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Exelon Nuclear

SVP-04-034

April 30, 2004

U. S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, D.C. 20555

Quad Cities Nuclear Power Station, Units 1 and 2
Facility Operating License Nos. DPR-29 and DPR-30
NRC Docket Nos. 50-254 and 50-265

Subject: Quad Cities Nuclear Power Station's Radioactive Effluent Report for January through December 2003

The attached Quad Cities Nuclear Power Station's Radioactive Effluent Report for January through December 2003 is submitted in accordance with the Quad Cities Technical Specifications Section 5.6.3 and 10 CFR 50.36a.

Six abnormal releases occurred during 2003. These abnormal releases resulted in minor increases to normal plant radioactive effluents and are discussed in detail in this report.

The Main Chimney Flow Rate monitor was out of service for 78 days from September 22, 2003 to December 9, 2003 due to leaking sensing lines between the flow element and the flow transmitter. These sensing lines are routed through the ventilation duct and are not reasonably accessible. The extended out of service time was due to the time required to troubleshoot, plan, and install a modification to reroute new sensing lines and relocate the transmitter.

Should you have any questions concerning this letter, please contact Mr. W. J. Beck at (309) 227-2800.

Respectfully,

Timothy J. Tulon
Site Vice President
Quad Cities Nuclear Power Station

IE48

Attachments:

A. Effluent and Waste Disposal Semiannual Report, Quad Cities Nuclear Power Station, January - June 2003 (CY-QC-120-722, Attachment 1)
B. Effluent and Waste Disposal Semiannual Report Supplemental Information, Quad Cities Nuclear Power Station, January - June 2003 (CY-QC-120-722, Attachment 3)
C. Effluent and Waste Disposal Semiannual Report, Quad Cities Nuclear Power Station, July - December 2003 (CY-QC-120-722, Attachment 1)
D. Effluent and Waste Disposal Semiannual Report Supplemental Information, Quad Cities Nuclear Power Station, July - December 2003 (CY-QC-120-722, Attachment 3)
E. Quad Cities Station Meteorological Site Quarterly Joint-Frequency Wind Rose Tables for 2003
F. Solid Waste Disposition Summary

cc: Regional Administrator – NRC Region III
NRC Senior Resident Inspector – Quad Cities Nuclear Power Station

Attachment A
Effluent and Waste Disposal Semiannual Report
Quad Cities Nuclear Power Station, January – June 2003
SVP-04-034

ATTACHMENT 1
Effluent & Waste Disposable Annual Report

GASEOUS EFFLUENTS – SUMMATION OF ALL RELEASES

Period: January – June 2003

A. FISSION & ACTIVATION GASES	UNIT	FIRST QUARTER	SECOND QUARTER	EST. TOTAL ERROR %
1. Total Release	Ci	9.77E+01	3.54E+02	12.4
2. Average release rate for the period	μCi/sec	1.26E+01	4.50E+01	
3. *Percent of ODCM limit Chimney & Stack	% γ	9.94E-03	3.36E-02	
	β	2.72E-03	1.23E-02	

B. IODINE				
1. Total Iodine – 131.	Ci	3.07E-03	8.29E-03	41.8
2. Average release rate for the period	μCi/sec	3.95E-04	1.05E-03	

C. PARTICULATES				
1. Particulates with half-lives > 8 days	Ci	9.96E-04	4.11E-03	32.4
2. Average release rate for the period	μCi/sec	1.28E-04	5.22E-04	
3. Gross alpha radioactivity	Ci	4.32E-06	<LLD**	

D. TRITIUM				
1. Total Release	Ci	4.36E+01	4.76E+01	8.1
2. Average release rate for the period	μCi/sec	5.61E+00	6.05E+00	

E. IODINE 131 & 133, TRITIUM & PARTICULATE			
1. Percent of ODCM limit Chimney & Stack	%	4.78E+00	1.68E+01

* % NOBLE GAS GAMMA/NOBLE GAS BETA DOSE LIMITS

** Gross Alpha LLD reported on page 6 of 7.

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Effluent & Waste Disposable Annual Report

MAIN CHIMNEY GASEOUS EFFLUENTS

NUCLIDES RELEASED		CONTINUOUS MODE		BATCH MODE	
1. Fission gases	**Unit**	**First Quarter**	**Second Quarter**	**Quarter**	**Quarter**
Kr-85	Ci	<LLD*	2.35E+00	NA	NA
Kr-85m	Ci	7.27E-01	4.97E+00	NA	NA
Kr-87	Ci	5.38E+00	8.38E+00	NA	NA
Kr-88	Ci	2.29E+00	7.41E+00	NA	NA
Xe-131m	Ci	<LLD*	6.89E-02	NA	NA
Xe-133	Ci	3.51E+00	6.57E+01	NA	NA
Xe-133m	Ci	2.46E-02	1.27E+00	NA	NA
Xe-135	Ci	4.69E+00	1.92E+01	NA	NA
Xe-135m	Ci	1.52E+01	4.05E+01	NA	NA
Xe-138	Ci	6.59E+01	1.86E+02	NA	NA
Ar-41	Ci	7.40E-03	9.42E-02	NA	NA
Total for Period	Ci	9.77E+01	3.36E+02	NA	NA
2. Iodines	**Unit**	**First Quarter**	**Second Quarter**	**Quarter**	**Quarter**
I-131	Ci	3.01E-03	6.09E-03	NA	NA
I-133	Ci	2.78E-03	7.08E-03	NA	NA
I-135	Ci	<LLD*	9.93E-04	NA	NA
Total for Period	Ci	5.79E-03	1.42E-02	NA	NA
3. Particulates	**Unit**	**First Quarter**	**Second Quarter**	**Quarter**	**Quarter**
Sr-89	Ci	1.85E-04	4.40E-04	NA	NA
Sr-90	Ci	<LLD*	<LLD*	NA	NA
Cs-134	Ci	<LLD*	<LLD*	NA	NA
Cs-137	Ci	<LLD*	<LLD*	NA	NA
Ba-140	Ci	5.48E-05	9.53E-04	NA	NA
La-140	Ci	6.34E-05	7.02E-04	NA	NA
Cr-51	Ci	<LLD*	<LLD*	NA	NA
Mn-54	Ci	<LLD*	<LLD*	NA	NA
Co-58	Ci	<LLD*	<LLD*	NA	NA
Co-60	Ci	2.90E-04	2.22E-04	NA	NA
Mo-99	Ci	5.30E-03	3.80E-03	NA	NA
Ag-110m	Ci	<LLD*	8.60E-05	NA	NA
Ce-141	Ci	<LLD*	<LLD*	NA	NA
Ce-144	Ci	<LLD*	<LLD*	NA	NA
Total for Period	Ci	5.89E-03	6.20E-03	NA	NA

*Actual gaseous LLD's are reported on page 6 of 7.

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Effluent & Waste Disposable Annual Report

REACTOR VENTILATION GASEOUS EFFLUENTS

NUCLIDES RELEASED		CONTINUOUS MODE		BATCH MODE	
1. Fission gases	**Unit**	**First Quarter**	**Second Quarter**	**Quarter**	**Quarter**
Kr-85	Ci	<LLD*	<LLD*	NA	NA
Kr-85m	Ci	<LLD*	<LLD*	NA	NA
Kr-87	Ci	<LLD*	<LLD*	NA	NA
Kr-88	Ci	<LLD*	<LLD*	NA	NA
Xe-133	Ci	<LLD*	1.07E+01	NA	NA
Xe-135	Ci	<LLD*	7.00E+00	NA	NA
Xe-135m	Ci	<LLD*	<LLD*	NA	NA
Xe-138	Ci	<LLD*	<LLD*	NA	NA
Ar-41	Ci	<LLD*	<LLD*	NA	NA
Total for Period	Ci	<LLD*	1.77E+01	NA	NA
2. Iodines	**Unit**	**First Quarter**	**Second Quarter**	**Quarter**	**Quarter**
I-131	Ci	5.67E-05	2.20E-03	NA	NA
I-133	Ci	<LLD*	6.97E-05	NA	NA
I-135	Ci	<LLD*	<LLD*	NA	NA
Total for Period	Ci	5.67E-05	2.27E-03	NA	NA
3. Particulates	**Unit**	**First Quarter**	**Second Quarter**	**Quarter**	**Quarter**
Sr-89	Ci	<LLD*	1.67E-04	NA	NA
Sr-90	Ci	<LLD*	<LLD*	NA	NA
Ba-133	Ci	<LLD*	6.28E-06	NA	NA
Cs-134	Ci	<LLD*	<LLD*	NA	NA
Cs-137	Ci	<LLD*	<LLD*	NA	NA
Ba-140	Ci	<LLD*	<LLD*	NA	NA
La-140	Ci	<LLD*	<LLD*	NA	NA
Cr-51	Ci	<LLD*	<LLD*	NA	NA
Mn-54	Ci	1.57E-05	2.76E-04	NA	NA
Co-58	Ci	<LLD*	<LLD*	NA	NA
Co-60	Ci	4.50E-04	1.94E-03	NA	NA
Mo-99	Ci	<LLD*	<LLD*	NA	NA
Ag-110m	Ci	<LLD*	1.98E-05	NA	NA
Ce-141	Ci	<LLD*	<LLD*	NA	NA
Ce-144	Ci	<LLD*	<LLD*	NA	NA
Total for Period	Ci	4.66E-04	2.41E-03	NA	NA

*Actual gaseous LLD's are reported on page 6 of 7.

ATTACHMENT 1
Effluent & Waste Disposable Annual Report

LIQUID EFFLUENTS – SUMMATION OF ALL RELEASES

A. FISSION & ACTIVATION PRODUCTS	UNIT	FIRST QUARTER	SECOND QUARTER	EST TOTAL ERROR%
1. Total Release (not including tritium, gases & alpha)	Ci	1.37E-02	2.28E-02	5.6
2. Average diluted concentration during batch discharges for the period.	µCi/mL	1.89E-09	2.44E-09	
3. Percent of applicable limit*	% WB	1.02E-02	4.52E-03	
	O	5.76E-03	2.54E-03	
4. Maximum diluted concentration during batch discharges	µCi/mL	9.86E-11	1.68E-09	
B. TRITIUM				
1. Total Release	Ci	5.68E+00	1.34E+01	4.1
2. Average diluted concentration during batch discharges for the period	µCi/mL	7.86E-07	1.43E-06	
3. Percent of applicable limit	%	2.48E-02	4.67E-02	
C. DISSOLVED & ENTRAINED GASES				
1. Total Release	Ci	<LLD	<LLD	5.6
2. Average diluted concentration during batch discharges for the period	µCi/mL	<LLD	<LLD	
3. Percent of applicable limit	%	NA	NA	
D. GROSS ALPHA ACTIVITY				
1. Total Release	Ci	<LLD**	<LLD**	14.8
2. Average diluted concentration during batch discharges for the period	µCi/mL	<LLD**	<LLD**	
E. VOLUME OF WASTE RELEASED (prior to dilution)	Liters	2.09E+06	1.89E+06	
F. VOLUME OF DILUTION WATER USED DURING BATCH DISCHARGES	Liters	7.23E+09	9.33E+09	
G. TOTAL VOLUME OF DILUTION WATER USED DURING PERIOD (quarter)	Liters	2.42E+11	3.91E+11	

* Whole Body/Organ (ODCM)
** Liquid Gross Alpha LLD is reported on page 7 of 7.

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LIQUID EFFLUENTS

NUCLIDES RELEASED		CONTINUOUS MODE		BATCH MODE	
	Unit	First Quarter	Second Quarter	First Quarter	Second Quarter
Sr-89	Ci	<LLD*	<LLD*	<LLD*	<LLD*
Sr-90	Ci	<LLD*	<LLD*	<LLD*	<LLD*
Cs-134	Ci	<LLD*	<LLD*	<LLD*	<LLD*
Cs-137	Ci	5.88E-04	2.61E-04	2.96E-05	1.45E-04
I-131	Ci	<LLD*	<LLD*	<LLD*	<LLD*
Co-58	Ci	8.34E-05	1.65E-04	<LLD*	<LLD*
Co-60	Ci	5.34E-03	4.88E-03	4.18E-04	7.77E-04
Fe-59	Ci	<LLD*	4.16E-05	<LLD*	<LLD*
Zn-65	Ci	6.14E-03	3.70E-03	<LLD*	5.52E-05
Mn-54	Ci	1.09E-03	9.21E-04	<LLD*	4.74E-04
Cr-51	Ci	<LLD*	1.37E-04	<LLD*	1.90E-04
Zr-95	Ci	<LLD*	<LLD*	<LLD*	<LLD*
Nb-95	Ci	<LLD*	<LLD*	<LLD*	<LLD*
Mo-99	Ci	<LLD*	<LLD*	<LLD*	<LLD*
Ag-110m	Ci	<LLD*	<LLD*	<LLD*	1.57E-04
Ba-140	Ci	<LLD*	<LLD*	<LLD*	<LLD*
La-140	Ci	<LLD*	<LLD*	<LLD*	<LLD*
Fe-55	Ci	<LLD*	1.12E-03	<LLD*	9.80E-03
Total for Period (above)	Ci	1.32E-02	1.12E-02	4.48E-04	1.16E-02
Xe-133	Ci	<LLD*	<LLD*	<LLD*	<LLD*
Xe-135	Ci	<LLD*	<LLD*	<LLD*	<LLD*

*Actual liquid LLD's are reported on page 7 of 7.

Prepared by: _____ Date: 4-16-04

Approved by: _____ Date: 4-16-04

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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	3.71E-06	None
Kr-85m	uCi/cc	1.25E-08	None
Kr-87	uCi/cc	2.99E-08	1E-04
Kr-88	uCi/cc	4.11E-08	1E-04
Xe-133	uCi/cc	3.34E-08	1E-04
Xe-133m	uCi/cc	9.21E-08	1E-04
Xe-135	uCi/cc	1.02E-08	1E-04
Xe-135m	uCi/cc	5.33E-08	None
Xe-131m	uCi/cc	4.35E-07	None
Xe-138	uCi/cc	1.66E-07	1E-04
Ar-41	uCi/cc	2.31E-08	None
NUCLIDE LOWER LIMITS OF DETECTION (LLD's) 2. Iodines	UNIT	LLD Value	ODCM Required LLD*
I-131	uCi/cc	2.46E-13	1E-12
I-133	uCi/cc	2.68E-12	1E-10
I-135	uCi/cc	1.41E-09	None
NUCLIDE LOWER LIMITS OF DETECTION (LLD's) 3. Particulates and Tritium	UNIT	LLD Value	ODCM Required LLD*
H-3	uCi/cc	3.21E-11	1E-06
Sr-89	uCi/cc	1.05E-14	1E-11
Sr-90	uCi/cc	1.58E-14	1E-11
Cs-134	uCi/cc	1.72E-13	1E-11
Cs-137	uCi/cc	2.75E-13	1E-11
Ba-140	uCi/cc	6.26E-13	None
La-140	uCi/cc	8.13E-13	None
Mn-54	uCi/cc	2.07E-13	1E-11
Co-58	uCi/cc	1.78E-13	1E-11
Fe-59	uCi/cc	4.15E-13	1E-11
Co-60	uCi/cc	3.88E-13	1E-11
Zn-65	uCi/cc	4.49E-13	1E-11
Mo-99	uCi/cc	3.55E-12	1E-11
Ce-141	uCi/cc	2.44E-13	1E-11
Ce-144	uCi/cc	9.40E-13	1E-11
Ag-110m	uCi/cc	1.23E-13	None
Ba-133	uCi/cc	2.23E-13	None
Cr-51	uCi/cc	1.28E-12	None
Gross Alpha	uCi/cc	5.26E-15	1E-11

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

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LIQUID EFFLUENT LLD's (Most Restrictive)
BATCH MODE

NUCLIDE LOWER LIMITS OF DETECTION (LLD's) 3. Liquids	UNIT	LLD Value	ODCM Required LLD
H-3	uCi/cc	3.46E-06	1E-05
Sr-89	uCi/cc	4.00E-08	5E-08
Sr-90	uCi/cc	1.00E-08	5E-08
Fe-55	uCi/cc	1.00E-06	1E-06
Kr-85	uCi/cc	1.73E-05	None*
Kr-87	uCi/cc	1.55E-07	1E-05
Kr-88	uCi/cc	2.12E-07	1E-05
Xe-133	uCi/cc	1.40E-07	1E-05
Xe-133m	uCi/cc	4.16E-07	1E-05
Xe-135	uCi/cc	5.22E-08	1E-05
Xe-138	uCi/cc	7.43E-07	1E-05
Mn-54	uCi/cc	6.61E-08	5E-07
Co-58	uCi/cc	6.67E-08	5E-07
Co-60	uCi/cc	1.23E-07	5E-07
Zn-65	uCi/cc	1.77E-07	5E-07
Mo-99	uCi/cc	4.69E-07	5E-07
I-131	uCi/cc	5.38E-08	1E-06
Cs-134	uCi/cc	5.80E-08	5E-07
Cs-137	uCi/cc	7.31E-08	5E-07
Ce-141	uCi/cc	8.89E-08	5E-07
Ce-144	uCi/cc	4.14E-07	5E-06
Gross Alpha	uCi/cc	8.88E-08	1E-07
Fe-59	uCi/cc	1.41E-07	5E-07
Cr-51	uCi/cc	3.75E-07	None
Ag-110m	uCi/cc	4.56E-08	None

* Kr-85 required by UFSAR section 9.1.3.3.

Attachment B
Effluent and Waste Disposal Semiannual Report Supplemental Information
Quad Cities Nuclear Power Station, January – June 2003
SVP-04-034

ATTACHMENT 3
Annual Effluent Report
Supplemental Information
Page 1 of 5

Facility: Quad Cities Nuclear Power Station January – June 2003

Licensee: Exelon Generation Company

1. Regulatory Limits

a. For Noble Gases: (per unit)

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

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

Beta Radiation
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.

Dose
1. Less than or equal to 7.5 mrem/quarter.
2. Less than or equal to 15 mrem/year.

d. For Liquid: (per site)

Less than or equal to 3 mrem to the whole body during any calendar quarter.
Less than or equal to 10 mrem to any organ during any calendar quarter.
Less than or equal to 6 mrem to the whole body during any calendar year.
Less than or equal to 20 mrem to any organ during any calendar year.

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Annual Effluent Report
Supplemental Information
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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 10.1 and 10.2 from the Offsite Dose Calculation Manual. 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 10.3 and 10.4 from the Offsite Dose Calculation Manual. The MPC values used for the monitors were as follows:

Radwaste discharge	7.17E-03 μCi/ml
Service water	1.0E-05 μCi/ml

3. Average Energy

The average gamma energy used to calculate the alarm setpoints for the noble gas monitors was 0.933 Mev for the first quarter, and 0.951 Mev for the second quarter.

4. Measurements and Approximations of Total Radioactivity

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

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 Sr89/90 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 Sr89/90 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 six (6) months 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.

ATTACHMENT 3
Annual Effluent Report
Supplemental Information

The continuous strip chart recorders for the monitors on the release points are reviewed monthly 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 Sr89/90 and Fe55. 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 Sr89/90 and Fe55 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.

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Annual Effluent Report
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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 LLDs used for counting effluent samples are included in this report.

5. Batch Releases

a. Liquid

1.	Number of releases:	17
2.	Total time:	14,720 minutes
3.	Maximum time:	915 minutes
4.	Average time:	865 minutes
5.	Minimum time:	834 minutes
6.	Average stream flow:	63.8 gpm (discharge) 3.01E+05 gpm (dilution)

b. Gaseous – None.

6. Abnormal Releases

a. Liquid

1. A leak in the 1A Residual Heat Removal (RHR) heat exchanger was repaired in June 2002. There continues to be a small amount of radioactivity identified in the service water side of the heat exchanger. Investigation continues to determine its source. At this time, the relatively small amount of radioactivity identified continues to be included in the normal monthly effluents and is also included in the "continuous" liquid section of this report.

2. A leak into the 2A RHR heat exchanger service water side developed in October 2002. The activity identified from the leak continues to be included in the normal monthly effluents and is also included in the "continuous" liquid section of this report. The leak is scheduled for repair in September 2003.

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Annual Effluent Report
Supplemental Information

b. Gaseous

1. A release from the service building contaminated area ventilation system occurred from 4/26/03 to 5/02/03. The release occurred when OV-02 fan drive belt failed. With the fan stopped, the suction line of the fan pressurized and leaked past inlet modulating damper OVX-01 to atmosphere. Fan OV-02 discharges to the Turbine Building exhaust ventilation. Therefore, the air being released was a combination of Service Building air and Turbine Building exhaust air.

   No measurable activity was detected at the point of release. However, since the majority of Main Chimney flow is Turbine Building ventilation exhaust, the measured activity at the Main Chimney was conservatively assigned to this release. The activity from this release was included in the normal monthly effluents and is also included in the "continuous" gaseous section of this report.

2. Between January 2003 and April 2003, several nuclear fuel leaks were identified on U-1. Some leaks were suppressed. The leaking fuel was replaced in May 2003 during outage Q1M16. The increased noble gas activity due to the fuel leaks resulted in an increase in the calculated effluent releases and was included in the normal monthly effluent releases during this period.

3. On April 28, 2003, a nuclear fuel leak developed on U-2. The leak was successfully suppressed on June 10, 2003. The leaking fuel was replaced in June 2003 during outage Q2F59. The increased noble gas activity due to the fuel leak resulted in an increase in the calculated effluent releases and was included in the normal monthly effluent releases during this period.

