HS = 4

MILLSTONE NUCLEAR POWER STATION / UNIT 2

WIND SPEED/WIND DIRECTION/STABILITY JOINT FREQUENCY DISTRIBUTION

WIND LEVEL = 142 FT
 DELTA T INTERVAL = 142 - 33 FT
 PASQUILL STABILITY CLASSES / CLASS DETERMINATION METHOD = DELTA T
 DATA PERIOD = 1 APR 82/0015 - 30 JUN 82/2315
 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	1	0	9	6	7	0	0	0	0	0	23
NE	0	6	3	6	0	0	0	0	0	0	15
ENE	0	3	2	0	1	0	0	0	0	0	6
E	2	2	8	14	8	1	0	0	0	0	35
ESE	0	2	9	2	0	0	0	0	0	0	13
SE	1	5	9	1	0	0	0	0	0	0	16
SSE	0	2	0	0	0	0	0	0	0	0	2
S	0	3	1	0	0	0	0	0	0	0	4
SSW	0	1	0	0	0	0	0	0	0	0	1
SW	0	1	0	0	0	1	0	0	0	0	2
WSW	0	0	1	3	0	1	1	1	0	0	6
W	0	0	4	2	1	1	0	0	0	0	8
WNW	0	1	1	3	1	0	0	0	0	0	6
NW	1	0	1	9	1	1	0	0	0	0	13
NNW	0	3	6	6	0	0	0	0	0	0	15
N	1	5	3	6	4	0	0	0	0	0	19
ALL SECTOR	6	34	57	58	23	5	1	0	0	0	

NO. OF VALID OBSERVATION = 184 NO. OF CALMS (WS LT 0.5M/SEC) = 0 NO. OF MISSING WD/WS = 3

HILLSTONE NUCLEAR POWER STATION / UNIT 2
 WIND SPEED/WIND DIRECTION/STABILITY JOINT FREQUENCY DISTRIBUTION

WIND LEVEL = 142 FT
 DELTA T INTERVAL = 142 - 33 FT
 PASQUILL STABILITY CLASSES / CLASS DETERMINATION METHOD = DELTA T
 DATA PERIOD = 1 APR 82/0015 - 30 JUN 82/2315
 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	0	1	8	1	3	0	0	0	0	0	13
NE	1	4	16	11	4	0	0	0	0	0	36
ENE	0	5	19	13	3	3	0	0	0	0	43
E	3	7	14	8	3	6	1	0	0	0	42
ESE	2	16	7	7	2	0	0	0	0	0	34
SE	4	3	12	1	0	0	0	0	0	0	20
SSE	0	4	1	2	0	0	0	0	0	0	7
S	2	0	0	0	0	0	0	0	0	0	2
SSW	1	2	0	0	0	0	0	0	0	0	3
SW	0	1	4	1	1	1	0	0	0	0	8
WSW	0	2	6	1	0	1	0	0	0	0	10
W	2	0	2	1	0	2	0	0	0	0	7
WNW	0	6	2	5	4	1	0	0	0	0	18
NW	2	2	8	9	4	0	0	0	0	0	25
NNW	1	4	7	5	0	0	0	0	0	0	17
N	3	6	7	0	1	0	0	0	0	0	17
ALL SECTOR	21	63	113	65	25	14	1	0	0	0	

