NORTHEAST NUCLEAR ENERGY COMPANY

MILLSTONE NUCLEAR POWER STATION

UNITS NO. 1 & NO. 2



# SEMIANNUAL RADIOACTIVE EFFLUENTS RELEASE REPORT

July 1, 1979 - December 31, 1979

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

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

February 29, 1980

NORTHEAST NUCLEAR ENERGY COMPANY

MILLSTONE NUCLEAR POWER STATION

UNITS NO. 1 & NO. 2

# SEMIANNUAL RADIOACTIVE EFFLUENTS RELEASE REPORT

July 1, 1979 - December 31, 1979

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

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

February 29, 1980

## 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 96% and Unit No. 2 with a unit capacity factor of 70%.

Unit No. 1 was shutdown for refueling from N/A to _____.
Unit No. 2 was shutdown for refueling from N/A to _____.

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 |
| Table 2.2-1 | Unit 2 Liquid Effluents-Summation |
| Table 2.2-2 | Unit 2 Liquid Effluents-Continuous Mode |
| Table 2.2-3 | Unit 2 Liquid Effluents-Batch Mode |
| Table 2.2-4 | Unit 2 Gaseous Effluents-Summation |
| Table 2.2-5 | Unit 2 Gaseous Efflunts-Mixed Continuous - Unit 2 Ventilation |
| Table 2.2-6 | Unit 2 Gaseous Effluents Elevated or Mixed Batch - Unit 2 Containment Purges |
| Table 2.2-7 | Unit 2 Gaseous Effluents-Elevated Batch - Unit 2 Waste Gas Tanks |
| Table 2.3-1 | Supplemental Information |

Table 2.1-1

MILLSTONE NUCLEAR POWER STATION - UNIT No. 1

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

Year 1979

| | Units | JULY | AUG. | SEPT. | QUARTERLY TOTALS | Est. Total Error, % |
|---|---|---|---|---|---|---|
| A. Fission and Activation Products | | | | | | |
| 1. Total released(not including H-3,Gases, Alpha) | Ci | 4.46E-03 | 1.44E-03 | 2.92E-03 | 8.82E-03 | 1.50E+01 |
| 2. Average diluted concentration during period | uCi/ml | 3.81E-09 | 1.69E-09 | 1.90E-09 | 2.48E-09 | |
| 3. Percent of applicable limit ** | % | - | - | - | ** 0.09 | |
| B. Tritium | | | | | | |
| 1. Total Released | Ci | 1.37E-02 | 3.41E-01 | 5.81E-01 | 9.36E-01 | 1.50E+01 |
| 2. Average diluted concentration during period | uCi/ml | 1.17E-08 | 4.00E-07 | 3.77E-07 | 2.63E-07 | |
| C. Dissolved and Entrained Gases | | | | | | |
| 1. Total Released | Ci | ≤1.24E-05 | 4.84E-02 | 4.02E-02 | 8.86E-02 | 1.50E+01 |
| 2. Average diluted concentration during period | uCi/ml | ≤ 1.06E-11 | 5.68E-08 | 2.61E-08 | 2.4 E-08 | - |
| D. Gross Alpha Radioactivity | | | | | | |
| 1. Total Released | Ci | 3.21E-06 | ≤ 1.42E-05 | ≤ 1.51E-05 | 3.21E-06 | 1.50E+01 |
| E. Volume of waste released(Prior to dilution) | liters | 9.58E+03 | 2.84E+05 | 3.01E+05 | 5.95E+05 | 1.00E+01 |
| F. Volume of dilution water used during period | liters | 1.17E+09 | 8.52E+08 | 1.54E+09 | 3.56E+09 | 1.00E+01 |

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

Table 2.1-1 (cont.)

MIDLAND NUCLEAR POWER STATION - UNIT No. 1

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

Year 1979

| | Units | OCT | NOV | DEC | QUARTERLY TOTALS | Est. Total Error, % |
|---|---|---|---|---|---|---|
| A. Fission and Activation Products | | | | | | |
| 1. Total released(not including H-3,Gases, Alpha) | Ci | 4.47E-03 | 4.29E-03 | 1.31E-03 | 1.01E-02 | 1.50E+01 |
| 2. Average diluted concentration during period | uCi/ml | 1.46E-09 | 8.22E-10 | 8.85E-10 | 1.51E-09 | |
| 3. Percent of applicable limit ** | % | --- | --- | --- | ** 0.10 | |
| B. Tritium | | | | | | |
| 1. Total Released | Ci | 1.01E+00 | 8.11E-01 | 5.51E-01 | 2.37E+00 | 1.50E+01 |
| 2. Average diluted concentration during period | uCi/ml | 3.30E-07 | 3.75E-07 | 3.72E-07 | 3.54E-07 | |
| C. Dissolved and Entrained Gases | | | | | | |
| 1. Total Released | Ci | 1.41E-02 | 2.49E-01 | 6.76E-03 | 2.70E-01 | 1.50E+01 |
| 2. Average diluted concentration during period | uCi/ml | 4.61E-09 | 1.15E-07 | 4.57E-09 | 4.03E-08 | |
| D. Gross Alpha Radioactivity | | | | | | |
| 1. Total Released | Ci | ≤2.31E-05 | ≤2.30E-05 | ≤1.99E-05 | ≤6.60E-05 | 1.50E+01 |
| E. Volume of waste released(Prior to dilution) | liters | 4.61E+05 | 5.75E+05 | 3.91E+05 | 1.43E+06 | 1.00E+01 |
| F. Volume of dilution water used during period | liters | 3.06E+09 | 2.16E+09 | 1.48E+09 | 6.70E+09 | 1.00E+01 |

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

Table 2.1-2

MILLSTONE NUCLEAR POWER STATION UNIT No. 1

EFFLUENT AND WASTE DISPOSAL REPORT

YEAR 1979 LIQUID EFFLUENTS - BATCH MODE

| Nuclides Released | Unit | JULY | AUG. | SEPT. | Quarterly Total |
|---|---|---|---|---|---|
| I-131 | Ci | ≤4.98E-06 | 7.70E-05 | 3.77E-04 | 4.54E-04 |
| Ba,La-140 | Ci | ≤ 2.21E-05 | ≤ 1.44E-04 | ≤ 1.87E-04 | ≤ 3.53E-04 |
| Cs-134 | Ci | 1.83E-05 | - | 2.47E-05 | 4.30E-05 |
| Cs-137 | Ci | 5.10E-05 | - | 1.53E-04 | 2.04E-04 |
| Co-58 | Ci | 1.57E-04 | - | 1.08E-05 | 1.68E-04 |
| Co-60 | Ci | 3.46E-03 | 8.58E-04 | 1.74E-03 | 6.06E-03 |
| Mn-54 | Ci | 5.81E-04 | 4.32E-04 | 5.59E-04 | 1.57E-03 |
| Ce-141 | Ci | 4.41E-05 | - | - | 4.41E-05 |
| Ag-110m | Ci | 9.75E-06 | - | - | 9.75E-06 |
| Nb-97 | Ci | 1.19E-05 | - | - | 1.19E-05 |
| Zr-95 | Ci | 2.02E-05 | - | - | 2.02E-05 |
| Nb-95 | Ci | 4.39E-05 | 2.53E-05 | - | 6.92E-05 |
| Fe-59 | Ci | 1.94E-05 | - | - | 1.94E-05 |
| Sr-89 | Ci | 2.16E-06 | ≤8.52E-06 | 1.29E-05 | 1.51E-05 |
| Sr-90 | Ci | 1.05E-06 | ≤2.84E-06 | 7.83E-06 | 8.88E-06 |
| Zn-65 | Ci | 3.95E-05 | - | - | 3.95E-05 |
| I-133 | Ci | - | 1.82E-05 | 3.52E-05 | 5.34E-05 |
| W-187 | Ci | - | 2.74E-05 | - | 2.74E-05 |
| | Ci | | | | |
| | Ci | | | | |
| | Ci | | | | |
| | Ci | | | | |
| | Ci | | | | |
| | Ci | | | | |
| | Ci | - | | | |
| Total for period(above) | Ci | 4.46E-03 | 1.44E-03 | 2.92E-03 | 8.82E-03 |
| xenon-133 | Ci | ≤8.49E-06 | 1.75E-02 | 3.20E-02 | 4.95E-02 |
| xenon-135 | Ci | ≤3.94E-06 | 3.09E-02 | 8.23E-03 | 3.91E-02 |
| | Ci | | | | |

Table 2.1-2 (cont.)

MILLSTONE NUCLEAR POWER STATION UNIT No. 1

EFFLUENT AND WASTE DISPOSAL REPORT

YEAR 1979 LIQUID EFFLUENTS - BATCH MODE

| Nuclides Released | Unit | OCT | NOV | DEC | Quarterly Total |
|---|---|---|---|---|---|
| I-131 | Ci | 2.56E-04 | 4.83E-04 | 1.34E-04 | 8.72E-04 |
| Ba,La-140 | Ci | 1.10E-03 | 7.68E-04 | 1.09E-05 | 1.88E-03 |
| Cs-134 | Ci | --- | --- | 6.29E-05 | 6.29E-05 |
| Cs-137 | Ci | --- | --- | 2.70E-04 | 2.70E-04 |
| Co-58 | Ci | --- | 1.88E-05 | 6.01E-06 | 2.48E-05 |
| Co-60 | Ci | 1.13E-03 | 1.04E-03 | 6.71E-04 | 2.84E-03 |
| Mn-54 | Ci | 4.36E-04 | 2.48E-04 | 9.97E-05 | 7.83E-04 |
| Mo-99 | Ci | 2.38E-05 | --- | --- | 2.38E-05 |
| Ce-141 | Ci | 5.32E-05 | 7.16E-05 | --- | 1.25E-04 |
| Cr-51 | Ci | 1.31E-03 | 1.40E-03 | --- | 2.71E-03 |
| I-133 | Ci | 7.24E-05 | 2.28E-04 | 2.46E-06 | 3.02E-04 |
| I-132 | Ci | --- | --- | 1.13E-05 | 1.13E-05 |
| Ru-105 | Ci | 7.63E-05 | --- | --- | 7.63E-05 |
| Sr-89 | Ci | ≤2.31E-05 | ≤2.88E-05 | ≤1.37E-05 | ≤6.56E-05 |
| Sr-90 | Ci | 7.84E-06 | 2.42E-05 | ≤2.54E-06 | 3.20E-05 |
| Nb-95 | Ci | --- | 1.04E-05 | --- | 1.04E-05 |
| Mn-56 | Ci | --- | --- | 1.63E-05 | 1.63E-05 |
| I-134 | Ci | --- | --- | 2.11E-05 | 2.11E-05 |
| | Ci | | | | |
| | Ci | | | | |
| | Ci | | | | |
| | Ci | | | | |
| | Ci | | | | |
| | Ci | | | | |
| | Ci | | | | |
| Total for period(above) | Ci | 4.47E-03 | 4.29E-03 | 1.31E-03 | 1.01E-02 |
| xenon-133 | Ci | 6.70E-03 | 7.69E-02 | 3.22E-03 | 8.68E-02 |
| xenon-135 | Ci | 7.38E-03 | 1.72E-01 | 3.54E-03 | 1.83E-01 |
| | Ci | | | | |

Table 2.1-3

MILLSTONE NUCLEAR POWER STATION - UNIT No. 1

EFFLUENT AND WASTE DISPOSAL REPORT

GASEOUS EFFLUENTS - SUMMATION OF ALL RELEASES

Year 1979

| | Units | JULY | AUG. | SEPT. | QUARTERLY TOTALS | Est. Total Error, % |
|---|---|---|---|---|---|---|
| A. Fission and Activation Gases | | | | | | |
| 1. Total Released | Ci | 1.54E+03 | 1.41E+03 | 2.15E+03 | 5.10E+03 | 2.50E+01 |
| 2. Average Release Rate For Period | uCi/sec | 5.75E+02 | 5.26E+02 | 8.30E+02 | 6.42E+02 | |
| 3. Percent of Technical Specification Limit | % | - | - | - | * 0.243 | |
| * Limit as per E.T.S. Equation 2.4.2.2.B.1 | | | | | | |
| B. Iodines | | | | | | |
| 1. Total Iodine - 131 | Ci | 1.06E-02 | 1.57E-02 | 1.67E-02 | 4.30E-02 | 2.50E+01 |
| 2. Average Release Rate For Period | uCi/sec | 3.96E-03 | 5.86E-03 | 6.45E-03 | 5.41E-03 | |
| C. Particulates | | | | | | |
| 1. Particulates With Half-lives > 8 Days | Ci | 1.09E-02 | 1.11E-02 | 9.12E-03 | 3.11E-02 | 2.50E+01 |
| 2. Average Release Rate For Period | uCi/sec | 4.07E-03 | 4.14E-03 | 3.52E-03 | 3.91E-03 | |
| 3. Percent of Technical Specification Limit | % | - | - | - | ** 1.17 | |
| 4. Gross Alpha Radioactivity | Ci | 1.60E-06 | 1.80E-06 | 2.08E-06 | 5.48E-06 | |
| ** Limit as per E.T.S. Equation 2.4.2.2.B.2 | | | | | | |
| D. Tritium | | | | | | |
| 1. Total Released | Ci | 3.48E+00 | 1.20E+01 | 8.75E+00 | 2.42E+01 | 2.50E+01 |
| 2. Average Release Rate For Period | uCi/sec | 1.30E+00 | 4.48E+00 | 3.38E+00 | 3.04E+00 | |

Table 2.1-3 (cont.)

MILLSTONE NUCLEAR POWER STATION - UNIT NO. 1

EFFLUENT AND WASTE DISPOSAL REPORT

GASEOUS EFFLUENTS - SUMMATION OF ALL RELEASES

Year 1979

| | Units | OCT | NOV | DEC | QUARTERLY TOTALS | Est. Total Error, % |
|---|---|---|---|---|---|---|
| A. Fission and Activation Gases | | | | | | |
| 1. Total Released | Ci | 1.72E+03 | 8.91E+02 | 7.16E+02 | 3.33E+03 | 2.50E+01 |
| 2. Average Release Rate For Period | uCi/sec | 6.42E+02 | 3.44E+02 | 2.67E+02 | 4.19E+02 | |
| 3. Percent of Technical Specification Limit | % | ——— | ——— | ——— | *0.711 | |
| B. Iodines | | | | | | |
| 1. Total Iodine - 131 | Ci | 1.66E-02 | 2.41E-02 | 1.67E-02 | 5.74E-02 | 2.50E+01 |
| 2. Average Release Rate For Period | uCi/sec | 6.20E-03 | 9.30E-03 | 6.24E-03 | 7.22E-03 | |
| C. Particulates | | | | | | |
| 1. Particulates With Half-lives > 8 Days | Ci | 9.21E-03 | 1.69E-02 | 1.09E-02 | 3.70E-02 | 2.50E+01 |
| 2. Average Release Rate For Period | uCi/sec | 3.44E-03 | 5.60E-03 | 4.07E-03 | 4.65E-03 | |
| 3. Percent of Technical Specification Limit | % | ——— | ——— | ——— | **1.17E+00 | |
| 4. Gross Alpha Radioactivity | Ci | 8.57E-07 | 1.56E-06 | 1.62E-06 | 4.04E-06 | |
| D. Tritium | | | | | | |
| 1. Total Released | Ci | 2.86E+00 | 2.79E+00 | 3.57E+00 | 9.22E+00 | 2.50E+01 |
| 2. Average Release Rate For Period | uCi/sec | 1.07E+00 | 1.08E+00 | 1.33E+00 | 1.16E+00 | |

* Limit as per E.T.S. equation 2.4.2.2.B.1

** Limit as per E.T.S. equation 2.4.2.2.B.2

Table 2.1-4

MILLSTONE NUCLEAR POWER STATION - UNIT No. 1

EFFLUENT AND WASTE DISPOSAL REPORT

YEAR 1979 GASEOUS EFFLUENTS-ELEVATED RELEASE - CONTINUOUS MODE

| Nuclides Released | Unit | JULY | AUG. | SEPT. | Quarterly Total |
|---|---|---|---|---|---|
| 1. Fission gases | | | | | |
| Xe-133 | Ci | 3.17E+02 | 3.69E+02 | 3.60E+02 | 1.05E+03 |
| Kr-87 | Ci | 6.23E-01 | 2.01E+01 | - | 2.07E+01 |
| Kr-88 | Ci | - | - | - | - |
| Kr-85m | Ci | 3.35E+01 | 1.69E+01 | - | 5.04E+01 |
| Xe-135 | Ci | 2.98E+02 | 3.58E+02 | 4.22E+02 | 1.08E+03 |
| Xe-133 | Ci | 5.21E+01 | 1.32E+01 | 1.36E+02 | 2.01E+02 |
| Kr-89 | Ci | - | - | - | - |
| Xe-137 | Ci | 4.66E+02 | 7.50E+01 | 7.69E+02 | 1.31E+03 |
| Xe-135m | Ci | 3.69E+02 | 5.56E+02 | 4.64E+02 | 1.39E+03 |
| Kr-83m | Ci | - | - | - | - |
| Xe-133m | Ci | - | - | - | - |
| Xe-131m | Ci | - | - | - | - |
| Kr-85 | Ci | - | - | - | - |
| Ar-37 | Ci | | | | |
| Total For Period | Ci | 1.54E+03 | 1.41E+03 | 2.15E+03 | 5.10E+03 |
| 2. Iodines | | | | | |
| iodine-131 | Ci | 1.04E-02 | 1.51E-02 | 1.62E-02 | 4.17E-02 |
| iodine-133 | Ci | 5.94E-02 | 7.39E-02 | 8.90E-02 | 2.22E-01 |
| iodine-135 | Ci | 7.61E-02 | 7.69E-02 | 1.04E-01 | 2.57E-01 |
| Total for period | Ci | 1.46E-01 | 1.66E-01 | 2.09E-01 | 5.21E-01 |
| 3. Particulates | | | | | |
| I-131 | Ci | 1.71E-04 | 5.72E-04 | 4.99E-04 | 1.24E-03 |
| Be,La-140 | Ci | 8.80E-03 | 8.30E-03 | 6.62E-03 | 2.37E-02 |
| Mn-54 | Ci | 2.92E-04 | 2.30E-04 | 2.32E-04 | 7.54E-04 |
| Co-58 | Ci | 1.98E-05 | 3.54E-05 | 4.38E-05 | 9.90E-05 |
| Co-60 | Ci | 4.30E-04 | 5.24E-04 | 5.28E-04 | 1.48E-03 |
| Cs-134 | Ci | 1.25E-05 | 2.58E-05 | 1.38E-05 | 5.21E-05 |
| Cs-137 | Ci | 1.11E-04 | 1.38E-04 | 7.94E-05 | 3.28E-04 |
| Fe-59 | Ci | 1.40E-05 | 2.79E-05 | 2.05E-05 | 6.24E-05 |
| | Ci | | | | |
| | Ci | | | | |
| Sr-89 | Ci | * 1.02E-03 | 1.28E-03 | 1.07E-03 | 3.37E-03 |
| Sr-90 | Ci | 7.33E-06 | 9.17E-06 | 6.98E-06 | 2.35E-05 |
| | Ci | | | | |
| | Ci | | | | |
| | Ci | | | | |