Attachment C
Effluent and Waste Disposal Semiannual Report
Quad Cities Nuclear Power Station, July – December 2003
SVP-04-034

ATTACHMENT 1
Effluent & Waste Disposable Annual Report

GASEOUS EFFLUENTS – SUMMATION OF ALL RELEASES

Period: July – December 2003

A. FISSION & ACTIVATION GASES	UNIT	THIRD QUARTER	FOURTH QUARTER	EST. TOTAL ERROR %
1. Total Release	Ci	2.51E+02	1.98E+02	11.8
2. Average release rate for the period	μCi/sec	3.16E+01	2.50E+01	
3. *Percent of ODCM limit Chimney & Stack	% γ	2.93E-02	2.20E-02	
	β	7.56E-03	5.76E-03	

B. IODINE				
1. Total Iodine – 131.	Ci	3.52E-03	3.15E-03	41.6
2. Average release rate for the period	μCi/sec	4.42E-04	3.96E-04	

C. PARTICULATES				
1. Particulates with half-lives > 8 days	Ci	2.74E-03	2.07E-03	32.1
2. Average release rate for the period	μCi/sec	3.44E-04	2.61E-04	
3. Gross alpha radioactivity	Ci	<LLD**	<LLD**	

D. TRITIUM				
1. Total Release	Ci	5.76E+01	7.18E+01	6.3
2. Average release rate for the period	μCi/sec	7.25E+00	9.03E+00	

E. IODINE 131 & 133, TRITIUM & PARTICULATE			
1. Percent of ODCM limit Chimney & Stack	%	5.51E+00	5.54E+00

* % NOBLE GAS GAMMA/NOBLE GAS BETA DOSE LIMITS

** Gross alpha LLD reported on page 6 of 7.

ATTACHMENT 1
Effluent & Waste Disposable Annual Report

MAIN CHIMNEY GASEOUS EFFLUENTS

NUCLIDES RELEASED		CONTINUOUS MODE		BATCH MODE	
1. Fission gases	**Unit**	**Third Quarter**	**Fourth Quarter**	**Quarter**	**Quarter**
Kr-85	Ci	<LLD*	<LLD*	NA	NA
Kr-85m	Ci	1.22E+00	9.37E-01	NA	NA
Kr-87	Ci	7.89E+00	5.39E+00	NA	NA
Kr-88	Ci	5.29E+00	3.55E+00	NA	NA
Xe-131m	Ci	2.10E-01	<LLD*	NA	NA
Xe-133	Ci	9.00E-01	1.00E+00	NA	NA
Xe-135	Ci	5.75E+00	6.45E+00	NA	NA
Xe-135m	Ci	3.77E+01	2.27E+01	NA	NA
Xe-138	Ci	1.90E+02	1.58E+02	NA	NA
Ar-41	Ci	2.90E-02	1.45E-01	NA	NA
Total for Period	Ci	2.49E+02	1.98E+02	NA	NA
2. Iodines	**Unit**	**Third Quarter**	**Fourth Quarter**	**Quarter**	**Quarter**
I-131	Ci	3.47E-03	2.80E-03	NA	NA
I-133	Ci	7.94E-03	6.86E-03	NA	NA
I-135	Ci	4.35E-05	1.74E-03	NA	NA
Total for Period	Ci	1.15E-02	1.14E-02	NA	NA
3. Particulates	**Unit**	**Third Quarter**	**Fourth Quarter**	**Quarter**	**Quarter**
Sr-89	Ci	6.26E-04	1.99E-04	NA	NA
Sr-90	Ci	<LLD*	<LLD*	NA	NA
Cs-134	Ci	<LLD*	<LLD*	NA	NA
Cs-137	Ci	<LLD*	<LLD*	NA	NA
Ba-140	Ci	1.07E-03	4.31E-04	NA	NA
La-140	Ci	7.61E-04	6.60E-04	NA	NA
Cr-51	Ci	<LLD*	<LLD*	NA	NA
Mn-54	Ci	<LLD*	1.63E-05	NA	NA
Co-58	Ci	<LLD*	<LLD*	NA	NA
Co-60	Ci	2.67E-04	1.87E-04	NA	NA
Mo-99	Ci	<LLD*	<LLD*	NA	NA
Ag-110m	Ci	1.18E-05	<LLD*	NA	NA
Ce-141	Ci	<LLD*	<LLD*	NA	NA
Ce-144	Ci	<LLD*	<LLD*	NA	NA
Total for Period	Ci	2.74E-03	1.49E-03	NA	NA

*Actual gaseous LLD's are reported on page 6 of 7.

ATTACHMENT 1
Effluent & Waste Disposable Annual Report

REACTOR VENTILATION GASEOUS EFFLUENTS

NUCLIDES RELEASED		CONTINUOUS MODE		BATCH MODE	
1. Fission gases	**Unit**	**Third Quarter**	**Fourth Quarter**	**Quarter**	**Quarter**
Kr-85	Ci	<LLD*	<LLD*	NA	NA
Kr-85m	Ci	<LLD*	<LLD*	NA	NA
Kr-87	Ci	<LLD*	<LLD*	NA	NA
Kr-88	Ci	<LLD*	<LLD*	NA	NA
Xe-133	Ci	<LLD*	<LLD*	NA	NA
Xe-135	Ci	8.89E-01	3.38E-02	NA	NA
Xe-135m	Ci	1.42E+00	<LLD*	NA	NA
Xe-138	Ci	<LLD*	<LLD*	NA	NA
Ar-41	Ci	<LLD*	<LLD*	NA	NA
Total for Period	Ci	2.31E+00	3.38E-02	NA	NA
2. Iodines	**Unit**	**Third Quarter**	**Fourth Quarter**	**Quarter**	**Quarter**
I-131	Ci	4.17E-05	3.52E-04	NA	NA
I-133	Ci	<LLD*	<LLD*	NA	NA
I-135	Ci	<LLD*	<LLD*	NA	NA
Total for Period	Ci	4.17E-05	3.52E-04	NA	NA
3. Particulates	**Unit**	**Third Quarter**	**Fourth Quarter**	**Quarter**	**Quarter**
Sr-89	Ci	<LLD*	1.90E-04	NA	NA
Sr-90	Ci	<LLD*	<LLD*	NA	NA
Cs-134	Ci	<LLD*	<LLD*	NA	NA
Cs-137	Ci	<LLD*	7.37E-06	NA	NA
Ba-140	Ci	<LLD*	<LLD*	NA	NA
La-140	Ci	<LLD*	<LLD*	NA	NA
Cr-51	Ci	3.81E-05	<LLD*	NA	NA
Mn-54	Ci	8.36E-07	1.56E-05	NA	NA
Co-58	Ci	<LLD*	<LLD*	NA	NA
Co-60	Ci	7.16E-04	9.68E-04	NA	NA
Mo-99	Ci	<LLD*	<LLD*	NA	NA
Ag-110m	Ci	<LLD*	6.01E-05	NA	NA
Ce-141	Ci	<LLD*	<LLD*	NA	NA
Ce-144	Ci	<LLD*	<LLD*	NA	NA
Total for Period	Ci	7.55E-04	1.24E-03	NA	NA

*Actual gaseous LLD's are reported on page 6 of 7.

ATTACHMENT 1
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LIQUID EFFLUENTS – SUMMATION OF ALL RELEASES

A. FISSION & ACTIVATION PRODUCTS	UNIT	THIRD QUARTER	FOURTH QUARTER	EST TOTAL ERROR%
1. Total Release (not including tritium, gases & alpha)	Ci	1.67E-02	1.62E-02	4.1
2. Average diluted concentration during batch discharges for the period.	µCi/mL	1.71E-09	3.00E-09	
3. Percent of applicable limit*	% WB	3.77E-03	9.02E-03	
	O	2.05E-03	4.63E-03	
4. Maximum diluted concentration during batch discharges	µCi/mL	6.81E-11	3.65E-10	
B. TRITIUM				
1. Total Release	Ci	8.07E+00	1.44E+01	4.1
2. Average diluted concentration during batch discharges for the period	µCi/mL	8.28E-07	2.66E-06	
3. Percent of applicable limit	%	2.63E-02	8.70E-02	
C. DISSOLVED & ENTRAINED GASES				
1. Total Release	Ci	<LLD	<LLD	4.1
2. Average diluted concentration during batch discharges for the period	µCi/mL	<LLD	<LLD	
3. Percent of applicable limit	%	NA	NA	
D. GROSS ALPHA ACTIVITY				
1. Total Release	Ci	<LLD**	<LLD**	14.8
2. Average diluted concentration during batch discharges for the period	µCi/Ml	<LLD	<LLD	
E. VOLUME OF WASTE RELEASED (prior to dilution)	Liters	1.42E+06	1.54E+06	
F. VOLUME OF DILUTION WATER USED DURING BATCH DISCHARGES	Liters	9.75E+09	5.40E+09	
G. TOTAL VOLUME OF DILUTION WATER USED DURING PERIOD (quarter)	Liters	4.91E+11	2.84E+11	

* Whole Body/Organ (ODCM)
** Liquid Gross Alpha LLD is reported on page 7 of 7.

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Effluent & Waste Disposable Annual Report

LIQUID EFFLUENTS

NUCLIDES RELEASED		CONTINUOUS MODE		BATCH MODE	
	Unit	Third Quarter	Fourth Quarter	Third Quarter	Fourth Quarter
Sr-89	Ci	<LLD*	<LLD*	<LLD*	<LLD*
Sr-90	Ci	<LLD*	<LLD*	<LLD*	<LLD*
Cs-134	Ci	3.90E-05	9.24E-05	<LLD*	<LLD*
Cs-137	Ci	2.48E-04	5.11E-04	4.23E-05	2.30E-05
I-131	Ci	<LLD*	<LLD*	<LLD*	<LLD*
Co-58	Ci	3.34E-04	2.19E-04	<LLD*	<LLD*
Co-60	Ci	9.98E-03	9.33E-03	3.28E-04	4.14E-04
Fe-59	Ci	2.08E-05	<LLD*	<LLD*	<LLD*
Zn-65	Ci	3.04E-03	2.95E-03	<LLD*	1.08E-04
Mn-54	Ci	2.29E-03	2.49E-03	9.10E-05	3.14E-05
Cr-51	Ci	9.57E-05	<LLD*	<LLD*	<LLD*
Zr-95	Ci	<LLD*	<LLD*	<LLD*	<LLD*
Nb-95	Ci	<LLD*	<LLD*	<LLD*	<LLD*
Mo-99	Ci	<LLD*	<LLD*	<LLD*	<LLD*
Ag-110m	Ci	<LLD*	<LLD*	<LLD*	6.68E-05
Ba-140	Ci	<LLD*	<LLD*	<LLD*	<LLD*
La-140	Ci	<LLD*	<LLD*	<LLD*	<LLD*
Fe-55	Ci	1.14E-04	<LLD*	<LLD*	<LLD*
Total for Period (above)	Ci	1.62E-02	1.56E-02	4.61E-04	6.43E-04
Xe-133	Ci	<LLD*	<LLD*	<LLD*	<LLD*
Xe-135	Ci	<LLD*	<LLD*	<LLD*	<LLD*

*Actual liquid LLD's are reported on page 7 of 7.

Prepared by: _____ Date: 4-16-04

Approved by: _____ Date: 4-16-04

ATTACHMENT 1
Effluent & Waste Disposable Annual Report
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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	3.71E-06	None
Kr-85m	uCi/cc	1.25E-08	None
Kr-87	uCi/cc	2.99E-08	1E-04
Kr-88	uCi/cc	4.11E-08	1E-04
Xe-133	uCi/cc	3.34E-08	1E-04
Xe-133m	uCi/cc	9.21E-08	1E-04
Xe-135	uCi/cc	1.02E-08	1E-04
Xe-135m	uCi/cc	5.33E-08	None
Xe-131m	uCi/cc	4.35E-07	None
Xe-138	uCi/cc	1.66E-07	1E-04
Ar-41	uCi/cc	2.31E-08	None
NUCLIDE LOWER LIMITS OF DETECTION (LLD's) 2. Iodines	UNIT	LLD Value	ODCM Required LLD*
I-131	uCi/cc	2.46E-13	1E-12
I-133	uCi/cc	2.68E-12	1E-10
I-135	uCi/cc	1.41E-09	None
NUCLIDE LOWER LIMITS OF DETECTION (LLD's) 3. Particulates and Tritium	UNIT	LLD Value	ODCM Required LLD*
H-3	uCi/cc	3.21E-11	1E-06
Sr-89	uCi/cc	1.05E-14	1E-11
Sr-90	uCi/cc	1.58E-14	1E-11
Cs-134	uCi/cc	1.72E-13	1E-11
Cs-137	uCi/cc	2.75E-13	1E-11
Ba-140	uCi/cc	6.26E-13	None
La-140	uCi/cc	8.13E-13	None
Mn-54	uCi/cc	2.07E-13	1E-11
Co-58	uCi/cc	1.78E-13	1E-11
Fe-59	uCi/cc	4.15E-13	1E-11
Co-60	uCi/cc	3.88E-13	1E-11
Zn-65	uCi/cc	4.49E-13	1E-11
Mo-99	uCi/cc	3.55E-12	1E-11
Ce-141	uCi/cc	2.44E-13	1E-11
Ce-144	uCi/cc	9.40E-13	1E-11
Ag-110m	uCi/cc	1.23E-13	None
Ba-133	uCi/cc	2.23E-13	None
Cr-51	uCi/cc	1.28E-12	None
Gross Alpha	uCi/cc	5.26E-15	1E-11

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

ATTACHMENT 1
Effluent & Waste Disposable Annual Report
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LIQUID EFFLUENT LLD's (Most Restrictive)
BATCH MODE

NUCLIDE LOWER LIMITS OF DETECTION (LLD's) 3. Liquids	UNIT	LLD Value	ODCM Required LLD
H-3	uCi/cc	3.46E-06	1E-05
Sr-89	uCi/cc	4.00E-08	5E-08
Sr-90	uCi/cc	1.00E-08	5E-08
Fe-55	uCi/cc	1.00E-06	1E-06
Kr-85	uCi/cc	1.73E-05	None*
Kr-87	uCi/cc	1.55E-07	1E-05
Kr-88	uCi/cc	2.12E-07	1E-05
Xe-133	uCi/cc	1.40E-07	1E-05
Xe-133m	uCi/cc	4.16E-07	1E-05
Xe-135	uCi/cc	5.22E-08	1E-05
Xe-138	uCi/cc	7.43E-07	1E-05
Mn-54	uCi/cc	6.61E-08	5E-07
Co-58	uCi/cc	6.67E-08	5E-07
Co-60	uCi/cc	1.23E-07	5E-07
Zn-65	uCi/cc	1.77E-07	5E-07
Mo-99	uCi/cc	4.69E-07	5E-07
I-131	uCi/cc	5.38E-08	1E-06
Cs-134	uCi/cc	5.80E-08	5E-07
Cs-137	uCi/cc	7.31E-08	5E-07
Ce-141	uCi/cc	8.89E-08	5E-07
Ce-144	uCi/cc	4.14E-07	5E-06
Gross Alpha	uCi/cc	8.88E-08	1E-07
Fe-59	uCi/cc	1.41E-07	5E-07
Cr-51	uCi/cc	3.75E-07	None
Ag-110m	uCi/cc	4.56E-08	None

* Kr-85 required by UFSAR section 9.1.3.3.

Attachment D
Effluent and Waste Disposal Semiannual Report Supplemental Information
Quad Cities Nuclear Power Station, July - December 2003
SVP-04-034

ATTACHMENT 3
Annual Effluent Report
Supplemental Information
Page 1 of 5

Facility: Quad Cities Nuclear Power Station July – December 2003

Licensee: Exelon Generation Company

1. Regulatory Limits

a. For Noble Gases: (per unit)

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

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

Beta Radiation
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.

Dose
1. Less than or equal to 7.5 mrem/quarter.
2. Less than or equal to 15 mrem/year.

d. For Liquid: (per site)

Less than or equal to 3 mrem to the whole body during any calendar quarter.
Less than or equal to 10 mrem to any organ during any calendar quarter.
Less than or equal to 6 mrem to the whole body during any calendar year.
Less than or equal to 20 mrem to any organ during any calendar year.

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Annual Effluent Report
Supplemental Information
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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 10.1 and 10.2 from the Offsite Dose Calculation Manual. 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 10.3 and 10.4 from the Offsite Dose Calculation Manual. The MPC values used for the monitors were as follows:

Radwaste discharge	5.01E-05 μCi/ml
Service water	1.0E-05 μCi/ml

3. Average Energy

   The average gamma energy used to calculate the alarm setpoints for the noble gas monitors was 1.02 Mev for the third quarter, and 1.00 Mev for the fourth quarter.

4. Measurements and Approximations of Total Radioactivity

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

   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 Sr89/90 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 Sr89/90 and gross alpha curies released values reported are actual. On a real time basis, the portion of the "percent of applicable 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.

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Annual Effluent Report
Supplemental Information

The continuous strip chart recorders for the monitors on the release points are reviewed monthly 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 Sr89/90 and Fe55. 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 Sr89/90 and Fe55 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.

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Annual Effluent Report
Supplemental Information
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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.

5. Batch Releases

a. Liquid

1.	Number of releases:	13
2.	Total time:	11,280 minutes
3.	Maximum time:	990 minutes
4.	Average time:	869 minutes
5.	Minimum time:	677 minutes
6.	Average stream flow:	62.5 gpm (discharge) 3.64E+05 gpm (dilution)

b. Gaseous

NONE.

6. Abnormal Releases

a. Liquid

1. A leak in the 1A RHR heat exchanger was repaired in June 2002. There continues to be a small amount of radioactivity identified in the service water side of the heat exchanger. Investigation continues to determine its source. At this time, the relatively small amount of radioactivity identified continues to be included in the normal monthly effluents and is also included in the "continuous" liquid section of this report.

2. A leak into the 2A RHR heat exchanger service water side developed in October 2002. On September 22, 2003, attempts to repair the heat exchanger were unsuccessful. The activity identified from the leak continues to be included in the normal monthly effluents and is also included in the "continuous" liquid section of this report. A temporary modification was performed 1/15/04 that reduced the leakage. The heat exchanger was repaired in March 2004 during refuel outage Q2R17.

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Annual Effluent Report
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b. Gaseous

1. A release occurred at the Turbine Building ventilation exhaust duct man-way. The man-way was opened on October 3 and October 6, 2003 to troubleshoot the Main Chimney flow instrumentation. The man-way was opened on December 8, 2003 to install new sensing lines as part of a modification to the Main Chimney flow instrumentation. Turbine Building ventilation was sampled to determine the amount of radioactivity released. The activity from this release was included in the normal monthly effluents for October and December 2003 and is also included in the "continuous" gaseous section of this report.

Attachment E
Quad Cities Station Meteorological Site Quarterly Joint-Frequency Wind Rose Tables for 2003
SVP-04-034

Quad Cities Nuclear Station
33 ft. Wind Speed and Direction

January-March. 2003
196Ft-33Ft Delta-T (F)

Number of Observations = 2120
Values are Percent Occurrence

SPEED CLASS	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL	EU	MU	SU	N	SS	MS	ES	TOTAL
	WIND DIRECTION CLASSES																	STABILITY CLASSES							
EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00						
C SU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00					
A N	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				0.00				
L SS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00					0.00			
M MS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00		
ES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00	
																									0.00
EU	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.00	0.00	0.00	0.05	0.24	0.24							
MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.05	0.14		0.14						
1 SU	0.00	0.00	0.14	0.00	0.00	0.00	0.05	0.05	0.00	0.00	0.00	0.14	0.00	0.00	0.05	0.00	0.42			0.42					
- N	0.19	0.09	0.09	0.19	0.09	0.19	0.33	0.33	0.33	0.33	0.14	0.28	0.57	0.47	0.42	0.38	4.43				4.43				
3 SS	0.00	0.05	0.19	0.14	0.24	0.28	0.75	0.57	0.47	0.33	0.38	0.52	0.47	0.33	0.19	0.14	5.05					5.05			
MS	0.09	0.09	0.05	0.19	0.42	0.38	0.57	0.47	0.28	0.19	0.09	0.47	0.66	0.19	0.19	0.05	4.39						4.39		
ES	0.14	0.14	0.09	0.28	0.38	0.85	0.52	0.61	0.28	0.05	0.19	0.28	0.14	0.09	0.05	0.00	4.10							4.10	
																									18.77
EU	0.33	0.09	0.09	0.33	0.38	0.33	0.24	1.18	0.90	1.18	1.13	0.42	1.51	0.52	0.94	0.61	10.19	10.19							
MU	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.05	0.14	0.09	0.05	0.05	0.05	0.00	0.19	0.05	0.71		0.71						
4 SU	0.09	0.09	0.00	0.09	0.05	0.05	0.09	0.28	0.19	0.33	0.28	0.05	0.14	0.09	0.28	0.14	2.26			2.26					
- N	1.93	0.71	0.47	0.57	0.28	0.14	0.47	0.57	0.75	0.75	1.79	1.56	2.69	4.15	3.82	1.89	22.55				22.55				
7 SS	0.14	0.24	0.61	0.42	0.33	0.61	0.66	0.90	0.66	0.42	0.90	0.47	0.80	0.80	0.52	0.38	8.87					8.87			
MS	0.05	0.14	0.14	0.09	0.09	0.05	0.14	0.09	0.14	0.05	0.05	0.00	0.19	0.05	0.05	0.00	1.32						1.32		
ES	0.00	0.00	0.05	0.00	0.05	0.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28							0.28	
																									46.18
EU	0.28	0.19	0.71	0.24	0.00	0.00	0.00	0.33	0.33	0.24	0.33	0.47	1.27	1.60	1.79	0.80	8.58	8.58							
MU	0.05	0.09	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.05	0.28	0.24	0.28	0.14	1.27		1.27						
8 SU	0.09	0.24	0.24	0.05	0.24	0.00	0.00	0.05	0.00	0.05	0.05	0.28	0.24	0.24	0.28	0.19	2.22			2.22					
- N	2.26	0.94	1.37	1.37	0.71	0.09	0.09	0.00	0.00	0.09	0.85	0.94	0.71	3.82	3.11	1.27	17.64				17.64				
1 SS	0.00	0.05	0.14	0.00	0.00	0.14	0.00	0.00	0.00	0.00	0.38	0.09	0.47	0.33	0.05	0.00	1.65					1.65			
2 MS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00		
ES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00	
																									31.37
EU	0.00	0.05	0.09	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.05	0.00	0.52	0.52							
1 MU	0.00	0.00	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.00	0.00	0.19		0.19						
3 SU	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.19	0.05	0.05	0.38			0.38					
- N	0.24	0.14	0.42	0.52	0.00	0.00	0.09	0.00	0.00	0.00	0.00	0.09	0.00	0.85	0.19	0.00	2.55				2.55				
1 SS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00					0.00			
8 MS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00		
ES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00	
																									3.63

Quad Cities Nuclear Station
33 ft. Wind Speed and Direction

January-March, 2003
196Ft-33Ft Delta-T (F)

SPEED CLASS	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL	EU	MU	SU	N	SS	MS	ES	TOTAL
	WIND DIRECTION CLASSES																	STABILITY CLASSES							
EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
1 MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00						
9 SU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00					
- N	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.05				0.05				
2 SS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00					0.00			
4 MS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00		
ES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00	
																									0.05
EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
G MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00						
T SU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00					
N	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				0.00				
2 SS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00					0.00			
4 MS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00		
ES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00	
																									0.00
TOT	5.90	3.40	5.19	4.53	3.25	3.30	4.01	5.47	4.48	4.15	6.60	6.32	10.28	14.34	12.59	6.18	100.00	19.53	2.31	5.28	47.22	15.57	5.71	4.39	100.00

Wind Direction by Stability

N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL	-STABILITY CLASSES-
0.61	0.38	0.90	0.61	0.38	0.33	0.24	1.51	1.23	1.42	1.46	1.04	2.78	2.41	2.78	1.46	19.53	Extremely Unstable
0.05	0.09	0.24	0.00	0.00	0.00	0.00	0.05	0.14	0.14	0.05	0.09	0.33	0.33	0.57	0.24	2.31	Moderately Unstable
0.19	0.33	0.42	0.14	0.28	0.05	0.14	0.38	0.19	0.38	0.33	0.47	0.42	0.52	0.66	0.38	5.28	Slightly Unstable
4.62	1.89	2.36	2.64	1.08	0.42	0.99	0.90	1.08	1.18	2.78	2.88	4.01	9.29	7.55	3.54	47.22	Neutral
0.14	0.33	0.94	0.57	0.57	1.04	1.42	1.46	1.13	0.75	1.65	1.08	1.75	1.46	0.75	0.52	15.57	Slightly Stable
0.14	0.24	0.19	0.28	0.52	0.42	0.71	0.57	0.42	0.24	0.14	0.47	0.85	0.24	0.24	0.05	5.71	Moderately Stable
0.14	0.14	0.14	0.28	0.42	1.04	0.52	0.61	0.28	0.05	0.19	0.28	0.14	0.09	0.05	0.00	4.39	Extremely Stable

Wind Direction by Wind Speed

N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL	-WIND SPEED CLASSES-
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	C A L M
0.42	0.42	0.57	0.80	1.13	1.70	2.22	2.03	1.37	0.90	0.80	1.84	1.84	1.08	0.99	0.66	18.77	< 3.5 mph
2.55	1.27	1.42	1.51	1.18	1.37	1.60	3.07	2.78	2.83	4.20	2.55	5.38	5.61	5.80	3.07	46.18	3.6 - 7.5 mph
2.69	1.51	2.55	1.65	0.94	0.24	0.09	0.38	0.33	0.42	1.60	1.84	2.97	6.23	5.52	2.41	31.37	7.6 - 12.5 mph
0.24	0.19	0.66	0.57	0.00	0.00	0.09	0.00	0.00	0.00	0.00	0.09	0.05	1.42	0.28	0.05	3.63	12.6 - 18.5 mph
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.05	18.6 - 24.5 mph
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	> 24.5 mph