NO. OF VALID OBSERVATION = 302 NO. OF CALMS (WS LT 0.5M/SEC) = 0 NO. OF MISSING WD/WS = 16

HILLSTONE NUCLEAR POWER STATION / UNIT 2

WIND SPEED/WIND DIRECTION/STABILITY JOINT FREQUENCY DISTRIBUTION

WIND LEVEL = 142 FT
 DELTA T INTERVAL = 142 - 33 FT
 PASQUILL STABILITY CLASSES / CLASS DETERMINATION METHOD = DELTA T
 DATA PERIOD = 1 APR 82/0015 - 30 JUN 82/2315
 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	1	2	6	1	0	0	0	0	10
NE	4	7	4	1	0	0	0	0	16
ENE	2	7	1	0	0	0	0	0	10
E	0	4	4	0	0	1	0	0	9
ESE	3	7	5	4	2	2	0	0	23
SE	3	6	11	9	0	0	1	0	30
SSE	2	9	8	8	0	0	0	0	27
S	1	5	7	1	1	0	0	0	15
SSW	4	5	10	2	1	1	0	0	23
SW	1	5	16	12	3	1	0	0	39
WSW	2	15	23	17	10	7	0	0	74
W	2	12	14	2	6	1	1	0	38
WNW	5	7	11	9	5	3	1	0	41
NW	3	14	9	4	1	0	0	0	31
NNW	3	5	9	4	0	0	0	0	21
N	8	3	12	0	1	0	0	0	24
ALL SECTOR	44	113	150	74	30	16	3	0	

NO. OF VALID OBSERVATION = 433 NO. OF CALMS (WS LT 0.5M/SEC) = 3 NO. OF MISSING WD/MS = 21

MILLSTONE NUCLEAR POWER STATION / UNIT 2

WIND SPEED/WIND DIRECTION/STABILITY JOINT FREQUENCY DISTRIBUTION

WIND LEVEL = 142 FT
 DELTA T INTERVAL = 142 - 33 FT
 PASQUILL STABILITY CLASSES / CLASS DETERMINATION METHOD = DELTA T
 DATA PERIOD = 1 APR 82/0015 - 30 JUN 82/2315
 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	0	1	4	0	0	0	0	0	0	0	5
NE	4	3	1	0	0	0	0	0	0	0	8
ENE	4	0	0	0	0	0	0	0	0	0	4
E	2	1	0	0	0	0	0	0	0	0	3
ESE	2	2	3	1	0	0	0	0	0	0	8
SE	4	7	6	5	1	0	0	0	0	0	23
SSE	0	4	12	10	1	1	1	1	1	1	30
S	2	8	3	3	2	0	0	0	0	0	18
SSW	0	6	12	8	8	8	2	0	0	0	44
SW	2	11	11	14	6	4	0	0	0	0	48
WSW	2	8	14	21	19	2	0	0	0	0	66
W	1	13	15	5	3	1	0	0	0	0	38
WNW	5	9	5	7	1	0	0	0	0	0	27
NW	4	5	3	0	0	0	0	0	0	0	12
NNW	5	4	2	1	0	0	0	0	0	0	12
N	1	10	8	1	0	0	0	0	0	0	20
ALL SECTOR	38	92	99	76	41	16	3	1			

NO. OF VALID OBSERVATION = 368 NO. OF CALMS (WS LT 0.5M/SEC) = 2 NO. OF MISSING WD/WS = 12

MILLSTONE NUCLEAR POWER STATION / UNIT 2
 WIND SPEED/WIND DIRECTION/STABILITY JOINT FREQUENCY DISTRIBUTION

WIND LEVEL = 142 FT
 DELTA T INTERVAL = 142 - 33 FT
 PASQUILL STABILITY CLASSES / CLASS DETERMINATION METHOD = DELTA T
 DATA PERIOD = 1 APR 82/0015 - 30 JUN 82/2315
 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
	0.3-1.5	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	2	1	2	0	0	0	0	0	0	0	5
NE	1	3	1	0	0	0	0	0	0	0	5
ENE	0	3	0	0	0	0	0	0	0	0	3
E	0	2	1	0	0	0	0	0	0	0	3
ESE	3	2	0	0	0	0	0	0	0	0	5
SE	2	1	5	1	1	0	0	0	0	0	10
SSE	0	6	11	9	1	0	0	0	0	0	27
S	0	4	8	14	2	0	0	0	0	0	28
SSW	2	7	7	6	10	2	0	0	0	0	34
SW	4	8	21	12	8	1	0	0	0	0	54
WSW	1	6	14	19	17	2	0	0	0	0	59
W	2	4	7	1	0	0	0	0	0	0	14
WNW	0	5	3	0	0	0	0	0	0	0	8
NW	4	4	0	0	0	0	0	0	0	0	8
NNW	2	1	3	0	0	0	0	0	0	0	6
N	1	0	5	0	0	0	0	0	0	0	6
ALL SECTOR	24	57	88	62	39	5	0	0	0	0	