* Particulate samples for July were lost during analysis for Strontium. Since the unit was shutdown for all of June, July strontium releases were calculated using

Table 2.1-4 (cont.)
MILLSTONE NUCLEAR POWER STATION - UNIT No. 1

EFFLUENT AND WASTE DISPOSAL REPORT

YEAR 1979 GASEOUS EFFLUENTS-ELEVATED RELEASE - CONTINUOUS MODE

| Nuclides Released | Unit | OCT | NOV | DEC | Quarterly Total |
|---|---|---|---|---|---|
| **1. Fission gases** | | | | | |
| Xe-133 | Ci | 3.48E+02 | 3.49E+02 | 3.66E+02 | 1.06E+03 |
| Kr-87 | Ci | 2.81E+01 | --- | 1.10E+01 | 3.91E+01 |
| Kr-88 | Ci | --- | --- | 1.03E+01 | 1.03E+01 |
| Kr-85m | Ci | 9.64E+00 | 3.16E+01 | 3.10E+00 | 4.43E+01 |
| Xe-135 | Ci | 5.01E+01 | 5.27E+01 | 3.58E+01 | 1.39E+02 |
| Xe-133 | Ci | 1.14E+01 | --- | --- | 1.14E+01 |
| Kr-89 | Ci | --- | --- | --- | --- |
| Xe-137 | Ci | 1.15E+03 | --- | --- | 1.15E+03 |
| Xe-135m | Ci | 1.25E+02 | 1.06E+02 | 1.26E+02 | 3.57E+02 |
| Kr-83m | Ci | --- | --- | --- | --- |
| Xe-133m | Ci | --- | --- | --- | --- |
| Xe-131m | Ci | --- | 3.52E+02 | 1.64E+02 | 5.16E+02 |
| Kr-85 | Ci | --- | --- | --- | --- |
| Ar-37 | Ci | --- | --- | --- | --- |
| Total For Period | Ci | 1.72E+03 | 8.91E+02 | 7.16E+02 | 3.33E+03 |
| **2. Iodines** | | | | | |
| iodine-131 | Ci | 1.57E-02 | 2.26E-02 | 1.52E-02 | 5.35E-02 |
| iodine-133 | Ci | 8.15E-02 | 1.20E-01 | 9.14E-02 | 2.93E-01 |
| iodine-135 | Ci | 7.05E-02 | 1.56E-01 | 1.23E-01 | 3.50E-01 |
| Total for period | Ci | 1.68E-01 | 2.99E-01 | 2.30E-01 | 6.97E-01 |
| **3. Particulates** | | | | | |
| I-131 | Ci | 9.49E-04 | 1.50E-03 | 1.50E-03 | 3.95E-03 |
| Ba,La-140 | Ci | 6.99E-03 | 1.33E-02 | 7.74E-03 | 2.80E-02 |
| Mn-54 | Ci | 1.16E-04 | 2.68E-04 | 2.47E-04 | 6.31E-04 |
| Co-58 | Ci | 4.36E-06 | 2.96E-05 | 3.51E-05 | 6.91E-05 |
| Co-60 | Ci | 2.04E-04 | 4.21E-04 | 2.48E-04 | 8.73E-04 |
| Cs-134 | Ci | 2.21E-06 | 7.01E-06 | 2.62E-05 | 3.54E-05 |
| Cs-137 | Ci | 4.15E-05 | 7.32E-05 | 1.23E-04 | 2.38E-04 |
| Fe-59 | Ci | 1.83E-05 | --- | 8.71E-06 | 2.70E-05 |
| | Ci | | | | |
| | Ci | | | | |
| Sr-89 | Ci | 8.75E-04 | 1.32E-03 | 9.25E-04 | 3.12E-03 |
| Sr-90 | Ci | 5.03E-06 | 7.98E-06 | 1.49E-05 | 2.79E-05 |
| | Ci | | | | |
| | Ci | | | | |
| | Ci | | | | |

Table 2.2-1

MILLSTONE NUCLEAR POWER STATION - UNIT No. 2

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

Year 1979

| | Units | JULY | AUGUST | SEPTEMBER | QUARTERLY TOTALS | Est. Total Error, % |
|---|---|---|---|---|---|---|
| A. Fission and Activation Products | | | | | | |
| 1. Total released(not including H-3,Gases, Alpha) | Ci | 1.30E-01 | 8.17E-02 | 1.19E-01 | 3.31E-01 | 1.50E+01 |
| 2. Average diluted concentration during period | uCi/ml | 1.61E-09 | 1.59E-09 | 1.48E-09 | 1.56E-09 | |
| 3. Percent of applicable limit ** | % | 1.30E+00 | 8.17E-01 | 1.19E+00 | 3.31E+00 | |
| B. Tritium | | | | | | |
| 1. Total Released | Ci | 1.51E+01 | 2.41E+01 | 2.92E+01 | 6.84E+01 | 1.50E+01 |
| 2. Average diluted concentration during period | uCi/ml | 1.87E-10 | 4.70E-07 | 3.65E-07 | 3.23E-07 | |
| C. Dissolved and Entrained Gases | | | | | | |
| 1. Total Released | Ci | 1.24E-02 | 6.82E-03 | 6.18E-03 | 2.54E-02 | 1.50E+01 |
| 2. Average diluted concentration during period | uCi/ml | 1.54E-10 | 1.33E-10 | 7.72E-11 | 1.20E-10 | |
| D. Gross Alpha Radioactivity | | | | | | |
| 1. Total Released | Ci | ≤ 3.56E-04 | ≤ 2.71E-04 | 3.34E-04 | -- - -- | 1.50E+01 |
| E. Volume of waste released(Prior to dilution) | liters | 7.11E+06 | 5.36E+06 | 6.40E+06 | 1.89E+07 | 1.00E+01 |
| F. Volume of dilution water used during period | liters | 8.08E+10 | 5.13E+10 | 8.01E+10 | 2.12E+11 | 1.00E+01 |

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

Table 2.2-1 (cont.)

MILLSTONE NUCLEAR POWER STATION - UNIT No. 2

EFFLUENT AND WASTE DISPOSAL REPORT

LIQUID EFFLUENTS - SUMMATION OF ALL RELEASES

Year 1979

| | Units | OCTOBER | NOVEMBER | DECEMBER | QUARTERLY TOTALS | Est. Total Error, % |
|---|---|---|---|---|---|---|
| A. Fission and Activation Products | | | | | | |
| 1. Total released(not including H-3,Gases, Alpha) | Ci | 1.79E-01 | 9.62E-02 | 1.36E-01 | 4.11E-01 | 1.50E+01 |
| 2. Average diluted concentration during period | uCi/ml | 1.89E-09 | 2.27E-08 | 1.89E-09 | 2.40E-09 | |
| 3. Percent of applicable limit ** | % | 1.79E+00 | 9.62E-01 | 1.36E+00 | 4.11E+00 | |
| B. Tritium | | | | | | |
| 1. Total Released | Ci | 1.69E+01 | 5.40E+01 | 2.21E+01 | 9.30E+01 | 1.50E+01 |
| 2. Average diluted concentration during period | uCi/ml | 1.79E-07 | 1.27E-05 | 3.09E-07 | 5.44E-07 | |
| C. Dissolved and Entrained Gases | | | | | | |
| 1. Total Released | Ci | 1.60E-02 | 1.96E-01 | 3.92E-02 | 2.51E-01 | 1.50E+01 |
| 2. Average diluted concentration during period | uCi/ml | 1.69E-10 | 4.62E-08 | 5.47E-10 | 1.47E-09 | |
| D. Gross Alpha Radioactivity | | | | | | |
| 1. Total Released | Ci | ≤ 3.50E-04 | ≤ 5.68E-05 | ≤3.61E-05 | - - - - | 1.50E+01 |
| E. Volume of waste released(Prior to dilution) | liters | 6.78E+06 | 7.10E+05 | 5.70E+06 | 1.32E+97 | 1.00E+01 |
| F. Volume of dilution water used during period | liters | 9.46E+10 | 4.24E+09 | 7.17E+10 | 1.71E+11 | 1.00E+01 |

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

Table 2.2-2

MILLSTONE NUCLEAR POWER STATION - UNIT No. 2

EFFLUENT AND WASTE DISPOSAL REPORT

YEAR 1979 LIQUID EFFLUENTS-CONTINUOUS MODE STEAM GENERATOR BLOWDOWN

| Nuclides Released | Unit | JULY | AUGUST | SEPTEMBER | Quarterly Total |
|---|---|---|---|---|---|
| I-131 | Ci | ≤ 9.74E-03 | ≤ 3.51E-03 | 4.17E-04 | 4.17E-04 |
| Ba,La-140 | Ci | ≤ 2.69E-03 | ≤ 1.00E-03 | ≤ 9.17E-04 | -- -- |
| Co-60 | Ci | 2.88E-03 | 1.36E-03 | 1.96E-03 | 6.20E-03 |
| Cs-137 | Ci | 2.58E-04 | -- -- | -- -- | 2.58E-04 |
| I-133 | Ci | -- -- | -- -- | 5.14E-04 | 5.14E-04 |
| Sr-89 | Ci | ≤ 1.34E-04 | ≤ 2.51E-04 | ≤ 2.43E-04 | -- -- |
| Sr-90 | Ci | ≤ 3.36E-05 | ≤ 4.02E-04 | ≤ 3.04E-04 | -- -- |
| | Ci | | | | |
| | Ci | | | | |
| TOTALS FOR PERIOD | Ci | 3.14E-03 | 1.36E-03 | 2.89E-03 | 7.39E-03 |
| | Ci | | | | |
| | Ci | | | | |
| | Ci | | | | |
| | Ci | | | | |
| | Ci | | | | |
| H-3 | Ci | 3.24E-02 | 3.88E-02 | 1.02E-01 | 1.73E-01 |
| | Ci | | | | |
| GROSS ALPHA | Ci | ≤ 3.36E-04 | ≤ 2.51E-04 | ≤ 3-04E-04 | -- -- |
| | Ci | | | | |
| | Ci | | | | |
| | Ci | | | | |
| | Ci | | | | |
| | Ci | | | | |
| | Ci | | | | |
| | Ci | | | | |
| Total for period (above) | Ci | | | | |
| xenon-133 | Ci | ≤ 3.88E-03 | ≤ 2.73E-04 | ≤ 5.08E-04 | -- -- |
| xenon-135 | Ci | ≤ 9.66E-04 | ≤ 9.67E-05 | ≤ 1.42E-04 | -- -- |
| | Ci | | | | |

Table 2.2-2 (cont.)

MILLSTONE NUCLEAR POWER STATION - UNIT No. 2

EFFLUENT AND WASTE DISPOSAL REPORT

Steam Generator Blowdown

YEAR 1979 LIQUID EFFLUENTS-CONTINUOUS MODE

| Nuclides Released | Unit | October | November | December | Quarterly Total |
|---|---|---|---|---|---|
| I-131 | Ci | ≤ 2.49E-04 | | ≤ 6.22E-04 | - - - - |
| Ba,La-140 | Ci | ≤ 4.36E-04 | | ≤ 6.22E-04 | - - - - |
| Co-60 | Ci | 2.30E-03 | | - - - - | 2.30E-03 |
| Mn-54 | Ci | 7.74E-04 | | - - - - | 7.74E-04 |
| Cs-137 | Ci | - - - - | | 5.35E-04 | 5.35E-04 |
| Na-24 | Ci | - - - - | | 2.70E-02 | 2.70E-02 *** |
| Sr-89 | Ci | ≤ 3.41E-04 | | ≤ 1.99E-04 | - - - - |
| Sr-90 | Ci | ≤ 3.90E-05 | | ≤ 3.49E-05 | - - - - |
| Total For Period | Ci | 3.07E-03 | | 2.75E-02 | 3.06E-02 |
| | Ci | | | | |

*** Discharged During Special Flow Test of Secondary System

| | | | | | |
|---|---|---|---|---|---|
| | Ci | | | | |
| H-3 | Ci | 3.71E-02 | | 2.23E-02 | 6.68E-02 |
| | Ci | | | | |
| Gross Alpha | Ci | ≤ 3.25E-04 | | ≤ 2.49E-04 | - - - - |
| | Ci | | | | |
| | Ci | | | | |
| | Ci | | | | |
| | Ci | | | | |
| | Ci | | | | |
| | Ci | | | | |
| | Ci | | | | |
| | Ci | | | | |
| | Ci | | | | |
| | Ci | | | | |
| Total for period (above) | Ci | | | | |
| xenon-133 | Ci | ≤ 2.10E-03 | | ≤ 9.90E-04 | - - - - |
| xenon-135 | Ci | ≤ 5.16E-04 | | ≤ 3.03E-04 | - - - - |
| | Ci | | | | |

12-05-79 UNIT OFF LINE 11-01-79 UNIT BACK ON LINE

Table 2.2-3

MILLSTONE NUCLEAR POWER STATION UNIT No. 2

EFFLUENT AND WASTE DISPOSAL REPORT

YEAR 1979

LIQUID EFFLUENTS - BATCH MODE

LIQUID RAD WASTE

| Nuclides Released | Unit | JULY | AUGUST | SEPTEMBER | Quarterly Total |
|---|---|---|---|---|---|
| I-131 | Ci | ≤ 2.32E-04 | 5.92E-05 | -- -- | 5.92E-05 |
| Ba,La-140 | Ci | ≤ 5.11E-04 | 1.49E-05 | ≤ 4.85E-04 | 1.49E-05 |
| Cs-134 | Ci | 4.35E-03 | 6.95E-03 | 9.29E-03 | 2.06E-02 |
| Cs-137 | Ci | 4.69E-03 | 8.81E-03 | 1.13E-02 | 2.48E-02 |
| Co-58 | Ci | 3.12E-02 | 1.81E-02 | 2.36E-02 | 7.29E-02 |
| Co-60 | Ci | 5.50E-02 | 3.67E-02 | 5.97E-02 | 1.51E-01 |
| Mn-54 | Ci | 4.99E-03 | 3.52E-03 | 5.32E-03 | 1.38E-02 |
| Cr-51 | Ci | 7.66E-04 | 6.30E-04 | 5.41E-05 | 1.45E-03 |
| Ag-110m | Ci | 2.68E-03 | 1.75E-05 | 1.19E-03 | 3.89E-03 |
| Nb-97 | Ci | 3.27E-03 | 2.14E-03 | 1.40E-03 | 6.81E-03 |
| W-187 | Ci | 1.34E-02 | 1.39E-04 | 3.48E-04 | 1.39E-02 |
| Ru-105 | Ci | 1.42E-03 | 7.41E-04 | 8.19E-04 | 2.98E-03 |
| Zr-95 | Ci | 1.01E-03 | 2.94E-04 | 6.39E-04 | 1.94e-03 |
| Nb-95 | Ci | 2.99E-03 | 1.47E-03 | 1.55E-03 | 6.01E-03 |
| Cs-136 | Ci | 1.61E-04 | 1.15E-04 | 1.54E-04 | 4.30E-04 |
| Fe-59 | Ci | 6.05E-04 | 3.46E-04 | 9.30E-05 | 1.04E-03 |
| Na-24 | Ci | 2.53E-04 | 1.58E-04 | -- -- - | 4.11E-04 |
| Sr-92 | Ci | 3.38E-05 | -- -- | -- -- | 3.38E-05 |
| I-132 | Ci | -- - -- | 8.15E-05 | -- - -- | 8.15E-05 |
| Mn-56 | Ci | -- - -- | 8.88E-06 | -- - -- | 8.88E-06 |
| I-134 | Ci | -- - -- | 1.14E-05 | -- - -- | 1.14E-05 |
| Zn-65 | Ci | -- - -- | 1.07E-05 | -- - -- | 1.07E-05 |
| Ce-144 | Ci | -- - -- | -- - -- | 1.97E-04 | 1.97E-04 |
| Mo-99 | Ci | -- - -- | -- - -- | 5.58E-06 | 5.58E-06 |
| Ce-141 | Ci | -- - -- | -- - -- | 1.07E-05 | 1.07E-05 |
| Sr-89 | Ci | ≤ 2.33E-05 | ≤ 1.68E-05 | ≤ 1.32E-05 | -- - -- |
| Sr-90 | Ci | 5.84E-05 | ≤ 3.36E-06 | 8.28E-06 | 6.67E-05 |
| | Ci | | | | |
| TOTALS FOR PERIOD | Ci | 1.27E-01 | 8.03E-02 | 1.16E-01 | 3.23E-01 |
| GROSS ALPHA | Ci | ≤ 1.95E-05 | ≤ 2.02E-05 | ≤ 2.98E-05 | -- - -- |
| xenon-133 | Ci | 1.24E-02 | 6.81E-03 | 6.11E-03 | 2.53E-02 |
| xenon-135 | Ci | 8.65E-06 | 1.20E-05 | 7.38E-05 | 9.45E-05 |
| H-3 | Ci | 1.51E+01 | 2.41E+01 | 2.91E+01 | 6.83E+01 |

Table 2.2-3 (cont.)