Quad Cities Nuclear Station
296 ft. Wind Speed and Direction

January-March, 2003
296Ft-33Ft Delta-T (F)

Number of Observations = 2143
Values are Percent Occurrence

SPEED		WIND DIRECTION CLASSES																	STABILITY CLASSES							
CLASS		N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL	EU	MU	SU	N	SS	MS	ES	TOTAL
	EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
	MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00						
C	SU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00					
A	N	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				0.00				
L	SS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00					0.00			
M	MS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00		
	ES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00	
																										0.00
	EU	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05							
	MU	0.00	0.00	0.00	0.05	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09		0.09						
1	SU	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.05	0.00	0.00	0.00	0.05	0.05	0.33			0.33					
-	N	0.09	0.05	0.05	0.09	0.14	0.09	0.05	0.05	0.09	0.05	0.09	0.09	0.05	0.00	0.05	0.05	1.07				1.07				
3	SS	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.09	0.00	0.00	0.00	0.00	0.09	0.00	0.05	0.00	0.28					0.28			
	MS	0.00	0.00	0.05	0.00	0.05	0.00	0.00	0.00	0.05	0.09	0.05	0.05	0.05	0.00	0.00	0.00	0.37						0.37		
	ES	0.00	0.09	0.14	0.05	0.05	0.09	0.00	0.00	0.00	0.00	0.05	0.00	0.05	0.05	0.00	0.05	0.61							0.61	
																										2.80
	EU	0.00	0.00	0.00	0.05	0.19	0.05	0.05	0.14	0.05	0.14	0.00	0.05	0.19	0.05	0.05	0.09	1.07	1.07							
	MU	0.00	0.00	0.05	0.05	0.00	0.19	0.00	0.05	0.14	0.19	0.14	0.05	0.14	0.09	0.14	0.00	1.21		1.21						
4	SU	0.14	0.00	0.00	0.14	0.09	0.09	0.00	0.00	0.14	0.09	0.28	0.09	0.09	0.09	0.19	0.05	1.49			1.49					
-	N	0.42	0.37	0.09	0.14	0.05	0.05	0.09	0.19	0.42	0.23	0.23	0.28	0.42	0.61	0.42	0.70	4.71				4.71				
7	SS	0.09	0.00	0.05	0.09	0.05	0.14	0.05	0.28	0.09	0.42	0.09	0.14	0.09	0.09	0.14	0.05	1.87					1.87			
	MS	0.00	0.09	0.09	0.05	0.14	0.05	0.05	0.19	0.09	0.09	0.19	0.09	0.19	0.05	0.09	0.19	1.63						1.63		
	ES	0.14	0.00	0.09	0.00	0.05	0.05	0.00	0.00	0.09	0.09	0.00	0.00	0.05	0.00	0.00	0.19	0.75							0.75	
																										12.74
	EU	0.09	0.14	0.00	0.09	0.00	0.00	0.05	0.42	0.37	0.37	0.19	0.09	0.65	0.28	0.37	0.09	3.22	3.22							
	MU	0.05	0.05	0.14	0.05	0.00	0.00	0.05	0.09	0.09	0.14	0.19	0.05	0.23	0.33	0.47	0.37	2.29		2.29						
8	SU	0.14	0.00	0.00	0.00	0.05	0.00	0.00	0.09	0.09	0.28	0.00	0.05	0.05	0.05	0.23	0.05	1.07			1.07					
-	N	1.03	0.37	0.37	0.33	0.33	0.00	0.33	0.70	0.56	0.56	0.98	0.33	0.79	1.63	1.73	1.87	11.90				11.90				
1	SS	0.09	0.00	0.19	0.23	0.37	0.19	0.33	0.65	0.42	0.65	0.28	0.33	0.05	0.98	0.42	0.28	5.46					5.46			
2	MS	0.05	0.09	0.05	0.19	0.09	0.23	0.37	0.19	0.14	0.61	0.05	0.09	0.19	0.23	0.09	0.09	2.75						2.75		
	ES	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.23	0.19	0.14	0.09	0.19	0.09	0.09	0.05	1.12							1.12	
																										27.81
	EU	0.00	0.00	0.42	0.00	0.00	0.00	0.00	0.42	0.19	0.42	0.09	0.19	0.47	0.56	0.70	0.23	3.69	3.69							
1	MU	0.00	0.09	0.19	0.00	0.00	0.00	0.00	0.00	0.23	0.19	0.05	0.09	0.09	0.28	0.47	0.19	1.87		1.87						
3	SU	0.05	0.28	0.23	0.00	0.00	0.00	0.00	0.23	0.09	0.14	0.05	0.05	0.23	0.28	0.51	0.14	2.29			2.29					
-	N	1.35	1.31	0.70	0.42	0.79	0.05	0.05	0.33	0.37	0.89	1.26	1.07	1.68	4.15	4.76	1.82	21.00				21.00				
1	SS	0.09	0.05	0.51	0.28	0.05	0.28	0.56	0.56	0.89	1.21	0.51	0.37	1.07	0.37	0.19	0.37	7.37					7.37			
8	MS	0.00	0.05	0.05	0.09	0.00	0.14	0.28	0.05	0.70	0.33	0.00	0.00	0.09	0.14	0.05	0.05	2.01						2.01		
	ES	0.00	0.00	0.00	0.00	0.05	0.05	0.05	0.05	0.23	0.28	0.00	0.00	0.00	0.05	0.00	0.00	0.75							0.75	
																										38.96

Quad Cities Nuclear Station
296 ft. Wind Speed and Direction

January-March, 2003
296Ft-33Ft Delta-T (F)

SPEED CLASS	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL	EU	MU	SU	N	SS	MS	ES	TOTAL
	WIND DIRECTION CLASSES																	STABILITY CLASSES							
EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.00	0.19	0.09	0.05	0.28	0.51	0.14	0.00	1.40	1.40							
1 MU	0.00	0.00	0.09	0.00	0.00	0.00	0.00	0.05	0.09	0.00	0.00	0.05	0.14	0.28	0.00	0.00	0.70		0.70						
9 SU	0.00	0.00	0.09	0.05	0.00	0.00	0.00	0.00	0.05	0.05	0.00	0.28	0.23	0.33	0.09	0.00	1.17			1.17					
- N	0.42	0.14	1.59	0.65	0.23	0.00	0.09	0.00	0.19	0.56	0.28	0.47	0.56	2.19	0.84	0.61	8.82				8.82				
2 SS	0.00	0.05	0.05	0.00	0.00	0.19	0.09	0.23	0.14	0.14	0.33	0.09	0.47	0.05	0.05	0.05	1.91					1.91			
4 MS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.28						0.28		
ES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14							0.14	
																									14.42
EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05							
G MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.19	0.00	0.00	0.23		0.23						
T SU	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.28	0.00	0.00	0.37			0.37					
N	0.00	0.00	0.28	0.33	0.00	0.00	0.14	0.00	0.00	0.05	0.09	0.14	0.09	1.07	0.05	0.00	2.24				2.24				
2 SS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.09	0.09	0.14	0.00	0.00	0.00	0.37					0.37			
4 MS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00		
ES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00	
																									3.27
TOT	4.29	3.22	5.60	3.45	2.75	2.01	2.71	5.37	6.58	8.87	5.83	4.81	9.10	15.35	12.41	7.65	100.00	9.47	6.39	6.72	49.74	17.27	7.05	3.36	100.00

Wind Direction by Stability

N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL	-STABILITY CLASSES-
0.09	0.14	0.42	0.19	0.19	0.05	0.09	1.17	0.61	1.12	0.37	0.37	1.59	1.40	1.26	0.42	9.47	Extremely Unstable
0.05	0.14	0.47	0.14	0.00	0.19	0.09	0.23	0.56	0.51	0.37	0.23	0.61	1.17	1.07	0.56	6.39	Moderately Unstable
0.37	0.28	0.37	0.19	0.14	0.09	0.00	0.37	0.37	0.70	0.37	0.47	0.61	1.03	1.07	0.28	6.72	Slightly Unstable
3.31	2.24	3.08	1.96	1.54	0.19	0.75	1.26	1.63	2.33	2.94	2.38	3.59	9.66	7.84	5.04	49.74	Neutral
0.28	0.09	0.79	0.61	0.47	0.84	1.03	1.82	1.54	2.47	1.31	1.03	1.91	1.49	0.84	0.75	17.27	Slightly Stable
0.05	0.23	0.23	0.33	0.28	0.42	0.70	0.42	1.21	1.17	0.28	0.23	0.51	0.42	0.23	0.33	7.05	Moderately Stable
0.14	0.09	0.23	0.05	0.14	0.23	0.05	0.09	0.65	0.56	0.19	0.09	0.28	0.19	0.09	0.28	3.36	Extremely Stable

Wind Direction by Wind Speed

N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL	-WIND SPEED CLASSES-
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	C A L M
0.14	0.14	0.23	0.23	0.23	0.23	0.09	0.14	0.14	0.28	0.23	0.14	0.23	0.05	0.14	0.14	2.80	< 3.5 mph
0.79	0.47	0.37	0.51	0.56	0.61	0.23	0.84	1.03	1.26	0.93	0.70	1.17	0.98	1.03	1.26	12.74	3.6 - 7.5 mph
1.45	0.65	0.75	0.89	0.84	0.47	1.12	2.15	1.91	2.80	1.82	1.03	2.15	3.59	3.41	2.80	27.81	7.6 - 12.5 mph
1.49	1.77	2.10	0.79	0.89	0.51	0.93	1.63	2.71	3.45	1.96	1.77	3.64	5.83	6.67	2.80	38.96	12.6 - 18.5 mph
0.42	0.19	1.82	0.70	0.23	0.19	0.19	0.47	0.79	0.98	0.70	0.93	1.68	3.36	1.12	0.65	14.42	18.6 - 24.5 mph
0.00	0.00	0.33	0.33	0.00	0.00	0.14	0.14	0.00	0.09	0.19	0.23	0.23	1.54	0.05	0.00	3.27	> 24.5 mph

Quad Cities Nuclear Station

Period of Record: January - March 2003
Stability Class - Extremely Unstable - 196Ft-33Ft Delta-T (F)
Winds Measured at 33 Feet

Wind Speed (in mph)

Wind Direction	1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	7	6	0	0	0	13
NNE	1	2	4	1	0	0	8
NE	0	2	15	2	0	0	19
ENE	0	7	5	1	0	0	13
E	0	8	0	0	0	0	8
ESE	0	7	0	0	0	0	7
SE	0	5	0	0	0	0	5
SSE	0	25	7	0	0	0	32
S	0	19	7	0	0	0	26
SSW	0	25	5	0	0	0	30
SW	0	24	7	0	0	0	31
WSW	3	9	10	0	0	0	22
W	0	32	27	0	0	0	59
WNW	0	11	34	6	0	0	51
NW	0	20	38	1	0	0	59
NNW	1	13	17	0	0	0	31
Variable	0	0	0	0	0	0	0
Total	5	216	182	11	0	0	414

Hours of calm in this stability class: 0
Hours of missing wind measurements in this stability class: 0
Hours of missing stability measurements in all stability classes: 0

Quad Cities Nuclear Station

Period of Record: January - March 2003
Stability Class - Moderately Unstable - 196Ft-33Ft Delta-T (F)
Winds Measured at 33 Feet

Wind Speed (in mph)

Wind Direction	1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	0	1	0	0	0	1
NNE	0	0	2	0	0	0	2
NE	0	1	2	2	0	0	5
ENE	0	0	0	0	0	0	0
E	0	0	0	0	0	0	0
ESE	0	0	0	0	0	0	0
SE	0	0	0	0	0	0	0
SSE	0	1	0	0	0	0	1
S	0	3	0	0	0	0	3
SSW	0	2	1	0	0	0	3
SW	0	1	0	0	0	0	1
WSW	0	1	1	0	0	0	2
W	0	1	6	0	0	0	7
WNW	0	0	5	2	0	0	7
NW	2	4	6	0	0	0	12
NNW	1	1	3	0	0	0	5
Variable	0	0	0	0	0	0	0
Total	3	15	27	4	0	0	49

Hours of calm in this stability class: 0
Hours of missing wind measurements in this stability class: 0
Hours of missing stability measurements in all stability classes: 0

Quad Cities Nuclear Station

Period of Record: January - March 2003
Stability Class - Slightly Unstable - 196Ft-33Ft Delta-T (F)
Winds Measured at 33 Feet

Wind Speed (in mph)

Wind Direction	1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	2	2	0	0	0	4
NNE	0	2	5	0	0	0	7
NE	3	0	5	1	0	0	9
ENE	0	2	1	0	0	0	3
E	0	1	5	0	0	0	6
ESE	0	1	0	0	0	0	1
SE	1	2	0	0	0	0	3
SSE	1	6	1	0	0	0	8
S	0	4	0	0	0	0	4
SSW	0	7	1	0	0	0	8
SW	0	6	1	0	0	0	7
WSW	3	1	6	0	0	0	10
W	0	3	5	1	0	0	9
WNW	0	2	5	4	0	0	11
NW	1	6	6	1	0	0	14
NNW	0	3	4	1	0	0	8
Variable	0	0	0	0	0	0	0
Total	9	48	47	8	0	0	112

Hours of calm in this stability class: 0
Hours of missing wind measurements in this stability class: 0
Hours of missing stability measurements in all stability classes: 0

Quad Cities Nuclear Station

Period of Record: January - March 2003
Stability Class - Neutral - 196Ft-33Ft Delta-T (F)
Winds Measured at 33 Feet

Wind Speed (in mph)

Wind Direction	1-3	4-7	8-12	13-18	19-24	> 24	Total
N	4	41	48	5	0	0	98
NNE	2	15	20	3	0	0	40
NE	2	10	29	9	0	0	50
ENE	4	12	29	11	0	0	56
E	2	6	15	0	0	0	23
ESE	4	3	2	0	0	0	9
SE	7	10	2	2	0	0	21
SSE	7	12	0	0	0	0	19
S	7	16	0	0	0	0	23
SSW	7	16	2	0	0	0	25
SW	3	38	18	0	0	0	59
WSW	6	33	20	2	0	0	61
W	12	57	15	0	1	0	85
WNW	10	88	81	18	0	0	197
NW	9	81	66	4	0	0	160
NNW	8	40	27	0	0	0	75
Variable	0	0	0	0	0	0	0
Total	94	478	374	54	1	0	1001

Hours of calm in this stability class: 0
Hours of missing wind measurements in this stability class: 0
Hours of missing stability measurements in all stability classes: 0

Quad Cities Nuclear Station

Period of Record: January - March 2003
Stability Class - Slightly Stable - 196Ft-33Ft Delta-T (F)
Winds Measured at 33 Feet

Wind Speed (in mph)

Wind Direction	1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	3	0	0	0	0	3
NNE	1	5	1	0	0	0	7
NE	4	13	3	0	0	0	20
ENE	3	9	0	0	0	0	12
E	5	7	0	0	0	0	12
ESE	6	13	3	0	0	0	22
SE	16	14	0	0	0	0	30
SSE	12	19	0	0	0	0	31
S	10	14	0	0	0	0	24
SSW	7	9	0	0	0	0	16
SW	8	19	8	0	0	0	35
WSW	11	10	2	0	0	0	23
W	10	17	10	0	0	0	37
WNW	7	17	7	0	0	0	31
NW	4	11	1	0	0	0	16
NNW	3	8	0	0	0	0	11
Variable	0	0	0	0	0	0	0
Total	107	188	35	0	0	0	330

Hours of calm in this stability class: 0
Hours of missing wind measurements in this stability class: 0
Hours of missing stability measurements in all stability classes: 0

Quad Cities Nuclear Station

Period of Record: January - March 2003
Stability Class - Moderately Stable - 196Ft-33Ft Delta-T (F)
Winds Measured at 33 Feet

Wind Speed (in mph)

Wind Direction	1-3	4-7	8-12	13-18	19-24	> 24	Total
N	2	1	0	0	0	0	3
NNE	2	3	0	0	0	0	5
NE	1	3	0	0	0	0	4
ENE	4	2	0	0	0	0	6
E	9	2	0	0	0	0	11
ESE	8	1	0	0	0	0	9
SE	12	3	0	0	0	0	15
SSE	10	2	0	0	0	0	12
S	6	3	0	0	0	0	9
SSW	4	1	0	0	0	0	5
SW	2	1	0	0	0	0	3
WSW	10	0	0	0	0	0	10
W	14	4	0	0	0	0	18
WNW	4	1	0	0	0	0	5
NW	4	1	0	0	0	0	5
NNW	1	0	0	0	0	0	1
Variable	0	0	0	0	0	0	0
Total	93	28	0	0	0	0	121

Hours of calm in this stability class: 0
Hours of missing wind measurements in this stability class: 0
Hours of missing stability measurements in all stability classes: 0

Quad Cities Nuclear Station

Period of Record: January - March 2003
Stability Class - Extremely Stable - 196Ft-33Ft Delta-T (F)
Winds Measured at 33 Feet

Wind Speed (in mph)

Wind Direction	1-3	4-7	8-12	13-18	19-24	> 24	Total
N	3	0	0	0	0	0	3
NNE	3	0	0	0	0	0	3
NE	2	1	0	0	0	0	3
ENE	6	0	0	0	0	0	6
E	8	1	0	0	0	0	9
ESE	18	4	0	0	0	0	22
SE	11	0	0	0	0	0	11
SSE	13	0	0	0	0	0	13
S	6	0	0	0	0	0	6
SSW	1	0	0	0	0	0	1
SW	4	0	0	0	0	0	4
WSW	6	0	0	0	0	0	6
W	3	0	0	0	0	0	3
WNW	2	0	0	0	0	0	2
NW	1	0	0	0	0	0	1
NNW	0	0	0	0	0	0	0
Variable	0	0	0	0	0	0	0
Total	87	6	0	0	0	0	93

Hours of calm in this stability class: 0
Hours of missing wind measurements in this stability class: 0
Hours of missing stability measurements in all stability classes: 0

Quad Cities Nuclear Station

Period of Record: January - March 2003
Stability Class - Moderately Unstable - 296Ft-33Ft Delta-T (F)
Winds Measured at 296 Feet

Wind Speed (in mph)

Wind Direction	1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	0	1	0	0	0	1
NNE	0	0	1	2	0	0	3
NE	0	1	3	4	2	0	10
ENE	1	1	1	0	0	0	3
E	0	0	0	0	0	0	0
ESE	0	4	0	0	0	0	4
SE	1	0	1	0	0	0	2
SSE	0	1	2	0	1	1	5
S	0	3	2	5	2	0	12
SSW	0	4	3	4	0	0	11
SW	0	3	4	1	0	0	8
WSW	0	1	1	2	1	0	5
W	0	3	5	2	3	0	13
WNW	0	2	7	6	6	4	25
NW	0	3	10	10	0	0	23
NNW	0	0	8	4	0	0	12
Variable	0	0	0	0	0	0	0
Total	2	26	49	40	15	5	137

Hours of calm in this stability class: 0
Hours of missing wind measurements in this stability class: 0
Hours of missing stability measurements in all stability classes: 5

Quad Cities Nuclear Station

Period of Record: January - March 2003
Stability Class - Slightly Unstable - 296Ft-33Ft Delta-T (F)
Winds Measured at 296 Feet

Wind Speed (in mph)

Wind Direction	1-3	4-7	8-12	13-18	19-24	> 24	Total
N	1	3	3	1	0	0	8
NNE	0	0	0	6	0	0	6
NE	0	0	0	5	2	1	8
ENE	0	3	0	0	1	0	4
E	0	2	1	0	0	0	3
ESE	0	2	0	0	0	0	2
SE	0	0	0	0	0	0	0
SSE	0	0	2	5	0	1	8
S	0	3	2	2	1	0	8
SSW	3	2	6	3	1	0	15
SW	1	6	0	1	0	0	8
WSW	0	2	1	1	6	0	10
W	0	2	1	5	5	0	13
WNW	0	2	1	6	7	6	22
NW	1	4	5	11	2	0	23
NNW	1	1	1	3	0	0	6
Variable	0	0	0	0	0	0	0
Total	7	32	23	49	25	8	144

Hours of calm in this stability class: 0
Hours of missing wind measurements in this stability class: 0
Hours of missing stability measurements in all stability classes: 5

Quad Cities Nuclear Station

Period of Record: January - March 2003
Stability Class - Neutral - 296Ft-33Ft Delta-T (F)
Winds Measured at 296 Feet

Wind Speed (in mph)

Wind Direction	1-3	4-7	8-12	13-18	19-24	> 24	Total
N	2	9	22	29	9	0	71
NNE	1	8	8	28	3	0	48
NE	1	2	8	15	34	6	66
ENE	2	3	7	9	14	7	42
E	3	1	7	17	5	0	33
ESE	2	1	0	1	0	0	4
SE	1	2	7	1	2	3	16
SSE	1	4	15	7	0	0	27
S	2	9	12	8	4	0	35
SSW	1	5	12	19	12	1	50
SW	2	5	21	27	6	2	63
WSW	2	6	7	23	10	3	51
W	1	9	17	36	12	2	77
WNW	0	13	35	89	47	23	207
NW	1	9	37	102	18	1	168
NNW	1	15	40	39	13	0	108
Variable	0	0	0	0	0	0	0
Total	23	101	255	450	189	48	1066

Hours of calm in this stability class: 0
Hours of missing wind measurements in this stability class: 11
Hours of missing stability measurements in all stability classes: 5

Quad Cities Nuclear Station

Period of Record: January - March 2003
Stability Class - Slightly Stable - 296Ft-33Ft Delta-T (F)
Winds Measured at 296 Feet

Wind Speed (in mph)

Wind Direction	1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	2	2	2	0	0	6
NNE	0	0	0	1	1	0	2
NE	0	1	4	11	1	0	17
ENE	0	2	5	6	0	0	13
E	0	1	8	1	0	0	10
ESE	1	3	4	6	4	0	18
SE	0	1	7	12	2	0	22
SSE	2	6	14	12	5	0	39
S	0	2	9	19	3	0	33
SSW	0	9	14	26	3	1	53
SW	0	2	6	11	7	2	28
WSW	0	3	7	8	2	2	22
W	2	2	1	23	10	3	41
WNW	0	2	21	8	1	0	32
NW	1	3	9	4	1	0	18
NNW	0	1	6	8	1	0	16
Variable	0	0	0	0	0	0	0
Total	6	40	117	158	41	8	370

Hours of calm in this stability class: 0
Hours of missing wind measurements in this stability class: 1
Hours of missing stability measurements in all stability classes: 5

Quad Cities Nuclear Station

Period of Record: January - March 2003
Stability Class - Moderately Stable - 296Ft-33Ft Delta-T (F)
Winds Measured at 296 Feet

Wind Speed (in mph)

Wind Direction	1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	0	1	0	0	0	1
NNE	0	2	2	1	0	0	5
NE	1	2	1	1	0	0	5
ENE	0	1	4	2	0	0	7
E	1	3	2	0	0	0	6
ESE	0	1	5	3	0	0	9
SE	0	1	8	6	0	0	15
SSE	0	4	4	1	0	0	9
S	1	2	3	15	5	0	26
SSW	2	2	13	7	1	0	25
SW	1	4	1	0	0	0	6
WSW	1	2	2	0	0	0	5
W	1	4	4	2	0	0	11
WNW	0	1	5	3	0	0	9
NW	0	2	2	1	0	0	5
NNW	0	4	2	1	0	0	7
Variable	0	0	0	0	0	0	0
Total	8	35	59	43	6	0	151

