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Exelon Nuclear

April 5, 2002

SVP-02-024

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 2001

In accordance with the Quad Cities Technical Specifications Section 5.6.3 and 10 CFR 50.36a, we are submitting the Quad Cities Nuclear Power Station's Radioactive Effluent Report for January through December 2001. A copy of procedure RW-AA-100, "Process Control Program for Radioactive Wastes," Revision 2, is also included as required by the Offsite Dose Calculation Manual (ODCM) Section 12.6.1, "Radioactive Effluent Release Report."

Four abnormal releases occurred during 2001. These abnormal releases resulted in minor increases to normal plant radioactive effluents and are expanded upon in this report.

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 2001
B. Effluent and Waste Disposal Semiannual Report Supplemental Information, Quad Cities Nuclear Power Station, January - June 2001
C. Effluent and Waste Disposal Semiannual Report, Quad Cities Nuclear Power Station, July - December 2001
D. Effluent and Waste Disposal Semiannual Report Supplemental Information, Quad Cities Nuclear Power Station, July - December 2001
E. Quad Cities Station Meteorological Site Quarterly Joint-Frequency Wind Rose Tables for 2001
F. Solid Waste Disposition Summary
G. RW-AA-100, Revision 2, "Process Control Program for Radioactive Wastes"

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 2001
SVP-02-024

QCRP 6400-02
UNIT 1(2)
REVISION 1

ATTACHMENT A (Page 1 of 5)
EFFLUENT & WASTE DISPOSABLE SEMI-ANNUAL REPORT

GASEOUS EFFLUENTS – SUMMATION OF ALL RELEASES

Period: January through June 2001

A. FISSION & ACTIVATION GASES	UNIT	FIRST QUARTER	SECOND QUARTER	Est. Total Error %
1. Total Release	Ci	4.63E+01	5.81E+01	12.4
2. Average release rate for the period	µCi/sec	5.96E+00	7.39E+00	
3. *Percent of ODCM limit Chimney & Stack	%	4.72E-03	5.86E-03	
		1.23E-03	1.52E-03	

* NOBLE GAS GAMMA/NOBLE GAS BETA DOSE LIMITS

B. IODINE				
1. Total Iodine-131	Ci	7.72E-04	1.07E-03	40.0
2. Average release rate for the period	µCi/sec	9.93E-05	1.36E-04	

C. PARTICULATES				
1. Particulates with half-lives >8 days	Ci	1.11E-03	1.65E-03	30.1
2. Average release rate for the period	µCi/sec	1.42E-04	2.09E-04	
3. Gross alpha radioactivity	Ci	2.66E-06	<LLD*	

D. TRITIUM				
1. Total Release	Ci	1.74E+01	1.81E+01	8.1
2. Average release rate for the period	µCi/sec	2.24E+00	2.30E+00	

E. Iodine 131 & 133,Tritium & Particulate			
1. Percent of ODCM limit Chimney & Stack	%	1.30E+00	9.30E-01

ATTACHMENT A (Page 2 of 5)
EFFLUENT & WASTE DISPOSABLE SEMI-ANNUAL REPORT

MAIN CHIMNEY GASEOUS EFFLUENTS

		CONTINUOUS MODE		BATCH MODE	
NUCLIDES RELEASED 1. Fission gases	**UNIT**	**FIRST QUARTER**	**SECOND QUARTER**	**FIRST QUARTER**	**SECOND QUARTER**
Kr-85	Ci	<LLD*	<LLD*	NA	NA
Kr-85m	Ci	4.86E-01	4.15E-01	NA	NA
Kr-87	Ci	1.50E+00	1.68E+00	NA	NA
Kr-88	Ci	8.57E-01	9.53E-01	NA	NA
Xe-131m	Ci	<LLD*	8.37E-01	NA	NA
Xe-133	Ci	1.49E+00	1.16E+00	NA	NA
Xe-135	Ci	1.51E+00	1.84E+00	NA	NA
Xe-135m	Ci	8.49E+00	1.13E+01	NA	NA
Xe-138	Ci	3.15E+01	3.97E+01	NA	NA
Ar-41	Ci	4.94E-01	2.53E-01	NA	NA
Total for Period	Ci	**4.63E+01**	**5.81E+01**	**NA**	**NA**
NUCLIDES RELEASED 2. Iodines	**UNIT**	**FIRST QUARTER**	**SECOND QUARTER**	**FIRST QUARTER**	**SECOND QUARTER**
I-131	Ci	7.44E-04	1.06E-03	NA	NA
I-133	Ci	1.82E-03	2.55E-03	NA	NA
I-135	Ci	<LLD*	<LLD*	NA	NA
Total for period	Ci	**2.56E-03**	**3.61E-03**	**NA**	**NA**
NUCLIDES RELEASED 3. Particulates	**UNIT**	**FIRST QUARTER**	**SECOND QUARTER**	**FIRST QUARTER**	**SECOND QUARTER**
Sr-89	Ci	1.72E-04	2.59E-04	NA	NA
Sr-90	Ci	<LLD*	<LLD*	NA	NA
Cs-134	Ci	<LLD*	<LLD*	NA	NA
Cs-137	Ci	7.96E-06	1.48E-05	NA	NA
Ba-140	Ci	4.11E-05	3.70E-04	NA	NA
La-140	Ci	5.30E-05	2.06E-04	NA	NA
Cr-51	Ci	<LLD*	<LLD*	NA	NA
Mn-54	Ci	<LLD*	4.03E-05	NA	NA
Co-58	Ci	<LLD*	<LLD*	NA	NA
Co-60	Ci	1.71E-04	2.40E-04	NA	NA
Mo-99	Ci	<LLD*	<LLD*	NA	NA
Ag-110m	Ci	1.11E-05	<LLD*	NA	NA
Total for Period	Ci	**4.56E-04**	**1.13E-03**	**NA**	**NA**

* Actual gaseous LLDs reported after page 3 of 5 of this checklist.

ATTACHMENT A (Page 3 of 5)
EFFLUENT & WASTE DISPOSABLE SEMI-ANNUAL REPORT

REACTOR VENTILATION GASEOUS EFFLUENTS

		CONTINUOUS MODE		BATCH MODE	
NUCLIDES RELEASED 1. Fission gases	**UNIT**	**FIRST QUARTER**	**SECOND QUARTER**	**FIRST QUARTER**	**SECOND 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	<LLD*	<LLD*	NA	NA
Xe-135m	Ci	<LLD*	<LLD*	NA	NA
Xe-138	Ci	<LLD*	<LLD*	NA	NA
AR-41		<LLD*	<LLD*	NA	NA
Total for Period	Ci	**<LLD***	**<LLD***	**NA**	**NA**
NUCLIDES RELEASED 2. Iodines	**UNIT**	**FIRST QUARTER**	**SECOND QUARTER**	**FIRST QUARTER**	**SECOND QUARTER**
I-131	Ci	2.86E-05	8.51E-06	NA	NA
I-133	Ci	<LLD*	<LLD*	NA	NA
I-135	Ci	<LLD*	<LLD*	NA	NA
Total for period	Ci	**2.86E-05**	**8.51E-06**	**NA**	**NA**
NUCLIDES RELEASED 3. Particulates	**UNIT**	**FIRST QUARTER**	**SECOND QUARTER**	**FIRST QUARTER**	**SECOND QUARTER**
Sr-89	Ci	<LLD*	<LLD*	NA	NA
Sr-90	Ci	<LLD*	<LLD*	NA	NA
Cs-134	Ci	<LLD*	<LLD*	NA	NA
Cs-137	Ci	9.14E-06	<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	2.82E-05	4.11E-05	NA	NA
Co-58	Ci	<LLD*	<LLD*	NA	NA
Co-60	Ci	6.16E-04	4.77E-04	NA	NA
Mo-99	Ci	<LLD*	<LLD*	NA	NA
Ag-110m	Ci	<LLD*	<LLD*	NA	NA
Total for Period	Ci	**6.53E-04**	**5.18E-04**	**NA**	**NA**

* Actual gaseous LLDs reported on next page.

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EFFLUENT & WASTE DISPOSABLE ANNUAL REPORT

2001

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	4.02E-06	None
Kr-85m	uCi/cc	1.67E-08	None
Kr-87	uCi/cc	3.35E-08	1E-04
Kr-88	uCi/cc	4.18E-08	1E-04
Xe-131m	uCi/cc	6.00E-07	None
Xe-133	uCi/cc	2.76E-08	1E-04
Xe-133m	uCi/cc	8.88E-08	1E-04
Xe-135	uCi/cc	1.16E-08	1E-04
Xe-135m	uCi/cc	1.58E-07	1E-04
Xe-138	uCi/cc	1.71E-07	1E-04
Ar-41	uCi/cc	7.19E-08	None
NUCLIDE LOWER LIMITS OF DETECTION (LLD's) **2. Iodines**	**UNIT**	**LLD Value**	**ODCM Required LLD***
I-131	uCi/cc	2.83E-13	1E-12
I-133	uCi/cc	3.56E-12	1E-10
I-135	uCi/cc	6.00E-09	None
NUCLIDE LOWER LIMITS OF DETECTION (LLD's) **3. Particulates and Tritium**	**UNIT**	**LLD Value**	**ODCM Required LLD***
H-3	uCi/cc	3.23E-11	1E-06
Sr-89	uCi/cc	2.30E-14	1E-11
Sr-90	uCi/cc	8.77E-15	1E-11
Cs-134	uCi/cc	1.47E-13	1E-11
Cs-137	uCi/cc	2.49E-13	1E-11
Ba-140	uCi/cc	4.25E-13	None
La-140	uCi/cc	6.22E-13	None
Mn-54	uCi/cc	1.86E-13	1E-11
Co-58	uCi/cc	2.06E-13	1E-11
Fe-59	uCi/cc	2.47E-13	1E-11
Co-60	uCi/cc	4.83E-13	1E-11
Zn-65	uCi/cc	4.31E-13	1E-11
Mo-99	uCi/cc	3.12E-12	1E-11
Ce-141	uCi/cc	2.92E-13	1E-11
Ce-144	uCi/cc	1.11E-12	1E-11

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

ATTACHMENT A (Page 4 of 5)
EFFLUENT & WASTE DISPOSABLE SEMI-ANNUAL REPORT

LIQUID EFFLUENTS – SUMMATION OF ALL RELEASES

A. FISSION & ACTIVATION GASES	UNIT	FIRST QUARTER	SECOND QUARTER	Est. Total Error %
1. Total Release (not including tritium, gases & alpha)	Ci	1.33E-03	2.52E-03	5.6
2. Average diluted concentration during batch discharges for the period	µCi/mL	1.36E-10	1.53E-10	
3. Percent of applicable limit*	WB %	1.02E-01	1.70E-01	
	O %	4.83E-02	8.10E-02	
4. Maximum diluted concentration during batch discharges	µCi/mL	2.81E-10	5.27E-10	
B. TRITIUM				
1. Total Release	Ci	3.13E+00	4.09E+00	4.1
2. Average diluted concentration during batch discharges for the period	µCi/mL	3.20E-07	2.48E-07	
3. Percent of applicable limit	%	1.07E-02	8.28E-03	
C. DISSOLVED & ENTRAINED GASES				
1. Total Release	Ci	<LLD*	4.96E-05	5.6
2. Average diluted concentration during batch discharges for the period	µCi/mL	<LLD*	3.01E-12	
3. Percent of applicable limit	%	NA	1.50E-06	
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	1.88E+06	1.65E+06	
F. VOLUME OF DILUTION WATER USED DURING BATCH DISCHARGES	Liters	9.78E+09	1.65E+10	
G. TOTAL VOLUME OF DILUTION WATER USED DURING PERIOD (quarter)	Liters	2.63E+11	4.69E+11	

* Whole Body/Organ (ODCM)

ATTACHMENT A (Page 5 of 5)
EFFLUENT & WASTE DISPOSABLE SEMI-ANNUAL REPORT

LIQUID EFFLUENTS

		CONTINUOUS MODE		BATCH MODE	
NUCLIDES RELEASED	**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	<LLD*	<LLD*	6.80E-04	1.78E-03
I-131	Ci	<LLD*	<LLD*	<LLD*	<LLD*
Co-60	Ci	<LLD*	<LLD*	5.40E-04	6.66E-04
Co-58	Ci	<LLD*	<LLD*	<LLD*	<LLD*
Fe-59	Ci	<LLD*	<LLD*	<LLD*	<LLD*
Zn-65	Ci	<LLD*	<LLD*	<LLD*	<LLD*
Mn-54	Ci	<LLD*	<LLD*	5.59E-05	3.34E-05
Cr-51	Ci	<LLD*	<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*	1.44E-05
Ba-140	Ci	<LLD*	<LLD*	<LLD*	<LLD*
La-140	Ci	<LLD*	<LLD*	<LLD*	<LLD*
Fe-55	Ci	<LLD*	<LLD*	<LLD*	2.23E-05
Sb-124	Ci	<LLD*	<LLD*	4.96E-05	<LLD*
Total for Period (above)	Ci	**<LLD***	**<LLD***	**1.33E-03**	**2.52E-03**
Xe-133	Ci	<LLD*	<LLD*	<LLD*	4.96E-05
Xe-135	Ci	<LLD*	<LLD*	<LLD*	<LLD*

* Actual liquid LLDs reported on next page.

Prepared by: _____ Date: 04/01/02

Approved by: _____ Date: 4.2.02

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EFFLUENT & WASTE DISPOSABLE ANNUAL REPORT

2001

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	3.92E-06	1E-05
Sr-89	uCi/cc	8.12E-09	5E-08
Sr-90	uCi/cc	2.13E-09	5E-08
Fe-55	uCi/cc	1.23E-07	1E-06
Kr-85	uCi/cc	1.42E-05	None*
Kr-87	uCi/cc	1.50E-07	1E-05
Kr-88	uCi/cc	1.89E-07	1E-05
Xe-133	uCi/cc	1.50E-07	1E-05
Xe-133m	uCi/cc	3.90E-07	1E-05
Xe-135	uCi/cc	4.66E-08	1E-05
Xe-138	uCi/cc	6.45E-07	1E-05
Mn-54	uCi/cc	7.86E-08	5E-07
Co-58	uCi/cc	6.29E-08	5E-07
Co-60	uCi/cc	1.35E-07	5E-07
Zn-65	uCi/cc	1.32E-07	5E-07
Mo-99	uCi/cc	4.55E-07	5E-07
Ag-110m	uCi/cc	4.32E-08	None
Sb-124	uCi/cc	4.23E-08	None
I-131	uCi/cc	5.44E-08	1E-06
Cs-134	uCi/cc	5.46E-08	5E-07
Ba-140	uCi/cc	2.18E-07	None
La-140	uCi/cc	2.75E-08	None
Cs-137	uCi/cc	6.14E-08	5E-07
Ce-141	uCi/cc	1.01E-07	5E-07
Ce-144	uCi/cc	3.78E-07	5E-06

* Kr-85 required to be calculated per UFSAR section 9.1.3.3.

Attachment B
Effluent and Waste Disposal Semiannual Report Supplemental Information
Quad Cities Nuclear Power Station, January – June 2001
SVP-02-024

ATTACHMENT C (Page 1 of 4)
Effluent and Waste Disposal Semiannual Report

Supplemental Information

Facility: Quad Cities Nuclear Power Station January – June 2001

Licensee: Commonwealth Edison 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.

ATTACHMENT C (Page 2 of 4)
Effluent and Waste Disposal Semiannual Report

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 0.886 Mev for the First quarter, and 0.943 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 C (Page 3 of 4)
Effluent and Waste Disposal Semiannual Report

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 Fe 55. 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 Fe 55 analysis. On a real time basis, the portion of the "percent of applicable limit" for these contributors is based on projections using scaling factors. The actual results are obtained by editing the ODCM software inputs when the vendor results become available. Therefore, the "percent of applicable limits" in this report are actual.

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

e. Estimated Total Error Percent

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

ATTACHMENT C (Page 4 of 4)
Effluent and Waste Disposal Semiannual Report

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:	19,340 minutes
3.	Maximum time:	1,240 minutes
4.	Average time:	1,138 minutes
5.	Minimum time:	1,040 minutes
6.	Average stream flow:	48.2 gpm (discharge) 3.59E+05 gpm (dilution)

b. Gaseous – None.

6. Abnormal Releases

a. Gaseous- None.

b. Liquid – None.