MILLSTONE NUCLEAR POWER STATION UNIT No. 2

EFFLUENT AND WASTE DISPOSAL REPORT

YEAR 1979 LIQUID EFFLUENTS - BATCH MODE Liquid Rad Waste

| Nuclides Released | Unit | October | November | December | Quarterly Total |
|---|---|---|---|---|---|
| I-131 | Ci | 1.26E-04 | 2.59E-04 | 6.87E-05 | 4.54E-04 |
| Ba,La-140 | Ci | 4.68E-07 | 3.20E-05 | 1.46E-06 | 3.39E-05 |
| Cs-134 | Ci | 1.23E-02 | 7.60E-03 | 1.23E-02 | 3.22E-02 |
| Cs-137 | Ci | 1.34E-02 | 9.79E-03 | 1.44E-02 | 3.76E-02 |
| Co-58 | Ci | 7.78E-02 | 1.15E-02 | 4.66E-02 | 1.36E-01 |
| Co-60 | Ci | 5.67E-02 | 5.29E-02 | 2.50E-02 | 1.35E-01 |
| Mn-54 | Ci | 6.79E-03 | 3.57E-03 | 1.66E-03 | 1.20E-02 |
| Ag-110m | Ci | 3.24E-03 | 3.31E-03 | 1.76E-03 | 8.31E-03 |
| Nb-97 | Ci | 4.62E-03 | 3.80E-03 | 2.06E-03 | 1.05E-02 |
| W-187 | Ci | 3.58E-04 | 2.39E-04 | 1.04E-04 | 7.01E-04 |
| Ru-105 | Ci | 4.01E-05 | 2.10E-04 | 4.69E-04 | 7.19E-04 |
| Zr-95 | Ci | 5.38E-05 | 1.67E-04 | 2.85E-04 | 5.06E-04 |
| Nb-95 | Ci | 5.81E-04 | 9.70E-04 | 8.84E-04 | 2.44E-03 |
| Cs-136 | Ci | 1.61E-04 | 1.24E-04 | 4.14E-06 | 2.89E-04 |
| Fe-59 | Ci | 4.09E-05 | 4.63E-04 | 8.07E-04 | 1.31E-03 |
| Sr-92 | Ci | 1.38E-04 | 7.51E-04 | 2.74E-04 | 1.16E-03 |
| Cr-51 | Ci | - - - - | 3.85E-04 | 1.30E-03 | 1.69E-03 |
| I-133 | Ci | - - - - | 1.37E-05 | 1.20E-05 | 2.57E-05 |
| Zr-97 | Ci | - - - - | 1.45E-05 | - - - - | 1.45E-05 |
| I-135 | Ci | - - - - | 4.05E-05 | - - - - | 4.05E-05 |
| Na-24 | Ci | - - - - | 9.91E-05 | 4.10E-05 | 1.40E-04 |
| Mo-99 | Ci | - - - - | 9.62E-06 | - - - - | 9.62E-06 |
| Sr-89 | Ci | ≤1.10E-05 | ≤2.13E-05 | ≤2.89E-05 | - - - - |
| Sr-90 | Ci | 7.45E-06 | ≤4.26E-06 | ≤7.22E-06 | 7.45E-06 |
| Totals For Period | Ci | 1.76E-01 | 9.62E-02 | 1.08E-01 | 3.81E-01 |
| Gross Alpha | | ≤2.48E-05 | ≤5.68E-05 | ≤3.61E-05 | - - - - |
| H-3 | | 1.69E+01 | 5.40E+01 | 2.21E+01 | 9.30E+01 |
| Total for period(above) | Ci | | | | |
| xenon-133 | Ci | 1.59E-02 | 1.96E-01 | 3.90E-02 | 2.51E-01 |
| xenon-135 | Ci | 1.07E-04 | 5.58E-05 | 1.63E-04 | 3.26E-04 |
| | Ci | | | | |

Table 2.2-4

MILLSTONE NUCLEAR POWER STATION - UNIT No. 2

EFFLUENT AND WASTE DISPOSAL REPORT

GASEOUS EFFLUENTS - SUMMATION OF ALL RELEASES

Year 1979

| | Units | JULY | AUGUST | SEPTEMBER | QUARTERLY TOTALS | Est. Total Error, % |
|---|---|---|---|---|---|---|
| **A. Fission and Activation Gases** | | | | | | |
| 1. Total Released | Ci | 1.42E+02 | 2.15E+01 | 2.21E+01 | 1.86E+02 | 2.50E+01 |
| 2. Average Release Rate For Period | uCi/sec | 5.30E+01 | 8.02E+00 | 8.55E+00 | 2.33E+01 | |
| 3. Percent of Technical Specification Limit | % | -- - -- | -- - -- | -- - -- | -- - -- | |
| **B. Iodines** | | | | | | |
| 1. Total Iodine - 131 | Ci | 8.45E-05 | 6.13E-04 | 6.13E-05 | 7.59E-04 | 2.50E+01 |
| 2. Average Release Rate For Period | uCi/sec | 3.15E-05 | 2.29E-04 | 2.37E-05 | 9.54E-05 | |
| **C. Particulates** | | | | | | |
| 1. Particulates With Half-lives > 8 Days | Ci | 2.24E-04 | 1.22E-03 | 8.71E-05 | 1.53E-03 | 2.50E+01 |
| 2. Average Release Rate For Period | uCi/sec | 8.37E-05 | 4.57E-04 | 3.36E-05 | 1.93E-04 | |
| 3. Percent of Technical Specification Limit | % | -- - -- | -- - -- - | -- - -- | -- - -- | |
| 4. Gross Alpha Radioactivity | Ci | ≤6.01E-08 | ≤ 6.21E-08 | ≤ 3.50E-08 | -- - -- | |
| **D. Tritium** | | | | | | |
| 1. Total Released | Ci | 5.29E+01 | 2.62E+00 | 1.89E+00 | 5.74E+01 | 2.50E+01 |
| 2. Average Release Rate For Period | uCi/sec | 1.97E+01 | 9.78E-01 | 7.30E-01 | 7.22E+00 | |

Table 2.2-4 (cont.)

MILLSTONE NUCLEAR POWER STATION - UNIT No. 2

EFFLUENT AND WASTE DISPOSAL REPORT

GASEOUS EFFLUENTS - SUMMATION OF ALL RELEASES

Year 1979.

| | Units | OCTOBER | NOVEMBER | DECEMBER | QUARTERLY TOTALS | Est. Total Error, % |
|---|---|---|---|---|---|---|
| A. Fission and Activation Gases | | | | | | |
| 1. Total Released | Ci | 1.29E+01 | 7.59E+01 | 8.60E+00 | 9.74E+01 | 2.50E+01 |
| 2. Average Release Rate For Period | uCi/sec | 4.81E+00 | 2.93E+01 | 3.21E+00 | 1.22E+01 | |
| 3. Percent of Technical Specification Limit | % | - - - - | - - - - | - - - - | - - - - | |
| B. Iodines | | | | | | |
| 1. Total Iodine - 131 | Ci | 1.86E-04 | 2.43E-04 | 5.46E-05 | 4.84E-04 | 2.50E+01 |
| 2. Average Release Rate For Period | uCi/sec | 6.94E-05 | 9.38E-05 | 2.04E-05 | 6.07E-05 | |
| C. Particulates | | | | | | |
| 1. Particulates With Half-lives > 8 Days | Ci | 1.51E-05 | 2.12E-05 | 1.91E-05 | 5.54E-05 | 2.50E+01 |
| 2. Average Release Rate For Period | uCi/sec | 5.63E-06 | 8.19E-06 | 7.13E-06 | 6.95E-06 | |
| 3. Percent of Technical Specification Limit | % | - - - - | - - - - | - - - - | - - - - | |
| 4. Gross Alpha Radioactivity | Ci | ≤ 2.83E-08 | ≤ 5.45E-08 | ≤ 3.56E-08 | - - - - | |
| D. Tritium | | | | | | |
| 1. Total Released | Ci | 7.64E+00 | 2.45E+00 | 3.45E+00 | 1.35E+01 | 2.50E+01 |
| 2. Average Release Rate For Period | uCi/sec | 2.85E+00 | 9.46E-01 | 1.29E+00 | 1.70E+00 | |

Table 2.2-5

MILLSTONE NUCLEAR POWER STATION - UNIT No. 2

EFFLUENT AND WASTE DISPOSAL REPORT

UNIT 2 VENTILATION

YEAR 1979 GASEOUS EFFLUENTS - GROUND-LEVEL RELEASES - CONTINUOUS MODE

| Nuclides Released | Unit | JULY | AUGUST | SEPTEMBER | Quarterly Total |
|---|---|---|---|---|---|
| 1. Fission gases | | | | | |
| Xe-133 | Ci | 1.41E+02 | 2.06E+01 | 2.13E+01 | 1.83E+02 |
| Kr-85 | Ci | 9.68E-01 | 6.85E-01 | 7.11E-01 | 2.36E+00 |
| | Ci | | | | |
| | Ci | | | | |
| | Ci | | | | |
| | Ci | | | | |
| | Ci | | | | |
| | Ci | | | | |
| | Ci | | | | |
| | Ci | | | | |
| Total for period | Ci | 1.42E+02 | 2.12E+01 | 2.20E+01 | 1.85E+02 |
| 2. Iodines | | | | | |
| iodine-131 | Ci | 8.45E-05 | 6.10E-04 | 3.46E-05 | 7.29E-04 |
| iodine-133 | Ci | 1.77E-05 | 3.48E-04 | 2.84E-05 | 3.94E-04 |
| iodine-135 | Ci | 3.97E-05 | 4.70E-04 | 8.30E-06 | 5.18E-04 |
| Total for period | Ci | 1.42E-04 | 1.43E-03 | 7.13E-05 | 1.64E-03 |
| 3. Particulates | | | | | |
| I-131 | Ci | -- - -- | 3.38E-06 | 2.74E-06 | 6.12E-06 |
| Ba,La-140 | Ci | ≤1.93E-07 | ≤4.17E-07 | ≤2.60E-07 | -- - -- |
| Co-58 | Ci | 3.38E-07 | 3.90E-06 | -- - -- | 4.24E-06 |
| Co-60 | Ci | 2.66E-05 | 2.99E-05 | 1.05E-05 | 6.70E-05 |
| Mn-54 | Ci | 1.69E-06 | 3.50E-06 | 9.26E-07 | 6.12E-06 |
| Cs-137 | Ci | 5.66E-06 | 3.14E-06 | 1.96E-06 | 1.08E-05 |
| Sr-89 | Ci | ≤ 8.33E-08 | ≤ 8.73E-08 | ≤5.60E-08 | -- - -- |
| Sr-90 | Ci | 2.41E-08 | ≤ 1.94E-08 | 2.03E-08 | 4.44E-08 |
| | Ci | | | | |
| TOTALS FOR PERIOD | Ci | 3.43E-05 | 4.38E-05 | 1.61E-05 | 9.42E-05 |
| H-3 | Ci | 5.29E+01 | 2.62E+00 | 1.89E+00 | 5.74E+01 |
| GROSSALPHA | Ci | ≤ 6.01E-08 | ≤ 6.21E-08 | ≤3.50E-08 | -- - -- |
| | Ci | | | | |
| | Ci | | | | |
| | Ci | | | | |

Table 2.2-5 (cont.)

MILLSTONE NUCLEAR POWER STATION - UNIT No. 2

EFFLUENT AND WASTE DISPOSAL REPORT Unit No. 2 Ventilation

YEAR 1979 GASEOUS EFFLUENTS - GROUND-LEVEL RELEASES - CONTINUOUS MODE

| Nuclides Released | Unit | October | November | December | Quarterly Total |
|---|---|---|---|---|---|
| 1. Fission gases | | | | | |
| Xe-133 | Ci | 1.29E+01 | 7.42E+01 | 7.91E+00 | 9.50E+01 |
| Kr-85 | Ci | 2.35E-02 | 9.92E-01 | 1.06E-01 | 1.12E+00 |
| Xe-135 | Ci | - - - - | - - - - | 5.86E-01 | 5.86E-01 |
| | Ci | | | | |
| | Ci | | | | |
| | Ci | | | | |
| | Ci | | | | |
| | Ci | | | | |
| | Ci | | | | |
| | Ci | | | | |
| Total for period | Ci | 1.29E+01 | 7.52E+01 | 8.60E+00 | 9.67E+01 |
| 2. Iodines | | | | | |
| iodine-131 | Ci | 6.01E-05 | 1.48E-05 | 3.71E-05 | 2.45E-04 |
| iodine-133 | Ci | 6.61E-05 | 3.40E-05 | 6.68E-06 | 1.07E-04 |
| iodine-135 | Ci | 6.01E-05 | 6.07E-05 | 1.08E-05 | 1.32E-04 |
| Total for period | Ci | 1.86E-04 | 2.43E-04 | 5.46E-05 | 4.84E-04 |
| 3. Particulates | | | | | |
| I-131 | Ci | 4.44E-06 | 6.47E-06 | 3.65E-06 | 1.46E-05 |
| Ba,La-140 | Ci | ≤ 2.15E-07 | ≤3.60E-07 | 9.79E-07 | 9.79E-07 |
| Co-58 | Ci | 2.18E-07 | - - - - | 1.99E-06 | 2.21E-06 |
| Co-60 | Ci | 9.06E-06 | 1.14E-05 | 9.32E-06 | 2.98E-05 |
| Mn-54 | Ci | 9.79E-07 | 1.22E-06 | 1.20E-06 | 3.40E-06 |
| Cs-137 | Ci | 3.81E-07 | 1.74E-06 | 2.01E-06 | 4.13E-06 |
| Cs-134 | Ci | - - - - | 3.57E-07 | - - - - | 3.57E-07 |
| Sr-89 | Ci | ≤ 6.36E-07 | ≤ 7.63E-08 | ≤ 6.40E-08 | - - - - |
| Sr-90 | Ci | ≤1.41E-07 | ≤ 2.18E-08 | ≤ 7.11E-09 | - - - - |
| Total For Period | Ci | 1.51E-05 | 2.12E-05 | 1.91E-05 | 5.54E-05 |
| | Ci | | | | |
| | Ci | | | | |
| | Ci | | | | |
| H-3 | Ci | 7.64E+00 | 2.45E+00 | 3.45E+00 | 1.35E+01 |
| Gross Alpha | Ci | ≤ 2.83E-08 | ≤ 5.45E-08 | ≤ 3.56E-08 | - - - - |

MILLSTONE NUCLEAR POWER STATION - UNIT No. 2

EFFLUENT AND WASTE DISPOSAL REPORT

Table 2.2-6

YEAR 1979 GASEOUS EFFLUENTS - GROUND-LEVEL RELEASES - BATCH MODE

| Nuclides Released | Unit | July | Aug. | Sept. | Quarterly Total |
|---|---|---|---|---|---|
| 1. Fission Gases | | | | | |
| Xenon-133 | Ci | 3.54E-1 | 1.15E+2 | 1.00 | 1.16E+2 |
| Xenon-135 | Ci | 1.65E-3 | 1.6E-1 | 1.1E-2 | 1.73E-1 |
| Argon-41 | Ci | 6.2E-3 | 1.8E-3 | 3.9E-2 | 4.7E-2 |
| | Ci | | | | |
| | Ci | | | | |
| | Ci | | | | |
| | Ci | | | | |
| | Ci | | | | |
| | Ci | | | | |
| | Ci | | | | |
| Total for period | Ci | 3.62E-1 | 1.15E+2 | 1.05 | 1.16E+2 |
| 2. Iodines | | | | | |
| iodine-131 | Ci | 2.2E-8 | 1.60E-4 | 5.36E-7 | 1.61E-4 |
| iodine-133 | Ci | | 1.43E-6 | 9.28E-6 | 1.07E-5 |
| iodine-135 | Ci | | | | |
| Total for period | Ci | 2.2E-8 | 1.61E-4 | 9.82E-6 | 1.27E-4 |
| 3. Particulates | | | | | |
| | Ci | | | | |
| | Ci | | | | |
| | Ci | | | | |
| | Ci | | | | |
| | Ci | | | | |
| 4. Tritium | | | | | |
| | Ci | 1.05E-2 | 4.36 | 5.11E-2 | 4.42 |
| | Ci | | | | |
| | Ci | | | | |
| | Ci | | | | |
| | Ci | | | | |
| | Ci | | | | |
| | Ci | | | | |
| | Ci | | | | |
| | Ci | | | | |
| | Ci | | | | |
| | Ci | | | | |
| | Ci | | | | |
| | Ci | | | | |
| | Ci | | | | |
| | Ci | | | | |
| | Ci | | | | |

EFFLUENT AND WASTE DISPOSAL REPORT

Table 2.2-6 (cont)

YEAR 1979 GASEOUS EFFLUENTS - GROUND-LEVEL RELEASES - BATCH MODE

| Nuclides Released | Unit 2 | October | November | December | Quarterly Total |
|---|---|---|---|---|---|
| 1. Fission Gases | | | | | |
| Xe 133 (XENON) | Ci | 5.8 E0 | 7.7 E1 | 1.9 E-1 | 8.30 E1 |
| Xe 135 (XENON) | Ci | 2.5 E-2 | 6.8 E-1 | 1.3 E-3 | 7.06 E-1 |
| Ar 41 (ARGON) | Ci | 9.9 E-2 | ----- | 6.0 E-3 | 1.05 E-1 |
| | Ci | | | | |
| | Ci | | | | |
| | Ci | | | | |
| | Ci | | | | |
| | Ci | | | | |
| | Ci | | | | |
| | Ci | | | | |
| Total for period | Ci | 5.9 E2 | 7.77 E1 | 1.97 E-1 | 8.38 E1 |
| 2. Iodines | | | | | |
| iodine-131 | Ci | 2.6 E-5 | 7.3 E-4 | ---- | 7.56 E-4 |
| iodine-133 | Ci | 1.7 E-5 | ---- | ---- | 1.7 E-5 |
| iodine-135 | Ci | | | | |
| Total for period | Ci | 4.3 E-5 | 7.3 E-4 | ---- | 7.73 E-4 |
| 3. Particulates | | | | | |
| | Ci | | | | |
| | Ci | | | | |
| | Ci | | | | |
| | Ci | | | | |
| | Ci | | | | |
| 4. Tritium | | | | | |
| $_1H^3$ (TRITIUM) | Ci | 1.2 E-1 | 6.8 E0 | 1.6 E-3 | 6.92 E0 |
| | Ci | | | | |
| | Ci | | | | |
| | Ci | | | | |
| | Ci | | | | |
| | Ci | | | | |
| | Ci | | | | |
| | Ci | | | | |
| | Ci | | | | |
| | Ci | | | | |
| | Ci | | | | |
| | Ci | | | | |
| | Ci | | | | |
| | Ci | | | | |
| | Ci | | | | |
| | Ci | | | | |

Table 2.2-7

MILLSTONE NUCLEAR POWER STATION - UNIT No. 2

EFFLUENT AND WASTE DISPOSAL REPORT WASTE GAS DECAY TANKS

YEAR 1979 GASEOUS EFFLUENTS-ELEVATED RELEASE - BATCH MODE

| Nuclides Released | Unit | JULY | AUGUST | SEPTEMBER | Quarterly Total |
|---|---|---|---|---|---|
| 1. Fission gases | | | | | |
| Xe-133 | Ci | 1.54E-03 | 9.00E-04 | -- - -- | 2.44E-03 |
| Xe-135 | Ci | 1.40E-05 | 2.20E-05 | 7.00E-06 | 4.30E-05 |
| Xe-131m | Ci | -- -- - | 1.30E-03 | -- - -- | 1.30E-03 |
| Xe-135m | Ci | -- --- | -- - -- | -- - -- | -- - -- |
| Kr-85 | Ci | 9.64E-03 | 2.85E-01 | 1.45E-01 | 4.40E-01 |
| | Ci | | | | |
| | Ci | | | | |
| | Ci | | | | |
| | Ci | | | | |
| | Ci | | | | |
| Total for period | Ci | 1.12E-02 | 2.87E-01 | 1.45E-01 | 4.43E-01 |
| 2. Iodines | | | | | |
| iodine-131 | Ci | -- - -- | -- - -- | 2.40E-05 | 2.40E-05 |
| iodine-133 | Ci | -- - -- | -- - -- | 1.10E-05 | 1.10E-05 |
| iodine-135 | Ci | -- - -- | -- - -- | -- - -- | -- - -- |
| Total for period | Ci | -- -- - | -- - -- - | 3.50E-05 | 3.50E-05 |
| 3. Particulates | | | | | |
| Cs-137 | Ci | 1.00E-06 | 2.00E-05 | -- - -- | 2.10E-05 |
| Co-58 | Ci | 2.00E-06 | -- - -- | -- - -- | 2.00E-06 |
| Mn-54 | Ci | 9.00E-06 | 3.80E-05 | -- - -- | 4.70E-05 |
| Co-60 | Ci | 1.21E-04 | 2.88E-04 | 4.60E-05 | 4.55E-04 |
| Cs-138 | Ci | 4.70E-05 | 8.29E-04 | 1.40E-05 | 8.90E-04 |
| Rb-88 | Ci | 1.00E-05 | -- - -- | -- - -- | 1.00E-05 |
| Cs-134 | Ci | -- - - - | 4.00E-06 | 1.10E-05 | 1.50E-05 |
| | Ci | | | | |
| | Ci | | | | |
| TOTALS FOR PERIOD | Ci | 1.90E-04 | 1.18E-03 | 7.10E-05 | 1.44E-03 |
| H-3 | Ci | 5.00E-05 | 7.98E-04 | 1.92E-04 | 1.04E-03 |
| | Ci | | | | |
| | Ci | | | | |
| | Ci | | | | |
| | Ci | | | | |
| | Ci | | | | |

Table 2.2-7 (cont.)

