**Attachment 1**
**Quad Cities Nuclear Power Station**
**2007 Annual Radioactive Effluent Release Report**
**SVP-08-022**

# Quad Cities Nuclear Power Station
# 2007 Annual Radioactive Effluent Release Report

## Effluent & Waste Disposable Summary

Gaseous Effluents – Summation of all Releases

Period: January – December 2007 Unit: 1 & 2

| A. Fission & Activation Gases | Unit | Quarter 1 | Quarter 2 | Quarter 3 | Quarter 4 | Est. Total Error % |
|---|---|---|---|---|---|---|
| 1. Total Release | Ci | 3.54E+01 | 3.25E+01 | 3.66E+01 | 4.15E+01 | 12.5 |
| 2. Average release rate for the period | µCi/sec | 4.55E+00 | 4.13E+00 | 4.60E+00 | 5.22E+00 | |
| 3. Percent of ODCM limit[1] | %γ | 3.34E-03 | 3.13E-03 | 3.66E-03 | 4.08E-03 | |
| | %β | 7.65E-04 | 7.48E-04 | 8.48E-04 | 9.39E-04 | |
| **B. Iodine** | | | | | | |
| 1. Total Iodine – 131. | Ci | 4.23E-04 | 6.85E-04 | 4.41E-04 | 4.50E-04 | 41.6 |
| 2. Average release rate for the period | µCi/sec | 5.44E-05 | 8.72E-05 | 5.55E-05 | 5.66E-05 | |
| 3. Percent of ODCM limit | % | N/A | N/A | N/A | N/A | |
| **C. Particulates** | | | | | | |
| 1. Total particulates | Ci | 2.53E-04 | 4.89E-04 | 1.82E-04 | 3.86E-04 | 32.3 |
| 2. Average release rate for the period | µCi/sec | 3.26E-05 | 6.22E-05 | 2.29E-05 | 4.85E-05 | |
| 3. Percent of ODCM limit | % | N/A | N/A | N/A | N/A | |
| 4. Gross alpha radioactivity | Ci | <LLD[2] | <LLD[2] | <LLD[2] | <LLD[2] | |
| **D. Tritium** | | | | | | |
| 1. Total Release | Ci | 2.61E+01 | 2.08E+01 | 2.51E+01 | 2.12E+01 | 6.3 |
| 2. Average release rate for the period | µCi/sec | 3.36E+00 | 2.64E+00 | 3.16E+00 | 2.67E+00 | |
| 3. Percent of ODCM limit | % | N/A | N/A | N/A | N/A | |
| **E. Iodine 131 & 133, Tritium & Particulate** | | | | | | |
| 1. Percent of ODCM limit | % | 6.85E-01 | 1.11E+00 | 7.27E-01 | 8.89E-01 | |

(1) % Noble gas gamma/noble gas beta dose limits

(2) Gross alpha LLD reported on page 6 of 111

## Quad Cities Nuclear Power Station
## 2007 Annual Radioactive Effluent Release Report

### Effluent & Waste Disposable Summary

Gaseous Effluents Release Point Main Chimney (Elevated)

Period: January – December 2007 Unit: 1 & 2

| Nuclides Released | | Continuous Mode | | | | Batch Mode | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1. Fission gases | Unit | Quarter 1 | Quarter 2 | Quarter 3 | Quarter 4 | Quarter 1 | Quarter 2 | Quarter 3 | Quarter 4 |
| Kr-85 | Ci | <LLD(1) | <LLD(1) | <LLD(1) | <LLD(1) | N/A(2) | N/A(2) | N/A(2) | N/A(2) |
| Kr-85m | Ci | 4.70E+00 | 3.90E+00 | 3.31E+00 | 4.95E+00 | N/A(2) | N/A(2) | N/A(2) | N/A(2) |
| Kr-87 | Ci | 7.85E-01 | 7.30E-01 | 8.08E-01 | 1.02E+00 | N/A(2) | N/A(2) | N/A(2) | N/A(2) |
| Kr-88 | Ci | 5.14E+00 | 4.29E+00 | 3.71E+00 | 5.65E+00 | N/A(2) | N/A(2) | N/A(2) | N/A(2) |
| Xe-133 | Ci | 5.13E+00 | 4.20E+00 | 3.40E+00 | 4.40E+00 | N/A(2) | N/A(2) | N/A(2) | N/A(2) |
| Xe-133M | Ci | <LLD(1) | <LLD(1) | <LLD(1) | 7.07E-02 | N/A(2) | N/A(2) | N/A(2) | N/A(2) |
| Xe-135 | Ci | 4.40E-01 | 4.26E-01 | 6.32E-01 | 5.80E-01 | N/A(2) | N/A(2) | N/A(2) | N/A(2) |
| Xe-135m | Ci | 3.51E+00 | 3.41E+00 | 4.09E+00 | 4.62E+00 | N/A(2) | N/A(2) | N/A(2) | N/A(2) |
| Xe-138 | Ci | 1.40E+01 | 1.32E+01 | 1.65E+01 | 1.82E+01 | N/A(2) | N/A(2) | N/A(2) | N/A(2) |
| Ar-41 | Ci | 1.67E+00 | 2.10E+00 | 4.07E+00 | 1.99E+00 | N/A(2) | N/A(2) | N/A(2) | N/A(2) |
| Total for Period | Ci | 3.54E+01 | 3.23E+01 | 3.65E+01 | 4.15E+01 | N/A(2) | N/A(2) | N/A(2) | N/A(2) |
| 2. Iodines | | | | | | | | | |
| I-131 | Ci | 4.23E-04 | 6.66E-04 | 4.27E-04 | 3.73E-04 | N/A(2) | N/A(2) | N/A(2) | N/A(2) |
| I-133 | Ci | 2.38E-03 | 1.82E-03 | 2.01E-03 | 2.20E-03 | N/A(2) | N/A(2) | N/A(2) | N/A(2) |
| I-135 | Ci | <LLD(1) | <LLD(1) | <LLD(1) | <LLD(1) | N/A(2) | N/A(2) | N/A(2) | N/A(2) |
| Total for Period | Ci | 2.80E-03 | 2.49E-03 | 2.44E-03 | 2.57E-03 | N/A(2) | N/A(2) | N/A(2) | N/A(2) |
| 3. Particulates | | | | | | | | | |
| Sr-89 | Ci | 5.52E-05 | 6.80E-05 | 7.38E-05 | 7.98E-05 | N/A(2) | N/A(2) | N/A(2) | N/A(2) |
| Sr-90 | Ci | <LLD(1) | <LLD(1) | <LLD(1) | <LLD(1) | N/A(2) | N/A(2) | N/A(2) | N/A(2) |
| Cs-134 | Ci | <LLD(1) | <LLD(1) | <LLD(1) | <LLD(1) | N/A(2) | N/A(2) | N/A(2) | N/A(2) |
| Cs-137 | Ci | <LLD(1) | <LLD(1) | <LLD(1) | <LLD(1) | N/A(2) | N/A(2) | N/A(2) | N/A(2) |
| Ba-140 | Ci | <LLD(1) | <LLD(1) | <LLD(1) | 3.07E-05 | N/A(2) | N/A(2) | N/A(2) | N/A(2) |
| La-140 | Ci | 4.03E-06 | <LLD(1) | 1.72E-05 | 1.54E-05 | N/A(2) | N/A(2) | N/A(2) | N/A(2) |
| Cr-51 | Ci | <LLD(1) | <LLD(1) | <LLD(1) | <LLD(1) | N/A(2) | N/A(2) | N/A(2) | N/A(2) |
| Mn-54 | Ci | <LLD(1) | <LLD(1) | <LLD(1) | <LLD(1) | N/A(2) | N/A(2) | N/A(2) | N/A(2) |
| Co-58 | Ci | <LLD(1) | <LLD(1) | <LLD(1) | <LLD(1) | N/A(2) | N/A(2) | N/A(2) | N/A(2) |
| Co-60 | Ci | <LLD(1) | <LLD(1) | 1.40E-05 | 3.45E-05 | N/A(2) | N/A(2) | N/A(2) | N/A(2) |
| Mo-99 | Ci | <LLD(1) | <LLD(1) | <LLD(1) | <LLD(1) | N/A(2) | N/A(2) | N/A(2) | N/A(2) |
| Ag-110m | Ci | <LLD(1) | <LLD(1) | <LLD(1) | <LLD(1) | N/A(2) | N/A(2) | N/A(2) | N/A(2) |
| Ce-141 | Ci | <LLD(1) | <LLD(1) | <LLD(1) | <LLD(1) | N/A(2) | N/A(2) | N/A(2) | N/A(2) |
| Ce-144 | Ci | <LLD(1) | <LLD(1) | <LLD(1) | <LLD(1) | N/A(2) | N/A(2) | N/A(2) | N/A(2) |
| Total for Period | Ci | 5.92E-05 | 6.80E-05 | 1.05E-04 | 1.60E-04 | N/A(2) | N/A(2) | N/A(2) | N/A(2) |

(1) Gaseous LLD's reported on page 6 of 111

(2) No gaseous batch releases

## Quad Cities Nuclear Power Station
## 2007 Annual Radioactive Effluent Release Report

### Effluent & Waste Disposable Summary

Gaseous Effluents Release Point Reactor Vents (Mixed Mode)

Period: January – December 2007 Unit: 1 & 2

| Nuclides Released | | Continuous Mode | | | | Batch Mode | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1. Fission gases | Unit | Quarter 1 | Quarter 2 | Quarter 3 | Quarter 4 | Quarter 1 | Quarter 2 | Quarter 3 | Quarter 4 |
| Kr-85 | Ci | <LLD(1) | <LLD(1) | <LLD(1) | <LLD(1) | N/A(2) | N/A(2) | N/A(2) | N/A(2) |
| Kr-85m | Ci | <LLD(1) | <LLD(1) | <LLD(1) | <LLD(1) | N/A(2) | N/A(2) | N/A(2) | N/A(2) |
| Kr-87 | Ci | <LLD(1) | <LLD(1) | <LLD(1) | <LLD(1) | N/A(2) | N/A(2) | N/A(2) | N/A(2) |
| Kr-88 | Ci | <LLD(1) | <LLD(1) | <LLD(1) | <LLD(1) | N/A(2) | N/A(2) | N/A(2) | N/A(2) |
| Xe-133 | Ci | <LLD(1) | 1.55E-01 | <LLD(1) | <LLD(1) | N/A(2) | N/A(2) | N/A(2) | N/A(2) |
| Xe-133M | Ci | <LLD(1) | <LLD(1) | <LLD(1) | <LLD(1) | N/A(2) | N/A(2) | N/A(2) | N/A(2) |
| Xe-135 | Ci | <LLD(1) | 2.72E-02 | <LLD(1) | <LLD(1) | N/A(2) | N/A(2) | N/A(2) | N/A(2) |
| Xe-135m | Ci | <LLD(1) | <LLD(1) | <LLD(1) | <LLD(1) | N/A(2) | N/A(2) | N/A(2) | N/A(2) |
| Xe-138 | Ci | <LLD(1) | <LLD(1) | <LLD(1) | <LLD(1) | N/A(2) | N/A(2) | N/A(2) | N/A(2) |
| Ar-41 | Ci | <LLD(1) | <LLD(1) | <LLD(1) | <LLD(1) | N/A(2) | N/A(2) | N/A(2) | N/A(2) |
| Total for Period | Ci | <LLD(1) | 1.82E-01 | <LLD(1) | <LLD(1) | N/A(2) | N/A(2) | N/A(2) | N/A(2) |
| 2. Iodines | | | | | | | | | |
| I-131 | Ci | <LLD(1) | 1.93E-05 | 1.44E-05 | 7.70E-05 | N/A(2) | N/A(2) | N/A(2) | N/A(2) |
| I-133 | Ci | <LLD(1) | <LLD(1) | <LLD(1) | 7.74E-04 | N/A(2) | N/A(2) | N/A(2) | N/A(2) |
| I-135 | Ci | <LLD(1) | <LLD(1) | <LLD(1) | <LLD(1) | N/A(2) | N/A(2) | N/A(2) | N/A(2) |
| Total for Period | Ci | <LLD(1) | 1.93E-05 | 1.44E-05 | 8.51E-04 | N/A(2) | N/A(2) | N/A(2) | N/A(2) |
| 3. Particulates | | | | | | | | | |
| Sr-89 | Ci | <LLD(1) | <LLD(1) | <LLD(1) | <LLD(1) | N/A(2) | N/A(2) | N/A(2) | N/A(2) |
| Sr-90 | Ci | <LLD(1) | <LLD(1) | <LLD(1) | <LLD(1) | N/A(2) | N/A(2) | N/A(2) | N/A(2) |
| Cs-134 | Ci | <LLD(1) | <LLD(1) | <LLD(1) | <LLD(1) | N/A(2) | N/A(2) | N/A(2) | N/A(2) |
| Cs-137 | Ci | 2.02E-05 | <LLD(1) | 1.27E-05 | <LLD(1) | N/A(2) | N/A(2) | N/A(2) | N/A(2) |
| Ba-140 | Ci | <LLD(1) | <LLD(1) | <LLD(1) | <LLD(1) | N/A(2) | N/A(2) | N/A(2) | N/A(2) |
| La-140 | Ci | <LLD(1) | <LLD(1) | <LLD(1) | <LLD(1) | N/A(2) | N/A(2) | N/A(2) | N/A(2) |
| Cr-51 | Ci | <LLD(1) | <LLD(1) | <LLD(1) | <LLD(1) | N/A(2) | N/A(2) | N/A(2) | N/A(2) |
| Mn-54 | Ci | <LLD(1) | <LLD(1) | <LLD(1) | <LLD(1) | N/A(2) | N/A(2) | N/A(2) | N/A(2) |
| Co-58 | Ci | <LLD(1) | <LLD(1) | <LLD(1) | <LLD(1) | N/A(2) | N/A(2) | N/A(2) | N/A(2) |
| Co-60 | Ci | 1.78E-04 | 4.21E-04 | 8.12E-05 | 2.41E-04 | N/A(2) | N/A(2) | N/A(2) | N/A(2) |
| Mo-99 | Ci | <LLD(1) | <LLD(1) | <LLD(1) | <LLD(1) | N/A(2) | N/A(2) | N/A(2) | N/A(2) |
| Ag-110m | Ci | <LLD(1) | <LLD(1) | <LLD(1) | <LLD(1) | N/A(2) | N/A(2) | N/A(2) | N/A(2) |
| Ce-141 | Ci | <LLD(1) | <LLD(1) | <LLD(1) | <LLD(1) | N/A(2) | N/A(2) | N/A(2) | N/A(2) |
| Ce-144 | Ci | <LLD(1) | <LLD(1) | <LLD(1) | <LLD(1) | N/A(2) | N/A(2) | N/A(2) | N/A(2) |
| Zn-65 | Ci | <LLD(1) | <LLD(1) | <LLD(1) | <LLD(1) | N/A(2) | N/A(2) | N/A(2) | N/A(2) |
| Total for Period | Ci | 1.98E-04 | 4.21E-04 | 9.39E-05 | 2.41E-04 | N/A(2) | N/A(2) | N/A(2) | N/A(2) |

(1) Gaseous LLD's reported on page 6 of 111

(2) No gaseous batch releases

# Quad Cities Nuclear Power Station
# 2007 Annual Radioactive Effluent Release Report

## Effluent & Waste Disposal Summary

Liquid Effluents – Summation of all Releases

Period: January – December 2007 Unit: 1 & 2

| A. Fission & Activation Products | Unit | Quarter 1 | Quarter 2 | Quarter 3 | Quarter 4 | Est. Total Error % |
|---|---|---|---|---|---|---|
| 1. Total Release (not including tritium, gases & alpha) | Ci | <LLD[2] | 1.92E-03 | <LLD[2] | <LLD[2] | 4.1 |
| 2 Average diluted concentration during period | µCi/mL | N/A[4] | 5.07E-12 | N/A[4] | N/A[4] | |
| 3. Percent of applicable limit[1] | WB | N/A | 1.36E-01 | N/A | N/A | |
| | O | N/A | 6.64E-02 | N/A | N/A | |
| 4. Maximum diluted concentration during batch discharges | µCi/mL | N/A[3] | 2.32E-09 | N/A[3] | N/A[3] | |

| B. Tritium | | | | | | |
|---|---|---|---|---|---|---|
| 1. Total Release | Ci | <LLD[2] | 1.06E+00 | <LLD[2] | <LLD[2] | 4.1 |
| 2. Average diluted concentration during period | µCi/mL | N/A | 2.80E-09 | N/A | N/A | |
| 3. Percent of applicable limit | % | N/A | 9.41E-05 | N/A | N/A | |

| C. Dissolved & Entrained Gases | | | | | | |
|---|---|---|---|---|---|---|
| 1. Total Release | Ci | <LLD[2] | <LLD[2] | <LLD[2] | <LLD[2] | 4.1 |
| 2. Average diluted concentration during period | µCi/mL | N/A | N/A | N/A | N/A | |
| 3. Percent of applicable limit | % | N/A | N/A | N/A | N/A | |

| D. Gross Alpha Activity | | | | | | |
|---|---|---|---|---|---|---|
| 1. Total Release | Ci | <LLD[2] | <LLD[2] | <LLD[2] | <LLD[2] | 14.8 |

| | | | | | |
|---|---|---|---|---|---|
| **E. Volume Of Waste Released** (prior to dilution) | Liters | 0.00E+00 | 2.07E+05 | 0.00E+00 | 0.00E+00 |

| | | | | | |
|---|---|---|---|---|---|
| **F. Volume Of Dilution Water Used During Period** | Liters | 2.68E+11 | 3.79E+11 | 4.84E+11 | 3.22E+11 |

(1) Whole body/organ (ODCM)
(2) Liquid LLD's reported on page 7 of 111
(3) No liquid batch discharges
(4) No liquid radioactivity released

## Quad Cities Nuclear Power Station
## 2007 Annual Radioactive Effluent Release Report

### Effluent & Waste Disposal Summary

Liquid Effluents Release Point Mississippi River

Period: January – December 2007 Unit: 1 & 2

| Nuclides Released | | Continuous Mode | | | | Batch Mode | | | |
|---|---|---|---|---|---|---|---|---|---|
| | Unit | Quarter 1 | Quarter 2 | Quarter 3 | Quarter 4 | Quarter 1 | Quarter 2 | Quarter 3 | Quarter 4 |
| Sr-89 | Ci | <LLD(1) | <LLD(1) | <LLD(1) | <LLD(1) | N/A(2) | <LLD(1) | N/A(2) | N/A(2) |
| Sr-90 | Ci | <LLD(1) | <LLD(1) | <LLD(1) | <LLD(1) | N/A(2) | <LLD(1) | N/A(2) | N/A(2) |
| Cs-134 | Ci | <LLD(1) | <LLD(1) | <LLD(1) | <LLD(1) | N/A(2) | <LLD(1) | N/A(2) | N/A(2) |
| Cs-137 | Ci | <LLD(1) | <LLD(1) | <LLD(1) | <LLD(1) | N/A(2) | 1.30E-04 | N/A(2) | N/A(2) |
| I-131 | Ci | <LLD(1) | <LLD(1) | <LLD(1) | <LLD(1) | N/A(2) | <LLD(1) | N/A(2) | N/A(2) |
| Co-58 | Ci | <LLD(1) | <LLD(1) | <LLD(1) | <LLD(1) | N/A(2) | 2.52E-05 | N/A(2) | N/A(2) |
| Co-60 | Ci | <LLD(1) | <LLD(1) | <LLD(1) | <LLD(1) | N/A(2) | 3.58E-04 | N/A(2) | N/A(2) |
| Fe-59 | Ci | <LLD(1) | <LLD(1) | <LLD(1) | <LLD(1) | N/A(2) | <LLD(1) | N/A(2) | N/A(2) |
| Zn-65 | Ci | <LLD(1) | <LLD(1) | <LLD(1) | <LLD(1) | N/A(2) | 8.10E-05 | N/A(2) | N/A(2) |
| Mn-54 | Ci | <LLD(1) | <LLD(1) | <LLD(1) | <LLD(1) | N/A(2) | 5.54E-05 | N/A(2) | N/A(2) |
| Cr-51 | Ci | <LLD(1) | <LLD(1) | <LLD(1) | <LLD(1) | N/A(2) | <LLD(1) | N/A(2) | N/A(2) |
| Zr-95 | Ci | <LLD(1) | <LLD(1) | <LLD(1) | <LLD(1) | N/A(2) | <LLD(1) | N/A(2) | N/A(2) |
| Nb-95 | Ci | <LLD(1) | <LLD(1) | <LLD(1) | <LLD(1) | N/A(2) | <LLD(1) | N/A(2) | N/A(2) |
| Mo-99 | Ci | <LLD(1) | <LLD(1) | <LLD(1) | <LLD(1) | N/A(2) | <LLD(1) | N/A(2) | N/A(2) |
| Tc-99m | Ci | <LLD(1) | <LLD(1) | <LLD(1) | <LLD(1) | N/A(2) | <LLD(1) | N/A(2) | N/A(2) |
| Ba-140 | Ci | <LLD(1) | <LLD(1) | <LLD(1) | <LLD(1) | N/A(2) | <LLD(1) | N/A(2) | N/A(2) |
| La-140 | Ci | <LLD(1) | <LLD(1) | <LLD(1) | <LLD(1) | N/A(2) | <LLD(1) | N/A(2) | N/A(2) |
| Ce-141 | Ci | <LLD(1) | <LLD(1) | <LLD(1) | <LLD(1) | N/A(2) | <LLD(1) | N/A(2) | N/A(2) |
| Ag-110m | Ci | <LLD(1) | <LLD(1) | <LLD(1) | <LLD(1) | N/A(2) | <LLD(1) | N/A(2) | N/A(2) |
| Fe-55 | Ci | <LLD(1) | <LLD(1) | <LLD(1) | <LLD(1) | N/A(2) | 1.28E-03 | N/A(2) | N/A(2) |
| | | | | | | | | | |
| | | | | | | | | | |
| Total for Period | Ci | <LLD(1) | <LLD(1) | <LLD(1) | <LLD(1) | N/A(2) | 1.93E-03 | N/A(2) | N/A(2) |
| | | | | | | | | | |
| Xe-133 | Ci | <LLD(1) | <LLD(1) | <LLD(1) | <LLD(1) | N/A(2) | <LLD(1) | N/A(2) | N/A(2) |
| Xe-135 | Ci | <LLD(1) | <LLD(1) | <LLD(1) | <LLD(1) | N/A(2) | <LLD(1) | N/A(2) | N/A(2) |

(1) Liquid LLD's reported on page 7 of 111

(2) No batch releases

# Quad Cities Nuclear Power Station
# 2007 Annual Radioactive Effluent Release Report

## Effluent & Waste Disposable Summary

**GASEOUS EFFLUENT LLD's (Most Restrictive)**
CONTINUOUS MODE

| NUCLIDE LOWER LIMITS OF DETECTION (LLD's) **1. Fission gases** | **UNIT** | **LLD Value** | **ODCM Required LLD** |
|---|---|---|---|
| Kr-85 | uCi/cc | 3.65E-06 | None |
| Kr-85m | uCi/cc | 1.39E-08 | None |
| Kr-87 | uCi/cc | 4.75E-08 | 1E-04 |
| Kr-88 | uCi/cc | 4.63E-08 | 1E-04 |
| Xe-133 | uCi/cc | 3.12E-08 | 1E-04 |
| Xe-133m | uCi/cc | 8.84E-08 | 1E-04 |
| Xe-135 | uCi/cc | 1.02E-08 | 1E-04 |
| Xe-135m | uCi/cc | 1.07E-06 | None |
| Xe-131m | uCi/cc | 3.89E-07 | None |
| Xe-138 | uCi/cc | 3.17E-06 | 1E-04 |
| Ar-41 | uCi/cc | 3.40E-08 | None |
| NUCLIDE LOWER LIMITS OF DETECTION (LLD's) **2. Iodines** | **UNIT** | **LLD Value** | **ODCM Required LLD*** |
| I-131 | uCi/cc | 6.06E-13 | 1E-12 |
| I-133 | uCi/cc | 8.71E-12 | 1E-10 |
| I-135 | uCi/cc | 1.29E-08 | None |
| NUCLIDE LOWER LIMITS OF DETECTION (LLD's) **3. Particulates and Tritium** | **UNIT** | **LLD Value** | **ODCM Required LLD*** |
| H-3 | uCi/cc | 2.95E-11 | 1E-06 |
| Sr-89 | uCi/cc | 8.56E-13 | 1E-11 |
| Sr-90 | uCi/cc | 2.08E-13 | 1E-11 |
| Cs-134 | uCi/cc | 4.06E-13 | 1E-11 |
| Cs-137 | uCi/cc | 5.05E-13 | 1E-11 |
| Ba-140 | uCi/cc | 1.72E-12 | None |
| La-140 | uCi/cc | 2.36E-12 | None |
| Mn-54 | uCi/cc | 3.81E-13 | 1E-11 |
| Co-58 | uCi/cc | 4.13E-13 | 1E-11 |
| Fe-59 | uCi/cc | 7.57E-13 | 1E-11 |
| Co-60 | uCi/cc | 8.85E-13 | 1E-11 |
| Zn-65 | uCi/cc | 1.37E-12 | 1E-11 |
| Mo-99 | uCi/cc | 7.13E-12 | 1E-11 |
| Ce-141 | uCi/cc | 5.57E-13 | 1E-11 |
| Ce-144 | uCi/cc | 2.37E-12 | 1E-11 |
| Ag-110m | uCi/cc | 4.60E-13 | None |
| Ba-133 | uCi/cc | 5.59E-13 | None |
| Cr-51 | uCi/cc | 3.57E-12 | None |
| Gross Alpha | uCi/cc | 2.67E-13 | 1E-11 |

* ODCM REC LLD's for weekly samples. These may be increased by a factor of 10 for daily samples

# Quad Cities Nuclear Power Station
# 2007 Annual Radioactive Effluent Release Report

## Effluent & Waste Disposable Summary

**LIQUID EFFLUENT LLD's (Most Restrictive)**
BATCH MODE

| NUCLIDE LOWER LIMITS OF DETECTION (LLD's)<br><br>**3. Liquids** | **UNIT** | **LLD Value** | **ODCM Required LLD** |
|---|---|---|---|
| H-3 | uCi/cc | 3.19E-06 | 1E-05 |
| Sr-89 | uCi/cc | 3.97E-08 | 5E-08 |
| Sr-90 | uCi/cc | 1.73E-08 | 5E-08 |
| Fe-55 | uCi/cc | 9.53E-07 | 1E-06 |
| Kr-85 | uCi/cc | 1.48E-05 | None* |
| Kr-87 | uCi/cc | 2.50E-07 | 1E-05 |
| Kr-88 | uCi/cc | 2.32E-07 | 1E-05 |
| Xe-133 | uCi/cc | 1.31E-07 | 1E-05 |
| Xe-133m | uCi/cc | 3.81E-07 | 1E-05 |
| Xe-135 | uCi/cc | 5.24E-08 | 1E-05 |
| Xe-138 | uCi/cc | 5.75E-06 | 1E-05 |
| Mn-54 | uCi/cc | 5.74E-08 | 5E-07 |
| Co-58 | uCi/cc | 7.19E-08 | 5E-07 |
| Co-60 | uCi/cc | 1.12E-07 | 5E-07 |
| Zn-65 | uCi/cc | 1.43E-07 | 5E-07 |
| Mo-99 | uCi/cc | 4.16E-07 | 5E-07 |
| I-131 | uCi/cc | 5.01E-08 | 1E-06 |
| Cs-134 | uCi/cc | 4.55E-08 | 5E-07 |
| Cs-137 | uCi/cc | 7.03E-08 | 5E-07 |
| Ce-141 | uCi/cc | 8.29E-08 | 5E-07 |
| Ce-144 | uCi/cc | 3.40E-07 | 5E-06 |
| Gross Alpha | uCi/cc | 9.62E-08 | 1E-07 |
| Fe-59 | uCi/cc | 1.18E-07 | 5E-07 |
| Cr-51 | uCi/cc | 4.81E-07 | None |
| Ag-110m | uCi/cc | 6.40E-08 | None |

* Kr-85 required by UFSAR section 9.1.3.3.

## Supplemental Information

Facility: Quad Cities Nuclear Power Station January – December 2007

Licensee: Exelon Generation Company

1. Regulatory Limits

   a. For Noble Gases:

      Dose rate (per site)
      1. Less than 500 mrem/year to the whole body
      2. Less than 3000 mrem/year to the skin.

      Dose Gamma Radiation (per unit)
      1. Less than or equal to 5 mrad/quarter.
      2. Less than or equal to 10 mrad/year.

      Beta Radiation (per unit)
      1. Less than or equal to 10 mrad/quarter.
      2. Less than or equal to 20 mrad/year.

   b,c. For Iodine-131, for Iodine-133, and for all radionuclides in particulate form with half-lives greater than 8 days.

      Dose Rate
      1. Less than 1500 mrem/year. (per site)

      Dose (per unit)
      1. Less than or equal to 7.5 mrem/quarter.
      2. Less than or equal to 15 mrem/year.

   d. For Liquid: (per unit)

      Less than or equal to 1.5 mrem to the whole body during any calendar quarter.
      Less than or equal to 5 mrem to any organ during any calendar quarter.
      Less than or equal to 3 mrem to the whole body during any calendar year.
      Less than or equal to 10 mrem to any organ during any calendar year.

## Supplemental Information

2. Maximum Permissible Concentration

a,b,c. For fission and activation gases, iodines, and particulates with half-lives greater than 8 days, allowable release limits are calculated by solving equations 2.0-5 and 2.0-6 from the Offsite Dose Calculation Manual Part II Chapter 2. The alarm setpoint is conservatively set at approximately 10% of the 10CFR20 limit.

d. For liquid effluents, allowable release limits are calculated by solving equations 2.0-1 and 2.0-2 from the Offsite Dose Calculation Manual Part II Chapter 2. The MPC values used for the monitors were as follows:

| | |
|---|---|
| Radwaste discharge | 1.55E-05 µCi/ml |
| Service water | 1.00E-05 µCi/ml |

3. Average Energy

The average gamma energy used to calculate the alarm setpoints for the noble gas monitors was:

9.01E-01 MeV for Quarter 1
8.76E-01 MeV for Quarter 2
9.27E-01 MeV for Quarter 3
9.23E-01 MeV for Quarter 4

4. Measurements and Approximations of Total Radioactivity

a. Fission and Activation Gases
b. Iodines
c. Particulates

a,b,c. The main chimney and reactor building ventilation exhaust systems are continually monitored for iodines and particulates. These samples are pulled every 7 days and analyzed by gamma isotopic. The particulate papers are composited every 31 days and sent to a vendor for Sr-89/90 and gross alpha analysis. Noble gas grab samples are pulled and analyzed by gamma isotopic weekly. Tritium samples are pulled and analyzed every month.

The Sr-89/90 and gross alpha curies released values reported are actual. On a real time basis, the portion of the "percent of applicable limit" for these contributors is reported based on projections using the previous available data. The actual results are obtained by editing the ODCM software inputs when the vendor results become available. Therefore, the "percent of applicable limits" in this report are actual.

## Supplemental Information

The continuous strip chart recorders for the monitors on the release points are reviewed for spikes and the activity released is calculated. An additional calculated activity for noble gases is added to the main chimney release each month. This calculation is done because most of the grab samples show less than the lower limit of detection due to the low amount of activity and the large dilution flow at the sample point. The calculation takes into account the normal offgas train and the gland steam contribution to the release.

The average flow at the release points is used to calculate the curies released.

d. Liquid Effluents

The River Discharge Tanks are analyzed before discharge by gamma isotopic. A composite representative portion of this sample is saved. This is composited with other discharges that occurred every 31 days and is analyzed for tritium and gross alpha. The monthly composites are composited quarterly and sent to a vendor for Sr-89/90 and Fe-55 analyses. The discharge bay is sampled every 31 days and analyzed by gamma isotopic for tritium and gross alpha. It is sampled quarterly and sent to a vendor for Sr-89/90 and Fe-55 analysis. On a real time basis, the portion of the "percent of applicable limit" for these contributors is based on projections using scaling factors. The actual results are obtained by editing the ODCM software inputs when the vendor results become available. Therefore, the "percent of applicable limits" in this report are actual.

The tank volumes and activities are used to calculate the curies released for the River Discharge Tank. The total water released during the quarter and the activity is used to calculate the diluted activity released at the discharge bay, from batch discharges.

e. Estimated Total Error Percent

The estimated total error percents were calculated by taking the square root of the sum of the squares of errors for sampling and measurement parameters.

f. Less than the Lower Limit of Detection (<LLD)

Samples are analyzed such that the Technical Specification LLD requirements are met. When a nuclide is not detected during the quarter, then <LLD is reported. The most conservative LLD's used for counting effluent samples are included in this report.

## Supplemental Information

5. Batch Releases

   a. Liquid

| | | |
|---|---|---|
| 1. | Number of releases: | 1 |
| 2. | Total time: | 8.59E+02 minutes |
| 3. | Maximum time: | 8.59E+02 minutes |
| 4. | Average time: | 8.59E+02 minutes |
| 5. | Minimum time: | 8.59E+02 minutes |
| 6. | Average stream flow: | 63.6 gpm (discharge)<br>7.64E+05 gpm (dilution) |

   b. Gaseous

   NONE.

6. Abnormal Releases

   a. Liquid

   NONE.

   b. Gaseous

   NONE.

7. Radiological Impact on Man

   a. Liquid Dose to a Member of the Public for 2007

   Total Body: 2.04E-03 mrem

   Organ: 3.32E-03 mrem

   b. Gaseous Dose to a Member of the Public for 2007

   Total Body: 5.61E-03 mrem

   Skin: 3.03E-04 mrem

   Organ (Particulate/Iodine): 2.56E-01 mrem

## Supplemental Information

c. Direct Radiation Dose to a Member of the Public for 2007

Total Body: 7.25E+00 mrem

d. Total Body Doses to the Population and Average Doses to Individuals in the Population from All Receiving-Water-Related-Pathways:

Not applicable for QCNPS

e. Total Body Doses to the Population and Average Doses to Individuals in the Population from Gaseous Effluents to a Distance of 50 Miles:

Not applicable for QCNPS

f. Doses From Liquid and Gaseous Effluent to Members of the Public Due to Their Activities Inside the Site Boundary for the Report Period:

Not applicable for QCNPS. Any member of the public that is onsite for a significant period will be issued a Thermo Luminescent Dosimeter (TLD).

g. Liquid and Gaseous Effluent Radiation Monitors and Instrumentation Unavailability for the Period Beyond the Requirements of the ODCM, Including Sampling Deviation:

No ODCM monitors were unavailable for greater than 30 days in 2007.