Attachment C
Effluent and Waste Disposal Semiannual Report
Quad Cities Nuclear Power Station, July – December 2001
SVP-02-024

ATTACHMENT A (Page 1 of 5)
EFFLUENT & WASTE DISPOSABLE SEMI-ANNUAL REPORT

GASEOUS EFFLUENTS – SUMMATION OF ALL RELEASES

Period: July – December 2001

A. FISSION & ACTIVATION GASES	UNIT	THIRD QUARTER	FOURTH QUARTER	Est. Total Error %
1. Total Release	Ci	5.17E+01	8.42E+01	12.4
2. Average release rate for the period	µCi/sec	6.51E+00	1.06E+01	
3. *Percent of ODCM limit Chimney & Stack	%	5.11E-03	8.07E-03	
		1.34E-03	2.13E-03	

* NOBLE GAS GAMMA/NOBLE GAS BETA DOSE LIMITS

B. IODINE				
1. Total Iodine-131	Ci	3.08E-03	3.15E-03	40.0
2. Average release rate for the period	µCi/sec	3.87E-04	3.96E-04	

C. PARTICULATES				
1. Particulates with half-lives >8 days	Ci	9.27E-03	9.41E-03	30.1
2. Average release rate for the period	µCi/sec	1.17E-03	1.18E-03	
3. Gross alpha radioactivity	Ci	3.21E-06	1.45E-06	

D. TRITIUM				
1. Total Release	Ci	3.16E+01	2.24E+01	8.1
2. Average release rate for the period	µCi/sec	3.98E+00	2.81E+00	

E. IODINE 131 & 133,TRITIUM & PARTICULATE			
1. Percent of ODCM limit Chimney & Stack	%	2.65E+00	2.70E+00

ATTACHMENT A (Page 2 of 5)
EFFLUENT & WASTE DISPOSABLE SEMI-ANNUAL REPORT

MAIN CHIMNEY GASEOUS EFFLUENTS

		CONTINUOUS MODE		BATCH MODE	
NUCLIDES RELEASED 1. Fission gases	**UNIT**	**THIRD QUARTER**	**FOURTH QUARTER**	**THIRD QUARTER**	**FOURTH QUARTER**
Kr-85	Ci	<LLD*	<LLD*	NA	NA
Kr-85m	Ci	7.75E-01	8.65E-01	NA	NA
Kr-87	Ci	1.49E+00	2.62E+00	NA	NA
Kr-88	Ci	9.81E-01	1.70E+00	NA	NA
Xe-131m	Ci	2.22E-02	4.91E-02	NA	NA
Xe-133	Ci	3.13E+00	5.18E+00	NA	NA
Xe-135	Ci	1.61E+00	4.15E+00	NA	NA
Xe-135m	Ci	9.02E+00	1.62E+01	NA	NA
Xe-138	Ci	3.45E+01	5.33E+01	NA	NA
Ar-41	Ci	1.66E-01	1.16E-01	NA	NA
Total for Period	Ci	**5.17E+01**	**8.42E+01**	**NA**	**NA**
NUCLIDES RELEASED 2. Iodines	**UNIT**	**THIRD QUARTER**	**FOURTH QUARTER**	**THIRD QUARTER**	**FOURTH QUARTER**
I-131	Ci	3.05E-03	3.13E-03	NA	NA
I-133	Ci	8.53E-03	9.19E-03	NA	NA
I-135	Ci	<LLD*	1.14E-03	NA	NA
Total for period	Ci	**1.16E-02**	**1.35E-02**	**NA**	**NA**
NUCLIDES RELEASED 3. Particulates	**UNIT**	**THIRD QUARTER**	**FOURTH QUARTER**	**THIRD QUARTER**	**FOURTH QUARTER**
Sr-89	Ci	8.67E-04	9.76E-04	NA	NA
Sr-90	Ci	2.40E-06	3.13E-06	NA	NA
Cs-134	Ci	<LLD*	<LLD*	NA	NA
Cs-137	Ci	<LLD*	<LLD*	NA	NA
Ba-140	Ci	3.22E-03	3.36E-03	NA	NA
La-140	Ci	1.81E-03	2.05E-03	NA	NA
Cr-51	Ci	<LLD*	<LLD*	NA	NA
Mn-54	Ci	1.75E-03	1.64E-03	NA	NA
Co-58	Ci	<LLD*	<LLD*	NA	NA
Co-60	Ci	1.06E-03	1.01E-03	NA	NA
Nb-95	Ci	1.17E-05	<LLD	NA	NA
Mo-99	Ci	<LLD*	<LLD*	NA	NA
Ag-110m	Ci	3.86E-05	2.14E-05	NA	NA
Total for Period	Ci	**8.76E-03**	**9.06E-03**	**NA**	**NA**

* Actual gaseous LLDs reported after page 3 of 5 of this checklist.

ATTACHMENT A (Page 3 of 5)
EFFLUENT & WASTE DISPOSABLE SEMI-ANNUAL REPORT

REACTOR VENTILATION GASEOUS EFFLUENTS

		CONTINUOUS MODE		BATCH MODE	
NUCLIDES RELEASED 1. Fission gases	**UNIT**	**THIRD QUARTER**	**FOURTH QUARTER**	**THIRD QUARTER**	**FOURTH 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	<LLD*	<LLD*	NA	NA
Xe-135m	Ci	<LLD*	<LLD*	NA	NA
Xe-138	Ci	<LLD*	<LLD*	NA	NA
AR-41		<LLD*	<LLD*	NA	NA
Total for Period	Ci	**<LLD***	**<LLD***	**NA**	**NA**
NUCLIDES RELEASED 2. Iodines	**UNIT**	**THIRD QUARTER**	**FOURTH QUARTER**	**THIRD QUARTER**	**FOURTH QUARTER**
I-131	Ci	2.69E-05	1.31E-05	NA	NA
I-133	Ci	<LLD*	<LLD*	NA	NA
I-135	Ci	<LLD*	<LLD*	NA	NA
Total for period	Ci	**2.69E-05**	**1.31E-05**	**NA**	**NA**
NUCLIDES RELEASED 3. Particulates	**UNIT**	**THIRD QUARTER**	**FOURTH QUARTER**	**THIRD QUARTER**	**FOURTH QUARTER**
Sr-89	Ci	<LLD*	<LLD*	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	<LLD*	<LLD*	NA	NA
La-140	Ci	<LLD*	<LLD*	NA	NA
Ce-144	Ci	<LLD*	4.12E-05	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	5.11E-04	3.04E-04	NA	NA
Mo-99	Ci	<LLD*	<LLD*	NA	NA
Ag-110m	Ci	<LLD*	<LLD*	NA	NA
Total for Period	Ci	**5.11E-04**	**3.45E-04**	**NA**	**NA**

* Actual gaseous LLDs reported on next page.

EFFLUENT & WASTE DISPOSABLE ANNUAL REPORT

2001

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	4.02E-06	None
Kr-85m	uCi/cc	1.67E-08	None
Kr-87	uCi/cc	3.35E-08	1E-04
Kr-88	uCi/cc	4.18E-08	1E-04
Xe-131m	uCi/cc	6.00E-07	None
Xe-133	uCi/cc	2.76E-08	1E-04
Xe-133m	uCi/cc	8.88E-08	1E-04
Xe-135	uCi/cc	1.16E-08	1E-04
Xe-135m	uCi/cc	1.58E-07	1E-04
Xe-138	uCi/cc	1.71E-07	1E-04
Ar-41	uCi/cc	7.19E-08	None
NUCLIDE LOWER LIMITS OF DETECTION (LLD's) **2. Iodines**	**UNIT**	**LLD Value**	**ODCM Required LLD***
I-131	uCi/cc	2.83E-13	1E-12
I-133	uCi/cc	3.56E-12	1E-10
I-135	uCi/cc	6.00E-09	None
NUCLIDE LOWER LIMITS OF DETECTION (LLD's) **3. Particulates and Tritium**	**UNIT**	**LLD Value**	**ODCM Required LLD***
H-3	uCi/cc	3.23E-11	1E-06
Sr-89	uCi/cc	2.30E-14	1E-11
Sr-90	uCi/cc	8.77E-15	1E-11
Cs-134	uCi/cc	1.47E-13	1E-11
Cs-137	uCi/cc	2.49E-13	1E-11
Ba-140	uCi/cc	4.25E-13	None
La-140	uCi/cc	6.22E-13	None
Mn-54	uCi/cc	1.86E-13	1E-11
Co-58	uCi/cc	2.06E-13	1E-11
Fe-59	uCi/cc	2.47E-13	1E-11
Co-60	uCi/cc	4.83E-13	1E-11
Zn-65	uCi/cc	4.31E-13	1E-11
Mo-99	uCi/cc	3.12E-12	1E-11
Ce-141	uCi/cc	2.92E-13	1E-11
Ce-144	uCi/cc	1.11E-12	1E-11

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

ATTACHMENT A (Page 4 of 5)
EFFLUENT & WASTE DISPOSABLE SEMI-ANNUAL REPORT

LIQUID EFFLUENTS – SUMMATION OF ALL RELEASES

A. FISSION & ACTIVATION GASES	UNIT	THIRD QUARTER	FOURTH QUARTER	Est. Total Error %
1. Total Release (not including tritium, gases & alpha)	Ci	8.86E-03	1.53E-02	5.6
2. Average diluted concentration during batch discharges for the period	µCi/mL	8.04E-10	8.21E-10	
3. Percent of applicable limit*	%	2.46E-01	3.11E-02	
		1.17E-01	2.01E-02	
4. Maximum diluted concentration during batch discharges	µCi/mL	1.43E-09	1.24E-09	
B. TRITIUM				
1. Total Release	Ci	3.30E+00	8.90E+00	4.1
2. Average diluted concentration during batch discharges for the period	µCi/mL	3.95E-07	1.03E-06	
3. Percent of applicable limit	%	1.32E-02	3.43E-02	
C. DISSOLVED & ENTRAINED GASES				
1. Total Release	Ci	<LLD	3.51E-05	5.6
2. Average diluted concentration during batch discharges for the period	µCi/mL	<LLD	3.19E-12	
3. Percent of applicable limit	%	NA	1.60E-06	
D. GROSS ALPHA ACTIVITY				
1. Total Release	Ci	<LLD	<LLD	14.8
2. Average diluted concentration during batch discharges for the period	µCi/mL	NA	NA	
E. VOLUME OF WASTE RELEASED (prior to dilution)	Liters	8.39E+05	1.47E+06	
F. VOLUME OF DILUTION WATER USED DURING BATCH DISCHARGES	Liters	8.16E+09	8.53E+09	
G. TOTAL VOLUME OF DILUTION WATER USED DURING PERIOD (quarter)	Liters	4.50E+11	3.49E+11	

* Whole Body/Organ (ODCM)

ATTACHMENT A (Page 5 of 5)
EFFLUENT & WASTE DISPOSABLE SEMI-ANNUAL REPORT

LIQUID EFFLUENTS

		CONTINUOUS MODE		BATCH MODE	
NUCLIDES RELEASED	**UNIT**	**THIRD QUARTER**	**FOURTH QUARTER**	**THIRD QUARTER**	**FOURTH QUARTER**
Sr-89	Ci	<LLD*	<LLD*	<LLD*	<LLD*
Sr-90	Ci	<LLD*	<LLD*	1.92E-04	<LLD*
Cs-134	Ci	<LLD*	<LLD*	<LLD*	<LLD*
Cs-137	Ci	2.01E-05	5.57E-05	1.28E-03	2.20E-04
I-131	Ci	<LLD*	<LLD*	<LLD*	<LLD*
Co-60	Ci	5.60E-04	2.41E-03	2.06E-03	1.05E-03
Co-58	Ci	1.77E-05	1.06E-05	<LLD*	<LLD*
Fe-59	Ci	<LLD*	<LLD*	<LLD*	7.95E-05
Zn-65	Ci	1.34E-04	6.57E-04	<LLD*	<LLD*
Mn-54	Ci	5.88E-04	2.86E-03	3.63E-04	2.26E-04
Cr-51	Ci	<LLD*	<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*	2.27E-05	5.45E-04
Ba-140	Ci	<LLD*	<LLD*	<LLD*	<LLD*
La-140	Ci	<LLD*	<LLD*	<LLD*	1.48E-05
Fe-55	Ci	1.45E-04	2.77E-04	3.48E-03	6.88E-03
Sb-124	Ci	<LLD	<LLD	<LLD	1.11E-05
Total for Period (above)	Ci	**1.46E-03**	**6.27E-03**	**7.40E-03**	**9.03E-03**
Xe-133	Ci	<LLD*	<LLD*	<LLD*	3.51E-05
Xe-135	Ci	<LLD*	<LLD*	<LLD*	<LLD*

* Actual liquid LLDs reported on next page.

Prepared by: _____ Date: 04/01/02

Approved by: _____ Date: 4.2.02

PAGE 5A

EFFLUENT & WASTE DISPOSABLE ANNUAL REPORT

2001

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	3.92E-06	1E-05
Sr-89	uCi/cc	8.12E-09	5E-08
Sr-90	uCi/cc	2.13E-09	5E-08
Fe-55	uCi/cc	1.23E-07	1E-06
Kr-85	uCi/cc	1.42E-05	None*
Kr-87	uCi/cc	1.50E-07	1E-05
Kr-88	uCi/cc	1.89E-07	1E-05
Xe-133	uCi/cc	1.50E-07	1E-05
Xe-133m	uCi/cc	3.90E-07	1E-05
Xe-135	uCi/cc	4.66E-08	1E-05
Xe-138	uCi/cc	6.45E-07	1E-05
Mn-54	uCi/cc	7.86E-08	5E-07
Co-58	uCi/cc	6.29E-08	5E-07
Co-60	uCi/cc	1.35E-07	5E-07
Zn-65	uCi/cc	1.32E-07	5E-07
Mo-99	uCi/cc	4.55E-07	5E-07
Ag-110m	uCi/cc	4.32E-08	None
Sb-124	uCi/cc	4.23E-08	None
I-131	uCi/cc	5.44E-08	1E-06
Cs-134	uCi/cc	5.46E-08	5E-07
Ba-140	uCi/cc	2.18E-07	None
La-140	uCi/cc	2.75E-08	None
Cs-137	uCi/cc	6.14E-08	5E-07
Ce-141	uCi/cc	1.01E-07	5E-07
Ce-144	uCi/cc	3.78E-07	5E-06

* Kr-85 required to be calculated per UFSAR section 9.1.3.3.

Attachment D
Effluent and Waste Disposal Semiannual Report Supplemental Information
Quad Cities Nuclear Power Station, July - December 2001
SVP-02-024

ATTACHMENT C (Page 1 of 5)
Effluent and Waste Disposal Semiannual Report

Supplemental Information

Facility: Quad Cities Nuclear Power Station July – December 2001

Licensee: Commonwealth Edison 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.

ATTACHMENT C (Page 2 of 5)
Effluent and Waste Disposal Semiannual Report

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 0.943 Mev for the third quarter, and 0.889 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.

ATTACHMENT C (Page 3 of 5)
Effluent and Waste Disposal Semiannual Report

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 Fe 55. 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 Fe 55 analysis. On a real time basis, the portion of the "percent of applicable limit" for these contributors is based on projections using scaling factors. The actual results are obtained by editing the ODCM software inputs when the vendor results become available. Therefore, the "percent of applicable limits" in this report are actual.

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

e. Estimated Total Error Percent

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

ATTACHMENT C (Page 4 of 5)
Effluent and Waste Disposal Semiannual Report

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:	11
2.	Total time:	13,610 minutes
3.	Maximum time:	2,120 minutes
4.	Average time:	1,237 minutes
5.	Minimum time:	726 minutes
6.	Average stream flow:	47.2 gpm (discharge) 3.92E+05 gpm (dilution)

b. Gaseous

NONE.

6. Abnormal Releases

a. Liquid

1. In September 2001, a leak developed on the 1A RHR heat exchanger. While the RHR service water system is idle, the leakage into the service water side of the heat exchanger can occur since the pressure is higher on the reactor (or suppression pool) side. The activity from this leak was included in the normal monthly liquid effluent releases and is reported under the "continuous" liquid section of this report. The leak is scheduled to be repaired in May 2002.

ATTACHMENT C (Page 5 of 5)
Effluent and Waste Disposal Semiannual Report

b. Gaseous

1. On July 24, 2001, a turbine building ventilation ductwork door was found open. It was closed immediately. The cause was a faulty latch, which was repaired. At the time, the Main Chimney alternate continuous sampling equipment was inoperable. This resulted in a small portion of the flow through the door to be released to the environment without being continuously monitored by the main chimney radioactive monitoring equipment. It was possible to determine when the door opened from reviewing Main Chimney flow data. The radioactivity released during this event was determined by proportioning the sample concentration obtained with the flow that escaped through the open door. This activity was included in the normal monthly effluents for July 2001.

2. In August 2001, a slight increase in iodine and particulate activity was identified on the Main Chimney samples. The source of activity was confirmed to be from the U-1 turbine building ventilation. A steam leak on a drain line from the 1A Steam-Jet Air Ejector Room was identified as the cause for the increased activity. The steam leak was repaired in December 2001. The increased activity was included in the normal monthly effluent releases for the affected months.