MILLSTONE NUCLEAR POWER STATION - UNIT No. 2

EFFLUENT AND WASTE DISPOSAL REPORT

YEAR 1979 GASEOUS EFFLUENTS-ELEVATED RELEASE - BATCH MODE

Waste Gas Decay Tanks

| Nuclides Released | Unit | October | November | December | Quarterly Total |
|---|---|---|---|---|---|
| **1. Fission gases** | | | | | |
| Xe-133 | Ci | | 7.91E-04 | | 7.91E-04 |
| Xe-135 | Ci | | 4.00E-06 | | 4.00E-06 |
| Xe-131m | Ci | | 9.40E-03 | | 9.40E-03 |
| Xe-135m | Ci | | | | |
| Kr-85 | Ci | | 6.53E-01 | | 6.53E-01 |
| | Ci | | | | |
| | Ci | | | | |
| | Ci | | | | |
| | Ci | | | | |
| | Ci | | | | |
| Total for period | Ci | | 6.63E-01 | | 6.63E-01 |
| **2. Iodines** | | | | | |
| iodine-131 | Ci | | - - - - | | - - - - |
| iodine-133 | Ci | | - - - - | | - - - - |
| iodine-135 | Ci | | - - - - | | - - - - |
| Total for period | Ci | | - - - - | | - - - - |
| **3. Particulates** | | | | | |
| Cs-137 | Ci | NO DISCHARGES THIS PERIOD | 8.00E-06 | NO DISCHARGES THIS PERIOD | 8.00E-06 |
| Mn-54 | Ci | | 1.10E-05 | | 1.10E-05 |
| Co-60 | Ci | | 1.37E-04 | | 1.37E-04 |
| | Ci | | | | |
| Total For Period | Ci | | 1.56E-04 | | 1.56E-04 |
| | Ci | | | | |
| H-3 | Ci | | 2.82E-04 | | 2.82E-04 |
| | Ci | | | | |
| | Ci | | | | |
| | Ci | | | | |
| | Ci | | | | |
| | Ci | | | | |
| | Ci | | | | |
| | Ci | | | | |
| | Ci | | | | |
| | Ci | | | | |

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

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

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

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

$\overline{E}_{i\beta}$ = 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.

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.

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 μ Ci 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 μ Ci released.

e. 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. Purges |
|---|---|---|---|---|
| a. Number of Batch Releases | 25 | 94 | 17 | 11 |
| b. Total Time (Minutes) | 6475 | 14,214 | 5865 | 4200 |
| c. Maximum Time-One Batch (Minutes) | 894 | 507 | 1156 | 1320 |
| d. Average Time (Minutes) | 259 | 151 | 345 | 382 |
| e. Minimum Time-One Batch (Minutes) | 85 | 45 | 85 | 30 |

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 (1979)

SOLID WASTE AND IRRADIATED FUEL SHIPMENTS

MILLSTONE UNIT I (July 1, 1979 - December 31, 1979)

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. | $m^3$<br>Ci | 4.48 E 2<br>2.43 E 2 | 2.5 E 1 |
| b. Dry compressible waste, contaminated equipment, etc. | $m^3$<br>Ci | 3.47 E 2<br>5.01 E 0 | 3.0 E 1 |
| c. Irradiated components, control rods, etc. | $m^3$<br>Ci | None | NA |
| d. Other (describe) | $m^3$<br>Ci | None | NA |

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

| | % | . E |
|---|---|---|
| a. $^{60}Co$ | % | 4.6 E 1 |
| $^{55}Fe$ | % | 1.9 E 1 |
| $^{54}Mn$ | % | 1.1 E 1 |
| $^{134}Cs$ $^{137}Cs$ | % | 7.9 E 0 |
| $^{131}I$ $^{58}Co$ $^{140}La$ $^{140}Ba$ | % | 9.8 E 0 |
| $^{141}Ce$ $^{95}Nb$ $^{59}Fe$ $^{90}Sr$ $^{63}Ni$ | % | 3.8 E 0 |
| $^{89}Sr$ $^{124}Sb$ $^{144}Ce$ | % | 2.5 E 0 |

| | | | |
|---|---|---|---|
| b. | $^{60}Co$ | % | 5.1 E 1 |
| | $^{54}Mn$ | % | 2.9 E 1 |
| | $^{58}Co$ $^{144}Ce$ $^{51}Cr$ $^{59}Fe$ | % | 1.4 E 1 |
| | $^{55}Fe$ $^{137}Cs$ $^{95}Nb$ | % | 5.0 E 0 |
| | $^{89}Sr$ $^{90}Sr$ $^{63}Ni$ | % | 1.0 E 0 |

3. Solid Waste Disposition

| Number of Shipments | Mode of Transportation | Destination |
|---|---|---|
| 62 | Truck (Sole Use Vehicle) | Barnwell, S. C. |

4. Irradiated Fuel Shipments - NONE.

NOTE: Unit Two type (b.) waste is included in this report.

TABLE 3.2

EFFLUENT AND WASTE DISPOSAL SEMIANNUAL REPORT (1979)

SOLID WASTE AND IRRADIATED FUEL SHIPMENTS

MILLSTONE UNIT II (July 1. 1979 - December 31, 1979)

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. | $m^3$<br>Ci | 1.19 E 02<br>2.33 E 00 | 2.5 E 01 |
| b. Dry compressible waste, contaminated equipment, etc. | $m^3$<br>Ci | 1.48 E 01<br>3.39 E 01 | 3.0 E 01 |
| c. Irradiated components, control rods, etc. | $m^3$<br>Ci | None | N/A |
| d. Other (describe) | $m^3$<br>Ci | None | N/A |

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

| | % | . E |
|---|---|---|
| a. $^{60}Co$ | % | 3.6 E 01 |
| $^{58}Co$ | % | 3.6 E 01 |
| $^{55}Fe$ | % | 6.7 E 00 |
| $^{54}Mn$ | % | 5.8 E 00 |
| $^{134}Cs$, $^{137}Cs$ | % | 5.4 E 00 |
| $^{124}Sb$, $^{110m}Ag$, $^{97}Nb$, $^{95}Nb$, $^{59}Fe$ | % | 8.1 E 00 |
| $^{95}Zn$, $^{63}Ni$, $^{57}Co$, $^{41}Ar$, $^{105}Ru$, $^{24}Na$, $^{89}Sr$, $^{90}Sr$, $^{92}Sr$. | % | 2.0 E 00 |

| | | | |
|---|---|---|---|
| | | % | . E |
| b. | $^{137}Cs$ | % | 3.7 E 01 |
| | $^{134}Cs$ | % | 2.9 E 01 |
| | $^{58}Co$, $^{60}Co$ | % | 1.9 E 01 |
| | $^{144}Ce$, $^{131}I$, $^{133}I$, $^{187}W$, $^{24}Na$, $^{54}Mn$ | % | 1.2 E 01 |
| | $^{95}Nb$, $^{59}Fe$, $^{140}La$, $^{55}Fe$, $^{63}Ni$, $^{89}Sr$, $^{90}Sr$ | % | 3.0 E 00 |

3. Solid Waste Disposition

| Number of Shipments | Mode of Transportation | Destination |
|---|---|---|
| 14 | Truck (Sole Use Vehicle) | Barnwell, S.C. |

4. 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 April 1, 1980.

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 GASPAR code were generated using a meteorological computer code which implements the assumptions given in Section C of NRC Regulatory Guide 1.111, "Methods for Estimating Atmospheric Transport and Dispersion of Gaseous Effluents in Routine Releases from Light-Water-Cooled Reactors".

Releases from the 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 GASPAR code was run separately for continuous releases from the MP2 vent (building ventilation), batch releases from the MP2 vent (containment purges) and MP2 batch releases from the MP1 stack (waste gas tanks). 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 GASPAR 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 calcualted 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 depleted X/Q. For the meat, cow's milk and goat's milk pathways, the calculated dose is included as the maximum individuals dose only at locations and times where these pathways actually exist. Doses were calculated at the cow farm and goat farm of maximum deposition. The doses presented in 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.

No page 9 in Original document.

## 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

| | | | 1979 | |
|---|---|---|---|---|
| A. | Airborne Effluents | Units | July-Sept | Oct-Dec |
| | 1. Maximum Individual Dose | Millirem | | |
| | a. Whole Body | | 6.1(-2)[a,b] | 2.4(-2)[b] |
| | b. Skin | | 6.1(-2)[b] | 2.4(-2)[b] |
| | c. Thyroid | | 4.4(-1)[c] | 3.7(-3)[d] |
| | 2. Population Dose 0-50 Miles | Person-Rem | | |
| | a. Whole Body | | 1.6(0) | 1.2(0) |
| | b. Skin | | 9.0(0) | 5.1(0) |
| | c. Thyroid | | 2.9(0) | 4.1(0) |
| | 3. Average Dose 0-50 Miles | Millirem | | |
| | a. Whole Body | | 5.5(-4) | 4.1(-4) |
| | b. Skin | | 3.1(-3) | 1.7(-3) |
| | c. Thyroid | | 9.9(-4) | 1.4(-3) |
| B. | Liquid Effluents | | | |
| | 1. Maximum Individual Dose | Millirem | | |
| | a. Whole Body | | 9.7(-5)[e] | 4.6(-5)[e] |
| | b. Max Organ (GI-LLI) | | 9.0(-4) | 2.1(-4) |
| | c. Thyroid | | 1.1(-4)[e] | 1.1(-4)[e] |
| | 2. Population Dose 0-50 Miles | Person-Rem | | |
| | a. Whole Body | | 8.5(-4) | 4.0(-4) |
| | b. Max Organ (GI-LLI) | | 3.8(-3) | 7.3(-4) |
| | c. Thyroid | | 8.1(-4) | 6.1(-4) |
| | 3. Average Dose 0-50 Miles | Millirem | | |
| | a. Whole Body | | 2.8(-7) | 1.3(-7) |
| | b. Max Organ (GI-LLI) | | 1.3(-6) | 2.4(-7) |
| | c. Thyroid | | 2.7(-7) | 2.0(-7) |

a. $6.1(-2) = 6.1 \times 10^{-2}$
b. Location = 0.5 miles NE
c. Infant thyroid dose at maximum goat farm - 2 miles ENE
d. Child thyroid dose at maximum location - 1.6 miles E
e. Teenager dose - all other doses are adult doses

TABLE 5.1.2

Off-Site Dose Estimates

Millstone Unit No. 2

| | | | 1979 | |
|---|---|---|---|---|
| A. | Airborne Effluents | Units | July-Sept | Oct-Dec |
| | 1. Maximum Individual Dose | Millirem | | |
| | a. Whole Body | | 1.3(-2)[a,b] | 5.2(-3)[b] |
| | b. Skin | | 3.7(-2)[b] | 1.5(-2)[b] |
| | c. Thyroid | | 1.6(-1)[c] | 5.5(-3)[d] |
| | 2. Population Dose 0-50 Miles | Person-Rem | | |
| | a. Whole Body | | 1.7(-1) | 4.1(-2) |
| | b. Skin | | 2.8(-1) | 8.4(-2) |
| | c. Thyroid | | 2.7(-1) | 1.5(-1) |
| | 3. Average Dose 0-50 Miles | Millirem | | |
| | a. Whole Body | | 5.7(-5) | 1.4(-5) |
| | b. Skin | | 9.7(-5) | 2.9(-5) |
| | c. Thyroid | | 9.2(-5) | 5.1(-5) |
| B. | Liquid Effluents | | | |
| | 1. Maximum Individual Dose | Millirem | | |
| | a. Whole Body | | 2.8(-3)[e] | 3.0(-3)[e] |
| | b. Max Organ (GI-LLI) | | 1.8(-2) | 1.6(-2) |
| | c. Thyroid | | 1.9(-3)[e] | 1.8(-3)[e] |
| | 2. Population Dose 0-50 Miles | Person-Rem | | |
| | a. Whole Body | | 2.4(-2) | 2.5(-2) |
| | b. Max Organ (GI-LLI) | | 6.9(-2) | 6.8(-2) |
| | c. Thyroid | | 1.8(-2) | 1.7(-2) |
| | 3. Average Dose 0-50 Miles | Millirem | | |
| | a. Whole Body | | 7.9(-6) | 8.3(-6) |
| | b. Max Organ (GI-LLI) | | 2.3(-5) | 2.2(-5) |
| | c. Thyroid | | 5.9(-6) | 5.6(-6) |

a. $1.3(-2) = 1.3 \times 10^{-2}$
b. At the maximum location - 0.4 miles NE
c. Child thyroid dose at the maximum vegetable garden - 0.4 miles NE
d. Child thyroid dose at the maximum lcoation - 0.4 miles NE
e. Teenager dose - all other doses are adult doses

# 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 JUL 79/0015 - 30 SEP 79/2315
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

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

NO. OF VALID OBSERVATION = 6 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 JUL 79/0015 - 30 SEP 79/2315
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

| | SPEED IN METERS PER SECOND | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| DIRECTION | 0.5-1.5 | 1.6-3.3 | 3.4-5.5 | 5.6-8.2 | 8.3-10.8 | 10.9-15.0 | 15.1-20.0 | GT 20.1 | ALL |
| NNE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ENE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| E | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ESE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SSE | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| S | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 2 |
| SSW | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 2 |
| SW | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 2 |
| 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 | 3 | 3 | 1 | 4 | 0 | 0 | 11 |
| NNW | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 2 |
| N | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| ALL SECTOR | 0 | 3 | 7 | 5 | 2 | 4 | 0 | 0 | |

NO. OF VALID OBSERVATION = 21 NO. OF CALMS (WS LT 0.5M/SEC) = 0 NO. OF MISSING WD/WS = 1

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 JUL 79/0015 - 30 SEP 79/2315
DATA ACQUISITION INTERVAL = MINUTES 00-15 OF EACH HOUR

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

| DIRECTION | SPEED IN METERS PER SECOND 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 | 1 | 1 | 0 | 3 | 0 | 0 | 0 | 0 | 5 |
| NE | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 2 |
| ENE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| E | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 2 |
| ESE | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 2 |
| SE | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| SSE | 0 | 1 | 1 | 1 | 2 | 0 | 0 | 0 | 5 |
| S | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 3 |
| SSW | 1 | 2 | 4 | 0 | 0 | 0 | 0 | 0 | 7 |
| SW | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 3 |
| WSW | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 2 |
| W | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| WNW | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| NW | 0 | 1 | 5 | 8 | 5 | 2 | 0 | 0 | 21 |
| NNW | 0 | 2 | 6 | 1 | 0 | 0 | 0 | 0 | 9 |
| N | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| ALL SECTOR | 2 | 10 | 22 | 16 | 12 | 2 | 0 | 0 | |

NO. OF VALID OBSERVATION = 64 NO. OF CALMS (WS LT 0.5M/SEC) = 0 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 JUL 79/0015 - 30 SEP 79/2315
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 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 | 2 | 3 | 12 | 24 | 23 | 0 | 0 | 0 | 64 |
| NE | 1 | 1 | 12 | 6 | 2 | 0 | 0 | 0 | 22 |
| ENE | 1 | 3 | 6 | 8 | 0 | 0 | 0 | 0 | 18 |
| E | 2 | 5 | 8 | 7 | 1 | 0 | 0 | 0 | 23 |
| ESE | 2 | 5 | 5 | 3 | 0 | 0 | 0 | 0 | 15 |
| SE | 3 | 10 | 12 | 4 | 5 | 0 | 0 | 0 | 34 |
| SSE | 0 | 12 | 21 | 1 | 1 | 0 | 0 | 0 | 35 |
| S | 3 | 16 | 19 | 9 | 2 | 0 | 1 | 0 | 50 |
| SSW | 2 | 11 | 9 | 12 | 14 | 3 | 1 | 2 | 54 |
| SW | 4 | 0 | 17 | 17 | 13 | 7 | 0 | 0 | 58 |
| WSW | 1 | 2 | 14 | 30 | 18 | 2 | 0 | 0 | 67 |
| W | 3 | 4 | 8 | 3 | 3 | 3 | 0 | 0 | 24 |
| WNW | 1 | 5 | 7 | 4 | 1 | 0 | 0 | 0 | 18 |
| NW | 1 | 5 | 7 | 15 | 10 | 0 | 0 | 0 | 38 |
| NNW | 1 | 4 | 8 | 9 | 4 | 0 | 0 | 0 | 26 |
| N | 0 | 4 | 10 | 6 | 1 | 0 | 0 | 0 | 21 |
| ALL SECTOR | 27 | 90 | 175 | 158 | 98 | 15 | 2 | 2 | |

NO. OF VALID OBSERVATION = 571 NO. OF CALMS (WS LT 0.5M/SEC) = 4 NO. OF MISSING WD/WS = 15

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 JUL 79/0015 - 30 SEP 79/2315
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

| | SPEED IN METERS PER SECOND | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 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 | 6 | 3 | 5 | 7 | 2 | 0 | 0 | 23 |
| NE | 3 | 0 | 4 | 3 | 0 | 0 | 0 | 0 | 10 |
| ENE | 0 | 3 | 3 | 8 | 1 | 0 | 0 | 0 | 15 |
| E | 3 | 3 | 9 | 4 | 0 | 0 | 0 | 0 | 19 |
| ESE | 2 | 8 | 5 | 6 | 0 | 0 | 0 | 0 | 21 |
| SE | 5 | 13 | 29 | 5 | 1 | 1 | 2 | 0 | 56 |
| SSE | 8 | 14 | 31 | 4 | 10 | 5 | 1 | 3 | 76 |
| S | 4 | 14 | 32 | 29 | 9 | 1 | 4 | 0 | 93 |
| SSW | 3 | 18 | 63 | 46 | 57 | 16 | 3 | 6 | 212 |
| SW | 5 | 24 | 62 | 76 | 19 | 9 | 2 | 1 | 198 |
| WSW | 10 | 24 | 40 | 52 | 11 | 4 | 1 | 1 | 143 |
| W | 2 | 10 | 19 | 23 | 8 | 2 | 0 | 0 | 64 |
| WNW | 5 | 14 | 9 | 7 | 3 | 0 | 0 | 0 | 38 |
| NW | 1 | 9 | 9 | 7 | 11 | 1 | 0 | 0 | 38 |
| NNW | 2 | 6 | 4 | 14 | 20 | 6 | 0 | 0 | 52 |
| N | 2 | 5 | 7 | 7 | 8 | 0 | 0 | 0 | 29 |
| ALL SECTOR | 55 | 171 | 329 | 296 | 165 | 47 | 13 | 11 | |