## Quad Cities Nuclear Power Station
## 2007 Annual Radioactive Effluent Release Report

## 10CFR20.1301(a)(1) Compliance Assessment

Quad Cities Station Unit One and Unit Two

Assessment Period 01/01/07 THROUGH 12/31/07

10CFR20.1301(a)(1) Limit 100.0 mrem/year

**Quad Cities Unit 1**

| | 1st Quarter | 2nd Quarter | 3rd Quarter | 4th Quarter | Year Total | % of Limit |
|---|---|---|---|---|---|---|
| TEDE (mrem) | 9.54E-01 | 7.18E-01 | 9.46E-01 | 1.01E+00 | 3.63E+00 | **3.63** |

**Quad Cities Unit 2**

| | 1st Quarter | 2nd Quarter | 3rd Quarter | 4th Quarter | Year Total | % of Limit |
|---|---|---|---|---|---|---|
| TEDE (mrem) | 9.45E-01 | 9.77E-01 | 9.87E-01 | 9.81E-01 | 3.89E+00 | **3.89** |

Submitted by: Blake A. Young Date: 4/14/08
Blake A. Young

Reviewed by: James G. Wooldridge Date: 04/14/08
James G. Wooldridge

# Quad Cities Nuclear Power Station
# 2007 Annual Radioactive Effluent Release Report

## Joint Frequency Data

Site:: Quad Cities Station
Period:: Months Jan - Mar for years 2007 - 2007
All Stabilities
Elevations:: Winds 33ft Stability 196ft

| Wind Direction Sector | Wind Speed Range (m/s) <0.50 | 0.5-1.0 | 1.1-1.5 | 1.6-2.0 | 2.1-3.0 | 3.1-4.0 | 4.1-5.0 | 5.1-6.0 | 6.1-8.0 | 8.1-10.0 | >10.00 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N | 0 | 2 | 7 | 6 | 15 | 30 | 15 | 3 | 0 | 0 | 0 | 78 |
| NNE | 0 | 1 | 2 | 4 | 11 | 0 | 1 | 4 | 6 | 0 | 0 | 29 |
| NE | 0 | 1 | 5 | 8 | 38 | 19 | 14 | 6 | 9 | 0 | 0 | 100 |
| ENE | 0 | 2 | 2 | 10 | 18 | 20 | 15 | 7 | 0 | 0 | 0 | 74 |
| E | 0 | 1 | 8 | 13 | 28 | 34 | 22 | 10 | 14 | 1 | 0 | 131 |
| ESE | 0 | 5 | 13 | 17 | 45 | 15 | 16 | 10 | 27 | 6 | 0 | 154 |
| SE | 0 | 15 | 17 | 12 | 22 | 7 | 10 | 3 | 0 | 0 | 0 | 86 |
| SSE | 0 | 7 | 14 | 10 | 23 | 6 | 8 | 3 | 0 | 0 | 0 | 71 |
| S | 0 | 2 | 6 | 9 | 34 | 19 | 7 | 2 | 0 | 0 | 0 | 79 |
| SSW | 0 | 5 | 10 | 7 | 37 | 43 | 15 | 4 | 0 | 0 | 0 | 121 |
| SW | 0 | 4 | 8 | 12 | 53 | 48 | 22 | 7 | 3 | 0 | 0 | 157 |
| WSW | 0 | 4 | 6 | 12 | 28 | 31 | 26 | 7 | 3 | 15 | 0 | 132 |
| W | 0 | 5 | 12 | 19 | 73 | 111 | 83 | 26 | 17 | 2 | 0 | 348 |
| WNW | 0 | 2 | 8 | 16 | 69 | 56 | 62 | 44 | 30 | 0 | 0 | 287 |
| NW | 0 | 3 | 13 | 18 | 54 | 46 | 32 | 24 | 4 | 0 | 0 | 194 |
| NNW | 0 | 5 | 8 | 3 | 19 | 18 | 3 | 1 | 0 | 0 | 0 | 57 |
| Tot | 0 | 64 | 139 | 176 | 567 | 503 | 351 | 161 | 113 | 24 | 0 | 2098 |

| | |
|---|---|
| Hours of Calm | 39 |
| Hours of Variable Direction | 1 |
| Hours of Valid Data | 2138 |
| Hours of Missing Data | 22 |
| Hours in Period | 2160 |

# Quad Cities Nuclear Power Station
# 2007 Annual Radioactive Effluent Release Report

## Joint Frequency Data

Site:: Quad Cities Station
Period:: Months Jan - Mar for years 2007 - 2007
Stability Class A Extremely Unstable based on Lapse Rate
Elevations:: Winds 33ft Stability 196ft

| Wind Direction Sector | Wind Speed Range (m/s) <0.50 | 0.5-1.0 | 1.1-1.5 | 1.6-2.0 | 2.1-3.0 | 3.1-4.0 | 4.1-5.0 | 5.1-6.0 | 6.1-8.0 | 8.1-10.0 | >10.00 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NNE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NE | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 3 |
| ENE | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 1 | 0 | 0 | 0 | 4 |
| E | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ESE | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 2 | 6 | 0 | 0 | 9 |
| SE | 0 | 0 | 0 | 0 | 1 | 3 | 1 | 0 | 0 | 0 | 0 | 5 |
| SSE | 0 | 0 | 0 | 0 | 8 | 4 | 3 | 1 | 0 | 0 | 0 | 16 |
| S | 0 | 0 | 0 | 0 | 9 | 5 | 0 | 0 | 0 | 0 | 0 | 14 |
| SSW | 0 | 0 | 0 | 0 | 3 | 3 | 2 | 0 | 0 | 0 | 0 | 8 |
| SW | 0 | 0 | 0 | 0 | 0 | 4 | 2 | 0 | 0 | 0 | 0 | 6 |
| WSW | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| W | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| WNW | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 2 | 0 | 0 | 0 | 4 |
| NW | 0 | 0 | 0 | 0 | 0 | 4 | 6 | 10 | 0 | 0 | 0 | 20 |
| NNW | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 2 |
| Tot | 0 | 0 | 0 | 0 | 22 | 26 | 19 | 18 | 6 | 0 | 0 | 91 |

Hours of Calm . . . . . 0
Hours of Variable Direction 0
Hours of Valid Data . . . . 91
Hours of Missing Data . . . 22
Hours in Period . . . . . 2160

# Quad Cities Nuclear Power Station
# 2007 Annual Radioactive Effluent Release Report

## Joint Frequency Data

Site:: Quad Cities Station
Period:: Months Jan - Mar for years 2007 - 2007
Stability Class B Moderately Unstable based on Lapse Rate
Elevations:: Winds 33ft Stability 196ft

| Wind Direction Sector | Wind Speed Range (m/s) <0.50 | 0.5-1.0 | 1.1-1.5 | 1.6-2.0 | 2.1-3.0 | 3.1-4.0 | 4.1-5.0 | 5.1-6.0 | 6.1-8.0 | 8.1-10.0 | >10.00 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| NNE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NE | 0 | 0 | 0 | 0 | 0 | 3 | 1 | 0 | 0 | 0 | 0 | 4 |
| ENE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| E | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| ESE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SE | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 2 |
| SSE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| S | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SSW | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 4 |
| SW | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| WSW | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 2 |
| W | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 3 | 0 | 0 | 6 |
| WNW | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 0 | 0 | 4 |
| NW | 0 | 0 | 0 | 0 | 1 | 2 | 4 | 5 | 1 | 0 | 0 | 13 |
| NNW | 0 | 0 | 0 | 0 | 1 | 5 | 2 | 0 | 0 | 0 | 0 | 8 |
| Tot | 0 | 0 | 0 | 0 | 7 | 12 | 14 | 8 | 6 | 0 | 0 | 47 |

| | |
|---|---|
| Hours of Calm . . . . . | 0 |
| Hours of Variable Direction | 0 |
| Hours of Valid Data . . . . | 47 |
| Hours of Missing Data . . . | 22 |
| Hours in Period . . . . . | 2160 |

# Quad Cities Nuclear Power Station
# 2007 Annual Radioactive Effluent Release Report

## Joint Frequency Data

Site:: Quad Cities Station
Period:: Months Jan - Mar for years 2007 - 2007
Stability Class C Slightly Unstable based on Lapse Rate
Elevations:: Winds 33ft Stability 196ft

| Wind Direction Sector | Wind Speed Range (m/s) <0.50 | 0.5-1.0 | 1.1-1.5 | 1.6-2.0 | 2.1-3.0 | 3.1-4.0 | 4.1-5.0 | 5.1-6.0 | 6.1-8.0 | 8.1-10.0 | >10.00 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N | 0 | 0 | 0 | 0 | 2 | 3 | 3 | 0 | 0 | 0 | 0 | 8 |
| NNE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NE | 0 | 0 | 0 | 0 | 0 | 4 | 1 | 1 | 0 | 0 | 0 | 6 |
| ENE | 0 | 0 | 0 | 0 | 2 | 0 | 1 | 0 | 0 | 0 | 0 | 3 |
| E | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 2 |
| ESE | 0 | 0 | 0 | 0 | 2 | 0 | 1 | 3 | 0 | 0 | 0 | 6 |
| SE | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 3 |
| SSE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| S | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| SSW | 0 | 0 | 0 | 0 | 1 | 4 | 2 | 0 | 0 | 0 | 0 | 7 |
| SW | 0 | 0 | 0 | 0 | 6 | 3 | 0 | 2 | 0 | 0 | 0 | 11 |
| WSW | 0 | 0 | 0 | 0 | 0 | 2 | 3 | 2 | 0 | 0 | 0 | 7 |
| W | 0 | 0 | 0 | 0 | 1 | 12 | 12 | 6 | 6 | 0 | 0 | 37 |
| WNW | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 5 | 6 | 0 | 0 | 13 |
| NW | 0 | 0 | 0 | 0 | 6 | 3 | 8 | 1 | 1 | 0 | 0 | 19 |
| NNW | 0 | 0 | 0 | 0 | 2 | 1 | 1 | 0 | 0 | 0 | 0 | 4 |
| Tot | 0 | 0 | 0 | 0 | 23 | 35 | 35 | 21 | 13 | 0 | 0 | 127 |

| | |
|---|---|
| Hours of Calm . . . . . | 0 |
| Hours of Variable Direction | 0 |
| Hours of Valid Data . . . . | 127 |
| Hours of Missing Data . . . | 22 |
| Hours in Period . . . . . | 2160 |

# Quad Cities Nuclear Power Station
# 2007 Annual Radioactive Effluent Release Report

## Joint Frequency Data

Site:: Quad Cities Station
Period:: Months Jan - Mar for years 2007 - 2007
Stability Class D Neutral based on Lapse Rate
Elevations:: Winds 33ft Stability 196ft

| Wind Direction Sector | Wind Speed Range (m/s) <0.50 | 0.5-1.0 | 1.1-1.5 | 1.6-2.0 | 2.1-3.0 | 3.1-4.0 | 4.1-5.0 | 5.1-6.0 | 6.1-8.0 | 8.1-10.0 | >10.00 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N | 0 | 0 | 4 | 4 | 12 | 23 | 10 | 3 | 0 | 0 | 0 | 56 |
| NNE | 0 | 0 | 0 | 4 | 9 | 0 | 1 | 4 | 6 | 0 | 0 | 24 |
| NE | 0 | 0 | 1 | 4 | 30 | 11 | 11 | 4 | 9 | 0 | 0 | 70 |
| ENE | 0 | 0 | 0 | 5 | 11 | 20 | 11 | 6 | 0 | 0 | 0 | 53 |
| E | 0 | 0 | 0 | 7 | 24 | 33 | 20 | 10 | 14 | 1 | 0 | 109 |
| ESE | 0 | 0 | 0 | 4 | 26 | 12 | 11 | 5 | 18 | 6 | 0 | 82 |
| SE | 0 | 1 | 3 | 4 | 7 | 1 | 7 | 2 | 0 | 0 | 0 | 25 |
| SSE | 0 | 0 | 3 | 7 | 11 | 0 | 1 | 1 | 0 | 0 | 0 | 23 |
| S | 0 | 0 | 1 | 3 | 10 | 9 | 0 | 0 | 0 | 0 | 0 | 23 |
| SSW | 0 | 2 | 2 | 0 | 17 | 19 | 4 | 3 | 0 | 0 | 0 | 47 |
| SW | 0 | 1 | 4 | 7 | 13 | 23 | 13 | 2 | 3 | 0 | 0 | 66 |
| WSW | 0 | 0 | 3 | 5 | 17 | 26 | 20 | 3 | 3 | 15 | 0 | 92 |
| W | 0 | 1 | 2 | 6 | 47 | 93 | 66 | 18 | 8 | 2 | 0 | 243 |
| WNW | 0 | 0 | 0 | 8 | 42 | 54 | 55 | 37 | 22 | 0 | 0 | 218 |
| NW | 0 | 0 | 1 | 7 | 34 | 34 | 14 | 8 | 2 | 0 | 0 | 100 |
| NNW | 0 | 0 | 4 | 2 | 11 | 10 | 0 | 0 | 0 | 0 | 0 | 27 |
| Tot | 0 | 5 | 28 | 77 | 321 | 368 | 244 | 106 | 85 | 24 | 0 | 1258 |

| | |
|---|---|
| Hours of Calm . . . . . | 0 |
| Hours of Variable Direction | 1 |
| Hours of Valid Data . . . . | 1259 |
| Hours of Missing Data . . . | 22 |
| Hours in Period . . . . . | 2160 |

# Quad Cities Nuclear Power Station
# 2007 Annual Radioactive Effluent Release Report

## Joint Frequency Data

Site:: Quad Cities Station
Period:: Months Jan - Mar for years 2007 - 2007
Stability Class E Slightly Stable based on Lapse Rate
Elevations:: Winds 33ft Stability 196ft

| Wind Direction Sector | Wind Speed Range (m/s) <0.50 | 0.5-1.0 | 1.1-1.5 | 1.6-2.0 | 2.1-3.0 | 3.1-4.0 | 4.1-5.0 | 5.1-6.0 | 6.1-8.0 | 8.1-10.0 | >10.00 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N | 0 | 1 | 2 | 1 | 1 | 4 | 1 | 0 | 0 | 0 | 0 | 10 |
| NNE | 0 | 1 | 1 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| NE | 0 | 0 | 3 | 4 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 15 |
| ENE | 0 | 2 | 1 | 4 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 12 |
| E | 0 | 0 | 7 | 5 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 16 |
| ESE | 0 | 2 | 4 | 9 | 6 | 3 | 4 | 0 | 3 | 0 | 0 | 31 |
| SE | 0 | 2 | 4 | 1 | 6 | 2 | 0 | 0 | 0 | 0 | 0 | 15 |
| SSE | 0 | 2 | 4 | 2 | 3 | 2 | 4 | 1 | 0 | 0 | 0 | 18 |
| S | 0 | 1 | 1 | 6 | 13 | 5 | 7 | 2 | 0 | 0 | 0 | 35 |
| SSW | 0 | 2 | 4 | 5 | 11 | 15 | 7 | 1 | 0 | 0 | 0 | 45 |
| SW | 0 | 1 | 3 | 5 | 25 | 17 | 7 | 3 | 0 | 0 | 0 | 61 |
| WSW | 0 | 1 | 2 | 7 | 11 | 3 | 2 | 1 | 0 | 0 | 0 | 27 |
| W | 0 | 2 | 8 | 11 | 25 | 6 | 4 | 0 | 0 | 0 | 0 | 56 |
| WNW | 0 | 1 | 5 | 7 | 27 | 0 | 3 | 0 | 0 | 0 | 0 | 43 |
| NW | 0 | 1 | 11 | 9 | 13 | 3 | 0 | 0 | 0 | 0 | 0 | 37 |
| NNW | 0 | 2 | 3 | 0 | 5 | 1 | 0 | 0 | 0 | 0 | 0 | 11 |
| Tot | 0 | 21 | 63 | 76 | 165 | 61 | 39 | 8 | 3 | 0 | 0 | 436 |

| | |
|---|---|
| Hours of Calm | 8 |
| Hours of Variable Direction | 0 |
| Hours of Valid Data | 444 |
| Hours of Missing Data | 22 |
| Hours in Period | 2160 |

# Quad Cities Nuclear Power Station
# 2007 Annual Radioactive Effluent Release Report

## Joint Frequency Data

Site:: Quad Cities Station
Period:: Months Jan - Mar for years 2007 - 2007
Stability Class F Moderately Stable based on Lapse Rate
Elevations:: Winds 33ft Stability 196ft

| Wind Direction Sector | Wind Speed Range (m/s) <0.50 | 0.5-1.0 | 1.1-1.5 | 1.6-2.0 | 2.1-3.0 | 3.1-4.0 | 4.1-5.0 | 5.1-6.0 | 6.1-8.0 | 8.1-10.0 | >10.00 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| NNE | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| NE | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| ENE | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| E | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| ESE | 0 | 1 | 3 | 2 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 13 |
| SE | 0 | 4 | 4 | 7 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 21 |
| SSE | 0 | 2 | 4 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 8 |
| S | 0 | 1 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| SSW | 0 | 1 | 2 | 2 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 8 |
| SW | 0 | 1 | 1 | 0 | 7 | 1 | 0 | 0 | 0 | 0 | 0 | 10 |
| WSW | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| W | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| WNW | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| NW | 0 | 1 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| NNW | 0 | 3 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| Tot | 0 | 19 | 25 | 20 | 25 | 1 | 0 | 0 | 0 | 0 | 0 | 90 |

| | |
|---|---|
| Hours of Calm | 13 |
| Hours of Variable Direction | 0 |
| Hours of Valid Data | 103 |
| Hours of Missing Data | 22 |
| Hours in Period | 2160 |

# Quad Cities Nuclear Power Station
# 2007 Annual Radioactive Effluent Release Report

## Joint Frequency Data

Site:: Quad Cities Station
Period:: Months Jan - Mar for years 2007 - 2007
Stability Class G Extremely Stable based on Lapse Rate
Elevations:: Winds 33ft Stability 196ft

| Wind Direction Sector | Wind Speed Range (m/s) <0.50 | 0.5-1.0 | 1.1-1.5 | 1.6-2.0 | 2.1-3.0 | 3.1-4.0 | 4.1-5.0 | 5.1-6.0 | 6.1-8.0 | 8.1-10.0 | >10.00 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NNE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ENE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| E | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ESE | 0 | 2 | 6 | 2 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 13 |
| SE | 0 | 8 | 6 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 15 |
| SSE | 0 | 3 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 |
| S | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| SSW | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| SW | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| WSW | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| W | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| WNW | 0 | 0 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| NW | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| NNW | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| Tot | 0 | 19 | 23 | 3 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 49 |

| | |
|---|---|
| Hours of Calm . . . . . | 18 |
| Hours of Variable Direction | 0 |
| Hours of Valid Data . . . . | 67 |
| Hours of Missing Data . . . | 22 |
| Hours in Period . . . . . | 2160 |

# Quad Cities Nuclear Power Station
# 2007 Annual Radioactive Effluent Release Report

## Joint Frequency Data

Site:: Quad Cities Station
Period:: Months Jan - Mar for years 2007 - 2007
All Stabilities
Elevations:: Winds 196ft Stability 196ft

| Wind Direction Sector | Wind Speed Range (m/s) <0.50 | 0.5-1.0 | 1.1-1.5 | 1.6-2.0 | 2.1-3.0 | 3.1-4.0 | 4.1-5.0 | 5.1-6.0 | 6.1-8.0 | 8.1-10.0 | >10.00 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N | 0 | 0 | 0 | 3 | 6 | 7 | 18 | 12 | 12 | 4 | 1 | 63 |
| NNE | 0 | 0 | 0 | 2 | 5 | 7 | 6 | 4 | 2 | 8 | 4 | 38 |
| NE | 0 | 1 | 0 | 1 | 5 | 19 | 24 | 21 | 19 | 9 | 5 | 104 |
| ENE | 0 | 0 | 1 | 2 | 6 | 13 | 15 | 26 | 21 | 8 | 0 | 92 |
| E | 0 | 0 | 0 | 1 | 8 | 9 | 21 | 22 | 25 | 12 | 19 | 117 |
| ESE | 0 | 0 | 4 | 5 | 11 | 14 | 16 | 12 | 11 | 27 | 19 | 119 |
| SE | 0 | 0 | 2 | 1 | 8 | 5 | 5 | 13 | 19 | 4 | 2 | 59 |
| SSE | 0 | 1 | 0 | 2 | 4 | 11 | 14 | 19 | 17 | 4 | 10 | 82 |
| S | 0 | 0 | 3 | 2 | 7 | 5 | 13 | 22 | 32 | 20 | 14 | 118 |
| SSW | 0 | 0 | 1 | 0 | 4 | 9 | 17 | 22 | 59 | 28 | 21 | 161 |
| SW | 0 | 0 | 3 | 2 | 7 | 14 | 10 | 18 | 55 | 23 | 9 | 141 |
| WSW | 0 | 0 | 3 | 3 | 7 | 13 | 16 | 28 | 58 | 7 | 21 | 156 |
| W | 0 | 0 | 2 | 2 | 15 | 34 | 45 | 67 | 73 | 40 | 11 | 289 |
| WNW | 0 | 0 | 1 | 4 | 10 | 33 | 47 | 55 | 89 | 59 | 22 | 320 |
| NW | 0 | 1 | 1 | 3 | 15 | 34 | 38 | 40 | 36 | 21 | 0 | 189 |
| NNW | 0 | 2 | 2 | 5 | 14 | 9 | 9 | 19 | 9 | 1 | 0 | 70 |
| Tot | 0 | 5 | 23 | 38 | 132 | 236 | 314 | 400 | 537 | 275 | 158 | 2118 |

| | |
|---|---|
| Hours of Calm | 3 |
| Hours of Variable Direction | 0 |
| Hours of Valid Data | 2121 |
| Hours of Missing Data | 39 |
| Hours in Period | 2160 |

# Quad Cities Nuclear Power Station
# 2007 Annual Radioactive Effluent Release Report

## Joint Frequency Data

Site:: Quad Cities Station
Period:: Months Jan - Mar for years 2007 - 2007
Stability Class A Extremely Unstable based on Lapse Rate
Elevations:: Winds 196ft Stability 196ft

| Wind Direction Sector | Wind Speed Range (m/s) <0.50 | 0.5-1.0 | 1.1-1.5 | 1.6-2.0 | 2.1-3.0 | 3.1-4.0 | 4.1-5.0 | 5.1-6.0 | 6.1-8.0 | 8.1-10.0 | >10.00 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NNE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 5 | 0 | 0 | 6 |
| ENE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 |
| E | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| ESE | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 5 | 1 | 8 |
| SE | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 3 | 0 | 0 | 5 |
| SSE | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 0 | 4 | 3 | 2 | 15 |
| S | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 6 | 4 | 3 | 0 | 16 |
| SSW | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 6 | 1 | 0 | 10 |
| SW | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 0 | 3 |
| WSW | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| W | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| WNW | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 4 | 0 | 7 |
| NW | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 7 | 6 | 0 | 19 |
| NNW | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Tot | 0 | 0 | 0 | 0 | 1 | 5 | 11 | 15 | 33 | 23 | 3 | 91 |

Hours of Calm . . . . . 0
Hours of Variable Direction 0
Hours of Valid Data . . . . 91
Hours of Missing Data . . . 39
Hours in Period . . . . . 2160

# Quad Cities Nuclear Power Station
# 2007 Annual Radioactive Effluent Release Report

## Joint Frequency Data

Site:: Quad Cities Station
Period:: Months Jan - Mar for years 2007 - 2007
Stability Class B Moderately Unstable based on Lapse Rate
Elevations:: Winds 196ft Stability 196ft

| Wind Direction Sector | Wind Speed Range (m/s) <0.50 | 0.5-1.0 | 1.1-1.5 | 1.6-2.0 | 2.1-3.0 | 3.1-4.0 | 4.1-5.0 | 5.1-6.0 | 6.1-8.0 | 8.1-10.0 | >10.00 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NNE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NE | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 1 | 0 | 0 | 4 |
| ENE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 |
| E | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ESE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 |
| SSE | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| S | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| SSW | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 0 | 3 |
| SW | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 2 |
| WSW | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 2 |
| W | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 2 | 5 |
| WNW | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 2 | 5 |
| NW | 0 | 0 | 0 | 0 | 0 | 3 | 2 | 1 | 3 | 6 | 0 | 15 |
| NNW | 0 | 0 | 0 | 0 | 1 | 0 | 2 | 2 | 1 | 0 | 0 | 6 |
| Tot | 0 | 0 | 0 | 0 | 1 | 4 | 7 | 5 | 13 | 12 | 4 | 46 |

Hours of Calm . . . . . 0
Hours of Variable Direction 0
Hours of Valid Data . . . . 46
Hours of Missing Data . . . 39
Hours in Period . . . . . 2160

# Quad Cities Nuclear Power Station
# 2007 Annual Radioactive Effluent Release Report

## Joint Frequency Data

Site:: Quad Cities Station
Period:: Months Jan - Mar for years 2007 - 2007
Stability Class C Slightly Unstable based on Lapse Rate
Elevations:: Winds 196ft Stability 196ft

| Wind Direction Sector | Wind Speed Range (m/s) <0.50 | 0.5-1.0 | 1.1-1.5 | 1.6-2.0 | 2.1-3.0 | 3.1-4.0 | 4.1-5.0 | 5.1-6.0 | 6.1-8.0 | 8.1-10.0 | >10.00 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N | 0 | 0 | 0 | 0 | 1 | 1 | 2 | 0 | 0 | 0 | 0 | 4 |
| NNE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NE | 0 | 0 | 0 | 0 | 0 | 1 | 3 | 2 | 1 | 1 | 0 | 8 |
| ENE | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| E | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 0 | 0 | 3 |
| ESE | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 3 | 0 | 4 |
| SE | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 0 | 1 | 4 |
| SSE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| S | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 2 | 0 | 0 | 3 |
| SSW | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 2 | 7 |
| SW | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 3 | 3 | 1 | 1 | 10 |
| WSW | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 5 | 2 | 0 | 13 |
| W | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 9 | 8 | 9 | 2 | 31 |
| WNW | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 6 | 7 | 3 | 18 |
| NW | 0 | 0 | 0 | 0 | 0 | 6 | 3 | 1 | 5 | 0 | 0 | 15 |
| NNW | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 3 | 2 | 0 | 0 | 6 |
| Tot | 0 | 0 | 0 | 0 | 3 | 13 | 17 | 26 | 35 | 24 | 9 | 127 |

Hours of Calm . . . . . 0
Hours of Variable Direction 0
Hours of Valid Data . . . . 127
Hours of Missing Data . . . 39
Hours in Period . . . . . 2160

# Quad Cities Nuclear Power Station
# 2007 Annual Radioactive Effluent Release Report

## Joint Frequency Data

Site:: Quad Cities Station
Period:: Months Jan - Mar for years 2007 - 2007
Stability Class D Neutral based on Lapse Rate
Elevations:: Winds 196ft Stability 196ft

| Wind Direction Sector | Wind Speed Range (m/s) <0.50 | 0.5-1.0 | 1.1-1.5 | 1.6-2.0 | 2.1-3.0 | 3.1-4.0 | 4.1-5.0 | 5.1-6.0 | 6.1-8.0 | 8.1-10.0 | >10.00 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N | 0 | 0 | 0 | 1 | 1 | 3 | 13 | 10 | 6 | 4 | 1 | 39 |
| NNE | 0 | 0 | 0 | 0 | 2 | 6 | 6 | 0 | 2 | 8 | 4 | 28 |
| NE | 0 | 0 | 0 | 0 | 3 | 16 | 16 | 12 | 11 | 8 | 5 | 71 |
| ENE | 0 | 0 | 1 | 0 | 2 | 6 | 12 | 22 | 20 | 8 | 0 | 71 |
| E | 0 | 0 | 0 | 1 | 3 | 6 | 15 | 17 | 23 | 11 | 19 | 95 |
| ESE | 0 | 0 | 0 | 3 | 7 | 8 | 13 | 9 | 6 | 15 | 15 | 76 |
| SE | 0 | 0 | 0 | 1 | 2 | 1 | 1 | 2 | 4 | 3 | 1 | 15 |
| SSE | 0 | 0 | 0 | 1 | 2 | 2 | 5 | 6 | 4 | 0 | 2 | 22 |
| S | 0 | 0 | 1 | 1 | 3 | 1 | 2 | 2 | 12 | 9 | 1 | 32 |
| SSW | 0 | 0 | 1 | 0 | 3 | 4 | 2 | 9 | 22 | 11 | 8 | 60 |
| SW | 0 | 0 | 3 | 0 | 3 | 8 | 5 | 5 | 19 | 10 | 6 | 59 |
| WSW | 0 | 0 | 1 | 2 | 2 | 10 | 8 | 23 | 48 | 2 | 20 | 116 |
| W | 0 | 0 | 1 | 1 | 8 | 22 | 35 | 49 | 61 | 25 | 7 | 209 |
| WNW | 0 | 0 | 0 | 1 | 4 | 18 | 22 | 42 | 78 | 44 | 17 | 226 |
| NW | 0 | 1 | 0 | 1 | 9 | 15 | 15 | 22 | 18 | 9 | 0 | 90 |
| NNW | 0 | 0 | 1 | 4 | 7 | 3 | 6 | 12 | 6 | 1 | 0 | 40 |
| Tot | 0 | 1 | 9 | 17 | 61 | 129 | 176 | 242 | 340 | 168 | 106 | 1249 |

| | |
|---|---|
| Hours of Calm | 0 |
| Hours of Variable Direction | 0 |
| Hours of Valid Data | 1249 |
| Hours of Missing Data | 39 |
| Hours in Period | 2160 |

# Quad Cities Nuclear Power Station
# 2007 Annual Radioactive Effluent Release Report

## Joint Frequency Data

Site:: Quad Cities Station
Period:: Months Jan - Mar for years 2007 - 2007
Stability Class E Slightly Stable based on Lapse Rate
Elevations:: Winds 196ft Stability 196ft

| Wind Direction Sector | Wind Speed Range (m/s) <0.50 | 0.5-1.0 | 1.1-1.5 | 1.6-2.0 | 2.1-3.0 | 3.1-4.0 | 4.1-5.0 | 5.1-6.0 | 6.1-8.0 | 8.1-10.0 | >10.00 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N | 0 | 0 | 0 | 1 | 1 | 1 | 2 | 2 | 6 | 0 | 0 | 13 |
| NNE | 0 | 0 | 0 | 1 | 2 | 1 | 0 | 2 | 0 | 0 | 0 | 6 |
| NE | 0 | 0 | 0 | 0 | 2 | 1 | 3 | 4 | 1 | 0 | 0 | 11 |
| ENE | 0 | 0 | 0 | 1 | 4 | 5 | 3 | 2 | 0 | 0 | 0 | 15 |
| E | 0 | 0 | 0 | 0 | 5 | 3 | 6 | 3 | 1 | 0 | 0 | 18 |
| ESE | 0 | 0 | 1 | 1 | 2 | 3 | 2 | 3 | 4 | 4 | 3 | 23 |
| SE | 0 | 0 | 0 | 0 | 2 | 3 | 2 | 2 | 2 | 1 | 0 | 12 |
| SSE | 0 | 0 | 0 | 1 | 1 | 4 | 1 | 2 | 7 | 1 | 6 | 23 |
| S | 0 | 0 | 0 | 0 | 2 | 3 | 2 | 5 | 8 | 7 | 13 | 40 |
| SSW | 0 | 0 | 0 | 0 | 1 | 0 | 4 | 7 | 21 | 14 | 10 | 57 |
| SW | 0 | 0 | 0 | 1 | 2 | 2 | 4 | 8 | 25 | 9 | 2 | 53 |
| WSW | 0 | 0 | 1 | 1 | 3 | 3 | 5 | 2 | 4 | 2 | 1 | 22 |
| W | 0 | 0 | 0 | 1 | 3 | 9 | 6 | 9 | 3 | 4 | 0 | 35 |
| WNW | 0 | 0 | 1 | 1 | 5 | 13 | 23 | 11 | 2 | 3 | 0 | 59 |
| NW | 0 | 0 | 0 | 2 | 5 | 8 | 13 | 13 | 3 | 0 | 0 | 44 |
| NNW | 0 | 0 | 0 | 0 | 5 | 3 | 0 | 2 | 0 | 0 | 0 | 10 |
| Tot | 0 | 0 | 3 | 11 | 45 | 62 | 76 | 77 | 87 | 45 | 35 | 441 |

Hours of Calm . . . . . 1
Hours of Variable Direction 0
Hours of Valid Data . . . . 442
Hours of Missing Data . . . 39
Hours in Period . . . . . 2160

# Quad Cities Nuclear Power Station
# 2007 Annual Radioactive Effluent Release Report

## Joint Frequency Data

Site:: Quad Cities Station
Period:: Months Jan - Mar for years 2007 - 2007
Stability Class F Moderately Stable based on Lapse Rate
Elevations:: Winds 196ft Stability 196ft

| Wind Direction Sector | Wind Speed Range (m/s) <0.50 | 0.5-1.0 | 1.1-1.5 | 1.6-2.0 | 2.1-3.0 | 3.1-4.0 | 4.1-5.0 | 5.1-6.0 | 6.1-8.0 | 8.1-10.0 | >10.00 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N | 0 | 0 | 0 | 1 | 2 | 2 | 1 | 0 | 0 | 0 | 0 | 6 |
| NNE | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 2 | 0 | 0 | 0 | 4 |
| NE | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 2 |
| ENE | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 2 |
| E | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ESE | 0 | 0 | 2 | 0 | 0 | 2 | 1 | 0 | 0 | 0 | 0 | 5 |
| SE | 0 | 0 | 2 | 0 | 2 | 0 | 2 | 7 | 7 | 0 | 0 | 20 |
| SSE | 0 | 1 | 0 | 0 | 0 | 2 | 3 | 5 | 1 | 0 | 0 | 12 |
| S | 0 | 0 | 1 | 1 | 1 | 0 | 3 | 3 | 2 | 0 | 0 | 11 |
| SSW | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 2 | 5 | 1 | 1 | 12 |
| SW | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 1 | 5 | 2 | 0 | 10 |
| WSW | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| W | 0 | 0 | 1 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 4 |
| WNW | 0 | 0 | 0 | 2 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 4 |
| NW | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 2 |
| NNW | 0 | 1 | 1 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 4 |
| Tot | 0 | 2 | 8 | 8 | 9 | 12 | 15 | 22 | 20 | 3 | 1 | 100 |

Hours of Calm . . . . . 1
Hours of Variable Direction 0
Hours of Valid Data . . . . 101
Hours of Missing Data . . . 39
Hours in Period . . . . . 2160

# Quad Cities Nuclear Power Station
# 2007 Annual Radioactive Effluent Release Report

## Joint Frequency Data

Site:: Quad Cities Station
Period:: Months Jan - Mar for years 2007 - 2007
Stability Class G Extremely Stable based on Lapse Rate
Elevations:: Winds 196ft Stability 196ft

| Wind Direction Sector | Wind Speed Range (m/s) <0.50 | 0.5-1.0 | 1.1-1.5 | 1.6-2.0 | 2.1-3.0 | 3.1-4.0 | 4.1-5.0 | 5.1-6.0 | 6.1-8.0 | 8.1-10.0 | >10.00 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| NNE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NE | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 2 |
| ENE | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| E | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ESE | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| SE | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 2 |
| SSE | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 6 | 1 | 0 | 0 | 9 |
| S | 0 | 0 | 1 | 0 | 1 | 0 | 3 | 6 | 4 | 0 | 0 | 15 |
| SSW | 0 | 0 | 0 | 0 | 0 | 3 | 6 | 1 | 2 | 0 | 0 | 12 |
| SW | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 0 | 1 | 0 | 0 | 4 |
| WSW | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| W | 0 | 0 | 0 | 0 | 3 | 2 | 0 | 0 | 0 | 0 | 0 | 5 |
| WNW | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| NW | 0 | 0 | 1 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 4 |
| NNW | 0 | 1 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 4 |
| Tot | 0 | 2 | 3 | 2 | 12 | 11 | 12 | 13 | 9 | 0 | 0 | 64 |

| | |
|---|---|
| Hours of Calm . . . . . | 1 |
| Hours of Variable Direction | 0 |
| Hours of Valid Data . . . . | 65 |
| Hours of Missing Data . . . | 39 |
| Hours in Period . . . . . | 2160 |