3. On December 18, 2001, a fuel leak developed on U-1. The leak was determined to be a pin-hole leak and was successfully suppressed on December 23, 2001. The increased noble gas activity, due to the fuel leak, resulted in a slight increase in the calculated effluent releases and was included in the normal monthly effluent releases for December 2001. The leaking fuel was replaced in January 2002 during a forced outage (Q1F49).

Attachment E
Quad Cities Station Meteorological Site Quarterly Joint-Frequency Wind Rose Tables for 2001
SVP-02-024

Quad Cities Nuclear Station
33 ft. Wind Speed and Direction

January-March, 2001
196Ft-33Ft Delta-T (F)

Number of Observations = 2057
Values are Percent Occurrence

SPEED CLASS	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL	STABILITY CLASSES 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	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.00	0.00	0.00	0.15	0.15							
MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10		0.10						
1 SU	0.00	0.00	0.00	0.15	0.05	0.00	0.05	0.10	0.00	0.00	0.10	0.10	0.05	0.05	0.00	0.00	0.63			0.63					
- N	0.05	0.34	0.10	0.29	0.39	0.49	0.49	0.53	0.49	0.44	0.19	0.24	0.44	0.53	0.39	0.19	5.59				5.59				
3 SS	0.10	0.10	0.29	0.44	0.63	0.92	1.07	0.68	0.49	0.29	0.34	0.34	0.78	0.68	0.24	0.15	7.54					7.54			
MS	0.10	0.39	0.49	0.24	0.10	0.58	0.29	0.24	0.24	0.05	0.00	0.24	0.39	0.34	0.19	0.24	4.13						4.13		
ES	0.05	0.05	0.00	0.15	0.24	0.24	0.15	0.10	0.05	0.00	0.05	0.10	0.39	0.29	0.15	0.29	2.28							2.28	
																									20.42
EU	0.10	0.10	0.24	0.29	0.24	0.63	0.49	0.29	0.34	0.58	0.53	0.53	1.70	0.63	0.49	0.68	7.88	7.88							
MU	0.10	0.05	0.00	0.10	0.05	0.05	0.19	0.15	0.00	0.05	0.10	0.10	0.39	0.19	0.19	0.15	1.85		1.85						
4 SU	0.05	0.00	0.05	0.19	0.05	0.19	0.00	0.19	0.24	0.24	0.29	0.19	0.39	0.15	0.39	0.34	2.97			2.97					
- N	0.49	0.19	0.53	0.78	0.63	0.97	1.12	0.58	0.29	0.44	1.07	2.09	5.40	4.76	3.40	1.17	23.92				23.92				
7 SS	0.10	0.05	0.19	0.19	0.88	1.12	0.44	0.63	0.49	0.58	1.46	0.78	2.19	0.88	0.39	0.15	10.50					10.50			
MS	0.00	0.00	0.05	0.15	0.24	0.34	0.49	0.10	0.05	0.10	0.00	0.00	0.10	0.10	0.05	0.00	1.75						1.75		
ES	0.00	0.00	0.00	0.05	0.00	0.05	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.10	0.00	0.34							0.34	
																									49.20
EU	0.19	0.19	0.00	0.05	0.29	0.00	0.44	0.05	0.15	0.24	0.10	0.63	1.07	1.46	1.02	0.24	6.13	6.13							
MU	0.00	0.05	0.00	0.00	0.10	0.05	0.00	0.00	0.00	0.05	0.05	0.19	0.29	0.05	0.05	0.00	0.88		0.88						
8 SU	0.05	0.15	0.00	0.00	0.05	0.10	0.05	0.00	0.00	0.00	0.05	0.10	0.63	0.49	0.34	0.10	2.09			2.09					
- N	0.63	0.39	0.00	0.00	1.41	1.17	0.39	0.00	0.00	0.10	0.97	1.41	2.77	5.54	2.38	0.19	17.36				17.36				
1 SS	0.00	0.05	0.00	0.10	0.05	0.05	0.15	0.00	0.15	0.29	0.29	0.10	0.34	0.19	0.05	0.00	1.80					1.80			
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	
																									28.25
EU	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	0.29	0.00	0.10	0.49	0.49							
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	0.05	0.00	0.00	0.05		0.05						
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	0.05	0.05	0.00	0.00	0.10			0.10					
- N	0.00	0.00	0.00	0.00	0.00	0.19	0.00	0.00	0.00	0.00	0.00	0.00	0.34	0.24	0.10	0.00	0.88				0.88				
1 SS	0.00	0.00	0.00	0.00	0.10	0.05	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	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	
																									1.70

Quad Cities Nuclear Station
33 ft. Wind Speed and Direction

January-March, 2001
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
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	0.15	0.29	0.00	0.00	0.00	0.44				0.44				
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	
																									0.44
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						
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	1.99	2.19	1.94	3.16	5.54	7.19	5.88	3.74	2.97	3.45	5.64	7.29	18.08	17.02	9.92	3.99	100.00	14.63	2.87	5.79	48.18	20.03	5.88	2.63	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-
0.29	0.39	0.24	0.34	0.58	0.63	0.92	0.34	0.49	0.83	0.63	1.17	2.87	2.38	1.51	1.02	14.63	Extremely Unstable
0.10	0.10	0.00	0.10	0.15	0.10	0.19	0.24	0.00	0.10	0.15	0.29	0.68	0.29	0.24	0.15	2.87	Moderately Unstable
0.10	0.15	0.05	0.34	0.15	0.29	0.10	0.29	0.24	0.24	0.44	0.39	1.12	0.73	0.73	0.44	5.79	Slightly Unstable
1.17	0.92	0.63	1.07	2.43	2.82	1.99	1.12	0.78	0.97	2.24	3.89	9.24	11.08	6.27	1.56	48.18	Neutral
0.19	0.19	0.49	0.73	1.65	2.14	1.65	1.31	1.12	1.17	2.14	1.22	3.31	1.75	0.68	0.29	20.03	Slightly Stable
0.10	0.39	0.53	0.39	0.34	0.92	0.78	0.34	0.29	0.15	0.00	0.24	0.49	0.44	0.24	0.24	5.88	Moderately Stable
0.05	0.05	0.00	0.19	0.24	0.29	0.24	0.10	0.05	0.00	0.05	0.10	0.39	0.34	0.24	0.29	2.63	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
0.29	0.88	0.88	1.26	1.46	2.24	2.04	1.75	1.26	0.78	0.68	1.02	2.14	1.90	0.97	0.88	20.42	1.0- 3.5 mph
0.83	0.39	1.07	1.75	2.09	3.35	2.82	1.94	1.41	1.99	3.45	3.69	10.16	6.76	5.01	2.48	49.20	3.6- 7.5 mph
0.88	0.83	0.00	0.15	1.90	1.36	1.02	0.05	0.29	0.68	1.46	2.43	5.10	7.73	3.84	0.53	28.25	7.6-12.5 mph
0.00	0.10	0.00	0.00	0.10	0.24	0.00	0.00	0.00	0.00	0.05	0.00	0.39	0.63	0.10	0.10	1.70	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	0.15	0.29	0.00	0.00	0.00	0.44	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

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Quad Cities Nuclear Station
296 ft. Wind Speed and Direction

January-March, 2001
296Ft-33Ft Delta-T (F)

Number of Observations = 2044
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	0.00	0.00	0.00	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	0.10	0.20	0.00	0.10	0.24	0.24	0.00	0.10	0.15	0.05	0.00	0.00	0.10	0.00	0.05	0.00	1.32				1.32				
3 SS	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.05	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.15					0.15			
MS	0.00	0.00	0.05	0.10	0.10	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.29						0.29		
ES	0.00	0.05	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10							0.10	
																									1.86
EU	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.05	0.00	0.10	0.05	0.29	0.29							
MU	0.00	0.05	0.10	0.15	0.05	0.10	0.05	0.10	0.00	0.10	0.20	0.00	0.44	0.05	0.00	0.15	1.52		1.52						
4 SU	0.05	0.05	0.05	0.20	0.10	0.34	0.00	0.15	0.15	0.15	0.05	0.24	0.05	0.15	0.34	0.59	2.64			2.64					
- N	0.10	0.00	0.15	0.24	0.78	0.34	0.39	0.44	0.54	0.44	0.34	0.64	0.44	0.49	1.03	0.49	6.85				6.85				
7 SS	0.10	0.10	0.15	0.00	0.29	0.10	0.15	0.20	0.15	0.39	0.20	0.24	0.15	0.05	0.00	0.29	2.54					2.54			
MS	0.05	0.15	0.15	0.05	0.24	0.00	0.10	0.05	0.05	0.00	0.05	0.00	0.00	0.20	0.05	0.15	1.27						1.27		
ES	0.10	0.05	0.10	0.05	0.05	0.00	0.05	0.05	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.15	0.64							0.64	
																									15.75
EU	0.00	0.00	0.00	0.00	0.10	0.05	0.10	0.10	0.00	0.10	0.24	0.05	0.73	0.24	0.20	0.20	2.10	2.10							
MU	0.05	0.05	0.00	0.00	0.05	0.24	0.20	0.10	0.10	0.00	0.10	0.20	0.34	0.29	0.24	0.20	2.15		2.15						
8 SU	0.10	0.15	0.00	0.00	0.10	0.05	0.20	0.05	0.00	0.20	0.00	0.20	0.24	0.29	0.44	0.20	2.20			2.20					
- N	1.08	0.20	0.44	0.54	0.29	0.24	0.73	0.88	0.73	0.64	0.59	0.93	1.71	1.47	2.40	1.47	14.33				14.33				
1 SS	0.24	0.05	0.20	0.05	0.24	0.64	0.78	0.93	0.44	0.59	0.68	0.39	0.68	0.73	1.03	0.24	7.93					7.93			
2 MS	0.15	0.29	0.10	0.05	0.39	0.39	0.15	0.20	0.15	0.10	0.20	0.00	0.00	0.10	0.15	0.10	2.50						2.50		
ES	0.05	0.05	0.00	0.05	0.00	0.00	0.05	0.00	0.05	0.10	0.05	0.00	0.00	0.10	0.00	0.05	0.54							0.54	
																									31.75
EU	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.05	0.15	0.15	0.05	0.15	0.24	0.39	0.54	0.05	1.81	1.81							
1 MU	0.05	0.10	0.00	0.00	0.05	0.00	0.00	0.05	0.05	0.05	0.15	0.15	0.20	0.05	0.29	0.05	1.22		1.22						
3 SU	0.00	0.05	0.05	0.00	0.24	0.05	0.05	0.05	0.05	0.10	0.10	0.10	0.73	0.10	0.29	0.15	2.10			2.10					
- N	0.83	0.68	0.15	0.05	0.49	1.03	0.68	0.20	0.44	0.54	0.59	1.03	3.13	3.67	5.28	0.93	19.72				19.72				
1 SS	0.00	0.05	0.00	0.24	0.10	0.34	0.83	0.44	0.78	0.49	1.37	0.24	1.08	1.13	0.88	0.10	8.07					8.07			
8 MS	0.10	0.05	0.05	0.00	0.00	0.15	0.20	0.49	0.15	0.39	0.10	0.00	0.05	0.05	0.34	0.10	2.20						2.20		
ES	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05	0.00	0.05	0.20							0.20	
																									35.32

Quad Cities Nuclear Station
296 ft. Wind Speed and Direction

January-March, 2001
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
EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.10	0.00	0.00	0.05	0.29	0.34	0.05	0.88	0.88							
1 MU	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.10	0.00	0.59	0.00	0.78		0.78						
9 SU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.05	0.15	0.10	0.10	0.05	0.49			0.49					
- N	0.00	0.05	0.49	0.05	0.24	0.54	0.20	0.00	0.00	0.10	0.34	0.59	1.32	1.47	2.74	0.05	8.17				8.17				
2 SS	0.00	0.10	0.00	0.00	0.00	0.00	0.24	0.05	0.00	0.49	0.34	0.10	0.20	0.15	0.00	0.00	1.66					1.66			
4 MS	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		
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	
																									12.04
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	0.05	0.05	0.00	0.10	0.10							
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						
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	0.10	0.00	0.10			0.10					
> N	0.00	0.00	0.73	0.00	0.00	0.05	0.20	0.00	0.00	0.00	0.10	0.05	0.59	0.54	0.29	0.00	2.54				2.54				
2 SS	0.00	0.00	0.00	0.00	0.00	0.20	0.00	0.00	0.00	0.10	0.05	0.00	0.00	0.10	0.00	0.00	0.44					0.44			
4 MS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.00	0.00	0.00	0.00	0.00	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	
																									3.28
TOT	3.13	2.64	2.94	1.96	4.16	5.19	5.38	4.65	4.31	5.53	5.87	5.33	12.87	12.33	17.86	5.87	100.00	5.19	5.68	7.53	52.94	20.79	6.41	1.47	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	0.05	0.00	0.05	0.10	0.05	0.10	0.15	0.20	0.39	0.29	0.20	1.08	0.98	1.22	0.34	5.19	Extremely Unstable
0.10	0.24	0.10	0.15	0.15	0.34	0.24	0.24	0.15	0.20	0.44	0.34	1.08	0.39	1.13	0.39	5.68	Moderately Unstable
0.15	0.24	0.10	0.20	0.44	0.44	0.24	0.24	0.20	0.49	0.15	0.59	1.17	0.64	1.27	0.98	7.53	Slightly Unstable
2.10	1.13	1.96	0.98	2.05	2.45	2.20	1.61	1.86	1.76	1.96	3.23	7.29	7.63	11.79	2.94	52.94	Neutral
0.34	0.29	0.34	0.29	0.64	1.32	2.01	1.61	1.42	2.05	2.64	0.98	2.15	2.15	1.91	0.64	20.79	Slightly Stable
0.29	0.49	0.34	0.20	0.73	0.54	0.49	0.73	0.44	0.54	0.34	0.00	0.05	0.34	0.54	0.34	6.41	Moderately Stable
0.15	0.20	0.10	0.10	0.05	0.05	0.10	0.05	0.05	0.10	0.05	0.00	0.05	0.20	0.00	0.24	1.47	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
0.10	0.24	0.05	0.20	0.34	0.34	0.05	0.10	0.20	0.05	0.00	0.00	0.15	0.00	0.05	0.00	1.86	1.0- 3.5 mph
0.39	0.39	0.68	0.73	1.52	0.88	0.73	0.98	0.88	1.13	0.83	1.13	1.13	0.98	1.52	1.86	15.75	3.6- 7.5 mph
1.66	0.78	0.73	0.68	1.17	1.61	2.20	2.25	1.47	1.71	1.86	1.76	3.72	3.23	4.45	2.45	31.75	7.6-12.5 mph
0.98	1.03	0.24	0.29	0.88	1.57	1.76	1.27	1.61	1.71	2.35	1.66	5.48	5.43	7.63	1.42	35.32	12.6-18.5 mph
0.00	0.20	0.49	0.05	0.24	0.54	0.44	0.05	0.05	0.83	0.68	0.73	1.81	2.01	3.77	0.15	12.04	18.6-24.5 mph
0.00	0.00	0.73	0.00	0.00	0.24	0.20	0.00	0.10	0.10	0.15	0.05	0.59	0.68	0.44	0.00	3.28	>24.5 mph

Quad Cities Nuclear Station
33 ft. Wind Speed and Direction

January-March, 2001
196Ft-33Ft Delta-T (F)