NO. OF VALID OBSERVATION = 1088 NO. OF CALMS (WS LT 0.5M/SEC) = 1 NO. OF MISSING WD/WS = 22

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 JUL 79/0015 - 30 SEP 79/2315
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

| | SPEED IN METERS PER SECOND | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 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 | 1 | 0 | 0 | 0 | 1 |
| NE | 1 | 0 | 2 | 1 | 0 | 0 | 0 | 0 | 4 |
| ENE | 0 | 0 | 1 | 3 | 5 | 0 | 0 | 0 | 9 |
| E | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 3 |
| ESE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SE | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 4 |
| SSE | 1 | 3 | 4 | 1 | 1 | 0 | 0 | 0 | 10 |
| S | 5 | 6 | 2 | 3 | 0 | 0 | 0 | 0 | 16 |
| SSW | 0 | 6 | 9 | 5 | 0 | 0 | 0 | 0 | 20 |
| SW | 1 | 11 | 7 | 11 | 1 | 0 | 0 | 0 | 31 |
| WSW | 1 | 5 | 20 | 8 | 1 | 0 | 0 | 0 | 35 |
| W | 0 | 5 | 2 | 2 | 0 | 0 | 0 | 0 | 9 |
| WNW | 2 | 1 | 4 | 3 | 0 | 0 | 0 | 0 | 10 |
| NW | 1 | 0 | 4 | 2 | 0 | 0 | 0 | 0 | 7 |
| NNW | 0 | 1 | 0 | 2 | 2 | 0 | 0 | 0 | 5 |
| N | 0 | 0 | 0 | 1 | 4 | 0 | 0 | 0 | 5 |
| ALL SECTOR | 12 | 40 | 57 | 45 | 15 | 0 | 0 | 0 | |

NO. OF VALID OBSERVATION = 171 NO. OF CALMS (WS LT 0.5M/SEC) = 2 NO. OF MISSING WD/WS = 1

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 JUL 79/0015 - 30 SEP 79/2315
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 0.5-1.5 | 1.6-3.3 | 3.4-5.5 | 5.6-8.2 | 8.3-10.8 | 10.9-15.0 | 15.1-20.0 | GT 20.1 | ALL |
|---|---|---|---|---|---|---|---|---|---|
| NNE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ENE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| E | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ESE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SSE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| S | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SSW | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SW | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| WSW | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| W | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| WNW | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 2 |
| NW | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 2 |
| NNW | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| N | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ALL SECTOR | 0 | 2 | 3 | 1 | 0 | 0 | 0 | 0 | |

NO. OF VALID OBSERVATION = 6 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 JUL 79/0015 - 30 SEP 79/2315
DATA ACQUISITION INTERVAL = MINUTES 00-15 OF EACH HOUR

ALL STABILITY CLASSES

| DIRECTION | SPEED IN METERS PER SECOND 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 | 3 | 10 | 15 | 32 | 31 | 2 | 0 | 0 | 93 |
| NE | 5 | 2 | 18 | 10 | 3 | 0 | 0 | 0 | 38 |
| ENE | 1 | 6 | 10 | 19 | 6 | 0 | 0 | 0 | 42 |
| E | 5 | 8 | 17 | 14 | 3 | 0 | 0 | 0 | 47 |
| ESE | 4 | 13 | 10 | 11 | 2 | 0 | 0 | 0 | 40 |
| SE | 8 | 26 | 48 | 12 | 6 | 1 | 2 | 0 | 103 |
| SSE | 9 | 31 | 63 | 8 | 14 | 5 | 1 | 3 | 134 |
| S | 12 | 38 | 56 | 43 | 11 | 1 | 5 | 0 | 166 |
| SSW | 6 | 38 | 86 | 63 | 71 | 19 | 4 | 8 | 295 |
| SW | 10 | 36 | 91 | 104 | 33 | 16 | 2 | 1 | 293 |
| WSW | 13 | 31 | 74 | 92 | 30 | 6 | 1 | 1 | 248 |
| W | 5 | 19 | 29 | 28 | 11 | 5 | 0 | 0 | 97 |
| WNW | 8 | 22 | 21 | 14 | 4 | 0 | 0 | 0 | 69 |
| NW | 3 | 15 | 29 | 36 | 29 | 7 | 0 | 0 | 119 |
| NNW | 3 | 15 | 18 | 27 | 29 | 6 | 0 | 0 | 98 |
| N | 2 | 9 | 19 | 14 | 13 | 0 | 0 | 0 | 57 |
| ALL SECTOR | 97 | 319 | 604 | 527 | 296 | 68 | 15 | 13 | |

NO. OF POSSIBLE OBSERVATIONS = 2208 NO. OF VALID NON-CALM CONCURRENT WD/WS/DT = 1920 NO. OF MISSING WD/WS = 262
NO. OF VALID OBSERVATIONS = 1946 NO. OF CALMS (WS LT 0.5M/SEC) = 7 NO. OF MISSING DELTA T = 239

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 OCT 79/0015 - 31 DEC 79/2315
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 0.5-1.5 | 1.6-3.3 | 3.4-5.5 | 5.6-8.2 | 8.3-10.8 | 10.9-15.0 | 15.1-20.0 | GT 20.1 | ALL |
|---|---|---|---|---|---|---|---|---|---|
| NNE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ENE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| E | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ESE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SSE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| S | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SSW | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SW | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| WSW | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| W | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| WNW | 0 | 0 | 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 | |

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 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 OCT 79/0615 - 31 DEC 79/2315
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 0.5-1.5 | 1.6-3.3 | 3.4-5.5 | 5.6-8.2 | 8.3-10.8 | 10.9-15.0 | 15.1-20.0 | GT 20.1 | ALL |
|---|---|---|---|---|---|---|---|---|---|
| NNE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ENE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| E | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ESE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SSE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| S | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SSW | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SW | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| WSW | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| W | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 2 |
| WNW | 0 | 0 | 0 | 0 | 3 | 1 | 0 | 0 | 4 |
| NW | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 5 |
| NNW | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| N | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ALL SECTOR | 0 | 0 | 1 | 3 | 4 | 3 | 1 | 0 | |

NO. OF VALID OBSERVATION = 17 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 OCT 79/0015 - 31 DEC 79/2315
DATA ACQUISITION INTERVAL = MINUTES 00-15 OF EACH HOUR

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

| DIRECTION | SPEED IN METERS PER SECOND 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 | 2 | 0 | 0 | 0 | 0 | 2 |
| NE | 0 | 0 | 5 | 2 | 0 | 0 | 0 | 0 | 7 |
| ENE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| E | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| ESE | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| SE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SSE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| S | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 2 |
| SSW | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 2 |
| SW | 0 | 0 | 0 | 0 | 2 | 3 | 0 | 0 | 5 |
| WSW | 0 | 0 | 0 | 1 | 7 | 9 | 5 | 0 | 22 |
| W | 0 | 0 | 0 | 6 | 8 | 7 | 0 | 0 | 21 |
| WNW | 0 | 0 | 0 | 7 | 9 | 4 | 0 | 0 | 20 |
| NW | 0 | 0 | 2 | 20 | 21 | 22 | 6 | 0 | 71 |
| NNW | 0 | 0 | 4 | 4 | 3 | 3 | 0 | 0 | 14 |
| N | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ALL SECTOR | 1 | 0 | 12 | 44 | 52 | 48 | 11 | 0 | |

NO. OF VALID OBSERVATION = 163 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 OCT 79/0015 - 31 DEC 79/2315
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

| | SPEED IN METERS PER SECOND | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 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 | 5 | 11 | 50 | 31 | 3 | 0 | 0 | 100 |
| NE | 0 | 8 | 24 | 30 | 6 | 2 | 0 | 0 | 70 |
| ENE | 0 | 2 | 2 | 2 | 1 | 0 | 0 | 0 | 7 |
| E | 0 | 0 | 5 | 4 | 3 | 0 | 0 | 0 | 12 |
| ESE | 0 | 4 | 15 | 8 | 4 | 3 | 1 | 1 | 36 |
| SE | 0 | 4 | 19 | 5 | 2 | 1 | 2 | 0 | 33 |
| SSE | 1 | 5 | 19 | 3 | 3 | 1 | 0 | 0 | 32 |
| S | 0 | 5 | 15 | 24 | 12 | 5 | 0 | 0 | 61 |
| SSW | 1 | 7 | 18 | 26 | 21 | 14 | 4 | 0 | 91 |
| SW | 0 | 7 | 22 | 26 | 31 | 24 | 4 | 0 | 114 |
| WSW | 0 | 6 | 21 | 28 | 36 | 35 | 7 | 0 | 133 |
| W | 1 | 2 | 25 | 54 | 54 | 26 | 0 | 0 | 162 |
| WNW | 0 | 0 | 27 | 50 | 27 | 8 | 1 | 0 | 113 |
| NW | 3 | 7 | 17 | 47 | 52 | 21 | 0 | 0 | 147 |
| NNW | 0 | 3 | 17 | 38 | 39 | 10 | 1 | 0 | 108 |
| N | 1 | 1 | 5 | 22 | 20 | 0 | 0 | 0 | 49 |
| ALL SECTOR | 7 | 66 | 262 | 417 | 342 | 153 | 20 | 1 | |

NO. OF VALID OBSERVATION = 1268 NO. OF CALMS (WS LT 0.5M/SEC) = 0 NO. OF MISSING WD/WS = 1

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 OCT 79/0015 - 31 DEC 79/2315
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

| | SPEED IN METERS PER SECOND | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 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 | 1 | 4 | 6 | 3 | 4 | 0 | 0 | 0 | 18 |
| NE | 1 | 1 | 3 | 6 | 1 | 0 | 0 | 0 | 12 |
| ENE | 0 | 1 | 5 | 3 | 0 | 0 | 0 | 0 | 9 |
| E | 0 | 0 | 2 | 3 | 0 | 0 | 0 | 0 | 5 |
| ESE | 2 | 0 | 7 | 3 | 1 | 1 | 0 | 0 | 14 |
| SE | 0 | 4 | 0 | 2 | 2 | 1 | 5 | 0 | 14 |
| SSE | 0 | 3 | 4 | 6 | 7 | 12 | 5 | 5 | 42 |
| S | 1 | 1 | 8 | 6 | 6 | 16 | 1 | 0 | 39 |
| SSW | 2 | 6 | 10 | 27 | 17 | 17 | 8 | 1 | 88 |
| SW | 0 | 4 | 26 | 24 | 20 | 10 | 0 | 0 | 84 |
| WSW | 1 | 3 | 9 | 15 | 8 | 4 | 1 | 0 | 41 |
| W | 0 | 3 | 10 | 7 | 6 | 0 | 0 | 0 | 26 |
| WNW | 3 | 5 | 8 | 15 | 5 | 0 | 0 | 0 | 36 |
| NW | 1 | 3 | 11 | 3 | 2 | 0 | 0 | 0 | 20 |
| NNW | 1 | 2 | 8 | 9 | 11 | 4 | 0 | 0 | 35 |
| N | 3 | 1 | 7 | 5 | 5 | 0 | 0 | 0 | 21 |
| ALL SECTOR | 16 | 41 | 124 | 137 | 95 | 65 | 20 | 6 | |

NO. OF VALID OBSERVATION = 506 NO. OF CALMS (WS LT 0.5M/SEC) = 2 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 OCT 79/0015 - 31 DEC 79/2315
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 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 | 1 | 0 | 0 | 0 | 0 | 1 |
| ENE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| E | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 4 |
| ESE | 0 | 0 | 2 | 1 | 0 | 0 | 0 | 0 | 3 |
| SE | 0 | 4 | 4 | 1 | 0 | 0 | 2 | 0 | 11 |
| SSE | 0 | 5 | 3 | 1 | 0 | 4 | 2 | 0 | 15 |
| S | 1 | 3 | 9 | 0 | 0 | 0 | 0 | 0 | 13 |
| SSW | 0 | 3 | 11 | 1 | 3 | 4 | 0 | 0 | 22 |
| SW | 0 | 4 | 3 | 1 | 1 | 0 | 0 | 0 | 9 |
| WSW | 1 | 0 | 1 | 1 | 2 | 0 | 0 | 0 | 5 |
| W | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 2 |
| WNW | 0 | 1 | 3 | 1 | 0 | 0 | 0 | 0 | 5 |
| NW | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| NNW | 1 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 3 |
| N | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ALL SECTOR | 4 | 23 | 39 | 11 | 6 | 9 | 4 | 0 | |

NO. OF VALID OBSERVATION = 96 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 OCT 79/0015 - 31 DEC 79/2315
DATA ACQUISITION INTERVAL = MINUTES 00-15 OF EACH HOUR

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

| | SPEED IN METERS PER SECOND | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| DIRECTION | 0.5-1.5 | 1.6-3.3 | 3.4-5.5 | 5.6-8.2 | 8.3-10.8 | 10.9-15.0 | 15.1-20.0 | GT 20.1 | ALL |
| NNE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ENE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| E | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ESE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SE | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 2 |
| SSE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| S | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SSW | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 2 |
| SW | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| WSW | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| W | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 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 | 4 | 4 | 0 | 0 | 0 | 0 | 0 | |

NO. OF VALID OBSERVATION = 8 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 OCT 79/0015 - 31 DEC 79/2315
DATA ACQUISITION INTERVAL = MINUTES 00-15 OF EACH HOUR

ALL STABILITY CLASSES

| DIRECTION | SPEED IN METERS PER SECOND 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 | 1 | 9 | 17 | 59 | 42 | 4 | 0 | 0 | 132 |
| NE | 1 | 9 | 32 | 39 | 7 | 2 | 0 | 0 | 90 |
| ENE | 0 | 4 | 7 | 5 | 1 | 0 | 0 | 0 | 17 |
| E | 1 | 0 | 9 | 9 | 3 | 0 | 0 | 0 | 22 |
| ESE | 2 | 5 | 25 | 12 | 5 | 4 | 1 | 1 | 55 |
| SE | 0 | 13 | 27 | 8 | 4 | 2 | 9 | 0 | 63 |
| SSE | 1 | 13 | 31 | 25 | 10 | 17 | 7 | 5 | 109 |
| S | 2 | 9 | 34 | 37 | 18 | 21 | 1 | 0 | 122 |
| SSW | 4 | 19 | 41 | 58 | 43 | 35 | 12 | 1 | 213 |
| SW | 0 | 16 | 54 | 53 | 54 | 37 | 4 | 0 | 218 |
| WSW | 3 | 9 | 32 | 50 | 53 | 48 | 13 | 0 | 208 |
| W | 1 | 9 | 37 | 70 | 68 | 34 | 0 | 0 | 219 |
| WNW | 3 | 6 | 38 | 73 | 44 | 13 | 1 | 0 | 178 |
| NW | 5 | 13 | 33 | 71 | 76 | 44 | 7 | 0 | 249 |
| NNW | 2 | 6 | 34 | 53 | 53 | 18 | 1 | 0 | 167 |
| N | 5 | 2 | 13 | 27 | 25 | 0 | 0 | 0 | 72 |
| ALL SECTOR | 31 | 142 | 464 | 649 | 506 | 279 | 56 | 7 | |

NO. OF POSSIBLE OBSERVATIONS = 2208
NO. OF VALID OBSERVATIONS = 2136
NO. OF VALID NON-CALM CONCURRENT WD/WS/DT = 2056
NO. OF CALMS (WS LT 0.5M/SEC) = 2
NO. OF MISSING WD/WS = 72
NO. OF MISSING DELTA T = 149

# 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 JUL 79/0015 - 30 SEP 79/2315
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

| | SPEED IN METERS PER SECOND | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 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 | 3 | 10 | 2 | 0 | 0 | 0 | 0 | 15 |
| NE | 2 | 3 | 1 | 2 | 0 | 0 | 0 | 0 | 8 |
| ENE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| E | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ESE | 0 | 3 | 3 | 0 | 0 | 0 | 0 | 0 | 6 |
| SE | 0 | 4 | 2 | 0 | 0 | 0 | 0 | 0 | 6 |
| SSE | 1 | 3 | 2 | 0 | 0 | 0 | 0 | 0 | 6 |
| S | 0 | 4 | 3 | 2 | 0 | 0 | 0 | 0 | 9 |
| SSW | 1 | 6 | 5 | 2 | 2 | 0 | 0 | 0 | 16 |
| SW | 1 | 1 | 12 | 1 | 0 | 0 | 0 | 0 | 15 |
| WSW | 0 | 3 | 2 | 5 | 0 | 0 | 0 | 0 | 10 |
| W | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| WNW | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NW | 0 | 0 | 3 | 6 | 1 | 0 | 0 | 0 | 10 |
| NNW | 0 | 1 | 11 | 6 | 1 | 0 | 0 | 0 | 19 |
| N | 0 | 5 | 3 | 1 | 0 | 0 | 0 | 0 | 9 |
| ALL SECTOR | 6 | 36 | 57 | 27 | 4 | 0 | 0 | 0 | |

NO. OF VALID OBSERVATION = 130 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 = 142 FT
DELTA T INTERVAL = 142 - 33 FT
PASQUILL STABILITY CLASSES / CLASS DETERMINATION METHOD = DELTA T
DATA PERIOD = 1 JUL 79/0015 - 30 SEP 79/2315
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

| | SPEED IN METERS PER SECOND | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 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 | 1 | 3 | 3 | 1 | 0 | 0 | 0 | 0 | 8 |
| NE | 0 | 1 | 2 | 6 | 0 | 0 | 0 | 0 | 9 |
| ENE | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| E | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| ESE | 0 | 3 | 4 | 0 | 5 | 0 | 0 | 0 | 12 |
| SE | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 2 |
| SSE | 1 | 1 | 3 | 3 | 0 | 0 | 0 | 0 | 8 |
| S | 2 | 5 | 3 | 0 | 1 | 0 | 0 | 0 | 11 |
| SSW | 0 | 2 | 3 | 1 | 0 | 0 | 0 | 0 | 6 |
| SW | 1 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 3 |
| WSW | 0 | 0 | 2 | 2 | 2 | 0 | 0 | 0 | 6 |
| W | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 2 |
| WNW | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 3 |
| NW | 1 | 4 | 8 | 2 | 2 | 0 | 0 | 0 | 17 |
| NNW | 0 | 1 | 7 | 2 | 2 | 0 | 0 | 0 | 12 |
| N | 1 | 3 | 3 | 0 | 0 | 0 | 0 | 0 | 7 |
| ALL SECTOR | 9 | 26 | 46 | 18 | 12 | 0 | 0 | 0 | |