NO. OF VALID OBSERVATION = 277 NO. OF CALMS (WS LT 0.5M/SEC) = 2 NO. OF MISSING WD/WS = 4

MILLSTONE NUCLEAR POWER STATION / UNIT 2

WIND SPEED/WIND DIRECTION/STABILITY JOINT FREQUENCY DISTRIBUTION

WIND LEVEL = 142 FT
 DELTA T INTERVAL = 142 - 33 FT
 PASQUILL STABILITY CLASSES / CLASS DETERMINATION METHOD = DELTA T
 DATA PERIOD = 1 APR 82/0015 - 30 JUN 82/2315
 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	4	8	43	28	30	1	0	0	114
NE	11	28	39	25	8	0	0	0	111
ENE	7	22	24	15	9	3	0	0	80
E	7	22	36	28	15	10	1	0	119
ESE	10	30	36	26	4	2	0	0	108
SE	14	22	62	23	2	0	1	0	124
SSE	2	27	35	29	2	1	1	1	98
S	5	20	19	18	5	0	0	0	67
SSW	7	22	29	16	19	11	2	0	106
SW	7	26	53	39	21	8	0	0	154
WSW	6	31	59	61	46	15	1	0	219
W	7	30	43	11	10	5	1	0	107
WNW	11	30	23	24	13	6	1	0	108
NW	14	25	24	38	17	4	0	0	122
NNW	11	17	28	26	5	1	0	0	88
N	14	28	53	29	9	0	0	0	133
ALL SECTOR	137	388	606	436	215	67	8	1	

NO. OF POSSIBLE OBSERVATIONS = 2184
 NO. OF VALID OBSERVATIONS = 1865

NO. OF VALID NON-CALM CONCURRENT WD/WS/DT = 1858
 NO. OF CALMS (WS LT 0.5M/SEC) = 7

NO. OF MISSING WD/WS = 319
 NO. OF MISSING DELTA T = 259

MILLSTONE NO. 2
METEOROLOGICAL
JOINT FREQUENCY
DATA FOR
CONTAINMENT VENTS

MILLSTONE NUCLEAR POWER STATION / UNIT 2

WIND SPEED/WIND DIRECTION/STABILITY JOINT FREQUENCY DISTRIBUTION

WIND LEVEL = 447 FT
 DELTA T INTERVAL = 447 - 33 FT
 PASQUILL STABILITY CLASSES / CLASS DETERMINATION METHOD = DELTA T
 DATA PERIOD = 9 MAR 82/0400 - 26 MAR 82/1600
 DATA ACQUISITION INTERVAL = MINUTES 00-00 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								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	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	0	0	0	0	0	0	0	0	0	0
E	0	0	0	0	0	0	0	0	0	0
ESE	0	0	0	0	0	0	0	0	0	0
SE	0	0	0	0	0	0	0	0	0	0
SSE	0	0	0	0	0	0	0	0	0	0
S	0	0	0	0	0	0	0	0	0	0
SSW	0	0	0	0	0	0	0	0	0	0
SW	0	0	0	0	0	0	0	0	0	0
WSW	0	0	0	0	0	0	0	0	0	0
W	0	0	0	0	0	0	0	0	0	0
WNW	0	0	0	0	0	0	0	0	0	0
NW	0	0	0	0	0	0	0	0	0	0
NWN	0	0	0	0	0	0	0	0	0	0
N	0	0	0	0	0	0	0	0	0	0
ALL SECTOR	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

MILLSTONE NUCLEAR POWER STATION / UNIT 2

WIND SPEED/WIND DIRECTION/STABILITY JOINT FREQUENCY DISTRIBUTION

WIND LEVEL = 447 FT
 DELTA T INTERVAL = 447 - 33 FT
 PASQUILL STABILITY CLASSES / CLASS DETERMINATION METHOD = DELTA T
 DATA PERIOD = 9 MAR 82/0400 - 26 MAR 82/1600
 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							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	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