Number of Observations = 2057
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	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.00	0.00	0.00	0.15	0.15							
MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10		0.10						
1 SU	0.00	0.00	0.00	0.15	0.05	0.00	0.05	0.10	0.00	0.00	0.10	0.10	0.05	0.05	0.00	0.00	0.63			0.63					
- N	0.05	0.34	0.10	0.29	0.39	0.49	0.49	0.53	0.49	0.44	0.19	0.24	0.44	0.53	0.39	0.19	5.59				5.59				
3 SS	0.10	0.10	0.29	0.44	0.63	0.92	1.07	0.68	0.49	0.29	0.34	0.34	0.78	0.68	0.24	0.15	7.54					7.54			
MS	0.10	0.39	0.49	0.24	0.10	0.58	0.29	0.24	0.24	0.05	0.00	0.24	0.39	0.34	0.19	0.24	4.13						4.13		
ES	0.05	0.05	0.00	0.15	0.24	0.24	0.15	0.10	0.05	0.00	0.05	0.10	0.39	0.29	0.15	0.29	2.28							2.28	
																									20.42
EU	0.10	0.10	0.24	0.29	0.24	0.63	0.49	0.29	0.34	0.58	0.53	0.53	1.70	0.63	0.49	0.68	7.88	7.88							
MU	0.10	0.05	0.00	0.10	0.05	0.05	0.19	0.15	0.00	0.05	0.10	0.10	0.39	0.19	0.19	0.15	1.85		1.85						
4 SU	0.05	0.00	0.05	0.19	0.05	0.19	0.00	0.19	0.24	0.24	0.29	0.19	0.39	0.15	0.39	0.34	2.97			2.97					
- N	0.49	0.19	0.53	0.78	0.63	0.97	1.12	0.58	0.29	0.44	1.07	2.09	5.40	4.76	3.40	1.17	23.92				23.92				
7 SS	0.10	0.05	0.19	0.19	0.88	1.12	0.44	0.63	0.49	0.58	1.46	0.78	2.19	0.88	0.39	0.15	10.50					10.50			
MS	0.00	0.00	0.05	0.15	0.24	0.34	0.49	0.10	0.05	0.10	0.00	0.00	0.10	0.10	0.05	0.00	1.75						1.75		
ES	0.00	0.00	0.00	0.05	0.00	0.05	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.10	0.00	0.34							0.34	
																									49.20
EU	0.19	0.19	0.00	0.05	0.29	0.00	0.44	0.05	0.15	0.24	0.10	0.63	1.07	1.46	1.02	0.24	6.13	6.13							
MU	0.00	0.05	0.00	0.00	0.10	0.05	0.00	0.00	0.00	0.05	0.05	0.19	0.29	0.05	0.05	0.00	0.88		0.88						
8 SU	0.05	0.15	0.00	0.00	0.05	0.10	0.05	0.00	0.00	0.00	0.05	0.10	0.63	0.49	0.34	0.10	2.09			2.09					
- N	0.63	0.39	0.00	0.00	1.41	1.17	0.39	0.00	0.00	0.10	0.97	1.41	2.77	5.54	2.38	0.19	17.36				17.36				
1 SS	0.00	0.05	0.00	0.10	0.05	0.05	0.15	0.00	0.15	0.29	0.29	0.10	0.34	0.19	0.05	0.00	1.80					1.80			
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	
																									28.25
EU	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	0.29	0.00	0.10	0.49	0.49							
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	0.05	0.00	0.00	0.05		0.05						
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	0.05	0.05	0.00	0.00	0.10			0.10					
- N	0.00	0.00	0.00	0.00	0.00	0.19	0.00	0.00	0.00	0.00	0.00	0.00	0.34	0.24	0.10	0.00	0.88				0.88				
1 SS	0.00	0.00	0.00	0.00	0.10	0.05	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	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	
																									1.70

Quad Cities Nuclear Station
33 ft. Wind Speed and Direction

January-March, 2001
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	0.15	0.29	0.00	0.00	0.00	0.44				0.44				
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	
																									0.44
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						
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	1.99	2.19	1.94	3.16	5.54	7.19	5.88	3.74	2.97	3.45	5.64	7.29	18.08	17.02	9.92	3.99	100.00	14.63	2.87	5.79	48.18	20.03	5.88	2.63	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-
0.29	0.39	0.24	0.34	0.58	0.63	0.92	0.34	0.49	0.83	0.63	1.17	2.87	2.38	1.51	1.02	14.63	Extremely Unstable
0.10	0.10	0.00	0.10	0.15	0.10	0.19	0.24	0.00	0.10	0.15	0.29	0.68	0.29	0.24	0.15	2.87	Moderately Unstable
0.10	0.15	0.05	0.34	0.15	0.29	0.10	0.29	0.24	0.24	0.44	0.39	1.12	0.73	0.73	0.44	5.79	Slightly Unstable
1.17	0.92	0.63	1.07	2.43	2.82	1.99	1.12	0.78	0.97	2.24	3.89	9.24	11.08	6.27	1.56	48.18	Neutral
0.19	0.19	0.49	0.73	1.65	2.14	1.65	1.31	1.12	1.17	2.14	1.22	3.31	1.75	0.68	0.29	20.03	Slightly Stable
0.10	0.39	0.53	0.39	0.34	0.92	0.78	0.34	0.29	0.15	0.00	0.24	0.49	0.44	0.24	0.24	5.88	Moderately Stable
0.05	0.05	0.00	0.19	0.24	0.29	0.24	0.10	0.05	0.00	0.05	0.10	0.39	0.34	0.24	0.29	2.63	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
0.29	0.88	0.88	1.26	1.46	2.24	2.04	1.75	1.26	0.78	0.68	1.02	2.14	1.90	0.97	0.88	20.42	1.0- 3.5 mph
0.83	0.39	1.07	1.75	2.09	3.35	2.82	1.94	1.41	1.99	3.45	3.69	10.16	6.76	5.01	2.48	49.20	3.6- 7.5 mph
0.88	0.83	0.00	0.15	1.90	1.36	1.02	0.05	0.29	0.68	1.46	2.43	5.10	7.73	3.84	0.53	28.25	7.6-12.5 mph
0.00	0.10	0.00	0.00	0.10	0.24	0.00	0.00	0.00	0.00	0.05	0.00	0.39	0.63	0.10	0.10	1.70	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	0.15	0.29	0.00	0.00	0.00	0.44	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

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Quad Cities Nuclear Station
296 ft. Wind Speed and Direction

January-March, 2001
296Ft-33Ft Delta-T (F)

Number of Observations = 2044
Values are Percent Occurrence

SPEED CLASS	WIND DIRECTION CLASSES N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL	STABILITY CLASSES 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	0.00	0.00	0.00	0.00	0.00	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	0.10	0.20	0.00	0.10	0.24	0.24	0.00	0.10	0.15	0.05	0.00	0.00	0.10	0.00	0.05	0.00	1.32				1.32				
3 SS	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.05	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.15					0.15			
MS	0.00	0.00	0.05	0.10	0.10	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.29						0.29		
ES	0.00	0.05	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10							0.10	1.86
EU	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.05	0.00	0.10	0.05	0.29	0.29							
MU	0.00	0.05	0.10	0.15	0.05	0.10	0.05	0.10	0.00	0.10	0.20	0.00	0.44	0.05	0.00	0.15	1.52		1.52						
4 SU	0.05	0.05	0.05	0.20	0.10	0.34	0.00	0.15	0.15	0.15	0.05	0.24	0.05	0.15	0.34	0.59	2.64			2.64					
- N	0.10	0.00	0.15	0.24	0.78	0.34	0.39	0.44	0.54	0.44	0.34	0.64	0.44	0.49	1.03	0.49	6.85				6.85				
7 SS	0.10	0.10	0.15	0.00	0.29	0.10	0.15	0.20	0.15	0.39	0.20	0.24	0.15	0.05	0.00	0.29	2.54					2.54			
MS	0.05	0.15	0.15	0.05	0.24	0.00	0.10	0.05	0.05	0.00	0.05	0.00	0.00	0.20	0.05	0.15	1.27						1.27		
ES	0.10	0.05	0.10	0.05	0.05	0.00	0.05	0.05	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.15	0.64							0.64	15.75
EU	0.00	0.00	0.00	0.00	0.10	0.05	0.10	0.10	0.00	0.10	0.24	0.05	0.73	0.24	0.20	0.20	2.10	2.10							
MU	0.05	0.05	0.00	0.00	0.05	0.24	0.20	0.10	0.10	0.00	0.10	0.20	0.34	0.29	0.24	0.20	2.15		2.15						
8 SU	0.10	0.15	0.00	0.00	0.10	0.05	0.20	0.05	0.00	0.20	0.00	0.20	0.24	0.29	0.44	0.20	2.20			2.20					
- N	1.08	0.20	0.44	0.54	0.29	0.24	0.73	0.88	0.73	0.64	0.59	0.93	1.71	1.47	2.40	1.47	14.33				14.33				
1 SS	0.24	0.05	0.20	0.05	0.24	0.64	0.78	0.93	0.44	0.59	0.68	0.39	0.68	0.73	1.03	0.24	7.93					7.93			
2 MS	0.15	0.29	0.10	0.05	0.39	0.39	0.15	0.20	0.15	0.10	0.20	0.00	0.00	0.10	0.15	0.10	2.50						2.50		
ES	0.05	0.05	0.00	0.05	0.00	0.00	0.05	0.00	0.05	0.10	0.05	0.00	0.00	0.10	0.00	0.05	0.54							0.54	31.75
EU	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.05	0.15	0.15	0.05	0.15	0.24	0.39	0.54	0.05	1.81	1.81							
1 MU	0.05	0.10	0.00	0.00	0.05	0.00	0.00	0.05	0.05	0.05	0.15	0.15	0.20	0.05	0.29	0.05	1.22		1.22						
3 SU	0.00	0.05	0.05	0.00	0.24	0.05	0.05	0.05	0.05	0.10	0.10	0.10	0.73	0.10	0.29	0.15	2.10			2.10					
- N	0.83	0.68	0.15	0.05	0.49	1.03	0.68	0.20	0.44	0.54	0.59	1.03	3.13	3.67	5.28	0.93	19.72				19.72				
1 SS	0.00	0.05	0.00	0.24	0.10	0.34	0.83	0.44	0.78	0.49	1.37	0.24	1.08	1.13	0.88	0.10	8.07					8.07			
8 MS	0.10	0.05	0.05	0.00	0.00	0.15	0.20	0.49	0.15	0.39	0.10	0.00	0.05	0.05	0.34	0.10	2.20						2.20		
ES	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05	0.00	0.05	0.20							0.20	35.32

Quad Cities Nuclear Station
296 ft. Wind Speed and Direction

January-March, 2001
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	0.05	0.10	0.00	0.00	0.05	0.29	0.34	0.05	0.88	0.88							
1 MU	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.10	0.00	0.59	0.00	0.78		0.78						
9 SU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.05	0.15	0.10	0.10	0.05	0.49			0.49					
- N	0.00	0.05	0.49	0.05	0.24	0.54	0.20	0.00	0.00	0.10	0.34	0.59	1.32	1.47	2.74	0.05	8.17				8.17				
2 SS	0.00	0.10	0.00	0.00	0.00	0.00	0.24	0.05	0.00	0.49	0.34	0.10	0.20	0.15	0.00	0.00	1.66					1.66			
4 MS	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		
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	
																									12.04
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	0.05	0.05	0.00	0.10	0.10							
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						
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	0.10	0.00	0.10			0.10					
> N	0.00	0.00	0.73	0.00	0.00	0.05	0.20	0.00	0.00	0.00	0.10	0.05	0.59	0.54	0.29	0.00	2.54				2.54				
2 SS	0.00	0.00	0.00	0.00	0.00	0.20	0.00	0.00	0.00	0.10	0.05	0.00	0.00	0.10	0.00	0.00	0.44					0.44			
4 MS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.00	0.00	0.00	0.00	0.00	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	
																									3.28
TOT	3.13	2.64	2.94	1.96	4.16	5.19	5.38	4.65	4.31	5.53	5.87	5.33	12.87	12.33	17.86	5.87	100.00	5.19	5.68	7.53	52.94	20.79	6.41	1.47	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	0.05	0.00	0.05	0.10	0.05	0.10	0.15	0.20	0.39	0.29	0.20	1.08	0.98	1.22	0.34	5.19	Extremely Unstable
0.10	0.24	0.10	0.15	0.15	0.34	0.24	0.24	0.15	0.20	0.44	0.34	1.08	0.39	1.13	0.39	5.68	Moderately Unstable
0.15	0.24	0.10	0.20	0.44	0.44	0.24	0.24	0.20	0.49	0.15	0.59	1.17	0.64	1.27	0.98	7.53	Slightly Unstable
2.10	1.13	1.96	0.98	2.05	2.45	2.20	1.61	1.86	1.76	1.96	3.23	7.29	7.63	11.79	2.94	52.94	Neutral
0.34	0.29	0.34	0.29	0.64	1.32	2.01	1.61	1.42	2.05	2.64	0.98	2.15	2.15	1.91	0.64	20.79	Slightly Stable
0.29	0.49	0.34	0.20	0.73	0.54	0.49	0.73	0.44	0.54	0.34	0.00	0.05	0.34	0.54	0.34	6.41	Moderately Stable
0.15	0.20	0.10	0.10	0.05	0.05	0.10	0.05	0.05	0.10	0.05	0.00	0.05	0.20	0.00	0.24	1.47	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
0.10	0.24	0.05	0.20	0.34	0.34	0.05	0.10	0.20	0.05	0.00	0.00	0.15	0.00	0.05	0.00	1.86	1.0- 3.5 mph
0.39	0.39	0.68	0.73	1.52	0.88	0.73	0.98	0.88	1.13	0.83	1.13	1.13	0.98	1.52	1.86	15.75	3.6- 7.5 mph
1.66	0.78	0.73	0.68	1.17	1.61	2.20	2.25	1.47	1.71	1.86	1.76	3.72	3.23	4.45	2.45	31.75	7.6-12.5 mph
0.98	1.03	0.24	0.29	0.88	1.57	1.76	1.27	1.61	1.71	2.35	1.66	5.48	5.43	7.63	1.42	35.32	12.6-18.5 mph
0.00	0.20	0.49	0.05	0.24	0.54	0.44	0.05	0.05	0.83	0.68	0.73	1.81	2.01	3.77	0.15	12.04	18.6-24.5 mph
0.00	0.00	0.73	0.00	0.00	0.24	0.20	0.00	0.10	0.10	0.15	0.05	0.59	0.68	0.44	0.00	3.28	>24.5 mph

Quad Cities Nuclear Station
33 ft. Wind Speed and Direction

April-June, 2001
196Ft-33Ft Delta-T (F)

Number of Observations = 2136
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	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09							0.09	
																									0.09
EU	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	0.00	0.00	0.05	0.19	0.19							
MU	0.00	0.00	0.05	0.09	0.05	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.28		0.28						
1 SU	0.00	0.09	0.14	0.05	0.00	0.05	0.00	0.00	0.00	0.05	0.05	0.09	0.14	0.00	0.05	0.14	0.84			0.84					
- N	0.37	0.33	0.33	0.23	0.33	0.14	0.14	0.14	0.19	0.14	0.09	0.28	0.28	0.37	0.28	0.28	3.93				3.93				
3 SS	0.00	0.09	0.56	0.47	0.23	0.42	0.89	0.98	0.51	0.47	0.37	0.51	0.66	1.22	0.84	0.28	8.52					8.52			
MS	0.51	0.23	0.28	0.19	0.23	1.03	0.75	0.98	0.37	0.84	0.23	0.19	0.42	0.33	0.23	0.14	6.98						6.98		
ES	0.23	0.19	0.37	0.28	0.42	1.08	0.37	0.42	0.47	0.09	0.23	0.33	0.37	0.19	0.23	0.05	5.34							5.34	
																									26.08
EU	0.47	0.23	0.19	0.09	0.09	0.19	0.37	0.80	0.80	1.45	1.03	0.98	1.40	1.12	0.66	0.84	10.72	10.72							
MU	0.14	0.09	0.09	0.00	0.05	0.05	0.00	0.09	0.09	0.28	0.28	0.14	0.09	0.09	0.09	0.00	1.59		1.59						
4 SU	0.14	0.14	0.19	0.09	0.09	0.00	0.14	0.19	0.19	0.28	0.37	0.14	0.28	0.19	0.14	0.14	2.72			2.72					
- N	0.33	0.33	1.17	1.54	0.94	0.56	0.56	0.61	0.28	1.22	0.94	0.89	0.89	0.84	0.61	0.51	12.22				12.22				
7 SS	0.28	0.09	0.37	1.50	1.36	1.03	0.89	0.80	1.92	1.50	2.72	0.75	1.08	0.89	1.08	0.51	16.76					16.76			
MS	0.05	0.00	0.00	0.14	0.09	0.56	0.28	0.23	0.05	0.42	0.23	0.14	0.05	0.00	0.19	0.09	2.53						2.53		
ES	0.00	0.00	0.00	0.00	0.00	0.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.37							0.37	
																									46.91
EU	0.14	0.23	0.09	0.51	0.51	0.33	0.33	0.51	0.42	0.89	0.98	0.42	0.70	0.56	0.00	0.09	6.74	6.74							
MU	0.00	0.05	0.09	0.19	0.09	0.14	0.14	0.00	0.00	0.09	0.05	0.00	0.19	0.14	0.09	0.00	1.26		1.26						
8 SU	0.00	0.05	0.09	0.23	0.37	0.23	0.09	0.14	0.00	0.05	0.19	0.09	0.09	0.09	0.19	0.05	1.97			1.97					
- N	0.28	0.33	0.75	1.45	1.17	0.75	0.23	0.19	0.09	0.33	0.47	0.28	0.51	1.36	0.42	0.33	8.94				8.94				
1 SS	0.05	0.05	0.05	0.28	0.14	0.09	0.14	0.23	0.80	0.56	0.98	0.09	0.09	0.05	0.05	0.00	3.65					3.65			
2 MS	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		
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	
																									22.61
EU	0.09	0.00	0.00	0.14	0.09	0.23	0.00	0.00	0.00	0.00	0.05	0.14	0.14	0.09	0.00	0.14	1.12	1.12							
1 MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.00	0.05	0.09	0.00	0.05	0.28		0.28						
3 SU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.09	0.00	0.14	0.00	0.00	0.37			0.37					
- N	0.00	0.05	0.00	0.00	0.00	0.00	0.09	0.00	0.00	0.23	0.14	0.56	0.51	0.14	0.09	0.05	1.87				1.87				
1 SS	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.05	0.09	0.05	0.05	0.05	0.05	0.00	0.00	0.00	0.37					0.37			
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	
																									4.03