Hours of calm in this stability class: 0
Hours of missing wind measurements in this stability class: 0
Hours of missing stability measurements in all stability classes: 5

Quad Cities Nuclear Station

Period of Record: January - March 2003
Stability Class - Extremely Stable - 296Ft-33Ft Delta-T (F)
Winds Measured at 296 Feet

Wind Speed (in mph)

Wind Direction	1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	3	0	0	0	0	3
NNE	2	0	0	0	0	0	2
NE	3	2	0	0	0	0	5
ENE	1	0	0	0	0	0	1
E	1	1	0	1	0	0	3
ESE	2	1	1	1	0	0	5
SE	0	0	0	1	0	0	1
SSE	0	0	0	1	1	0	2
S	0	2	5	5	2	0	14
SSW	0	2	4	6	0	0	12
SW	1	0	3	0	0	0	4
WSW	0	0	2	0	0	0	2
W	1	1	4	0	0	0	6
WNW	1	0	2	1	0	0	4
NW	0	0	2	0	0	0	2
NNW	1	4	1	0	0	0	6
Variable	0	0	0	0	0	0	0
Total	13	16	24	16	3	0	72

Hours of calm in this stability class: 0
Hours of missing wind measurements in this stability class: 0
Hours of missing stability measurements in all stability classes: 5

Quad Cities Nuclear Station
33 ft. Wind Speed and Direction

January-December, 2003
196Ft-33Ft Delta-T (F)

Number of Observations = 8258
Values are Percent Occurrence

SPEED CLASS	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL	EU	MU	SU	N	SS	MS	ES	TOTAL
	WIND DIRECTION CLASSES																	STABILITY CLASSES							
EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00						
C SU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00					
A N	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				0.00				
L SS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00					0.00			
M MS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00		
ES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00	
																									0.00
EU	0.00	0.01	0.01	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.00	0.01	0.10	0.10							
MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.01	0.00	0.00	0.00	0.02	0.01	0.06		0.06						
1 SU	0.01	0.00	0.07	0.01	0.01	0.00	0.01	0.01	0.02	0.00	0.01	0.07	0.00	0.01	0.01	0.01	0.28			0.28					
- N	0.12	0.21	0.29	0.33	0.13	0.23	0.24	0.30	0.33	0.25	0.27	0.33	0.41	0.36	0.27	0.21	4.27				4.27				
3 SS	0.13	0.18	0.39	0.53	0.52	0.39	0.38	0.40	0.45	0.41	0.59	0.76	0.74	0.57	0.33	0.30	7.07					7.07			
MS	0.21	0.38	0.61	0.44	0.70	1.03	0.70	0.51	0.30	0.39	0.31	0.40	0.59	0.42	0.31	0.29	7.59						7.59		
ES	0.19	0.18	0.17	0.22	0.63	1.34	0.65	0.57	0.35	0.23	0.17	0.18	0.21	0.36	0.12	0.12	5.70							5.70	
																									25.08
EU	0.16	0.25	0.17	0.27	0.23	0.22	0.24	0.94	0.50	0.84	0.57	0.35	0.98	0.33	0.45	0.35	6.84	6.84							
MU	0.06	0.05	0.10	0.08	0.04	0.06	0.10	0.08	0.07	0.15	0.08	0.08	0.12	0.07	0.16	0.06	1.37		1.37						
4 SU	0.17	0.27	0.21	0.23	0.23	0.13	0.19	0.31	0.18	0.25	0.38	0.30	0.42	0.16	0.39	0.15	3.97			3.97					
- N	1.24	0.88	1.55	1.56	1.05	0.92	0.94	0.71	0.98	0.82	1.47	1.51	1.82	2.40	2.13	0.98	20.97				20.97				
7 SS	0.38	0.29	1.04	0.93	0.65	0.93	0.75	0.90	0.94	0.68	1.30	0.93	1.53	1.24	0.87	0.62	13.97					13.97			
MS	0.04	0.12	0.15	0.22	0.11	0.34	0.21	0.13	0.06	0.13	0.10	0.06	0.15	0.11	0.13	0.10	2.14						2.14		
ES	0.00	0.01	0.04	0.00	0.06	0.39	0.01	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.02	0.00	0.58							0.58	
																									49.85
EU	0.27	0.28	0.41	0.22	0.11	0.07	0.15	0.35	0.16	0.47	0.31	0.27	0.50	0.79	0.71	0.42	5.49	5.49							
MU	0.04	0.04	0.07	0.05	0.00	0.05	0.02	0.00	0.00	0.05	0.02	0.06	0.17	0.17	0.17	0.05	0.96		0.96						
8 SU	0.08	0.15	0.19	0.08	0.12	0.01	0.05	0.05	0.01	0.07	0.08	0.21	0.24	0.27	0.23	0.10	1.95			1.95					
- N	0.91	0.51	0.98	1.02	0.68	0.27	0.27	0.07	0.07	0.15	0.53	0.69	0.94	2.26	1.71	0.59	11.65				11.65				
1 SS	0.06	0.04	0.10	0.08	0.07	0.25	0.12	0.15	0.06	0.27	0.27	0.11	0.23	0.23	0.12	0.10	2.25					2.25			
2 MS	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.01	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.04						0.04		
ES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00	
																									22.33
EU	0.02	0.01	0.02	0.07	0.05	0.04	0.00	0.00	0.00	0.00	0.00	0.02	0.01	0.12	0.02	0.01	0.41	0.41							
1 MU	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.05	0.00	0.00	0.08		0.08						
3 SU	0.01	0.00	0.02	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.04	0.06	0.01	0.05	0.22			0.22					
- N	0.16	0.05	0.12	0.28	0.06	0.04	0.04	0.00	0.00	0.00	0.00	0.22	0.40	0.44	0.07	0.05	1.91				1.91				
1 SS	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.05					0.05			
8 MS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00		
ES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00	
																									2.68

Quad Cities Nuclear Station
33 ft. Wind Speed and Direction

January-December, 2003
196Ft-33Ft Delta-T (F)

SPEED CLASS	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL	EU	MU	SU	N	SS	MS	ES	TOTAL
	WIND DIRECTION CLASSES																	STABILITY CLASSES							
EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
1 MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00						
9 SU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00					
- N	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.01	0.00	0.00	0.06				0.06				
2 SS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00					0.00			
4 MS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00		
ES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00	
																									0.06
EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
G MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00						
T SU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00					
N	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				0.00				
2 SS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00					0.00			
4 MS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00		
ES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00	
																									0.00
TOT	4.25	3.90	6.73	6.62	5.50	6.74	5.09	5.50	4.52	5.17	6.49	6.62	9.55	10.46	8.27	4.58	100.00	12.84	2.47	6.42	38.87	23.35	9.77	6.28	100.00

Wind Direction by Stability

N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL	-STABILITY CLASSES-
0.45	0.56	0.62	0.56	0.41	0.33	0.39	1.30	0.65	1.31	0.88	0.68	1.49	1.24	1.19	0.80	12.84	Extremely Unstable
0.10	0.08	0.19	0.13	0.04	0.11	0.12	0.08	0.08	0.19	0.12	0.16	0.29	0.29	0.35	0.12	2.47	Moderately Unstable
0.28	0.41	0.50	0.33	0.38	0.15	0.25	0.38	0.22	0.33	0.47	0.59	0.70	0.50	0.64	0.30	6.42	Slightly Unstable
2.42	1.65	2.94	3.18	1.93	1.45	1.49	1.09	1.38	1.22	2.26	2.75	3.62	5.47	4.18	1.83	38.87	Neutral
0.57	0.51	1.53	1.55	1.25	1.61	1.25	1.44	1.45	1.36	2.16	1.80	2.49	2.05	1.32	1.02	23.35	Slightly Stable
0.24	0.50	0.75	0.65	0.81	1.37	0.92	0.64	0.38	0.52	0.41	0.46	0.74	0.54	0.45	0.39	9.77	Moderately Stable
0.19	0.19	0.21	0.22	0.69	1.73	0.67	0.57	0.35	0.24	0.18	0.18	0.22	0.38	0.15	0.12	6.28	Extremely Stable

Wind Direction by Wind Speed

N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL	-WIND SPEED CLASSES-
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	C A L M
0.67	0.96	1.54	1.53	2.02	2.99	1.99	1.79	1.47	1.28	1.37	1.78	1.95	1.73	1.07	0.96	25.08	< 3.5 mph
2.03	1.88	3.25	3.29	2.37	2.99	2.45	3.09	2.74	2.88	3.90	3.25	5.03	4.31	4.15	2.25	49.85	3.6 - 7.5 mph
1.36	1.01	1.76	1.45	0.98	0.65	0.62	0.62	0.31	1.01	1.22	1.33	2.08	3.73	2.94	1.26	22.33	7.6 - 12.5 mph
0.19	0.06	0.19	0.35	0.12	0.11	0.04	0.00	0.00	0.00	0.00	0.27	0.45	0.68	0.11	0.11	2.68	12.6 - 18.5 mph
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.01	0.00	0.00	0.06	18.6 - 24.5 mph
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	> 24.5 mph

Quad Cities Nuclear Station
296 ft. Wind Speed and Direction

January-December, 2003
296Ft-33Ft Delta-T (F)

Number of Observations = 8565
Values are Percent Occurrence

SPEED CLASS	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL	EU	MU	SU	N	SS	MS	ES	TOTAL
	WIND DIRECTION CLASSES																	STABILITY CLASSES							
EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00						
C SU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00					
A N	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				0.00				
L SS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00					0.00			
M MS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00		
ES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00	
																									0.00
EU	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01							
MU	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04		0.04						
1 SU	0.01	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.04	0.04	0.00	0.00	0.02	0.01	0.01	0.18			0.18					
- N	0.02	0.06	0.06	0.09	0.13	0.05	0.07	0.05	0.05	0.06	0.09	0.14	0.02	0.04	0.05	0.04	1.00				1.00				
3 SS	0.04	0.04	0.02	0.05	0.07	0.02	0.00	0.06	0.04	0.02	0.05	0.00	0.04	0.01	0.05	0.02	0.51					0.51			
MS	0.00	0.00	0.02	0.02	0.04	0.02	0.01	0.04	0.07	0.02	0.01	0.04	0.02	0.04	0.00	0.04	0.39						0.39		
ES	0.00	0.04	0.04	0.02	0.05	0.05	0.02	0.02	0.00	0.04	0.02	0.00	0.01	0.02	0.00	0.02	0.35							0.35	
																									2.48
EU	0.01	0.01	0.02	0.01	0.06	0.04	0.02	0.07	0.04	0.09	0.06	0.02	0.14	0.06	0.01	0.04	0.70	0.70							
MU	0.06	0.04	0.04	0.04	0.05	0.09	0.04	0.05	0.08	0.19	0.12	0.07	0.12	0.11	0.13	0.08	1.27		1.27						
4 SU	0.11	0.07	0.13	0.13	0.16	0.12	0.05	0.06	0.16	0.18	0.19	0.12	0.23	0.23	0.16	0.09	2.18			2.18					
- N	0.35	0.36	0.40	0.43	0.39	0.23	0.16	0.26	0.28	0.27	0.34	0.25	0.41	0.42	0.32	0.44	5.30				5.30				
7 SS	0.14	0.20	0.15	0.11	0.25	0.08	0.05	0.21	0.11	0.21	0.13	0.08	0.15	0.21	0.18	0.07	2.31					2.31			
MS	0.12	0.14	0.09	0.11	0.11	0.04	0.05	0.08	0.08	0.13	0.15	0.08	0.14	0.08	0.08	0.12	1.59						1.59		
ES	0.09	0.05	0.07	0.02	0.20	0.05	0.06	0.04	0.11	0.09	0.07	0.06	0.06	0.02	0.02	0.05	1.05							1.05	
																									14.41
EU	0.12	0.27	0.05	0.05	0.05	0.02	0.16	0.34	0.23	0.35	0.09	0.21	0.49	0.22	0.18	0.13	2.95	2.95							
MU	0.18	0.14	0.23	0.13	0.12	0.09	0.09	0.23	0.09	0.16	0.07	0.11	0.19	0.12	0.22	0.22	2.39		2.39						
8 SU	0.11	0.16	0.14	0.15	0.14	0.18	0.07	0.13	0.06	0.15	0.14	0.13	0.12	0.05	0.16	0.09	1.97			1.97					
- N	0.56	0.68	1.09	1.04	0.50	0.46	0.46	0.49	0.46	0.42	0.56	0.43	0.79	0.92	1.00	0.69	10.54				10.54				
1 SS	0.28	0.39	0.48	0.75	0.82	0.28	0.35	0.43	0.36	0.50	0.64	0.48	0.55	0.57	0.47	0.43	7.78					7.78			
2 MS	0.18	0.26	0.26	0.25	0.51	0.36	0.47	0.65	0.40	0.47	0.25	0.22	0.23	0.28	0.29	0.13	5.20						5.20		
ES	0.07	0.02	0.08	0.04	0.07	0.12	0.09	0.33	0.28	0.27	0.16	0.08	0.16	0.11	0.11	0.04	2.02							2.02	
																									32.85
EU	0.06	0.07	0.22	0.01	0.04	0.00	0.11	0.41	0.22	0.57	0.19	0.18	0.25	0.30	0.34	0.15	3.11	3.11							
1 MU	0.04	0.05	0.09	0.05	0.00	0.02	0.05	0.12	0.11	0.12	0.04	0.12	0.09	0.18	0.23	0.12	1.40		1.40						
3 SU	0.05	0.07	0.14	0.05	0.02	0.02	0.06	0.13	0.09	0.09	0.08	0.14	0.21	0.23	0.26	0.07	1.72			1.72					
- N	0.54	0.57	1.00	1.11	0.82	0.33	0.34	0.43	0.75	0.49	0.65	0.75	1.11	2.09	2.32	0.77	14.07				14.07				
1 SS	0.37	0.18	0.61	0.57	0.19	0.88	0.44	0.68	0.83	1.10	0.54	0.65	1.12	0.89	0.53	0.54	10.10					10.10			
8 MS	0.09	0.08	0.11	0.15	0.07	0.50	0.57	0.70	0.75	0.47	0.06	0.12	0.30	0.21	0.16	0.14	4.48						4.48		
ES	0.02	0.00	0.00	0.01	0.01	0.07	0.27	0.11	0.30	0.47	0.12	0.00	0.04	0.02	0.06	0.00	1.49							1.49	
																									36.37

Quad Cities Nuclear Station
296 ft. Wind Speed and Direction

January-December, 2003
296Ft-33Ft Delta-T (F)

SPEED CLASS	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL	EU	MU	SU	N	SS	MS	ES	TOTAL
	WIND DIRECTION CLASSES																	STABILITY CLASSES							
EU	0.02	0.00	0.04	0.04	0.02	0.02	0.00	0.07	0.06	0.16	0.02	0.01	0.08	0.15	0.07	0.02	0.79	0.79							
1 MU	0.00	0.00	0.02	0.01	0.02	0.05	0.00	0.05	0.07	0.06	0.04	0.02	0.06	0.16	0.04	0.01	0.61		0.61						
9 SU	0.00	0.00	0.02	0.01	0.00	0.04	0.01	0.02	0.04	0.08	0.04	0.08	0.09	0.26	0.07	0.01	0.77			0.77					
- N	0.21	0.11	0.56	0.37	0.16	0.13	0.16	0.18	0.13	0.35	0.19	0.23	0.48	1.19	0.86	0.40	5.71				5.71				
2 SS	0.02	0.04	0.01	0.02	0.00	0.35	0.16	0.37	0.41	0.50	0.22	0.13	0.15	0.20	0.05	0.08	2.72					2.72			
4 MS	0.00	0.00	0.01	0.00	0.00	0.01	0.04	0.04	0.08	0.04	0.00	0.00	0.00	0.00	0.01	0.01	0.23						0.23		
ES	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.01	0.02	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.07							0.07	
																									10.90
EU	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.04	0.01	0.06	0.00	0.00	0.00	0.02	0.02	0.00	0.16	0.16							
G MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.01	0.00	0.00	0.00	0.07	0.04	0.00	0.15		0.15						
T SU	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.05	0.07	0.02	0.01	0.18			0.18					
N	0.04	0.00	0.13	0.16	0.01	0.07	0.05	0.00	0.00	0.12	0.04	0.14	0.32	0.74	0.21	0.12	2.12				2.12				
2 SS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.06	0.12	0.06	0.04	0.05	0.01	0.00	0.00	0.37					0.37			
4 MS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00		
ES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00	
																									2.99
TOT	3.89	4.09	6.35	6.01	5.07	4.78	4.51	6.96	6.83	8.45	5.45	5.11	8.27	10.32	8.72	5.20	100.00	7.73	5.86	6.99	38.75	23.79	11.89	4.99	100.00

Wind Direction by Stability

N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL	-STABILITY CLASSES-
0.21	0.35	0.34	0.12	0.16	0.08	0.29	0.92	0.56	1.24	0.36	0.42	0.96	0.76	0.62	0.34	7.73	Extremely Unstable
0.27	0.22	0.39	0.23	0.20	0.26	0.19	0.48	0.35	0.54	0.26	0.32	0.46	0.63	0.65	0.43	5.86	Moderately Unstable
0.27	0.33	0.44	0.34	0.33	0.35	0.19	0.35	0.37	0.54	0.48	0.47	0.70	0.86	0.69	0.29	6.99	Slightly Unstable
1.72	1.77	3.23	3.21	2.01	1.26	1.24	1.40	1.66	1.70	1.87	1.94	3.13	5.39	4.76	2.45	38.75	Neutral
0.85	0.83	1.27	1.49	1.32	1.61	1.00	1.80	1.80	2.45	1.63	1.38	2.05	1.89	1.26	1.14	23.79	Slightly Stable
0.39	0.48	0.49	0.53	0.72	0.93	1.13	1.51	1.38	1.12	0.47	0.46	0.70	0.61	0.55	0.43	11.89	Moderately Stable
0.19	0.11	0.19	0.09	0.33	0.28	0.47	0.50	0.71	0.86	0.39	0.14	0.27	0.18	0.19	0.11	4.99	Extremely Stable

Wind Direction by Wind Speed

N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL	-WIND SPEED CLASSES-
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	C A L M
0.07	0.15	0.14	0.21	0.29	0.14	0.12	0.16	0.18	0.18	0.21	0.18	0.09	0.13	0.11	0.13	2.48	< 3.5 mph
0.88	0.86	0.90	0.84	1.20	0.64	0.42	0.76	0.85	1.16	1.05	0.68	1.25	1.13	0.90	0.89	14.41	3.6 - 7.5 mph
1.48	1.91	2.32	2.39	2.21	1.51	1.69	2.60	1.88	2.32	1.91	1.66	2.53	2.27	2.43	1.73	32.85	7.6 - 12.5 mph
1.17	1.02	2.17	1.95	1.14	1.82	1.83	2.57	3.05	3.30	1.67	1.95	3.12	3.92	3.90	1.79	36.37	12.6 - 18.5 mph
0.26	0.14	0.67	0.46	0.21	0.60	0.40	0.74	0.81	1.19	0.51	0.48	0.86	1.96	1.10	0.54	10.90	18.6 - 24.5 mph
0.04	0.00	0.15	0.16	0.01	0.07	0.05	0.13	0.07	0.30	0.09	0.18	0.41	0.91	0.29	0.13	2.99	> 24.5 mph

Quad Cities Nuclear Station
33 ft. Wind Speed and Direction

April-June, 2003
196Ft-33Ft Delta-T (F)

Number of Observations = 2089
Values are Percent Occurrence

SPEED CLASS	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL	EU	MU	SU	N	SS	MS	ES	TOTAL
	WIND DIRECTION CLASSES																	STABILITY CLASSES							
EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00						
C SU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00					
A N	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				0.00				
L SS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00					0.00			
M MS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00		
ES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00	
																									0.00
EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.10		0.10						
1 SU	0.05	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.19			0.19					
- N	0.00	0.19	0.38	0.24	0.10	0.14	0.24	0.14	0.10	0.24	0.29	0.48	0.24	0.29	0.05	0.19	3.30				3.30				
3 SS	0.29	0.38	0.72	0.81	0.81	0.29	0.24	0.34	0.24	0.38	0.29	1.05	0.72	0.43	0.34	0.43	7.75					7.75			
MS	0.29	0.62	1.24	0.53	0.43	0.86	0.91	0.62	0.34	0.24	0.34	0.48	0.34	0.29	0.34	0.62	8.47						8.47		
ES	0.34	0.43	0.43	0.19	0.48	0.77	0.72	0.77	0.48	0.38	0.34	0.34	0.29	0.57	0.19	0.29	6.99							6.99	
																									26.81
EU	0.24	0.77	0.57	0.57	0.34	0.38	0.19	0.72	0.24	1.20	0.57	0.24	0.86	0.10	0.14	0.29	7.42	7.42							
MU	0.10	0.19	0.19	0.24	0.10	0.00	0.10	0.05	0.10	0.24	0.14	0.10	0.00	0.14	0.24	0.10	2.01		2.01						
4 SU	0.24	0.43	0.43	0.53	0.43	0.24	0.05	0.24	0.34	0.14	0.24	0.67	0.38	0.10	0.24	0.05	4.74			4.74					
- N	0.96	1.24	2.58	2.25	1.63	0.86	0.57	0.48	0.43	0.29	0.77	1.01	0.77	0.53	0.62	0.29	15.27				15.27				
7 SS	0.19	0.43	1.44	2.25	0.81	1.01	0.38	0.77	0.67	0.67	0.91	1.05	0.62	0.53	0.43	0.53	12.69					12.69			
MS	0.00	0.19	0.29	0.43	0.05	0.34	0.24	0.29	0.10	0.34	0.24	0.10	0.14	0.00	0.14	0.29	3.16						3.16		
ES	0.00	0.05	0.05	0.00	0.00	0.38	0.05	0.00	0.00	0.00	0.00	0.00	0.05	0.05	0.05	0.00	0.67							0.67	
																									45.96
EU	0.43	0.77	0.86	0.53	0.38	0.14	0.34	0.19	0.05	1.20	0.53	0.34	0.10	0.29	0.43	0.62	7.18	7.18							
MU	0.05	0.05	0.10	0.10	0.00	0.14	0.05	0.00	0.00	0.00	0.05	0.10	0.00	0.10	0.24	0.05	1.01		1.01						
8 SU	0.10	0.24	0.38	0.24	0.14	0.05	0.00	0.00	0.00	0.19	0.05	0.24	0.14	0.10	0.19	0.10	2.15			2.15					
- N	0.53	0.43	1.72	1.87	0.96	0.67	0.19	0.05	0.14	0.14	0.34	0.91	0.53	0.48	0.72	0.57	10.24				10.24				
1 SS	0.10	0.05	0.14	0.29	0.29	0.77	0.05	0.05	0.10	0.10	0.29	0.05	0.24	0.10	0.29	0.10	2.97					2.97			
2 MS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00		
ES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00	
																									23.55
EU	0.10	0.00	0.00	0.24	0.19	0.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19	0.05	0.05	0.96	0.96							
1 MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00						
3 SU	0.00	0.00	0.05	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10			0.10					
- N	0.19	0.00	0.05	0.57	0.24	0.14	0.05	0.00	0.00	0.00	0.00	0.62	0.34	0.10	0.00	0.14	2.44				2.44				
1 SS	0.00	0.00	0.00	0.00	0.00	0.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.19					0.19			
8 MS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00		
ES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00	
																									3.69