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

MILLSTONE NUCLEAR POWER STATION / UNIT 2

WIND SPEED/WIND DIRECTION/STABILITY JOINT FREQUENCY DISTRIBUTION

WIND LEVEL = 447 FT
 DELTA T INTERVAL = 447 - 33 FT
 PASQUILL STABILITY CLASSES / CLASS DETERMINATION METHOD = DELTA T
 DATA PERIOD = 9 MAR 82/0400 - 26 MAR 82/1600
 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	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	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
NNW	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	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

MILLSTONE NUCLEAR POWER STATION / UNIT 2

WIND SPEED, WIND DIRECTION/STABILITY JOINT FREQUENCY DISTRIBUTION

WIND LEVEL = 447 FT
 DELTA T INTERVAL = 447 - 33 FT
 PASQUILL STABILITY CLASSES / CLASS DETERMINATION METHOD = DELTA T
 DATA PERIOD = 9 MAR 82/0400 - 26 MAR 82/1600
 DATA ACQUISITION INTERVAL = MINUTES 00-00 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	8.3-10.6	10.9-15.0	15.1-20.0	GT 20.1			
NNE	0	0	2	2	0	0	0	0	0	0	4
NE	0	1	0	0	0	0	0	0	0	0	1
ENE	0	0	0	0	0	0	0	0	0	0	0
E	0	0	1	2	1	0	0	0	0	0	4
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
SH	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	5	5	2	0	0	0	0	12
WSW	0	0	5	3	2	1	0	0	0	0	11
NW	0	1	2	7	4	0	0	0	0	0	14
WNW	0	1	0	0	0	0	0	0	0	0	1
N	0	2	0	0	2	0	0	0	0	0	4
ALL SECTOR	0	5	10	19	14	3	0	0	0	0	

NO. OF VALID OBSERVATION = 51 NO. OF CALMS (WS LT 0.5M/SEC) = 0 NO. OF MISSING WD/WS = 0

MILLSTONE NUCLEAR POWER STATION / UNIT 2
 WIND SPEED/WIND DIRECTION/STABILITY JOINT FREQUENCY DISTRIBUTION

WIND LEVEL = 447 FT
 DELTA T INTERVAL = 447 - 33 FT
 PASQUILL STABILITY CLASSES / CLASS DETERMINATION METHOD = DELTA T
 DATA PERIOD = 9 MAR 82/0400 - 26 MAR 82/1600
 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				
NNW	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	1	0	0	0	0	0	0	0	0	1
E	0	0	6	2	0	0	0	0	0	0	0	8
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
SSW	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	3	0	0	0	0	0	0	3
WNW	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
NNW	0	0	0	0	0	0	0	0	0	0	0	0
N	0	0	0	0	1	0	0	0	0	0	0	1
ALL SECTOR	0	0	7	2	4	0	0	0	0	0	0	0

NO. OF VALID OBSERVATION = 13 NO. OF CALMS (WS LT 0.5M/SEC) = 0 NO. OF MISSING WD/WS = 0

MILLSTONE NUCLEAR POWER STATION / UNIT 2

WIND SPEED/WIND DIRECTION/STABILITY JOINT FREQUENCY DISTRIBUTION

WIND LEVEL = 447 FT
 DELTA T INTERVAL = 447 ~ 33 FT
 PASQUILL STABILITY CLASSES / CLASS DETERMINATION METHOD = DELTA T
 DATA PERIOD = 9 MAR 82/0400 ~ 26 MAR 82/1600
 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	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	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
NNW	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	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

MILLSTONE NUCLEAR POWER STATION / UNIT 2

WIND SPEED/WIND DIRECTION/STABILITY JOINT FREQUENCY DISTRIBUTION

WIND LEVEL = 447 FT
 DELTA T INTERVAL = 447 - 33 FT
 PASQUILL STABILITY CLASSES / CLASS DETERMINATION METHOD = DELTA T
 DATA PERIOD = 9 MAR 82/0400 - 26 MAR 82/1600
 DATA ACQUISITION INTERVAL = MINUTES 00-00 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	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
SSW	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
WNW	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
NNW	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 (MS LT 0.5M/SEC) = 0 NO. OF MISSING WD/MS = 0