NO. OF VALID OBSERVATION = 111 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 = 142 FT
DELTA T INTERVAL = 142 - 33 FT
PASQUILL STABILITY CLASSES / CLASS DETERMINATION METHOD = DELTA T
DATA PERIOD = 1 JUL 79/0015 - 30 SEP 79/2315
DATA ACQUISITION INTERVAL = MINUTES 00-15 OF EACH HOUR

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

| | SPEED IN METERS PER SECOND | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 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 | 1 | 2 | 2 | 1 | 0 | 0 | 0 | 0 | 6 |
| NE | 2 | 1 | 0 | 2 | 0 | 0 | 0 | 0 | 5 |
| ENE | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| E | 4 | 7 | 1 | 0 | 0 | 0 | 0 | 0 | 12 |
| ESE | 3 | 4 | 3 | 1 | 0 | 0 | 0 | 0 | 11 |
| SE | 1 | 6 | 8 | 8 | 0 | 0 | 0 | 0 | 23 |
| SSE | 1 | 5 | 5 | 5 | 0 | 0 | 0 | 0 | 16 |
| S | 0 | 4 | 6 | 1 | 0 | 0 | 0 | 0 | 11 |
| SSW | 1 | 8 | 4 | 1 | 3 | 0 | 0 | 0 | 17 |
| SW | 0 | 2 | 2 | 2 | 0 | 1 | 0 | 0 | 7 |
| WSW | 1 | 2 | 2 | 3 | 6 | 0 | 0 | 0 | 14 |
| W | 2 | 3 | 1 | 1 | 0 | 0 | 0 | 0 | 7 |
| WNW | 1 | 1 | 3 | 1 | 0 | 0 | 0 | 0 | 6 |
| NW | 0 | 3 | 5 | 3 | 0 | 0 | 0 | 0 | 11 |
| NNW | 0 | 1 | 12 | 0 | 0 | 0 | 0 | 0 | 13 |
| N | 0 | 2 | 3 | 1 | 0 | 0 | 0 | 0 | 6 |
| ALL SECTOR | 17 | 52 | 57 | 30 | 9 | 1 | 0 | 0 | |

NO. OF VALID OBSERVATION = 166 NO. OF CALMS (WS LT 0.5M/SEC) = 0 NO. OF MISSING WD/WS = 2

MILLSTONE NUCLEAR POWER STATION / UNIT 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 JUL 79/0015 - 30 SEP 79/2315
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

| | SPEED IN METERS PER SECOND | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 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 | 4 | 5 | 20 | 18 | 0 | 0 | 0 | 0 | 47 |
| NE | 1 | 8 | 11 | 10 | 0 | 0 | 0 | 0 | 30 |
| ENE | 6 | 6 | 11 | 0 | 0 | 0 | 0 | 1 | 24 |
| E | 4 | 13 | 12 | 5 | 0 | 0 | 0 | 0 | 34 |
| ESE | 3 | 6 | 8 | 4 | 0 | 0 | 0 | 0 | 21 |
| SE | 1 | 11 | 13 | 4 | 0 | 3 | 0 | 0 | 32 |
| SSE | 5 | 10 | 7 | 2 | 2 | 0 | 0 | 0 | 26 |
| S | 2 | 8 | 5 | 1 | 0 | 2 | 0 | 0 | 18 |
| SSW | 0 | 5 | 5 | 10 | 0 | 0 | 1 | 0 | 21 |
| SW | 3 | 5 | 8 | 17 | 11 | 1 | 0 | 0 | 45 |
| WSW | 1 | 6 | 13 | 25 | 10 | 0 | 0 | 0 | 55 |
| W | 2 | 13 | 11 | 4 | 3 | 0 | 0 | 0 | 33 |
| WNW | 4 | 6 | 13 | 1 | 0 | 0 | 0 | 0 | 24 |
| NW | 2 | 9 | 13 | 4 | 1 | 0 | 0 | 0 | 29 |
| NNW | 3 | 3 | 19 | 7 | 0 | 0 | 0 | 0 | 32 |
| N | 3 | 5 | 13 | 6 | 0 | 0 | 0 | 0 | 27 |
| ALL SECTOR | 44 | 119 | 182 | 118 | 27 | 6 | 1 | 1 | |

NO. OF VALID OBSERVATION = 501 NO. OF CALMS (WS LT 0.5M/SEC) = 3 NO. OF MISSING WD/WS = 5

MILLSTONE NUCLEAR POWER STATION / UNIT 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 JUL 79/0015 - 30 SEP 79/2315
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

| | SPEED IN METERS PER SECOND | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 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 | 4 | 2 | 7 | 3 | 0 | 0 | 0 | 0 | 16 |
| NE | 1 | 1 | 4 | 4 | 0 | 0 | 0 | 0 | 10 |
| ENE | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 3 |
| E | 2 | 6 | 3 | 0 | 0 | 0 | 0 | 0 | 11 |
| ESE | 3 | 3 | 9 | 2 | 0 | 0 | 0 | 0 | 17 |
| SE | 4 | 8 | 11 | 0 | 0 | 1 | 0 | 0 | 24 |
| SSE | 2 | 10 | 10 | 1 | 3 | 0 | 2 | 0 | 28 |
| S | 2 | 12 | 9 | 4 | 2 | 3 | 0 | 0 | 32 |
| SSW | 6 | 18 | 10 | 27 | 15 | 1 | 7 | 0 | 84 |
| SW | 2 | 15 | 29 | 18 | 6 | 1 | 2 | 0 | 73 |
| WSW | 7 | 23 | 28 | 23 | 3 | 0 | 2 | 0 | 86 |
| W | 9 | 22 | 16 | 5 | 5 | 1 | 0 | 0 | 58 |
| WNW | 6 | 18 | 5 | 2 | 0 | 0 | 0 | 0 | 31 |
| NW | 2 | 2 | 3 | 0 | 0 | 0 | 0 | 0 | 7 |
| NNW | 3 | 6 | 14 | 5 | 0 | 0 | 0 | 0 | 28 |
| N | 1 | 2 | 3 | 2 | 0 | 0 | 0 | 0 | 8 |
| ALL SECTOR | 55 | 149 | 162 | 96 | 34 | 7 | 13 | 0 | |

NO. OF VALID OBSERVATION = 521 NO. OF CALMS (WS LT 0.5M/SEC) = 5 NO. OF MISSING WD/WS = 15

MILLSTONE NUCLEAR POWER STATION / UNIT 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 JUL 79/0015 - 30 SEP 79/2315
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 0.5-1.5 | 1.6-3.3 | 3.4-5.5 | 5.6-8.2 | 8.3-10.8 | 10.9-13.0 | 13.1-20.0 | GT 20.1 | ALL |
|---|---|---|---|---|---|---|---|---|---|
| NNE | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 2 |
| NE | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| ENE | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| E | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| ESE | 5 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 8 |
| SE | 3 | 5 | 8 | 7 | 0 | 0 | 0 | 0 | 23 |
| SSE | 4 | 5 | 17 | 6 | 0 | 0 | 0 | 0 | 32 |
| S | 2 | 7 | 12 | 6 | 0 | 0 | 0 | 0 | 27 |
| SSW | 3 | 14 | 28 | 14 | 7 | 1 | 2 | 0 | 69 |
| SW | 4 | 10 | 20 | 12 | 4 | 4 | 0 | 0 | 54 |
| WSW | 2 | 8 | 19 | 8 | 1 | 0 | 0 | 0 | 38 |
| W | 0 | 7 | 2 | 3 | 0 | 0 | 0 | 0 | 12 |
| WNW | 2 | 11 | 2 | 0 | 0 | 0 | 0 | 0 | 15 |
| NW | 2 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 4 |
| NNW | 4 | 3 | 2 | 0 | 0 | 0 | 0 | 0 | 9 |
| N | 3 | 0 | 1 | 2 | 0 | 0 | 0 | 0 | 6 |
| ALL SECTOR | 37 | 76 | 114 | 59 | 12 | 5 | 2 | 0 | |

NO. OF VALID OBSERVATION = 307 NO. OF CALMS (WS LT 0.5M/SEC) = 2 NO. OF MISSING WD/WS = 8

MILLSTONE NUCLEAR POWER STATION / UNIT 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 JUL 79/0015 - 30 SEP 79/2315
DATA ACQUISITION INTERVAL = MINUTES 00-15 OF EACH HOUR

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

| | SPEED IN METERS PER SECOND | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 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 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| NE | 2 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 3 |
| ENE | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| E | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| ESE | 1 | 5 | 1 | 0 | 0 | 0 | 0 | 0 | 7 |
| SE | 1 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 4 |
| SSE | 1 | 2 | 6 | 7 | 0 | 0 | 0 | 0 | 16 |
| S | 0 | 5 | 6 | 2 | 0 | 0 | 0 | 0 | 13 |
| SSW | 3 | 6 | 15 | 11 | 6 | 0 | 0 | 0 | 41 |
| SW | 2 | 2 | 10 | 12 | 2 | 0 | 0 | 0 | 28 |
| WSW | 4 | 0 | 14 | 11 | 0 | 0 | 0 | 0 | 29 |
| W | 1 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 4 |
| WNW | 5 | 4 | 1 | 0 | 0 | 0 | 0 | 0 | 10 |
| NW | 4 | 8 | 3 | 0 | 0 | 0 | 0 | 0 | 15 |
| NNW | 1 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| N | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| ALL SECTOR | 32 | 40 | 60 | 44 | 8 | 0 | 0 | 0 | |

NO. OF VALID OBSERVATION = 190 NO. OF CALMS (WS LT 0.5M/SEC) = 6 NO. OF MISSING WD/WS = 1

MILLSTONE NUCLEAR POWER STATION / UNIT 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 JUL 79/0015 - 30 SEP 79/2315
DATA ACQUISITION INTERVAL = MINUTES 00-15 OF EACH HOUR

ALL STABILITY CLASSES

| | SPEED IN METERS PER SECOND | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 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 | 11 | 16 | 43 | 25 | 0 | 0 | 0 | 0 | 95 |
| NE | 9 | 14 | 18 | 25 | 0 | 0 | 0 | 0 | 66 |
| ENE | 14 | 9 | 12 | 0 | 0 | 0 | 0 | 1 | 36 |
| E | 11 | 34 | 16 | 5 | 0 | 0 | 0 | 0 | 66 |
| ESE | 15 | 26 | 29 | 10 | 5 | 0 | 0 | 0 | 85 |
| SE | 10 | 37 | 50 | 21 | 0 | 4 | 0 | 0 | 122 |
| SSE | 15 | 36 | 52 | 25 | 5 | 0 | 2 | 0 | 135 |
| S | 8 | 46 | 47 | 16 | 3 | 5 | 0 | 0 | 125 |
| SSW | 14 | 60 | 70 | 66 | 33 | 2 | 10 | 0 | 255 |
| SW | 14 | 35 | 83 | 62 | 23 | 7 | 2 | 0 | 226 |
| WSW | 15 | 42 | 80 | 77 | 22 | 0 | 2 | 0 | 238 |
| W | 15 | 46 | 33 | 14 | 8 | 1 | 0 | 0 | 117 |
| WNW | 18 | 40 | 27 | 4 | 0 | 0 | 0 | 0 | 89 |
| NW | 11 | 27 | 36 | 15 | 4 | 0 | 0 | 0 | 93 |
| NNW | 11 | 18 | 65 | 20 | 3 | 0 | 0 | 0 | 117 |
| N | 10 | 17 | 26 | 12 | 0 | 0 | 0 | 0 | 65 |
| ALL SECTOR | 201 | 503 | 687 | 397 | 106 | 19 | 16 | 1 | |

NO. OF POSSIBLE OBSERVATIONS = 2208
NO. OF VALID OBSERVATIONS = 1946
NO. OF VALID NON-CALM CONCURRENT WD/WS/DT = 1910
NO. OF CALMS (WS LT 0.5M/SEC) = 16
NO. OF MISSING WD/WS = 262
NO. OF MISSING DELTA T = 240

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 OCT 79/0015 - 31 DEC 79/2315
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

| | SPEED IN METERS PER SECOND | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 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 | 1 | 3 | 1 | 0 | 0 | 0 | 0 | 5 |
| NE | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 4 |
| ENE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| E | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ESE | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 2 |
| SE | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 |
| SSE | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 |
| S | 0 | 0 | 0 | 2 | 1 | 1 | 0 | 0 | 4 |
| SSW | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 2 |
| SW | 0 | 0 | 0 | 2 | 1 | 3 | 0 | 0 | 6 |
| WSW | 0 | 0 | 0 | 7 | 7 | 15 | 5 | 0 | 34 |
| W | 0 | 0 | 0 | 5 | 4 | 8 | 0 | 0 | 17 |
| WNW | 0 | 0 | 0 | 5 | 3 | 5 | 0 | 0 | 13 |
| NW | 0 | 0 | 0 | 5 | 6 | 2 | 0 | 0 | 13 |
| NNW | 0 | 0 | 4 | 8 | 3 | 1 | 0 | 0 | 16 |
| N | 0 | 0 | 3 | 4 | 0 | 0 | 0 | 0 | 7 |
| ALL SECTOR | 0 | 1 | 16 | 39 | 27 | 37 | 5 | 0 | |

NO. OF VALID OBSERVATION = 125 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 = 142 FT
DELTA T INTERVAL = 142 - 33 FT
PASQUILL STABILITY CLASSES / CLASS DETERMINATION METHOD = DELTA T
DATA PERIOD = 1 OCT 89/0015 - 31 DEC 89/2315
DATA ACQUISITION INTERVAL = MINUTES 00-15 OF EACH HOUR

PASQUILL STABILITY 5 — DELTA T LESS THAN OR EQUAL TO -1.7 AND GREATER THAN -1.9 DEG C PER 100 METERS

| | SPEED IN METERS PER SECOND | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 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 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 4 |
| NE | 0 | 0 | 3 | 9 | 2 | 0 | 0 | 0 | 14 |
| ENE | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| E | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ESE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SE | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 2 |
| SSE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| S | 0 | 0 | 1 | 2 | 0 | 0 | 0 | 0 | 3 |
| SSW | 0 | 0 | 3 | 6 | 0 | 0 | 0 | 0 | 9 |
| SW | 0 | 0 | 2 | 1 | 0 | 0 | 0 | 0 | 3 |
| WSW | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| W | 0 | 0 | 2 | 1 | 3 | 0 | 0 | 0 | 6 |
| WNW | 0 | 0 | 2 | 7 | 6 | 0 | 0 | 0 | 15 |
| NW | 0 | 1 | 4 | 1 | 4 | 1 | 0 | 0 | 11 |
| NNW | 0 | 1 | 17 | 1 | 0 | 3 | 0 | 0 | 22 |
| N | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 3 |
| ALL SECTOR | 0 | 4 | 40 | 30 | 16 | 4 | 0 | 0 | |

NO. OF VALID OBSERVATION = 94 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 = 142 FT
DELTA T INTERVAL = 142 - 35 FT
PASQUILL STABILITY CLASSES / CLASS DETERMINATION METHOD = DELTA T
DATA PERIOD = 1 OCT 79/0015 - 31 DEC 79/2315
DATA ACQUISITION INTERVAL = MINUTES 00-15 OF EACH HOUR

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

| | SPEED IN METERS PER SECOND | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 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 | 2 | 11 | 10 | 0 | 0 | 0 | 0 | 23 |
| NE | 0 | 3 | 7 | 4 | 0 | 0 | 0 | 0 | 14 |
| ENE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| E | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 3 |
| ESE | 1 | 0 | 6 | 3 | 0 | 0 | 0 | 0 | 10 |
| SE | 0 | 1 | 3 | 1 | 0 | 0 | 0 | 0 | 5 |
| SSE | 0 | 1 | 8 | 5 | 1 | 1 | 0 | 0 | 16 |
| S | 0 | 2 | 7 | 11 | 4 | 0 | 0 | 0 | 24 |
| SSW | 1 | 1 | 7 | 10 | 2 | 1 | 0 | 0 | 22 |
| SW | 0 | 2 | 8 | 7 | 10 | 2 | 0 | 0 | 29 |
| WSW | 0 | 1 | 10 | 7 | 12 | 3 | 1 | 0 | 34 |
| W | 0 | 2 | 6 | 26 | 27 | 3 | 3 | 0 | 67 |
| WNW | 0 | 4 | 25 | 40 | 10 | 0 | 0 | 0 | 79 |
| NW | 0 | 5 | 22 | 19 | 4 | 7 | 0 | 0 | 57 |
| NNW | 0 | 1 | 33 | 21 | 12 | 0 | 0 | 0 | 67 |
| N | 0 | 0 | 13 | 5 | 4 | 0 | 0 | 0 | 22 |
| ALL SECTOR | 2 | 26 | 167 | 170 | 86 | 17 | 4 | 0 | |

NO. OF VALID OBSERVATION = 472 NO. OF CALMS (WS LT 0.5M/SEC) = 0 NO. OF MISSING WD/WS = 1

MILLSTONE NUCLEAR POWER STATION / UNIT 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 OCT 79/0015 - 31 DEC 79/2315
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 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 | 1 | 3 | 1 | 4 | 0 | 0 | 0 | 0 | 9 |
| NE | 0 | 1 | 3 | 1 | 0 | 0 | 0 | 0 | 5 |
| ENE | 0 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 3 |
| E | 0 | 1 | 3 | 1 | 0 | 0 | 0 | 0 | 5 |
| ESE | 0 | 0 | 4 | 3 | 0 | 0 | 0 | 0 | 7 |
| SE | 1 | 2 | 8 | 0 | 0 | 0 | 0 | 0 | 11 |
| SSE | 0 | 5 | 2 | 2 | 4 | 1 | 3 | 0 | 17 |
| S | 0 | 3 | 0 | 3 | 3 | 1 | 1 | 0 | 11 |
| SSW | 1 | 3 | 9 | 14 | 8 | 9 | 0 | 0 | 44 |
| SW | 3 | 7 | 11 | 14 | 9 | 4 | 0 | 0 | 48 |
| WSW | 0 | 9 | 12 | 9 | 2 | 0 | 0 | 0 | 32 |
| W | 0 | 9 | 5 | 3 | 0 | 0 | 0 | 0 | 17 |
| WNW | 1 | 2 | 10 | 0 | 0 | 0 | 0 | 0 | 13 |
| NW | 0 | 3 | 3 | 0 | 0 | 0 | 0 | 0 | 6 |
| NNW | 1 | 8 | 8 | 5 | 1 | 0 | 0 | 0 | 23 |
| N | 1 | 1 | 5 | 7 | 1 | 0 | 0 | 0 | 15 |
| ALL SECTOR | 9 | 58 | 86 | 66 | 28 | 15 | 4 | 0 | |