Quad Cities Nuclear Station
33 ft. Wind Speed and Direction

April-June, 2001
196Ft-33Ft Delta-T (F)

SPEED CLASS	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL	STABILITY CLASSES 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	0.05	0.00	0.00	0.00	0.00	0.00	0.05			0.05					
- N	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.09	0.05	0.00	0.00	0.00	0.23				0.23				
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	
																									0.28
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						
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	3.09	2.57	4.87	7.49	6.27	7.26	5.48	6.37	6.37	8.99	9.83	6.27	8.19	7.91	5.24	3.79	100.00	18.77	3.42	5.95	27.20	29.31	9.55	5.81	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-
0.70	0.47	0.33	0.75	0.70	0.75	0.70	1.31	1.22	2.34	2.06	1.54	2.34	1.78	0.66	1.12	18.77	Extremely Unstable
0.14	0.14	0.23	0.28	0.19	0.19	0.19	0.09	0.09	0.37	0.42	0.14	0.37	0.33	0.19	0.05	3.42	Moderately Unstable
0.14	0.28	0.42	0.37	0.47	0.28	0.23	0.33	0.19	0.37	0.80	0.42	0.51	0.42	0.37	0.33	5.95	Slightly Unstable
0.98	1.03	2.25	3.23	2.43	1.45	1.03	0.94	0.56	1.92	1.73	2.11	2.25	2.72	1.40	1.17	27.20	Neutral
0.33	0.23	0.98	2.25	1.73	1.59	1.92	2.06	3.32	2.57	4.12	1.40	1.87	2.15	1.97	0.80	29.31	Slightly Stable
0.56	0.23	0.28	0.33	0.33	1.59	1.03	1.22	0.42	1.31	0.47	0.33	0.47	0.33	0.42	0.23	9.55	Moderately Stable
0.23	0.19	0.37	0.28	0.42	1.40	0.37	0.42	0.56	0.09	0.23	0.33	0.37	0.19	0.23	0.09	5.81	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	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	C A L M
1.12	0.94	1.78	1.31	1.26	2.72	2.20	2.53	1.54	1.59	0.98	1.40	2.01	2.11	1.64	0.94	26.08	1.0- 3.5 mph
1.40	0.89	2.01	3.37	2.62	2.72	2.25	2.72	3.32	5.15	5.57	3.04	3.79	3.14	2.76	2.15	46.91	3.6- 7.5 mph
0.47	0.70	1.08	2.67	2.29	1.54	0.94	1.08	1.31	1.97	2.67	0.89	1.59	2.20	0.75	0.47	22.61	7.6-12.5 mph
0.09	0.05	0.00	0.14	0.09	0.28	0.09	0.05	0.09	0.28	0.47	0.84	0.75	0.47	0.09	0.23	4.03	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	0.14	0.09	0.05	0.00	0.00	0.00	0.28	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

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Quad Cities Nuclear Station
296 ft. Wind Speed and Direction

April-June, 2001
296Ft-33Ft Delta-T (F)

Number of Observations = 1998
Values are Percent Occurrence

SPEED CLASS	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL	STABILITY CLASSES 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	0.05	0.00	0.00	0.05	0.00	0.00	0.10		0.10						
1	SU 0.05	0.05	0.05	0.00	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.10	0.05	0.00	0.10	0.55			0.55					
-	N 0.05	0.05	0.10	0.10	0.05	0.05	0.00	0.05	0.10	0.05	0.05	0.10	0.10	0.05	0.05	0.00	0.95				0.95				
3	SS 0.00	0.10	0.00	0.05	0.00	0.00	0.05	0.05	0.05	0.05	0.00	0.05	0.10	0.00	0.00	0.00	0.50					0.50			
	MS 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	0.10	0.00	0.00	0.20						0.20		
	ES 0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.05	0.00	0.05	0.05	0.05	0.00	0.10	0.05	0.40							0.40	
																									2.70
	EU 0.30	0.10	0.05	0.00	0.00	0.05	0.05	0.00	0.00	0.15	0.20	0.30	0.50	0.50	0.25	0.40	2.85	2.85							
	MU 0.15	0.20	0.15	0.15	0.10	0.00	0.10	0.05	0.05	0.20	0.10	0.20	0.25	0.05	0.15	0.20	2.10		2.10						
4	SU 0.10	0.10	0.35	0.10	0.10	0.05	0.00	0.05	0.10	0.05	0.05	0.15	0.15	0.00	0.25	0.05	1.65			1.65					
-	N 0.25	0.15	0.40	0.15	0.20	0.10	0.30	0.05	0.05	0.20	0.30	0.40	0.35	0.30	0.10	0.15	3.45				3.45				
7	SS 0.15	0.15	0.15	0.05	0.20	0.15	0.10	0.10	0.20	0.15	0.25	0.00	0.05	0.10	0.25	0.00	2.05					2.05			
	MS 0.05	0.05	0.15	0.05	0.00	0.05	0.05	0.10	0.05	0.10	0.10	0.10	0.20	0.05	0.05	0.10	1.25						1.25		
	ES 0.05	0.05	0.00	0.05	0.00	0.00	0.05	0.05	0.00	0.15	0.05	0.10	0.00	0.00	0.00	0.00	0.55							0.55	
																									13.91
	EU 0.15	0.25	0.05	0.10	0.20	0.00	0.20	0.25	0.30	0.50	0.40	0.25	0.60	0.60	0.45	0.15	4.45	4.45							
	MU 0.00	0.15	0.25	0.05	0.20	0.05	0.00	0.15	0.10	0.15	0.05	0.20	0.15	0.05	0.05	0.00	1.60		1.60						
8	SU 0.20	0.05	0.10	0.05	0.25	0.00	0.05	0.05	0.20	0.10	0.05	0.05	0.05	0.10	0.10	0.00	1.40			1.40					
-	N 0.30	0.20	0.60	1.10	1.20	0.15	0.35	0.45	0.45	0.40	0.45	0.60	0.35	0.60	0.60	0.30	8.11				8.11				
1	SS 0.45	0.35	0.20	0.10	0.95	0.40	0.50	0.40	0.55	0.35	0.40	0.30	0.65	0.35	0.65	0.55	7.16					7.16			
2	MS 0.15	0.45	0.10	0.20	0.15	0.00	0.15	0.10	0.60	0.55	0.10	0.15	0.05	0.05	0.20	0.15	3.15						3.15		
	ES 0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.25	0.10	0.00	0.00	0.00	0.00	0.00	0.60							0.60	
																									26.48
	EU 0.10	0.05	0.00	0.10	0.25	0.00	0.05	0.35	1.05	0.85	0.35	0.40	0.10	0.45	0.10	0.10	4.30	4.30							
1	MU 0.00	0.00	0.10	0.20	0.30	0.30	0.05	0.10	0.20	0.15	0.10	0.05	0.15	0.10	0.00	0.05	1.85		1.85						
3	SU 0.00	0.00	0.10	0.10	0.10	0.25	0.20	0.10	0.25	0.15	0.05	0.05	0.10	0.15	0.00	0.05	1.65			1.65					
-	N 0.25	0.40	0.90	0.85	2.00	1.35	0.60	0.60	0.50	1.10	0.70	0.75	0.85	0.70	0.70	0.60	12.86				12.86				
1	SS 0.10	0.15	0.10	0.35	0.70	0.80	0.75	1.00	1.40	1.35	1.40	0.50	0.35	0.45	0.20	0.40	10.01					10.01			
8	MS 0.10	0.15	0.05	0.00	0.00	0.30	0.55	0.45	1.05	0.50	0.40	0.20	0.15	0.05	0.05	0.00	4.00						4.00		
	ES 0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.10	0.05	0.00	0.00	0.00	0.00	0.05	0.00	0.25							0.25	
																									34.93

Quad Cities Nuclear Station
296 ft. Wind Speed and Direction

April-June, 2001
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	0.15	0.00	0.00	0.10	0.00	0.30	0.10	0.30	0.55	0.45	0.30	0.15	0.05	0.00	0.10	0.05	2.60	2.60							
1 MU	0.00	0.00	0.00	0.00	0.00	0.30	0.05	0.05	0.25	0.35	0.05	0.10	0.05	0.05	0.15	0.05	1.45		1.45						
9 SU	0.05	0.00	0.00	0.00	0.00	0.05	0.00	0.10	0.10	0.15	0.10	0.05	0.00	0.10	0.05	0.10	0.85			0.85					
- N	0.00	0.05	0.35	0.30	0.30	0.35	0.15	0.25	0.30	0.80	0.40	0.15	0.50	0.90	0.65	0.15	5.61				5.61				
2 SS	0.00	0.20	0.00	0.05	0.00	0.35	0.00	0.70	1.05	1.10	0.65	0.05	0.05	0.00	0.00	0.00	4.20					4.20			
4 MS	0.00	0.00	0.05	0.00	0.00	0.00	0.20	0.10	0.15	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.55						0.55		
ES	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	0.00	0.05							0.05	
																									15.32
EU	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.05	0.10	0.05	0.15	0.00	0.10	0.00	0.00	0.50	0.50							
MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05	0.10	0.05	0.30	0.00	0.05	0.60		0.60						
SU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.00	0.00	0.25	0.20	0.20	0.25	0.05	0.00	1.10			1.10					
> N	0.05	0.00	0.00	0.00	0.00	0.05	0.00	0.15	0.15	0.50	0.30	0.45	0.70	0.20	0.10	0.00	2.65				2.65				
2 SS	0.00	0.00	0.00	0.00	0.05	0.00	0.10	0.10	1.00	0.40	0.10	0.05	0.00	0.00	0.00	0.00	1.80					1.80			
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	
																									6.66
TOT	3.25	3.45	4.35	4.35	7.46	5.51	4.75	6.46	11.31	11.51	8.06	6.46	7.01	6.81	5.46	3.80	100.00	14.71	7.71	7.21	33.63	25.73	9.16	1.85	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-
0.70	0.40	0.10	0.30	0.45	0.40	0.40	0.90	1.95	2.05	1.30	1.25	1.25	1.65	0.90	0.70	14.71	Extremely Unstable
0.15	0.35	0.50	0.40	0.60	0.65	0.20	0.35	0.60	0.90	0.40	0.65	0.65	0.60	0.35	0.35	7.71	Moderately Unstable
0.40	0.20	0.60	0.25	0.55	0.35	0.25	0.45	0.65	0.45	0.50	0.55	0.60	0.65	0.45	0.30	7.21	Slightly Unstable
0.90	0.85	2.35	2.50	3.75	2.05	1.40	1.55	1.55	3.05	2.20	2.45	2.85	2.75	2.20	1.20	33.63	Neutral
0.70	0.95	0.45	0.60	1.90	1.70	1.50	2.35	4.25	3.40	2.80	0.95	1.20	0.90	1.10	0.95	25.73	Slightly Stable
0.30	0.65	0.35	0.25	0.15	0.35	0.95	0.75	1.90	1.20	0.65	0.45	0.40	0.25	0.30	0.25	9.16	Moderately Stable
0.10	0.05	0.00	0.05	0.05	0.00	0.05	0.10	0.40	0.45	0.20	0.15	0.05	0.00	0.15	0.05	1.85	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
0.10	0.20	0.15	0.15	0.20	0.05	0.05	0.10	0.25	0.10	0.20	0.25	0.35	0.25	0.15	0.15	2.70	1.0- 3.5 mph
1.05	0.80	1.25	0.55	0.60	0.40	0.65	0.40	0.45	1.00	1.05	1.25	1.50	1.00	1.05	0.90	13.91	3.6- 7.5 mph
1.30	1.45	1.30	1.60	2.95	0.60	1.25	1.40	2.40	2.30	1.55	1.55	1.85	1.75	2.05	1.15	26.48	7.6-12.5 mph
0.55	0.75	1.25	1.60	3.35	3.00	2.20	2.65	4.55	4.15	3.00	1.95	1.70	1.90	1.10	1.20	34.93	12.6-18.5 mph
0.20	0.25	0.40	0.45	0.30	1.35	0.50	1.50	2.45	2.90	1.50	0.50	0.65	1.05	0.95	0.35	15.32	18.6-24.5 mph
0.05	0.00	0.00	0.00	0.05	0.10	0.10	0.40	1.20	1.05	0.75	0.95	0.95	0.85	0.15	0.05	6.66	>24.5 mph

Quad Cities Nuclear Station
33 ft. Wind Speed and Direction

July-September, 2001
196Ft-33Ft Delta-T (F)

Number of Observations = 2203
Values are Percent Occurrence

SPEED CLASS	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL	STABILITY CLASSES 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							
	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	0.05	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	0.14						0.14	
																									0.14
	EU	0.05	0.00	0.09	0.05	0.00	0.00	0.00	0.09	0.05	0.09	0.05	0.00	0.05	0.05	0.05	0.00	0.59	0.59						
	MU	0.00	0.05	0.00	0.00	0.00	0.05	0.00	0.00	0.09	0.09	0.05	0.05	0.05	0.00	0.05	0.05	0.50		0.50					
1	SU	0.05	0.00	0.09	0.05	0.05	0.05	0.05	0.14	0.09	0.14	0.09	0.23	0.23	0.05	0.05	0.05	1.36			1.36				
-	N	0.18	0.05	0.00	0.36	0.23	0.23	0.36	0.50	0.50	0.54	0.27	0.36	0.64	0.23	0.27	0.27	4.99				4.99			
3	SS	0.27	0.45	0.64	0.73	0.95	0.73	0.77	1.13	1.13	0.64	1.00	1.23	1.13	1.23	0.86	0.54	13.44					13.44		
	MS	0.45	0.50	0.68	0.64	1.86	1.82	0.95	1.18	1.27	0.77	0.41	0.59	0.68	0.82	0.59	0.54	13.75						13.75	
	ES	0.73	0.45	0.82	0.68	1.77	2.41	0.95	0.36	0.68	0.18	0.41	0.45	0.54	0.86	0.36	0.27	11.94							11.94
																									46.57
	EU	0.68	0.32	0.64	1.09	0.54	0.41	0.50	1.18	1.63	1.09	2.22	1.32	1.13	0.50	0.91	1.23	15.39	15.39						
	MU	0.09	0.05	0.09	0.18	0.14	0.00	0.18	0.09	0.09	0.14	0.18	0.14	0.18	0.05	0.14	0.18	1.91		1.91					
4	SU	0.32	0.05	0.09	0.18	0.18	0.14	0.14	0.14	0.36	0.41	0.27	0.27	0.09	0.23	0.18	0.23	3.27			3.27				
-	N	0.73	0.18	0.95	0.91	0.54	1.00	0.45	0.54	0.64	0.64	1.04	0.77	0.41	0.95	0.77	0.41	10.94				10.94			
7	SS	0.82	0.18	0.82	1.32	1.04	1.23	0.50	0.54	0.68	0.54	0.95	0.73	0.95	0.73	1.32	0.91	13.25					13.25		
	MS	0.05	0.05	0.09	0.09	0.05	0.14	0.05	0.00	0.00	0.00	0.00	0.00	0.18	0.09	0.32	0.27	1.36						1.36	
	ES	0.00	0.00	0.00	0.00	0.05	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.18							0.18
																									46.30
	EU	0.59	0.36	0.23	0.14	0.23	0.50	0.05	0.05	0.05	0.09	0.05	0.14	0.00	0.00	0.27	0.32	3.04	3.04						
	MU	0.05	0.05	0.05	0.09	0.05	0.05	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.36		0.36					
8	SU	0.05	0.00	0.00	0.14	0.00	0.00	0.05	0.05	0.00	0.09	0.05	0.00	0.00	0.00	0.00	0.09	0.50			0.50				
-	N	0.64	0.14	0.45	0.14	0.00	0.05	0.14	0.05	0.00	0.09	0.05	0.05	0.09	0.00	0.54	0.18	2.59				2.59			
1	SS	0.09	0.00	0.00	0.05	0.00	0.09	0.00	0.00	0.09	0.00	0.05	0.00	0.00	0.00	0.00	0.09	0.45					0.45		
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
																									6.95
	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	0.05	0.05				0.05			
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
																									0.05