HILLSTONE NUCLEAR POWER STATION / UNIT 2
 WIND SPEED/WIND DIRECTION/STABILITY JOINT FREQUENCY DISTRIBUTION

WIND LEVEL = 447 FT
 DELTA T INTERVAL = 447 - 33 FT
 PASQUILL STABILITY CLASSES / CLASS DETERMINATION METHOD = DELTA T
 DATA PERIOD = 9 MAR 82/0400 - 26 MAR 82/1600
 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			
NNE	0	0	2	2	0	0	0	0	0	0	4
NE	0	1	0	0	0	0	0	0	0	0	1
ENE	0	0	1	0	0	0	0	0	0	0	1
E	0	0	7	4	1	0	0	0	0	0	12
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	5	8	2	0	0	0	0	15
WNW	0	0	5	3	2	1	0	0	0	0	11
NW	0	1	2	.7	4	0	0	0	0	0	14
NNW	0	1	0	0	0	0	0	0	0	0	1
N	0	2	0	0	3	0	0	0	0	0	5
ALL SECTOR	0	5	17	21	18	3	0	0	0	0	

NO. OF POSSIBLE OBSERVATIONS = 64
 NO. OF VALID OBSERVATIONS = 64
 NO. OF VALID NON-CALM CONCURRENT WD/WS/DT = 64
 NO. OF CALMS (WS LT 0.5M/SEC) = 0
 NO. OF MISSING WD/WS = 0
 NO. OF MISSING DELTA T = 0

HILLSTONE NUCLEAR POWER STATION / UNIT 2
 WIND SPEED/WIND DIRECTION/STABILITY JOINT FREQUENCY DISTRIBUTION

WIND LEVEL = 447 FT
 DELTA T INTERVAL = 447 - 33 FT
 PASQUILL STABILITY CLASSES / CLASS DETERMINATION METHOD = DELTA T
 DATA PERIOD = 5 JUN 82/2200 - 28 JUN 82/1430
 DATA ACQUISITION INTERVAL = MINUTES 00-00 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	9.3-10.8	10.9-15.0	15.1-20.0	GT 20.1			
NNE	0	0	0	0	0	0	0	0	0	0	0
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	0	0	0	0	0	0	0
WNW	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
N	0	0	0	0	0	0	0	0	0	0	0
ALL SECTOR	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

MILLSTONE NUCLEAR POWER STATION / UNIT 2

WIND SPEED/WIND DIRECTION/STABILITY JOINT FREQUENCY DISTRIBUTION

WIND LEVEL = 447 FT
 DELTA T INTERVAL = 447 - 33 FT
 PASQUILL STABILITY CLASSES / CLASS DETERMINATION METHOD = DELTA T
 DATA PERIOD = 5 JUN 82/2200 - 28 JUN 82/1430
 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			
NNW	0	0	0	0	0	0	0	0	0	0	0
NW	0	0	0	0	0	0	0	0	0	0	0
WNW	0	0	0	0	0	0	0	0	0	0	0
W	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
NNW	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	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

MILLSTONE NUCLEAR POWER STATION / UNIT 2

WIND SPEED/WIND DIRECTION/STABILITY JOINT FREQUENCY DISTRIBUTION

WIND LEVEL = 447 FT
 DELTA T INTERVAL = 447 - 33 FT
 PASQUILL STABILITY CLASSES / CLASS DETERMINATION METHOD = DELTA T
 DATA PERIOD = 5 JUN 82/2200 - 28 JUN 82/1430
 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	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

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

MILLSTONE NUCLEAR POWER STATION / UNIT 2

WIND SPEED/WIND DIRECTION/STABILITY JOINT FREQUENCY DISTRIBUTION

WIND LEVEL = 447 FT
 DELTA T INTERVAL = 447 - 33 FT
 PASQUILL STABILITY CLASSES / CLASS DETERMINATION METHOD = DELTA T
 DATA PERIOD = 5 JUN 82/2200 - 28 JUN 82/1430
 DATA ACQUISITION INTERVAL = MINUTES 00-00 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	0	0	0	1	0	0	0	0	0	0	1
NE	0	0	0	0	0	0	0	0	0	0	0
ENE	0	0	0	0	0	0	1	0	0	0	1
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	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
NNW	0	0	0	0	0	0	0	0	0	0	0
N	0	0	2	4	0	0	0	0	0	0	6
ALL SECTOR	0	0	2	5	0	0	1	0	0	0	0