NO. OF VALID OBSERVATION = 766 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 = 142 FT
DELTA T INTERVAL = 142 - 33 FT
PASQUILL STABILITY CLASSES / CLASS DETERMINATION METHOD = DELTA T
DATA PERIOD = 1 OCT 79/0015 - 31 DEC 79/2315
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

| | SPEED IN METERS PER SECOND | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 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 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| NE | 0 | 4 | 2 | 0 | 0 | 0 | 0 | 0 | 6 |
| ENE | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 3 |
| E | 1 | 1 | 3 | 0 | 0 | 0 | 0 | 0 | 5 |
| ESE | 1 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| SE | 0 | 1 | 1 | 1 | 2 | 2 | 0 | 0 | 7 |
| SSE | 0 | 3 | 1 | 4 | 5 | 4 | 0 | 0 | 17 |
| S | 5 | 4 | 5 | 0 | 2 | 0 | 0 | 0 | 16 |
| SSW | 1 | 3 | 9 | 6 | 8 | 6 | 1 | 0 | 34 |
| SW | 1 | 5 | 6 | 3 | 2 | 3 | 1 | 0 | 21 |
| WSW | 0 | 4 | 6 | 1 | 1 | 0 | 0 | 0 | 12 |
| W | 2 | 3 | 4 | 0 | 0 | 0 | 0 | 0 | 9 |
| WNW | 0 | 3 | 2 | 0 | 0 | 0 | 0 | 0 | 5 |
| NW | 0 | 3 | 3 | 0 | 0 | 0 | 0 | 0 | 6 |
| NNW | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 2 |
| N | 1 | 2 | 6 | 1 | 0 | 0 | 0 | 0 | 10 |
| ALL SECTOR | 14 | 44 | 49 | 17 | 20 | 15 | 2 | 0 | |

NO. OF VALID OBSERVATION = 162 NO. OF CALMS (WS LT 0.5M/SEC) = 1 NO. OF MISSING WD/WS = 0

MILLSTONE NUCLEAR POWER STATION / UNIT 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 OCT 79/0015 - 31 DEC 79/2315
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 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 | 2 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 4 |
| ENE | 2 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 4 |
| E | 0 | 6 | 5 | 0 | 0 | 0 | 0 | 0 | 11 |
| ESE | 1 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| SE | 2 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 6 |
| SSE | 2 | 2 | 0 | 0 | 1 | 1 | 0 | 0 | 6 |
| S | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| SSW | 0 | 4 | 1 | 1 | 3 | 0 | 0 | 0 | 9 |
| SW | 4 | 4 | 1 | 0 | 0 | 0 | 0 | 0 | 9 |
| WSW | 4 | 1 | 2 | 3 | 0 | 1 | 0 | 0 | 11 |
| W | 2 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 5 |
| WNW | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 2 |
| NW | 3 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 4 |
| NNW | 3 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| N | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 2 |
| ALL SECTOR | 25 | 30 | 19 | 4 | 4 | 2 | 0 | 0 | |

NO. OF VALID OBSERVATION = 85 NO. OF CALMS (WS LT 0.5M/SEC) = 1 NO. OF MISSING WD/WS = 0

MILLSTONE NUCLEAR POWER STATION / UNIT 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 OCT 79/0015 - 31 DEC 79/2315
DATA ACQUISITION INTERVAL = MINUTES 00-15 OF EACH HOUR

ALL STABILITY CLASSES

| | SPEED IN METERS PER SECOND | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 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 | 2 | 21 | 61 | 62 | 2 | 0 | 0 | 0 | 148 |
| NE | 4 | 25 | 50 | 24 | 5 | 0 | 0 | 0 | 106 |
| ENE | 3 | 10 | 11 | 0 | 0 | 0 | 0 | 0 | 24 |
| E | 2 | 11 | 16 | 8 | 0 | 0 | 0 | 0 | 37 |
| ESE | 4 | 11 | 19 | 12 | 5 | 1 | 0 | 0 | 52 |
| SE | 4 | 13 | 31 | 8 | 2 | 6 | 1 | 0 | 65 |
| SSE | 4 | 17 | 32 | 19 | 12 | 9 | 3 | 0 | 96 |
| S | 7 | 14 | 35 | 23 | 13 | 3 | 1 | 0 | 96 |
| SSW | 5 | 25 | 37 | 50 | 31 | 21 | 1 | 0 | 170 |
| SW | 13 | 27 | 45 | 48 | 31 | 17 | 2 | 0 | 183 |
| WSW | 6 | 22 | 54 | 45 | 34 | 25 | 7 | 0 | 193 |
| W | 6 | 37 | 28 | 65 | 62 | 20 | 3 | 0 | 221 |
| WNW | 3 | 31 | 61 | 78 | 26 | 10 | 0 | 0 | 209 |
| NW | 3 | 29 | 64 | 65 | 41 | 15 | 0 | 0 | 217 |
| NNW | 6 | 18 | 102 | 56 | 24 | 6 | 0 | 0 | 212 |
| N | 2 | 10 | 54 | 33 | 6 | 0 | 0 | 0 | 105 |
| ALL SECTOR | 74 | 319 | 700 | 596 | 294 | 133 | 18 | 0 | |

NO. OF POSSIBLE OBSERVATIONS = 2208 NO. OF VALID NON-CALM CONCURRENT WD/WS/DT = 2133 NO. OF MISSING WD/WS = 72
NO. OF VALID OBSERVATIONS = 2136 NO. OF CALMS (WS LT 0.5M/SEC) = 2 NO. OF MISSING DELTA T = 72

# MILLSTONE NO. 2

METEOROLOGICAL

JOINT FREQUENCY

DATA FOR

CONTAINMENT PURGES

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 = 8 JUL 79/0245 - 6 SEP 79/2315
DATA ACQUISITION INTERVAL = MINUTES 00-45 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 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 | 1 | 3 | 4 | 0 | 0 | 0 | 0 | 0 | 8 |
| NE | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| ENE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| E | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ESE | 0 | 1 | 6 | 0 | 0 | 0 | 0 | 0 | 7 |
| SE | 0 | 7 | 4 | 0 | 0 | 0 | 0 | 0 | 11 |
| SSE | 1 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 5 |
| S | 1 | 5 | 10 | 6 | 1 | 0 | 0 | 0 | 23 |
| SSW | 0 | 0 | 9 | 1 | 0 | 0 | 0 | 0 | 10 |
| SW | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| WSW | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| W | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| WNW | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| NW | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| NNW | 0 | 1 | 3 | 0 | 0 | 0 | 0 | 0 | 4 |
| N | 1 | 2 | 5 | 0 | 0 | 0 | 0 | 0 | 8 |
| ALL SECTOR | 7 | 24 | 43 | 9 | 1 | 0 | 0 | 0 | |

NO. OF VALID OBSERVATION = 84 NO. OF CALMS (WS LT 0.5M/SEC) = 0 NO. OF MISSING WD/WS = 5

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 = 8 JUL 79/0245 - 6 SEP 79/2315
DATA ACQUISITION INTERVAL = MINUTES 00-45 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

| | SPEED IN METERS PER SECOND | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 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 | 1 | 4 | 2 | 0 | 0 | 0 | 0 | 0 | 7 |
| NE | 0 | 4 | 1 | 0 | 0 | 0 | 0 | 0 | 5 |
| ENE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| E | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ESE | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| SE | 2 | 5 | 8 | 1 | 0 | 0 | 0 | 0 | 16 |
| SSE | 3 | 3 | 11 | 10 | 0 | 0 | 0 | 0 | 27 |
| S | 3 | 9 | 6 | 0 | 2 | 0 | 0 | 0 | 20 |
| SSW | 1 | 1 | 2 | 1 | 0 | 0 | 0 | 0 | 5 |
| SW | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 2 |
| WSW | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| W | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| WNW | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NW | 0 | 0 | 4 | 0 | 0 | 1 | 0 | 0 | 5 |
| NNW | 0 | 1 | 3 | 0 | 0 | 0 | 0 | 0 | 4 |
| N | 0 | 6 | 4 | 0 | 0 | 0 | 0 | 0 | 10 |
| ALL SECTOR | 13 | 38 | 42 | 12 | 2 | 1 | 0 | 0 | |

NO. OF VALID OBSERVATION = 108 NO. OF CALMS (WS LT 0.5M/SEC) = 0 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 = 8 JUL 79/0245 - 6 SEP 79/2315
DATA ACQUISITION INTERVAL = MINUTES 00-45 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 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 | 1 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 5 |
| NE | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| ENE | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| E | 2 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| ESE | 1 | 2 | 3 | 0 | 0 | 0 | 0 | 0 | 6 |
| SE | 0 | 4 | 5 | 0 | 0 | 0 | 0 | 0 | 9 |
| SSE | 1 | 5 | 14 | 9 | 3 | 0 | 0 | 0 | 32 |
| S | 0 | 8 | 12 | 4 | 0 | 0 | 0 | 0 | 24 |
| SSW | 0 | 4 | 8 | 1 | 0 | 0 | 0 | 0 | 13 |
| SW | 0 | 4 | 1 | 0 | 0 | 0 | 0 | 0 | 5 |
| WSW | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| W | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| WNW | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 2 |
| NW | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| NNW | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| N | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| ALL SECTOR | 9 | 40 | 46 | 14 | 3 | 0 | 0 | 0 | |

NO. OF VALID OBSERVATION = 112 NO. OF CALMS (WS LT 0.5M/SEC) = 0 NO. OF MISSING WD/WS = 3

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 = 8 JUL 79/0245 - 6 SEP 79/2315
DATA ACQUISITION INTERVAL = MINUTES 00-45 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

| | SPEED IN METERS PER SECOND | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 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 | 1 | 7 | 6 | 0 | 0 | 0 | 0 | 0 | 14 |
| NE | 1 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| ENE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| E | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| ESE | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 2 |
| SE | 1 | 3 | 5 | 0 | 0 | 0 | 0 | 0 | 9 |
| SSE | 3 | 1 | 4 | 2 | 3 | 0 | 0 | 0 | 13 |
| S | 0 | 5 | 9 | 4 | 0 | 0 | 0 | 0 | 18 |
| SSW | 0 | 9 | 1 | 1 | 0 | 0 | 0 | 0 | 11 |
| SW | 1 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 5 |
| WSW | 1 | 5 | 9 | 7 | 0 | 0 | 0 | 0 | 22 |
| W | 3 | 10 | 3 | 2 | 6 | 0 | 0 | 0 | 24 |
| WNW | 2 | 9 | 2 | 0 | 0 | 0 | 0 | 0 | 13 |
| NW | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 2 |
| NNW | 1 | 2 | 3 | 1 | 0 | 0 | 0 | 0 | 7 |
| N | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ALL SECTOR | 19 | 57 | 45 | 17 | 10 | 0 | 0 | 0 | |

NO. OF VALID OBSERVATION = 150 NO. OF CALMS (WS LT 0.5M/SEC) = 2 NO. OF MISSING WD/WS = 6

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 = 8 JUL 79/0245 - 6 SEP 79/2315
DATA ACQUISITION INTERVAL = MINUTES 00-45 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

| | SPEED IN METERS PER SECOND | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 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 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| NE | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| ENE | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| E | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| ESE | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| SE | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| SSE | 4 | 1 | 2 | 2 | 4 | 0 | 0 | 0 | 13 |
| S | 1 | 1 | 10 | 11 | 2 | 0 | 0 | 0 | 25 |
| SSW | 2 | 3 | 2 | 50 | 31 | 2 | 0 | 0 | 90 |
| SW | 0 | 6 | 16 | 7 | 4 | 1 | 0 | 0 | 34 |
| WSW | 2 | 9 | 31 | 10 | 0 | 0 | 0 | 0 | 52 |
| W | 5 | 8 | 5 | 0 | 5 | 0 | 0 | 0 | 23 |
| WNW | 3 | 20 | 10 | 0 | 0 | 0 | 0 | 0 | 33 |
| NW | 3 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 6 |
| NNW | 1 | 3 | 2 | 0 | 0 | 0 | 0 | 0 | 6 |
| N | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| ALL SECTOR | 32 | 56 | 79 | 80 | 46 | 3 | 0 | 0 | |

NO. OF VALID OBSERVATION = 297 NO. OF CALMS (WS LT 0.5M/SEC) = 1 NO. OF MISSING WD/WS = 10

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 = 8 JUL 79/0245 - 6 SEP 79/2315
DATA ACQUISITION INTERVAL = MINUTES 00-45 OF EACH HOUR

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

| | SPEED IN METERS PER SECOND | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 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 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| NE | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| ENE | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| E | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| ESE | 3 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 8 |
| SE | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| SSE | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| S | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| SSW | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| SW | 1 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 4 |
| WSW | 0 | 1 | 1 | 5 | 0 | 0 | 0 | 0 | 7 |
| W | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| WNW | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| NW | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| NNW | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| N | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| ALL SECTOR | 29 | 12 | 3 | 5 | 0 | 0 | 0 | 0 | |

NO. OF VALID OBSERVATION = 60 NO. OF CALMS (WS LT 0.5M/SEC) = 11 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 = 8 JUL 79/0245 - 6 SEP 79/2315
DATA ACQUISITION INTERVAL = MINUTES 00-45 OF EACH HOUR

ALL STABILITY CLASSES

| DIRECTION | SPEED IN METERS PER SECOND 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 | 10 | 17 | 14 | 0 | 0 | 0 | 0 | 0 | 41 |
| NE | 6 | 11 | 1 | 0 | 0 | 0 | 0 | 0 | 18 |
| ENE | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 |
| E | 10 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 14 |
| ESE | 8 | 23 | 13 | 5 | 0 | 0 | 0 | 0 | 49 |
| SE | 5 | 27 | 42 | 9 | 0 | 0 | 0 | 0 | 83 |
| SSE | 13 | 11 | 46 | 29 | 10 | 0 | 0 | 0 | 109 |
| S | 9 | 32 | 56 | 27 | 6 | 0 | 0 | 0 | 130 |
| SSW | 5 | 22 | 24 | 68 | 39 | 5 | 0 | 0 | 163 |
| SW | 6 | 13 | 25 | 14 | 6 | 12 | 0 | 0 | 76 |
| WSW | 8 | 19 | 49 | 23 | 0 | 0 | 0 | 0 | 99 |
| W | 12 | 24 | 8 | 2 | 11 | 0 | 0 | 0 | 57 |
| WNW | 13 | 32 | 14 | 0 | 0 | 0 | 0 | 0 | 59 |
| NW | 11 | 6 | 4 | 0 | 1 | 1 | 0 | 0 | 23 |
| NNW | 6 | 10 | 11 | 1 | 0 | 0 | 0 | 0 | 28 |
| N | 7 | 11 | 9 | 0 | 0 | 0 | 0 | 0 | 27 |
| ALL SECTOR | 136 | 262 | 316 | 178 | 73 | 18 | 0 | 0 | |

NO. OF POSSIBLE OBSERVATIONS = 1513 NO. OF VALID NON-CALM CONCURRENT WD/WS/DT = 903 NO. OF MISSING WD/WS = 515
NO. OF VALID OBSERVATIONS = 998 NO. OF CALMS (WS LT 0.5M/SEC) = 15 NO. OF MISSING DELTA T = 567

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 = 10 OCT 79/1730 - 26 DEC 79/0315
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 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 | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| NE | 0 | 3 | 7 | 0 | 0 | 0 | 0 | 0 | 10 |
| 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 | 3 | 0 | 0 | 0 | 3 |
| WSW | 0 | 0 | 0 | 11 | 4 | 27 | 1 | 0 | 43 |
| W | 0 | 0 | 0 | 3 | 2 | 14 | 0 | 0 | 19 |
| WNW | 0 | 0 | 0 | 11 | 2 | 0 | 0 | 0 | 13 |
| NW | 0 | 0 | 1 | 11 | 10 | 8 | 0 | 0 | 30 |
| NNW | 0 | 0 | 0 | 4 | 4 | 4 | 0 | 0 | 12 |
| N | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ALL SECTOR | 0 | 3 | 9 | 40 | 25 | 53 | 1 | 0 | |

NO. OF VALID OBSERVATION = 131 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 = 10 OCT 79/1730 - 26 DEC 79/0315
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

| | SPEED IN METERS PER SECOND | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 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 | 1 | 2 | 1 | 0 | 0 | 0 | 0 | 4 |
| 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 | 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 | 2 | 2 | 0 | 0 | 0 | 0 | 4 |
| SSW | 0 | 0 | 3 | 9 | 0 | 0 | 0 | 0 | 12 |
| SW | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| WSW | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 2 |
| W | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| WNW | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NW | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 2 |
| NNW | 0 | 2 | 16 | 3 | 0 | 6 | 0 | 0 | 27 |
| N | 0 | 1 | 7 | 5 | 0 | 0 | 0 | 0 | 13 |
| ALL SECTOR | 0 | 6 | 32 | 20 | 0 | 7 | 0 | 0 | |

NO. OF VALID OBSERVATION = 65 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 = 10 OCT 79/1730 - 26 DEC 79/0315
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 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 | 21 | 28 | 0 | 0 | 0 | 0 | 49 |
| NE | 0 | 3 | 12 | 16 | 0 | 0 | 0 | 0 | 31 |
| ENE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| E | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ESE | 0 | 0 | 4 | 1 | 0 | 0 | 0 | 0 | 5 |
| SE | 0 | 0 | 1 | 2 | 0 | 0 | 0 | 0 | 3 |
| SSE | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 2 |
| S | 0 | 7 | 3 | 14 | 0 | 0 | 0 | 0 | 24 |
| SSW | 1 | 1 | 12 | 22 | 0 | 0 | 0 | 0 | 36 |
| SW | 1 | 0 | 17 | 6 | 6 | 0 | 0 | 0 | 30 |
| WSW | 1 | 2 | 18 | 12 | 15 | 8 | 0 | 0 | 56 |
| W | 1 | 6 | 8 | 35 | 21 | 5 | 0 | 0 | 76 |
| WNW | 0 | 0 | 26 | 55 | 2 | 0 | 0 | 0 | 83 |
| NW | 0 | 0 | 30 | 37 | 1 | 0 | 0 | 0 | 68 |
| NNW | 0 | 1 | 37 | 22 | 9 | 0 | 0 | 0 | 69 |
| N | 0 | 1 | 11 | 17 | 9 | 0 | 0 | 0 | 38 |
| ALL SECTOR | 4 | 21 | 202 | 267 | 63 | 13 | 0 | 0 | |

NO. OF VALID OBSERVATION = 570 NO. OF CALMS (WS LT 0.5M/SEC) = 0 NO. OF MISSING WD/WS = 3

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 = 10 OCT 79/1730 - 26 DEC 79/0315
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

| | SPEED IN METERS PER SECOND | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 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 | 8 | 59 | 92 | 0 | 0 | 0 | 0 | 159 |
| NE | 1 | 12 | 37 | 7 | 0 | 0 | 0 | 0 | 57 |
| ENE | 1 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 7 |
| E | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| ESE | 0 | 5 | 9 | 6 | 0 | 0 | 0 | 0 | 20 |
| SE | 4 | 6 | 16 | 18 | 0 | 0 | 0 | 0 | 44 |
| SSE | 2 | 0 | 43 | 9 | 2 | 0 | 0 | 0 | 56 |
| S | 4 | 11 | 14 | 7 | 6 | 0 | 0 | 0 | 42 |
| SSW | 3 | 5 | 8 | 6 | 3 | 0 | 0 | 0 | 25 |
| SW | 7 | 12 | 19 | 4 | 2 | 1 | 0 | 0 | 45 |
| WSW | 5 | 23 | 14 | 9 | 10 | 6 | 0 | 0 | 67 |
| W | 8 | 28 | 19 | 7 | 10 | 0 | 0 | 0 | 72 |
| WNW | 3 | 41 | 32 | 4 | 0 | 0 | 0 | 0 | 80 |
| NW | 1 | 14 | 28 | 10 | 0 | 0 | 0 | 0 | 53 |
| NNW | 1 | 3 | 46 | 11 | 1 | 0 | 0 | 0 | 62 |
| N | 0 | 3 | 39 | 18 | 5 | 0 | 0 | 0 | 65 |
| ALL SECTOR | 40 | 179 | 383 | 208 | 39 | 7 | 0 | 0 | |