Quad Cities Nuclear Station
33 ft. Wind Speed and Direction

July-September, 2001
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
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							
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						
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	5.86	2.86	5.72	6.81	7.67	8.90	5.13	6.04	7.35	5.54	7.13	6.40	6.45	5.76	6.67	5.72	100.00	19.02	2.77	5.13	18.57	27.14	15.12	12.26	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-
1.32	0.68	0.95	1.27	0.77	0.91	0.54	1.32	1.72	1.27	2.32	1.45	1.18	0.54	1.23	1.54	19.02	Extremely Unstable
0.14	0.14	0.14	0.27	0.18	0.09	0.18	0.09	0.18	0.23	0.23	0.23	0.23	0.05	0.18	0.23	2.77	Moderately Unstable
0.41	0.05	0.18	0.36	0.23	0.18	0.23	0.32	0.45	0.64	0.41	0.50	0.32	0.27	0.23	0.36	5.13	Slightly Unstable
1.54	0.36	1.41	1.41	0.77	1.27	0.95	1.09	1.13	1.27	1.36	1.18	1.13	1.18	1.59	0.91	18.57	Neutral
1.18	0.64	1.45	2.09	2.00	2.04	1.27	1.68	1.91	1.18	2.00	1.95	2.09	1.95	2.18	1.54	27.14	Slightly Stable
0.50	0.54	0.77	0.73	1.91	1.95	1.00	1.18	1.27	0.77	0.41	0.59	0.86	0.91	0.91	0.82	15.12	Moderately Stable
0.77	0.45	0.82	0.68	1.82	2.45	0.95	0.36	0.68	0.18	0.41	0.50	0.64	0.86	0.36	0.32	12.26	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-
0.05	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	0.14	C A L M
1.72	1.50	2.32	2.50	4.86	5.27	3.09	3.40	3.81	2.45	2.27	2.91	3.31	3.22	2.22	1.72	46.57	1.0- 3.5 mph
2.68	0.82	2.68	3.77	2.54	2.95	1.82	2.50	3.40	2.81	4.68	3.22	3.04	2.54	3.63	3.22	46.30	3.6- 7.5 mph
1.41	0.54	0.73	0.54	0.27	0.68	0.23	0.14	0.14	0.27	0.18	0.23	0.09	0.00	0.82	0.68	6.95	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	0.05	0.05	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

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Quad Cities Nuclear Station
296 ft. Wind Speed and Direction

July-September, 2001
296Ft-33Ft Delta-T (F)

Number of Observations = 2205
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	0.05	0.00	0.00	0.05	0.00	0.00	0.05	0.00	0.00	0.14	0.14							
MU	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.05	0.05	0.05	0.00	0.05	0.05	0.00	0.00	0.00	0.27		0.27						
1 SU	0.05	0.00	0.00	0.05	0.05	0.05	0.00	0.00	0.09	0.00	0.09	0.09	0.05	0.00	0.00	0.00	0.50			0.50					
- N	0.05	0.00	0.00	0.05	0.00	0.23	0.05	0.00	0.09	0.05	0.14	0.18	0.00	0.05	0.05	0.05	0.95				0.95				
3 SS	0.05	0.00	0.00	0.00	0.00	0.09	0.09	0.00	0.14	0.00	0.05	0.00	0.09	0.00	0.00	0.00	0.50					0.50			
MS	0.00	0.14	0.05	0.05	0.14	0.09	0.00	0.09	0.09	0.05	0.09	0.00	0.09	0.00	0.05	0.00	0.91						0.91		
ES	0.05	0.05	0.05	0.05	0.05	0.05	0.00	0.05	0.00	0.05	0.09	0.05	0.05	0.00	0.09	0.00	0.63							0.63	3.90
EU	0.14	0.09	0.41	0.18	0.41	0.14	0.32	0.36	0.09	0.36	1.13	0.63	0.45	0.09	0.54	0.23	5.58	5.58							
MU	0.14	0.14	0.09	0.23	0.32	0.09	0.14	0.14	0.09	0.45	0.41	0.32	0.09	0.27	0.14	0.18	3.22		3.22						
4 SU	0.05	0.09	0.05	0.14	0.27	0.00	0.27	0.18	0.18	0.18	0.27	0.14	0.00	0.00	0.05	0.00	1.86			1.86					
- N	0.36	0.18	0.05	0.32	0.41	0.23	0.23	0.36	0.50	0.27	0.23	0.09	0.41	0.23	0.23	0.14	4.22				4.22				
7 SS	0.09	0.00	0.18	0.23	0.36	0.18	0.05	0.27	0.45	0.32	0.50	0.36	0.18	0.27	0.23	0.09	3.76					3.76			
MS	0.14	0.00	0.18	0.18	0.45	0.09	0.14	0.14	0.36	0.50	0.32	0.18	0.14	0.09	0.09	0.05	3.04						3.04		
ES	0.09	0.18	0.18	0.00	0.09	0.09	0.00	0.18	0.23	0.18	0.09	0.05	0.05	0.05	0.00	0.05	1.50							1.50	23.17
EU	0.82	0.27	0.41	0.50	0.27	0.14	0.27	0.54	0.91	0.73	0.63	0.50	0.59	0.05	0.27	0.63	7.53	7.53							
MU	0.18	0.00	0.05	0.41	0.09	0.09	0.14	0.18	0.14	0.14	0.23	0.09	0.14	0.00	0.05	0.14	2.04		2.04						
8 SU	0.23	0.14	0.00	0.05	0.09	0.05	0.05	0.09	0.32	0.23	0.09	0.14	0.09	0.00	0.09	0.18	1.81			1.81					
- N	0.36	0.32	0.27	0.27	0.95	0.68	0.18	0.36	0.68	0.41	0.41	0.77	0.36	0.54	0.41	0.45	7.44				7.44				
1 SS	0.36	0.41	0.36	0.36	1.18	0.59	0.77	0.77	0.73	0.95	1.45	0.73	0.54	0.82	0.82	0.63	11.47					11.47			
2 MS	0.18	0.14	0.27	0.23	0.18	0.45	0.68	0.68	0.86	1.09	0.68	0.45	0.18	0.18	0.27	0.23	6.76						6.76		
ES	0.09	0.05	0.14	0.09	0.18	0.05	0.14	0.41	0.18	0.45	0.63	0.27	0.00	0.23	0.05	0.05	2.99							2.99	40.05
EU	0.18	0.50	0.09	0.00	0.05	0.18	0.23	0.05	0.86	0.27	0.09	0.36	0.27	0.14	0.45	0.23	3.95	3.95							
1 MU	0.14	0.09	0.05	0.14	0.00	0.05	0.05	0.00	0.00	0.00	0.05	0.00	0.09	0.14	0.09	0.05	0.91		0.91						
3 SU	0.05	0.00	0.09	0.05	0.00	0.00	0.09	0.05	0.14	0.00	0.14	0.09	0.14	0.18	0.23	0.00	1.22			1.22					
- N	0.59	0.32	0.77	0.59	0.32	0.41	0.45	0.23	0.32	0.41	0.54	0.09	0.45	0.45	0.77	0.36	7.07				7.07				
1 SS	0.59	0.36	0.23	0.77	0.36	1.00	0.63	0.82	1.18	0.77	0.59	0.45	0.73	0.50	0.45	0.68	10.11					10.11			
8 MS	0.36	0.36	0.27	0.05	0.09	0.36	0.95	0.36	0.73	0.50	0.00	0.09	0.23	0.36	0.27	0.23	5.22						5.22		
ES	0.00	0.00	0.00	0.05	0.00	0.09	0.18	0.45	0.09	0.27	0.09	0.14	0.00	0.00	0.18	0.05	1.59							1.59	30.07

Quad Cities Nuclear Station
296 ft. Wind Speed and Direction

July-September, 2001
296Ft-33Ft Delta-T (F)

SPEED CLASS	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL	STABILITY CLASSES 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	0.05	0.00	0.05	0.00	0.00	0.00	0.00	0.09	0.09							
1 MU	0.00	0.00	0.00	0.05	0.00	0.00	0.05	0.00	0.00	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.18		0.18						
9 SU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05	0.09	0.00	0.00	0.00	0.00	0.00	0.09	0.27			0.27					
- N	0.36	0.18	0.18	0.05	0.00	0.00	0.09	0.05	0.05	0.00	0.05	0.00	0.00	0.00	0.23	0.14	1.36				1.36				
2 SS	0.05	0.00	0.09	0.05	0.00	0.00	0.00	0.00	0.05	0.14	0.00	0.00	0.00	0.00	0.00	0.00	0.36					0.36			
4 MS	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	0.05	0.09	0.00	0.23						0.23		
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	
																									2.49
EU	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	0.00	0.00	0.00	0.09	0.09							
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						
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	0.05	0.00	0.05	0.00	0.00	0.00	0.00	0.09	0.18				0.18				
2 SS	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	0.00	0.05					0.05			
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	
																									0.32
TOT	5.71	3.99	4.49	5.12	6.35	5.49	6.21	6.98	9.75	9.07	9.16	6.35	5.44	4.72	6.17	4.99	100.00	17.37	6.62	5.67	21.22	26.26	16.15	6.71	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-
1.13	0.86	0.91	0.68	0.73	0.45	0.82	1.00	1.90	1.45	1.90	1.54	1.32	0.32	1.27	1.09	17.37	Extremely Unstable
0.45	0.23	0.18	0.82	0.45	0.23	0.36	0.36	0.27	0.73	0.68	0.45	0.36	0.41	0.27	0.36	6.62	Moderately Unstable
0.36	0.23	0.14	0.27	0.41	0.09	0.41	0.36	0.77	0.50	0.59	0.45	0.27	0.18	0.36	0.27	5.67	Slightly Unstable
1.72	1.00	1.27	1.27	1.68	1.54	1.00	1.00	1.68	1.13	1.41	1.13	1.22	1.27	1.68	1.22	21.22	Neutral
1.13	0.77	0.86	1.41	1.90	1.86	1.54	1.86	2.59	2.18	2.59	1.54	1.54	1.59	1.50	1.41	26.26	Slightly Stable
0.68	0.63	0.77	0.50	0.86	1.04	1.77	1.32	2.04	2.13	1.09	0.73	0.63	0.68	0.77	0.50	16.15	Moderately Stable
0.23	0.27	0.36	0.18	0.32	0.27	0.32	1.09	0.50	0.95	0.91	0.50	0.09	0.27	0.32	0.14	6.71	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
0.18	0.18	0.09	0.18	0.27	0.50	0.14	0.23	0.45	0.18	0.50	0.36	0.32	0.09	0.18	0.05	3.90	1.0- 3.5 mph
1.00	0.68	1.13	1.27	2.31	0.82	1.13	1.63	1.90	2.27	2.95	1.77	1.32	1.00	1.27	0.73	23.17	3.6- 7.5 mph
2.22	1.32	1.50	1.90	2.95	2.04	2.22	3.04	3.81	3.99	4.13	2.95	1.90	1.81	1.95	2.31	40.05	7.6-12.5 mph
1.90	1.63	1.50	1.63	0.82	2.09	2.59	1.95	3.31	2.22	1.50	1.22	1.90	1.77	2.45	1.59	30.07	12.6-18.5 mph
0.41	0.18	0.27	0.14	0.00	0.05	0.14	0.14	0.14	0.36	0.05	0.05	0.00	0.05	0.32	0.23	2.49	18.6-24.5 mph
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.05	0.05	0.00	0.00	0.00	0.00	0.09	0.32	>24.5 mph

Quad Cities Nuclear Station
33 ft. Wind Speed and Direction

October-December, 2001
196Ft-33Ft Delta-T (F)

Number of Observations = 2190
Values are Percent Occurrence

SPEED CLASS	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL	STABILITY CLASSES EU	MU	SU	N	SS	MS	ES	TOTAL
	WIND DIRECTION 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	0.05	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	0.00	0.00	0.00	0.00	0.00	0.00		0.00						
1 SU	0.00	0.00	0.05	0.00	0.00	0.05	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.05	0.05	0.14	0.41			0.41					
- N	0.32	0.27	0.23	0.14	0.14	0.18	0.27	0.55	0.18	0.41	0.23	0.32	0.50	0.23	0.46	0.18	4.61				4.61				
3 SS	0.18	0.18	0.27	0.27	0.37	0.59	0.32	0.32	0.55	0.64	0.73	0.87	1.28	0.82	0.68	0.23	8.31					8.31			
MS	0.18	0.37	0.27	0.14	0.55	0.73	0.73	1.32	0.50	0.64	0.59	0.50	0.59	0.50	0.27	0.09	7.99						7.99		
ES	0.09	0.14	0.18	0.14	0.55	1.78	0.64	0.55	0.23	0.14	0.27	0.46	0.41	0.18	0.18	0.18	6.12							6.12	
																									27.49
EU	0.09	0.00	0.05	0.09	0.00	0.23	0.32	0.32	0.73	1.10	1.00	0.32	0.64	0.14	0.09	0.14	5.25	5.25							
MU	0.05	0.00	0.05	0.05	0.00	0.09	0.23	0.00	0.09	0.05	0.23	0.14	0.09	0.05	0.00	0.05	1.14		1.14						
4 SU	0.05	0.09	0.00	0.05	0.00	0.09	0.09	0.18	0.09	0.32	0.32	0.18	0.55	0.14	0.14	0.09	2.37			2.37					
- N	0.50	0.46	0.23	0.41	0.32	0.73	1.37	0.68	0.46	0.55	1.23	3.06	4.47	3.20	1.55	0.32	19.54				19.54				
7 SS	0.09	0.18	0.37	0.59	0.46	0.87	0.68	1.28	2.79	1.74	2.37	1.46	1.55	0.91	1.14	0.50	16.99					16.99			
MS	0.00	0.05	0.00	0.09	0.05	1.00	0.18	0.41	0.37	0.32	0.05	0.09	0.09	0.00	0.09	0.09	2.88						2.88		
ES	0.00	0.00	0.00	0.00	0.00	0.82	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.87							0.87	
																									49.04
EU	0.00	0.00	0.00	0.05	0.00	0.05	0.09	0.05	0.50	0.14	0.50	0.32	0.68	1.14	0.50	0.05	4.06	4.06							
MU	0.05	0.00	0.00	0.00	0.00	0.00	0.09	0.00	0.05	0.05	0.09	0.09	0.18	0.14	0.05	0.05	0.82		0.82						
8 SU	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.05	0.05	0.05	0.09	0.23	0.32	0.32	0.27	0.00	1.46			1.46					
- N	0.09	0.05	0.23	0.05	0.37	0.37	0.50	0.37	0.59	0.41	0.68	1.60	1.78	2.56	0.91	0.09	10.64				10.64				
1 SS	0.00	0.00	0.00	0.00	0.09	0.32	0.41	0.27	1.00	0.91	0.78	0.23	0.05	0.05	0.00	0.00	4.11					4.11			
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	
																									21.10
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	0.05	0.00	0.00	0.00	0.00	0.00	0.14	1.19	0.55	0.09	0.00	2.01				2.01				
1 SS	0.00	0.00	0.00	0.00	0.00	0.14	0.05	0.00	0.00	0.00	0.05	0.00	0.05	0.00	0.00	0.00	0.27					0.27			
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	
																									2.28

Quad Cities Nuclear Station
33 ft. Wind Speed and Direction

October-December, 2001
196Ft-33Ft Delta-T (F)

SPEED CLASS	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL	STABILITY CLASSES 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	0.09	0.00	0.00	0.00	0.09				0.09				
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	
																									0.09
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						
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	1.69	1.78	1.92	2.05	2.88	8.08	6.12	6.35	8.17	7.53	9.22	10.05	14.52	10.96	6.48	2.19	100.00	9.36	1.96	4.25	36.89	29.68	10.87	6.99	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-
0.09	0.00	0.05	0.14	0.00	0.27	0.41	0.37	1.23	1.23	1.51	0.68	1.32	1.28	0.59	0.18	9.36	Extremely Unstable
0.09	0.00	0.05	0.05	0.00	0.09	0.32	0.00	0.14	0.09	0.32	0.23	0.27	0.18	0.05	0.09	1.96	Moderately Unstable
0.05	0.09	0.05	0.05	0.00	0.14	0.18	0.23	0.14	0.46	0.41	0.41	0.87	0.50	0.46	0.23	4.25	Slightly Unstable
0.91	0.78	0.68	0.59	0.82	1.32	2.15	1.60	1.23	1.37	2.15	5.11	8.04	6.53	3.01	0.59	36.89	Neutral
0.27	0.37	0.64	0.87	0.91	1.92	1.46	1.87	4.34	3.29	3.93	2.56	2.92	1.78	1.83	0.73	29.68	Slightly Stable
0.18	0.41	0.27	0.23	0.59	1.74	0.91	1.74	0.87	0.96	0.64	0.59	0.68	0.50	0.37	0.18	10.87	Moderately Stable
0.09	0.14	0.18	0.14	0.55	2.60	0.68	0.55	0.23	0.14	0.27	0.46	0.41	0.18	0.18	0.18	6.99	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
0.78	0.96	1.00	0.68	1.60	3.33	1.96	2.74	1.46	1.92	1.83	2.19	2.79	1.78	1.64	0.82	27.49	1.0- 3.5 mph
0.78	0.78	0.68	1.28	0.82	3.84	2.92	2.88	4.52	4.06	5.21	5.25	7.40	4.43	3.01	1.19	49.04	3.6- 7.5 mph
0.14	0.05	0.23	0.09	0.46	0.73	1.19	0.73	2.19	1.55	2.15	2.47	3.01	4.20	1.74	0.18	21.10	7.6-12.5 mph
0.00	0.00	0.00	0.00	0.00	0.18	0.05	0.00	0.00	0.00	0.05	0.14	1.23	0.55	0.09	0.00	2.28	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	0.09	0.00	0.00	0.00	0.09	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