# Quad Cities Nuclear Power Station
# 2007 Annual Radioactive Effluent Release Report

## Joint Frequency Data

Site:: Quad Cities Station
Period:: Months Jan - Mar for years 2007 - 2007
All Stabilities
Elevations:: Winds 296ft Stability 296ft

| Wind Direction Sector | Wind Speed Range (m/s) <0.50 | 0.5-1.0 | 1.1-1.5 | 1.6-2.0 | 2.1-3.0 | 3.1-4.0 | 4.1-5.0 | 5.1-6.0 | 6.1-8.0 | 8.1-10.0 | >10.00 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N | 0 | 0 | 0 | 1 | 4 | 5 | 10 | 22 | 18 | 9 | 0 | 69 |
| NNE | 0 | 0 | 0 | 2 | 2 | 8 | 4 | 5 | 4 | 6 | 5 | 36 |
| NE | 0 | 2 | 0 | 0 | 2 | 9 | 27 | 19 | 22 | 12 | 10 | 103 |
| ENE | 0 | 0 | 0 | 1 | 3 | 2 | 9 | 13 | 30 | 8 | 3 | 69 |
| E | 0 | 0 | 0 | 2 | 8 | 16 | 18 | 20 | 32 | 6 | 15 | 117 |
| ESE | 0 | 0 | 1 | 4 | 5 | 5 | 12 | 17 | 24 | 24 | 33 | 125 |
| SE | 0 | 1 | 2 | 3 | 8 | 11 | 9 | 7 | 11 | 14 | 3 | 69 |
| SSE | 0 | 0 | 0 | 1 | 4 | 7 | 9 | 9 | 28 | 14 | 10 | 82 |
| S | 0 | 0 | 0 | 3 | 4 | 5 | 9 | 9 | 33 | 18 | 11 | 92 |
| SSW | 0 | 0 | 0 | 1 | 4 | 7 | 13 | 15 | 42 | 50 | 41 | 173 |
| SW | 0 | 1 | 2 | 1 | 5 | 9 | 13 | 10 | 54 | 48 | 31 | 174 |
| WSW | 0 | 0 | 3 | 2 | 2 | 8 | 13 | 10 | 41 | 22 | 21 | 122 |
| W | 0 | 1 | 0 | 2 | 11 | 21 | 34 | 59 | 82 | 51 | 24 | 285 |
| WNW | 0 | 1 | 2 | 1 | 10 | 10 | 13 | 30 | 104 | 74 | 49 | 294 |
| NW | 0 | 0 | 0 | 2 | 6 | 27 | 31 | 50 | 71 | 42 | 12 | 241 |
| NNW | 0 | 0 | 1 | 6 | 12 | 11 | 14 | 14 | 21 | 4 | 0 | 83 |
| Tot | 0 | 6 | 11 | 32 | 90 | 161 | 238 | 309 | 617 | 402 | 268 | 2134 |

| | |
|---|---|
| Hours of Calm | 0 |
| Hours of Variable Direction | 0 |
| Hours of Valid Data | 2134 |
| Hours of Missing Data | 26 |
| Hours in Period | 2160 |

# Quad Cities Nuclear Power Station
# 2007 Annual Radioactive Effluent Release Report

## Joint Frequency Data

Site:: Quad Cities Station
Period:: Months Jan - Mar for years 2007 - 2007
Stability Class A Extremely Unstable based on Lapse Rate
Elevations:: Winds 296ft Stability 296ft

| Wind Direction Sector | Wind Speed Range (m/s) <0.50 | 0.5-1.0 | 1.1-1.5 | 1.6-2.0 | 2.1-3.0 | 3.1-4.0 | 4.1-5.0 | 5.1-6.0 | 6.1-8.0 | 8.1-10.0 | >10.00 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NNE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 |
| ENE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| E | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ESE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 3 | 1 | 5 |
| SE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SSE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| S | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 5 | 1 | 0 | 7 |
| SSW | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| SW | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 |
| WSW | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| W | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| WNW | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NW | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 4 |
| NNW | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Tot | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 10 | 6 | 1 | 19 |

| | |
|---|---|
| Hours of Calm . . . . . | 0 |
| Hours of Variable Direction | 0 |
| Hours of Valid Data . . . . | 19 |
| Hours of Missing Data . . . | 26 |
| Hours in Period . . . . . | 2160 |

# Quad Cities Nuclear Power Station
# 2007 Annual Radioactive Effluent Release Report

## Joint Frequency Data

Site:: Quad Cities Station
Period:: Months Jan - Mar for years 2007 - 2007
Stability Class B Moderately Unstable based on Lapse Rate
Elevations:: Winds 296ft Stability 296ft

| Wind Direction Sector | Wind Speed Range (m/s) <0.50 | 0.5-1.0 | 1.1-1.5 | 1.6-2.0 | 2.1-3.0 | 3.1-4.0 | 4.1-5.0 | 5.1-6.0 | 6.1-8.0 | 8.1-10.0 | >10.00 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NNE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 3 | 0 | 0 | 4 |
| ENE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 2 |
| E | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ESE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 2 |
| SE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 |
| SSE | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 2 | 1 | 1 | 8 |
| S | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 1 | 1 | 0 | 6 |
| SSW | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 3 | 0 | 1 | 5 |
| SW | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 0 | 3 |
| WSW | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| W | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| WNW | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NW | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 1 | 0 | 4 | 0 | 8 |
| NNW | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 |
| Tot | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 8 | 14 | 7 | 3 | 40 |

| | |
|---|---|
| Hours of Calm . . . . . | 0 |
| Hours of Variable Direction | 0 |
| Hours of Valid Data . . . . | 40 |
| Hours of Missing Data . . . | 26 |
| Hours in Period . . . . . | 2160 |

# Quad Cities Nuclear Power Station
# 2007 Annual Radioactive Effluent Release Report

## Joint Frequency Data

Site:: Quad Cities Station
Period:: Months Jan - Mar for years 2007 - 2007
Stability Class C Slightly Unstable based on Lapse Rate
Elevations:: Winds 296ft Stability 296ft

| Wind Direction Sector | Wind Speed Range (m/s) <0.50 | 0.5-1.0 | 1.1-1.5 | 1.6-2.0 | 2.1-3.0 | 3.1-4.0 | 4.1-5.0 | 5.1-6.0 | 6.1-8.0 | 8.1-10.0 | >10.00 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 2 |
| NNE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NE | 0 | 0 | 0 | 0 | 0 | 1 | 5 | 3 | 1 | 0 | 0 | 10 |
| ENE | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| E | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 |
| ESE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| SE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 2 |
| SSE | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 0 | 1 | 1 | 1 | 6 |
| S | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 0 | 3 |
| SSW | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 2 | 1 | 9 |
| SW | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 0 | 3 |
| WSW | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 0 | 3 |
| W | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 1 | 7 |
| WNW | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 6 | 7 | 17 |
| NW | 0 | 0 | 0 | 0 | 0 | 2 | 4 | 2 | 7 | 12 | 3 | 30 |
| NNW | 0 | 0 | 0 | 0 | 1 | 1 | 3 | 0 | 4 | 1 | 0 | 10 |
| Tot | 0 | 0 | 0 | 0 | 1 | 7 | 16 | 10 | 29 | 29 | 13 | 105 |

| | |
|---|---|
| Hours of Calm | 0 |
| Hours of Variable Direction | 0 |
| Hours of Valid Data | 105 |
| Hours of Missing Data | 26 |
| Hours in Period | 2160 |

# Quad Cities Nuclear Power Station
# 2007 Annual Radioactive Effluent Release Report

## Joint Frequency Data

Site:: Quad Cities Station
Period:: Months Jan - Mar for years 2007 - 2007
Stability Class D Neutral based on Lapse Rate
Elevations:: Winds 296ft Stability 296ft

| Wind Direction Sector | Wind Speed Range (m/s) <0.50 | 0.5-1.0 | 1.1-1.5 | 1.6-2.0 | 2.1-3.0 | 3.1-4.0 | 4.1-5.0 | 5.1-6.0 | 6.1-8.0 | 8.1-10.0 | >10.00 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N | 0 | 0 | 0 | 1 | 2 | 2 | 5 | 19 | 11 | 7 | 0 | 47 |
| NNE | 0 | 0 | 0 | 0 | 0 | 5 | 4 | 5 | 2 | 6 | 5 | 27 |
| NE | 0 | 0 | 0 | 0 | 1 | 6 | 20 | 12 | 9 | 12 | 10 | 70 |
| ENE | 0 | 0 | 0 | 0 | 1 | 1 | 7 | 11 | 25 | 8 | 3 | 56 |
| E | 0 | 0 | 0 | 2 | 2 | 9 | 15 | 16 | 29 | 6 | 15 | 94 |
| ESE | 0 | 0 | 0 | 2 | 3 | 4 | 11 | 14 | 16 | 15 | 28 | 93 |
| SE | 0 | 1 | 0 | 1 | 7 | 3 | 5 | 3 | 2 | 11 | 3 | 36 |
| SSE | 0 | 0 | 0 | 0 | 2 | 1 | 0 | 5 | 5 | 1 | 4 | 18 |
| S | 0 | 0 | 0 | 1 | 1 | 2 | 2 | 3 | 11 | 5 | 2 | 27 |
| SSW | 0 | 0 | 0 | 1 | 2 | 4 | 5 | 4 | 14 | 25 | 13 | 68 |
| SW | 0 | 1 | 2 | 0 | 1 | 5 | 9 | 5 | 22 | 17 | 17 | 79 |
| WSW | 0 | 0 | 2 | 1 | 0 | 6 | 8 | 4 | 34 | 19 | 19 | 93 |
| W | 0 | 0 | 0 | 1 | 7 | 18 | 24 | 55 | 68 | 46 | 21 | 240 |
| WNW | 0 | 0 | 1 | 0 | 4 | 7 | 8 | 17 | 79 | 66 | 39 | 221 |
| NW | 0 | 0 | 0 | 0 | 4 | 20 | 13 | 27 | 40 | 23 | 9 | 136 |
| NNW | 0 | 0 | 1 | 5 | 7 | 4 | 7 | 8 | 12 | 1 | 0 | 45 |
| Tot | 0 | 2 | 6 | 15 | 44 | 97 | 143 | 208 | 379 | 268 | 188 | 1350 |

| | |
|---|---|
| Hours of Calm | 0 |
| Hours of Variable Direction | 0 |
| Hours of Valid Data | 1350 |
| Hours of Missing Data | 26 |
| Hours in Period | 2160 |

# Quad Cities Nuclear Power Station
# 2007 Annual Radioactive Effluent Release Report

## Joint Frequency Data

Site:: Quad Cities Station
Period:: Months Jan - Mar for years 2007 - 2007
Stability Class E Slightly Stable based on Lapse Rate
Elevations:: Winds 296ft Stability 296ft

| Wind Direction Sector | Wind Speed Range (m/s) <0.50 | 0.5-1.0 | 1.1-1.5 | 1.6-2.0 | 2.1-3.0 | 3.1-4.0 | 4.1-5.0 | 5.1-6.0 | 6.1-8.0 | 8.1-10.0 | >10.00 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N | 0 | 0 | 0 | 0 | 2 | 1 | 2 | 2 | 7 | 2 | 0 | 16 |
| NNE | 0 | 0 | 0 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| NE | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 3 | 6 | 0 | 0 | 11 |
| ENE | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 2 | 3 | 0 | 0 | 9 |
| E | 0 | 0 | 0 | 0 | 5 | 7 | 3 | 4 | 2 | 0 | 0 | 21 |
| ESE | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 3 | 7 | 4 | 3 | 20 |
| SE | 0 | 0 | 0 | 1 | 1 | 5 | 3 | 3 | 4 | 2 | 0 | 19 |
| SSE | 0 | 0 | 0 | 1 | 1 | 3 | 4 | 1 | 8 | 7 | 4 | 29 |
| S | 0 | 0 | 0 | 0 | 1 | 3 | 3 | 1 | 4 | 6 | 9 | 27 |
| SSW | 0 | 0 | 0 | 0 | 0 | 1 | 5 | 4 | 11 | 20 | 25 | 66 |
| SW | 0 | 0 | 0 | 0 | 2 | 2 | 1 | 2 | 26 | 24 | 11 | 68 |
| WSW | 0 | 0 | 0 | 0 | 1 | 0 | 4 | 6 | 5 | 2 | 2 | 20 |
| W | 0 | 0 | 0 | 0 | 2 | 1 | 7 | 4 | 11 | 2 | 2 | 29 |
| WNW | 0 | 0 | 0 | 1 | 3 | 2 | 4 | 13 | 21 | 2 | 3 | 49 |
| NW | 0 | 0 | 0 | 2 | 1 | 5 | 11 | 18 | 20 | 1 | 0 | 58 |
| NNW | 0 | 0 | 0 | 0 | 4 | 5 | 3 | 3 | 3 | 2 | 0 | 20 |
| Tot | 0 | 0 | 0 | 8 | 26 | 39 | 52 | 69 | 138 | 74 | 59 | 465 |

Hours of Calm . . . . . 0
Hours of Variable Direction 0
Hours of Valid Data . . . . 465
Hours of Missing Data . . . 26
Hours in Period . . . . . 2160

# Quad Cities Nuclear Power Station
# 2007 Annual Radioactive Effluent Release Report

## Joint Frequency Data

Site:: Quad Cities Station
Period:: Months Jan - Mar for years 2007 - 2007
Stability Class F Moderately Stable based on Lapse Rate
Elevations:: Winds 296ft Stability 296ft

| Wind Direction Sector | Wind Speed Range (m/s) <0.50 | 0.5-1.0 | 1.1-1.5 | 1.6-2.0 | 2.1-3.0 | 3.1-4.0 | 4.1-5.0 | 5.1-6.0 | 6.1-8.0 | 8.1-10.0 | >10.00 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 0 | 0 | 0 | 0 | 3 |
| NNE | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 0 | 2 | 0 | 0 | 5 |
| NE | 0 | 2 | 0 | 0 | 1 | 0 | 1 | 0 | 2 | 0 | 0 | 6 |
| ENE | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| E | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ESE | 0 | 0 | 0 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| SE | 0 | 0 | 2 | 0 | 0 | 2 | 1 | 1 | 2 | 1 | 0 | 9 |
| SSE | 0 | 0 | 0 | 0 | 1 | 0 | 2 | 1 | 10 | 4 | 0 | 18 |
| S | 0 | 0 | 0 | 2 | 2 | 0 | 1 | 0 | 10 | 1 | 0 | 16 |
| SSW | 0 | 0 | 0 | 0 | 2 | 0 | 1 | 2 | 9 | 3 | 1 | 18 |
| SW | 0 | 0 | 0 | 1 | 2 | 1 | 2 | 0 | 1 | 6 | 3 | 16 |
| WSW | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 5 |
| W | 0 | 1 | 0 | 1 | 1 | 1 | 3 | 0 | 0 | 0 | 0 | 7 |
| WNW | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 2 |
| NW | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 4 |
| NNW | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 1 | 2 | 0 | 0 | 5 |
| Tot | 0 | 3 | 4 | 8 | 13 | 10 | 14 | 7 | 40 | 15 | 4 | 118 |

| | |
|---|---|
| Hours of Calm . . . . . | 0 |
| Hours of Variable Direction | 0 |
| Hours of Valid Data . . . . | 118 |
| Hours of Missing Data . . . | 26 |
| Hours in Period . . . . . | 2160 |

# Quad Cities Nuclear Power Station
# 2007 Annual Radioactive Effluent Release Report

## Joint Frequency Data

Site:: Quad Cities Station
Period:: Months Jan - Mar for years 2007 - 2007
Stability Class G Extremely Stable based on Lapse Rate
Elevations:: Winds 296ft Stability 296ft

| Wind Direction Sector | Wind Speed Range (m/s) <0.50 | 0.5-1.0 | 1.1-1.5 | 1.6-2.0 | 2.1-3.0 | 3.1-4.0 | 4.1-5.0 | 5.1-6.0 | 6.1-8.0 | 8.1-10.0 | >10.00 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| NNE | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| NE | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| ENE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| E | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| ESE | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| SE | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 2 |
| SSE | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 2 | 0 | 0 | 3 |
| S | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 3 | 0 | 6 |
| SSW | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 2 | 2 | 0 | 0 | 6 |
| SW | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 1 | 0 | 0 | 4 |
| WSW | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| W | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 2 |
| WNW | 0 | 1 | 0 | 0 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 5 |
| NW | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| NNW | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 2 |
| Tot | 0 | 1 | 1 | 1 | 6 | 7 | 5 | 6 | 7 | 3 | 0 | 37 |

| | |
|---|---|
| Hours of Calm . . . . . | 0 |
| Hours of Variable Direction | 0 |
| Hours of Valid Data . . . . | 37 |
| Hours of Missing Data . . . | 26 |
| Hours in Period . . . . . | 2160 |

# Quad Cities Nuclear Power Station
# 2007 Annual Radioactive Effluent Release Report

## Joint Frequency Data

Site:: Quad Cities Station
Period:: Months Apr - Jun for years 2007 - 2007
All Stabilities
Elevations:: Winds 33ft Stability 196ft

| Wind Direction Sector | Wind Speed Range (m/s) <0.50 | 0.5-1.0 | 1.1-1.5 | 1.6-2.0 | 2.1-3.0 | 3.1-4.0 | 4.1-5.0 | 5.1-6.0 | 6.1-8.0 | 8.1-10.0 | >10.00 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N | 0 | 9 | 2 | 3 | 15 | 10 | 5 | 0 | 0 | 0 | 0 | 44 |
| NNE | 1 | 6 | 3 | 2 | 14 | 11 | 11 | 5 | 0 | 0 | 0 | 53 |
| NE | 0 | 10 | 4 | 12 | 28 | 29 | 7 | 13 | 3 | 0 | 0 | 106 |
| ENE | 0 | 18 | 11 | 19 | 28 | 29 | 20 | 11 | 8 | 1 | 0 | 145 |
| E | 0 | 16 | 21 | 10 | 46 | 30 | 22 | 27 | 11 | 0 | 0 | 183 |
| ESE | 0 | 29 | 33 | 29 | 45 | 26 | 13 | 12 | 19 | 1 | 0 | 207 |
| SE | 0 | 16 | 22 | 18 | 44 | 24 | 7 | 5 | 1 | 0 | 0 | 137 |
| SSE | 0 | 13 | 15 | 17 | 34 | 24 | 2 | 2 | 0 | 0 | 0 | 107 |
| S | 0 | 15 | 10 | 10 | 37 | 14 | 3 | 3 | 0 | 0 | 0 | 92 |
| SSW | 0 | 7 | 22 | 16 | 28 | 25 | 18 | 2 | 0 | 0 | 0 | 118 |
| SW | 0 | 10 | 20 | 29 | 53 | 38 | 13 | 11 | 2 | 0 | 0 | 176 |
| WSW | 0 | 13 | 8 | 19 | 33 | 22 | 13 | 7 | 7 | 0 | 0 | 122 |
| W | 0 | 11 | 23 | 26 | 60 | 21 | 7 | 5 | 3 | 0 | 0 | 156 |
| WNW | 0 | 7 | 19 | 12 | 56 | 27 | 18 | 21 | 25 | 0 | 0 | 185 |
| NW | 0 | 7 | 9 | 13 | 47 | 36 | 41 | 31 | 12 | 0 | 0 | 196 |
| NNW | 0 | 3 | 4 | 13 | 19 | 14 | 9 | 0 | 0 | 0 | 0 | 62 |
| Tot | 1 | 190 | 226 | 248 | 587 | 380 | 209 | 155 | 91 | 2 | 0 | 2089 |

| | |
|---|---|
| Hours of Calm | 91 |
| Hours of Variable Direction | 0 |
| Hours of Valid Data | 2180 |
| Hours of Missing Data | 4 |
| Hours in Period | 2184 |

# Quad Cities Nuclear Power Station
# 2007 Annual Radioactive Effluent Release Report

## Joint Frequency Data

Site:: Quad Cities Station
Period:: Months Apr - Jun for years 2007 - 2007
Stability Class A Extremely Unstable based on Lapse Rate
Elevations:: Winds 33ft . Stability 196ft

| Wind Direction Sector | Wind Speed Range (m/s) <0.50 | 0.5-1.0 | 1.1-1.5 | 1.6-2.0 | 2.1-3.0 | 3.1-4.0 | 4.1-5.0 | 5.1-6.0 | 6.1-8.0 | 8.1-10.0 | >10.00 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 2 |
| NNE | 0 | 0 | 0 | 0 | 1 | 3 | 3 | 4 | 0 | 0 | 0 | 11 |
| NE | 0 | 0 | 0 | 0 | 0 | 5 | 2 | 3 | 0 | 0 | 0 | 10 |
| ENE | 0 | 0 | 0 | 0 | 2 | 6 | 4 | 2 | 0 | 0 | 0 | 14 |
| E | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 4 | 2 | 0 | 0 | 10 |
| ESE | 0 | 0 | 0 | 0 | 1 | 3 | 0 | 1 | 0 | 0 | 0 | 5 |
| SE | 0 | 0 | 0 | 0 | 4 | 12 | 3 | 2 | 0 | 0 | 0 | 21 |
| SSE | 0 | 0 | 0 | 0 | 9 | 16 | 2 | 1 | 0 | 0 | 0 | 28 |
| S | 0 | 0 | 0 | 0 | 6 | 5 | 3 | 3 | 0 | 0 | 0 | 17 |
| SSW | 0 | 0 | 0 | 0 | 9 | 9 | 9 | 2 | 0 | 0 | 0 | 29 |
| SW | 0 | 0 | 0 | 0 | 8 | 20 | 3 | 4 | 0 | 0 | 0 | 35 |
| WSW | 0 | 0 | 0 | 0 | 2 | 2 | 3 | 0 | 0 | 0 | 0 | 7 |
| W | 0 | 0 | 0 | 0 | 7 | 1 | 1 | 0 | 0 | 0 | 0 | 9 |
| WNW | 0 | 0 | 0 | 0 | 4 | 5 | 6 | 4 | 1 | 0 | 0 | 20 |
| NW | 0 | 0 | 0 | 0 | 2 | 5 | 8 | 18 | 4 | 0 | 0 | 37 |
| NNW | 0 | 0 | 0 | 0 | 1 | 4 | 1 | 0 | 0 | 0 | 0 | 6 |
| Tot | 0 | 0 | 0 | 0 | 56 | 100 | 50 | 48 | 7 | 0 | 0 | 261 |

| | |
|---|---|
| Hours of Calm . . . . . | 0 |
| Hours of Variable Direction | 0 |
| Hours of Valid Data . . . . | 261 |
| Hours of Missing Data . . . | 4 |
| Hours in Period . . . . . | 2184 |

# Quad Cities Nuclear Power Station
# 2007 Annual Radioactive Effluent Release Report

## Joint Frequency Data

Site:: Quad Cities Station
Period:: Months Apr - Jun for years 2007 - 2007
Stability Class B Moderately Unstable based on Lapse Rate
Elevations:: Winds 33ft Stability 196ft

| Wind Direction Sector | Wind Speed Range (m/s) <0.50 | 0.5-1.0 | 1.1-1.5 | 1.6-2.0 | 2.1-3.0 | 3.1-4.0 | 4.1-5.0 | 5.1-6.0 | 6.1-8.0 | 8.1-10.0 | >10.00 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| NNE | 0 | 0 | 0 | 0 | 1 | 1 | 2 | 0 | 0 | 0 | 0 | 4 |
| NE | 0 | 0 | 0 | 0 | 4 | 1 | 0 | 0 | 1 | 0 | 0 | 6 |
| ENE | 0 | 0 | 0 | 0 | 1 | 2 | 1 | 0 | 0 | 0 | 0 | 4 |
| E | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 1 | 0 | 0 | 0 | 4 |
| ESE | 0 | 0 | 0 | 0 | 1 | 4 | 1 | 1 | 2 | 0 | 0 | 9 |
| SE | 0 | 0 | 0 | 0 | 6 | 2 | 1 | 0 | 0 | 0 | 0 | 9 |
| SSE | 0 | 0 | 0 | 0 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 4 |
| S | 0 | 0 | 0 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| SSW | 0 | 0 | 0 | 1 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| SW | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| WSW | 0 | 0 | 0 | 0 | 3 | 0 | 3 | 0 | 0 | 0 | 0 | 6 |
| W | 0 | 0 | 0 | 0 | 1 | 3 | 0 | 0 | 0 | 0 | 0 | 4 |
| WNW | 0 | 0 | 0 | 0 | 6 | 1 | 0 | 0 | 3 | 0 | 0 | 10 |
| NW | 0 | 0 | 0 | 0 | 2 | 3 | 2 | 1 | 0 | 0 | 0 | 8 |
| NNW | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| Tot | 0 | 0 | 0 | 3 | 36 | 20 | 13 | 3 | 6 | 0 | 0 | 81 |

| | |
|---|---|
| Hours of Calm . . . . . | 0 |
| Hours of Variable Direction | 0 |
| Hours of Valid Data . . . . | 81 |
| Hours of Missing Data . . . | 4 |
| Hours in Period . . . . . | 2184 |

# Quad Cities Nuclear Power Station
# 2007 Annual Radioactive Effluent Release Report

## Joint Frequency Data

Site:: Quad Cities Station
Period:: Months Apr - Jun for years 2007 - 2007
Stability Class C Slightly Unstable based on Lapse Rate
Elevations:: Winds 33ft Stability 196ft

| Wind Direction Sector | Wind Speed Range (m/s) <0.50 | 0.5-1.0 | 1.1-1.5 | 1.6-2.0 | 2.1-3.0 | 3.1-4.0 | 4.1-5.0 | 5.1-6.0 | 6.1-8.0 | 8.1-10.0 | >10.00 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N | 0 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 3 |
| NNE | 0 | 0 | 0 | 0 | 1 | 2 | 1 | 1 | 0 | 0 | 0 | 5 |
| NE | 0 | 0 | 0 | 1 | 3 | 2 | 1 | 1 | 1 | 0 | 0 | 9 |
| ENE | 0 | 0 | 0 | 3 | 0 | 3 | 0 | 1 | 0 | 0 | 0 | 7 |
| E | 0 | 0 | 0 | 2 | 1 | 1 | 2 | 1 | 0 | 0 | 0 | 7 |
| ESE | 0 | 0 | 0 | 0 | 6 | 3 | 2 | 2 | 1 | 0 | 0 | 14 |
| SE | 0 | 0 | 0 | 1 | 11 | 3 | 0 | 1 | 0 | 0 | 0 | 16 |
| SSE | 0 | 0 | 0 | 0 | 5 | 1 | 0 | 0 | 0 | 0 | 0 | 6 |
| S | 0 | 0 | 0 | 3 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 7 |
| SSW | 0 | 0 | 0 | 6 | 1 | 3 | 0 | 0 | 0 | 0 | 0 | 10 |
| SW | 0 | 0 | 2 | 4 | 6 | 1 | 1 | 1 | 0 | 0 | 0 | 15 |
| WSW | 0 | 0 | 0 | 2 | 3 | 5 | 0 | 0 | 0 | 0 | 0 | 10 |
| W | 0 | 0 | 0 | 2 | 7 | 4 | 2 | 0 | 0 | 0 | 0 | 15 |
| WNW | 0 | 0 | 0 | 0 | 12 | 3 | 2 | 3 | 4 | 0 | 0 | 24 |
| NW | 0 | 0 | 0 | 1 | 2 | 2 | 2 | 3 | 3 | 0 | 0 | 13 |
| NNW | 0 | 0 | 0 | 0 | 5 | 3 | 0 | 0 | 0 | 0 | 0 | 8 |
| Tot | 0 | 0 | 2 | 26 | 66 | 38 | 14 | 14 | 9 | 0 | 0 | 169 |

| | |
|---|---|
| Hours of Calm | 0 |
| Hours of Variable Direction | 0 |
| Hours of Valid Data | 169 |
| Hours of Missing Data | 4 |
| Hours in Period | 2184 |

# Quad Cities Nuclear Power Station
# 2007 Annual Radioactive Effluent Release Report

## Joint Frequency Data

Site:: Quad Cities Station
Period:: Months Apr - Jun for years 2007 - 2007
Stability Class D Neutral based on Lapse Rate
Elevations:: Winds 33ft Stability 196ft

| Wind Direction Sector | Wind Speed Range (m/s) <0.50 | 0.5-1.0 | 1.1-1.5 | 1.6-2.0 | 2.1-3.0 | 3.1-4.0 | 4.1-5.0 | 5.1-6.0 | 6.1-8.0 | 8.1-10.0 | >10.00 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N | 0 | 0 | 0 | 0 | 7 | 3 | 4 | 0 | 0 | 0 | 0 | 14 |
| NNE | 0 | 0 | 0 | 0 | 7 | 3 | 4 | 0 | 0 | 0 | 0 | 14 |
| NE | 0 | 0 | 3 | 6 | 15 | 13 | 4 | 8 | 1 | 0 | 0 | 50 |
| ENE | 0 | 0 | 5 | 8 | 12 | 11 | 15 | 8 | 8 | 1 | 0 | 68 |
| E | 0 | 1 | 2 | 5 | 26 | 24 | 15 | 18 | 9 | 0 | 0 | 100 |
| ESE | 0 | 1 | 0 | 6 | 24 | 13 | 7 | 4 | 13 | 1 | 0 | 69 |
| SE | 0 | 0 | 3 | 9 | 18 | 1 | 2 | 0 | 0 | 0 | 0 | 33 |
| SSE | 0 | 0 | 1 | 4 | 8 | 3 | 0 | 1 | 0 | 0 | 0 | 17 |
| S | 0 | 0 | 2 | 1 | 10 | 1 | 0 | 0 | 0 | 0 | 0 | 14 |
| SSW | 0 | 0 | 3 | 4 | 9 | 8 | 5 | 0 | 0 | 0 | 0 | 29 |
| SW | 0 | 0 | 4 | 8 | 16 | 3 | 3 | 5 | 2 | 0 | 0 | 41 |
| WSW | 0 | 1 | 2 | 11 | 10 | 5 | 5 | 7 | 7 | 0 | 0 | 48 |
| W | 0 | 0 | 2 | 13 | 20 | 7 | 3 | 5 | 3 | 0 | 0 | 53 |
| WNW | 0 | 0 | 2 | 5 | 27 | 17 | 10 | 14 | 17 | 0 | 0 | 92 |
| NW | 0 | 0 | 2 | 5 | 26 | 25 | 28 | 9 | 5 | 0 | 0 | 100 |
| NNW | 0 | 0 | 0 | 7 | 9 | 7 | 7 | 0 | 0 | 0 | 0 | 30 |
| Tot | 0 | 3 | 31 | 92 | 244 | 144 | 112 | 79 | 65 | 2 | 0 | 772 |

| | |
|---|---|
| Hours of Calm | 0 |
| Hours of Variable Direction | 0 |
| Hours of Valid Data | 772 |
| Hours of Missing Data | 4 |
| Hours in Period | 2184 |

# Quad Cities Nuclear Power Station
# 2007 Annual Radioactive Effluent Release Report

## Joint Frequency Data

Site:: Quad Cities Station
Period:: Months Apr - Jun for years 2007 - 2007
Stability Class E Slightly Stable based on Lapse Rate
Elevations:: Winds 33ft Stability 196ft

| Wind Direction Sector | Wind Speed Range (m/s) <0.50 | 0.5-1.0 | 1.1-1.5 | 1.6-2.0 | 2.1-3.0 | 3.1-4.0 | 4.1-5.0 | 5.1-6.0 | 6.1-8.0 | 8.1-10.0 | >10.00 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N | 0 | 0 | 2 | 2 | 6 | 3 | 0 | 0 | 0 | 0 | 0 | 13 |
| NNE | 0 | 1 | 1 | 2 | 4 | 2 | 1 | 0 | 0 | 0 | 0 | 11 |
| NE | 0 | 2 | 1 | 4 | 6 | 8 | 0 | 1 | 0 | 0 | 0 | 22 |
| ENE | 0 | 4 | 3 | 6 | 12 | 7 | 0 | 0 | 0 | 0 | 0 | 32 |
| E | 0 | 2 | 5 | 3 | 18 | 2 | 1 | 3 | 0 | 0 | 0 | 34 |
| ESE | 0 | 2 | 4 | 6 | 12 | 3 | 3 | 4 | 3 | 0 | 0 | 37 |
| SE | 0 | 3 | 11 | 8 | 4 | 6 | 1 | 2 | 1 | 0 | 0 | 36 |
| SSE | 0 | 3 | 3 | 12 | 6 | 3 | 0 | 0 | 0 | 0 | 0 | 27 |
| S | 0 | 6 | 6 | 4 | 12 | 7 | 0 | 0 | 0 | 0 | 0 | 35 |
| SSW | 0 | 4 | 7 | 4 | 5 | 5 | 4 | 0 | 0 | 0 | 0 | 29 |
| SW | 0 | 5 | 6 | 15 | 20 | 14 | 6 | 1 | 0 | 0 | 0 | 67 |
| WSW | 0 | 2 | 1 | 4 | 15 | 10 | 2 | 0 | 0 | 0 | 0 | 34 |
| W | 0 | 3 | 6 | 7 | 24 | 6 | 1 | 0 | 0 | 0 | 0 | 47 |
| WNW | 0 | 0 | 9 | 6 | 7 | 1 | 0 | 0 | 0 | 0 | 0 | 23 |
| NW | 0 | 5 | 7 | 6 | 15 | 1 | 1 | 0 | 0 | 0 | 0 | 35 |
| NNW | 0 | 1 | 1 | 3 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 9 |
| Tot | 0 | 43 | 73 | 92 | 170 | 78 | 20 | 11 | 4 | 0 | 0 | 491 |

| | |
|---|---|
| Hours of Calm | 3 |
| Hours of Variable Direction | 0 |
| Hours of Valid Data | 494 |
| Hours of Missing Data | 4 |
| Hours in Period | 2184 |

# Quad Cities Nuclear Power Station
# 2007 Annual Radioactive Effluent Release Report

## Joint Frequency Data

Site:: Quad Cities Station
Period:: Months Apr - Jun for years 2007 - 2007
Stability Class F Moderately Stable based on Lapse Rate
Elevations:: Winds 33ft Stability 196ft

| Wind Direction Sector | Wind Speed Range (m/s) <0.50 | 0.5-1.0 | 1.1-1.5 | 1.6-2.0 | 2.1-3.0 | 3.1-4.0 | 4.1-5.0 | 5.1-6.0 | 6.1-8.0 | 8.1-10.0 | >10.00 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N | 0 | 4 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 6 |
| NNE | 1 | 3 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 |
| NE | 0 | 3 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| ENE | 0 | 3 | 1 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 7 |
| E | 0 | 4 | 5 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 10 |
| ESE | 0 | 10 | 8 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 30 |
| SE | 0 | 2 | 6 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 9 |
| SSE | 0 | 9 | 8 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 19 |
| S | 0 | 7 | 2 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 14 |
| SSW | 0 | 3 | 10 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14 |
| SW | 0 | 1 | 5 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 |
| WSW | 0 | 3 | 4 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9 |
| W | 0 | 2 | 6 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 10 |
| WNW | 0 | 5 | 5 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 11 |
| NW | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| NNW | 0 | 0 | 3 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 |
| Tot | 1 | 60 | 65 | 26 | 13 | 0 | 0 | 0 | 0 | 0 | 0 | 165 |

| | |
|---|---|
| Hours of Calm . . . . . | 13 |
| Hours of Variable Direction | 0 |
| Hours of Valid Data . . . . | 178 |
| Hours of Missing Data . . . | 4 |
| Hours in Period . . . . . | 2184 |

# Quad Cities Nuclear Power Station
# 2007 Annual Radioactive Effluent Release Report

## Joint Frequency Data

Site:: Quad Cities Station
Period:: Months Apr - Jun for years 2007 - 2007
Stability Class G Extremely Stable based on Lapse Rate
Elevations:: Winds 33ft Stability 196ft

| Wind Direction Sector | Wind Speed Range (m/s) <0.50 | 0.5-1.0 | 1.1-1.5 | 1.6-2.0 | 2.1-3.0 | 3.1-4.0 | 4.1-5.0 | 5.1-6.0 | 6.1-8.0 | 8.1-10.0 | >10.00 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| NNE | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| NE | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| ENE | 0 | 11 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13 |
| E | 0 | 9 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18 |
| ESE | 0 | 16 | 21 | 5 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 43 |
| SE | 0 | 11 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13 |
| SSE | 0 | 1 | 3 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 6 |
| S | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| SSW | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| SW | 0 | 4 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 |
| WSW | 0 | 7 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 |
| W | 0 | 6 | 9 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18 |
| WNW | 0 | 2 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| NW | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| NNW | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| Tot | 0 | 84 | 55 | 9 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 150 |

| | |
|---|---|
| Hours of Calm | 75 |
| Hours of Variable Direction | 0 |
| Hours of Valid Data | 225 |
| Hours of Missing Data | 4 |
| Hours in Period | 2184 |