Quad Cities Nuclear Station
33 ft. Wind Speed and Direction

April-June. 2003
196Ft-33Ft Delta-T (F)

SPEED	WIND DIRECTION CLASSES																	STABILITY CLASSES							
CLASS	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL	EU	MU	SU	N	SS	MS	ES	TOTAL
EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
1 MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00						
9 SU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00					
- N	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				0.00				
2 SS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00					0.00			
4 MS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00		
ES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00	
																									0.00
EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
G MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00						
T SU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00					
N	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				0.00				
2 SS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00					0.00			
4 MS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00		
ES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00	
																									0.00
TOT	4.16	6.46	11.68	11.87	7.42	7.47	4.36	4.69	3.40	5.74	5.46	7.75	5.74	4.40	4.69	4.69	100.00	15.56	3.11	7.18	31.26	23.60	11.63	7.66	100.00

Wind Direction by Stability

N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL	-STABILITY CLASSES-
0.77	1.53	1.44	1.34	0.91	0.67	0.53	0.91	0.29	2.39	1.10	0.57	0.96	0.57	0.62	0.96	15.56	Extremely Unstable
0.14	0.24	0.29	0.34	0.10	0.14	0.14	0.05	0.14	0.24	0.24	0.19	0.00	0.24	0.48	0.14	3.11	Moderately Unstable
0.38	0.67	0.91	0.77	0.62	0.29	0.05	0.24	0.38	0.34	0.34	0.91	0.53	0.19	0.43	0.14	7.18	Slightly Unstable
1.68	1.87	4.74	4.93	2.92	1.82	1.05	0.67	0.67	0.67	1.39	3.02	1.87	1.39	1.39	1.20	31.26	Neutral
0.57	0.86	2.30	3.35	1.91	2.20	0.67	1.15	1.01	1.15	1.48	2.15	1.58	1.10	1.05	1.05	23.60	Slightly Stable
0.29	0.81	1.53	0.96	0.48	1.20	1.15	0.91	0.43	0.57	0.57	0.57	0.48	0.29	0.48	0.91	11.63	Moderately Stable
0.34	0.48	0.48	0.19	0.48	1.15	0.77	0.77	0.48	0.38	0.34	0.34	0.34	0.62	0.24	0.29	7.66	Extremely Stable

Wind Direction by Wind Speed

N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL	-WIND SPEED CLASSES-
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	C A L M
0.96	1.63	2.82	1.77	1.82	2.06	2.11	1.87	1.24	1.24	1.34	2.35	1.58	1.58	0.91	1.53	26.81	< 3.5 mph
1.72	3.30	5.55	6.27	3.35	3.21	1.58	2.54	1.87	2.87	2.87	3.16	2.82	1.44	1.87	1.53	45.96	3.6 - 7.5 mph
1.20	1.53	3.21	3.02	1.77	1.77	0.62	0.29	0.29	1.63	1.24	1.63	1.01	1.05	1.87	1.44	23.55	7.6 - 12.5 mph
0.29	0.00	0.10	0.81	0.48	0.43	0.05	0.00	0.00	0.00	0.00	0.62	0.34	0.34	0.05	0.19	3.69	12.6 - 18.5 mph
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	18.6 - 24.5 mph
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	> 24.5 mph

Quad Cities Nuclear Station
296 ft. Wind Speed and Direction

April-June, 2003
296Ft-33Ft Delta-T (F)

Number of Observations = 2119
Values are Percent Occurrence

SPEED CLASS	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL	EU	MU	SU	N	SS	MS	ES	TOTAL
EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00						
C SU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00					
A N	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				0.00				
L SS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00					0.00			
M MS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00		
ES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00	
																									0.00
EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00						
1 SU	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.00	0.09	0.00	0.00	0.09	0.00	0.00	0.33			0.33					
- N	0.00	0.09	0.00	0.09	0.05	0.00	0.00	0.05	0.05	0.00	0.14	0.09	0.00	0.00	0.05	0.00	0.61				0.61				
3 SS	0.05	0.09	0.00	0.05	0.09	0.00	0.00	0.00	0.09	0.09	0.09	0.00	0.00	0.05	0.00	0.05	0.66					0.66			
MS	0.00	0.00	0.00	0.05	0.09	0.00	0.00	0.09	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.38						0.38		
ES	0.00	0.00	0.00	0.05	0.05	0.00	0.05	0.05	0.00	0.05	0.00	0.00	0.00	0.05	0.00	0.00	0.28							0.28	
																									2.27
EU	0.05	0.05	0.09	0.00	0.05	0.09	0.05	0.09	0.09	0.14	0.14	0.00	0.05	0.00	0.00	0.05	0.94	0.94							
MU	0.19	0.09	0.09	0.09	0.09	0.14	0.05	0.14	0.00	0.19	0.19	0.19	0.19	0.14	0.14	0.24	2.17		2.17						
4 SU	0.14	0.24	0.28	0.14	0.19	0.14	0.14	0.00	0.24	0.05	0.14	0.09	0.33	0.24	0.14	0.09	2.60			2.60					
- N	0.24	0.47	0.66	0.71	0.61	0.33	0.09	0.14	0.00	0.24	0.28	0.09	0.19	0.19	0.19	0.24	4.67				4.67				
7 SS	0.14	0.38	0.09	0.14	0.24	0.09	0.00	0.05	0.14	0.05	0.05	0.05	0.09	0.14	0.09	0.00	1.75					1.75			
MS	0.05	0.09	0.00	0.09	0.14	0.05	0.09	0.09	0.00	0.14	0.05	0.00	0.05	0.09	0.00	0.14	1.09						1.09		
ES	0.09	0.05	0.09	0.05	0.24	0.09	0.09	0.05	0.24	0.05	0.14	0.14	0.05	0.00	0.05	0.00	1.42							1.42	
																									14.63
EU	0.09	0.94	0.19	0.09	0.19	0.05	0.42	0.28	0.19	0.38	0.05	0.09	0.57	0.05	0.19	0.28	4.06	4.06							
MU	0.05	0.33	0.61	0.42	0.28	0.09	0.05	0.09	0.05	0.14	0.00	0.05	0.00	0.05	0.14	0.09	2.45		2.45						
8 SU	0.00	0.24	0.38	0.33	0.28	0.28	0.00	0.05	0.05	0.09	0.14	0.09	0.00	0.00	0.14	0.05	2.12			2.12					
- N	0.33	1.32	2.50	2.12	0.71	0.47	0.42	0.38	0.19	0.19	0.24	0.28	0.47	0.24	0.14	0.05	10.05				10.05				
1 SS	0.33	0.61	0.90	1.60	1.51	0.57	0.19	0.33	0.38	0.47	0.19	0.33	0.52	0.19	0.19	0.42	8.73					8.73			
2 MS	0.28	0.14	0.38	0.28	0.90	0.38	0.47	0.47	0.33	0.14	0.05	0.24	0.24	0.14	0.28	0.14	4.86						4.86		
ES	0.05	0.00	0.09	0.05	0.05	0.24	0.19	0.19	0.14	0.33	0.14	0.09	0.19	0.19	0.09	0.00	2.03							2.03	
																									34.31
EU	0.14	0.28	0.47	0.05	0.14	0.00	0.14	0.19	0.09	1.42	0.19	0.38	0.05	0.09	0.28	0.33	4.25	4.25							
1 MU	0.14	0.09	0.14	0.09	0.00	0.09	0.00	0.28	0.09	0.09	0.09	0.19	0.05	0.05	0.09	0.09	1.60		1.60						
3 SU	0.09	0.00	0.14	0.14	0.05	0.05	0.05	0.00	0.19	0.05	0.00	0.24	0.14	0.00	0.14	0.05	1.32			1.32					
- N	0.28	0.61	1.42	2.08	1.23	0.52	0.33	0.19	0.42	0.28	0.14	1.09	0.57	0.42	0.61	0.38	10.57				10.57				
1 SS	0.33	0.33	0.61	1.27	0.52	1.42	0.19	0.38	0.66	0.80	0.33	0.66	0.85	0.33	0.24	0.57	9.49					9.49			
8 MS	0.28	0.19	0.24	0.33	0.09	0.47	0.24	0.90	0.80	0.66	0.09	0.24	0.42	0.19	0.28	0.24	5.66						5.66		
ES	0.00	0.00	0.00	0.05	0.00	0.05	0.24	0.14	0.19	0.24	0.14	0.00	0.05	0.05	0.24	0.00	1.37							1.37	
																									34.26

Quad Cities Nuclear Station
296 ft. Wind Speed and Direction

April-June, 2003
296Ft-33Ft Delta-T (F)

SPEED CLASS	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL	EU	MU	SU	N	SS	MS	ES	TOTAL
	WIND DIRECTION CLASSES																	STABILITY CLASSES							
EU	0.09	0.00	0.14	0.14	0.09	0.09	0.00	0.09	0.05	0.33	0.00	0.00	0.05	0.00	0.05	0.09	1.23	1.23							
1 MU	0.00	0.00	0.00	0.05	0.09	0.19	0.00	0.00	0.05	0.05	0.14	0.05	0.09	0.14	0.14	0.05	1.04		1.04						
9 SU	0.00	0.00	0.00	0.00	0.00	0.14	0.00	0.00	0.05	0.09	0.05	0.05	0.05	0.14	0.09	0.05	0.71			0.71					
- N	0.24	0.05	0.47	0.76	0.38	0.42	0.14	0.24	0.09	0.19	0.14	0.14	0.19	0.52	0.66	0.19	4.81				4.81				
2 SS	0.05	0.00	0.00	0.05	0.00	0.76	0.00	0.24	0.61	0.94	0.05	0.00	0.00	0.00	0.00	0.00	2.69					2.69			
4 MS	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.05	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19						0.19		
ES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00	
																									10.67
EU	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.05	0.24	0.00	0.00	0.00	0.09	0.09	0.00	0.52	0.52							
G MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.09	0.09	0.00	0.24		0.24						
T SU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05			0.05					
N	0.05	0.00	0.24	0.33	0.05	0.28	0.05	0.00	0.00	0.14	0.00	0.42	0.38	0.47	0.14	0.14	2.69				2.69				
2 SS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.00	0.14	0.05	0.00	0.05	0.00	0.00	0.38					0.38			
4 MS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00		
ES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00	
																									3.87
TOT	3.78	6.75	10.34	11.70	8.40	7.50	3.68	5.24	5.95	8.31	3.63	5.33	5.80	4.48	5.00	4.11	100.00	11.00	7.50	7.13	33.41	23.69	12.18	5.10	100.00

Wind Direction by Stability

N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL	-STABILITY CLASSES-
0.38	1.27	0.94	0.28	0.47	0.24	0.61	0.66	0.47	2.50	0.38	0.47	0.71	0.24	0.61	0.76	11.00	Extremely Unstable
0.38	0.52	0.85	0.66	0.47	0.52	0.09	0.52	0.19	0.52	0.42	0.47	0.33	0.47	0.61	0.47	7.50	Moderately Unstable
0.24	0.52	0.80	0.61	0.52	0.61	0.19	0.05	0.61	0.28	0.42	0.47	0.52	0.47	0.52	0.28	7.13	Slightly Unstable
1.13	2.55	5.29	6.09	3.02	2.03	1.04	0.99	0.76	1.04	0.94	2.12	1.79	1.84	1.79	0.99	33.41	Neutral
0.90	1.42	1.60	3.11	2.36	2.83	0.38	0.99	2.03	2.36	0.85	1.09	1.46	0.76	0.52	1.04	23.69	Slightly Stable
0.61	0.42	0.66	0.76	1.23	0.90	0.80	1.60	1.32	0.94	0.19	0.47	0.71	0.42	0.57	0.57	12.18	Moderately Stable
0.14	0.05	0.19	0.19	0.33	0.38	0.57	0.42	0.57	0.66	0.42	0.24	0.28	0.28	0.38	0.00	5.10	Extremely Stable

Wind Direction by Wind Speed

N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL	-WIND SPEED CLASSES-
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	C A L M
0.05	0.24	0.00	0.24	0.28	0.00	0.05	0.19	0.33	0.14	0.33	0.09	0.00	0.19	0.05	0.09	2.27	< 3.5 mph
0.90	1.37	1.32	1.23	1.56	0.94	0.52	0.57	0.71	0.85	0.99	0.57	0.94	0.80	0.61	0.76	14.63	3.6 - 7.5 mph
1.13	3.59	5.05	4.91	3.92	2.08	1.75	1.79	1.32	1.75	0.80	1.18	1.98	0.85	1.18	1.04	34.31	7.6 - 12.5 mph
1.27	1.51	3.02	4.01	2.03	2.60	1.18	2.08	2.45	3.54	0.99	2.78	2.12	1.13	1.89	1.65	34.26	12.6 - 18.5 mph
0.38	0.05	0.66	0.99	0.57	1.60	0.14	0.61	0.94	1.60	0.38	0.24	0.38	0.80	0.94	0.38	10.67	18.6 - 24.5 mph
0.05	0.00	0.28	0.33	0.05	0.28	0.05	0.00	0.19	0.42	0.14	0.47	0.38	0.71	0.33	0.19	3.87	> 24.5 mph

Quad Cities Nuclear Station

Period of Record: April - June 2003
Stability Class - Extremely Unstable - 196Ft-33Ft Delta-T (F)
Winds Measured at 33 Feet

Wind Speed (in mph)

Wind Direction	1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	5	9	2	0	0	16
NNE	0	16	16	0	0	0	32
NE	0	12	18	0	0	0	30
ENE	0	12	11	5	0	0	28
E	0	7	8	4	0	0	19
ESE	0	8	3	3	0	0	14
SE	0	4	7	0	0	0	11
SSE	0	15	4	0	0	0	19
S	0	5	1	0	0	0	6
SSW	0	25	25	0	0	0	50
SW	0	12	11	0	0	0	23
WSW	0	5	7	0	0	0	12
W	0	18	2	0	0	0	20
WNW	0	2	6	4	0	0	12
NW	0	3	9	1	0	0	13
NNW	0	6	13	1	0	0	20
Variable	0	0	0	0	0	0	0
Total	0	155	150	20	0	0	325

Hours of calm in this stability class: 0
Hours of missing wind measurements in this stability class: 0
Hours of missing stability measurements in all stability classes: 0

Quad Cities Nuclear Station

Period of Record: April - June 2003
Stability Class - Moderately Unstable - 196Ft-33Ft Delta-T (F)
Winds Measured at 33 Feet

Wind Speed (in mph)

Wind Direction	1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	2	1	0	0	0	3
NNE	0	4	1	0	0	0	5
NE	0	4	2	0	0	0	6
ENE	0	5	2	0	0	0	7
E	0	2	0	0	0	0	2
ESE	0	0	3	0	0	0	3
SE	0	2	1	0	0	0	3
SSE	0	1	0	0	0	0	1
S	1	2	0	0	0	0	3
SSW	0	5	0	0	0	0	5
SW	1	3	1	0	0	0	5
WSW	0	2	2	0	0	0	4
W	0	0	0	0	0	0	0
WNW	0	3	2	0	0	0	5
NW	0	5	5	0	0	0	10
NNW	0	2	1	0	0	0	3
Variable	0	0	0	0	0	0	0
Total	2	42	21	0	0	0	65

Hours of calm in this stability class: 0
Hours of missing wind measurements in this stability class: 0
Hours of missing stability measurements in all stability classes: 0

Quad Cities Nuclear Station

Period of Record: April - June 2003
Stability Class - Slightly Unstable - 196Ft-33Ft Delta-T (F)
Winds Measured at 33 Feet

Wind Speed (in mph)

Wind Direction	1-3	4-7	8-12	13-18	19-24	> 24	Total
N	1	5	2	0	0	0	8
NNE	0	9	5	0	0	0	14
NE	1	9	8	1	0	0	19
ENE	0	11	5	0	0	0	16
E	0	9	3	1	0	0	13
ESE	0	5	1	0	0	0	6
SE	0	1	0	0	0	0	1
SSE	0	5	0	0	0	0	5
S	1	7	0	0	0	0	8
SSW	0	3	4	0	0	0	7
SW	1	5	1	0	0	0	7
WSW	0	14	5	0	0	0	19
W	0	8	3	0	0	0	11
WNW	0	2	2	0	0	0	4
NW	0	5	4	0	0	0	9
NNW	0	1	2	0	0	0	3
Variable	0	0	0	0	0	0	0
Total	4	99	45	2	0	0	150

Hours of calm in this stability class: 0
Hours of missing wind measurements in this stability class: 0
Hours of missing stability measurements in all stability classes: 0

Quad Cities Nuclear Station

Period of Record: April - June 2003
Stability Class - Neutral - 196Ft-33Ft Delta-T (F)
Winds Measured at 33 Feet

Wind Speed (in mph)

Wind Direction	1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	20	11	4	0	0	35
NNE	4	26	9	0	0	0	39
NE	8	54	36	1	0	0	99
ENE	5	47	39	12	0	0	103
E	2	34	20	5	0	0	61
ESE	3	18	14	3	0	0	38
SE	5	12	4	1	0	0	22
SSE	3	10	1	0	0	0	14
S	2	9	3	0	0	0	14
SSW	5	6	3	0	0	0	14
SW	6	16	7	0	0	0	29
WSW	10	21	19	13	0	0	63
W	5	16	11	7	0	0	39
WNW	6	11	10	2	0	0	29
NW	1	13	15	0	0	0	29
NNW	4	6	12	3	0	0	25
Variable	0	0	0	0	0	0	0
Total	69	319	214	51	0	0	653

Hours of calm in this stability class: 0
Hours of missing wind measurements in this stability class: 0
Hours of missing stability measurements in all stability classes: 0

Quad Cities Nuclear Station

Period of Record: April - June 2003
Stability Class - Slightly Stable - 196Ft-33Ft Delta-T (F)
Winds Measured at 33 Feet

Wind Speed (in mph)

Wind Direction	1-3	4-7	8-12	13-18	19-24	> 24	Total
N	6	4	2	0	0	0	12
NNE	8	9	1	0	0	0	18
NE	15	30	3	0	0	0	48
ENE	17	47	6	0	0	0	70
E	17	17	6	0	0	0	40
ESE	6	21	16	3	0	0	46
SE	5	8	1	0	0	0	14
SSE	7	16	1	0	0	0	24
S	5	14	2	0	0	0	21
SSW	8	14	2	0	0	0	24
SW	6	19	6	0	0	0	31
WSW	22	22	1	0	0	0	45
W	15	13	5	0	0	0	33
WNW	9	11	2	1	0	0	23
NW	7	9	6	0	0	0	22
NNW	9	11	2	0	0	0	22
Variable	0	0	0	0	0	0	0
Total	162	265	62	4	0	0	493

Hours of calm in this stability class: 0
Hours of missing wind measurements in this stability class: 0
Hours of missing stability measurements in all stability classes: 0

Quad Cities Nuclear Station

Period of Record: April - June 2003
Stability Class - Moderately Stable - 196Ft-33Ft Delta-T (F)
Winds Measured at 33 Feet

Wind Speed (in mph)

Wind Direction	1-3	4-7	8-12	13-18	19-24	> 24	Total
N	6	0	0	0	0	0	6
NNE	13	4	0	0	0	0	17
NE	26	6	0	0	0	0	32
ENE	11	9	0	0	0	0	20
E	9	1	0	0	0	0	10
ESE	18	7	0	0	0	0	25
SE	19	5	0	0	0	0	24
SSE	13	6	0	0	0	0	19
S	7	2	0	0	0	0	9
SSW	5	7	0	0	0	0	12
SW	7	5	0	0	0	0	12
WSW	10	2	0	0	0	0	12
W	7	3	0	0	0	0	10
WNW	6	0	0	0	0	0	6
NW	7	3	0	0	0	0	10
NNW	13	6	0	0	0	0	19
Variable	0	0	0	0	0	0	0
Total	177	66	0	0	0	0	243

Hours of calm in this stability class: 0
Hours of missing wind measurements in this stability class: 0
Hours of missing stability measurements in all stability classes: 0

Quad Cities Nuclear Station

Period of Record: April - June 2003
Stability Class - Extremely Stable - 196Ft-33Ft Delta-T (F)
Winds Measured at 33 Feet

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	7	0	0	0	0	0	7
NNE	9	1	0	0	0	0	10
NE	9	1	0	0	0	0	10
ENE	4	0	0	0	0	0	4
E	10	0	0	0	0	0	10
ESE	16	8	0	0	0	0	24
SE	15	1	0	0	0	0	16
SSE	16	0	0	0	0	0	16
S	10	0	0	0	0	0	10
SSW	8	0	0	0	0	0	8
SW	7	0	0	0	0	0	7
WSW	7	0	0	0	0	0	7
W	6	1	0	0	0	0	7
WNW	12	1	0	0	0	0	13
NW	4	1	0	0	0	0	5
NNW	6	0	0	0	0	0	6
Variable	0	0	0	0	0	0	0
Total	146	14	0	0	0	0	160

Hours of calm in this stability class: 0
Hours of missing wind measurements in this stability class: 0
Hours of missing stability measurements in all stability classes: 0

Quad Cities Nuclear Station

Period of Record: April - June 2003
Stability Class - Extremely Unstable - 296Ft-33Ft Delta-T (F)
Winds Measured at 296 Feet

Wind Speed (in mph)

Wind Direction	1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	1	2	3	2	0	8
NNE	0	1	20	6	0	0	27
NE	0	2	4	10	3	1	20
ENE	0	0	2	1	3	0	6
E	0	1	4	3	2	0	10
ESE	0	2	1	0	2	0	5
SE	0	1	9	3	0	0	13
SSE	0	2	6	4	2	0	14
S	0	2	4	2	1	1	10
SSW	0	3	8	30	7	5	53
SW	0	3	1	4	0	0	8
WSW	0	0	2	8	0	0	10
W	0	1	12	1	1	0	15
WNW	0	0	1	2	0	2	5
NW	0	0	4	6	1	2	13
NNW	0	1	6	7	2	0	16
Variable	0	0	0	0	0	0	0
Total	0	20	86	90	26	11	233

Hours of calm in this stability class: 0
Hours of missing wind measurements in this stability class: 0
Hours of missing stability measurements in all stability classes: 65

Quad Cities Nuclear Station

Period of Record: April - June 2003
Stability Class - Moderately Unstable - 296Ft-33Ft Delta-T (F)
Winds Measured at 296 Feet

Wind Speed (in mph)

Wind Direction	1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	4	1	3	0	0	8
NNE	0	2	7	2	0	0	11
NE	0	2	13	3	0	0	18
ENE	0	2	9	2	1	0	14
E	0	2	6	0	2	0	10
ESE	0	3	2	2	4	0	11
SE	0	1	1	0	0	0	2
SSE	0	3	2	6	0	0	11
S	0	0	1	2	1	0	4
SSW	0	4	3	2	1	1	11
SW	0	4	0	2	3	0	9
WSW	0	4	1	4	1	0	10
W	0	4	0	1	2	0	7
WNW	0	3	1	1	3	2	10
NW	0	3	3	2	3	2	13
NNW	0	5	2	2	1	0	10
Variable	0	0	0	0	0	0	0
Total	0	46	52	34	22	5	159

Hours of calm in this stability class: 0
Hours of missing wind measurements in this stability class: 0
Hours of missing stability measurements in all stability classes: 65

Quad Cities Nuclear Station

Period of Record: April - June 2003
Stability Class - Slightly Unstable - 296Ft-33Ft Delta-T (F)
Winds Measured at 296 Feet