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Quad Cities Nuclear Station
296 ft. Wind Speed and Direction

October-December, 2001
296Ft-33Ft Delta-T (F)

Number of Observations = 2207
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	0.09	0.00	0.00	0.00	0.09				0.09				
L SS	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			
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	0.14
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	0.05	0.00	0.00	0.00	0.00	0.05		0.05						
1 SU	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					
- N	0.14	0.14	0.09	0.09	0.05	0.09	0.00	0.05	0.23	0.09	0.05	0.32	0.18	0.09	0.05	0.09	1.72				1.72				
3 SS	0.00	0.00	0.05	0.00	0.00	0.05	0.00	0.00	0.00	0.05	0.00	0.05	0.00	0.00	0.00	0.00	0.18					0.18			
MS	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	0.05	0.00	0.09	0.27						0.27		
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	2.27
EU	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	0.05	0.18	0.18							
MU	0.05	0.09	0.05	0.05	0.00	0.00	0.14	0.05	0.05	0.09	0.14	0.09	0.18	0.00	0.05	0.00	1.00		1.00						
4 SU	0.05	0.00	0.00	0.00	0.05	0.09	0.05	0.05	0.00	0.14	0.18	0.00	0.00	0.05	0.05	0.14	0.82			0.82					
- N	0.23	0.27	0.23	0.41	0.18	0.18	0.23	0.27	0.14	0.18	0.32	0.36	0.23	0.23	0.32	0.23	3.99				3.99				
7 SS	0.14	0.14	0.09	0.05	0.18	0.14	0.14	0.14	0.05	0.14	0.27	0.05	0.09	0.32	0.36	0.09	2.36					2.36			
MS	0.09	0.05	0.00	0.05	0.23	0.09	0.00	0.00	0.09	0.05	0.05	0.09	0.18	0.00	0.09	0.09	1.13						1.13		
ES	0.00	0.00	0.05	0.09	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05	0.09	0.00	0.00	0.41							0.41	9.88
EU	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.05	0.32	0.45	0.45	0.27	0.05	0.14	0.00	0.05	1.95	1.95							
MU	0.14	0.00	0.05	0.00	0.05	0.05	0.09	0.05	0.14	0.14	0.23	0.05	0.00	0.09	0.00	0.05	1.09		1.09						
8 SU	0.05	0.05	0.05	0.00	0.05	0.09	0.14	0.05	0.14	0.05	0.05	0.23	0.14	0.09	0.09	0.05	1.27			1.27					
- N	0.54	0.36	0.05	0.14	0.18	0.27	0.27	0.27	0.41	0.27	0.54	0.95	1.13	1.13	0.63	0.36	7.52				7.52				
1 SS	0.50	0.23	0.09	0.32	0.32	0.36	0.41	0.54	0.27	0.36	0.86	0.63	0.86	0.36	0.68	0.68	7.48					7.48			
2 MS	0.18	0.27	0.18	0.09	0.00	0.05	0.23	0.41	0.18	0.86	0.32	0.32	0.45	0.36	0.05	0.27	4.21						4.21		
ES	0.05	0.00	0.05	0.18	0.05	0.05	0.09	0.27	0.68	0.05	0.09	0.09	0.09	0.18	0.09	0.18	2.17							2.17	25.69
EU	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.23	0.27	0.27	0.09	0.18	0.32	0.09	0.09	1.63	1.63							
1 MU	0.09	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.14	0.23	0.18	0.14	0.36	0.14	0.18	0.00	1.50		1.50						
3 SU	0.05	0.00	0.00	0.00	0.00	0.00	0.18	0.23	0.14	0.27	0.18	0.18	0.41	0.45	0.09	0.09	2.27			2.27					
- N	0.54	0.09	0.32	0.14	0.14	0.27	1.04	0.86	0.59	0.77	1.27	1.90	3.49	3.72	2.58	1.00	18.71				18.71				
1 SS	0.32	0.00	0.09	0.54	0.32	0.23	0.54	0.45	1.63	2.36	1.72	0.45	1.09	0.54	0.63	0.50	11.42					11.42			
8 MS	0.09	0.05	0.00	0.05	0.00	0.09	0.09	0.36	0.82	1.27	0.18	0.09	0.32	0.23	0.36	0.23	4.21						4.21		
ES	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.50	0.68	0.05	0.09	0.09	0.09	0.05	0.05	1.77							1.77	41.50

Quad Cities Nuclear Station
296 ft. Wind Speed and Direction

October-December, 2001
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
EU	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.27	0.18	0.09	0.05	0.00	0.14	0.05	0.14	0.95	0.95							
1 MU	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05	0.09	0.05	0.05	0.09	0.18	0.14	0.72		0.72						
9 SU	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.09	0.00	0.09	0.09	0.32	0.23	0.05	0.95			0.95					
- N	0.14	0.00	0.09	0.00	0.23	0.27	0.45	0.32	0.95	0.68	0.68	0.23	0.91	1.31	1.04	0.27	7.57				7.57				
2 SS	0.00	0.00	0.00	0.00	0.00	0.09	0.54	0.23	1.59	1.00	1.00	0.18	0.05	0.09	0.05	0.00	4.80					4.80			
4 MS	0.00	0.00	0.05	0.00	0.00	0.09	0.00	0.05	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23						0.23		
ES	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	0.00	0.00	0.14							0.14	
																									15.36
EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.18							
MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09		0.09						
SU	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					
> N	0.00	0.05	0.00	0.05	0.00	0.14	0.00	0.05	0.82	0.50	0.09	0.00	1.31	0.86	0.23	0.18	4.26				4.26				
2 SS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.32	0.05	0.00	0.00	0.00	0.00	0.00	0.59					0.59			
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	
																									5.17
TOT	3.58	1.81	1.54	2.22	2.08	2.72	4.85	5.07	11.06	11.55	9.38	7.16	12.10	11.51	8.25	5.12	100.00	4.89	4.44	5.39	43.86	26.87	10.06	4.49	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-
0.09	0.00	0.00	0.00	0.00	0.00	0.18	0.09	1.00	0.91	0.82	0.45	0.23	0.63	0.18	0.32	4.89	Extremely Unstable
0.32	0.09	0.09	0.05	0.05	0.09	0.23	0.14	0.41	0.50	0.63	0.36	0.59	0.32	0.41	0.18	4.44	Moderately Unstable
0.18	0.05	0.05	0.00	0.09	0.18	0.41	0.41	0.27	0.54	0.41	0.50	0.63	0.91	0.45	0.32	5.39	Slightly Unstable
1.59	0.91	0.77	0.82	0.77	1.22	1.99	1.81	3.13	2.49	2.95	3.76	7.34	7.34	4.85	2.13	43.86	Neutral
0.95	0.41	0.32	0.91	0.82	0.86	1.63	1.36	3.76	4.21	3.90	1.36	2.08	1.31	1.72	1.27	26.87	Slightly Stable
0.36	0.36	0.23	0.18	0.23	0.32	0.32	0.86	1.18	2.17	0.54	0.50	1.00	0.63	0.50	0.68	10.06	Moderately Stable
0.09	0.00	0.09	0.27	0.14	0.05	0.09	0.41	1.31	0.72	0.14	0.23	0.23	0.36	0.14	0.23	4.49	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	0.05	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	0.00	0.14	C A L M
0.14	0.14	0.14	0.09	0.05	0.14	0.05	0.09	0.27	0.14	0.05	0.41	0.23	0.14	0.05	0.18	2.27	1.0- 3.5 mph
0.54	0.54	0.41	0.63	0.72	0.50	0.54	0.50	0.32	0.59	0.95	0.68	0.72	0.72	0.91	0.59	9.88	3.6- 7.5 mph
1.45	0.91	0.45	0.72	0.63	0.86	1.40	1.63	2.13	2.17	2.54	2.54	2.72	2.36	1.54	1.63	25.69	7.6-12.5 mph
1.18	0.14	0.41	0.72	0.45	0.63	1.86	2.08	4.03	5.85	3.85	2.95	5.94	5.48	3.99	1.95	41.50	12.6-18.5 mph
0.27	0.00	0.14	0.00	0.23	0.45	1.00	0.63	3.04	1.99	1.86	0.59	1.09	1.95	1.54	0.59	15.36	18.6-24.5 mph
0.00	0.05	0.00	0.05	0.00	0.14	0.00	0.14	1.27	0.82	0.14	0.00	1.31	0.86	0.23	0.18	5.17	>24.5 mph

Quad Cities Nuclear Station
33 ft. Wind Speed and Direction

January-December, 2001
196Ft-33Ft Delta-T (F)

Number of Observations = 8586
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 0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.01	0.00	0.00	0.00	0.01	0.06							0.06	0.06
	EU 0.01	0.00	0.03	0.01	0.01	0.00	0.00	0.02	0.01	0.02	0.01	0.01	0.06	0.01	0.01	0.01	0.24	0.24							
	MU 0.00	0.01	0.01	0.02	0.01	0.01	0.01	0.02	0.02	0.02	0.01	0.01	0.02	0.00	0.01	0.01	0.22		0.22						
1	SU 0.01	0.02	0.07	0.06	0.02	0.03	0.02	0.06	0.02	0.07	0.06	0.10	0.10	0.03	0.03	0.08	0.82			0.82					
-	N 0.23	0.24	0.16	0.26	0.27	0.26	0.31	0.43	0.34	0.38	0.20	0.30	0.47	0.34	0.35	0.23	4.78				4.78				
3	SS 0.14	0.21	0.44	0.48	0.55	0.66	0.76	0.78	0.68	0.51	0.62	0.75	0.97	0.99	0.66	0.30	9.49					9.49			
	MS 0.31	0.37	0.43	0.30	0.70	1.05	0.69	0.94	0.61	0.58	0.31	0.38	0.52	0.50	0.33	0.26	8.29						8.29		
	ES 0.28	0.21	0.35	0.31	0.76	1.40	0.54	0.36	0.36	0.10	0.24	0.34	0.43	0.38	0.23	0.20	6.50							6.50	30.34
	EU 0.34	0.16	0.28	0.40	0.22	0.36	0.42	0.65	0.89	1.06	1.21	0.79	1.21	0.59	0.54	0.72	9.84	9.84							
	MU 0.09	0.05	0.06	0.08	0.06	0.05	0.15	0.08	0.07	0.13	0.20	0.13	0.19	0.09	0.10	0.09	1.62		1.62						
4	SU 0.14	0.07	0.08	0.13	0.08	0.10	0.09	0.17	0.22	0.31	0.31	0.20	0.33	0.17	0.21	0.20	2.83			2.83					
-	N 0.51	0.29	0.72	0.91	0.61	0.82	0.87	0.61	0.42	0.71	1.07	1.70	2.76	2.41	1.56	0.59	16.56				16.56				
7	SS 0.33	0.13	0.44	0.91	0.93	1.06	0.63	0.82	1.48	1.09	1.88	0.93	1.43	0.85	0.99	0.52	14.42					14.42			
	MS 0.02	0.02	0.03	0.12	0.10	0.51	0.24	0.19	0.12	0.21	0.07	0.06	0.10	0.05	0.16	0.12	2.13						2.13		
	ES 0.00	0.00	0.00	0.01	0.01	0.31	0.03	0.00	0.00	0.00	0.00	0.00	0.02	0.01	0.02	0.01	0.44							0.44	47.85
	EU 0.23	0.20	0.08	0.19	0.26	0.22	0.22	0.16	0.28	0.34	0.41	0.37	0.61	0.78	0.44	0.17	4.96	4.96							
	MU 0.02	0.03	0.03	0.07	0.06	0.06	0.06	0.00	0.01	0.05	0.05	0.08	0.16	0.08	0.05	0.01	0.83		0.83						
8	SU 0.02	0.05	0.02	0.09	0.10	0.08	0.07	0.06	0.01	0.05	0.09	0.10	0.26	0.22	0.20	0.06	1.49			1.49					
-	N 0.41	0.22	0.36	0.41	0.72	0.57	0.31	0.15	0.17	0.23	0.54	0.83	1.27	2.32	1.05	0.20	9.76				9.76				
1	SS 0.03	0.02	0.01	0.10	0.07	0.14	0.17	0.13	0.51	0.44	0.52	0.10	0.12	0.07	0.02	0.02	2.50					2.50			
2	MS 0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.01						0.01		
	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	19.56
	EU 0.02	0.02	0.00	0.03	0.02	0.06	0.00	0.00	0.00	0.00	0.01	0.03	0.03	0.09	0.00	0.06	0.40	0.40							
1	MU 0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.01	0.03	0.00	0.01	0.08		0.08						
3	SU 0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.02	0.01	0.05	0.00	0.00	0.12			0.12					
-	N 0.00	0.01	0.00	0.00	0.00	0.06	0.02	0.00	0.00	0.06	0.03	0.17	0.51	0.23	0.07	0.02	1.20				1.20				
1	SS 0.00	0.00	0.00	0.00	0.02	0.06	0.01	0.01	0.02	0.01	0.03	0.01	0.02	0.00	0.00	0.00	0.21					0.21			
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	2.00

Quad Cities Nuclear Station
33 ft. Wind Speed and Direction

January-December, 2001
196Ft-33Ft Delta-T (F)

SPEED CLASS	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL	STABILITY CLASSES 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	0.01	0.00	0.00	0.00	0.00	0.00	0.01			0.01					
- N	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.06	0.10	0.00	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	
																									0.20
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						
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	3.18	2.35	3.63	4.89	5.59	7.87	5.65	5.65	6.27	6.41	7.98	7.51	11.73	10.32	7.05	3.92	100.00	15.44	2.75	5.26	32.48	26.62	10.44	7.00	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	0.40	0.63	0.51	0.64	0.64	0.84	1.18	1.42	1.64	1.21	1.91	1.48	0.99	0.97	15.44	Extremely Unstable
0.12	0.09	0.10	0.17	0.13	0.12	0.22	0.10	0.10	0.20	0.28	0.22	0.38	0.21	0.16	0.13	2.75	Moderately Unstable
0.17	0.14	0.17	0.28	0.21	0.22	0.19	0.29	0.26	0.43	0.51	0.43	0.70	0.48	0.44	0.34	5.26	Slightly Unstable
1.15	0.77	1.25	1.57	1.60	1.70	1.53	1.19	0.93	1.39	1.86	3.06	5.11	5.30	3.03	1.05	32.48	Neutral
0.50	0.36	0.90	1.49	1.57	1.92	1.57	1.74	2.69	2.06	3.05	1.79	2.54	1.91	1.68	0.85	26.62	Slightly Stable
0.34	0.40	0.47	0.42	0.80	1.56	0.93	1.13	0.72	0.80	0.38	0.44	0.63	0.55	0.49	0.37	10.44	Moderately Stable
0.29	0.21	0.35	0.33	0.77	1.71	0.57	0.36	0.38	0.10	0.24	0.35	0.45	0.40	0.26	0.22	7.00	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-
0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.01	0.00	0.00	0.00	0.01	0.06	C A L M
0.99	1.07	1.50	1.44	2.32	3.41	2.33	2.62	2.04	1.70	1.46	1.90	2.57	2.26	1.63	1.09	30.34	1.0- 3.5 mph
1.43	0.72	1.62	2.55	2.01	3.21	2.45	2.52	3.19	3.52	4.74	3.81	6.04	4.18	3.59	2.26	47.85	3.6- 7.5 mph
0.72	0.52	0.51	0.86	1.21	1.07	0.84	0.50	0.99	1.12	1.61	1.49	2.41	3.47	1.76	0.47	19.56	7.6-12.5 mph
0.02	0.03	0.00	0.03	0.05	0.17	0.03	0.01	0.02	0.07	0.14	0.24	0.59	0.41	0.07	0.09	2.00	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	0.03	0.06	0.10	0.00	0.00	0.00	0.20	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