# Quad Cities Nuclear Power Station
# 2007 Annual Radioactive Effluent Release Report

## Joint Frequency Data

Site:: Quad Cities Station
Period:: Months Apr - Jun for years 2007 - 2007
All Stabilities
Elevations:: Winds 196ft Stability 196ft

| Wind Direction Sector | Wind Speed Range (m/s) <0.50 | 0.5-1.0 | 1.1-1.5 | 1.6-2.0 | 2.1-3.0 | 3.1-4.0 | 4.1-5.0 | 5.1-6.0 | 6.1-8.0 | 8.1-10.0 | >10.00 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N | 0 | 0 | 2 | 1 | 6 | 8 | 7 | 9 | 4 | 1 | 0 | 38 |
| NNE | 0 | 1 | 0 | 3 | 7 | 15 | 15 | 11 | 16 | 4 | 0 | 72 |
| NE | 0 | 0 | 2 | 2 | 12 | 13 | 16 | 24 | 23 | 14 | 1 | 107 |
| ENE | 0 | 1 | 0 | 2 | 17 | 12 | 19 | 18 | 25 | 14 | 10 | 118 |
| E | 0 | 2 | 1 | 7 | 18 | 22 | 27 | 44 | 46 | 27 | 9 | 203 |
| ESE | 0 | 0 | 3 | 5 | 13 | 28 | 38 | 29 | 22 | 13 | 23 | 174 |
| SE | 0 | 0 | 0 | 9 | 17 | 32 | 31 | 22 | 14 | 7 | 3 | 135 |
| SSE | 0 | 0 | 2 | 4 | 5 | 28 | 20 | 28 | 29 | 19 | 6 | 141 |
| S | 0 | 0 | 2 | 0 | 8 | 17 | 14 | 21 | 48 | 24 | 25 | 159 |
| SSW | 0 | 0 | 2 | 3 | 19 | 15 | 30 | 36 | 31 | 13 | 24 | 173 |
| SW | 0 | 0 | 5 | 6 | 16 | 17 | 19 | 19 | 33 | 10 | 10 | 135 |
| WSW | 0 | 1 | 3 | 7 | 14 | 17 | 23 | 16 | 16 | 5 | 7 | 109 |
| W | 0 | 0 | 2 | 7 | 32 | 35 | 26 | 30 | 13 | 6 | 3 | 154 |
| WNW | 0 | 0 | 4 | 3 | 16 | 29 | 30 | 34 | 37 | 18 | 28 | 199 |
| NW | 0 | 1 | 0 | 1 | 15 | 15 | 29 | 25 | 52 | 38 | 3 | 179 |
| NNW | 0 | 1 | 2 | 4 | 17 | 13 | 18 | 13 | 9 | 2 | 0 | 79 |
| Tot | 0 | 7 | 30 | 64 | 232 | 316 | 362 | 379 | 418 | 215 | 152 | 2175 |

| | |
|---|---|
| Hours of Calm | 3 |
| Hours of Variable Direction | 0 |
| Hours of Valid Data | 2178 |
| Hours of Missing Data | 6 |
| Hours in Period | 2184 |

# Quad Cities Nuclear Power Station
# 2007 Annual Radioactive Effluent Release Report

## Joint Frequency Data

Site:: Quad Cities Station
Period:: Months Apr - Jun for years 2007 - 2007
Stability Class A Extremely Unstable based on Lapse Rate
Elevations:: Winds 196ft Stability 196ft

| Wind Direction Sector | Wind Speed Range (m/s) <0.50 | 0.5-1.0 | 1.1-1.5 | 1.6-2.0 | 2.1-3.0 | 3.1-4.0 | 4.1-5.0 | 5.1-6.0 | 6.1-8.0 | 8.1-10.0 | >10.00 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NNE | 0 | 0 | 0 | 0 | 0 | 1 | 4 | 3 | 6 | 2 | 0 | 16 |
| NE | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 4 | 0 | 0 | 8 |
| ENE | 0 | 0 | 0 | 0 | 0 | 2 | 3 | 1 | 5 | 0 | 0 | 11 |
| E | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 4 | 4 | 0 | 10 |
| ESE | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 1 | 0 | 5 |
| SE | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 2 | 5 | 3 | 0 | 16 |
| SSE | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 11 | 6 | 7 | 2 | 31 |
| S | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 3 | 13 | 2 | 17 | 39 |
| SSW | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 12 | 12 | 3 | 3 | 36 |
| SW | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 2 | 4 | 1 | 3 | 11 |
| WSW | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 0 | 2 | 0 | 0 | 5 |
| W | 0 | 0 | 0 | 0 | 3 | 4 | 1 | 0 | 1 | 1 | 0 | 10 |
| WNW | 0 | 0 | 0 | 0 | 0 | 3 | 2 | 2 | 10 | 3 | 0 | 20 |
| NW | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 1 | 10 | 18 | 1 | 36 |
| NNW | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 3 | 1 | 0 | 0 | 7 |
| Tot | 0 | 0 | 0 | 0 | 4 | 25 | 33 | 45 | 83 | 45 | 26 | 261 |

| | |
|---|---|
| Hours of Calm . . . . . | 0 |
| Hours of Variable Direction | 0 |
| Hours of Valid Data . . . . | 261 |
| Hours of Missing Data . . . | 6 |
| Hours in Period . . . . . | 2184 |

# Quad Cities Nuclear Power Station
# 2007 Annual Radioactive Effluent Release Report

## *Joint Frequency Data*

Site:: Quad Cities Station
Period:: Months Apr - Jun for years 2007 - 2007
Stability Class B Moderately Unstable based on Lapse Rate
Elevations:: Winds 196ft Stability 196ft

| Wind Direction Sector | Wind Speed Range (m/s) <0.50 | 0.5-1.0 | 1.1-1.5 | 1.6-2.0 | 2.1-3.0 | 3.1-4.0 | 4.1-5.0 | 5.1-6.0 | 6.1-8.0 | 8.1-10.0 | >10.00 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| NNE | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 2 | 0 | 0 | 5 |
| NE | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 1 | 0 | 1 | 0 | 6 |
| ENE | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 2 | 0 | 0 | 0 | 3 |
| E | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 1 | 1 | 5 |
| ESE | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 1 | 1 | 2 | 0 | 7 |
| SE | 0 | 0 | 0 | 0 | 1 | 3 | 2 | 1 | 2 | 0 | 0 | 9 |
| SSE | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 2 | 2 | 0 | 1 | 6 |
| S | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 2 |
| SSW | 0 | 0 | 0 | 0 | 2 | 1 | 2 | 2 | 0 | 0 | 0 | 7 |
| SW | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 2 |
| WSW | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 2 | 0 | 0 | 5 |
| W | 0 | 0 | 0 | 0 | 1 | 1 | 2 | 1 | 0 | 0 | 0 | 5 |
| WNW | 0 | 0 | 0 | 0 | 0 | 4 | 1 | 1 | 0 | 0 | 3 | 9 |
| NW | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 2 | 3 | 1 | 0 | 8 |
| NNW | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| Tot | 0 | 0 | 0 | 0 | 6 | 18 | 18 | 15 | 13 | 6 | 5 | 81 |

| | |
|---|---|
| Hours of Calm . . . . . | 0 |
| Hours of Variable Direction | 0 |
| Hours of Valid Data . . . . | 81 |
| Hours of Missing Data . . . | 6 |
| Hours in Period . . . . . | 2184 |

# Quad Cities Nuclear Power Station
# 2007 Annual Radioactive Effluent Release Report

## Joint Frequency Data

Site:: Quad Cities Station
Period:: Months Apr - Jun for years 2007 - 2007
Stability Class C Slightly Unstable based on Lapse Rate
Elevations:: Winds 196ft Stability 196ft

| Wind Direction Sector | Wind Speed Range (m/s) <0.50 | 0.5-1.0 | 1.1-1.5 | 1.6-2.0 | 2.1-3.0 | 3.1-4.0 | 4.1-5.0 | 5.1-6.0 | 6.1-8.0 | 8.1-10.0 | >10.00 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| NNE | 0 | 0 | 0 | 0 | 2 | 1 | 3 | 2 | 1 | 2 | 0 | 11 |
| NE | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 3 | 0 | 0 | 0 | 7 |
| ENE | 0 | 0 | 0 | 0 | 1 | 0 | 2 | 0 | 0 | 1 | 0 | 4 |
| E | 0 | 0 | 0 | 1 | 2 | 0 | 2 | 0 | 3 | 0 | 0 | 8 |
| ESE | 0 | 0 | 0 | 0 | 1 | 7 | 2 | 1 | 2 | 2 | 2 | 17 |
| SE | 0 | 0 | 0 | 0 | 4 | 2 | 2 | 2 | 0 | 0 | 0 | 10 |
| SSE | 0 | 0 | 0 | 1 | 1 | 2 | 0 | 3 | 2 | 1 | 0 | 10 |
| S | 0 | 0 | 0 | 0 | 2 | 2 | 1 | 0 | 2 | 1 | 1 | 9 |
| SSW | 0 | 0 | 0 | 0 | 6 | 0 | 1 | 1 | 2 | 0 | 2 | 12 |
| SW | 0 | 0 | 1 | 1 | 4 | 2 | 0 | 3 | 0 | 0 | 0 | 11 |
| WSW | 0 | 0 | 0 | 2 | 2 | 2 | 3 | 0 | 2 | 0 | 0 | 11 |
| W | 0 | 0 | 0 | 0 | 6 | 5 | 1 | 1 | 2 | 0 | 0 | 15 |
| WNW | 0 | 0 | 0 | 0 | 4 | 3 | 0 | 3 | 5 | 1 | 5 | 21 |
| NW | 0 | 0 | 0 | 0 | 1 | 3 | 3 | 0 | 2 | 4 | 1 | 14 |
| NNW | 0 | 0 | 0 | 0 | 1 | 2 | 1 | 2 | 1 | 0 | 0 | 7 |
| Tot | 0 | 0 | 1 | 5 | 43 | 31 | 21 | 21 | 24 | 12 | 11 | 169 |

| | |
|---|---|
| Hours of Calm . . . . . | 0 |
| Hours of Variable Direction | 0 |
| Hours of Valid Data . . . . | 169 |
| Hours of Missing Data . . . | 6 |
| Hours in Period . . . . . | 2184 |

# Quad Cities Nuclear Power Station
# 2007 Annual Radioactive Effluent Release Report

## Joint Frequency Data

Site:: Quad Cities Station
Period:: Months Apr - Jun for years 2007 - 2007
Stability Class D Neutral based on Lapse Rate
Elevations:: Winds 196ft Stability 196ft

| Wind Direction Sector | Wind Speed Range (m/s) <0.50 | 0.5-1.0 | 1.1-1.5 | 1.6-2.0 | 2.1-3.0 | 3.1-4.0 | 4.1-5.0 | 5.1-6.0 | 6.1-8.0 | 8.1-10.0 | >10.00 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N | 0 | 0 | 0 | 1 | 1 | 3 | 3 | 2 | 2 | 1 | 0 | 13 |
| NNE | 0 | 0 | 0 | 1 | 2 | 6 | 1 | 3 | 4 | 0 | 0 | 17 |
| NE | 0 | 0 | 0 | 1 | 6 | 10 | 8 | 11 | 9 | 11 | 1 | 57 |
| ENE | 0 | 0 | 0 | 1 | 8 | 5 | 8 | 6 | 16 | 13 | 10 | 67 |
| E | 0 | 0 | 0 | 2 | 6 | 9 | 9 | 23 | 27 | 20 | 5 | 101 |
| ESE | 0 | 0 | 0 | 3 | 7 | 7 | 11 | 7 | 8 | 4 | 15 | 62 |
| SE | 0 | 0 | 0 | 5 | 4 | 5 | 8 | 3 | 2 | 1 | 0 | 28 |
| SSE | 0 | 0 | 0 | 2 | 1 | 2 | 2 | 3 | 4 | 3 | 2 | 19 |
| S | 0 | 0 | 0 | 0 | 3 | 2 | 0 | 2 | 7 | 7 | 2 | 23 |
| SSW | 0 | 0 | 0 | 1 | 3 | 4 | 3 | 3 | 6 | 3 | 11 | 34 |
| SW | 0 | 0 | 2 | 3 | 7 | 6 | 6 | 4 | 7 | 2 | 6 | 43 |
| WSW | 0 | 0 | 0 | 3 | 6 | 2 | 4 | 4 | 4 | 5 | 7 | 35 |
| W | 0 | 0 | 1 | 3 | 11 | 13 | 5 | 6 | 4 | 5 | 3 | 51 |
| WNW | 0 | 0 | 1 | 1 | 9 | 7 | 11 | 18 | 21 | 14 | 20 | 102 |
| NW | 0 | 0 | 0 | 0 | 6 | 0 | 16 | 11 | 36 | 14 | 1 | 84 |
| NNW | 0 | 0 | 1 | 2 | 7 | 3 | 9 | 6 | 6 | 2 | 0 | 36 |
| Tot | 0 | 0 | 5 | 29 | 87 | 84 | 104 | 112 | 163 | 105 | 83 | 772 |

| | |
|---|---|
| Hours of Calm . . . . . | 0 |
| Hours of Variable Direction | 0 |
| Hours of Valid Data . . . . | 772 |
| Hours of Missing Data . . . | 6 |
| Hours in Period . . . . . | 2184 |

# Quad Cities Nuclear Power Station
# 2007 Annual Radioactive Effluent Release Report

## Joint Frequency Data

Site:: Quad Cities Station
Period:: Months Apr - Jun for years 200 - 200
Stability Class E Slightly Stable based on Lap ate
Elevations:: Winds 196ft Stability 33ft

| Wind Direction Sector | Wind Speed Range (m/s) <0.50 | 0.5-1.0 | 1.1-1.5 | 1.6-2.0 | 2.1-3.0 | 3.1-4.0 | 4.1-5.0 | 5.1-6.0 | [illegible] | 1-[illegible] | >10.00 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N | 0 | 0 | 0 | 0 | 1 | 2 | 3 | 4 | 2 | 0 | 0 | 12 |
| NNE | 0 | 0 | 0 | 1 | 1 | 2 | 3 | 3 | 2 | 0 | 0 | 12 |
| NE | 0 | 0 | 1 | 0 | 1 | 0 | 2 | 7 | 7 | 2 | 0 | 23 |
| ENE | 0 | 0 | 0 | 1 | 4 | 3 | 4 | 8 | 4 | 0 | 0 | 24 |
| E | 0 | 0 | 0 | 1 | 1 | 7 | 7 | 12 | 8 | 2 | 3 | 41 |
| ESE | 0 | 0 | 0 | 1 | 0 | 7 | 8 | 3 | 4 | 4 | 6 | 33 |
| SE | 0 | 0 | 0 | 0 | 1 | 5 | 6 | 9 | 3 | 3 | 3 | 30 |
| SSE | 0 | 0 | 0 | 1 | 0 | 4 | 2 | 3 | 9 | 6 | 1 | 26 |
| S | 0 | 0 | 0 | 0 | 0 | 1 | 4 | 6 | 18 | 9 | 5 | 43 |
| SSW | 0 | 0 | 1 | 1 | 7 | 4 | 11 | 7 | 8 | 7 | 8 | 54 |
| SW | 0 | 0 | 2 | 0 | 4 | 4 | 8 | 8 | 22 | 6 | 1 | 55 |
| WSW | 0 | 0 | 1 | 0 | 0 | 4 | 6 | 11 | 6 | 0 | 0 | 28 |
| W | 0 | 0 | 0 | 3 | 3 | 5 | 6 | 20 | 6 | 0 | 0 | 43 |
| WNW | 0 | 0 | 1 | 2 | 1 | 5 | 11 | 6 | 1 | 0 | 0 | 27 |
| NW | 0 | 0 | 0 | 0 | 5 | 4 | 4 | 10 | 1 | 1 | 0 | 25 |
| NNW | 0 | 0 | 0 | 1 | 2 | 5 | 5 | 2 | 1 | 0 | 0 | 16 |
| Tot | 0 | 0 | 6 | 12 | 31 | 62 | 90 | 119 | 105 | 40 | 27 | 492 |

| | |
|---|---|
| Hours of Calm | 0 |
| Hours of Variable Direction | 0 |
| Hours of Valid Data | 492 |
| Hours of Missing Data | 6 |
| Hours in Period | 2184 |

# Quad Cities Nuclear Power Station
# 2007 Annual Radioactive Effluent Release Report

## Joint Frequency Data

Site:: Quad Cities Station
Period:: Months Apr - Jun for years 2007 - 2007
Stability Class F Moderately Stable based on Lapse Rate
Elevations:: Winds 196ft Stability 196ft

| Wind Direction Sector | Wind Speed Range (m/s) <0.50 | 0.5-1.0 | 1.1-1.5 | 1.6-2.0 | 2.1-3.0 | 3.1-4.0 | 4.1-5.0 | 5.1-6.0 | 6.1-8.0 | 8.1-10.0 | >10.00 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 3 | 0 | 0 | 0 | 6 |
| NNE | 0 | 1 | 0 | 0 | 1 | 2 | 2 | 0 | 1 | 0 | 0 | 7 |
| NE | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 3 |
| ENE | 0 | 1 | 0 | 0 | 3 | 1 | 2 | 1 | 0 | 0 | 0 | 8 |
| E | 0 | 0 | 0 | 0 | 5 | 0 | 3 | 3 | 3 | 0 | 0 | 14 |
| ESE | 0 | 0 | 1 | 1 | 0 | 0 | 3 | 8 | 1 | 0 | 0 | 14 |
| SE | 0 | 0 | 0 | 0 | 0 | 3 | 4 | 0 | 1 | 0 | 0 | 8 |
| SSE | 0 | 0 | 0 | 0 | 1 | 7 | 5 | 4 | 4 | 1 | 0 | 22 |
| S | 0 | 0 | 0 | 0 | 0 | 5 | 6 | 7 | 7 | 5 | 0 | 30 |
| SSW | 0 | 0 | 0 | 0 | 1 | 2 | 7 | 7 | 3 | 0 | 0 | 20 |
| SW | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 2 | 0 | 0 | 0 | 5 |
| WSW | 0 | 0 | 0 | 1 | 1 | 2 | 6 | 1 | 0 | 0 | 0 | 11 |
| W | 0 | 0 | 1 | 0 | 1 | 2 | 4 | 0 | 0 | 0 | 0 | 8 |
| WNW | 0 | 0 | 1 | 0 | 0 | 2 | 3 | 1 | 0 | 0 | 0 | 7 |
| NW | 0 | 0 | 0 | 1 | 1 | 3 | 2 | 1 | 0 | 0 | 0 | 8 |
| NNW | 0 | 0 | 1 | 0 | 2 | 2 | 2 | 0 | 0 | 0 | 0 | 7 |
| Tot | 0 | 2 | 4 | 3 | 18 | 36 | 51 | 38 | 20 | 6 | 0 | 178 |

| | |
|---|---|
| Hours of Calm . . . . . | 0 |
| Hours of Variable Direction | 0 |
| Hours of Valid Data . . . . | 178 |
| Hours of Missing Data . . . | 6 |
| Hours in Period . . . . . | 2184 |

# Quad Cities Nuclear Power Station
# 2007 Annual Radioactive Effluent Release Report

## Joint Frequency Data

Site:: Quad Cities Station
Period:: Months Apr - Jun for years 2007 - 2007
Stability Class G Extremely Stable based on Lapse Rate
Elevations:: Winds 196ft Stability 196ft

| Wind Direction Sector | Wind Speed Range (m/s) <0.50 | 0.5-1.0 | 1.1-1.5 | 1.6-2.0 | 2.1-3.0 | 3.1-4.0 | 4.1-5.0 | 5.1-6.0 | 6.1-8.0 | 8.1-10.0 | >10.00 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N | 0 | 0 | 2 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 4 |
| NNE | 0 | 0 | 0 | 1 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 4 |
| NE | 0 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 3 |
| ENE | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| E | 0 | 2 | 1 | 3 | 4 | 6 | 5 | 3 | 0 | 0 | 0 | 24 |
| ESE | 0 | 0 | 2 | 0 | 5 | 7 | 9 | 7 | 6 | 0 | 0 | 36 |
| SE | 0 | 0 | 0 | 4 | 7 | 11 | 6 | 5 | 1 | 0 | 0 | 34 |
| SSE | 0 | 0 | 2 | 0 | 2 | 12 | 6 | 2 | 2 | 1 | 0 | 27 |
| S | 0 | 0 | 2 | 0 | 3 | 3 | 1 | 3 | 1 | 0 | 0 | 13 |
| SSW | 0 | 0 | 1 | 1 | 0 | 1 | 3 | 4 | 0 | 0 | 0 | 10 |
| SW | 0 | 0 | 0 | 2 | 1 | 2 | 3 | 0 | 0 | 0 | 0 | 8 |
| WSW | 0 | 1 | 2 | 1 | 4 | 4 | 2 | 0 | 0 | 0 | 0 | 14 |
| W | 0 | 0 | 0 | 1 | 7 | 5 | 7 | 2 | 0 | 0 | 0 | 22 |
| WNW | 0 | 0 | 1 | 0 | 2 | 5 | 2 | 3 | 0 | 0 | 0 | 13 |
| NW | 0 | 1 | 0 | 0 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 4 |
| NNW | 0 | 1 | 0 | 1 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| Tot | 0 | 5 | 14 | 15 | 43 | 60 | 45 | 29 | 10 | 1 | 0 | 222 |

| | |
|---|---|
| Hours of Calm | 3 |
| Hours of Variable Direction | 0 |
| Hours of Valid Data | 225 |
| Hours of Missing Data | 6 |
| Hours in Period | 2184 |

# Quad Cities Nuclear Power Station
# 2007 Annual Radioactive Effluent Release Report

## Joint Frequency Data

Site:: Quad Cities Station
Period:: Months Apr - Jun for years 2007 - 2007
All Stabilities
Elevations:: Winds 296ft Stability 296ft

| Wind Direction Sector | Wind Speed Range (m/s) <0.50 | 0.5-1.0 | 1.1-1.5 | 1.6-2.0 | 2.1-3.0 | 3.1-4.0 | 4.1-5.0 | 5.1-6.0 | 6.1-8.0 | 8.1-10.0 | >10.00 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N | 0 | 0 | 1 | 1 | 8 | 4 | 9 | 6 | 6 | 2 | 1 | 38 |
| NNE | 0 | 1 | 1 | 1 | 6 | 10 | 13 | 13 | 12 | 11 | 0 | 68 |
| NE | 0 | 0 | 2 | 2 | 10 | 11 | 16 | 17 | 23 | 13 | 8 | 102 |
| ENE | 0 | 0 | 3 | 0 | 16 | 13 | 15 | 14 | 28 | 19 | 17 | 125 |
| E | 0 | 0 | 2 | 1 | 13 | 10 | 13 | 35 | 59 | 29 | 10 | 172 |
| ESE | 0 | 0 | 1 | 2 | 14 | 18 | 28 | 30 | 42 | 21 | 33 | 189 |
| SE | 0 | 0 | 1 | 4 | 16 | 15 | 26 | 21 | 30 | 4 | 11 | 128 |
| SSE | 0 | 0 | 0 | 5 | 7 | 10 | 17 | 34 | 36 | 16 | 13 | 138 |
| S | 0 | 0 | 1 | 1 | 3 | 11 | 13 | 19 | 45 | 45 | 37 | 175 |
| SSW | 0 | 0 | 4 | 4 | 13 | 13 | 11 | 26 | 57 | 20 | 30 | 178 |
| SW | 0 | 0 | 3 | 2 | 16 | 16 | 13 | 19 | 35 | 22 | 15 | 141 |
| WSW | 0 | 0 | 4 | 6 | 13 | 9 | 13 | 8 | 27 | 14 | 11 | 105 |
| W | 0 | 0 | 1 | 3 | 15 | 18 | 33 | 14 | 29 | 8 | 5 | 126 |
| WNW | 0 | 0 | 1 | 3 | 14 | 21 | 28 | 23 | 57 | 21 | 26 | 194 |
| NW | 0 | 0 | 0 | 2 | 10 | 17 | 16 | 36 | 48 | 53 | 25 | 207 |
| NNW | 0 | 1 | 0 | 2 | 9 | 16 | 11 | 20 | 16 | 5 | 0 | 80 |
| Tot | 0 | 2 | 25 | 39 | 183 | 212 | 275 | 335 | 550 | 303 | 242 | 2166 |

| | |
|---|---|
| Hours of Calm . . . . . | 2 |
| Hours of Variable Direction | 0 |
| Hours of Valid Data . . . . | 2168 |
| Hours of Missing Data . . . | 16 |
| Hours in Period . . . . . | 2184 |

# Quad Cities Nuclear Power Station
# 2007 Annual Radioactive Effluent Release Report

## Joint Frequency Data

Site:: Quad Cities Station
Period:: Months Apr - Jun for years 2007 - 2007
Stability Class A Extremely Unstable based on Lapse Rate
Elevations:: Winds 296ft Stability 296ft

| Wind Direction Sector | Wind Speed Range (m/s) <0.50 | 0.5-1.0 | 1.1-1.5 | 1.6-2.0 | 2.1-3.0 | 3.1-4.0 | 4.1-5.0 | 5.1-6.0 | 6.1-8.0 | 8.1-10.0 | >10.00 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NNE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 3 | 0 | 6 |
| NE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 0 | 3 |
| ENE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 1 | 0 | 4 |
| E | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ESE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 2 |
| SSE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 8 | 3 | 1 | 16 |
| S | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 5 | 6 | 12 | 24 |
| SSW | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 11 | 3 | 4 | 23 |
| SW | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 2 | 5 |
| WSW | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| W | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| WNW | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 3 | 0 | 5 |
| NW | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 11 | 2 | 14 |
| NNW | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Tot | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 12 | 36 | 32 | 21 | 102 |

| | |
|---|---|
| Hours of Calm . . . . . | 0 |
| Hours of Variable Direction | 0 |
| Hours of Valid Data . . . . | 102 |
| Hours of Missing Data . . . | 16 |
| Hours in Period . . . . . | 2184 |

# Quad Cities Nuclear Power Station
# 2007 Annual Radioactive Effluent Release Report

## Joint Frequency Data

Site:: Quad Cities Station
Period:: Months Apr - Jun for years 2007 - 2007
Stability Class B Moderately Unstable based on Lapse Rate
Elevations:: Winds 296ft Stability 296ft

| Wind Direction Sector | Wind Speed Range (m/s) <0.50 | 0.5-1.0 | 1.1-1.5 | 1.6-2.0 | 2.1-3.0 | 3.1-4.0 | 4.1-5.0 | 5.1-6.0 | 6.1-8.0 | 8.1-10.0 | >10.00 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NNE | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 2 | 2 | 1 | 0 | 8 |
| NE | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 3 | 0 | 0 | 0 | 4 |
| ENE | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 2 | 0 | 0 | 5 |
| E | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 3 | 3 | 1 | 8 |
| ESE | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 2 |
| SE | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 3 | 3 | 0 | 1 | 8 |
| SSE | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 3 | 2 | 1 | 1 | 10 |
| S | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 3 | 4 | 10 |
| SSW | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 4 | 1 | 0 | 8 |
| SW | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 1 | 3 |
| WSW | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 2 |
| W | 0 | 0 | 0 | 0 | 0 | 1 | 5 | 0 | 0 | 0 | 0 | 6 |
| WNW | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 6 | 3 | 1 | 13 |
| NW | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 3 | 1 | 6 | 7 | 20 |
| NNW | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 3 |
| Tot | 0 | 0 | 0 | 0 | 0 | 8 | 21 | 18 | 28 | 19 | 16 | 110 |

| | |
|---|---|
| Hours of Calm . . . . . | 0 |
| Hours of Variable Direction | 0 |
| Hours of Valid Data . . . . | 110 |
| Hours of Missing Data . . . | 16 |
| Hours in Period . . . . . | 2184 |

# Quad Cities Nuclear Power Station
# 2007 Annual Radioactive Effluent Release Report

## Joint Frequency Data

Site:: Quad Cities Station
Period:: Months Apr - Jun for years 2007 - 2007
Stability Class C Slightly Unstable based on Lapse Rate
Elevations:: Winds 296ft Stability 296ft

| Wind Direction Sector | Wind Speed Range (m/s) <0.50 | 0.5-1.0 | 1.1-1.5 | 1.6-2.0 | 2.1-3.0 | 3.1-4.0 | 4.1-5.0 | 5.1-6.0 | 6.1-8.0 | 8.1-10.0 | >10.00 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N | 0 | 0 | 0 | 0 | 2 | 1 | 1 | 0 | 0 | 0 | 0 | 4 |
| NNE | 0 | 0 | 0 | 0 | 1 | 2 | 3 | 3 | 2 | 1 | 0 | 12 |
| NE | 0 | 0 | 0 | 0 | 2 | 2 | 2 | 1 | 0 | 2 | 0 | 9 |
| ENE | 0 | 0 | 0 | 0 | 1 | 1 | 3 | 4 | 2 | 0 | 0 | 11 |
| E | 0 | 0 | 0 | 0 | 2 | 0 | 1 | 1 | 2 | 2 | 0 | 8 |
| ESE | 0 | 0 | 0 | 0 | 0 | 4 | 5 | 4 | 2 | 3 | 3 | 21 |
| SE | 0 | 0 | 0 | 0 | 2 | 5 | 2 | 1 | 3 | 1 | 0 | 14 |
| SSE | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 4 | 3 | 1 | 1 | 11 |
| S | 0 | 0 | 0 | 0 | 1 | 3 | 1 | 2 | 5 | 0 | 2 | 14 |
| SSW | 0 | 0 | 0 | 0 | 4 | 3 | 2 | 1 | 5 | 1 | 0 | 16 |
| SW | 0 | 0 | 0 | 0 | 1 | 2 | 2 | 2 | 1 | 1 | 1 | 10 |
| WSW | 0 | 0 | 0 | 0 | 1 | 1 | 3 | 1 | 1 | 4 | 0 | 11 |
| W | 0 | 0 | 0 | 0 | 3 | 4 | 5 | 1 | 0 | 0 | 0 | 13 |
| WNW | 0 | 0 | 0 | 0 | 3 | 6 | 4 | 1 | 4 | 0 | 5 | 23 |
| NW | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 3 | 3 | 3 | 2 | 15 |
| NNW | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 4 | 2 | 1 | 0 | 8 |
| Tot | 0 | 0 | 0 | 1 | 24 | 37 | 36 | 33 | 35 | 20 | 14 | 200 |

| | |
|---|---|
| Hours of Calm . . . . . | 0 |
| Hours of Variable Direction | 0 |
| Hours of Valid Data . . . . | 200 |
| Hours of Missing Data . . . | 16 |
| Hours in Period . . . . . | 2184 |

# Quad Cities Nuclear Power Station
# 2007 Annual Radioactive Effluent Release Report

## Joint Frequency Data

Site:: Quad Cities Station
Period:: Months Apr - Jun for years 2007 - 2007
Stability Class D Neutral based on Lapse Rate
Elevations:: Winds 296ft Stability 296ft

| Wind Direction Sector | Wind Speed Range (m/s) <0.50 | 0.5-1.0 | 1.1-1.5 | 1.6-2.0 | 2.1-3.0 | 3.1-4.0 | 4.1-5.0 | 5.1-6.0 | 6.1-8.0 | 8.1-10.0 | >10.00 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N | 0 | 0 | 0 | 1 | 1 | 2 | 5 | 3 | 1 | 0 | 1 | 14 |
| NNE | 0 | 0 | 0 | 1 | 1 | 4 | 2 | 5 | 1 | 5 | 0 | 19 |
| NE | 0 | 0 | 0 | 1 | 5 | 7 | 9 | 11 | 10 | 7 | 6 | 56 |
| ENE | 0 | 0 | 0 | 0 | 7 | 8 | 8 | 7 | 13 | 13 | 17 | 73 |
| E | 0 | 0 | 0 | 1 | 5 | 6 | 2 | 16 | 33 | 22 | 9 | 94 |
| ESE | 0 | 0 | 0 | 2 | 4 | 11 | 10 | 11 | 12 | 13 | 19 | 82 |
| SE | 0 | 0 | 0 | 3 | 9 | 3 | 13 | 4 | 5 | 1 | 4 | 42 |
| SSE | 0 | 0 | 0 | 3 | 2 | 2 | 3 | 6 | 6 | 4 | 3 | 29 |
| S | 0 | 0 | 0 | 0 | 1 | 2 | 3 | 1 | 5 | 10 | 5 | 27 |
| SSW | 0 | 0 | 2 | 2 | 7 | 3 | 3 | 7 | 8 | 6 | 14 | 52 |
| SW | 0 | 0 | 1 | 2 | 9 | 8 | 3 | 6 | 7 | 4 | 6 | 46 |
| WSW | 0 | 0 | 2 | 4 | 8 | 4 | 2 | 4 | 8 | 6 | 9 | 47 |
| W | 0 | 0 | 1 | 2 | 9 | 10 | 9 | 7 | 7 | 7 | 5 | 57 |
| WNW | 0 | 0 | 0 | 2 | 7 | 6 | 8 | 9 | 23 | 14 | 20 | 89 |
| NW | 0 | 0 | 0 | 1 | 7 | 4 | 5 | 21 | 33 | 33 | 14 | 118 |
| NNW | 0 | 0 | 0 | 2 | 4 | 7 | 5 | 10 | 8 | 3 | 0 | 39 |
| Tot | 0 | 0 | 6 | 27 | 86 | 87 | 90 | 128 | 180 | 148 | 132 | 884 |

| | |
|---|---|
| Hours of Calm . . . . . | 0 |
| Hours of Variable Direction | 0 |
| Hours of Valid Data . . . . | 884 |
| Hours of Missing Data . . . | 16 |
| Hours in Period . . . . . | 2184 |

# Quad Cities Nuclear Power Station
# 2007 Annual Radioactive Effluent Release Report

## Joint Frequency Data

Site:: Quad Cities Station
Period:: Months Apr - Jun for years 2007 - 2007
Stability Class E Slightly Stable based on Lapse Rate
Elevations:: Winds 296ft Stability 296ft

| Wind Direction Sector | Wind Speed Range (m/s) <0.50 | 0.5-1.0 | 1.1-1.5 | 1.6-2.0 | 2.1-3.0 | 3.1-4.0 | 4.1-5.0 | 5.1-6.0 | 6.1-8.0 | 8.1-10.0 | >10.00 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N | 0 | 0 | 0 | 0 | 2 | 1 | 1 | 3 | 3 | 2 | 0 | 12 |
| NNE | 0 | 0 | 0 | 0 | 1 | 3 | 3 | 2 | 3 | 1 | 0 | 13 |
| NE | 0 | 0 | 1 | 0 | 2 | 1 | 1 | 1 | 11 | 3 | 2 | 22 |
| ENE | 0 | 0 | 0 | 0 | 4 | 1 | 1 | 3 | 7 | 5 | 0 | 21 |
| E | 0 | 0 | 0 | 0 | 2 | 2 | 6 | 13 | 16 | 1 | 0 | 40 |
| ESE | 0 | 0 | 0 | 0 | 2 | 1 | 4 | 6 | 8 | 2 | 11 | 34 |
| SE | 0 | 0 | 1 | 0 | 0 | 2 | 5 | 4 | 10 | 1 | 6 | 29 |
| SSE | 0 | 0 | 0 | 1 | 1 | 2 | 4 | 9 | 7 | 5 | 6 | 35 |
| S | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 13 | 19 | 10 | 45 |
| SSW | 0 | 0 | 1 | 0 | 1 | 5 | 4 | 10 | 14 | 6 | 12 | 53 |
| SW | 0 | 0 | 1 | 0 | 2 | 4 | 4 | 8 | 17 | 16 | 5 | 57 |
| WSW | 0 | 0 | 1 | 1 | 3 | 3 | 3 | 2 | 11 | 4 | 2 | 30 |
| W | 0 | 0 | 0 | 1 | 1 | 0 | 4 | 4 | 18 | 1 | 0 | 29 |
| WNW | 0 | 0 | 1 | 0 | 1 | 1 | 3 | 6 | 20 | 1 | 0 | 33 |
| NW | 0 | 0 | 0 | 0 | 2 | 4 | 5 | 7 | 8 | 0 | 0 | 26 |
| NNW | 0 | 0 | 0 | 0 | 3 | 4 | 4 | 5 | 5 | 0 | 0 | 21 |
| Tot | 0 | 0 | 6 | 3 | 27 | 34 | 53 | 85 | 171 | 67 | 54 | 500 |

| | |
|---|---|
| Hours of Calm | 0 |
| Hours of Variable Direction | 0 |
| Hours of Valid Data | 500 |
| Hours of Missing Data | 16 |
| Hours in Period | 2184 |