Wind Speed (in mph)

Wind Direction	1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	3	0	2	0	0	5
NNE	1	5	5	0	0	0	11
NE	0	6	8	3	0	0	17
ENE	0	3	7	3	0	0	13
E	0	4	6	1	0	0	11
ESE	0	3	6	1	3	0	13
SE	0	3	0	1	0	0	4
SSE	0	0	1	0	0	0	1
S	2	5	1	4	1	0	13
SSW	0	1	2	1	2	0	6
SW	2	3	3	0	1	0	9
WSW	0	2	2	5	1	0	10
W	0	7	0	3	1	0	11
WNW	2	5	0	0	3	0	10
NW	0	3	3	3	2	0	11
NNW	0	2	1	1	1	1	6
Variable	0	0	0	0	0	0	0
Total	7	55	45	28	15	1	151

Hours of calm in this stability class: 0
Hours of missing wind measurements in this stability class: 0
Hours of missing stability measurements in all stability classes: 65

Quad Cities Nuclear Station

Period of Record: April - June 2003
Stability Class - Neutral - 296Ft-33Ft Delta-T (F)
Winds Measured at 296 Feet

Wind Speed (in mph)

Wind Direction	1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	5	7	6	5	1	24
NNE	2	10	28	13	1	0	54
NE	0	14	53	30	10	5	112
ENE	2	15	45	44	16	7	129
E	1	13	15	26	8	1	64
ESE	0	7	10	11	9	6	43
SE	0	2	9	7	3	1	22
SSE	1	3	8	4	5	0	21
S	1	0	4	9	2	0	16
SSW	0	5	4	6	4	3	22
SW	3	6	5	3	3	0	20
WSW	2	2	6	23	3	9	45
W	0	4	10	12	4	8	38
WNW	0	4	5	9	11	10	39
NW	1	4	3	13	14	3	38
NNW	0	5	1	8	4	3	21
Variable	0	0	0	0	0	0	0
Total	13	99	213	224	102	57	708

Hours of calm in this stability class: 0
Hours of missing wind measurements in this stability class: 0
Hours of missing stability measurements in all stability classes: 65

Quad Cities Nuclear Station

Period of Record: April - June 2003
Stability Class - Slightly Stable - 296Ft-33Ft Delta-T (F)
Winds Measured at 296 Feet

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	1	3	7	7	1	0	19
NNE	2	8	13	7	0	0	30
NE	0	2	19	13	0	0	34
ENE	1	3	34	27	1	0	66
E	2	5	32	11	0	0	50
ESE	0	2	12	30	16	0	60
SE	0	0	4	4	0	0	8
SSE	0	1	7	8	5	0	21
S	2	3	8	14	13	3	43
SSW	2	1	10	17	20	0	50
SW	2	1	4	7	1	3	18
WSW	0	1	7	14	0	1	23
W	0	2	11	18	0	0	31
WNW	1	3	4	7	0	1	16
NW	0	2	4	5	0	0	11
NNW	1	0	9	12	0	0	22
Variable	0	0	0	0	0	0	0
Total	14	37	185	201	57	8	502

Hours of calm in this stability class: 0
Hours of missing wind measurements in this stability class: 0
Hours of missing stability measurements in all stability classes: 65

Quad Cities Nuclear Station

Period of Record: April - June 2003
Stability Class - Moderately Stable - 296Ft-33Ft Delta-T (F)
Winds Measured at 296 Feet

Wind Speed (in mph)

Wind Direction	1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	1	6	6	0	0	13
NNE	0	2	3	4	0	0	9
NE	0	0	8	5	1	0	14
ENE	1	2	6	7	0	0	16
E	2	3	19	2	0	0	26
ESE	0	1	8	10	0	0	19
SE	0	2	10	5	0	0	17
SSE	2	2	10	19	1	0	34
S	2	0	7	17	2	0	28
SSW	0	3	3	14	0	0	20
SW	0	1	1	2	0	0	4
WSW	0	0	5	5	0	0	10
W	0	1	5	9	0	0	15
WNW	0	2	3	4	0	0	9
NW	0	0	6	6	0	0	12
NNW	1	3	3	5	0	0	12
Variable	0	0	0	0	0	0	0
Total	8	23	103	120	4	0	258

Hours of calm in this stability class: 0
Hours of missing wind measurements in this stability class: 0
Hours of missing stability measurements in all stability classes: 65

Quad Cities Nuclear Station

Period of Record: April - June 2003
Stability Class - Extremely Stable - 296Ft-33Ft Delta-T (F)
Winds Measured at 296 Feet

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	2	1	0	0	0	3
NNE	0	1	0	0	0	0	1
NE	0	2	2	0	0	0	4
ENE	1	1	1	1	0	0	4
E	1	5	1	0	0	0	7
ESE	0	2	5	1	0	0	8
SE	1	2	4	5	0	0	12
SSE	1	1	4	3	0	0	9
S	0	5	3	4	0	0	12
SSW	1	1	7	5	0	0	14
SW	0	3	3	3	0	0	9
WSW	0	3	2	0	0	0	5
W	0	1	4	1	0	0	6
WNW	1	0	4	1	0	0	6
NW	0	1	2	5	0	0	8
NNW	0	0	0	0	0	0	0
Variable	0	0	0	0	0	0	0
Total	6	30	43	29	0	0	108

Hours of calm in this stability class: 0
Hours of missing wind measurements in this stability class: 0
Hours of missing stability measurements in all stability classes: 65

Quad Cities Nuclear Station
33 ft. Wind Speed and Direction

July-September. 2003
196Ft-33Ft Delta-T (F)

Number of Observations = 1967
Values are Percent Occurrence

SPEED CLASS	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL	EU	MU	SU	N	SS	MS	ES	TOTAL
	WIND DIRECTION CLASSES																	STABILITY CLASSES							
EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00						
C SU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00					
A N	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				0.00				
L SS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00					0.00			
M MS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00		
ES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00	
																									0.00
EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00						
1 SU	0.00	0.00	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10			0.10					
- N	0.05	0.10	0.15	0.36	0.15	0.25	0.15	0.20	0.31	0.25	0.20	0.20	0.61	0.10	0.31	0.10	3.51				3.51				
3 SS	0.15	0.15	0.31	0.86	0.46	0.56	0.25	0.51	0.81	0.81	0.81	1.02	0.97	1.02	0.66	0.56	9.91					9.91			
MS	0.36	0.46	0.92	0.56	1.53	2.03	1.17	0.81	0.46	0.92	0.56	0.41	1.12	0.92	0.71	0.41	13.32						13.32		
ES	0.25	0.15	0.10	0.31	1.07	1.88	1.02	0.66	0.46	0.31	0.05	0.05	0.36	0.41	0.15	0.05	7.27							7.27	
																									34.11
EU	0.05	0.00	0.00	0.05	0.05	0.00	0.15	1.02	0.71	0.71	0.15	0.56	0.92	0.41	0.31	0.25	5.34	5.34							
MU	0.15	0.00	0.10	0.10	0.05	0.15	0.15	0.20	0.05	0.15	0.15	0.10	0.25	0.00	0.15	0.00	1.78		1.78						
4 SU	0.36	0.36	0.25	0.15	0.20	0.10	0.31	0.31	0.20	0.46	0.51	0.20	0.56	0.10	0.31	0.36	4.73			4.73					
- N	1.27	0.86	2.34	1.83	1.37	1.12	1.42	1.12	1.68	1.37	1.68	2.03	1.98	1.73	1.53	0.71	24.05				24.05				
7 SS	0.46	0.15	1.32	0.81	0.97	0.61	1.07	0.76	1.27	0.92	1.73	0.97	2.24	1.37	1.73	1.07	17.44					17.44			
MS	0.00	0.10	0.05	0.31	0.05	0.61	0.41	0.05	0.00	0.10	0.00	0.05	0.20	0.36	0.25	0.05	2.59						2.59		
ES	0.00	0.00	0.05	0.00	0.00	0.05	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.15							0.15	
																									56.08
EU	0.36	0.05	0.00	0.05	0.00	0.00	0.15	0.76	0.00	0.15	0.20	0.05	0.31	0.56	0.20	0.05	2.90	2.90							
MU	0.05	0.00	0.10	0.00	0.00	0.00	0.05	0.00	0.00	0.10	0.00	0.05	0.15	0.05	0.00	0.00	0.56		0.56						
8 SU	0.15	0.05	0.10	0.00	0.05	0.00	0.15	0.10	0.05	0.05	0.10	0.10	0.20	0.46	0.31	0.05	1.93			1.93					
- N	0.36	0.05	0.31	0.15	0.05	0.05	0.15	0.00	0.05	0.05	0.05	0.05	0.41	0.66	0.81	0.25	3.46				3.46				
1 SS	0.05	0.05	0.10	0.00	0.00	0.00	0.05	0.00	0.05	0.20	0.05	0.10	0.10	0.00	0.05	0.05	0.86					0.86			
2 MS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.10						0.10		
ES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00	
																									9.81
EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
1 MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00						
3 SU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00					
- N	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				0.00				
1 SS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00					0.00			
8 MS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00		
ES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00	
																									0.00

Quad Cities Nuclear Station
33 ft. Wind Speed and Direction

July-September, 2003
196Ft-33Ft Delta-T (F)

SPEED CLASS	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL	EU	MU	SU	N	SS	MS	ES	TOTAL
	WIND DIRECTION CLASSES																	STABILITY CLASSES							
EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
1 MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00						
9 SU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00					
- N	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				0.00				
2 SS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00					0.00			
4 MS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00		
ES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00	
																									0.00
EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
G MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00						
T SU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00					
N	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				0.00				
2 SS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00					0.00			
4 MS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00		
ES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00	
																									0.00
TOT	4.07	2.54	6.30	5.54	6.00	7.42	6.66	6.51	6.15	6.61	6.25	5.95	10.37	8.19	7.47	3.97	100.00	8.24	2.34	6.76	31.01	28.22	16.01	7.42	100.00

Wind Direction by Stability

N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL	-STABILITY CLASSES-
0.41	0.05	0.00	0.10	0.05	0.00	0.31	1.78	0.71	0.86	0.36	0.61	1.22	0.97	0.51	0.31	8.24	Extremely Unstable
0.20	0.00	0.20	0.10	0.05	0.15	0.20	0.20	0.05	0.25	0.15	0.15	0.41	0.05	0.15	0.00	2.34	Moderately Unstable
0.51	0.41	0.46	0.15	0.25	0.10	0.46	0.41	0.25	0.51	0.61	0.31	0.76	0.56	0.61	0.41	6.76	Slightly Unstable
1.68	1.02	2.80	2.34	1.58	1.42	1.73	1.32	2.03	1.68	1.93	2.29	3.00	2.49	2.64	1.07	31.01	Neutral
0.66	0.36	1.73	1.68	1.42	1.17	1.37	1.27	2.14	1.93	2.59	2.08	3.30	2.39	2.44	1.68	28.22	Slightly Stable
0.36	0.56	0.97	0.86	1.58	2.64	1.58	0.86	0.51	1.02	0.56	0.46	1.32	1.32	0.97	0.46	16.01	Moderately Stable
0.25	0.15	0.15	0.31	1.07	1.93	1.02	0.66	0.46	0.36	0.05	0.05	0.36	0.41	0.15	0.05	7.42	Extremely Stable

Wind Direction by Wind Speed

N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL	-WIND SPEED CLASSES-
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	C A L M
0.81	0.86	1.58	2.08	3.20	4.73	2.59	2.19	2.03	2.29	1.63	1.68	3.05	2.44	1.83	1.12	34.11	< 3.5 mph
2.29	1.47	4.12	3.25	2.69	2.64	3.51	3.46	3.91	3.76	4.22	3.91	6.15	3.97	4.27	2.44	56.08	3.6 - 7.5 mph
0.97	0.20	0.61	0.20	0.10	0.05	0.56	0.86	0.20	0.56	0.41	0.36	1.17	1.78	1.37	0.41	9.81	7.6 - 12.5 mph
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	12.6 - 18.5 mph
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	18.6 - 24.5 mph
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	> 24.5 mph

Quad Cities Nuclear Station
296 ft. Wind Speed and Direction

July-September, 2003
296Ft-33Ft Delta-T (F)

Number of Observations = 2127
Values are Percent Occurrence

SPEED CLASS	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL	EU	MU	SU	N	SS	MS	ES	TOTAL
	WIND DIRECTION CLASSES																	STABILITY CLASSES							
EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00						
C SU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00					
A N	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				0.00				
L SS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00					0.00			
M MS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00		
ES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00	
																									0.00
EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00						
1 SU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00					
- N	0.00	0.05	0.05	0.09	0.05	0.00	0.05	0.09	0.05	0.05	0.05	0.19	0.05	0.05	0.05	0.05	0.89				0.89				
3 SS	0.05	0.00	0.05	0.00	0.09	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.09	0.05	0.38					0.38			
MS	0.00	0.00	0.05	0.05	0.00	0.05	0.05	0.05	0.09	0.00	0.00	0.09	0.05	0.09	0.00	0.09	0.66						0.66		
ES	0.00	0.05	0.00	0.00	0.09	0.09	0.05	0.05	0.00	0.09	0.00	0.00	0.00	0.00	0.00	0.05	0.47							0.47	
																									2.40
EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.05	0.09	0.05	0.33	0.19	0.00	0.00	0.75	0.75							
MU	0.05	0.05	0.00	0.00	0.09	0.05	0.09	0.00	0.19	0.38	0.14	0.00	0.05	0.14	0.19	0.09	1.50		1.50						
4 SU	0.14	0.05	0.24	0.19	0.28	0.14	0.05	0.19	0.28	0.42	0.28	0.24	0.24	0.52	0.24	0.19	3.67			3.67					
- N	0.42	0.33	0.38	0.61	0.38	0.24	0.24	0.28	0.33	0.24	0.28	0.19	0.52	0.33	0.42	0.24	5.41				5.41				
7 SS	0.33	0.19	0.19	0.14	0.28	0.00	0.00	0.33	0.09	0.24	0.19	0.09	0.38	0.33	0.33	0.14	3.24					3.24			
MS	0.28	0.33	0.28	0.19	0.09	0.00	0.00	0.00	0.14	0.28	0.28	0.19	0.14	0.14	0.19	0.09	2.63						2.63		
ES	0.14	0.09	0.05	0.00	0.47	0.05	0.14	0.05	0.05	0.24	0.14	0.05	0.09	0.09	0.05	0.00	1.69							1.69	
																									18.90
EU	0.28	0.00	0.00	0.00	0.00	0.00	0.09	0.42	0.38	0.42	0.14	0.47	0.61	0.33	0.14	0.14	3.43	3.43							
MU	0.61	0.19	0.19	0.05	0.09	0.14	0.14	0.38	0.24	0.24	0.09	0.24	0.28	0.05	0.19	0.33	3.43		3.43						
8 SU	0.28	0.33	0.19	0.28	0.24	0.33	0.28	0.14	0.09	0.19	0.38	0.28	0.19	0.00	0.00	0.09	3.29			3.29					
- N	0.28	0.56	1.22	0.75	0.38	0.61	0.52	0.28	0.33	0.47	0.38	0.56	0.75	0.61	0.56	0.33	8.60				8.60				
1 SS	0.61	0.56	0.56	0.85	1.13	0.28	0.42	0.33	0.61	0.56	1.32	0.61	0.94	0.56	0.71	0.66	10.72					10.72			
2 MS	0.24	0.61	0.38	0.42	0.42	0.47	0.38	0.94	0.71	0.99	0.56	0.52	0.33	0.56	0.56	0.28	8.37						8.37		
ES	0.00	0.00	0.05	0.05	0.24	0.14	0.14	0.75	0.42	0.24	0.14	0.09	0.28	0.14	0.24	0.09	3.01							3.01	
																									40.86
EU	0.09	0.00	0.00	0.00	0.00	0.00	0.24	0.89	0.52	0.28	0.24	0.14	0.38	0.42	0.19	0.00	3.39	3.39							
1 MU	0.00	0.00	0.05	0.09	0.00	0.00	0.14	0.14	0.05	0.09	0.00	0.09	0.19	0.24	0.24	0.14	1.46		1.46						
3 SU	0.05	0.00	0.14	0.00	0.00	0.00	0.05	0.14	0.00	0.14	0.14	0.14	0.14	0.28	0.24	0.05	1.50			1.50					
- N	0.19	0.00	1.22	0.85	0.19	0.19	0.42	0.38	1.08	0.38	0.33	0.33	0.66	1.22	1.13	0.28	8.84				8.84				
1 SS	0.56	0.14	0.66	0.56	0.00	0.47	0.61	0.75	0.94	1.18	0.61	0.24	0.89	1.41	0.75	0.42	10.20					10.20			
8 MS	0.00	0.05	0.09	0.14	0.09	0.85	1.18	1.46	1.32	0.61	0.09	0.00	0.33	0.38	0.24	0.24	7.05						7.05		
ES	0.00	0.00	0.00	0.00	0.00	0.09	0.24	0.05	0.56	0.33	0.05	0.00	0.00	0.00	0.00	0.00	1.32							1.32	
																									33.76

Quad Cities Nuclear Station
296 ft. Wind Speed and Direction

July-September, 2003
296Ft-33Ft Delta-T (F)

SPEED CLASS	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL	EU	MU	SU	N	SS	MS	ES	TOTAL
	WIND DIRECTION CLASSES																	STABILITY CLASSES							
EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05	0.14	0.00	0.00	0.00	0.09	0.00	0.00	0.33	0.33							
1 MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.09	0.14	0.00	0.00	0.00	0.19	0.00	0.00	0.56		0.56						
9 SU	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.05	0.05	0.00	0.00	0.00	0.28	0.05	0.00	0.47			0.47					
- N	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.09	0.05	0.05	0.05	0.00	0.00	0.42	0.38	0.00	1.13				1.13				
2 SS	0.00	0.00	0.00	0.00	0.00	0.09	0.24	0.09	0.05	0.28	0.19	0.09	0.00	0.14	0.00	0.00	1.18					1.18			
4 MS	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.24						0.24		
ES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00	
																									3.90
EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.09							
G MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09		0.09						
T SU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00					
N	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				0.00				
2 SS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00					0.00			
4 MS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00		
ES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00	
																									0.19
TOT	4.61	3.57	6.02	5.31	4.61	4.28	6.02	8.74	8.74	8.74	6.21	4.89	7.80	9.21	7.19	4.04	100.00	7.99	7.05	8.93	24.87	25.72	18.95	6.49	100.00

Wind Direction by Stability

N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL	-STABILITY CLASSES-
0.38	0.00	0.00	0.00	0.00	0.00	0.33	1.50	0.94	0.89	0.47	0.66	1.32	1.03	0.33	0.14	7.99	Extremely Unstable
0.66	0.24	0.24	0.14	0.19	0.19	0.38	0.75	0.56	0.85	0.24	0.33	0.52	0.61	0.61	0.56	7.05	Moderately Unstable
0.47	0.38	0.56	0.47	0.52	0.47	0.42	0.47	0.42	0.80	0.80	0.66	0.56	1.08	0.52	0.33	8.93	Slightly Unstable
0.89	0.94	2.87	2.30	0.99	1.03	1.32	1.13	1.83	1.18	1.08	1.27	1.97	2.63	2.54	0.89	24.87	Neutral
1.55	0.89	1.46	1.55	1.50	0.85	1.27	1.50	1.69	2.26	2.35	1.03	2.21	2.44	1.88	1.27	25.72	Slightly Stable
0.52	0.99	0.80	0.80	0.61	1.36	1.74	2.49	2.26	1.88	0.94	0.80	0.85	1.18	1.03	0.71	18.95	Moderately Stable
0.14	0.14	0.09	0.05	0.80	0.38	0.56	0.89	1.03	0.89	0.33	0.14	0.38	0.24	0.28	0.14	6.49	Extremely Stable

Wind Direction by Wind Speed

N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL	-WIND SPEED CLASSES-
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	C A L M
0.05	0.09	0.14	0.14	0.24	0.14	0.14	0.19	0.14	0.14	0.09	0.28	0.09	0.14	0.14	0.24	2.40	< 3.5 mph
1.36	1.03	1.13	1.13	1.60	0.47	0.52	0.89	1.08	1.83	1.41	0.80	1.74	1.74	1.41	0.75	18.90	3.6 - 7.5 mph
2.30	2.26	2.59	2.40	2.49	1.97	1.97	3.24	2.77	3.10	3.01	2.77	3.39	2.26	2.40	1.93	40.86	7.6 - 12.5 mph
0.89	0.19	2.16	1.65	0.28	1.60	2.87	3.81	4.47	3.01	1.46	0.94	2.59	3.95	2.77	1.13	33.76	12.6 - 18.5 mph
0.00	0.00	0.00	0.00	0.00	0.09	0.52	0.42	0.28	0.66	0.24	0.09	0.00	1.13	0.47	0.00	3.90	18.6 - 24.5 mph
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19	> 24.5 mph

Quad Cities Nuclear Station

Period of Record: July - September 2003
Stability Class - Extremely Unstable - 196Ft-33Ft Delta-T (F)
Winds Measured at 33 Feet

Wind Speed (in mph)

Wind Direction	1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	1	7	0	0	0	8
NNE	0	0	1	0	0	0	1
NE	0	0	0	0	0	0	0
ENE	0	1	1	0	0	0	2
E	0	1	0	0	0	0	1
ESE	0	0	0	0	0	0	0
SE	0	3	3	0	0	0	6
SSE	0	20	15	0	0	0	35
S	0	14	0	0	0	0	14
SSW	0	14	3	0	0	0	17
SW	0	3	4	0	0	0	7
WSW	0	11	1	0	0	0	12
W	0	18	6	0	0	0	24
WNW	0	8	11	0	0	0	19
NW	0	6	4	0	0	0	10
NNW	0	5	1	0	0	0	6
Variable	0	0	0	0	0	0	0
Total	0	105	57	0	0	0	162

Hours of calm in this stability class: 0
Hours of missing wind measurements in this stability class: 0
Hours of missing stability measurements in all stability classes: 0

Quad Cities Nuclear Station

Period of Record: July - September 2003
Stability Class - Moderately Unstable - 196Ft-33Ft Delta-T (F)
Winds Measured at 33 Feet

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	3	1	0	0	0	4
NNE	0	0	0	0	0	0	0
NE	0	2	2	0	0	0	4
ENE	0	2	0	0	0	0	2
E	0	1	0	0	0	0	1
ESE	0	3	0	0	0	0	3
SE	0	3	1	0	0	0	4
SSE	0	4	0	0	0	0	4
S	0	1	0	0	0	0	1
SSW	0	3	2	0	0	0	5
SW	0	3	0	0	0	0	3
WSW	0	2	1	0	0	0	3
W	0	5	3	0	0	0	8
WNW	0	0	1	0	0	0	1
NW	0	3	0	0	0	0	3
NNW	0	0	0	0	0	0	0
Variable	0	0	0	0	0	0	0
Total	0	35	11	0	0	0	46

Hours of calm in this stability class: 0
Hours of missing wind measurements in this stability class: 0
Hours of missing stability measurements in all stability classes: 0

Quad Cities Nuclear Station

Period of Record: July - September 2003
Stability Class - Slightly Unstable - 196Ft-33Ft Delta-T (F)
Winds Measured at 33 Feet