NO. OF VALID OBSERVATION = 856 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 = 10 OCT 79/1730 - 26 DEC 79/0315
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

| | SPEED IN METERS PER SECOND | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 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 | 2 | 5 | 3 | 5 | 0 | 0 | 0 | 0 | 15 |
| NE | 0 | 5 | 5 | 0 | 0 | 0 | 0 | 0 | 10 |
| ENE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| E | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ESE | 0 | 2 | 1 | 1 | 0 | 0 | 0 | 0 | 4 |
| SE | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 3 |
| SSE | 0 | 8 | 5 | 0 | 0 | 0 | 0 | 0 | 13 |
| S | 1 | 6 | 3 | 4 | 9 | 6 | 0 | 0 | 29 |
| SSW | 2 | 5 | 14 | 8 | 32 | 26 | 0 | 0 | 87 |
| SW | 2 | 11 | 20 | 19 | 15 | 10 | 0 | 0 | 77 |
| WSW | 0 | 12 | 11 | 8 | 3 | 2 | 0 | 0 | 36 |
| W | 0 | 14 | 13 | 1 | 1 | 0 | 0 | 0 | 29 |
| WNW | 3 | 8 | 11 | 0 | 0 | 0 | 0 | 0 | 22 |
| NW | 0 | 2 | 8 | 1 | 0 | 0 | 0 | 0 | 11 |
| NNW | 1 | 0 | 4 | 17 | 6 | 0 | 0 | 0 | 28 |
| N | 1 | 2 | 3 | 27 | 2 | 0 | 0 | 0 | 35 |
| ALL SECTOR | 13 | 81 | 102 | 91 | 68 | 44 | 0 | 0 | |

NO. OF VALID OBSERVATION = 399 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 - 35 FT
PASQUILL STABILITY CLASSES / CLASS DETERMINATION METHOD = DELTA T
DATA PERIOD = 10 OCT 79/1730 - 26 DEC 79/0315
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 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 | 4 | 2 | 0 | 0 | 0 | 0 | 0 | 6 |
| NE | 0 | 1 | 10 | 0 | 0 | 0 | 0 | 0 | 11 |
| ENE | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| E | 2 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 4 |
| ESE | 1 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 6 |
| SE | 1 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 5 |
| SSE | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| S | 5 | 2 | 1 | 1 | 3 | 0 | 0 | 0 | 12 |
| SSW | 3 | 10 | 15 | 8 | 17 | 22 | 0 | 0 | 75 |
| SW | 2 | 11 | 6 | 11 | 6 | 7 | 0 | 0 | 43 |
| WSW | 0 | 7 | 1 | 1 | 0 | 1 | 0 | 0 | 10 |
| W | 2 | 1 | 1 | 0 | 2 | 0 | 0 | 0 | 6 |
| WNW | 4 | 4 | 3 | 0 | 0 | 0 | 0 | 0 | 11 |
| NW | 0 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 3 |
| NNW | 1 | 2 | 2 | 1 | 0 | 0 | 0 | 0 | 6 |
| N | 1 | 1 | 5 | 1 | 0 | 0 | 0 | 0 | 9 |
| ALL SECTOR | 25 | 55 | 50 | 23 | 28 | 30 | 0 | 0 | |

NO. OF VALID OBSERVATION = 211 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 - 35 FT
PASQUILL STABILITY CLASSES / CLASS DETERMINATION METHOD = DELTA T
DATA PERIOD = 16 OCT 79/1730 - 26 DEC 79/0315
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 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 | 5 | 0 | 0 | 0 | 0 | 0 | 5 |
| ENE | 0 | 7 | 1 | 0 | 0 | 0 | 0 | 0 | 8 |
| E | 1 | 22 | 13 | 0 | 0 | 0 | 0 | 0 | 36 |
| ESE | 3 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| SE | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| SSE | 4 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 9 |
| S | 2 | 4 | 1 | 0 | 0 | 0 | 0 | 0 | 7 |
| SSW | 0 | 8 | 4 | 7 | 11 | 0 | 0 | 0 | 30 |
| SW | 7 | 11 | 1 | 0 | 0 | 0 | 0 | 0 | 19 |
| WSW | 8 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 12 |
| W | 4 | 1 | 1 | 2 | 0 | 0 | 0 | 0 | 8 |
| WNW | 1 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 3 |
| NW | 1 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 4 |
| NNW | 4 | 6 | 1 | 0 | 0 | 0 | 0 | 0 | 11 |
| N | 1 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 4 |
| ALL SECTOR | 37 | 76 | 31 | 9 | 11 | 0 | 0 | 0 | |

NO. OF VALID OBSERVATION = 160 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 = 10 OCT 79/1730 - 26 DEC 79/0315
DATA ACQUISITION INTERVAL = MINUTES 00-30 OF EACH HOUR

ALL STABILITY CLASSES

| DIRECTION | SPEED IN METERS PER SECOND | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | 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 | 2 | 18 | 88 | 126 | 0 | 0 | 0 | 0 | 234 |
| NE | 1 | 24 | 76 | 23 | 0 | 0 | 0 | 0 | 124 |
| ENE | 2 | 15 | 1 | 0 | 0 | 0 | 0 | 0 | 18 |
| E | 3 | 25 | 14 | 0 | 0 | 0 | 0 | 0 | 42 |
| ESE | 4 | 14 | 14 | 8 | 0 | 0 | 0 | 0 | 40 |
| SE | 7 | 12 | 19 | 20 | 0 | 0 | 0 | 0 | 58 |
| SSE | 8 | 14 | 50 | 9 | 2 | 0 | 0 | 0 | 83 |
| S | 12 | 30 | 24 | 28 | 18 | 6 | 0 | 0 | 118 |
| SSW | 9 | 29 | 56 | 60 | 63 | 48 | 0 | 0 | 265 |
| SW | 19 | 45 | 63 | 40 | 32 | 18 | 0 | 0 | 217 |
| WSW | 14 | 48 | 46 | 41 | 32 | 44 | 1 | 0 | 226 |
| W | 15 | 50 | 42 | 48 | 36 | 19 | 0 | 0 | 210 |
| WNW | 11 | 53 | 74 | 70 | 4 | 0 | 0 | 0 | 212 |
| NW | 2 | 20 | 70 | 59 | 11 | 9 | 0 | 0 | 171 |
| NNW | 7 | 14 | 106 | 58 | 20 | 10 | 0 | 0 | 215 |
| N | 3 | 10 | 66 | 68 | 16 | 0 | 0 | 0 | 163 |
| ALL SECTOR | 119 | 421 | 809 | 658 | 234 | 154 | 1 | 0 | |

NO. OF POSSIBLE OBSERVATIONS = 2441
NO. OF VALID OBSERVATIONS = 2398
NO. OF VALID NON-CALM CONCURRENT WD/WS/DT = 2396
NO. OF CALMS (WS LT 0.5M/SEC) = 2
NO. OF MISSING WD/WS = 43
NO. OF MISSING DELTA T = 40

# 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 = 16 JUL 79/1800 - 24 SEP 79/2215
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 0.5-1.5 | 1.6-3.3 | 3.4-5.5 | 5.6-8.2 | 8.3-10.8 | 10.9-15.0 | 15.1-20.0 | GT 20.1 | ALL |
|---|---|---|---|---|---|---|---|---|---|
| NNE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ENE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| E | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ESE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SSE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| S | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SSW | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SW | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| WSW | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| W | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| WNW | 0 | 0 | 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 | |

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 = 16 JUL 79/1800 - 24 SEP 79/2215
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

| | SPEED IN METERS PER SECOND | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| DIRECTION | 0.5-1.5 | 1.6-3.3 | 3.4-5.5 | 5.6-8.2 | 8.3-10.8 | 10.9-15.0 | 15.1-20.0 | GT 20.1 | ALL |
| NNE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ENE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| E | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ESE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SSE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| S | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SSW | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SW | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| WSW | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| W | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| WNW | 0 | 0 | 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 | |

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 = 16 JUL 79/1800 - 24 SEP 79/2215
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 0.5-1.5 | 1.6-3.3 | 3.4-5.5 | 5.6-8.2 | 8.3-10.8 | 10.9-15.0 | 15.1-20.0 | GT 20.1 | ALL |
|---|---|---|---|---|---|---|---|---|---|
| NNE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ENE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| E | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 4 |
| ESE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SE | 0 | 0 | 2 | 3 | 0 | 0 | 0 | 0 | 5 |
| SSE | 0 | 1 | 4 | 0 | 0 | 0 | 0 | 0 | 5 |
| 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 | 1 | 6 | 3 | 4 | 0 | 0 | 0 | |

NO. OF VALID OBSERVATION = 14 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 = 16 JUL 79/1800 - 24 SEP 79/2215
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 0.5-1.5 | 1.6-3.3 | 3.4-5.5 | 5.6-8.2 | 8.3-10.8 | 10.9-13.0 | 13.1-20.0 | GT 20.1 | ALL |
|---|---|---|---|---|---|---|---|---|---|
| NNE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ENE | 0 | 0 | 0 | 12 | 2 | 0 | 0 | 0 | 14 |
| E | 0 | 0 | 0 | 4 | 5 | 0 | 0 | 0 | 9 |
| ESE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SE | 0 | 4 | 4 | 1 | 5 | 0 | 0 | 0 | 14 |
| SSE | 0 | 5 | 5 | 4 | 1 | 0 | 0 | 0 | 15 |
| S | 0 | 3 | 1 | 6 | 5 | 0 | 0 | 0 | 15 |
| SSW | 0 | 0 | 4 | 8 | 8 | 0 | 0 | 0 | 20 |
| SW | 0 | 1 | 0 | 2 | 0 | 0 | 0 | 0 | 3 |
| WSW | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| W | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 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 | 19 | 14 | 37 | 26 | 0 | 0 | 0 | |

NO. OF VALID OBSERVATION = 96 NO. OF CALMS (WS LT 0.5M/SEC) = 0 NO. OF MISSING WD/WS = 2

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 = 16 JUL 79/1800 - 24 SEP 79/2215
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

| | SPEED IN METERS PER SECOND | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 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 | 2 | 0 | 0 | 3 | 0 | 0 | 0 | 5 |
| NE | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| ENE | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 3 |
| E | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 2 |
| ESE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SSE | 2 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 6 |
| S | 0 | 11 | 0 | 4 | 0 | 0 | 0 | 0 | 15 |
| SSW | 0 | 0 | 3 | 9 | 6 | 0 | 0 | 0 | 18 |
| SW | 1 | 4 | 15 | 9 | 0 | 0 | 0 | 0 | 29 |
| WSW | 2 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 11 |
| W | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| WNW | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| NW | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| NNW | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| N | 0 | 0 | 3 | 2 | 0 | 0 | 0 | 0 | 5 |
| ALL SECTOR | 8 | 37 | 26 | 25 | 9 | 0 | 0 | 0 | |

NO. OF VALID OBSERVATION = 105 NO. OF CALMS (WS LT 0.5M/SEC) = 0 NO. OF MISSING WD/WS = 11

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 = 16 JUL 79/1800 - 24 SEP 79/2215
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 0.5-1.5 | 1.6-3.3 | 3.4-5.5 | 5.6-8.2 | 8.3-10.8 | 10.9-15.0 | 15.1-20.0 | GT 20.1 | ALL |
|---|---|---|---|---|---|---|---|---|---|
| NNE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ENE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| E | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ESE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SSE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| S | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SSW | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SW | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| WSW | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| W | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| WNW | 0 | 0 | 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 | |

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 = 16 JUL 79/1800 - 24 SEP 79/2215
DATA ACQUISITION INTERVAL = MINUTES 00-00 OF EACH HOUR

ALL STABILITY CLASSES

| DIRECTION | SPEED IN METERS PER SECOND 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 | 2 | 0 | 0 | 3 | 0 | 0 | 0 | 5 |
| NE | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| ENE | 0 | 1 | 1 | 13 | 2 | 0 | 0 | 0 | 17 |
| E | 0 | 0 | 2 | 4 | 9 | 0 | 0 | 0 | 15 |
| ESE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SE | 0 | 4 | 6 | 4 | 5 | 0 | 0 | 0 | 19 |
| SSE | 2 | 8 | 11 | 4 | 1 | 0 | 0 | 0 | 26 |
| S | 0 | 14 | 1 | 10 | 5 | 0 | 0 | 0 | 30 |
| SSW | 0 | 1 | 7 | 17 | 14 | 0 | 0 | 0 | 39 |
| SW | 1 | 12 | 15 | 13 | 0 | 0 | 0 | 0 | 41 |
| WSW | 4 | 19 | 0 | 0 | 0 | 0 | 0 | 0 | 23 |
| W | 1 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 13 |
| WNW | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| NW | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| NNW | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| N | 0 | 0 | 3 | 2 | 0 | 0 | 0 | 0 | 5 |
| ALL SECTOR | 10 | 80 | 46 | 67 | 39 | 0 | 0 | 0 | |

NO. OF POSSIBLE OBSERVATIONS = 286
NO. OF VALID OBSERVATIONS = 242
NO. OF VALID NON-CALM CONCURRENT WD/WS/DT = 242
NO. OF CALMS (WS LT 0.5M/SEC) = 0
NO. OF MISSING WD/WS = 44
NO. OF MISSING DELTA T = 31

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 = 13 NOV 79/1130 - 16 NOV 79/1415
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

| | SPEED IN METERS PER SECOND | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| DIRECTION | 0.5-1.5 | 1.6-3.3 | 3.4-5.5 | 5.6-8.2 | 8.3-10.8 | 10.9-15.0 | 15.1-20.0 | GT 20.1 | ALL |
| NNE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ENE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| E | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ESE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SSE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| S | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SSW | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SW | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| WSW | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| W | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| WNW | 0 | 0 | 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 | |

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 = 13 NOV 79/1130 - 16 NOV 79/1415
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

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

NO. OF VALID OBSERVATION = 5 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 = 13 NOV 79/1130 - 16 NOV 79/1415
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

| | SPEED IN METERS PER SECOND | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| DIRECTION | 0.5-1.5 | 1.6-3.3 | 3.4-5.5 | 5.6-8.2 | 8.3-10.8 | 10.9-15.0 | 15.1-20.0 | GT 20.1 | ALL |
| NNE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ENE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| E | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ESE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SSE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| S | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SSW | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SW | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 |
| 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 | 9 | 0 | 0 | 9 |
| 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 | 10 | 0 | 0 | |

NO. OF VALID OBSERVATION = 10 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 = 13 NOV 79/1130 - 16 NOV 79/1415
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 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 | 11 | 29 | 0 | 0 | 0 | 40 |
| NE | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| 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 | 8 | 6 | 0 | 0 | 14 |
| WSW | 0 | 0 | 0 | 9 | 2 | 0 | 0 | 0 | 11 |
| W | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| WNW | 0 | 0 | 2 | 2 | 1 | 0 | 0 | 0 | 5 |
| NW | 0 | 0 | 0 | 12 | 14 | 0 | 0 | 0 | 26 |
| NNW | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| N | 0 | 0 | 0 | 8 | 12 | 0 | 0 | 0 | 20 |
| ALL SECTOR | 0 | 0 | 2 | 43 | 66 | 6 | 0 | 0 | |

NO. OF VALID OBSERVATION = 117 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 = 13 NOV 79/1130 - 16 NOV 79/1415
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 0.5-1.5 | 1.6-3.3 | 3.4-5.5 | 5.6-8.2 | 8.3-10.8 | 10.9-15.0 | 15.1-20.0 | GT 20.1 | ALL |
|---|---|---|---|---|---|---|---|---|---|
| NNE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ENE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| E | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ESE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SSE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| S | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SSW | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SW | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| WSW | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| W | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| WNW | 0 | 0 | 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 | |

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 = 13 NOV 79/1130 - 16 NOV 79/1415
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 0.5-1.5 | 1.6-3.3 | 3.4-5.5 | 5.6-8.2 | 8.3-10.8 | 10.9-15.0 | 15.1-20.0 | GT 20.1 | ALL |
|---|---|---|---|---|---|---|---|---|---|
| NNE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ENE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| E | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ESE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SSE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| S | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SSW | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SW | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| WSW | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| W | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| WNW | 0 | 0 | 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 | |

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 = 13 NOV 79/1130 - 16 NOV 79/1415
DATA ACQUISITION INTERVAL = MINUTES 00-30 OF EACH HOUR

PASQUILL STABILITY 6 — DELTA T GREATER THAN 4.0 DEG C PER 100 METERS

| DIRECTION | SPEED IN METERS PER SECOND 0.5-1.5 | 1.6-3.3 | 3.4-5.5 | 5.6-8.2 | 8.3-10.8 | 10.9-15.0 | 15.1-20.0 | GT 20.1 | ALL |
|---|---|---|---|---|---|---|---|---|---|
| NNE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ENE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| E | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ESE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SSE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| S | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SSW | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SW | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| WSW | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| W | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| WNW | 0 | 0 | 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 | |

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 = 13 NOV 79/1130 - 16 NOV 79/1415
DATA ACQUISITION INTERVAL = MINUTES 00-30 OF EACH HOUR

ALL STABILITY CLASSES

| DIRECTION | SPEED IN METERS PER SECOND 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 | 11 | 29 | 0 | 0 | 0 | 40 |
| NE | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| 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 | 8 | 7 | 0 | 0 | 15 |
| WSW | 0 | 0 | 0 | 9 | 2 | 0 | 0 | 0 | 11 |
| W | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| WNW | 0 | 0 | 2 | 2 | 1 | 1 | 0 | 0 | 6 |
| NW | 0 | 0 | 0 | 12 | 14 | 9 | 2 | 0 | 37 |
| NNW | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| N | 0 | 0 | 0 | 8 | 12 | 0 | 0 | 0 | 20 |
| ALL SECTOR | 0 | 0 | 2 | 43 | 66 | 17 | 2 | 0 | |

NO. OF POSSIBLE OBSERVATIONS = 130 NO. OF VALID NON-CALM CONCURRENT WD/WS/DT = 130 NO. OF MISSING WD/WS = 0
NO. OF VALID OBSERVATIONS = 130 NO. OF CALMS (WS LT 0.5M/SEC) = 0 NO. OF MISSING DELTA T = 0