# Quad Cities Nuclear Power Station
# 2007 Annual Radioactive Effluent Release Report

## Joint Frequency Data

Site:: Quad Cities Station
Period:: Months Apr - Jun for years 2007 - 2007
Stability Class F Moderately Stable based on Lapse Rate
Elevations:: Winds 296ft Stability 296ft

| Wind Direction Sector | Wind Speed Range (m/s) <0.50 | 0.5-1.0 | 1.1-1.5 | 1.6-2.0 | 2.1-3.0 | 3.1-4.0 | 4.1-5.0 | 5.1-6.0 | 6.1-8.0 | 8.1-10.0 | >10.00 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N | 0 | 0 | 0 | 0 | 2 | 0 | 1 | 0 | 2 | 0 | 0 | 5 |
| NNE | 0 | 1 | 0 | 0 | 2 | 0 | 1 | 0 | 2 | 0 | 0 | 6 |
| NE | 0 | 0 | 0 | 0 | 1 | 1 | 2 | 1 | 0 | 0 | 0 | 5 |
| ENE | 0 | 0 | 2 | 0 | 2 | 2 | 1 | 0 | 1 | 0 | 0 | 8 |
| E | 0 | 0 | 1 | 0 | 3 | 2 | 3 | 2 | 5 | 1 | 0 | 17 |
| ESE | 0 | 0 | 1 | 0 | 5 | 1 | 5 | 4 | 16 | 3 | 0 | 35 |
| SE | 0 | 0 | 0 | 0 | 0 | 1 | 3 | 4 | 3 | 0 | 0 | 11 |
| SSE | 0 | 0 | 0 | 0 | 1 | 2 | 5 | 6 | 4 | 2 | 1 | 21 |
| S | 0 | 0 | 0 | 0 | 0 | 2 | 7 | 11 | 12 | 7 | 4 | 43 |
| SSW | 0 | 0 | 0 | 2 | 0 | 0 | 1 | 2 | 10 | 3 | 0 | 18 |
| SW | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 1 | 4 | 0 | 0 | 7 |
| WSW | 0 | 0 | 0 | 1 | 0 | 0 | 2 | 0 | 6 | 0 | 0 | 9 |
| W | 0 | 0 | 0 | 0 | 1 | 0 | 5 | 2 | 2 | 0 | 0 | 10 |
| WNW | 0 | 0 | 0 | 1 | 0 | 1 | 3 | 6 | 1 | 0 | 0 | 12 |
| NW | 0 | 0 | 0 | 0 | 1 | 3 | 2 | 1 | 0 | 0 | 0 | 7 |
| NNW | 0 | 1 | 0 | 0 | 0 | 4 | 1 | 0 | 0 | 0 | 0 | 6 |
| Tot | 0 | 2 | 5 | 4 | 18 | 19 | 43 | 40 | 68 | 16 | 5 | 220 |

| | |
|---|---|
| Hours of Calm . . . . . | 0 |
| Hours of Variable Direction | 0 |
| Hours of Valid Data . . . . | 220 |
| Hours of Missing Data . . . | 16 |
| Hours in Period . . . . . | 2184 |

# Quad Cities Nuclear Power Station
# 2007 Annual Radioactive Effluent Release Report

## Joint Frequency Data

Site:: Quad Cities Station
Period:: Months Apr - Jun for years 2007 - 2007
Stability Class G Extremely Stable based on Lapse Rate
Elevations:: Winds 296ft Stability 296ft

| Wind Direction Sector | Wind Speed Range (m/s) <0.50 | 0.5-1.0 | 1.1-1.5 | 1.6-2.0 | 2.1-3.0 | 3.1-4.0 | 4.1-5.0 | 5.1-6.0 | 6.1-8.0 | 8.1-10.0 | >10.00 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N | 0 | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 3 |
| NNE | 0 | 0 | 1 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 4 |
| NE | 0 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 3 |
| ENE | 0 | 0 | 1 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| E | 0 | 0 | 1 | 0 | 1 | 0 | 1 | 2 | 0 | 0 | 0 | 5 |
| ESE | 0 | 0 | 0 | 0 | 3 | 1 | 3 | 4 | 4 | 0 | 0 | 15 |
| SE | 0 | 0 | 0 | 1 | 5 | 4 | 2 | 5 | 5 | 0 | 0 | 22 |
| SSE | 0 | 0 | 0 | 0 | 3 | 2 | 3 | 2 | 6 | 0 | 0 | 16 |
| S | 0 | 0 | 1 | 1 | 1 | 4 | 0 | 2 | 3 | 0 | 0 | 12 |
| SSW | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 0 | 5 | 0 | 0 | 8 |
| SW | 0 | 0 | 0 | 0 | 4 | 2 | 3 | 1 | 2 | 1 | 0 | 13 |
| WSW | 0 | 0 | 1 | 0 | 1 | 1 | 2 | 1 | 0 | 0 | 0 | 6 |
| W | 0 | 0 | 0 | 0 | 1 | 3 | 5 | 0 | 2 | 0 | 0 | 11 |
| WNW | 0 | 0 | 0 | 0 | 3 | 6 | 8 | 0 | 2 | 0 | 0 | 19 |
| NW | 0 | 0 | 0 | 1 | 0 | 2 | 1 | 1 | 2 | 0 | 0 | 7 |
| NNW | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 3 |
| Tot | 0 | 0 | 8 | 4 | 28 | 27 | 31 | 19 | 32 | 1 | 0 | 150 |

| | |
|---|---|
| Hours of Calm | 2 |
| Hours of Variable Direction | 0 |
| Hours of Valid Data | 152 |
| Hours of Missing Data | 16 |
| Hours in Period | 2184 |

# Quad Cities Nuclear Power Station
# 2007 Annual Radioactive Effluent Release Report

## Joint Frequency Data

Site:: Quad Cities Station
Period:: Months Jul - Sep for years 2007 - 2007
All Stabilities
Elevations:: Winds 33ft Stability 196ft

| Wind Direction Sector | Wind Speed Range (m/s) <0.50 | 0.5-1.0 | 1.1-1.5 | 1.6-2.0 | 2.1-3.0 | 3.1-4.0 | 4.1-5.0 | 5.1-6.0 | 6.1-8.0 | 8.1-10.0 | >10.00 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N | 0 | 18 | 8 | 18 | 39 | 15 | 1 | 0 | 0 | 0 | 0 | 99 |
| NNE | 0 | 10 | 15 | 13 | 19 | 5 | 1 | 0 | 0 | 0 | 0 | 63 |
| NE | 1 | 13 | 24 | 10 | 19 | 5 | 0 | 0 | 0 | 0 | 0 | 72 |
| ENE | 0 | 16 | 16 | 20 | 28 | 3 | 1 | 0 | 0 | 0 | 0 | 84 |
| E | 0 | 36 | 21 | 19 | 37 | 8 | 0 | 1 | 0 | 0 | 0 | 122 |
| ESE | 2 | 53 | 75 | 28 | 48 | 12 | 4 | 5 | 0 | 0 | 0 | 227 |
| SE | 0 | 33 | 49 | 36 | 32 | 6 | 2 | 2 | 0 | 0 | 0 | 160 |
| SSE | 0 | 20 | 35 | 29 | 51 | 12 | 1 | 0 | 0 | 0 | 0 | 148 |
| S | 1 | 21 | 24 | 27 | 31 | 19 | 2 | 0 | 0 | 0 | 0 | 125 |
| SSW | 0 | 7 | 14 | 31 | 56 | 34 | 5 | 0 | 0 | 0 | 0 | 147 |
| SW | 0 | 7 | 16 | 26 | 93 | 27 | 6 | 0 | 0 | 0 | 0 | 175 |
| WSW | 0 | 7 | 14 | 35 | 47 | 25 | 6 | 0 | 0 | 0 | 0 | 134 |
| W | 0 | 8 | 14 | 26 | 54 | 19 | 14 | 1 | 0 | 0 | 0 | 136 |
| WNW | 1 | 9 | 27 | 31 | 33 | 17 | 8 | 5 | 0 | 0 | 0 | 131 |
| NW | 0 | 10 | 29 | 46 | 47 | 15 | 9 | 2 | 0 | 0 | 0 | 158 |
| NNW | 0 | 15 | 16 | 19 | 24 | 8 | 2 | 0 | 0 | 0 | 0 | 84 |
| Tot | 5 | 283 | 397 | 414 | 658 | 230 | 62 | 16 | 0 | 0 | 0 | 2065 |

| | |
|---|---|
| Hours of Calm | 136 |
| Hours of Variable Direction | 0 |
| Hours of Valid Data | 2201 |
| Hours of Missing Data | 7 |
| Hours in Period | 2208 |

# Quad Cities Nuclear Power Station
# 2007 Annual Radioactive Effluent Release Report

## Joint Frequency Data

Site:: Quad Cities Station
Period:: Months Jul - Sep for years 2007 - 2007
Stability Class A Extremely Unstable based on Lapse Rate
Elevations:: Winds 33ft Stability 196ft

| Wind Direction Sector | Wind Speed Range (m/s) <0.50 | 0.5-1.0 | 1.1-1.5 | 1.6-2.0 | 2.1-3.0 | 3.1-4.0 | 4.1-5.0 | 5.1-6.0 | 6.1-8.0 | 8.1-10.0 | >10.00 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N | 0 | 0 | 0 | 0 | 2 | 4 | 0 | 0 | 0 | 0 | 0 | 6 |
| NNE | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 2 |
| NE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ENE | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| E | 0 | 0 | 0 | 0 | 2 | 3 | 0 | 0 | 0 | 0 | 0 | 5 |
| ESE | 0 | 0 | 0 | 0 | 5 | 2 | 1 | 2 | 0 | 0 | 0 | 10 |
| SE | 0 | 0 | 0 | 1 | 10 | 3 | 0 | 1 | 0 | 0 | 0 | 15 |
| SSE | 0 | 0 | 0 | 0 | 15 | 4 | 0 | 0 | 0 | 0 | 0 | 19 |
| S | 0 | 0 | 0 | 2 | 6 | 5 | 0 | 0 | 0 | 0 | 0 | 13 |
| SSW | 0 | 0 | 0 | 0 | 15 | 17 | 4 | 0 | 0 | 0 | 0 | 36 |
| SW | 0 | 0 | 0 | 0 | 4 | 6 | 2 | 0 | 0 | 0 | 0 | 12 |
| WSW | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| W | 0 | 0 | 0 | 2 | 4 | 4 | 2 | 0 | 0 | 0 | 0 | 12 |
| WNW | 0 | 0 | 0 | 0 | 6 | 3 | 2 | 2 | 0 | 0 | 0 | 13 |
| NW | 0 | 0 | 0 | 0 | 8 | 0 | 4 | 2 | 0 | 0 | 0 | 14 |
| NNW | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 2 |
| Tot | 0 | 0 | 0 | 6 | 78 | 54 | 15 | 7 | 0 | 0 | 0 | 160 |

| | |
|---|---|
| Hours of Calm . . . . . | 0 |
| Hours of Variable Direction | 0 |
| Hours of Valid Data . . . . | 160 |
| Hours of Missing Data . . . | 7 |
| Hours in Period . . . . . | 2208 |

# Quad Cities Nuclear Power Station
# 2007 Annual Radioactive Effluent Release Report

## Joint Frequency Data

Site:: Quad Cities Station
Period:: Months Jul - Sep for years 2007 - 2007
Stability Class B Moderately Unstable based on Lapse Rate
Elevations:: Winds 33ft Stability 196ft

| Wind Direction Sector | Wind Speed Range (m/s) <0.50 | 0.5-1.0 | 1.1-1.5 | 1.6-2.0 | 2.1-3.0 | 3.1-4.0 | 4.1-5.0 | 5.1-6.0 | 6.1-8.0 | 8.1-10.0 | >10.00 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N | 0 | 0 | 0 | 0 | 4 | 1 | 0 | 0 | 0 | 0 | 0 | 5 |
| NNE | 0 | 0 | 0 | 0 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 4 |
| NE | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| ENE | 0 | 0 | 0 | 0 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 3 |
| E | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| ESE | 0 | 0 | 0 | 0 | 3 | 0 | 1 | 0 | 0 | 0 | 0 | 4 |
| SE | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| SSE | 0 | 0 | 0 | 1 | 10 | 0 | 1 | 0 | 0 | 0 | 0 | 12 |
| S | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| SSW | 0 | 0 | 0 | 0 | 4 | 2 | 1 | 0 | 0 | 0 | 0 | 7 |
| SW | 0 | 0 | 0 | 2 | 10 | 1 | 0 | 0 | 0 | 0 | 0 | 13 |
| WSW | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| W | 0 | 0 | 0 | 0 | 7 | 2 | 1 | 0 | 0 | 0 | 0 | 10 |
| WNW | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 0 | 0 | 3 |
| NW | 0 | 0 | 0 | 0 | 4 | 1 | 0 | 0 | 0 | 0 | 0 | 5 |
| NNW | 0 | 0 | 0 | 0 | 6 | 1 | 0 | 0 | 0 | 0 | 0 | 7 |
| Tot | 0 | 0 | 0 | 5 | 68 | 10 | 5 | 1 | 0 | 0 | 0 | 89 |

| | |
|---|---|
| Hours of Calm . . . . . | 0 |
| Hours of Variable Direction | 0 |
| Hours of Valid Data . . . . | 89 |
| Hours of Missing Data . . . | 7 |
| Hours in Period . . . . . | 2208 |

# Quad Cities Nuclear Power Station
# 2007 Annual Radioactive Effluent Release Report

## Joint Frequency Data

Site:: Quad Cities Station
Period:: Months Jul - Sep for years 2007 - 2007
Stability Class C Slightly Unstable based on Lapse Rate
Elevations:: Winds 33ft Stability 196ft

| Wind Direction Sector | Wind Speed Range (m/s) <0.50 | 0.5-1.0 | 1.1-1.5 | 1.6-2.0 | 2.1-3.0 | 3.1-4.0 | 4.1-5.0 | 5.1-6.0 | 6.1-8.0 | 8.1-10.0 | >10.00 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N | 0 | 0 | 0 | 0 | 9 | 2 | 0 | 0 | 0 | 0 | 0 | 11 |
| NNE | 0 | 0 | 0 | 1 | 9 | 1 | 0 | 0 | 0 | 0 | 0 | 11 |
| NE | 0 | 0 | 0 | 1 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 6 |
| ENE | 0 | 0 | 0 | 2 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 7 |
| E | 0 | 0 | 0 | 0 | 12 | 1 | 0 | 0 | 0 | 0 | 0 | 13 |
| ESE | 0 | 0 | 0 | 1 | 10 | 0 | 1 | 3 | 0 | 0 | 0 | 15 |
| SE | 0 | 0 | 0 | 3 | 6 | 0 | 1 | 1 | 0 | 0 | 0 | 11 |
| SSE | 0 | 0 | 0 | 5 | 7 | 1 | 0 | 0 | 0 | 0 | 0 | 13 |
| S | 0 | 0 | 0 | 4 | 4 | 3 | 0 | 0 | 0 | 0 | 0 | 11 |
| SSW | 0 | 0 | 0 | 2 | 7 | 3 | 0 | 0 | 0 | 0 | 0 | 12 |
| SW | 0 | 0 | 0 | 5 | 11 | 5 | 1 | 0 | 0 | 0 | 0 | 22 |
| WSW | 0 | 0 | 1 | 5 | 6 | 2 | 1 | 0 | 0 | 0 | 0 | 15 |
| W | 0 | 0 | 0 | 2 | 18 | 4 | 4 | 1 | 0 | 0 | 0 | 29 |
| WNW | 0 | 0 | 0 | 2 | 9 | 2 | 1 | 1 | 0 | 0 | 0 | 15 |
| NW | 0 | 0 | 0 | 6 | 5 | 0 | 1 | 0 | 0 | 0 | 0 | 12 |
| NNW | 0 | 0 | 0 | 3 | 6 | 2 | 0 | 0 | 0 | 0 | 0 | 11 |
| Tot | 0 | 0 | 1 | 42 | 129 | 26 | 10 | 6 | 0 | 0 | 0 | 214 |

| | |
|---|---|
| Hours of Calm | 0 |
| Hours of Variable Direction | 0 |
| Hours of Valid Data | 214 |
| Hours of Missing Data | 7 |
| Hours in Period | 2208 |

# Quad Cities Nuclear Power Station
# 2007 Annual Radioactive Effluent Release Report

## Joint Frequency Data

Site:: Quad Cities Station
Period:: Months Jul - Sep for years 2007 - 2007
Stability Class D Neutral based on Lapse Rate
Elevations:: Winds 33ft Stability 196ft

| Wind Direction Sector | Wind Speed Range (m/s) <0.50 | 0.5-1.0 | 1.1-1.5 | 1.6-2.0 | 2.1-3.0 | 3.1-4.0 | 4.1-5.0 | 5.1-6.0 | 6.1-8.0 | 8.1-10.0 | >10.00 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N | 0 | 0 | 3 | 5 | 14 | 7 | 1 | 0 | 0 | 0 | 0 | 30 |
| NNE | 0 | 0 | 1 | 5 | 5 | 1 | 1 | 0 | 0 | 0 | 0 | 13 |
| NE | 0 | 0 | 4 | 7 | 6 | 4 | 0 | 0 | 0 | 0 | 0 | 21 |
| ENE | 0 | 0 | 3 | 10 | 15 | 2 | 0 | 0 | 0 | 0 | 0 | 30 |
| E | 0 | 2 | 2 | 13 | 11 | 4 | 0 | 0 | 0 | 0 | 0 | 32 |
| ESE | 0 | 0 | 2 | 8 | 17 | 7 | 1 | 0 | 0 | 0 | 0 | 35 |
| SE | 0 | 0 | 4 | 16 | 7 | 3 | 1 | 0 | 0 | 0 | 0 | 31 |
| SSE | 0 | 0 | 12 | 11 | 8 | 2 | 0 | 0 | 0 | 0 | 0 | 33 |
| S | 0 | 1 | 5 | 8 | 4 | 4 | 2 | 0 | 0 | 0 | 0 | 24 |
| SSW | 0 | 0 | 3 | 14 | 14 | 7 | 0 | 0 | 0 | 0 | 0 | 38 |
| SW | 0 | 0 | 2 | 10 | 34 | 7 | 2 | 0 | 0 | 0 | 0 | 55 |
| WSW | 0 | 0 | 8 | 16 | 32 | 21 | 5 | 0 | 0 | 0 | 0 | 82 |
| W | 0 | 1 | 3 | 8 | 18 | 7 | 6 | 0 | 0 | 0 | 0 | 43 |
| WNW | 0 | 0 | 2 | 9 | 5 | 9 | 4 | 1 | 0 | 0 | 0 | 30 |
| NW | 0 | 0 | 4 | 12 | 19 | 10 | 2 | 0 | 0 | 0 | 0 | 47 |
| NNW | 0 | 0 | 4 | 9 | 8 | 3 | 2 | 0 | 0 | 0 | 0 | 26 |
| Tot | 0 | 4 | 62 | 161 | 217 | 98 | 27 | 1 | 0 | 0 | 0 | 570 |

| | |
|---|---|
| Hours of Calm . . . . . | 0 |
| Hours of Variable Direction | 0 |
| Hours of Valid Data . . . . | 570 |
| Hours of Missing Data . . . | 7 |
| Hours in Period . . . . . | 2208 |

# Quad Cities Nuclear Power Station
# 2007 Annual Radioactive Effluent Release Report

## Joint Frequency Data

Site:: Quad Cities Station
Period:: Months Jul - Sep for years 2007 - 2007
Stability Class E Slightly Stable based on Lapse Rate
Elevations:: Winds 33ft Stability 196ft

| Wind Direction Sector | Wind Speed Range (m/s) <0.50 | 0.5-1.0 | 1.1-1.5 | 1.6-2.0 | 2.1-3.0 | 3.1-4.0 | 4.1-5.0 | 5.1-6.0 | 6.1-8.0 | 8.1-10.0 | >10.00 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N | 0 | 2 | 2 | 11 | 10 | 1 | 0 | 0 | 0 | 0 | 0 | 26 |
| NNE | 0 | 1 | 5 | 6 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 14 |
| NE | 0 | 2 | 7 | 2 | 6 | 1 | 0 | 0 | 0 | 0 | 0 | 18 |
| ENE | 0 | 1 | 7 | 7 | 5 | 0 | 1 | 0 | 0 | 0 | 0 | 21 |
| E | 0 | 3 | 13 | 5 | 7 | 0 | 0 | 1 | 0 | 0 | 0 | 29 |
| ESE | 0 | 3 | 14 | 8 | 13 | 3 | 0 | 0 | 0 | 0 | 0 | 41 |
| SE | 0 | 7 | 15 | 10 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 37 |
| SSE | 0 | 2 | 11 | 10 | 10 | 5 | 0 | 0 | 0 | 0 | 0 | 38 |
| S | 0 | 5 | 12 | 11 | 15 | 7 | 0 | 0 | 0 | 0 | 0 | 50 |
| SSW | 0 | 0 | 7 | 12 | 16 | 5 | 0 | 0 | 0 | 0 | 0 | 40 |
| SW | 0 | 0 | 10 | 8 | 33 | 8 | 1 | 0 | 0 | 0 | 0 | 60 |
| WSW | 0 | 0 | 3 | 14 | 7 | 2 | 0 | 0 | 0 | 0 | 0 | 26 |
| W | 0 | 2 | 5 | 13 | 6 | 2 | 1 | 0 | 0 | 0 | 0 | 29 |
| WNW | 0 | 4 | 12 | 16 | 11 | 3 | 0 | 0 | 0 | 0 | 0 | 46 |
| NW | 0 | 1 | 13 | 23 | 10 | 4 | 2 | 0 | 0 | 0 | 0 | 53 |
| NNW | 0 | 5 | 8 | 5 | 4 | 1 | 0 | 0 | 0 | 0 | 0 | 23 |
| Tot | 0 | 38 | 144 | 161 | 160 | 42 | 5 | 1 | 0 | 0 | 0 | 551 |

| | |
|---|---|
| Hours of Calm | 0 |
| Hours of Variable Direction | 0 |
| Hours of Valid Data | 551 |
| Hours of Missing Data | 7 |
| Hours in Period | 2208 |

# Quad Cities Nuclear Power Station
# 2007 Annual Radioactive Effluent Release Report

## Joint Frequency Data

Site:: Quad Cities Station
Period:: Months Jul - Sep for years 2007 - 2007
Stability Class F Moderately Stable based on Lapse Rate
Elevations:: Winds 33ft Stability 196ft

| Wind Direction Sector | Wind Speed Range (m/s) <0.50 | 0.5-1.0 | 1.1-1.5 | 1.6-2.0 | 2.1-3.0 | 3.1-4.0 | 4.1-5.0 | 5.1-6.0 | 6.1-8.0 | 8.1-10.0 | >10.00 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N | 0 | 11 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15 |
| NNE | 0 | 5 | 6 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12 |
| NE | 0 | 3 | 13 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 17 |
| ENE | 0 | 4 | 6 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 11 |
| E | 0 | 8 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12 |
| ESE | 1 | 11 | 20 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 39 |
| SE | 0 | 13 | 21 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 40 |
| SSE | 0 | 10 | 12 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 24 |
| S | 0 | 7 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12 |
| SSW | 0 | 3 | 4 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 |
| SW | 0 | 0 | 3 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| WSW | 0 | 4 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 |
| W | 0 | 2 | 5 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 |
| WNW | 0 | 3 | 10 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 17 |
| NW | 0 | 6 | 9 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 20 |
| NNW | 0 | 8 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12 |
| Tot | 1 | 98 | 125 | 32 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 260 |

| | |
|---|---|
| Hours of Calm . . . . . | 19 |
| Hours of Variable Direction | 0 |
| Hours of Valid Data . . . . | 279 |
| Hours of Missing Data . . . | 7 |
| Hours in Period . . . . . | 2208 |

# Quad Cities Nuclear Power Station
# 2007 Annual Radioactive Effluent Release Report

## Joint Frequency Data

Site:: Quad Cities Station
Period:: Months Jul - Sep for years 2007 - 2007
Stability Class G Extremely Stable based on Lapse Rate
Elevations:: Winds 33ft Stability 196ft

| Wind Direction Sector | Wind Speed Range (m/s) <0.50 | 0.5-1.0 | 1.1-1.5 | 1.6-2.0 | 2.1-3.0 | 3.1-4.0 | 4.1-5.0 | 5.1-6.0 | 6.1-8.0 | 8.1-10.0 | >10.00 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N | 0 | 5 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 |
| NNE | 0 | 4 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 |
| NE | 1 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9 |
| ENE | 0 | 11 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 11 |
| E | 0 | 23 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 26 |
| ESE | 1 | 39 | 39 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 83 |
| SE | 0 | 13 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22 |
| SSE | 0 | 8 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9 |
| S | 1 | 8 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 11 |
| SSW | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| SW | 0 | 7 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 |
| WSW | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| W | 0 | 3 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| WNW | 1 | 2 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 |
| NW | 0 | 3 | 3 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 7 |
| NNW | 0 | 2 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| Tot | 4 | 143 | 65 | 7 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 221 |

| | |
|---|---|
| Hours of Calm | 117 |
| Hours of Variable Direction | 0 |
| Hours of Valid Data | 338 |
| Hours of Missing Data | 7 |
| Hours in Period | 2208 |

# Quad Cities Nuclear Power Station
# 2007 Annual Radioactive Effluent Release Report

## Joint Frequency Data

Site:: Quad Cities Station
Period:: Months Jul - Sep for years 2007 - 2007
All Stabilities
Elevations:: Winds 196ft Stability 196ft

| Wind Direction Sector | Wind Speed Range (m/s) <0.50 | 0.5-1.0 | 1.1-1.5 | 1.6-2.0 | 2.1-3.0 | 3.1-4.0 | 4.1-5.0 | 5.1-6.0 | 6.1-8.0 | 8.1-10.0 | >10.00 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N | 0 | 0 | 1 | 5 | 29 | 24 | 26 | 20 | 4 | 0 | 0 | 109 |
| NNE | 0 | 1 | 4 | 3 | 22 | 22 | 19 | 6 | 2 | 0 | 0 | 79 |
| NE | 0 | 2 | 2 | 9 | 16 | 13 | 23 | 6 | 4 | 2 | 0 | 77 |
| ENE | 0 | 2 | 4 | 10 | 23 | 35 | 17 | 3 | 1 | 0 | 1 | 96 |
| E | 0 | 2 | 6 | 6 | 29 | 37 | 18 | 8 | 4 | 0 | 0 | 110 |
| ESE | 0 | 0 | 3 | 8 | 29 | 24 | 20 | 31 | 19 | 5 | 0 | 139 |
| SE | 0 | 1 | 3 | 2 | 28 | 39 | 43 | 31 | 18 | 4 | 0 | 169 |
| SSE | 0 | 0 | 3 | 8 | 32 | 55 | 53 | 24 | 28 | 11 | 1 | 215 |
| S | 0 | 1 | 5 | 2 | 28 | 39 | 45 | 37 | 41 | 26 | 2 | 226 |
| SSW | 0 | 0 | 3 | 4 | 27 | 46 | 45 | 49 | 46 | 20 | 2 | 242 |
| SW | 0 | 0 | 2 | 5 | 26 | 24 | 26 | 21 | 32 | 2 | 0 | 138 |
| WSW | 0 | 1 | 1 | 11 | 20 | 22 | 21 | 12 | 19 | 0 | 0 | 107 |
| W | 0 | 2 | 1 | 5 | 20 | 30 | 31 | 19 | 20 | 3 | 0 | 131 |
| WNW | 0 | 0 | 3 | 6 | 19 | 18 | 30 | 8 | 16 | 8 | 0 | 108 |
| NW | 0 | 1 | 2 | 7 | 27 | 42 | 37 | 10 | 21 | 3 | 0 | 150 |
| NNW | 0 | 0 | 6 | 7 | 30 | 22 | 22 | 7 | 7 | 0 | 0 | 101 |
| Tot | 0 | 13 | 49 | 98 | 405 | 492 | 476 | 292 | 282 | 84 | 6 | 2197 |

| | |
|---|---|
| Hours of Calm . . . . . | 4 |
| Hours of Variable Direction | 0 |
| Hours of Valid Data . . . . | 2201 |
| Hours of Missing Data . . . | 7 |
| Hours in Period . . . . . | 2208 |

# Quad Cities Nuclear Power Station
# 2007 Annual Radioactive Effluent Release Report

## Joint Frequency Data

Site:: Quad Cities Station
Period:: Months Jul - Sep for years 2007 - 2007
Stability Class A Extremely Unstable based on Lapse Rate
Elevations:: Winds 196ft Stability 196ft

| Wind Direction Sector | Wind Speed Range (m/s) <0.50 | 0.5-1.0 | 1.1-1.5 | 1.6-2.0 | 2.1-3.0 | 3.1-4.0 | 4.1-5.0 | 5.1-6.0 | 6.1-8.0 | 8.1-10.0 | >10.00 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 3 | 0 | 0 | 0 | 7 |
| NNE | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| NE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ENE | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| E | 0 | 0 | 0 | 0 | 1 | 3 | 4 | 0 | 0 | 0 | 0 | 8 |
| ESE | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 1 | 1 | 0 | 5 |
| SE | 0 | 0 | 0 | 0 | 1 | 8 | 3 | 1 | 0 | 2 | 0 | 15 |
| SSE | 0 | 0 | 0 | 0 | 4 | 7 | 6 | 4 | 3 | 1 | 0 | 25 |
| S | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 5 | 10 | 6 | 0 | 23 |
| SSW | 0 | 0 | 0 | 0 | 0 | 4 | 6 | 7 | 10 | 4 | 2 | 33 |
| SW | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| WSW | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| W | 0 | 0 | 0 | 0 | 2 | 2 | 2 | 3 | 2 | 0 | 0 | 11 |
| WNW | 0 | 0 | 0 | 0 | 3 | 1 | 4 | 1 | 2 | 3 | 0 | 14 |
| NW | 0 | 0 | 0 | 0 | 2 | 5 | 1 | 0 | 4 | 2 | 0 | 14 |
| NNW | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 2 |
| Tot | 0 | 0 | 0 | 0 | 17 | 34 | 31 | 25 | 32 | 19 | 2 | 160 |

Hours of Calm . . . . . 0
Hours of Variable Direction 0
Hours of Valid Data . . . . 160
Hours of Missing Data . . . 7
Hours in Period . . . . . 2208

# Quad Cities Nuclear Power Station
# 2007 Annual Radioactive Effluent Release Report

## Joint Frequency Data

Site:: Quad Cities Station
Period:: Months Jul - Sep for years 2007 - 2007
Stability Class B Moderately Unstable based on Lapse Rate
Elevations:: Winds 196ft Stability 196ft

| Wind Direction Sector | Wind Speed Range (m/s) <0.50 | 0.5-1.0 | 1.1-1.5 | 1.6-2.0 | 2.1-3.0 | 3.1-4.0 | 4.1-5.0 | 5.1-6.0 | 6.1-8.0 | 8.1-10.0 | >10.00 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N | 0 | 0 | 0 | 0 | 1 | 3 | 0 | 0 | 0 | 0 | 0 | 4 |
| NNE | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 4 |
| NE | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| ENE | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 2 |
| E | 0 | 0 | 0 | 0 | 1 | 4 | 0 | 0 | 0 | 0 | 0 | 5 |
| ESE | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 1 | 0 | 0 | 4 |
| SE | 0 | 0 | 0 | 0 | 2 | 2 | 1 | 0 | 0 | 0 | 0 | 5 |
| SSE | 0 | 0 | 0 | 0 | 2 | 5 | 4 | 0 | 0 | 1 | 0 | 12 |
| S | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 1 | 0 | 2 | 0 | 6 |
| SSW | 0 | 0 | 0 | 0 | 4 | 1 | 5 | 3 | 0 | 2 | 0 | 15 |
| SW | 0 | 0 | 0 | 0 | 1 | 2 | 1 | 0 | 0 | 0 | 0 | 4 |
| WSW | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| W | 0 | 0 | 0 | 0 | 2 | 4 | 2 | 1 | 2 | 0 | 0 | 11 |
| WNW | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 2 |
| NW | 0 | 0 | 0 | 0 | 1 | 1 | 3 | 0 | 0 | 0 | 0 | 5 |
| NNW | 0 | 0 | 0 | 0 | 2 | 4 | 2 | 0 | 1 | 0 | 0 | 9 |
| Tot | 0 | 0 | 0 | 0 | 21 | 32 | 20 | 6 | 4 | 6 | 0 | 89 |

| | |
|---|---|
| Hours of Calm . . . . . | 0 |
| Hours of Variable Direction | 0 |
| Hours of Valid Data . . . . | 89 |
| Hours of Missing Data . . . | 7 |
| Hours in Period . . . . . | 2208 |

# Quad Cities Nuclear Power Station
# 2007 Annual Radioactive Effluent Release Report

## Joint Frequency Data

Site:: Quad Cities Station
Period:: Months Jul - Sep for years 2007 - 2007
Stability Class C Slightly Unstable based on Lapse Rate
Elevations:: Winds 196ft Stability 196ft

| Wind Direction Sector | Wind Speed Range (m/s) <0.50 | 0.5-1.0 | 1.1-1.5 | 1.6-2.0 | 2.1-3.0 | 3.1-4.0 | 4.1-5.0 | 5.1-6.0 | 6.1-8.0 | 8.1-10.0 | >10.00 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N | 0 | 0 | 0 | 0 | 5 | 5 | 1 | 1 | 0 | 0 | 0 | 12 |
| NNE | 0 | 0 | 0 | 0 | 2 | 6 | 1 | 0 | 0 | 0 | 0 | 9 |
| NE | 0 | 0 | 0 | 1 | 3 | 2 | 2 | 0 | 0 | 0 | 0 | 8 |
| ENE | 0 | 0 | 0 | 0 | 4 | 4 | 0 | 0 | 0 | 0 | 0 | 8 |
| E | 0 | 0 | 0 | 0 | 4 | 7 | 1 | 0 | 0 | 0 | 0 | 12 |
| ESE | 0 | 0 | 0 | 0 | 4 | 2 | 1 | 0 | 1 | 3 | 0 | 11 |
| SE | 0 | 0 | 0 | 0 | 5 | 2 | 1 | 0 | 0 | 2 | 0 | 10 |
| SSE | 0 | 0 | 0 | 0 | 8 | 4 | 3 | 1 | 0 | 1 | 0 | 17 |
| S | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 4 | 4 | 0 | 0 | 11 |
| SSW | 0 | 0 | 0 | 1 | 5 | 7 | 1 | 5 | 3 | 2 | 0 | 24 |
| SW | 0 | 0 | 0 | 1 | 2 | 0 | 1 | 3 | 2 | 0 | 0 | 9 |
| WSW | 0 | 0 | 0 | 1 | 5 | 2 | 3 | 0 | 2 | 0 | 0 | 13 |
| W | 0 | 0 | 1 | 1 | 5 | 8 | 5 | 3 | 5 | 1 | 0 | 29 |
| WNW | 0 | 0 | 0 | 2 | 7 | 3 | 1 | 0 | 2 | 1 | 0 | 16 |
| NW | 0 | 0 | 0 | 3 | 4 | 2 | 2 | 0 | 1 | 0 | 0 | 12 |
| NNW | 0 | 0 | 0 | 2 | 5 | 1 | 4 | 1 | 0 | 0 | 0 | 13 |
| Tot | 0 | 0 | 1 | 12 | 69 | 56 | 28 | 18 | 20 | 10 | 0 | 214 |