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	7	3	0	0	0	10
NNE	0	7	1	0	0	0	8
NE	2	5	2	0	0	0	9
ENE	0	3	0	0	0	0	3
E	0	4	1	0	0	0	5
ESE	0	2	0	0	0	0	2
SE	0	6	3	0	0	0	9
SSE	0	6	2	0	0	0	8
S	0	4	1	0	0	0	5
SSW	0	9	1	0	0	0	10
SW	0	10	2	0	0	0	12
WSW	0	4	2	0	0	0	6
W	0	11	4	0	0	0	15
WNW	0	2	9	0	0	0	11
NW	0	6	6	0	0	0	12
NNW	0	7	1	0	0	0	8
Variable	0	0	0	0	0	0	0
Total	2	93	38	0	0	0	133

Hours of calm in this stability class: 0
Hours of missing wind measurements in this stability class: 0
Hours of missing stability measurements in all stability classes: 0

Quad Cities Nuclear Station

Period of Record: July - September 2003
Stability Class - Neutral - 196Ft-33Ft Delta-T (F)
Winds Measured at 33 Feet

Wind Speed (in mph)

Wind Direction	1-3	4-7	8-12	13-18	19-24	> 24	Total
N	1	25	7	0	0	0	33
NNE	2	17	1	0	0	0	20
NE	3	46	6	0	0	0	55
ENE	7	36	3	0	0	0	46
E	3	27	1	0	0	0	31
ESE	5	22	1	0	0	0	28
SE	3	28	3	0	0	0	34
SSE	4	22	0	0	0	0	26
S	6	33	1	0	0	0	40
SSW	5	27	1	0	0	0	33
SW	4	33	1	0	0	0	38
WSW	4	40	1	0	0	0	45
W	12	39	8	0	0	0	59
WNW	2	34	13	0	0	0	49
NW	6	30	16	0	0	0	52
NNW	2	14	5	0	0	0	21
Variable	0	0	0	0	0	0	0
Total	69	473	68	0	0	0	610

Hours of calm in this stability class: 0
Hours of missing wind measurements in this stability class: 0
Hours of missing stability measurements in all stability classes: 0

Quad Cities Nuclear Station

Period of Record: July - September 2003
Stability Class - Slightly Stable - 196Ft-33Ft Delta-T (F)
Winds Measured at 33 Feet

Wind Speed (in mph)

Wind Direction	1-3	4-7	8-12	13-18	19-24	> 24	Total
N	3	9	1	0	0	0	13
NNE	3	3	1	0	0	0	7
NE	6	26	2	0	0	0	34
ENE	17	16	0	0	0	0	33
E	9	19	0	0	0	0	28
ESE	11	12	0	0	0	0	23
SE	5	21	1	0	0	0	27
SSE	10	15	0	0	0	0	25
S	16	25	1	0	0	0	42
SSW	16	18	4	0	0	0	38
SW	16	34	1	0	0	0	51
WSW	20	19	2	0	0	0	41
W	19	44	2	0	0	0	65
WNW	20	27	0	0	0	0	47
NW	13	34	1	0	0	0	48
NNW	11	21	1	0	0	0	33
Variable	0	0	0	0	0	0	0
Total	195	343	17	0	0	0	555

Hours of calm in this stability class: 0
Hours of missing wind measurements in this stability class: 0
Hours of missing stability measurements in all stability classes: 0

Quad Cities Nuclear Station

Period of Record: July - September 2003
Stability Class - Moderately Stable - 196Ft-33Ft Delta-T (F)
Winds Measured at 33 Feet

Wind Speed (in mph)

Wind Direction	1-3	4-7	8-12	13-18	19-24	> 24	Total
N	7	0	0	0	0	0	7
NNE	9	2	0	0	0	0	11
NE	18	1	0	0	0	0	19
ENE	11	6	0	0	0	0	17
E	30	1	0	0	0	0	31
ESE	40	12	0	0	0	0	52
SE	23	8	0	0	0	0	31
SSE	16	1	0	0	0	0	17
S	9	0	1	0	0	0	10
SSW	18	2	0	0	0	0	20
SW	11	0	0	0	0	0	11
WSW	8	1	0	0	0	0	9
W	22	4	0	0	0	0	26
WNW	18	7	1	0	0	0	26
NW	14	5	0	0	0	0	19
NNW	8	1	0	0	0	0	9
Variable	0	0	0	0	0	0	0
Total	262	51	2	0	0	0	315

Hours of calm in this stability class: 0
Hours of missing wind measurements in this stability class: 0
Hours of missing stability measurements in all stability classes: 0

Quad Cities Nuclear Station

Period of Record: July - September 2003
Stability Class - Extremely Stable - 196Ft-33Ft Delta-T (F)
Winds Measured at 33 Feet

Wind Speed (in mph)

Wind Direction	1-3	4-7	8-12	13-18	19-24	> 24	Total
N	5	0	0	0	0	0	5
NNE	3	0	0	0	0	0	3
NE	2	1	0	0	0	0	3
ENE	6	0	0	0	0	0	6
E	21	0	0	0	0	0	21
ESE	37	1	0	0	0	0	38
SE	20	0	0	0	0	0	20
SSE	13	0	0	0	0	0	13
S	9	0	0	0	0	0	9
SSW	6	1	0	0	0	0	7
SW	1	0	0	0	0	0	1
WSW	1	0	0	0	0	0	1
W	7	0	0	0	0	0	7
WNW	8	0	0	0	0	0	8
NW	3	0	0	0	0	0	3
NNW	1	0	0	0	0	0	1
Variable	0	0	0	0	0	0	0
Total	143	3	0	0	0	0	146

Hours of calm in this stability class: 0
Hours of missing wind measurements in this stability class: 0
Hours of missing stability measurements in all stability classes: 0

Quad Cities Nuclear Station

Period of Record: July - September 2003
Stability Class - Extremely Unstable - 296Ft-33Ft Delta-T (F)
Winds Measured at 296 Feet

Wind Speed (in mph)

Wind Direction	1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	0	6	2	0	0	8
NNE	0	0	0	0	0	0	0
NE	0	0	0	0	0	0	0
ENE	0	0	0	0	0	0	0
E	0	0	0	0	0	0	0
ESE	0	0	0	0	0	0	0
SE	0	0	2	5	0	0	7
SSE	0	1	9	19	1	2	32
S	0	0	8	11	1	0	20
SSW	0	1	9	6	3	0	19
SW	0	2	3	5	0	0	10
WSW	0	1	10	3	0	0	14
W	0	7	13	8	0	0	28
WNW	0	4	7	9	2	0	22
NW	0	0	3	4	0	0	7
NNW	0	0	3	0	0	0	3
Variable	0	0	0	0	0	0	0
Total	0	16	73	72	7	2	170

Hours of calm in this stability class: 0
Hours of missing wind measurements in this stability class: 0
Hours of missing stability measurements in all stability classes: 76

Quad Cities Nuclear Station

Period of Record: July - September 2003
Stability Class - Moderately Unstable - 296Ft-33Ft Delta-T (F)
Winds Measured at 296 Feet

Wind Speed (in mph)

Wind Direction	1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	1	13	0	0	0	14
NNE	0	1	4	0	0	0	5
NE	0	0	4	1	0	0	5
ENE	0	0	1	2	0	0	3
E	0	2	2	0	0	0	4
ESE	0	1	3	0	0	0	4
SE	0	2	3	3	0	0	8
SSE	0	0	8	3	3	2	16
S	0	4	5	1	2	0	12
SSW	0	8	5	2	3	0	18
SW	0	3	2	0	0	0	5
WSW	0	0	5	2	0	0	7
W	0	1	6	4	0	0	11
WNW	0	3	1	5	4	0	13
NW	0	4	4	5	0	0	13
NNW	0	2	7	3	0	0	12
Variable	0	0	0	0	0	0	0
Total	0	32	73	31	12	2	150

Hours of calm in this stability class: 0
Hours of missing wind measurements in this stability class: 0
Hours of missing stability measurements in all stability classes: 76

Quad Cities Nuclear Station

Period of Record: July - September 2003
Stability Class - Slightly Unstable - 296Ft-33Ft Delta-T (F)
Winds Measured at 296 Feet

Wind Speed (in mph)

Wind Direction	1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	3	6	1	0	0	10
NNE	0	1	7	0	0	0	8
NE	0	5	4	3	0	0	12
ENE	0	4	6	0	0	0	10
E	0	6	5	0	0	0	11
ESE	0	3	7	0	0	0	10
SE	0	1	6	1	1	0	9
SSE	0	4	3	3	0	0	10
S	0	6	2	0	1	0	9
SSW	0	9	4	3	1	0	17
SW	0	6	8	3	0	0	17
WSW	0	5	6	3	0	0	14
W	0	5	4	3	0	0	12
WNW	0	11	0	6	6	0	23
NW	0	5	0	5	1	0	11
NNW	0	4	2	1	0	0	7
Variable	0	0	0	0	0	0	0
Total	0	78	70	32	10	0	190

Hours of calm in this stability class: 0
Hours of missing wind measurements in this stability class: 0
Hours of missing stability measurements in all stability classes: 76

Quad Cities Nuclear Station

Period of Record: July - September 2003
Stability Class - Neutral - 296Ft-33Ft Delta-T (F)
Winds Measured at 296 Feet

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	9	6	4	0	0	19
NNE	1	7	12	0	0	0	20
NE	1	8	26	26	0	0	61
ENE	2	13	16	18	0	0	49
E	1	8	8	4	0	0	21
ESE	0	5	13	4	0	0	22
SE	1	5	11	9	2	0	28
SSE	2	6	6	8	2	0	24
S	1	7	7	23	1	0	39
SSW	1	5	10	8	1	0	25
SW	1	6	8	7	1	0	23
WSW	4	4	12	7	0	0	27
W	1	11	16	14	0	0	42
WNW	1	7	13	26	9	0	56
NW	1	9	12	24	8	0	54
NNW	1	5	7	6	0	0	19
Variable	0	0	0	0	0	0	0
Total	19	115	183	188	24	0	529

Hours of calm in this stability class: 0
Hours of missing wind measurements in this stability class: 0
Hours of missing stability measurements in all stability classes: 76

Quad Cities Nuclear Station

Period of Record: July - September 2003
Stability Class - Slightly Stable - 296Ft-33Ft Delta-T (F)
Winds Measured at 296 Feet

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	1	7	13	12	0	0	33
NNE	0	4	12	3	0	0	19
NE	1	4	12	14	0	0	31
ENE	0	3	18	12	0	0	33
E	2	6	24	0	0	0	32
ESE	0	0	6	10	2	0	18
SE	0	0	9	13	5	0	27
SSE	0	7	7	16	2	0	32
S	0	2	13	20	1	0	36
SSW	0	5	12	25	6	0	48
SW	1	4	28	13	4	0	50
WSW	0	2	13	5	2	0	22
W	0	8	20	19	0	0	47
WNW	0	7	12	30	3	0	52
NW	2	7	15	16	0	0	40
NNW	1	3	14	9	0	0	27
Variable	0	0	0	0	0	0	0
Total	8	69	228	217	25	0	547

Hours of calm in this stability class: 0
Hours of missing wind measurements in this stability class: 2
Hours of missing stability measurements in all stability classes: 76

Quad Cities Nuclear Station

Period of Record: July - September 2003
Stability Class - Moderately Stable - 296Ft-33Ft Delta-T (F)
Winds Measured at 296 Feet

Wind Speed (in mph)

Wind Direction	1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	6	5	0	0	0	11
NNE	0	7	13	1	0	0	21
NE	1	6	8	2	0	0	17
ENE	1	4	9	3	0	0	17
E	0	2	9	2	0	0	13
ESE	1	0	10	18	0	0	29
SE	1	0	8	25	3	0	37
SSE	1	0	20	31	1	0	53
S	2	3	15	28	0	0	48
SSW	0	6	21	13	0	0	40
SW	0	6	12	2	0	0	20
WSW	2	4	11	0	0	0	17
W	1	3	7	7	0	0	18
WNW	2	3	12	8	0	0	25
NW	0	4	12	5	1	0	22
NNW	2	2	6	5	0	0	15
Variable	0	0	0	0	0	0	0
Total	14	56	178	150	5	0	403

Hours of calm in this stability class: 0
Hours of missing wind measurements in this stability class: 2
Hours of missing stability measurements in all stability classes: 76

Quad Cities Nuclear Station

Period of Record: July - September 2003
Stability Class - Extremely Stable - 296Ft-33Ft Delta-T (F)
Winds Measured at 296 Feet

Wind Speed (in mph)

Wind Direction	1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	3	0	0	0	0	3
NNE	1	2	0	0	0	0	3
NE	0	1	1	0	0	0	2
ENE	0	0	1	0	0	0	1
E	2	10	5	0	0	0	17
ESE	2	1	3	2	0	0	8
SE	1	3	3	5	0	0	12
SSE	1	1	16	1	0	0	19
S	0	1	9	12	0	0	22
SSW	2	5	5	7	0	0	19
SW	0	3	3	1	0	0	7
WSW	0	1	2	0	0	0	3
W	0	2	6	0	0	0	8
WNW	0	2	3	0	0	0	5
NW	0	1	5	0	0	0	6
NNW	1	0	2	0	0	0	3
Variable	0	0	0	0	0	0	0
Total	10	36	64	28	0	0	138

Hours of calm in this stability class: 0
Hours of missing wind measurements in this stability class: 1
Hours of missing stability measurements in all stability classes: 76

Quad Cities Nuclear Station
33 ft. Wind Speed and Direction

October-December, 2003
196Ft-33Ft Delta-T (F)

Number of Observations = 2082
Values are Percent Occurrence

SPEED CLASS	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL	EU	MU	SU	N	SS	MS	ES	TOTAL
	WIND DIRECTION CLASSES																	STABILITY CLASSES							
EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00						
C SU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00					
A N	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				0.00				
L SS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00					0.00			
M MS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00		
ES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00	
																									0.00
EU	0.00	0.00	0.05	0.00	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.14							
MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00						
1 SU	0.00	0.00	0.00	0.05	0.05	0.00	0.00	0.00	0.05	0.00	0.00	0.14	0.00	0.05	0.00	0.05	0.38			0.38					
- N	0.24	0.43	0.53	0.53	0.19	0.34	0.24	0.53	0.58	0.19	0.43	0.34	0.24	0.58	0.29	0.14	5.81				5.81				
3 SS	0.10	0.14	0.34	0.34	0.58	0.43	0.24	0.19	0.29	0.14	0.91	0.48	0.82	0.53	0.14	0.10	5.76					5.76			
MS	0.10	0.34	0.24	0.48	0.48	0.91	0.19	0.14	0.14	0.24	0.29	0.24	0.29	0.34	0.05	0.10	4.56						4.56		
ES	0.05	0.00	0.05	0.10	0.62	1.92	0.38	0.24	0.19	0.19	0.10	0.05	0.05	0.38	0.10	0.14	4.56							4.56	
																									21.23
EU	0.00	0.14	0.00	0.10	0.14	0.14	0.38	0.86	0.14	0.24	0.38	0.19	0.62	0.29	0.38	0.24	4.27	4.27							
MU	0.00	0.00	0.05	0.00	0.00	0.10	0.14	0.05	0.00	0.10	0.00	0.10	0.19	0.14	0.05	0.10	1.01		1.01						
4 SU	0.00	0.19	0.14	0.14	0.24	0.14	0.34	0.43	0.00	0.10	0.48	0.29	0.62	0.34	0.72	0.05	4.23			4.23					
- N	0.77	0.72	0.86	1.63	0.96	1.59	1.34	0.72	1.10	0.91	1.63	1.49	1.83	3.12	2.50	1.01	22.19				22.19				
7 SS	0.72	0.34	0.82	0.24	0.53	1.49	0.91	1.15	1.20	0.72	1.68	1.25	2.50	2.26	0.86	0.53	17.20					17.20			
MS	0.10	0.05	0.10	0.05	0.24	0.38	0.05	0.10	0.00	0.05	0.10	0.10	0.05	0.05	0.10	0.05	1.54						1.54		
ES	0.00	0.00	0.00	0.00	0.19	0.91	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.05	0.00	1.20							1.20	
																									51.63
EU	0.00	0.10	0.05	0.05	0.05	0.14	0.10	0.14	0.24	0.29	0.19	0.19	0.29	0.67	0.38	0.19	3.07	3.07							
MU	0.00	0.00	0.00	0.10	0.00	0.05	0.00	0.00	0.00	0.05	0.05	0.05	0.24	0.29	0.14	0.00	0.96		0.96						
8 SU	0.00	0.05	0.05	0.05	0.05	0.00	0.05	0.05	0.00	0.00	0.14	0.19	0.38	0.29	0.14	0.05	1.49			1.49					
- N	0.43	0.58	0.48	0.62	0.96	0.24	0.62	0.24	0.10	0.29	0.86	0.82	2.11	3.99	2.11	0.24	14.70				14.70				
1 SS	0.10	0.00	0.00	0.05	0.00	0.10	0.38	0.53	0.10	0.77	0.34	0.19	0.10	0.48	0.10	0.24	3.46					3.46			
2 MS	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05						0.05		
ES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00	
																									23.73
EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.05	0.00	0.00	0.00	0.14	0.14							
1 MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.10	0.00	0.00	0.14		0.14						
3 SU	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.10	0.05	0.00	0.14	0.38			0.38					
- N	0.19	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	1.25	0.77	0.10	0.05	2.55				2.55				
1 SS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00					0.00			
8 MS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00		
ES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00	
																									3.22

Quad Cities Nuclear Station
33 ft. Wind Speed and Direction

October-December, 2003
196Ft-33Ft Delta-T (F)

SPEED CLASS	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL	EU	MU	SU	N	SS	MS	ES	TOTAL
	WIND DIRECTION CLASSES																	STABILITY CLASSES							
EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
1 MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00						
9 SU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00					
- N	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.05	0.00	0.00	0.19				0.19				
2 SS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00					0.00			
4 MS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00		
ES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00	
																									0.19
EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
G MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00						
T SU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00					
N	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				0.00				
2 SS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00					0.00			
4 MS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00		
ES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00	
																									0.00
TOT	2.83	3.12	3.75	4.51	5.38	8.89	5.43	5.38	4.13	4.27	7.64	6.44	11.86	14.75	8.21	3.41	100.00	7.64	2.11	6.48	45.44	26.42	6.15	5.76	100.00

Wind Direction by Stability

N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL	-STABILITY CLASSES-
0.00	0.24	0.10	0.14	0.29	0.29	0.48	1.01	0.38	0.53	0.58	0.48	0.96	0.96	0.77	0.43	7.64	Extremely Unstable
0.00	0.00	0.05	0.10	0.00	0.14	0.14	0.05	0.00	0.14	0.05	0.19	0.43	0.53	0.19	0.10	2.11	Moderately Unstable
0.05	0.24	0.19	0.24	0.34	0.14	0.38	0.48	0.05	0.10	0.62	0.67	1.10	0.72	0.86	0.29	6.48	Slightly Unstable
1.63	1.78	1.87	2.79	2.11	2.16	2.21	1.49	1.78	1.39	2.93	2.79	5.57	8.50	5.00	1.44	45.44	Neutral
0.91	0.48	1.15	0.62	1.10	2.02	1.54	1.87	1.59	1.63	2.93	1.92	3.41	3.27	1.10	0.86	26.42	Slightly Stable
0.19	0.38	0.34	0.53	0.72	1.30	0.29	0.24	0.14	0.29	0.38	0.34	0.34	0.38	0.14	0.14	6.15	Moderately Stable
0.05	0.00	0.05	0.10	0.82	2.83	0.38	0.24	0.19	0.19	0.14	0.05	0.05	0.38	0.14	0.14	5.76	Extremely Stable

Wind Direction by Wind Speed

N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL	-WIND SPEED CLASSES-
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	C A L M
0.48	0.91	1.20	1.49	2.02	3.60	1.06	1.10	1.25	0.77	1.73	1.25	1.39	1.87	0.58	0.53	21.23	< 3.5 mph
1.59	1.44	1.97	2.16	2.31	4.76	3.17	3.31	2.45	2.11	4.32	3.41	5.81	6.20	4.66	1.97	51.63	3.6 - 7.5 mph
0.53	0.72	0.58	0.86	1.06	0.53	1.20	0.96	0.43	1.39	1.59	1.44	3.12	5.72	2.88	0.72	23.73	7.6 - 12.5 mph
0.24	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.34	1.39	0.91	0.10	0.19	3.22	12.6 - 18.5 mph
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.05	0.00	0.00	0.19	18.6 - 24.5 mph
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	> 24.5 mph

Quad Cities Nuclear Station
296 ft. Wind Speed and Direction

October-December, 2003
296Ft-33Ft Delta-T (F)

Number of Observations = 2176
Values are Percent Occurrence

SPEED CLASS	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL	EU	MU	SU	N	SS	MS	ES	TOTAL
	WIND DIRECTION CLASSES																	STABILITY CLASSES							
EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00						
C SU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00					
A N	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				0.00				
L SS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00					0.00			
M MS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00		
ES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00	
																									0.00
EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
MU	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05		0.05						
1 SU	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05			0.05					
- N	0.00	0.05	0.14	0.09	0.28	0.09	0.18	0.00	0.00	0.14	0.09	0.18	0.00	0.09	0.05	0.05	1.42				1.42				
3 SS	0.05	0.05	0.05	0.14	0.09	0.05	0.00	0.14	0.05	0.00	0.05	0.00	0.05	0.00	0.05	0.00	0.74					0.74			
MS	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.14						0.14		
ES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.05							0.05	
																									2.44
EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05							
MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.09	0.05	0.05	0.00	0.23		0.23						
4 SU	0.00	0.00	0.00	0.05	0.09	0.09	0.00	0.05	0.00	0.14	0.05	0.05	0.28	0.09	0.09	0.05	1.01			1.01					
- N	0.32	0.28	0.46	0.28	0.51	0.32	0.23	0.41	0.37	0.37	0.55	0.41	0.51	0.55	0.23	0.60	6.39				6.39				
7 SS	0.00	0.23	0.28	0.05	0.41	0.09	0.14	0.18	0.09	0.14	0.18	0.05	0.05	0.28	0.14	0.09	2.39					2.39			
MS	0.14	0.05	0.00	0.09	0.05	0.05	0.05	0.05	0.09	0.00	0.09	0.05	0.18	0.05	0.05	0.05	1.01						1.01		
ES	0.00	0.05	0.05	0.05	0.05	0.00	0.00	0.05	0.05	0.00	0.00	0.05	0.05	0.00	0.00	0.00	0.37							0.37	
																									11.44
EU	0.00	0.00	0.00	0.00	0.00	0.05	0.09	0.23	0.00	0.23	0.00	0.18	0.14	0.23	0.00	0.00	1.15	1.15							
MU	0.00	0.00	0.00	0.00	0.09	0.14	0.14	0.37	0.00	0.14	0.00	0.09	0.23	0.05	0.09	0.09	1.42		1.42						
8 SU	0.00	0.09	0.00	0.00	0.00	0.09	0.00	0.23	0.00	0.05	0.05	0.09	0.23	0.14	0.28	0.18	1.42			1.42					
- N	0.60	0.46	0.28	0.97	0.60	0.74	0.55	0.60	0.74	0.46	0.64	0.55	1.15	1.19	1.56	0.51	11.58				11.58				
1 SS	0.09	0.37	0.28	0.32	0.28	0.09	0.46	0.41	0.05	0.32	0.78	0.64	0.69	0.55	0.55	0.37	6.25					6.25			
2 MS	0.14	0.18	0.23	0.09	0.64	0.37	0.64	1.01	0.41	0.14	0.32	0.05	0.18	0.18	0.23	0.00	4.83						4.83		
ES	0.23	0.09	0.18	0.05	0.00	0.05	0.05	0.37	0.32	0.32	0.23	0.05	0.00	0.00	0.00	0.00	1.93							1.93	
																									28.58
EU	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.14	0.09	0.18	0.23	0.00	0.09	0.14	0.18	0.05	1.15	1.15							
1 MU	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05	0.05	0.09	0.00	0.09	0.05	0.14	0.14	0.05	0.69		0.69						
3 SU	0.00	0.00	0.05	0.05	0.05	0.05	0.14	0.14	0.09	0.05	0.14	0.14	0.32	0.37	0.14	0.05	1.75			1.75					
- N	0.32	0.37	0.69	1.10	1.06	0.55	0.55	0.83	1.10	0.41	0.87	0.51	1.52	2.53	2.76	0.60	15.76				15.76				
1 SS	0.51	0.18	0.64	0.18	0.18	1.33	0.41	1.01	0.83	1.19	0.69	1.33	1.65	1.42	0.92	0.78	13.28					13.28			
8 MS	0.09	0.05	0.05	0.05	0.09	0.55	0.60	0.41	0.18	0.28	0.05	0.23	0.37	0.14	0.09	0.05	3.26						3.26		
ES	0.09	0.00	0.00	0.00	0.00	0.09	0.55	0.18	0.23	1.01	0.28	0.00	0.09	0.00	0.00	0.00	2.53							2.53	
																									38.42