NO. OF VALID OBSERVATION = 8 NO. OF CALMS (MS LT 0.5M/SEC) = 0 NO. OF MISSING WD/MS = 0

HILLSTONE NUCLEAR POWER STATION / UNIT 2

WIND SPEED/WIND DIRECTION/STABILITY JOINT FREQUENCY DISTRIBUTION

WIND LEVEL = 447 FT
 DELTA T INTERVAL = 447 - 33 FT
 PASQUILL STABILITY CLASSES / CLASS DETERMINATION METHOD = DELTA T
 DATA PERIOD = 5 JUN 82/2200 - 28 JUN 82/1430
 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	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	1	0	0	0	0	0	0	1
E	0	0	0	0	0	0	0	0	0
ESE	0	1	2	0	0	0	0	0	3
SE	0	1	0	0	0	0	0	0	1
SSE	0	1	0	0	0	0	0	0	1
S	0	2	3	0	0	0	0	0	5
SSW	0	0	1	0	0	0	0	0	1
SW	0	1	0	0	0	0	0	0	1
WSW	0	0	0	0	0	0	0	0	0
W	0	1	0	4	0	0	0	0	5
WNW	0	0	1	5	0	0	0	0	6
NW	0	1	0	0	0	0	0	0	1
NNW	0	0	0	0	0	0	0	0	0
N	0	0	0	0	0	0	0	0	0
ALL SECTOR	0	9	7	9	0	0	0	0	0

NO. OF VALID OBSERVATION = 25 NO. OF CALMS (WS LT 0.5M/SEC) = 0 NO. OF MISSING WD/WS = 0

MILLSTONE NUCLEAR POWER STATION / UNIT 2

WIND SPEED/WIND DIRECTION/STABILITY JOINT FREQUENCY DISTRIBUTION

WIND LEVEL = 447 FT
 DELTA T INTERVAL = 447 - 33 FT
 PASQUILL STABILITY CLASSES / CLASS DETERMINATION METHOD = DELTA T
 DATA PERIOD = 5 JUN 82/2200 - 23 JUN 82/1430
 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	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	1	0	0	0	0	0	0	0	0	0	1
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	3	3	0	0	0	0	0	0	0	0	6
SSW	0	2	3	0	0	0	0	0	0	0	0	5
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
WNW	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
NNW	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	6	6	0	0	0	0	0	0	0	0	0

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

MILLSTONE NUCLEAR POWER STATION / UNIT 2

WIND SPEED/WIND DIRECTION/STABILITY JOINT FREQUENCY DISTRIBUTION

WIND LEVEL = 447 FT
 DELTA T INTERVAL = 447 - 33 FT
 PASQUILL STABILITY CLASSES / CLASS DETERMINATION METHOD = DELTA T
 DATA PERIOD = 5 JUN 82/2200 - 28 JUN 82/1430
 DATA ACQUISITION INTERVAL = MINUTES 00-00 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	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	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
NNW	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	0	0	0	0	0	0	0	0