Hours of Calm . . . . . 0
Hours of Variable Direction 0
Hours of Valid Data . . . . 214
Hours of Missing Data . . . 7
Hours in Period . . . . . 2208

## Joint Frequency Data

Site:: Quad Cities Station
Period:: Months Jul - Sep for years 2007 - 2007
Stability Class D Neutral based on Lapse Rate
Elevations:: Winds 196ft Stability 196ft

| Wind Direction Sector | Wind Speed Range (m/s) <0.50 | 0.5-1.0 | 1.1-1.5 | 1.6-2.0 | 2.1-3.0 | 3.1-4.0 | 4.1-5.0 | 5.1-6.0 | 6.1-8.0 | 8.1-10.0 | >10.00 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N | 0 | 0 | 1 | 3 | 11 | 2 | 9 | 6 | 2 | 0 | 0 | 34 |
| NNE | 0 | 0 | 1 | 1 | 5 | 4 | 1 | 1 | 1 | 0 | 0 | 14 |
| NE | 0 | 0 | 0 | 3 | 8 | 5 | 7 | 3 | 2 | 0 | 0 | 28 |
| ENE | 0 | 0 | 2 | 2 | 10 | 6 | 4 | 0 | 1 | 0 | 0 | 25 |
| E | 0 | 0 | 0 | 2 | 10 | 6 | 4 | 5 | 1 | 0 | 0 | 28 |
| ESE | 0 | 0 | 1 | 0 | 7 | 8 | 6 | 5 | 8 | 0 | 0 | 35 |
| SE | 0 | 0 | 2 | 2 | 6 | 7 | 5 | 1 | 4 | 0 | 0 | 27 |
| SSE | 0 | 0 | 0 | 3 | 8 | 7 | 4 | 3 | 5 | 3 | 0 | 33 |
| S | 0 | 0 | 1 | 0 | 9 | 10 | 7 | 5 | 3 | 7 | 0 | 42 |
| SSW | 0 | 0 | 1 | 1 | 6 | 13 | 6 | 15 | 7 | 4 | 0 | 53 |
| SW | 0 | 0 | 0 | 2 | 14 | 8 | 14 | 7 | 12 | 1 | 0 | 58 |
| WSW | 0 | 0 | 0 | 10 | 4 | 12 | 7 | 8 | 13 | 0 | 0 | 54 |
| W | 0 | 0 | 0 | 2 | 7 | 11 | 9 | 5 | 8 | 1 | 0 | 43 |
| WNW | 0 | 0 | 2 | 2 | 2 | 4 | 3 | 3 | 9 | 2 | 0 | 27 |
| NW | 0 | 1 | 0 | 2 | 10 | 9 | 8 | 4 | 9 | 1 | 0 | 44 |
| NNW | 0 | 0 | 2 | 0 | 7 | 5 | 6 | 1 | 4 | 0 | 0 | 25 |
| Tot | 0 | 1 | 13 | 35 | 124 | 117 | 100 | 72 | 89 | 19 | 0 | 570 |

| | |
|---|---|
| Hours of Calm . . . . . | 0 |
| Hours of Variable Direction | 0 |
| Hours of Valid Data . . . . | 570 |
| Hours of Missing Data . . . | 7 |
| Hours in Period . . . . . | 2208 |

# Quad Cities Nuclear Power Station
# 2007 Annual Radioactive Effluent Release Report

## Joint Frequency Data

Site:: Quad Cities Station
Period:: Months Jul - Sep for years 2007 - 2007
Stability Class E Slightly Stable based on Lapse Rate
Elevations:: Winds 196ft Stability 196ft

| Wind Direction Sector | Wind Speed Range (m/s) <0.50 | 0.5-1.0 | 1.1-1.5 | 1.6-2.0 | 2.1-3.0 | 3.1-4.0 | 4.1-5.0 | 5.1-6.0 | 6.1-8.0 | 8.1-10.0 | >10.00 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N | 0 | 0 | 0 | 1 | 4 | 7 | 11 | 7 | 2 | 0 | 0 | 32 |
| NNE | 0 | 0 | 0 | 1 | 6 | 2 | 5 | 3 | 0 | 0 | 0 | 17 |
| NE | 0 | 0 | 0 | 0 | 0 | 2 | 6 | 2 | 1 | 2 | 0 | 13 |
| ENE | 0 | 0 | 0 | 2 | 1 | 9 | 5 | 2 | 0 | 0 | 1 | 20 |
| E | 0 | 0 | 0 | 1 | 4 | 6 | 5 | 3 | 1 | 0 | 0 | 20 |
| ESE | 0 | 0 | 0 | 2 | 7 | 5 | 7 | 12 | 4 | 1 | 0 | 38 |
| SE | 0 | 0 | 0 | 0 | 1 | 9 | 10 | 5 | 1 | 0 | 0 | 26 |
| SSE | 0 | 0 | 1 | 2 | 2 | 9 | 8 | 5 | 9 | 4 | 1 | 41 |
| S | 0 | 0 | 2 | 0 | 5 | 12 | 14 | 14 | 17 | 11 | 2 | 77 |
| SSW | 0 | 0 | 0 | 0 | 4 | 5 | 11 | 9 | 25 | 8 | 0 | 62 |
| SW | 0 | 0 | 1 | 2 | 3 | 6 | 4 | 8 | 16 | 1 | 0 | 41 |
| WSW | 0 | 0 | 0 | 0 | 4 | 6 | 7 | 4 | 4 | 0 | 0 | 25 |
| W | 0 | 0 | 0 | 0 | 3 | 3 | 9 | 7 | 3 | 1 | 0 | 26 |
| WNW | 0 | 0 | 0 | 0 | 3 | 6 | 15 | 4 | 3 | 1 | 0 | 32 |
| NW | 0 | 0 | 0 | 1 | 5 | 17 | 16 | 4 | 7 | 0 | 0 | 50 |
| NNW | 0 | 0 | 0 | 1 | 10 | 7 | 7 | 4 | 2 | 0 | 0 | 31 |
| Tot | 0 | 0 | 4 | 13 | 62 | 111 | 140 | 93 | 95 | 29 | 4 | 551 |

| | |
|---|---|
| Hours of Calm | 0 |
| Hours of Variable Direction | 0 |
| Hours of Valid Data | 551 |
| Hours of Missing Data | 7 |
| Hours in Period | 2208 |

# Quad Cities Nuclear Power Station
# 2007 Annual Radioactive Effluent Release Report

## Joint Frequency Data

Site:: Quad Cities Station
Period:: Months Jul - Sep for years 2007 - 2007
Stability Class F Moderately Stable based on Lapse Rate
Elevations:: Winds 196ft Stability 196ft

| Wind Direction Sector | Wind Speed Range (m/s) <0.50 | 0.5-1.0 | 1.1-1.5 | 1.6-2.0 | 2.1-3.0 | 3.1-4.0 | 4.1-5.0 | 5.1-6.0 | 6.1-8.0 | 8.1-10.0 | >10.00 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N | 0 | 0 | 0 | 0 | 4 | 5 | 2 | 2 | 0 | 0 | 0 | 13 |
| NNE | 0 | 0 | 1 | 1 | 2 | 7 | 7 | 1 | 1 | 0 | 0 | 20 |
| NE | 0 | 0 | 0 | 1 | 3 | 2 | 4 | 1 | 1 | 0 | 0 | 12 |
| ENE | 0 | 0 | 0 | 0 | 3 | 6 | 7 | 1 | 0 | 0 | 0 | 17 |
| E | 0 | 0 | 0 | 2 | 4 | 6 | 2 | 0 | 2 | 0 | 0 | 16 |
| ESE | 0 | 0 | 0 | 0 | 3 | 0 | 1 | 6 | 2 | 0 | 0 | 12 |
| SE | 0 | 0 | 0 | 0 | 1 | 4 | 5 | 13 | 5 | 0 | 0 | 28 |
| SSE | 0 | 0 | 0 | 0 | 2 | 6 | 15 | 8 | 9 | 1 | 0 | 41 |
| S | 0 | 0 | 0 | 0 | 2 | 4 | 11 | 7 | 7 | 0 | 0 | 31 |
| SSW | 0 | 0 | 1 | 0 | 2 | 5 | 6 | 7 | 1 | 0 | 0 | 22 |
| SW | 0 | 0 | 1 | 0 | 2 | 3 | 1 | 2 | 2 | 0 | 0 | 11 |
| WSW | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 2 |
| W | 0 | 1 | 0 | 0 | 0 | 2 | 4 | 0 | 0 | 0 | 0 | 7 |
| WNW | 0 | 0 | 1 | 1 | 4 | 2 | 4 | 0 | 0 | 0 | 0 | 12 |
| NW | 0 | 0 | 0 | 0 | 4 | 7 | 5 | 2 | 0 | 0 | 0 | 18 |
| NNW | 0 | 0 | 3 | 2 | 4 | 5 | 1 | 0 | 0 | 0 | 0 | 15 |
| Tot | 0 | 1 | 7 | 7 | 41 | 64 | 76 | 50 | 30 | 1 | 0 | 277 |

| | |
|---|---|
| Hours of Calm . . . . . | 2 |
| Hours of Variable Direction | 0 |
| Hours of Valid Data . . . . | 279 |
| Hours of Missing Data . . . | 7 |
| Hours in Period . . . . . | 2208 |

# Quad Cities Nuclear Power Station
# 2007 Annual Radioactive Effluent Release Report

## Joint Frequency Data

Site:: Quad Cities Station
Period:: Months Jul - Sep for years 2007 - 2007
Stability Class G Extremely Stable based on Lapse Rate
Elevations:: Winds 196ft Stability 196ft

| Wind Direction Sector | Wind Speed Range (m/s) <0.50 | 0.5-1.0 | 1.1-1.5 | 1.6-2.0 | 2.1-3.0 | 3.1-4.0 | 4.1-5.0 | 5.1-6.0 | 6.1-8.0 | 8.1-10.0 | >10.00 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N | 0 | 0 | 0 | 1 | 4 | 0 | 1 | 1 | 0 | 0 | 0 | 7 |
| NNE | 0 | 1 | 2 | 0 | 6 | 2 | 3 | 0 | 0 | 0 | 0 | 14 |
| NE | 0 | 2 | 2 | 4 | 2 | 2 | 3 | 0 | 0 | 0 | 0 | 15 |
| ENE | 0 | 2 | 2 | 6 | 4 | 8 | 1 | 0 | 0 | 0 | 0 | 23 |
| E | 0 | 2 | 6 | 1 | 5 | 5 | 2 | 0 | 0 | 0 | 0 | 21 |
| ESE | 0 | 0 | 2 | 6 | 7 | 5 | 5 | 7 | 2 | 0 | 0 | 34 |
| SE | 0 | 1 | 1 | 0 | 12 | 7 | 18 | 11 | 8 | 0 | 0 | 58 |
| SSE | 0 | 0 | 2 | 3 | 6 | 17 | 13 | 3 | 2 | 0 | 0 | 46 |
| S | 0 | 1 | 2 | 2 | 6 | 12 | 12 | 1 | 0 | 0 | 0 | 36 |
| SSW | 0 | 0 | 1 | 2 | 6 | 11 | 10 | 3 | 0 | 0 | 0 | 33 |
| SW | 0 | 0 | 0 | 0 | 4 | 5 | 4 | 1 | 0 | 0 | 0 | 14 |
| WSW | 0 | 1 | 1 | 0 | 6 | 2 | 3 | 0 | 0 | 0 | 0 | 13 |
| W | 0 | 1 | 0 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| WNW | 0 | 0 | 0 | 1 | 0 | 1 | 3 | 0 | 0 | 0 | 0 | 5 |
| NW | 0 | 0 | 2 | 1 | 1 | 1 | 2 | 0 | 0 | 0 | 0 | 7 |
| NNW | 0 | 0 | 1 | 2 | 1 | 0 | 1 | 1 | 0 | 0 | 0 | 6 |
| Tot | 0 | 11 | 24 | 31 | 71 | 78 | 81 | 28 | 12 | 0 | 0 | 336 |

| | |
|---|---|
| Hours of Calm | 2 |
| Hours of Variable Direction | 0 |
| Hours of Valid Data | 338 |
| Hours of Missing Data | 7 |
| Hours in Period | 2208 |

# Quad Cities Nuclear Power Station
# 2007 Annual Radioactive Effluent Release Report

## Joint Frequency Data

Site:: Quad Cities Station
Period:: Months Jul - Sep for years 2007 - 2007
All Stabilities
Elevations:: Winds 296ft Stability 296ft

| Wind Direction Sector | Wind Speed Range (m/s) <0.50 | 0.5-1.0 | 1.1-1.5 | 1.6-2.0 | 2.1-3.0 | 3.1-4.0 | 4.1-5.0 | 5.1-6.0 | 6.1-8.0 | 8.1-10.0 | >10.00 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N | 0 | 0 | 1 | 3 | 21 | 24 | 23 | 17 | 24 | 1 | 0 | 114 |
| NNE | 0 | 0 | 2 | 2 | 14 | 22 | 19 | 16 | 9 | 0 | 0 | 84 |
| NE | 0 | 0 | 0 | 6 | 13 | 10 | 11 | 14 | 11 | 4 | 0 | 69 |
| ENE | 0 | 0 | 3 | 4 | 23 | 17 | 23 | 13 | 4 | 0 | 1 | 88 |
| E | 0 | 3 | 3 | 8 | 25 | 30 | 22 | 14 | 8 | 1 | 0 | 114 |
| ESE | 0 | 0 | 0 | 4 | 20 | 23 | 16 | 14 | 35 | 9 | 0 | 121 |
| SE | 0 | 1 | 4 | 4 | 19 | 25 | 22 | 22 | 59 | 11 | 1 | 168 |
| SSE | 0 | 1 | 2 | 6 | 28 | 30 | 48 | 31 | 57 | 10 | 6 | 219 |
| S | 0 | 0 | 1 | 2 | 9 | 23 | 22 | 44 | 58 | 38 | 11 | 208 |
| SSW | 0 | 0 | 1 | 1 | 17 | 27 | 40 | 59 | 67 | 36 | 10 | 258 |
| SW | 0 | 0 | 0 | 6 | 28 | 21 | 26 | 31 | 51 | 11 | 2 | 176 |
| WSW | 0 | 1 | 1 | 5 | 14 | 8 | 22 | 14 | 28 | 8 | 0 | 101 |
| W | 0 | 1 | 4 | 6 | 16 | 20 | 23 | 22 | 31 | 8 | 2 | 133 |
| WNW | 0 | 0 | 4 | 5 | 13 | 11 | 20 | 9 | 26 | 13 | 4 | 105 |
| NW | 0 | 1 | 1 | 6 | 16 | 20 | 25 | 27 | 26 | 11 | 1 | 134 |
| NNW | 0 | 0 | 2 | 3 | 21 | 17 | 33 | 16 | 12 | 3 | 0 | 107 |
| Tot | 0 | 8 | 29 | 71 | 297 | 328 | 395 | 363 | 506 | 164 | 38 | 2199 |

| | |
|---|---|
| Hours of Calm . . . . . | 2 |
| Hours of Variable Direction | 0 |
| Hours of Valid Data . . . . | 2201 |
| Hours of Missing Data . . . | 7 |
| Hours in Period . . . . . | 2208 |

# Quad Cities Nuclear Power Station
# 2007 Annual Radioactive Effluent Release Report

## Joint Frequency Data

Site:: Quad Cities Station
Period:: Months Jul - Sep for years 2007 - 2007
Stability Class A Extremely Unstable based on Lapse Rate
Elevations:: Winds 296ft Stability 296ft

| Wind Direction Sector | Wind Speed Range (m/s) <0.50 | 0.5-1.0 | 1.1-1.5 | 1.6-2.0 | 2.1-3.0 | 3.1-4.0 | 4.1-5.0 | 5.1-6.0 | 6.1-8.0 | 8.1-10.0 | >10.00 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 |
| NNE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ENE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| E | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ESE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SSE | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 0 | 3 |
| S | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| SSW | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 4 | 2 | 1 | 9 |
| SW | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| WSW | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| W | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| WNW | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| NW | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 3 |
| NNW | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Tot | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 2 | 5 | 6 | 2 | 18 |

| | |
|---|---|
| Hours of Calm | 0 |
| Hours of Variable Direction | 0 |
| Hours of Valid Data | 18 |
| Hours of Missing Data | 7 |
| Hours in Period | 2208 |

# Quad Cities Nuclear Power Station
# 2007 Annual Radioactive Effluent Release Report

## Joint Frequency Data

Site:: Quad Cities Station
Period:: Months Jul - Sep for years 2007 - 2007
Stability Class B Moderately Unstable based on Lapse Rate
Elevations:: Winds 296ft Stability 296ft

| Wind Direction Sector | Wind Speed Range (m/s) <0.50 | 0.5-1.0 | 1.1-1.5 | 1.6-2.0 | 2.1-3.0 | 3.1-4.0 | 4.1-5.0 | 5.1-6.0 | 6.1-8.0 | 8.1-10.0 | >10.00 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 1 | 0 | 0 | 0 | 4 |
| NNE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ENE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| E | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 5 |
| ESE | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 1 | 1 | 0 | 5 |
| SE | 0 | 0 | 0 | 0 | 0 | 4 | 3 | 1 | 0 | 1 | 0 | 9 |
| SSE | 0 | 0 | 0 | 0 | 1 | 2 | 1 | 1 | 3 | 1 | 0 | 9 |
| S | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 2 | 2 | 5 | 1 | 11 |
| SSW | 0 | 0 | 0 | 0 | 0 | 2 | 3 | 2 | 6 | 4 | 1 | 18 |
| SW | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| WSW | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| W | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 2 | 0 | 0 | 5 |
| WNW | 0 | 0 | 0 | 0 | 2 | 1 | 4 | 0 | 1 | 1 | 0 | 9 |
| NW | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 | 1 | 4 |
| NNW | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| Tot | 0 | 0 | 0 | 0 | 5 | 12 | 20 | 10 | 16 | 14 | 3 | 80 |

| | |
|---|---|
| Hours of Calm . . . . . | 0 |
| Hours of Variable Direction | 0 |
| Hours of Valid Data . . . . | 80 |
| Hours of Missing Data . . . | 7 |
| Hours in Period . . . . . | 2208 |

# Quad Cities Nuclear Power Station
# 2007 Annual Radioactive Effluent Release Report

## Joint Frequency Data

Site:: Quad Cities Station
Period:: Months Jul - Sep for years 2007 - 2007
Stability Class C Slightly Unstable based on Lapse Rate
Elevations:: Winds 296ft Stability 296ft

| Wind Direction Sector | Wind Speed Range (m/s) <0.50 | 0.5-1.0 | 1.1-1.5 | 1.6-2.0 | 2.1-3.0 | 3.1-4.0 | 4.1-5.0 | 5.1-6.0 | 6.1-8.0 | 8.1-10.0 | >10.00 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N | 0 | 0 | 0 | 0 | 3 | 5 | 1 | 1 | 0 | 0 | 0 | 10 |
| NNE | 0 | 0 | 0 | 0 | 3 | 4 | 2 | 1 | 0 | 0 | 0 | 10 |
| NE | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 0 | 0 | 0 | 3 |
| ENE | 0 | 0 | 0 | 0 | 2 | 6 | 0 | 0 | 0 | 0 | 0 | 8 |
| E | 0 | 0 | 0 | 0 | 3 | 10 | 2 | 0 | 0 | 0 | 0 | 15 |
| ESE | 0 | 0 | 0 | 0 | 3 | 4 | 1 | 0 | 1 | 1 | 0 | 10 |
| SE | 0 | 0 | 0 | 0 | 8 | 4 | 3 | 0 | 0 | 0 | 1 | 16 |
| SSE | 0 | 0 | 0 | 0 | 5 | 9 | 8 | 3 | 1 | 0 | 1 | 27 |
| S | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 2 | 5 | 3 | 0 | 13 |
| SSW | 0 | 0 | 0 | 0 | 4 | 3 | 4 | 6 | 4 | 2 | 3 | 26 |
| SW | 0 | 0 | 0 | 1 | 2 | 3 | 1 | 4 | 0 | 0 | 0 | 11 |
| WSW | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| W | 0 | 0 | 0 | 1 | 2 | 9 | 6 | 1 | 3 | 0 | 0 | 22 |
| WNW | 0 | 0 | 0 | 1 | 4 | 2 | 2 | 0 | 1 | 2 | 2 | 14 |
| NW | 0 | 0 | 0 | 1 | 7 | 4 | 4 | 1 | 0 | 0 | 0 | 17 |
| NNW | 0 | 0 | 0 | 0 | 3 | 2 | 5 | 1 | 1 | 0 | 0 | 12 |
| Tot | 0 | 0 | 0 | 4 | 52 | 68 | 41 | 21 | 16 | 8 | 7 | 217 |

Hours of Calm . . . . . 0
Hours of Variable Direction 0
Hours of Valid Data . . . . 217
Hours of Missing Data . . . 7
Hours in Period . . . . . 2208

# Quad Cities Nuclear Power Station
# 2007 Annual Radioactive Effluent Release Report

## Joint Frequency Data

Site:: Quad Cities Station
Period:: Months Jul - Sep for years 2007 - 2007
*Stability Class D Neutral based on Lapse Rate*
Elevations:: Winds 296ft Stability 296ft

| Wind Direction Sector | Wind Speed Range (m/s) <0.50 | 0.5-1.0 | 1.1-1.5 | 1.6-2.0 | 2.1-3.0 | 3.1-4.0 | 4.1-5.0 | 5.1-6.0 | 6.1-8.0 | 8.1-10.0 | >10.00 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N | 0 | 0 | 1 | 2 | 9 | 5 | 5 | 7 | 7 | 1 | 0 | 37 |
| NNE | 0 | 0 | 0 | 2 | 6 | 9 | 1 | 4 | 1 | 0 | 0 | 23 |
| NE | 0 | 0 | 0 | 3 | 10 | 3 | 3 | 7 | 2 | 1 | 0 | 29 |
| ENE | 0 | 0 | 2 | 2 | 12 | 4 | 9 | 1 | 1 | 0 | 0 | 31 |
| E | 0 | 0 | 0 | 1 | 11 | 8 | 3 | 3 | 4 | 0 | 0 | 30 |
| ESE | 0 | 0 | 0 | 1 | 4 | 6 | 4 | 7 | 10 | 3 | 0 | 35 |
| SE | 0 | 0 | 1 | 1 | 5 | 6 | 6 | 1 | 6 | 2 | 0 | 28 |
| SSE | 0 | 0 | 0 | 3 | 13 | 7 | 11 | 4 | 3 | 2 | 1 | 44 |
| S | 0 | 0 | 0 | 1 | 6 | 10 | 8 | 9 | 9 | 8 | 2 | 53 |
| SSW | 0 | 0 | 0 | 0 | 8 | 11 | 12 | 17 | 15 | 9 | 2 | 74 |
| SW | 0 | 0 | 0 | 4 | 18 | 8 | 9 | 13 | 23 | 1 | 0 | 76 |
| WSW | 0 | 0 | 1 | 4 | 7 | 7 | 10 | 9 | 15 | 7 | 0 | 60 |
| W | 0 | 0 | 1 | 4 | 11 | 9 | 10 | 14 | 14 | 6 | 1 | 70 |
| WNW | 0 | 0 | 2 | 3 | 5 | 3 | 7 | 1 | 10 | 5 | 2 | 38 |
| NW | 0 | 1 | 0 | 4 | 6 | 10 | 7 | 6 | 11 | 5 | 0 | 50 |
| NNW | 0 | 0 | 1 | 1 | 8 | 3 | 14 | 4 | 2 | 2 | 0 | 35 |
| Tot | 0 | 1 | 9 | 36 | 139 | 109 | 119 | 107 | 133 | 52 | 8 | 713 |

| | |
|---|---|
| Hours of Calm | 0 |
| Hours of Variable Direction | 0 |
| Hours of Valid Data | 713 |
| Hours of Missing Data | 7 |
| Hours in Period | 2208 |

# Quad Cities Nuclear Power Station
# 2007 Annual Radioactive Effluent Release Report

## Joint Frequency Data

Site:: Quad Cities Station
Period:: Months Jul - Sep for years 2007 - 2007
Stability Class E Slightly Stable based on Lapse Rate
Elevations:: Winds 296ft Stability 296ft

| Wind Direction Sector | Wind Speed Range (m/s) <0.50 | 0.5-1.0 | 1.1-1.5 | 1.6-2.0 | 2.1-3.0 | 3.1-4.0 | 4.1-5.0 | 5.1-6.0 | 6.1-8.0 | 8.1-10.0 | >10.00 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N | 0 | 0 | 0 | 1 | 4 | 7 | 11 | 6 | 11 | 0 | 0 | 40 |
| NNE | 0 | 0 | 1 | 0 | 2 | 3 | 6 | 7 | 4 | 0 | 0 | 23 |
| NE | 0 | 0 | 0 | 0 | 2 | 2 | 1 | 5 | 4 | 2 | 0 | 16 |
| ENE | 0 | 0 | 0 | 0 | 2 | 2 | 3 | 8 | 2 | 0 | 1 | 18 |
| E | 0 | 0 | 0 | 3 | 5 | 5 | 4 | 7 | 4 | 1 | 0 | 29 |
| ESE | 0 | 0 | 0 | 0 | 2 | 4 | 6 | 4 | 17 | 1 | 0 | 34 |
| SE | 0 | 0 | 0 | 0 | 1 | 6 | 4 | 6 | 14 | 1 | 0 | 32 |
| SSE | 0 | 0 | 1 | 1 | 3 | 6 | 10 | 7 | 19 | 3 | 4 | 54 |
| S | 0 | 0 | 0 | 1 | 0 | 6 | 4 | 12 | 23 | 15 | 7 | 68 |
| SSW | 0 | 0 | 1 | 0 | 3 | 6 | 8 | 8 | 25 | 19 | 3 | 73 |
| SW | 0 | 0 | 0 | 1 | 4 | 5 | 4 | 8 | 18 | 8 | 2 | 50 |
| WSW | 0 | 0 | 0 | 1 | 2 | 1 | 8 | 4 | 8 | 1 | 0 | 25 |
| W | 0 | 1 | 0 | 1 | 2 | 2 | 4 | 5 | 6 | 2 | 1 | 24 |
| WNW | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 5 | 14 | 4 | 0 | 29 |
| NW | 0 | 0 | 1 | 0 | 1 | 3 | 8 | 12 | 10 | 3 | 0 | 38 |
| NNW | 0 | 0 | 0 | 1 | 6 | 9 | 9 | 6 | 6 | 1 | 0 | 38 |
| Tot | 0 | 1 | 4 | 10 | 39 | 70 | 93 | 110 | 185 | 61 | 18 | 591 |

Hours of Calm . . . . . 0
Hours of Variable Direction 0
Hours of Valid Data . . . . 591
Hours of Missing Data . . . 7
Hours in Period . . . . . 2208

# Quad Cities Nuclear Power Station
# 2007 Annual Radioactive Effluent Release Report

## Joint Frequency Data

Site:: Quad Cities Station
Period:: Months Jul - Sep for years 2007 - 2007
Stability Class F Moderately Stable based on Lapse Rate
Elevations:: Winds 296ft Stability 296ft

| Wind Direction Sector | Wind Speed Range (m/s) <0.50 | 0.5-1.0 | 1.1-1.5 | 1.6-2.0 | 2.1-3.0 | 3.1-4.0 | 4.1-5.0 | 5.1-6.0 | 6.1-8.0 | 8.1-10.0 | >10.00 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N | 0 | 0 | 0 | 0 | 4 | 6 | 4 | 1 | 3 | 0 | 0 | 18 |
| NNE | 0 | 0 | 1 | 0 | 2 | 2 | 8 | 4 | 4 | 0 | 0 | 21 |
| NE | 0 | 0 | 0 | 3 | 1 | 1 | 5 | 1 | 5 | 1 | 0 | 17 |
| ENE | 0 | 0 | 0 | 2 | 4 | 4 | 9 | 3 | 1 | 0 | 0 | 23 |
| E | 0 | 1 | 1 | 0 | 4 | 4 | 6 | 4 | 0 | 0 | 0 | 20 |
| ESE | 0 | 0 | 0 | 0 | 4 | 4 | 3 | 1 | 3 | 2 | 0 | 17 |
| SE | 0 | 1 | 0 | 0 | 3 | 0 | 2 | 3 | 21 | 4 | 0 | 34 |
| SSE | 0 | 0 | 0 | 1 | 2 | 4 | 6 | 9 | 18 | 2 | 0 | 42 |
| S | 0 | 0 | 0 | 0 | 1 | 1 | 6 | 13 | 15 | 7 | 0 | 43 |
| SSW | 0 | 0 | 0 | 0 | 1 | 1 | 4 | 16 | 12 | 0 | 0 | 34 |
| SW | 0 | 0 | 0 | 0 | 2 | 2 | 5 | 3 | 6 | 2 | 0 | 20 |
| WSW | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| W | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 6 | 0 | 0 | 7 |
| WNW | 0 | 0 | 1 | 1 | 0 | 2 | 4 | 3 | 0 | 0 | 0 | 11 |
| NW | 0 | 0 | 0 | 1 | 2 | 2 | 2 | 5 | 2 | 0 | 0 | 14 |
| NNW | 0 | 0 | 1 | 0 | 2 | 3 | 5 | 4 | 3 | 0 | 0 | 18 |
| Tot | 0 | 2 | 4 | 8 | 33 | 36 | 70 | 70 | 99 | 18 | 0 | 340 |

| | |
|---|---|
| Hours of Calm | 1 |
| Hours of Variable Direction | 0 |
| Hours of Valid Data | 341 |
| Hours of Missing Data | 7 |
| Hours in Period | 2208 |

# Quad Cities Nuclear Power Station
# 2007 Annual Radioactive Effluent Release Report

## Joint Frequency Data

Site:: Quad Cities Station
Period:: Months Jul - Sep for years 2007 - 2007
Stability Class G Extremely Stable based on Lapse Rate
Elevations:: Winds 296ft Stability 296ft

| Wind Direction Sector | Wind Speed Range (m/s) <0.50 | 0.5-1.0 | 1.1-1.5 | 1.6-2.0 | 2.1-3.0 | 3.1-4.0 | 4.1-5.0 | 5.1-6.0 | 6.1-8.0 | 8.1-10.0 | >10.00 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 3 | 0 | 0 | 4 |
| NNE | 0 | 0 | 0 | 0 | 1 | 4 | 2 | 0 | 0 | 0 | 0 | 7 |
| NE | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 4 |
| ENE | 0 | 0 | 1 | 0 | 3 | 1 | 2 | 1 | 0 | 0 | 0 | 8 |
| E | 0 | 2 | 2 | 4 | 2 | 3 | 2 | 0 | 0 | 0 | 0 | 15 |
| ESE | 0 | 0 | 0 | 3 | 6 | 4 | 2 | 1 | 3 | 1 | 0 | 20 |
| SE | 0 | 0 | 3 | 3 | 2 | 5 | 4 | 11 | 18 | 3 | 0 | 49 |
| SSE | 0 | 1 | 1 | 1 | 4 | 2 | 11 | 6 | 13 | 1 | 0 | 40 |
| S | 0 | 0 | 1 | 0 | 2 | 2 | 4 | 6 | 4 | 0 | 0 | 19 |
| SSW | 0 | 0 | 0 | 1 | 1 | 4 | 7 | 10 | 1 | 0 | 0 | 24 |
| SW | 0 | 0 | 0 | 0 | 2 | 3 | 7 | 3 | 4 | 0 | 0 | 19 |
| WSW | 0 | 1 | 0 | 0 | 2 | 0 | 3 | 1 | 5 | 0 | 0 | 12 |
| W | 0 | 0 | 3 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 5 |
| WNW | 0 | 0 | 1 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| NW | 0 | 0 | 0 | 0 | 0 | 1 | 3 | 3 | 1 | 0 | 0 | 8 |
| NNW | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 3 |
| Tot | 0 | 4 | 12 | 13 | 29 | 33 | 49 | 43 | 52 | 5 | 0 | 240 |

Hours of Calm . . . . . 1
Hours of Variable Direction 0
Hours of Valid Data . . . . 241
Hours of Missing Data . . . 7
Hours in Period . . . . . 2208

# Quad Cities Nuclear Power Station
# 2007 Annual Radioactive Effluent Release Report

## Joint Frequency Data

Site:: Quad Cities Station
Period:: Months Oct - Dec for years 2007 - 2007
All Stabilities
Elevations:: Winds 33ft Stability 196ft

| Wind Direction Sector | Wind Speed Range (m/s) <0.50 | 0.5-1.0 | 1.1-1.5 | 1.6-2.0 | 2.1-3.0 | 3.1-4.0 | 4.1-5.0 | 5.1-6.0 | 6.1-8.0 | 8.1-10.0 | >10.00 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N | 0 | 5 | 8 | 8 | 27 | 27 | 20 | 21 | 1 | 0 | 0 | 117 |
| NNE | 0 | 5 | 3 | 8 | 25 | 19 | 11 | 7 | 4 | 0 | 0 | 82 |
| NE | 0 | 1 | 9 | 19 | 31 | 8 | 3 | 1 | 0 | 0 | 0 | 72 |
| ENE | 0 | 8 | 11 | 15 | 19 | 5 | 6 | 0 | 0 | 0 | 0 | 64 |
| E | 0 | 28 | 25 | 19 | 29 | 7 | 1 | 0 | 0 | 0 | 0 | 109 |
| ESE | 0 | 30 | 53 | 42 | 54 | 27 | 13 | 1 | 3 | 0 | 0 | 223 |
| SE | 0 | 36 | 48 | 23 | 15 | 11 | 6 | 3 | 0 | 0 | 0 | 142 |
| SSE | 0 | 22 | 24 | 28 | 35 | 12 | 4 | 0 | 0 | 0 | 0 | 125 |
| S | 0 | 19 | 18 | 15 | 35 | 16 | 4 | 0 | 0 | 0 | 0 | 107 |
| SSW | 0 | 6 | 12 | 19 | 49 | 21 | 5 | 1 | 0 | 0 | 0 | 113 |
| SW | 0 | 6 | 17 | 20 | 68 | 32 | 12 | 7 | 0 | 0 | 0 | 162 |
| WSW | 0 | 3 | 15 | 21 | 38 | 26 | 11 | 5 | 7 | 0 | 0 | 126 |
| W | 0 | 0 | 10 | 15 | 60 | 39 | 36 | 15 | 6 | 0 | 0 | 181 |
| WNW | 0 | 1 | 9 | 16 | 48 | 35 | 34 | 38 | 30 | 0 | 0 | 211 |
| NW | 0 | 1 | 12 | 24 | 81 | 34 | 35 | 14 | 8 | 0 | 0 | 209 |
| NNW | 0 | 1 | 12 | 5 | 34 | 22 | 11 | 0 | 0 | 0 | 0 | 85 |
| Tot | 0 | 172 | 286 | 297 | 648 | 341 | 212 | 113 | 59 | 0 | 0 | 2128 |

| | |
|---|---|
| Hours of Calm | 35 |
| Hours of Variable Direction | 0 |
| Hours of Valid Data | 2163 |
| Hours of Missing Data | 45 |
| Hours in Period | 2208 |