Quad Cities Nuclear Station
296 ft. Wind Speed and Direction

October-December, 2003
296Ft-33Ft Delta-T (F)

SPEED CLASS	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL	EU	MU	SU	N	SS	MS	ES	TOTAL
	WIND DIRECTION CLASSES																	STABILITY CLASSES							
EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.00	0.00	0.00	0.00	0.00	0.09	0.00	0.23	0.23							
1 MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05	0.00	0.00	0.00	0.05	0.00	0.00	0.14		0.14						
9 SU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.00	0.14	0.09	0.00	0.09	0.28	0.05	0.00	0.74			0.74					
- N	0.18	0.23	0.18	0.09	0.05	0.09	0.32	0.37	0.18	0.60	0.28	0.32	1.15	1.61	1.56	0.78	8.00				8.00				
2 SS	0.05	0.09	0.00	0.05	0.00	0.37	0.32	0.92	0.83	0.64	0.32	0.32	0.14	0.60	0.14	0.28	5.06					5.06			
4 MS	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.05	0.00	0.09	0.00	0.00	0.00	0.00	0.00	0.05	0.23						0.23		
ES	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.14							0.14	
																									14.52
EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
G MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.05		0.05						
T SU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.00	0.09	0.00	0.28			0.28					
N	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.05	0.00	0.78	1.38	0.64	0.32	3.54				3.54				
2 SS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.09	0.41	0.00	0.00	0.05	0.00	0.00	0.00	0.74					0.74			
4 MS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00		
ES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00	
																									4.60
TOT	2.90	2.85	3.54	3.68	4.55	5.33	5.61	8.46	6.07	7.90	6.11	5.42	10.29	12.13	10.20	4.96	100.00	2.57	2.57	5.24	46.69	28.45	9.47	5.01	100.00

Wind Direction by Stability

N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL	-STABILITY CLASSES-
0.00	0.00	0.00	0.00	0.00	0.05	0.14	0.37	0.23	0.46	0.23	0.18	0.23	0.37	0.28	0.05	2.57	Extremely Unstable
0.00	0.00	0.00	0.00	0.14	0.14	0.18	0.41	0.09	0.28	0.00	0.23	0.37	0.28	0.32	0.14	2.57	Moderately Unstable
0.00	0.14	0.05	0.09	0.14	0.23	0.14	0.51	0.09	0.37	0.32	0.28	1.10	0.87	0.64	0.28	5.24	Slightly Unstable
1.52	1.38	1.75	2.53	2.48	1.79	1.84	2.21	2.39	2.25	2.48	1.98	5.10	7.35	6.80	2.85	46.69	Neutral
0.69	0.92	1.24	0.74	0.97	1.93	1.33	2.85	1.93	2.71	2.02	2.34	2.62	2.85	1.79	1.52	28.45	Slightly Stable
0.37	0.28	0.28	0.23	0.78	1.06	1.29	1.52	0.74	0.51	0.46	0.32	0.74	0.41	0.37	0.14	9.47	Moderately Stable
0.32	0.14	0.23	0.09	0.05	0.14	0.69	0.60	0.60	1.33	0.60	0.09	0.14	0.00	0.00	0.00	5.01	Extremely Stable

Wind Direction by Wind Speed

N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL	-WIND SPEED CLASSES-
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	C A L M
0.05	0.14	0.18	0.23	0.41	0.18	0.18	0.14	0.09	0.14	0.18	0.18	0.05	0.14	0.09	0.05	2.44	< 3.5 mph
0.46	0.60	0.78	0.51	1.10	0.55	0.41	0.74	0.60	0.69	0.87	0.64	1.15	1.01	0.55	0.78	11.44	3.6 - 7.5 mph
1.06	1.19	0.97	1.42	1.61	1.52	1.93	3.22	1.52	1.65	2.02	1.65	2.62	2.34	2.71	1.15	28.58	7.6 - 12.5 mph
1.01	0.60	1.42	1.38	1.38	2.57	2.34	2.76	2.57	3.22	2.25	2.30	4.09	4.73	4.23	1.56	38.42	12.6 - 18.5 mph
0.23	0.32	0.18	0.14	0.05	0.51	0.74	1.42	1.19	1.52	0.74	0.64	1.38	2.53	1.84	1.10	14.52	18.6 - 24.5 mph
0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.09	0.69	0.05	0.00	1.01	1.38	0.78	0.32	4.60	> 24.5 mph

Quad Cities Nuclear Station

Period of Record: October - December2003
Stability Class - Extremely Unstable - 196Ft-33Ft Delta-T (F)
Winds Measured at 33 Feet

Wind Speed (in mph)

Wind Direction	1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	0	0	0	0	0	0
NNE	0	3	2	0	0	0	5
NE	1	0	1	0	0	0	2
ENE	0	2	1	0	0	0	3
E	2	3	1	0	0	0	6
ESE	0	3	3	0	0	0	6
SE	0	8	2	0	0	0	10
SSE	0	18	3	0	0	0	21
S	0	3	5	0	0	0	8
SSW	0	5	6	0	0	0	11
SW	0	8	4	0	0	0	12
WSW	0	4	4	2	0	0	10
W	0	13	6	1	0	0	20
WNW	0	6	14	0	0	0	20
NW	0	8	8	0	0	0	16
NNW	0	5	4	0	0	0	9
Variable	0	0	0	0	0	0	0
Total	3	89	64	3	0	0	159

Hours of calm in this stability class: 0
Hours of missing wind measurements in this stability class: 0
Hours of missing stability measurements in all stability classes: 0

Quad Cities Nuclear Station

Period of Record: October - December2003
Stability Class - Moderately Unstable - 196Ft-33Ft Delta-T (F)
Winds Measured at 33 Feet

Wind Speed (in mph)

Wind Direction	1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	0	0	0	0	0	0
NNE	0	0	0	0	0	0	0
NE	0	1	0	0	0	0	1
ENE	0	0	2	0	0	0	2
E	0	0	0	0	0	0	0
ESE	0	2	1	0	0	0	3
SE	0	3	0	0	0	0	3
SSE	0	1	0	0	0	0	1
S	0	0	0	0	0	0	0
SSW	0	2	1	0	0	0	3
SW	0	0	1	0	0	0	1
WSW	0	2	1	1	0	0	4
W	0	4	5	0	0	0	9
WNW	0	3	6	2	0	0	11
NW	0	1	3	0	0	0	4
NNW	0	2	0	0	0	0	2
Variable	0	0	0	0	0	0	0
Total	0	21	20	3	0	0	44

Hours of calm in this stability class: 0
Hours of missing wind measurements in this stability class: 0
Hours of missing stability measurements in all stability classes: 0

Quad Cities Nuclear Station

Period of Record: October - December2003
Stability Class - Slightly Unstable - 196Ft-33Ft Delta-T (F)
Winds Measured at 33 Feet

Wind Speed (in mph)

Wind Direction	1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	0	0	1	0	0	1
NNE	0	4	1	0	0	0	5
NE	0	3	1	0	0	0	4
ENE	1	3	1	0	0	0	5
E	1	5	1	0	0	0	7
ESE	0	3	0	0	0	0	3
SE	0	7	1	0	0	0	8
SSE	0	9	1	0	0	0	10
S	1	0	0	0	0	0	1
SSW	0	2	0	0	0	0	2
SW	0	10	3	0	0	0	13
WSW	3	6	4	1	0	0	14
W	0	13	8	2	0	0	23
WNW	1	7	6	1	0	0	15
NW	0	15	3	0	0	0	18
NNW	1	1	1	3	0	0	6
Variable	0	0	0	0	0	0	0
Total	8	88	31	8	0	0	135

Hours of calm in this stability class: 0
Hours of missing wind measurements in this stability class: 0
Hours of missing stability measurements in all stability classes: 0

Quad Cities Nuclear Station

Period of Record: October - December2003
Stability Class - Neutral - 196Ft-33Ft Delta-T (F)
Winds Measured at 33 Feet

Wind Speed (in mph)

Wind Direction	1-3	4-7	8-12	13-18	19-24	> 24	Total
N	5	16	9	4	0	0	34
NNE	9	15	12	1	0	0	37
NE	11	18	10	0	0	0	39
ENE	11	34	13	0	0	0	58
E	4	20	20	0	0	0	44
ESE	7	33	5	0	0	0	45
SE	5	28	13	0	0	0	46
SSE	11	15	5	0	0	0	31
S	12	23	2	0	0	0	37
SSW	4	19	6	0	0	0	29
SW	9	34	18	0	0	0	61
WSW	7	31	17	3	0	0	58
W	5	38	44	26	3	0	116
WNW	12	65	83	16	1	0	177
NW	6	52	44	2	0	0	104
NNW	3	21	5	1	0	0	30
Variable	0	0	0	0	0	0	0
Total	121	462	306	53	4	0	946

Hours of calm in this stability class: 0
Hours of missing wind measurements in this stability class: 0
Hours of missing stability measurements in all stability classes: 0

Quad Cities Nuclear Station

Period of Record: October - December2003
Stability Class - Slightly Stable - 196Ft-33Ft Delta-T (F)
Winds Measured at 33 Feet

Wind Speed (in mph)

Wind Direction	1-3	4-7	8-12	13-18	19-24	> 24	Total
N	2	15	2	0	0	0	19
NNE	3	7	0	0	0	0	10
NE	7	17	0	0	0	0	24
ENE	7	5	1	0	0	0	13
E	12	11	0	0	0	0	23
ESE	9	31	2	0	0	0	42
SE	5	19	8	0	0	0	32
SSE	4	24	11	0	0	0	39
S	6	25	2	0	0	0	33
SSW	3	15	16	0	0	0	34
SW	19	35	7	0	0	0	61
WSW	10	26	4	0	0	0	40
W	17	52	2	0	0	0	71
WNW	11	47	10	0	0	0	68
NW	3	18	2	0	0	0	23
NNW	2	11	5	0	0	0	18
Variable	0	0	0	0	0	0	0
Total	120	358	72	0	0	0	550

Hours of calm in this stability class: 0
Hours of missing wind measurements in this stability class: 0
Hours of missing stability measurements in all stability classes: 0

Quad Cities Nuclear Station

Period of Record: October - December2003
Stability Class - Moderately Stable - 196Ft-33Ft Delta-T (F)
Winds Measured at 33 Feet

Wind Speed (in mph)

Wind Direction	1-3	4-7	8-12	13-18	19-24	> 24	Total
N	2	2	0	0	0	0	4
NNE	7	1	0	0	0	0	8
NE	5	2	0	0	0	0	7
ENE	10	1	0	0	0	0	11
E	10	5	0	0	0	0	15
ESE	19	8	0	0	0	0	27
SE	4	1	1	0	0	0	6
SSE	3	2	0	0	0	0	5
S	3	0	0	0	0	0	3
SSW	5	1	0	0	0	0	6
SW	6	2	0	0	0	0	8
WSW	5	2	0	0	0	0	7
W	6	1	0	0	0	0	7
WNW	7	1	0	0	0	0	8
NW	1	2	0	0	0	0	3
NNW	2	1	0	0	0	0	3
Variable	0	0	0	0	0	0	0
Total	95	32	1	0	0	0	128

Hours of calm in this stability class: 0
Hours of missing wind measurements in this stability class: 0
Hours of missing stability measurements in all stability classes: 0

Quad Cities Nuclear Station

Period of Record: October - December2003
Stability Class - Extremely Stable - 196Ft-33Ft Delta-T (F)
Winds Measured at 33 Feet

Wind Speed (in mph)

Wind Direction	1-3	4-7	8-12	13-18	19-24	> 24	Total
N	1	0	0	0	0	0	1
NNE	0	0	0	0	0	0	0
NE	1	0	0	0	0	0	1
ENE	2	0	0	0	0	0	2
E	13	4	0	0	0	0	17
ESE	40	19	0	0	0	0	59
SE	8	0	0	0	0	0	8
SSE	5	0	0	0	0	0	5
S	4	0	0	0	0	0	4
SSW	4	0	0	0	0	0	4
SW	2	1	0	0	0	0	3
WSW	1	0	0	0	0	0	1
W	1	0	0	0	0	0	1
WNW	8	0	0	0	0	0	8
NW	2	1	0	0	0	0	3
NNW	3	0	0	0	0	0	3
Variable	0	0	0	0	0	0	0
Total	95	25	0	0	0	0	120

Hours of calm in this stability class: 0
Hours of missing wind measurements in this stability class: 0
Hours of missing stability measurements in all stability classes: 0

Quad Cities Nuclear Station

Period of Record: October - December2003
Stability Class - Extremely Unstable - 296Ft-33Ft Delta-T (F)
Winds Measured at 296 Feet

Wind Speed (in mph)

Wind Direction	1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	0	0	0	0	0	0
NNE	0	0	0	0	0	0	0
NE	0	0	0	0	0	0	0
ENE	0	0	0	0	0	0	0
E	0	0	0	0	0	0	0
ESE	0	0	1	0	0	0	1
SE	0	0	2	1	0	0	3
SSE	0	0	5	3	0	0	8
S	0	0	0	2	3	0	5
SSW	0	1	5	4	0	0	10
SW	0	0	0	5	0	0	5
WSW	0	0	4	0	0	0	4
W	0	0	3	2	0	0	5
WNW	0	0	5	3	0	0	8
NW	0	0	0	4	2	0	6
NNW	0	0	0	1	0	0	1
Variable	0	0	0	0	0	0	0
Total	0	1	25	25	5	0	56

Hours of calm in this stability class: 0
Hours of missing wind measurements in this stability class: 0
Hours of missing stability measurements in all stability classes: 16

Quad Cities Nuclear Station

Period of Record: October - December2003
Stability Class - Moderately Unstable - 296Ft-33Ft Delta-T (F)
Winds Measured at 296 Feet

Wind Speed (in mph)

Wind Direction	1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	0	0	0	0	0	0
NNE	0	0	0	0	0	0	0
NE	0	0	0	0	0	0	0
ENE	0	0	0	0	0	0	0
E	1	0	2	0	0	0	3
ESE	0	0	3	0	0	0	3
SE	0	0	3	1	0	0	4
SSE	0	0	8	1	0	0	9
S	0	0	0	1	1	0	2
SSW	0	0	3	2	1	0	6
SW	0	0	0	0	0	0	0
WSW	0	1	2	2	0	0	5
W	0	2	5	1	0	0	8
WNW	0	1	1	3	1	0	6
NW	0	1	2	3	0	1	7
NNW	0	0	2	1	0	0	3
Variable	0	0	0	0	0	0	0
Total	1	5	31	15	3	1	56

Hours of calm in this stability class: 0
Hours of missing wind measurements in this stability class: 0
Hours of missing stability measurements in all stability classes: 16

Quad Cities Nuclear Station

Period of Record: October - December2003
Stability Class - Slightly Unstable - 296Ft-33Ft Delta-T (F)
Winds Measured at 296 Feet

Wind Speed (in mph)

Wind Direction	1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	0	0	0	0	0	0
NNE	1	0	2	0	0	0	3
NE	0	0	0	1	0	0	1
ENE	0	1	0	1	0	0	2
E	0	2	0	1	0	0	3
ESE	0	2	2	1	0	0	5
SE	0	0	0	3	0	0	3
SSE	0	1	5	3	2	0	11
S	0	0	0	2	0	0	2
SSW	0	3	1	1	3	0	8
SW	0	1	1	3	2	0	7
WSW	0	1	2	3	0	0	6
W	0	6	5	7	2	4	24
WNW	0	2	3	8	6	0	19
NW	0	2	6	3	1	2	14
NNW	0	1	4	1	0	0	6
Variable	0	0	0	0	0	0	0
Total	1	22	31	38	16	6	114

Hours of calm in this stability class: 0
Hours of missing wind measurements in this stability class: 0
Hours of missing stability measurements in all stability classes: 16

Quad Cities Nuclear Station

Period of Record: October - December2003
Stability Class - Neutral - 296Ft-33Ft Delta-T (F)
Winds Measured at 296 Feet

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	7	13	7	4	2	33
NNE	1	6	10	8	5	0	30
NE	3	10	6	15	4	0	38
ENE	2	6	21	24	2	0	55
E	6	11	13	23	1	0	54
ESE	2	7	16	12	2	0	39
SE	4	5	12	12	7	0	40
SSE	0	9	13	18	8	0	48
S	0	8	16	24	4	0	52
SSW	3	8	10	9	13	6	49
SW	2	12	14	19	6	1	54
WSW	4	9	12	11	7	0	43
W	0	11	25	33	25	17	111
WNW	2	12	26	55	35	30	160
NW	1	5	34	60	34	14	148
NNW	1	13	11	13	17	7	62
Variable	0	0	0	0	0	0	0
Total	31	139	252	343	174	77	1016

Hours of calm in this stability class: 0
Hours of missing wind measurements in this stability class: 6
Hours of missing stability measurements in all stability classes: 16

Quad Cities Nuclear Station

Period of Record: October - December2003
Stability Class - Slightly Stable - 296Ft-33Ft Delta-T (F)
Winds Measured at 296 Feet

Wind Speed (in mph)

Wind Direction	1-3	4-7	8-12	13-18	19-24	> 24	Total
N	1	0	2	11	1	0	15
NNE	1	5	8	4	2	0	20
NE	1	6	6	14	0	0	27
ENE	3	1	7	4	1	0	16
E	2	9	6	4	0	0	21
ESE	1	2	2	29	8	0	42
SE	0	3	10	9	7	0	29
SSE	3	4	9	22	20	4	62
S	1	2	1	18	18	2	42
SSW	0	3	7	26	14	9	59
SW	1	4	17	15	7	0	44
WSW	0	1	14	29	7	0	51
W	1	1	15	36	3	1	57
WNW	0	6	12	31	13	0	62
NW	1	3	12	20	3	0	39
NNW	0	2	8	17	6	0	33
Variable	0	0	0	0	0	0	0
Total	16	52	136	289	110	16	619

Hours of calm in this stability class: 0
Hours of missing wind measurements in this stability class: 10
Hours of missing stability measurements in all stability classes: 16

Quad Cities Nuclear Station

Period of Record: October - December2003
Stability Class - Moderately Stable - 296Ft-33Ft Delta-T (F)
Winds Measured at 296 Feet

Wind Speed (in mph)

Wind Direction	1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	3	3	2	0	0	8
NNE	0	1	4	1	0	0	6
NE	0	0	5	1	0	0	6
ENE	0	2	2	1	0	0	5
E	0	1	14	2	0	0	17
ESE	1	1	8	12	1	0	23
SE	0	1	14	13	0	0	28
SSE	0	1	22	9	1	0	33
S	1	2	9	4	0	0	16
SSW	0	0	3	6	2	0	11
SW	0	2	7	1	0	0	10
WSW	0	1	1	5	0	0	7
W	0	4	4	8	0	0	16
WNW	1	1	4	3	0	0	9
NW	0	1	5	2	0	0	8
NNW	0	1	0	1	1	0	3
Variable	0	0	0	0	0	0	0
Total	3	22	105	71	5	0	206

Hours of calm in this stability class: 0
Hours of missing wind measurements in this stability class: 0
Hours of missing stability measurements in all stability classes: 16

Quad Cities Nuclear Station

Period of Record: October - December2003
Stability Class - Extremely Stable - 296Ft-33Ft Delta-T (F)
Winds Measured at 296 Feet

Wind Speed (in mph)

Wind Direction	1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	0	5	2	0	0	7
NNE	0	1	2	0	0	0	3
NE	0	1	4	0	0	0	5
ENE	0	1	1	0	0	0	2
E	0	1	0	0	0	0	1
ESE	0	0	1	2	0	0	3
SE	0	0	1	12	2	0	15
SSE	0	1	8	4	0	0	13
S	0	1	7	5	0	0	13
SSW	0	0	7	22	0	0	29
SW	1	0	5	6	1	0	13
WSW	0	1	1	0	0	0	2
W	0	1	0	2	0	0	3
WNW	0	0	0	0	0	0	0
NW	0	0	0	0	0	0	0
NNW	0	0	0	0	0	0	0
Variable	0	0	0	0	0	0	0
Total	1	8	42	55	3	0	109

Hours of calm in this stability class: 0
Hours of missing wind measurements in this stability class: 0
Hours of missing stability measurements in all stability classes: 16

Attachment F
Solid Waste Disposition Summary
SVP-04-034

NRC REGULATORY GUIDE 1.21 REPORTS

Solid Waste Shipped Offsite for Disposal and Estimates of Major Nuclides by Waste Class and Stream During Period from 01/01/2003 to 12/31/2003.

Waste Stream: Resins, Filters, and Evaporator Bottoms

Waste Class	Volume		Curies Shipped	Major Nuclide Composition	% Error (Ci)
	Ft^3	M^3			
A	3.19E+03	9.04E+01	6.82E+02	Zn-65, Cs-137, Mn-54, Fe-55, Co-60	25
B	2.91E+02	8.25E+00	1.97E+02	Mn-54, Zn-65, Co-60, Fe-55, Cs-137	25
C	0.00E+00	0.00E+00	0.00E+00	NA	25
All	3.48E+03	9.87E+01	8.79E+02	Mn-54, Zn-65, Co-60, Fe-55, Cs-137	25

Waste Stream: Dry Active Waste

Waste Class	Volume		Curies Shipped	Major Nuclide Composition	% Error (Ci)
	Ft^3	M^3			
A	3.23E+02	9.14E+00	1.55E+00	Mn-54, Co-60, Fe-55, Cs-137	25
B	0.00E+00	0.00E+00	0.00E+00	NA	25
C	0.00E+00	0.00E+00	0.00E+00	NA	25
All	3.23E+02	9.14E+00	1.55E+00	Mn-54, Co-60, Fe-55, Cs-137	25

Waste Stream: Irradiated Components

Waste Class	Volume		Curies Shipped	Major Nuclide Composition	% Error (Ci)
	Ft^3	M^3			
A	0.00E+00	0.00E+00	0.00E+00	NA	25
B	0.00E+00	0.00E+00	0.00E+00	NA	25
C	2.52E+02	7.13E+00	3.72E+04	Fe-55, Co-60, Ni-63, Hf-181, Ta-182, Mn-54	25
All	2.52E+02	7.13E+00	3.72E+04	Fe-55, Co-60, Ni-63, Hf-181, Ta-182, Mn-54	25

Solid Waste Disposition

Number of Shipments	Mode of Transportation	Destination
26	Highway	Disposal Site
21	Highway	Waste Processor