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

MILLSTONE NUCLEAR POWER STATION / UNIT 2
 WIND SPEED/WIND DIRECTION/STABILITY JOINT FREQUENCY DISTRIBUTION

WIND LEVEL = 447 FT
 DELTA T INTERVAL = 447 - 33 FT
 PASQUILL STABILITY CLASSES / CLASS DETERMINATION METHOD = DELTA T
 DATA PERIOD = 5 JUN 82/2200 - 28 JUN 82/1430
 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	8.3-10.6	10.9-15.0	15.1-20.0	GT 20.1			
NNE	0	0	0	1	0	0	0	0	0	0	1
NE	0	0	0	0	0	0	0	0	0	0	0
ENE	0	2	0	0	0	0	0	1	0	0	3
E	0	0	0	0	0	0	0	0	0	0	0
ESE	0	1	2	0	0	0	0	0	0	0	3
SE	0	1	0	0	0	0	0	0	0	0	1
SSE	0	1	0	0	0	0	0	0	0	0	1
S	0	5	6	0	0	0	0	0	0	0	11
SSW	0	2	4	0	0	0	0	0	0	0	6
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	0	1	0	4	0	0	0	0	0	0	5
WNW	0	0	1	5	0	0	0	0	0	0	6
NW	0	1	0	0	0	0	0	0	0	0	1
NRW	0	0	0	0	0	0	0	0	0	0	0
N	0	0	2	4	0	0	0	0	0	0	6
ALL SECTOR	0	15	15	14	0	0	0	1	0	0	0

NO. OF POSSIBLE OBSERVATIONS = 55
 NO. OF VALID OBSERVATIONS = 45
 NO. OF VALID NON-CALM CONCURRENT WD/WS/DT = 45
 NO. OF CALMS (WS LT 0.5M/SEC) = 0
 NO. OF MISSING WD/WS = 10
 NO. OF MISSING DELTA T = 10

MILLSTONE NO. 2

METEOROLOGICAL

JOINT FREQUENCY

DATA FOR

WASTE GAS TANK RELEASES

MILLSTONE NUCLEAR POWER STATION / UNIT 2

WIND SPEED/WIND DIRECTION/STABILITY JOINT FREQUENCY DISTRIBUTION

WIND LEVEL = 447 FT
 DELTA T INTERVAL = 447 - 33 FT
 PASQUILL STABILITY CLASSES / CLASS DETERMINATION METHOD = DELTA T
 DATA PERIOD = 10 FEB 82/2030 - 10 MAR 82/0515
 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	8.3-10.6	10.9-15.0	15.1-20.0	GT 20.1			
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	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
NNW	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	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

MILLSTONE NUCLEAR POWER STATION / UNIT 2

WIND SPEED/WIND DIRECTION/STABILITY JOINT FREQUENCY DISTRIBUTION

WIND LEVEL = 447 FT
 DELTA T INTERVAL = 447 - 33 FT
 PASQUILL STABILITY CLASSES / CLASS DETERMINATION METHOD = DELTA T
 DATA PERIOD = 10 FEB 82/2030 - 10 MAR 82/0515
 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	8.3-10.8	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
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
WNW	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
NNW	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 HD/WS = 0

MILLSTONE NUCLEAR POWER STATION / UNIT 2

WIND SPEED/WIND DIRECTION/STABILITY JOINT FREQUENCY DISTRIBUTION

WIND LEVEL = 447 FT
 DELTA T INTERVAL = 447 - 33 FT
 PASQUILL STABILITY CLASSES / CLASS DETERMINATION METHOD = DELTA T
 DATA PERIOD = 10 FEB 82/2030 - 10 MAR 82/0515
 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	8.3-10.8	10.9-15.0	15.1-20.0	GT 20.1			
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	0	0	0	0	0	0	0
WNW	0	0	0	3	11	0	0	0	0	0	14
NW	0	0	5	16	0	0	0	0	0	0	21
NNW	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	5	19	11	0	0	0	0	0	0

NO. OF VALID OBSERVATION = 35 NO. OF CALMS (WS LT 0.5M/SEC) = 0 NO. OF MISSING WD/WS = 0

MILLSTONE NUCLEAR POWER STATION / UNIT 2

WIND SPEED/WIND DIRECTION/STABILITY JOINT FREQUENCY DISTRIBUTION

WIND LEVEL = 447 FT
 DELTA T INTERVAL = 447 - 33 FT
 PASQUILL STABILITY CLASSES / CLASS DETERMINATION METHOD = DELTA T
 DATA PERIOD = 10 FEB 82/2030 - 10 MAR 82/0515
 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	0	0	0	1	0	0	0	0	0	0	1
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	4	2	3	0	0	0	0	0	9
WNW	0	0	6	8	3	0	0	0	0	0	17
W	0	0	3	12	10	1	0	0	0	0	26
NNW	0	0	0	3	1	0	0	0	0	0	4
N	0	0	0	1	5	0	0	0	0	0	6
ALL SECTOR	0	0	13	27	22	1	0	0	0	0	0