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Quad Cities Nuclear Station
296 ft. Wind Speed and Direction

January-December, 2001
296Ft-33Ft Delta-T (F)

Number of Observations = 8454
Values are Percent Occurrence

SPEED CLASS	WIND DIRECTION CLASSES N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL	STABILITY CLASSES 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	0.02	0.00	0.00	0.00	0.02				0.02				
L SS	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	0.00	0.00	0.01					0.01			
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	0.04
EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.01	0.00	0.00	0.01	0.00	0.00	0.04	0.04							
MU	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.01	0.01	0.01	0.01	0.02	0.01	0.01	0.00	0.00	0.11		0.11						
1 SU	0.02	0.01	0.01	0.01	0.04	0.01	0.01	0.00	0.02	0.00	0.02	0.04	0.04	0.01	0.00	0.02	0.27			0.27					
- N	0.08	0.09	0.05	0.08	0.08	0.15	0.01	0.05	0.14	0.06	0.06	0.15	0.09	0.05	0.05	0.04	1.24				1.24				
3 SS	0.01	0.02	0.01	0.01	0.00	0.05	0.04	0.01	0.06	0.02	0.01	0.02	0.06	0.00	0.00	0.00	0.33					0.33			
MS	0.00	0.04	0.02	0.04	0.06	0.02	0.01	0.04	0.05	0.01	0.04	0.00	0.04	0.04	0.01	0.02	0.43						0.43		
ES	0.01	0.02	0.01	0.01	0.02	0.02	0.00	0.01	0.01	0.01	0.04	0.02	0.02	0.00	0.05	0.01	0.28							0.28	2.70
EU	0.11	0.05	0.12	0.06	0.11	0.05	0.09	0.09	0.02	0.14	0.34	0.25	0.25	0.15	0.24	0.18	2.25	2.25							
MU	0.08	0.12	0.09	0.14	0.12	0.05	0.11	0.08	0.05	0.21	0.21	0.15	0.24	0.09	0.08	0.13	1.96		1.96						
4 SU	0.06	0.06	0.11	0.11	0.13	0.12	0.08	0.11	0.11	0.13	0.14	0.13	0.05	0.05	0.17	0.19	1.73			1.73					
- N	0.24	0.15	0.20	0.28	0.39	0.21	0.28	0.28	0.31	0.27	0.30	0.37	0.35	0.31	0.41	0.25	4.61				4.61				
7 SS	0.12	0.09	0.14	0.08	0.26	0.14	0.11	0.18	0.21	0.25	0.31	0.17	0.12	0.19	0.21	0.12	2.70					2.70			
MS	0.08	0.06	0.12	0.08	0.24	0.06	0.07	0.07	0.14	0.17	0.13	0.09	0.13	0.08	0.07	0.09	1.69						1.69		
ES	0.06	0.07	0.08	0.05	0.06	0.02	0.02	0.07	0.06	0.08	0.04	0.05	0.02	0.05	0.00	0.05	0.78							0.78	15.72
EU	0.25	0.13	0.12	0.15	0.14	0.05	0.19	0.24	0.39	0.45	0.44	0.27	0.48	0.25	0.22	0.26	4.03	4.03							
MU	0.09	0.05	0.08	0.12	0.09	0.11	0.11	0.12	0.12	0.11	0.15	0.13	0.15	0.11	0.08	0.09	1.72		1.72						
8 SU	0.14	0.09	0.04	0.02	0.12	0.05	0.11	0.06	0.17	0.14	0.05	0.15	0.13	0.12	0.18	0.11	1.67			1.67					
- N	0.57	0.27	0.33	0.50	0.65	0.34	0.38	0.48	0.57	0.43	0.50	0.82	0.89	0.93	0.99	0.64	9.29				9.29				
1 SS	0.39	0.26	0.21	0.21	0.67	0.50	0.62	0.66	0.50	0.57	0.86	0.52	0.69	0.57	0.79	0.53	8.55					8.55			
2 MS	0.17	0.28	0.17	0.14	0.18	0.22	0.31	0.35	0.45	0.66	0.33	0.24	0.18	0.18	0.17	0.19	4.21						4.21		
ES	0.06	0.02	0.05	0.08	0.06	0.02	0.07	0.18	0.28	0.21	0.22	0.09	0.02	0.13	0.04	0.07	1.62							1.62	31.09
EU	0.08	0.15	0.02	0.02	0.07	0.05	0.07	0.12	0.57	0.38	0.19	0.25	0.20	0.32	0.30	0.12	2.91	2.91							
1 MU	0.07	0.05	0.04	0.08	0.08	0.09	0.02	0.04	0.09	0.11	0.12	0.08	0.20	0.11	0.14	0.04	1.36		1.36						
3 SU	0.02	0.01	0.06	0.04	0.08	0.07	0.13	0.11	0.14	0.13	0.12	0.11	0.34	0.22	0.15	0.07	1.81			1.81					
- N	0.56	0.37	0.53	0.40	0.71	0.75	0.70	0.47	0.46	0.70	0.78	0.95	1.99	2.14	2.32	0.72	14.54				14.54				
1 SS	0.26	0.14	0.11	0.48	0.37	0.59	0.69	0.67	1.25	1.25	1.27	0.41	0.82	0.65	0.54	0.43	9.94					9.94			
8 MS	0.17	0.15	0.09	0.02	0.02	0.22	0.45	0.41	0.69	0.67	0.17	0.09	0.19	0.18	0.26	0.14	3.94						3.94		
ES	0.01	0.01	0.00	0.01	0.00	0.02	0.05	0.17	0.18	0.26	0.04	0.06	0.04	0.04	0.07	0.04	0.98							0.98	35.47

Quad Cities Nuclear Station
296 ft. Wind Speed and Direction

January-December, 2001
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
EU	0.05	0.00	0.00	0.02	0.00	0.07	0.02	0.07	0.21	0.19	0.09	0.06	0.02	0.11	0.12	0.06	1.10	1.10							
1 MU	0.01	0.01	0.00	0.01	0.00	0.07	0.02	0.01	0.07	0.13	0.04	0.04	0.05	0.04	0.22	0.05	0.77		0.77						
9 SU	0.02	0.00	0.00	0.00	0.00	0.01	0.00	0.05	0.04	0.09	0.02	0.05	0.06	0.13	0.09	0.07	0.64			0.64					
- N	0.13	0.07	0.27	0.09	0.19	0.28	0.22	0.15	0.33	0.39	0.37	0.24	0.67	0.91	1.15	0.15	5.63				5.63				
2 SS	0.01	0.07	0.02	0.02	0.00	0.11	0.20	0.24	0.67	0.67	0.50	0.08	0.07	0.06	0.01	0.00	2.74					2.74			
4 MS	0.00	0.00	0.02	0.00	0.00	0.04	0.05	0.05	0.05	0.02	0.00	0.00	0.00	0.01	0.02	0.00	0.26						0.26		
ES	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	0.00	0.05							0.05	
																									11.19
EU	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.07	0.04	0.01	0.04	0.00	0.04	0.01	0.00	0.21	0.21							
MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.02	0.01	0.07	0.00	0.01	0.17		0.17						
SU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.06	0.05	0.05	0.06	0.04	0.00	0.30			0.30					
> N	0.01	0.01	0.18	0.01	0.00	0.06	0.05	0.05	0.26	0.25	0.13	0.12	0.65	0.40	0.15	0.07	2.40				2.40				
2 SS	0.00	0.00	0.00	0.00	0.01	0.05	0.02	0.02	0.31	0.20	0.05	0.01	0.00	0.02	0.00	0.00	0.70					0.70			
4 MS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02						0.02		
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	
																									3.80
TOT	3.95	2.97	3.31	3.42	4.97	4.70	5.31	5.80	9.14	9.44	8.16	6.34	9.34	8.82	9.37	4.96	100.00	10.54	6.08	6.41	37.73	24.97	10.55	3.71	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-
0.48	0.33	0.26	0.26	0.32	0.22	0.38	0.53	1.27	1.19	1.09	0.86	0.96	0.88	0.89	0.62	10.54	Extremely Unstable
0.26	0.22	0.21	0.35	0.31	0.32	0.26	0.27	0.35	0.58	0.54	0.45	0.66	0.43	0.53	0.32	6.08	Moderately Unstable
0.27	0.18	0.21	0.18	0.37	0.26	0.33	0.37	0.47	0.50	0.41	0.52	0.66	0.59	0.63	0.46	6.41	Slightly Unstable
1.59	0.97	1.56	1.37	2.02	1.80	1.64	1.49	2.07	2.09	2.13	2.64	4.67	4.74	5.07	1.87	37.73	Neutral
0.79	0.60	0.50	0.82	1.31	1.43	1.67	1.79	3.00	2.97	2.99	1.22	1.75	1.49	1.56	1.08	24.97	Slightly Stable
0.41	0.53	0.43	0.28	0.50	0.57	0.89	0.92	1.40	1.54	0.66	0.43	0.53	0.48	0.53	0.45	10.55	Moderately Stable
0.14	0.13	0.14	0.15	0.14	0.09	0.14	0.43	0.58	0.57	0.33	0.22	0.11	0.21	0.15	0.17	3.71	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	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.04	C A L M
0.13	0.19	0.11	0.15	0.21	0.26	0.07	0.13	0.30	0.12	0.19	0.26	0.26	0.12	0.11	0.09	2.70	1.0- 3.5 mph
0.75	0.60	0.86	0.80	1.30	0.65	0.77	0.89	0.90	1.25	1.47	1.21	1.16	0.92	1.18	1.01	15.72	3.6- 7.5 mph
1.67	1.11	0.99	1.23	1.92	1.29	1.77	2.09	2.47	2.57	2.56	2.22	2.54	2.28	2.47	1.89	31.09	7.6-12.5 mph
1.17	0.89	0.85	1.06	1.34	1.80	2.11	1.99	3.38	3.50	2.67	1.95	3.77	3.66	3.79	1.55	35.47	12.6-18.5 mph
0.22	0.15	0.32	0.15	0.19	0.58	0.52	0.57	1.42	1.50	1.02	0.46	0.88	1.25	1.62	0.33	11.19	18.6-24.5 mph
0.01	0.01	0.18	0.01	0.01	0.12	0.07	0.13	0.67	0.50	0.26	0.24	0.71	0.59	0.20	0.08	3.80	>24.5 mph

Attachment F
Solid Waste Disposition Summary
SVP-02-024

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 01/01/2001 to 12/31/2001.

Waste Stream: Resins, Filters, and Evaporator Bottoms

Waste Class	Volume		Curies Shipped	% Error (Ci)
	Ft^3	M^3		
A	3.82E+03	1.08E+02	5.15E+02	+/- 12.3%
B	8.23E+02	2.33E+01	2.79E+02	+/- 12.3%
C	0.00E+00	0.00E+00	0.00E+00	+/- 12.3%
All	4.65E+03	1.32E+02	7.94E+02	+/- 12.3%

Waste Stream: Dry Active Waste

Waste Class	Volume		Curies Shipped	% Error (Ci)
	Ft^3	M^3		
A	2.22E+04	6.29E+02	1.01E+01	+/- 12.3%
B	3.21E+02	9.10E+00	0.11E+00	+/- 12.3%
C	7.50E+00	2.12E-01	2.55E+01	+/- 12.3%
All	2.25E+04	6.38E+02	2.08E+01	+/- 12.3%

Waste Stream: Irradiated Components

Waste Class	Volume		Curies Shipped	% Error (Ci)
	Ft^3	M^3		
A	0.00E+00	0.00E+00	0.00E+00	+/- 12.3%
B	0.00E+00	0.00E+00	0.00E+00	+/- 12.3%
C	2.52E+02	7.12E+00	6.00E+04	+/- 12.3%
All	2.52E+02	7.12E+00	6.00E+04	+/- 12.3%

Solid Waste Disposition

Number of Shipments	Mode of Transportation	Destination
18	Highway	Waste Processor
22	Highway	Disposal Site

Attachment G
RW-AA-100, Revision 2
Process Control Program for Radioactive Wastes
SVP-02-024

Exelon Nuclear

PROCESS CONTROL PROGRAM FOR RADIOACTIVE WASTES

1. PURPOSE

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

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

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

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

2. TERMS AND DEFINITIONS

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

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

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

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

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

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

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

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

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

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

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

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

- Filter media (powdered, bead resin and fiber),
- Filter cartridges,
- Pre-coat body feed material,
- Contaminated charcoal,
- Fuel pool activated hardware,
- Fuel Pool Crud

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

3. RESPONSIBILITIES

3.1. Implementation of this Process Control Program (PCP) is described in procedures at each station.

4. MAIN BODY

4.1. Process Control Program Requirements

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

4.1.2. Changes become effective upon acceptance per station requirements.

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

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

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

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

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

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

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

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

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

2. All vendors used to process liquid LLRW at the sites **MUST MEET** applicable QA Topical Report Augmented Quality Requirements and **SHALL BE APPROVED** by station radwaste management.

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

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

4.2. General Waste Processing Requirements

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

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

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

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

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

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

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

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

2. DAW **MAY BE PACKAGED** in containers to facilitate on-site pre-compaction and/or off-site super-compaction, incineration, or offsite volume reduction processes.

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

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

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

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

4.2.10. High Integrity Containers (HIC):

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

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

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

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

4.2.13 Certain waste, including flowable solids from holding pond, oily waste separator, cooling tower basin and emergency spray pond, may be disposed of onsite under the provisions of 0CFR20.2002 permit. Specific requirements associated with the disposal shall be incorporated into station implementing procedures. **(CM-2)**

4.3. Burial Site Requirements

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

4.3.2. Wastes containing freestanding liquids **SHALL BE CONTROLLED** within limits defined in the applicable burial site criteria. The amount (or maximum level) of freestanding liquid in any container of processed wet waste **SHALL BE DETERMINED** through techniques defined in station or vendor procedures.

4.3.3. Waste **WILL NOT BE** capable of detonation or explosive decomposition/reaction.

4.3.4. Non-gaseous waste **WILL BE CONTROLLED** such that no waste container contains, or is capable of generating, toxic gases, vapors or fumes harmful to people.

4.3.5. Waste **WILL BE** non-flammable.

4.3.6. Waste containing hazardous, biological, pathogenic, or infectious material **WILL BE TREATED** using vendor process/policy to reduce the potential hazard from non-radiological materials.

4.4. Shipping and Inspection Requirements

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

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

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

4.5. Inspection and Corrective Action

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

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

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

4.6. Procedure and Process Reviews

4.6.1. The Exelon Nuclear Process Control Program and changes to it (other than editorial changes) **SHALL BE APPROVED** in accordance with the Quality Assurance Program and the Technical Specifications or Technical Reference Manual (TRMs) or Operation Requirements Manual (ORM), as applicable, for the respective station.

4.6.2. The station or vendor's implementing processing procedures for the purpose of this Process Control Program **SHALL BE REVIEWED and APPROVED** in accordance with the plant specific Technical Specifications (either CTS or ITS, as applicable). These include the following, when applicable:

1. procedures for set-up and operation of dewatering equipment (e.g., set-up and operation of RDS 1000 Unit).

2. solidification procedures affecting waste stabilization for waste processed in a steel container. (This processing method is not currently in use due to waste loading and volume reduction.)

3. High Integrity Container handling procedure.

4. operating waste sampling equipment for solidification and dewatering processes.

4.6.3. All other vendor waste processing procedures **SHALL BE** technically **REVIEWED**, as appropriate.

4.6.4. Station processes, including procedures related to waste manifests, shipment inspections, and container activity determination, **ARE CONTROLLED** by each station.

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

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

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

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

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

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

5. **DOCUMENTATION** - None

6. **REFERENCES**

6.1. Technical Specifications:

6.1.1. The details contained in Current Tech Specs (CTS) or Improved Technical Specifications (ITS), as applicable, in regard to the Process Control Program (PCP), are to be relocated to the UFSAR. Some facilities such as Clinton have elected to relocate these details into the Operational Requirements Manual (ORM). The PCP implements the requirements of 10 CFR 20, 10CFR 61, and 10CFR 71. Compliance with these regulations is required by the Facility Operating Licenses. Relocation of the description of the PCP from the CTS or ITS does not affect the safe operation of the facility. Therefore, the relocation details are not required to be in the CTS or the ITS to provide adequate protection of the public health and safety. Changes to the UFSAR and ORM are controlled by the provisions of 10CFR 50.59.

6.2. Source Documents:

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

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

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

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

6.2.5. Regulatory Guide 1.21

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

6.2.7. Quality Assurance Program

6.3. Station Commitments:

6.3.1. Peach Bottom

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

6.3.2. Limerick

CM-2, 10CFR20.2002 permit granted to Limerick via letter dated July 10, 1976.

7. **ATTACHMENTS** - None