# Quad Cities Nuclear Power Station
# 2007 Annual Radioactive Effluent Release Report

## Joint Frequency Data

Site:: Quad Cities Station
Period:: Months Oct - Dec for years 2007 - 2007
Stability Class A Extremely Unstable based on Lapse Rate
Elevations:: Winds 33ft Stability 196ft

| Wind Direction Sector | Wind Speed Range (m/s) <0.50 | 0.5-1.0 | 1.1-1.5 | 1.6-2.0 | 2.1-3.0 | 3.1-4.0 | 4.1-5.0 | 5.1-6.0 | 6.1-8.0 | 8.1-10.0 | >10.00 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 6 | 0 | 0 | 0 | 7 |
| NNE | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| NE | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 2 |
| ENE | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 4 |
| E | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| ESE | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 0 | 0 | 0 | 0 | 3 |
| SE | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 2 |
| SSE | 0 | 0 | 0 | 0 | 4 | 3 | 2 | 0 | 0 | 0 | 0 | 9 |
| S | 0 | 0 | 0 | 0 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 3 |
| SSW | 0 | 0 | 0 | 0 | 12 | 10 | 0 | 0 | 0 | 0 | 0 | 22 |
| SW | 0 | 0 | 0 | 0 | 9 | 10 | 1 | 1 | 0 | 0 | 0 | 21 |
| WSW | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| W | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 0 | 0 | 0 | 3 |
| WNW | 0 | 0 | 0 | 0 | 1 | 3 | 3 | 4 | 1 | 0 | 0 | 12 |
| NW | 0 | 0 | 0 | 0 | 1 | 4 | 7 | 7 | 1 | 0 | 0 | 20 |
| NNW | 0 | 0 | 0 | 0 | 2 | 0 | 5 | 0 | 0 | 0 | 0 | 7 |
| Tot | 0 | 0 | 0 | 0 | 31 | 37 | 28 | 19 | 2 | 0 | 0 | 117 |

| | |
|---|---|
| Hours of Calm . . . . . | 0 |
| Hours of Variable Direction | 0 |
| Hours of Valid Data . . . . | 117 |
| Hours of Missing Data . . . | 45 |
| Hours in Period . . . . . | 2208 |

# Quad Cities Nuclear Power Station
# 2007 Annual Radioactive Effluent Release Report

## Joint Frequency Data

Site:: Quad Cities Station
Period:: Months Oct - Dec for years 2007 - 2007
Stability Class B Moderately Unstable based on Lapse Rate
Elevations:: Winds 33ft Stability 196ft

| Wind Direction Sector | Wind Speed Range (m/s) <0.50 | 0.5-1.0 | 1.1-1.5 | 1.6-2.0 | 2.1-3.0 | 3.1-4.0 | 4.1-5.0 | 5.1-6.0 | 6.1-8.0 | 8.1-10.0 | >10.00 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N | 0 | 0 | 0 | 0 | 1 | 1 | 4 | 0 | 0 | 0 | 0 | 6 |
| NNE | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 3 |
| NE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ENE | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| E | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ESE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SSE | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 2 |
| S | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| SSW | 0 | 0 | 0 | 0 | 3 | 2 | 1 | 0 | 0 | 0 | 0 | 6 |
| SW | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| WSW | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 2 |
| W | 0 | 0 | 0 | 0 | 1 | 4 | 6 | 0 | 0 | 0 | 0 | 11 |
| WNW | 0 | 0 | 0 | 0 | 2 | 1 | 3 | 1 | 1 | 0 | 0 | 8 |
| NW | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 1 | 0 | 0 | 0 | 4 |
| NNW | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| Tot | 0 | 0 | 0 | 0 | 13 | 16 | 17 | 2 | 1 | 0 | 0 | 49 |

| | |
|---|---|
| Hours of Calm . . . . . | 0 |
| Hours of Variable Direction | 0 |
| Hours of Valid Data . . . . | 49 |
| Hours of Missing Data . . . | 45 |
| Hours in Period . . . . . | 2208 |

# Quad Cities Nuclear Power Station
# 2007 Annual Radioactive Effluent Release Report

## Joint Frequency Data

Site:: Quad Cities Station
Period:: Months Oct - Dec for years 2007 - 2007
Stability Class C Slightly Unstable based on Lapse Rate
Elevations:: Winds 33ft Stability 196ft

| Wind Direction Sector | Wind Speed Range (m/s) <0.50 | 0.5-1.0 | 1.1-1.5 | 1.6-2.0 | 2.1-3.0 | 3.1-4.0 | 4.1-5.0 | 5.1-6.0 | 6.1-8.0 | 8.1-10.0 | >10.00 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N | 0 | 0 | 0 | 0 | 1 | 2 | 2 | 5 | 0 | 0 | 0 | 10 |
| NNE | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 2 |
| NE | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| ENE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| E | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ESE | 0 | 0 | 0 | 0 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 3 |
| SE | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| SSE | 0 | 0 | 1 | 1 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 6 |
| S | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 4 |
| SSW | 0 | 0 | 0 | 1 | 8 | 3 | 0 | 0 | 0 | 0 | 0 | 12 |
| SW | 0 | 0 | 0 | 0 | 7 | 2 | 1 | 1 | 0 | 0 | 0 | 11 |
| WSW | 0 | 0 | 0 | 2 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 4 |
| W | 0 | 0 | 0 | 3 | 3 | 5 | 4 | 0 | 0 | 0 | 0 | 15 |
| WNW | 0 | 0 | 0 | 0 | 2 | 1 | 1 | 1 | 3 | 0 | 0 | 8 |
| NW | 0 | 0 | 0 | 0 | 1 | 1 | 6 | 1 | 2 | 0 | 0 | 11 |
| NNW | 0 | 0 | 0 | 0 | 3 | 2 | 3 | 0 | 0 | 0 | 0 | 8 |
| Tot | 0 | 0 | 1 | 7 | 34 | 23 | 18 | 8 | 5 | 0 | 0 | 96 |

| | |
|---|---|
| Hours of Calm . . . . . | 0 |
| Hours of Variable Direction | 0 |
| Hours of Valid Data . . . . | 96 |
| Hours of Missing Data . . . | 45 |
| Hours in Period . . . . . | 2208 |

# Quad Cities Nuclear Power Station
# 2007 Annual Radioactive Effluent Release Report

## Joint Frequency Data

Site:: Quad Cities Station
Period:: Months Oct - Dec for years 2007 - 2007
Stability Class D Neutral based on Lapse Rate
Elevations:: Winds 33ft Stability 196ft

| Wind Direction Sector | Wind Speed Range (m/s) <0.50 | 0.5-1.0 | 1.1-1.5 | 1.6-2.0 | 2.1-3.0 | 3.1-4.0 | 4.1-5.0 | 5.1-6.0 | 6.1-8.0 | 8.1-10.0 | >10.00 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N | 0 | 2 | 6 | 6 | 23 | 21 | 11 | 10 | 1 | 0 | 0 | 80 |
| NNE | 0 | 2 | 0 | 6 | 22 | 14 | 10 | 7 | 4 | 0 | 0 | 65 |
| NE | 0 | 0 | 4 | 12 | 25 | 7 | 1 | 1 | 0 | 0 | 0 | 50 |
| ENE | 0 | 1 | 2 | 9 | 16 | 5 | 1 | 0 | 0 | 0 | 0 | 34 |
| E | 0 | 3 | 5 | 7 | 23 | 6 | 1 | 0 | 0 | 0 | 0 | 45 |
| ESE | 0 | 2 | 4 | 4 | 15 | 10 | 7 | 1 | 3 | 0 | 0 | 46 |
| SE | 0 | 3 | 4 | 6 | 6 | 5 | 2 | 1 | 0 | 0 | 0 | 27 |
| SSE | 0 | 3 | 7 | 10 | 16 | 6 | 0 | 0 | 0 | 0 | 0 | 42 |
| S | 0 | 1 | 4 | 7 | 12 | 5 | 2 | 0 | 0 | 0 | 0 | 31 |
| SSW | 0 | 0 | 2 | 10 | 20 | 2 | 1 | 1 | 0 | 0 | 0 | 36 |
| SW | 0 | 1 | 1 | 8 | 32 | 14 | 7 | 5 | 0 | 0 | 0 | 68 |
| WSW | 0 | 0 | 10 | 7 | 27 | 15 | 10 | 5 | 7 | 0 | 0 | 81 |
| W | 0 | 0 | 6 | 4 | 28 | 24 | 23 | 14 | 6 | 0 | 0 | 105 |
| WNW | 0 | 0 | 3 | 3 | 31 | 27 | 26 | 32 | 25 | 0 | 0 | 147 |
| NW | 0 | 0 | 5 | 12 | 50 | 25 | 21 | 5 | 5 | 0 | 0 | 123 |
| NNW | 0 | 0 | 7 | 4 | 19 | 18 | 3 | 0 | 0 | 0 | 0 | 51 |
| Tot | 0 | 18 | 70 | 115 | 365 | 204 | 126 | 82 | 51 | 0 | 0 | 1031 |

| | |
|---|---|
| Hours of Calm | 1 |
| Hours of Variable Direction | 0 |
| Hours of Valid Data | 1032 |
| Hours of Missing Data | 45 |
| Hours in Period | 2208 |

# Quad Cities Nuclear Power Station
# 2007 Annual Radioactive Effluent Release Report

## Joint Frequency Data

Site:: Quad Cities Station
Period:: Months Oct - Dec for years 2007 - 2007
Stability Class E Slightly Stable based on Lapse Rate
Elevations:: Winds 33ft Stability 196ft

| Wind Direction Sector | Wind Speed Range (m/s) <0.50 | 0.5-1.0 | 1.1-1.5 | 1.6-2.0 | 2.1-3.0 | 3.1-4.0 | 4.1-5.0 | 5.1-6.0 | 6.1-8.0 | 8.1-10.0 | >10.00 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N | 0 | 1 | 0 | 2 | 2 | 3 | 2 | 0 | 0 | 0 | 0 | 10 |
| NNE | 0 | 1 | 2 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| NE | 0 | 0 | 2 | 4 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 11 |
| ENE | 0 | 3 | 4 | 5 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 15 |
| E | 0 | 6 | 13 | 10 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 35 |
| ESE | 0 | 4 | 10 | 13 | 21 | 14 | 5 | 0 | 0 | 0 | 0 | 67 |
| SE | 0 | 4 | 7 | 9 | 6 | 5 | 4 | 1 | 0 | 0 | 0 | 36 |
| SSE | 0 | 6 | 7 | 10 | 11 | 2 | 1 | 0 | 0 | 0 | 0 | 37 |
| S | 0 | 4 | 7 | 6 | 15 | 8 | 2 | 0 | 0 | 0 | 0 | 42 |
| SSW | 0 | 1 | 6 | 5 | 6 | 4 | 3 | 0 | 0 | 0 | 0 | 25 |
| SW | 0 | 1 | 14 | 12 | 17 | 6 | 3 | 0 | 0 | 0 | 0 | 53 |
| WSW | 0 | 1 | 4 | 12 | 10 | 8 | 1 | 0 | 0 | 0 | 0 | 36 |
| W | 0 | 0 | 2 | 8 | 28 | 5 | 1 | 1 | 0 | 0 | 0 | 45 |
| WNW | 0 | 1 | 3 | 9 | 11 | 3 | 1 | 0 | 0 | 0 | 0 | 28 |
| NW | 0 | 1 | 5 | 12 | 28 | 2 | 0 | 0 | 0 | 0 | 0 | 48 |
| NNW | 0 | 0 | 4 | 1 | 10 | 1 | 0 | 0 | 0 | 0 | 0 | 16 |
| Tot | 0 | 34 | 90 | 118 | 181 | 61 | 23 | 2 | 0 | 0 | 0 | 509 |

| | |
|---|---|
| Hours of Calm | 4 |
| Hours of Variable Direction | 0 |
| Hours of Valid Data | 513 |
| Hours of Missing Data | 45 |
| Hours in Period | 2208 |

# Quad Cities Nuclear Power Station
# 2007 Annual Radioactive Effluent Release Report

## Joint Frequency Data

Site:: Quad Cities Station
Period:: Months Oct - Dec for years 2007 - 2007
Stability Class F Moderately Stable based on Lapse Rate
Elevations:: Winds 33ft Stability 196ft

| Wind Direction Sector | Wind Speed Range (m/s) <0.50 | 0.5-1.0 | 1.1-1.5 | 1.6-2.0 | 2.1-3.0 | 3.1-4.0 | 4.1-5.0 | 5.1-6.0 | 6.1-8.0 | 8.1-10.0 | >10.00 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| NNE | 0 | 1 | 1 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| NE | 0 | 1 | 3 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 8 |
| ENE | 0 | 1 | 4 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 |
| E | 0 | 10 | 4 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16 |
| ESE | 0 | 9 | 18 | 10 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 49 |
| SE | 0 | 14 | 31 | 7 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 54 |
| SSE | 0 | 7 | 7 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 20 |
| S | 0 | 8 | 7 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 19 |
| SSW | 0 | 2 | 4 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9 |
| SW | 0 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| WSW | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| W | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| WNW | 0 | 0 | 1 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| NW | 0 | 0 | 2 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| NNW | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| Tot | 0 | 59 | 88 | 39 | 19 | 0 | 0 | 0 | 0 | 0 | 0 | 205 |

| | |
|---|---|
| Hours of Calm . . . . . | 11 |
| Hours of Variable Direction | 0 |
| Hours of Valid Data . . . . | 216 |
| Hours of Missing Data . . . | 45 |
| Hours in Period . . . . . | 2208 |

# Quad Cities Nuclear Power Station
# 2007 Annual Radioactive Effluent Release Report

## Joint Frequency Data

Site:: Quad Cities Station
Period:: Months Oct - Dec for years 2007 - 2007
Stability Class G Extremely Stable based on Lapse Rate
Elevations:: Winds 33ft Stability 196ft

| Wind Direction Sector | Wind Speed Range (m/s) <0.50 | 0.5-1.0 | 1.1-1.5 | 1.6-2.0 | 2.1-3.0 | 3.1-4.0 | 4.1-5.0 | 5.1-6.0 | 6.1-8.0 | 8.1-10.0 | >10.00 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NNE | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| NE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ENE | 0 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| E | 0 | 9 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12 |
| ESE | 0 | 15 | 21 | 15 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 55 |
| SE | 0 | 15 | 6 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22 |
| SSE | 0 | 6 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9 |
| S | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 |
| SSW | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| SW | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| WSW | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| W | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| WNW | 0 | 0 | 2 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| NW | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NNW | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Tot | 0 | 61 | 37 | 18 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 121 |

Hours of Calm . . . . . 19
Hours of Variable Direction 0
Hours of Valid Data . . . . 140
Hours of Missing Data . . . 45
Hours in Period . . . . . 2208

# Quad Cities Nuclear Power Station
# 2007 Annual Radioactive Effluent Release Report

## Joint Frequency Data

Site:: Quad Cities Station
Period:: Months Oct - Dec for years 2007 - 2007
All Stabilities
Elevations:: Winds 196ft Stability 196ft

| Wind Direction Sector | Wind Speed Range (m/s) <0.50 | 0.5-1.0 | 1.1-1.5 | 1.6-2.0 | 2.1-3.0 | 3.1-4.0 | 4.1-5.0 | 5.1-6.0 | 6.1-8.0 | 8.1-10.0 | >10.00 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N | 0 | 0 | 1 | 1 | 7 | 13 | 12 | 15 | 24 | 19 | 1 | 93 |
| NNE | 0 | 0 | 1 | 1 | 11 | 12 | 18 | 12 | 9 | 7 | 3 | 74 |
| NE | 0 | 0 | 0 | 0 | 10 | 19 | 17 | 9 | 16 | 1 | 0 | 72 |
| ENE | 0 | 0 | 1 | 2 | 7 | 12 | 14 | 8 | 5 | 0 | 0 | 49 |
| E | 0 | 0 | 1 | 3 | 16 | 20 | 20 | 15 | 5 | 0 | 0 | 80 |
| ESE | 0 | 1 | 3 | 5 | 10 | 21 | 16 | 25 | 40 | 9 | 2 | 132 |
| SE | 0 | 1 | 3 | 3 | 8 | 12 | 15 | 10 | 9 | 8 | 2 | 71 |
| SSE | 0 | 1 | 1 | 2 | 10 | 31 | 58 | 23 | 37 | 11 | 4 | 178 |
| S | 0 | 0 | 2 | 3 | 10 | 27 | 52 | 49 | 41 | 21 | 11 | 216 |
| SSW | 0 | 0 | 1 | 1 | 17 | 26 | 40 | 55 | 38 | 17 | 10 | 205 |
| SW | 0 | 0 | 2 | 8 | 10 | 21 | 26 | 18 | 22 | 9 | 0 | 116 |
| WSW | 0 | 0 | 3 | 3 | 7 | 18 | 21 | 17 | 27 | 8 | 5 | 109 |
| W | 0 | 2 | 2 | 2 | 13 | 19 | 35 | 32 | 42 | 16 | 3 | 166 |
| WNW | 0 | 1 | 1 | 4 | 8 | 22 | 36 | 28 | 42 | 38 | 27 | 207 |
| NW | 0 | 0 | 2 | 2 | 10 | 21 | 48 | 31 | 40 | 26 | 7 | 187 |
| NNW | 0 | 0 | 0 | 2 | 11 | 13 | 33 | 31 | 33 | 2 | 0 | 125 |
| Tot | 0 | 6 | 24 | 42 | 165 | 307 | 461 | 378 | 430 | 192 | 75 | 2080 |

| | |
|---|---|
| Hours of Calm . . . . . | 1 |
| Hours of Variable Direction | 0 |
| Hours of Valid Data . . . . | 2081 |
| Hours of Missing Data . . . | 127 |
| Hours in Period . . . . . | 2208 |

# Quad Cities Nuclear Power Station
# 2007 Annual Radioactive Effluent Release Report

## Joint Frequency Data

Site:: Quad Cities Station
Period:: Months Oct - Dec for years 2007 - 2007
Stability Class A Extremely Unstable based on Lapse Rate
Elevations:: Winds 196ft Stability 196ft

| Wind Direction Sector | Wind Speed Range (m/s) <0.50 | 0.5-1.0 | 1.1-1.5 | 1.6-2.0 | 2.1-3.0 | 3.1-4.0 | 4.1-5.0 | 5.1-6.0 | 6.1-8.0 | 8.1-10.0 | >10.00 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 5 | 0 | 7 |
| NNE | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| NE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 |
| ENE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 4 |
| E | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 |
| ESE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 3 | 0 | 0 | 4 |
| SE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SSE | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 2 | 3 | 1 | 2 | 11 |
| S | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 3 |
| SSW | 0 | 0 | 0 | 0 | 0 | 3 | 10 | 8 | 9 | 3 | 2 | 35 |
| SW | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 3 | 2 | 0 | 0 | 7 |
| WSW | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| W | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 0 | 3 |
| WNW | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 3 | 5 | 1 | 1 | 11 |
| NW | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 3 | 9 | 6 | 1 | 21 |
| NNW | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 5 | 1 | 0 | 8 |
| Tot | 0 | 0 | 0 | 0 | 0 | 7 | 18 | 22 | 46 | 18 | 6 | 117 |

| | |
|---|---|
| Hours of Calm . . . . . | 0 |
| Hours of Variable Direction | 0 |
| Hours of Valid Data . . . . | 117 |
| Hours of Missing Data . . . | 127 |
| Hours in Period . . . . . | 2208 |

# Quad Cities Nuclear Power Station
# 2007 Annual Radioactive Effluent Release Report

## Joint Frequency Data

Site:: Quad Cities Station
Period:: Months Oct - Dec for years 2007 - 2007
Stability Class B Moderately Unstable based on Lapse Rate
Elevations:: Winds 196ft Stability 196ft

| Wind Direction Sector | Wind Speed Range (m/s) <0.50 | 0.5-1.0 | 1.1-1.5 | 1.6-2.0 | 2.1-3.0 | 3.1-4.0 | 4.1-5.0 | 5.1-6.0 | 6.1-8.0 | 8.1-10.0 | >10.00 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 3 |
| NNE | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 2 |
| NE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 |
| ENE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| E | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ESE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SSE | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 2 |
| S | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 1 | 0 | 0 | 3 |
| SSW | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 2 | 2 | 0 | 1 | 7 |
| SW | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| WSW | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 2 |
| W | 0 | 0 | 0 | 0 | 0 | 1 | 3 | 2 | 5 | 0 | 0 | 11 |
| WNW | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 3 | 1 | 1 | 7 |
| NW | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 1 | 1 | 0 | 5 |
| NNW | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 4 | 0 | 0 | 5 |
| Tot | 0 | 0 | 0 | 0 | 0 | 5 | 15 | 6 | 18 | 2 | 3 | 49 |

| | |
|---|---|
| Hours of Calm | 0 |
| Hours of Variable Direction | 0 |
| Hours of Valid Data | 49 |
| Hours of Missing Data | 127 |
| Hours in Period | 2208 |

# Quad Cities Nuclear Power Station
# 2007 Annual Radioactive Effluent Release Report

## Joint Frequency Data

Site:: Quad Cities Station
Period:: Months Oct - Dec for years 2007 - 2007
Stability Class C Slightly Unstable based on Lapse Rate
Elevations:: Winds 196ft Stability 196ft

| Wind Direction Sector | Wind Speed Range (m/s) <0.50 | 0.5-1.0 | 1.1-1.5 | 1.6-2.0 | 2.1-3.0 | 3.1-4.0 | 4.1-5.0 | 5.1-6.0 | 6.1-8.0 | 8.1-10.0 | >10.00 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 4 | 2 | 0 | 8 |
| NNE | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 2 |
| NE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 |
| ENE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| E | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ESE | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 2 |
| SE | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 2 |
| SSE | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 2 | 0 | 0 | 4 |
| S | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 3 | 1 | 2 | 0 | 8 |
| SSW | 0 | 0 | 0 | 0 | 0 | 3 | 5 | 4 | 4 | 1 | 1 | 18 |
| SW | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 | 1 | 0 | 0 | 4 |
| WSW | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 2 |
| W | 0 | 0 | 0 | 0 | 4 | 2 | 3 | 2 | 4 | 0 | 0 | 15 |
| WNW | 0 | 0 | 0 | 1 | 1 | 0 | 2 | 0 | 2 | 1 | 4 | 11 |
| NW | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 3 | 4 | 1 | 10 |
| NNW | 0 | 0 | 0 | 0 | 0 | 3 | 1 | 0 | 5 | 0 | 0 | 9 |
| Tot | 0 | 0 | 0 | 2 | 9 | 11 | 17 | 14 | 27 | 10 | 6 | 96 |

| | |
|---|---|
| Hours of Calm | 0 |
| Hours of Variable Direction | 0 |
| Hours of Valid Data | 96 |
| Hours of Missing Data | 127 |
| Hours in Period | 2208 |

# Quad Cities Nuclear Power Station
# 2007 Annual Radioactive Effluent Release Report

## Joint Frequency Data

Site:: Quad Cities Station
Period:: Months Oct - Dec for years 2007 - 2007
Stability Class D Neutral based on Lapse Rate
Elevations:: Winds 196ft Stability 196ft

| Wind Direction Sector | Wind Speed Range (m/s) <0.50 | 0.5-1.0 | 1.1-1.5 | 1.6-2.0 | 2.1-3.0 | 3.1-4.0 | 4.1-5.0 | 5.1-6.0 | 6.1-8.0 | 8.1-10.0 | >10.00 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N | 0 | 0 | 0 | 1 | 5 | 7 | 9 | 10 | 16 | 10 | 1 | 59 |
| NNE | 0 | 0 | 0 | 0 | 10 | 8 | 12 | 8 | 9 | 7 | 3 | 57 |
| NE | 0 | 0 | 0 | 0 | 7 | 17 | 14 | 6 | 7 | 1 | 0 | 52 |
| ENE | 0 | 0 | 0 | 2 | 1 | 8 | 7 | 6 | 1 | 0 | 0 | 25 |
| E | 0 | 0 | 1 | 1 | 9 | 8 | 9 | 8 | 5 | 0 | 0 | 41 |
| ESE | 0 | 1 | 2 | 2 | 3 | 7 | 4 | 5 | 12 | 2 | 2 | 40 |
| SE | 0 | 0 | 1 | 0 | 1 | 1 | 1 | 3 | 4 | 2 | 1 | 14 |
| SSE | 0 | 0 | 1 | 1 | 4 | 8 | 7 | 4 | 12 | 4 | 1 | 42 |
| S | 0 | 0 | 1 | 1 | 2 | 4 | 11 | 8 | 10 | 3 | 3 | 43 |
| SSW | 0 | 0 | 1 | 0 | 6 | 5 | 10 | 16 | 12 | 6 | 5 | 61 |
| SW | 0 | 0 | 1 | 5 | 4 | 11 | 11 | 6 | 10 | 5 | 0 | 53 |
| WSW | 0 | 0 | 0 | 2 | 3 | 13 | 9 | 11 | 18 | 7 | 5 | 68 |
| W | 0 | 0 | 2 | 1 | 4 | 8 | 16 | 13 | 24 | 13 | 3 | 84 |
| WNW | 0 | 0 | 1 | 2 | 5 | 10 | 23 | 16 | 26 | 35 | 21 | 139 |
| NW | 0 | 0 | 2 | 0 | 6 | 13 | 31 | 18 | 24 | 15 | 5 | 114 |
| NNW | 0 | 0 | 0 | 1 | 4 | 8 | 18 | 16 | 12 | 1 | 0 | 60 |
| Tot | 0 | 1 | 13 | 19 | 74 | 136 | 192 | 154 | 202 | 111 | 50 | 952 |

| | |
|---|---|
| Hours of Calm | 0 |
| Hours of Variable Direction | 0 |
| Hours of Valid Data | 952 |
| Hours of Missing Data | 127 |
| Hours in Period | 2208 |

## Joint Frequency Data

Site:: Quad Cities Station
Period:: Months Oct - Dec for years 2007 - 2007
Stability Class E Slightly Stable based on Lapse Rate
Elevations:: Winds 196ft Stability 196ft

| Wind Direction Sector | Wind Speed Range (m/s) <0.50 | 0.5-1.0 | 1.1-1.5 | 1.6-2.0 | 2.1-3.0 | 3.1-4.0 | 4.1-5.0 | 5.1-6.0 | 6.1-8.0 | 8.1-10.0 | >10.00 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N | 0 | 0 | 1 | 0 | 2 | 3 | 0 | 2 | 2 | 2 | 0 | 12 |
| NNE | 0 | 0 | 0 | 1 | 1 | 2 | 0 | 2 | 0 | 0 | 0 | 6 |
| NE | 0 | 0 | 0 | 0 | 3 | 1 | 1 | 2 | 4 | 0 | 0 | 11 |
| ENE | 0 | 0 | 1 | 0 | 1 | 3 | 5 | 0 | 0 | 0 | 0 | 10 |
| E | 0 | 0 | 0 | 2 | 4 | 11 | 9 | 3 | 0 | 0 | 0 | 29 |
| ESE | 0 | 0 | 0 | 2 | 4 | 9 | 9 | 15 | 20 | 7 | 0 | 66 |
| SE | 0 | 1 | 0 | 1 | 2 | 4 | 6 | 1 | 4 | 6 | 1 | 26 |
| SSE | 0 | 0 | 0 | 0 | 2 | 4 | 7 | 6 | 5 | 6 | 0 | 30 |
| S | 0 | 0 | 0 | 1 | 2 | 7 | 10 | 8 | 12 | 14 | 8 | 62 |
| SSW | 0 | 0 | 0 | 1 | 2 | 4 | 6 | 14 | 8 | 7 | 1 | 43 |
| SW | 0 | 0 | 0 | 1 | 2 | 6 | 9 | 8 | 8 | 4 | 0 | 38 |
| WSW | 0 | 0 | 1 | 0 | 2 | 4 | 10 | 5 | 9 | 1 | 0 | 32 |
| W | 0 | 1 | 0 | 0 | 4 | 3 | 11 | 15 | 8 | 2 | 0 | 44 |
| WNW | 0 | 0 | 0 | 0 | 1 | 9 | 8 | 8 | 6 | 0 | 0 | 32 |
| NW | 0 | 0 | 0 | 0 | 4 | 4 | 10 | 9 | 3 | 0 | 0 | 30 |
| NNW | 0 | 0 | 0 | 0 | 5 | 2 | 11 | 15 | 7 | 0 | 0 | 40 |
| Tot | 0 | 2 | 3 | 9 | 41 | 76 | 112 | 113 | 96 | 49 | 10 | 511 |

| | |
|---|---|
| Hours of Calm . . . . . | 0 |
| Hours of Variable Direction | 0 |
| Hours of Valid Data . . . . | 511 |
| Hours of Missing Data . . . | 127 |
| Hours in Period . . . . . | 2208 |

# Quad Cities Nuclear Power Station
# 2007 Annual Radioactive Effluent Release Report

## Joint Frequency Data

Site:: Quad Cities Station
Period:: Months Oct - Dec for years 2007 - 2007
Stability Class F Moderately Stable based on Lapse Rate
Elevations:: Winds 196ft Stability 196ft

| Wind Direction Sector | Wind Speed Range (m/s) <0.50 | 0.5-1.0 | 1.1-1.5 | 1.6-2.0 | 2.1-3.0 | 3.1-4.0 | 4.1-5.0 | 5.1-6.0 | 6.1-8.0 | 8.1-10.0 | >10.00 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 0 | 0 | 0 | 0 | 3 |
| NNE | 0 | 0 | 1 | 0 | 0 | 2 | 2 | 1 | 0 | 0 | 0 | 6 |
| NE | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 2 | 0 | 0 | 5 |
| ENE | 0 | 0 | 0 | 0 | 5 | 1 | 2 | 2 | 0 | 0 | 0 | 10 |
| E | 0 | 0 | 0 | 0 | 2 | 1 | 2 | 3 | 0 | 0 | 0 | 8 |
| ESE | 0 | 0 | 0 | 1 | 3 | 2 | 1 | 4 | 4 | 0 | 0 | 15 |
| SE | 0 | 0 | 0 | 1 | 1 | 4 | 4 | 5 | 1 | 0 | 0 | 16 |
| SSE | 0 | 1 | 0 | 0 | 3 | 8 | 24 | 10 | 11 | 0 | 0 | 57 |
| S | 0 | 0 | 0 | 0 | 2 | 11 | 19 | 16 | 10 | 2 | 0 | 60 |
| SSW | 0 | 0 | 0 | 0 | 1 | 4 | 2 | 5 | 3 | 0 | 0 | 15 |
| SW | 0 | 0 | 0 | 0 | 1 | 3 | 1 | 0 | 1 | 0 | 0 | 6 |
| WSW | 0 | 0 | 1 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| W | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| WNW | 0 | 0 | 0 | 1 | 1 | 0 | 2 | 0 | 0 | 0 | 0 | 4 |
| NW | 0 | 0 | 0 | 2 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 5 |
| NNW | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| Tot | 0 | 1 | 2 | 5 | 22 | 38 | 66 | 47 | 32 | 2 | 0 | 215 |

| | |
|---|---|
| Hours of Calm . . . . . | 1 |
| Hours of Variable Direction | 0 |
| Hours of Valid Data . . . . | 216 |
| Hours of Missing Data . . . | 127 |
| Hours in Period . . . . . | 2208 |

# Quad Cities Nuclear Power Station
# 2007 Annual Radioactive Effluent Release Report

## Joint Frequency Data

Site:: Quad Cities Station
Period:: Months Oct - Dec for years 2007 - 2007
Stability Class G Extremely Stable based on Lapse Rate
Elevations:: Winds 196ft Stability 196ft

| Wind Direction Sector | Wind Speed Range (m/s) <0.50 | 0.5-1.0 | 1.1-1.5 | 1.6-2.0 | 2.1-3.0 | 3.1-4.0 | 4.1-5.0 | 5.1-6.0 | 6.1-8.0 | 8.1-10.0 | >10.00 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| NNE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NE | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| ENE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| E | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| ESE | 0 | 0 | 1 | 0 | 0 | 1 | 2 | 0 | 1 | 0 | 0 | 5 |
| SE | 0 | 0 | 2 | 1 | 3 | 3 | 3 | 1 | 0 | 0 | 0 | 13 |
| SSE | 0 | 0 | 0 | 1 | 0 | 9 | 17 | 1 | 4 | 0 | 0 | 32 |
| S | 0 | 0 | 1 | 1 | 3 | 5 | 9 | 14 | 4 | 0 | 0 | 37 |
| SSW | 0 | 0 | 0 | 0 | 8 | 6 | 6 | 6 | 0 | 0 | 0 | 26 |
| SW | 0 | 0 | 1 | 2 | 2 | 1 | 1 | 0 | 0 | 0 | 0 | 7 |
| WSW | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 2 |
| W | 0 | 1 | 0 | 1 | 1 | 4 | 1 | 0 | 0 | 0 | 0 | 8 |
| WNW | 0 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 3 |
| NW | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 2 |
| NNW | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| Tot | 0 | 2 | 6 | 7 | 19 | 34 | 41 | 22 | 9 | 0 | 0 | 140 |

| | |
|---|---|
| Hours of Calm | 0 |
| Hours of Variable Direction | 0 |
| Hours of Valid Data | 140 |
| Hours of Missing Data | 127 |
| Hours in Period | 2208 |

# Quad Cities Nuclear Power Station
# 2007 Annual Radioactive Effluent Release Report

## Joint Frequency Data

Site:: Quad Cities Station
Period:: Months Oct - Dec for years 2007 - 2007
All Stabilities
Elevations:: Winds 296ft Stability 296ft

| Wind Direction Sector | Wind Speed Range (m/s) <0.50 | 0.5-1.0 | 1.1-1.5 | 1.6-2.0 | 2.1-3.0 | 3.1-4.0 | 4.1-5.0 | 5.1-6.0 | 6.1-8.0 | 8.1-10.0 | >10.00 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N | 0 | 0 | 0 | 3 | 4 | 8 | 9 | 14 | 25 | 19 | 10 | 92 |
| NNE | 0 | 0 | 0 | 0 | 9 | 8 | 16 | 13 | 7 | 13 | 4 | 70 |
| NE | 0 | 0 | 0 | 0 | 6 | 13 | 21 | 11 | 15 | 6 | 1 | 73 |
| ENE | 0 | 0 | 1 | 1 | 2 | 8 | 10 | 16 | 10 | 2 | 0 | 50 |
| E | 0 | 1 | 0 | 0 | 9 | 6 | 11 | 16 | 11 | 0 | 0 | 54 |
| ESE | 0 | 0 | 2 | 3 | 6 | 12 | 12 | 19 | 45 | 23 | 6 | 128 |
| SE | 0 | 2 | 1 | 3 | 5 | 9 | 11 | 7 | 17 | 11 | 7 | 73 |
| SSE | 0 | 0 | 0 | 2 | 8 | 14 | 11 | 32 | 42 | 14 | 11 | 134 |
| S | 0 | 0 | 1 | 1 | 6 | 13 | 33 | 53 | 78 | 28 | 22 | 235 |
| SSW | 0 | 0 | 1 | 1 | 14 | 16 | 37 | 44 | 81 | 25 | 19 | 238 |
| SW | 0 | 1 | 2 | 5 | 4 | 12 | 18 | 24 | 34 | 16 | 8 | 124 |
| WSW | 0 | 0 | 0 | 3 | 2 | 12 | 14 | 22 | 28 | 16 | 18 | 115 |
| W | 0 | 0 | 1 | 1 | 7 | 12 | 24 | 24 | 42 | 41 | 10 | 162 |
| WNW | 0 | 0 | 2 | 3 | 7 | 14 | 16 | 25 | 49 | 43 | 54 | 213 |
| NW | 0 | 0 | 1 | 4 | 9 | 8 | 20 | 39 | 45 | 41 | 16 | 183 |
| NNW | 0 | 0 | 0 | 1 | 5 | 9 | 18 | 24 | 56 | 12 | 1 | 126 |
| Tot | 0 | 4 | 12 | 31 | 103 | 174 | 281 | 383 | 585 | 310 | 187 | 2070 |

| | |
|---|---|
| Hours of Calm | 1 |
| Hours of Variable Direction | 0 |
| Hours of Valid Data | 2071 |
| Hours of Missing Data | 137 |
| Hours in Period | 2208 |