NO. OF VALID OBSERVATION = 63 NO. OF CALMS (WS LT 0.5M/SEC) = 0 NO. OF MISSING WD/WS = 0

MILLSTONE NUCLEAR POWER STATION / UNIT 2
 WIND SPEED/WIND DIRECTION/STABILITY JOINT FREQUENCY DISTRIBUTION

WIND LEVEL = 447 FT
 DELTA T INTERVAL = 447 - 33 FT
 PASQUILL STABILITY CLASSES / CLASS DETERMINATION METHOD = DELTA T
 DATA PERIOD = 10 FEB 82/2030 - 10 MAR 82/0515
 DATA ACQUISITION INTERVAL = MINUTES 00-30 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	8.3-10.6	10.9-15.0	15.1-20.0	GT 20.1						
NNE	0	0	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	0	0
ENE	0	0	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	0	0
ESE	0	0	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	0	0
SSE	0	0	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	0	0
SSW	0	0	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	0	0
WSW	0	0	0	0	0	0	0	0	0	0	0	0	0	0
W	0	0	0	2	0	0	0	0	0	0	0	0	0	2
WNW	0	0	0	0	0	0	1	0	0	0	0	0	0	1
NW	0	0	0	0	0	0	7	0	0	0	0	0	0	7
NNW	0	0	0	0	0	0	0	0	0	0	0	0	0	0
N	0	0	0	0	0	0	0	2	0	0	0	0	0	2
ALL SECTOR	0	0	0	9	3	0	0	0	0	0	0	0	0	0

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

MILLSTONE NUCLEAR POWER STATION / UNIT 2

WIND SPEED/WIND DIRECTION/STABILITY JOINT FREQUENCY DISTRIBUTION

WIND LEVEL = 447 FT
 DELTA T INTERVAL = 447 - 33 FT
 PASQUILL STABILITY CLASSES / CLASS DETERMINATION METHOD = DELTA T
 DATA PERIOD = 10 FEB 82/2030 - 10 MAR 82/0515
 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	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

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

HILLSTONE NUCLEAR POWER STATION / UNIT 2

WIND SPEED/WIND DIRECTION/STABILITY JOINT FREQUENCY DISTRIBUTION

WIND LEVEL = 447 FT
 DELTA T INTERVAL = 447 - 33 FT
 PASQUILL STABILITY CLASSES / CLASS DETERMINATION METHOD = DELTA T
 DATA PERIOD = 10 FEB 82/2030 - 10 MAR 82/0515
 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	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	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
NNW	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	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 HD/WS = 0

MILLSTONE NUCLEAR POWER STATION / UNIT 2

WIND SPEED/WIND DIRECTION/STABILITY JOINT FREQUENCY DISTRIBUTION

WIND LEVEL = 447 FT
 DELTA T INTERVAL = 447 - 33 FT
 PASQUILL STABILITY CLASSES / CLASS DETERMINATION METHOD = DELTA T
 DATA PERIOD = 10 FEB 82/2030 - 10 MAR 82/0515
 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			
NNE	0	0	0	1	0	0	0	0	0	0	1
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	4	4	3	0	0	0	0	0	11
WRW	0	0	6	11	15	0	0	0	0	0	32
NW	0	0	8	35	10	1	0	0	0	0	54
NNW	0	0	0	3	1	0	0	0	0	0	4
N	0	0	0	1	7	0	0	0	0	0	8
ALL SECTOR	0	0	18	55	36	1	0	0	0	0	0

NO. OF POSSIBLE OBSERVATIONS = 110
 NO. OF VALID OBSERVATIONS = 110
 NO. OF VALID NON-CALM CONCURRENT WD/WS/DT = 110
 NO. OF CALMS (WS LT 0.5M/SEC) = 0
 NO. OF MISSING WD/WS = 0
 NO. OF MISSING DELTA T = 0