# Quad Cities Nuclear Power Station
# 2007 Annual Radioactive Effluent Release Report

## Joint Frequency Data

Site:: Quad Cities Station
Period:: Months Oct - Dec for years 2007 - 2007
Stability Class A Extremely Unstable based on Lapse Rate
Elevations:: Winds 296ft Stability 296ft

| Wind Direction Sector | Wind Speed Range (m/s) <0.50 | 0.5-1.0 | 1.1-1.5 | 1.6-2.0 | 2.1-3.0 | 3.1-4.0 | 4.1-5.0 | 5.1-6.0 | 6.1-8.0 | 8.1-10.0 | >10.00 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NNE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ENE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 2 |
| E | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ESE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SSE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 3 |
| S | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 3 |
| SSW | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 1 | 3 | 2 | 0 | 9 |
| SW | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 2 |
| WSW | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| W | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| WNW | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NW | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NNW | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 2 |
| Tot | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 2 | 10 | 4 | 2 | 21 |

| | |
|---|---|
| Hours of Calm . . . . . | 0 |
| Hours of Variable Direction | 0 |
| Hours of Valid Data . . . . | 21 |
| Hours of Missing Data . . . | 137 |
| Hours in Period . . . . . | 2208 |

# Quad Cities Nuclear Power Station
# 2007 Annual Radioactive Effluent Release Report

## Joint Frequency Data

Site:: Quad Cities Station
Period:: Months Oct - Dec for years 2007 - 2007
Stability Class B Moderately Unstable based on Lapse Rate
Elevations:: Winds 296ft Stability 296ft

| Wind Direction Sector | Wind Speed Range (m/s) <0.50 | 0.5-1.0 | 1.1-1.5 | 1.6-2.0 | 2.1-3.0 | 3.1-4.0 | 4.1-5.0 | 5.1-6.0 | 6.1-8.0 | 8.1-10.0 | >10.00 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 4 | 1 | 6 |
| NNE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 |
| ENE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 2 |
| E | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ESE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 2 |
| SE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SSE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 0 | 0 | 3 |
| S | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 |
| SSW | 0 | 0 | 0 | 0 | 0 | 1 | 5 | 4 | 3 | 2 | 0 | 15 |
| SW | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 2 |
| WSW | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| W | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| WNW | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 2 | 3 | 1 | 8 |
| NW | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 2 | 5 | 2 | 12 |
| NNW | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 4 |
| Tot | 0 | 0 | 0 | 0 | 0 | 2 | 7 | 9 | 17 | 17 | 4 | 56 |

| | |
|---|---|
| Hours of Calm . . . . . | 0 |
| Hours of Variable Direction | 0 |
| Hours of Valid Data . . . . | 56 |
| Hours of Missing Data . . . | 137 |
| Hours in Period . . . . . | 2208 |

# Quad Cities Nuclear Power Station
# 2007 Annual Radioactive Effluent Release Report

## Joint Frequency Data

Site:: Quad Cities Station
Period:: Months Oct - Dec for years 2007 - 2007
Stability Class C Slightly Unstable based on Lapse Rate
Elevations:: Winds 296ft Stability 296ft

| Wind Direction Sector | Wind Speed Range (m/s) <0.50 | 0.5-1.0 | 1.1-1.5 | 1.6-2.0 | 2.1-3.0 | 3.1-4.0 | 4.1-5.0 | 5.1-6.0 | 6.1-8.0 | 8.1-10.0 | >10.00 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 2 | 0 | 6 |
| NNE | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 1 | 0 | 0 | 0 | 5 |
| NE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 2 |
| ENE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| E | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ESE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 |
| SE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SSE | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 1 | 0 | 1 | 4 |
| S | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 |
| SSW | 0 | 0 | 0 | 0 | 0 | 1 | 3 | 4 | 8 | 2 | 3 | 21 |
| SW | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 3 | 0 | 0 | 4 |
| WSW | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 3 |
| W | 0 | 0 | 0 | 0 | 0 | 1 | 4 | 1 | 7 | 2 | 0 | 15 |
| WNW | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 2 | 4 | 1 | 6 | 16 |
| NW | 0 | 0 | 0 | 0 | 0 | 2 | 3 | 0 | 3 | 9 | 3 | 20 |
| NNW | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 0 | 0 | 6 |
| Tot | 0 | 0 | 0 | 0 | 0 | 8 | 15 | 14 | 37 | 17 | 13 | 104 |

| | |
|---|---|
| Hours of Calm | 0 |
| Hours of Variable Direction | 0 |
| Hours of Valid Data | 104 |
| Hours of Missing Data | 137 |
| Hours in Period | 2208 |

# Quad Cities Nuclear Power Station
# 2007 Annual Radioactive Effluent Release Report

## Joint Frequency Data

Site:: Quad Cities Station
Period:: Months Oct - Dec for years 2007 - 2007
Stability Class D Neutral based on Lapse Rate
Elevations:: Winds 296ft Stability 296ft

| Wind Direction Sector | Wind Speed Range (m/s) <0.50 | 0.5-1.0 | 1.1-1.5 | 1.6-2.0 | 2.1-3.0 | 3.1-4.0 | 4.1-5.0 | 5.1-6.0 | 6.1-8.0 | 8.1-10.0 | >10.00 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N | 0 | 0 | 0 | 1 | 3 | 7 | 5 | 9 | 19 | 10 | 7 | 61 |
| NNE | 0 | 0 | 0 | 0 | 7 | 5 | 9 | 11 | 4 | 13 | 4 | 53 |
| NE | 0 | 0 | 0 | 0 | 6 | 11 | 18 | 7 | 11 | 1 | 1 | 55 |
| ENE | 0 | 0 | 0 | 1 | 0 | 4 | 6 | 12 | 3 | 1 | 0 | 27 |
| E | 0 | 0 | 0 | 0 | 6 | 3 | 8 | 6 | 7 | 0 | 0 | 30 |
| ESE | 0 | 0 | 1 | 0 | 1 | 4 | 4 | 5 | 12 | 6 | 3 | 36 |
| SE | 0 | 0 | 0 | 1 | 1 | 0 | 3 | 2 | 4 | 5 | 2 | 18 |
| SSE | 0 | 0 | 0 | 1 | 1 | 4 | 5 | 5 | 13 | 4 | 4 | 37 |
| S | 0 | 0 | 0 | 1 | 3 | 5 | 11 | 12 | 11 | 5 | 4 | 52 |
| SSW | 0 | 0 | 1 | 0 | 9 | 3 | 10 | 16 | 27 | 6 | 11 | 83 |
| SW | 0 | 0 | 1 | 4 | 4 | 8 | 10 | 13 | 11 | 7 | 7 | 65 |
| WSW | 0 | 0 | 0 | 2 | 0 | 9 | 11 | 10 | 12 | 14 | 18 | 76 |
| W | 0 | 0 | 0 | 1 | 5 | 7 | 15 | 15 | 17 | 33 | 8 | 101 |
| WNW | 0 | 0 | 1 | 3 | 5 | 7 | 9 | 20 | 24 | 32 | 47 | 148 |
| NW | 0 | 0 | 1 | 3 | 6 | 3 | 13 | 26 | 22 | 22 | 11 | 107 |
| NNW | 0 | 0 | 0 | 1 | 2 | 5 | 12 | 17 | 20 | 3 | 1 | 61 |
| Tot | 0 | 0 | 5 | 19 | 59 | 85 | 149 | 186 | 217 | 162 | 128 | 1010 |

| | |
|---|---|
| Hours of Calm . . . . . | 0 |
| Hours of Variable Direction | 0 |
| Hours of Valid Data . . . . | 1010 |
| Hours of Missing Data . . . | 137 |
| Hours in Period . . . . . | 2208 |

# Quad Cities Nuclear Power Station
# 2007 Annual Radioactive Effluent Release Report

## Joint Frequency Data

Site:: Quad Cities Station
Period:: Months Oct - Dec for years 2007 - 2007
Stability Class E Slightly Stable based on Lapse Rate
Elevations:: Winds 296ft Stability 296ft

| Wind Direction Sector | Wind Speed Range (m/s) <0.50 | 0.5-1.0 | 1.1-1.5 | 1.6-2.0 | 2.1-3.0 | 3.1-4.0 | 4.1-5.0 | 5.1-6.0 | 6.1-8.0 | 8.1-10.0 | >10.00 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N | 0 | 0 | 0 | 2 | 1 | 1 | 2 | 2 | 3 | 3 | 2 | 16 |
| NNE | 0 | 0 | 0 | 0 | 1 | 2 | 3 | 0 | 3 | 0 | 0 | 9 |
| NE | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 4 | 0 | 3 | 0 | 9 |
| ENE | 0 | 0 | 0 | 0 | 2 | 4 | 4 | 4 | 3 | 1 | 0 | 18 |
| E | 0 | 0 | 0 | 0 | 2 | 2 | 3 | 7 | 2 | 0 | 0 | 16 |
| ESE | 0 | 0 | 0 | 2 | 3 | 5 | 8 | 8 | 24 | 13 | 3 | 66 |
| SE | 0 | 1 | 0 | 1 | 3 | 8 | 7 | 2 | 5 | 5 | 5 | 37 |
| SSE | 0 | 0 | 0 | 0 | 2 | 4 | 4 | 12 | 4 | 5 | 5 | 36 |
| S | 0 | 0 | 1 | 0 | 0 | 5 | 9 | 14 | 20 | 13 | 15 | 77 |
| SSW | 0 | 0 | 0 | 0 | 3 | 4 | 5 | 8 | 21 | 12 | 5 | 58 |
| SW | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 8 | 14 | 7 | 1 | 33 |
| WSW | 0 | 0 | 0 | 1 | 2 | 2 | 3 | 7 | 16 | 2 | 0 | 33 |
| W | 0 | 0 | 1 | 0 | 0 | 2 | 2 | 5 | 14 | 6 | 2 | 32 |
| WNW | 0 | 0 | 1 | 0 | 0 | 3 | 6 | 2 | 17 | 6 | 0 | 35 |
| NW | 0 | 0 | 0 | 0 | 1 | 3 | 3 | 8 | 16 | 4 | 0 | 35 |
| NNW | 0 | 0 | 0 | 0 | 3 | 4 | 4 | 7 | 25 | 5 | 0 | 48 |
| Tot | 0 | 1 | 3 | 6 | 23 | 52 | 65 | 98 | 187 | 85 | 38 | 558 |

| | |
|---|---|
| Hours of Calm | 0 |
| Hours of Variable Direction | 0 |
| Hours of Valid Data | 558 |
| Hours of Missing Data | 137 |
| Hours in Period | 2208 |

# Quad Cities Nuclear Power Station
# 2007 Annual Radioactive Effluent Release Report

## Joint Frequency Data

Site:: Quad Cities Station
Period:: Months Oct - Dec for years 2007 - 2007
Stability Class F Moderately Stable based on Lapse Rate
Elevations:: Winds 296ft Stability 296ft

| Wind Direction Sector | Wind Speed Range (m/s) <0.50 | 0.5-1.0 | 1.1-1.5 | 1.6-2.0 | 2.1-3.0 | 3.1-4.0 | 4.1-5.0 | 5.1-6.0 | 6.1-8.0 | 8.1-10.0 | >10.00 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 0 | 0 | 0 | 3 |
| NNE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 |
| NE | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 2 | 1 | 0 | 6 |
| ENE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| E | 0 | 1 | 0 | 0 | 1 | 1 | 0 | 3 | 2 | 0 | 0 | 8 |
| ESE | 0 | 0 | 1 | 0 | 1 | 2 | 0 | 3 | 7 | 3 | 0 | 17 |
| SE | 0 | 1 | 0 | 0 | 1 | 1 | 0 | 1 | 7 | 0 | 0 | 11 |
| SSE | 0 | 0 | 0 | 0 | 2 | 2 | 2 | 9 | 13 | 4 | 0 | 32 |
| S | 0 | 0 | 0 | 0 | 1 | 1 | 9 | 23 | 34 | 8 | 2 | 78 |
| SSW | 0 | 0 | 0 | 1 | 1 | 3 | 9 | 7 | 8 | 0 | 0 | 29 |
| SW | 0 | 1 | 1 | 1 | 0 | 1 | 5 | 2 | 2 | 2 | 0 | 15 |
| WSW | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 2 | 0 | 0 | 0 | 3 |
| W | 0 | 0 | 0 | 0 | 2 | 1 | 0 | 2 | 4 | 0 | 0 | 9 |
| WNW | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 2 | 1 | 0 | 5 |
| NW | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 2 | 2 | 1 | 0 | 7 |
| NNW | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 2 | 1 | 0 | 4 |
| Tot | 0 | 3 | 2 | 3 | 11 | 15 | 30 | 56 | 85 | 21 | 2 | 228 |

| | |
|---|---|
| Hours of Calm . . . . . | 1 |
| Hours of Variable Direction | 0 |
| Hours of Valid Data . . . . | 229 |
| Hours of Missing Data . . . | 137 |
| Hours in Period . . . . . | 2208 |

# Quad Cities Nuclear Power Station
# 2007 Annual Radioactive Effluent Release Report

## Joint Frequency Data

Site:: Quad Cities Station
Period:: Months Oct - Dec for years 2007 - 2007
Stability Class G Extremely Stable based on Lapse Rate
Elevations:: Winds 296ft Stability 296ft

| Wind Direction Sector | Wind Speed Range (m/s) <0.50 | 0.5-1.0 | 1.1-1.5 | 1.6-2.0 | 2.1-3.0 | 3.1-4.0 | 4.1-5.0 | 5.1-6.0 | 6.1-8.0 | 8.1-10.0 | >10.00 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NNE | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 2 |
| NE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ENE | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| E | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ESE | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 3 | 0 | 0 | 0 | 6 |
| SE | 0 | 0 | 1 | 1 | 0 | 0 | 1 | 2 | 1 | 1 | 0 | 7 |
| SSE | 0 | 0 | 0 | 1 | 3 | 2 | 0 | 3 | 9 | 1 | 0 | 19 |
| S | 0 | 0 | 0 | 0 | 2 | 2 | 4 | 4 | 10 | 1 | 0 | 23 |
| SSW | 0 | 0 | 0 | 0 | 1 | 3 | 3 | 4 | 11 | 1 | 0 | 23 |
| SW | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 0 | 0 | 3 |
| WSW | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| W | 0 | 0 | 0 | 0 | 0 | 1 | 3 | 1 | 0 | 0 | 0 | 5 |
| WNW | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| NW | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 2 |
| NNW | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| Tot | 0 | 0 | 2 | 3 | 10 | 11 | 13 | 18 | 32 | 4 | 0 | 93 |

| | |
|---|---|
| Hours of Calm | 0 |
| Hours of Variable Direction | 0 |
| Hours of Valid Data | 93 |
| Hours of Missing Data | 137 |
| Hours in Period | 2208 |

# Quad Cities Nuclear Power Station
# 2007 Annual Radioactive Effluent Release Report

## Solid Waste and Irradiated Fuel Shipments

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

1. Types of Waste

| Types of Waste | Total Quantity ($m^3$) | Total Activity (Ci) | Period | Est. Total Error % |
|---|---|---|---|---|
| a. Spent resins, filter sludges, evaporator bottoms, etc | 1.22E+03 | 7.75E+04 | 2007 | 2.50E+01 |
| b. Dry compressed waste, contaminated equip, etc | 1.41E+04 | 4.17E+02 | 2007 | 2.50E+01 |
| c. Irradiated components, control rods, etc | 5.70E+00 | 1.45E+05 | 2007 | 2.50E+01 |
| d. Other (RWCU Powdex Resin) | 1.11E+02 | 1.76E+03 | 2007 | 2.50E+01 |

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

| Major Nuclide Composition | % |
|---|---|
| a. Fe-55 | 4.64E+01 |
| Co-60 | 4.59E+01 |
| Mn-54 | 3.83E+00 |
| b. Co-60 | 3.99E+01 |
| Fe-55 | 3.75E+01 |
| Zn-65 | 8.80E+00 |
| c. Co-60 | 5.09E+01 |
| Fe-55 | 3.94E+01 |
| Ni-63 | 3.42E+00 |
| d. Co-60 | 4.41E+01 |
| Fe-55 | 3.76E+01 |
| Mn-54 | 6.12E+00 |

3. Solid Waste Disposition

| Number of Shipments | Mode of Transportation | Destination |
|---|---|---|
| 38 | Highway | Processor |
| 17 | Highway | Disposal |

B. Irradiated Fuel Shipments (disposition)

| Number of Shipments | Mode of Transportation | Destination |
|---|---|---|
| 0 | N/A | N/A |

C. Changes to the Process Control Program

None

**Attachment 2**
**Quad Cities Nuclear Power Station**
**RW-AA-100 - Process Control Program for Radioactive Wastes**
**SVP-08-022**

# PROCESS CONTROL PROGRAM FOR RADIOACTIVE WASTES

## 1. PURPOSE

1.1. The purpose of the Process Control Program (PCP) is to:

1.1.1. Establish the process and boundary conditions for the preparation of specific procedures for processing, sampling, analysis, packaging, storage, and shipment of solid radwaste in accordance with local, state, and federal requirements. **(CM-1)**

1.1.2. Establish parameters which will provide reasonable assurance that all Low Level Radioactive Wastes (LLRW), processed by the in-plant waste process systems on-site OR by on-site vendor supplied waste processing systems, meet the acceptance criteria to a Licensed Burial Facility, as required by 10CFR Part 20, 10CFR Part 61, 10CFR Part 71, 49CFR Parts 171-172, "Technical Position on Waste Form (Revision 1)" [1/91], "Low-Level Waste Licensing Branch Technical Position on Radioactive Waste Classification" [5/83], and the Station Technical Specifications, as applicable.

1.1.3. Provide reasonable assurance that waste placed in "on-site storage" meets the requirements as addressed within the Safety Analysis Reports for the low level radwaste storage facilities for dry and/or processed wet waste.

## 2. TERMS AND DEFINITIONS

2.1. **Process Control Program (PCP):** The program which contains the current formulas, sampling, analysis, tests, and determinations to be made to ensure that processing and packaging of solid radioactive waste based on demonstrated processing of actual or simulated wet solid wastes will be accomplished in such a way as to assure the waste meets the stabilization criteria specified in 10CFR Parts 20, 61 and 71, state regulations, and burial site requirements.

2.2. **Solidification:** Liquid waste processed to either an unstable or stable form per 10CFR61 requirements. Waste solidified does not have to meet the 300-year free standing monolith criteria. Approved formulas, samples and tests do not have to meet NRC approval for wastes solidified in a container meeting stability (e.g. High Integrity Container).

2.3. **Stabilization:** Liquid waste processed to a "stable state" per 10CFR61 Requirements. Established formulas, samples, and tests shall be approved by the NRC in order to meet solidification "stabilization" criteria. This processing method is currently not available, because the NRC recognizes that waste packed in a High Integrity Container meets the 300-year stabilization criteria. In the event that this processing method becomes an acceptable method, then the NRC shall approve the stabilization formulas, samples, tests, etc.

2.4. **Solidification Media:** An approved media (e.g. Barnwell - vinyl ester styrene, cement, bitumen) when waste containing greater than 5-year half lives is solidified in a container when the activity is greater than 1 micro curie/cc. Waste solidified in a HIC is approved by the commission meeting the 10CFR61 stabilization criteria, including 1% free standing liquids by volume when the waste is packaged to a "stable" form and ≤ 0.5% when waste is packaged to an "unstable" form. The formulas, sampling, analysis, and test do not require NRC approval, because the HIC meets the stability criteria.

2.4.1. Solidification to an unstable or stable state are performed by vendors, when applicable. Liquid waste solidified to meet stabilization criteria (10CFR61 and 01-91 Branch Technical Requirements) must have documentation available that shows that the process is approved by the NRC or disposal facility.

2.5. **Dewatering:** The process of removing fluids from liquid waste streams to produce a waste form that meets the requirements of 10CFR Part 61 and applicable burial site criteria, ≤0.5% by volume when the waste is packaged to an "unstable" state, or ≤1% by volume when the waste is packaged to a "stable" form.

2.6. **High Integrity Container (HIC):** A disposable container that is approved to the container's Certificate of Compliance 10CFR Part 61 Requirements for meeting stability. The use of HIC's is an alternative to solidification or encapsulation in a steel container to meet burial stability. HIC's are used to package dewatered liquid wastes, (e.g. filter cartridges, filter media, resin, sludges, etc), or dry active waste.

2.7. **Encapsulation:** The process of placing a component (e.g. cartridge filters or mechanical components) into a special purpose disposable container and then completely surrounding the waste material with an approved stabilization media, such as cement.

2.8. **Liquid Waste Processing Systems:** In-plant or vendor supplied processing systems consisting of equipment utilized for evaporation, filtration, demineralization, dewatering, compression dewatering, solidification, or reverse osmosis (RO) for the treatment of liquid wastes (such as Floor Drains, Chemical Drains and Equipment Drain inputs).

2.9. **Incineration, RVR, and/or Glass Vitrification of Liquid or Solid:** Dry or wet waste processed via incineration and/or thermal processing where the volume is reduced by thermal means meets 10CFR61 requirements.

2.10. **Compaction:** When dry wastes such as paper, wood, plastic, cardboard, incinerator ash, and etc. are volume reduced through the use of a compactor.

2.11. **Waste Streams:** Consist of but are not limited to

- Filter media (powdered, bead resin and fiber),
- Filter cartridges,
- Pre-coat body feed material,
- Contaminated charcoal,

- Fuel pool activated hardware,
- Oil Dry absorbent material added to a container to absorb liquids
- Fuel Pool Crud
- Sump and tank sludges,
- High activity filter cartridges,
- Concentrated liquids,
- Contaminated waste oil,
- Dried sewage or wastewater plant waste,
- Dry Active Waste (DAW): Waste such as filters, air filters, low activity cartridge filters, paper, wood, glass, plastic, cardboard, hoses, cloth, and metals, etc, which have become contaminated as a consequence of normal operating, housekeeping and maintenance activities.
- Other radioactive waste generated from cleanup of inadvertent contamination.

## 3. RESPONSIBILITIES

3.1. Implementation of this Process Control Program (PCP) is described in procedures at each station and is the responsibility of the each site to implement.

## 4. MAIN BODY

4.1. Process Control Program Requirements

4.1.1. A change to this PCP (Radioactive Waste Treatment Systems) may be made provided that the change is reported as part of the annual radioactive effluent release report, Regulatory Guide 1.21, and is approved by the Plant Operations Review Committee (PORC).

4.1.2. Changes become effective upon acceptance per station requirements.

4.1.3. Records of reviews performed shall be retained for the duration of the unit operating license. This documentation shall contain:

1. Sufficient information to support the change together with the appropriate analyses or evaluations justifying the change, and

2. A determination which documents that the change will maintain the overall conformance of waste products to Federal (10CFR61 and the Branch Technical Position), State, or other applicable requirements, including applicable burial site criteria.

4.1.4. A solidification media, approved by the burial site, **MAY BE REQUIRED when** liquid radwaste is solidified to a stable/unstable state.

4.1.5. **When** processing liquid radwaste to meet solidification stability using a vendor supplied solidification system:

1. **If** the vendor has its own Quality Assurance (QA) Program, **then** the vendor **SHALL ADHERE** to its own QA Program and **SHALL HAVE SUBMITTED** its process system topical report to the NRC or agreement state.

2. **If** the vendor **DOES NOT HAVE** its own Quality Assurance Program, **then** the vendor **SHALL ADHERE** to an approved Quality Assurance Topical Report standard belonging to the Station or to another vendor.

4.1.6. The vendor processing system(s) is/are controlled per the following:

1. A commercial vendor supplied processing system(s) **MAY BE USED** for the processing of LLRW streams.

2. Vendors that process liquid LLRW at the sites must meet applicable QA Topical Report and Augmented Quality Requirements.

4.1.7. Vendor processing system(s) operated at the site **WILL BE OPERATED and CONTROLLED** in accordance with vendor approved procedures or station procedures based upon vendor approved documents.

4.1.8. All waste streams processed for burial or long term on-site storage **SHALL MEET** the waste classification and characteristics specified in 10CFR Part 61.55, Part 61.56, the 5-83 Branch Technical Position for waste classification, and the applicable burial site acceptance criteria (for any burial site operating at the time the waste was processed).

4.2. General Waste Processing Requirements

4.2.1. On-site resin processing involves tank mixing and settling, transferring to the station or vendor processing system via resin water slurry or vacuuming into approved waste containers, and, when applicable, dewatering for burial.

4.2.2. Vendor resin beds **MAY BE USED** for decontamination of plant systems, such as, Spent Fuel Pool, RWCU (reactor water cleanup), and SDC (Shut Down Cooling). These resins **ARE then PROCESSED** via the station or vendor processing system.

4.2.3. Various drains and sump discharges **WILL BE COLLECTED** in tanks or suitable containers for processing treatment. Water from these tanks **MAY BE SENT** through a filter, demineralizer, concentrator or vendor supplied processing systems.

4.2.4. Process waste (e.g. filter media, sludges, resin, etc) **WILL BE** periodically **DISCHARGED** to the station or vendor processing system for onsite waste treatment **or PACKAGED** in containers for shipment to offsite vendor for volume reduction processing.

4.2.5. Process water (e.g. chemical, floor, equipment drain, etc.) **MAY BE SENT** to either the site waste process systems or vendor waste processing systems for further filtration, demineralization for plant re-use, or discharge.

4.2.6. All dewatering and solidification/stabilization **WILL BE PERFORMED** by either utility site personnel or by on-site vendors **or WILL BE PACKAGED and SHIPPED** to an off-site vendor low-level radwaste processing facility.

4.2.7. Dry Active Waste (DAW) **WILL BE HANDLED and PROCESSED** per the following:

1. DAW **WILL BE COLLECTED and SURVEYED and MAY BE SORTED** for compactable and non-compactable wastes.

2. "DAW may be packaged in containers to facilitate on-site pre-compaction and/or off-site vendor contract requirements

3. DAW items **MAY BE SURVEYED** for release onsite or offsite when applicable.

4. Contaminated filter cartridges **WILL BE PLACED** into a HIC **or WILL BE ENCAPSULATED** in an in-situ liner for disposal **or SHIPPED** to an offsite waste processor in drums, boxes or steel liners per the vendor site criteria for processing and disposal.

4.2.8. Filtering devices using pre-coat media **MAY BE USED** for the removal of suspended solids from liquid waste streams. The pre-coat material or cartridges from these devices **MAY BE** routinely **REMOVED** from the filter vessel and discharged to a Filter Sludge Tank or Liner/HIC. Periodically, the filter sludge **MAY BE DISCHARGED** to the vendor processing system for waste treatment onsite **or PACKAGED** in containers for shipment to offsite vendor for volume reduction processing.

4.2.9. Activated hardware stored in the Spent Fuel Pools **WILL BE PROCESSED** periodically using remote handling equipment **and MAY then BE PUT** into a container for shipment or storage

4.2.10. High Integrity Containers (HIC):

1. Vendors who supply HIC's to the station **MUST PROVIDE** a copy of the HIC Certificate of Compliance, which details specific limitations on use of the HIC.

2. Vendors who supply HIC's to the station **MUST PROVIDE** a handling procedure, which establishes guidelines for the utilization of the HIC. These guidelines serve to protect the integrity of the HIC and ensure the HIC is handled in accordance with the requirements of the Certificate of Compliance.

4.2.11. Lubricants and oils contaminated as a consequence of normal operating and maintenance activities **MAY BE PROCESSED** on-site (by incineration, for oils meeting 10CFR20.2004 and applicable state requirements, or by an approved vendor process) **or SHIPPED** offsite (for incineration or other acceptable processing method).

4.2.12. Former in-plant systems GE or Stock Drum Transfer Cart and Drum Storage Areas **MAY BE USED** for higher dose DAW storage at Clinton, Dresden, Quad Cities, Braidwood and Byron.

4.2.13 Certain waste, including flowable solids from holding pond, oily waste separator, cooling tower basin and emergency spray pond, may be disposed of onsite under the provisions of 10CFR20.2002 permit. Specific requirements associated with the disposal shall be incorporated into station implementing procedures. **(CM-2)**

4.3. Burial Site Requirements

4.3.1. Waste sent directly to burial **WILL COMPLY** with the applicable parts of 49CFR, 10CFR61, and 10CFR71, and the acceptance criteria for the applicable burial site.

4.4. Shipping and Inspection Requirements

4.4.1. All shipping/storage containers **WILL BE INSPECTED**, as required by station procedures, for compliance with applicable requirements (Department Of Transportation (DOT), Nuclear Regulatory Commission (NRC), station, on-site storage, and/or burial site requirements) prior to use.

4.4.2. Containers of solidified liquid waste **WILL BE INSPECTED** for solidification quality and/or dewatering requirements per the burial site, offsite vendor acceptance, or station acceptance criteria, as applicable.

4.4.3. Shipments sent to an off site processor **WILL BE INSPECTED** to ensure that the applicable processor's waste acceptance criteria are being met.

4.5. Inspection and Corrective Action

4.5.1. Inspection results that indicate non-compliance with applicable NRC, State, vendor, or site requirements **WILL BE IDENTIFIED and TRACKED** through the Corrective Action Program.

4.5.2. Administrative controls for preventing unsatisfactory waste forms from being released for shipment are described in applicable station procedures. **If** the provisions of the Process Control Program are not satisfied, **then SUSPEND** shipments of defectively packaged radioactive waste from the site. **(CM-1)**

4.5.3. **If** freestanding water or solidification **not** meeting program requirements is observed, **then** samples of the particular series of batches **WILL BE TAKEN** to determine the cause. Additional samples **WILL BE TAKEN**, as warranted, to ensure that **no** freestanding water is present and solidification requirements are maintained.

4.6. Procedure and Process Reviews

4.6.1. The Exelon Nuclear Process Control Program and changes to it (other than editorial/minor changes) **SHALL BE REVIEWED and APPROVED** in accordance with the station procedures, plant-specific Technical Specifications (Tech Spec), Technical Requirements Manual (T&RM), Operation Requirements Manual (ORM), as applicable, for the respective station and LS-AA-106. Changes to the Licensees Controlled Documents, UFSAR, ORM, or TRM are controlled by the provisions of 10CFR 50.59.

4.6.2. Any changes to the PCP shall be reviewed to determine if reportability is required in the Annual Radiological Effluent Release Report (ARERR). The Radwaste Specialist shall ensure correct information is submitted to the ODCM program owner prior to submittal of the ARERR.

4.6.3. Station processes, cask manual procedures as applicable to your station, or other vendor waste processing/operating procedures shall be approved per RM-AA-102-1006. Procedures related to waste manifests, shipment inspections, and container activity determination are **CONTROLLED** by Radiation Protection Standard Procedures (RP-AA-600 Series).

1. Site waste processing **IS CONTROLLED** by site operating procedures.

2. Liquid processed by vendor equipment **WILL BE DONE** in accordance with vendor procedures.

4.7. Waste Types, Point of Generation, and Processing Method

Methods of processing and individual vendors **MAY CHANGE** due to changing financial and regulatory options. The table below is a representative sample. It is **not** intended be all encompassing.

| Waste Stream | POINTS OF GENERATION | AVAILABLE WASTE PROCESSING METHODS |
|---|---|---|
| Bead Resin | Systems - Fuel Pool, Condensate, Reactor Water Cleanup, Blowdown, Equipment Drain, Chemical and Volume Control Systems, Floor Drain, Maximum Recycle, Blowdown, Boric Acid Recycling System, Vendor Supplied Processing Systems, and Portable Demin System | Dewatering, solidification to an unstable/stable state<br>Thermal Processing<br>Free Release to a Land Fill |
| Powdered Resin | Systems - (Condensate System, Floor Drain/Equipment Drain filtration, Fuel Pool) | Dewatering, solidification to an unstable/stable state<br>Thermal Processing |
| Concentrated Waste | Waste generated from Site Evaporators resulting typically from the Floor Drain and Equipment Drain Systems | Solidification to an unstable/stable state<br>Thermal Processing |
| Sludge | Sedimentation resulting from various sumps, condensers, tanks, cooling tower, emergency spray pond, holding pond, and oily waste separators.. | Dewatering, solidification to an unstable/stable state<br>Thermal Processing<br>Evaporation on-site or at an offsite processor<br>On-site disposal per 10CFR20.2002 permit |

| Waste Stream | POINTS OF GENERATION | AVAILABLE WASTE PROCESSING METHODS |
|---|---|---|
| Filter cartridges | Systems - Floor/Equipment Drains, Fuel Pool; cartridge filters are typically generated from clean up activities within the fuel pool, torus, etc. | Dewatering, solidification to an unstable/stable state<br>Processed by a vendor for volume reduction |
| Dry Active Waste | Paper, wood, plastic, rubber, glass, metal, and etc. resulting from daily plant activities. | Decon/Sorting for Free Release,<br>Compaction/Super-compaction<br>Thermal Processing by Incineration or glass vitrification<br>Sorting for Free Release<br>Metal melting to an ingot |
| Contaminated Oil | Oil contaminated with radioactive materials from any in-plant system. | Solidification unstable state<br>Thermal Processing by Incineration<br>Free Release for recycling |
| Drying Bed Sludge | Sewage Treatment and Waste Water Treatment Facilities | Free release to a landfill or burial |
| Metals | See DAW | See DAW |
| Irradiated Hardware | Fuel Pool, Reactor Components | Volume Reduction for packaging efficiencies |

5. **DOCUMENTATION** - None

6. **REFERENCES**

6.1. Technical Specifications:

6.1.1. The details contained in Current Tech Specs (CTS) or Improved Technical Specifications (ITS), as applicable, in regard to the Process Control Program (PCP), are to be relocated to the Licensee Controlled Documents. Some facilities have elected to relocate these details into the Operational Requirements Manual (ORM). Relocation of the description of the PCP from the CTS or ITS does **not** affect the safe operation of the facility. Therefore, the relocation details are **not** required to be in the CTS or the ITS to provide adequate protection of the public health and safety.

6.2. Source Documents:

6.2.1. Code Of Federal Regulations: 10 CFR Part 20, Part 61, Part 71, 49 CFR Parts 171-172

6.2.2. Low Level Waste Licensing Branch Technical Position On Radioactive Waste Classification, May 1983

6.2.3. Technical Position on Waste Form (Revision 1), January 1991

6.2.4. Branch Technical Position on Concentration Averaging and Encapsulation, January 1995

6.2.5. Regulatory Guide 1.21

6.2.6. I.E. Circular 80.18, 10CFR 50.59 Safety Evaluation for Changes to Radioactive Waste Treatment Systems

6.2.7. Quality Assurance Program

6.2.8. LS-AA-106

6.2.9. RM-AA-102-1006

6.2.10. RP-AA-600 Series

6.3. Station Commitments:

6.3.1. Peach Bottom

CM-1, T03819, Letter from G.A. Hunger, Jr., dated Sept. 29,94, transmitting TSCR 93-16 (Improved Technical Specifications).

6.3.2. Limerick

CM-2, T03896, 10CFR20.2002 permit granted to Limerick via letter dated July 10, 1996.

7. **ATTACHMENTS** - None