Pilgrim Nuclear Power Station

Radioactive Effluent and Waste Disposal Report including Radiological Impact on Humans

July 1 through December 31, 1983

Environmental and Radiological
Health and Safety Group

Date: March 1, 1984

BOSTON EDISON
ENERGY FOR TOMORROW

PILGRIM NUCLEAR POWER STATION

RADIOACTIVE EFFLUENT AND WASTE DISPOSAL REPORT

INCLUDING RADIOLOGICAL IMPACT ON HUMANS

JULY 1 THROUGH DECEMBER 31, 1983

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Date of Submittal: March 1, 1984

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1. INTRODUCTION AND SUMMARY

This report is issued for the period July - December 1983 in accordance with NRC Regulatory Guide 1.21, "Measuring, Evaluating and Reporting Radioactivity in Solid Wastes and Releases of Radioactive Materials in Liquid and Gaseous Effluents from Light Water Cooled Nuclear Power Plants" (Rev. 1). The information supplied includes actual effluent releases, radioactive waste and meteorological data; doses from liquid releases, doses from gaseous releases and direct gamma radiation doses.

2. EFFLUENT, WASTE DISPOSAL AND WIND DATA

Radioactive liquid and gaseous releases, wind speed data together with measurement errors and solid waste disposal information are given in Tables 1A, 1B, 1C, 2A, 2B, 3, 4A-1, 4A-2, and supplemental information section in the standard Regulatory Guide 1.21 format.

EFFLUENT AND WASTE DISPOSAL SEMIANNUAL REPORT

Supplemental Information

JULY - DECEMBER, 1983

Facility Pilgrim Nuclear Power Station **Licensee** DPR-35

1. **Regulatory Limits**

   a. Fission and activation gases $\frac{Qs}{0.25/\bar{E}} + \frac{Qv}{0.10/\bar{E}} \leq 1$

   b. Iodines 2Ci/Quarter

   c. Particulates, half-lives >8 days 13(1.8E4Qs +1.8E5Qv) ≤ 1

   d. Liquid effluents 10Ci/Quarter

2. **Maximum Permissible Concentration**

   Provide the MPC's used in determining allowable release rates or concentrations.

   a. Fission and activation gases } 10 CFR 20
   b. Iodines } Appendix B
   c. Particulates, half-lives >8 days } Table II

   d. Liquid effluents H - 3 = 1 X 10^{-5} μCi/ml; all rest, 10 CFR 20, Appendix B, Table II

3. **Average Energy**

   Provide the average energy ($\bar{E}$) of the radionuclide mixture in releases of fission and activation gases, if applicable. $\bar{E}$ = 1 Mev

   3rd Quarter, MS=0.26 & RBV=0.70;4th Quarter, MS=0.20 & RBV=0.65

4. **Measurements and Approximations of Total Radioactivity**

   Provide the methods used to measure or approximate the total radioactivity in effluents and the methods used to determine radionuclide composition.

   a. Fission and activation gases } GeLi
   b. Iodines } Istopic
   c. Particulates } Analysis
   d. Liquid effluents }

5. **Batch Releases**

   Provide the following information relating to batch releases of radioactive materials in liquid and gaseous effluents.

   a. Liquid

      1. Number of batch releases: 125
      2. Total time period for batch releases: 184.30 hours
      3. Maximum time period for a batch release: 7.25 hours
      4. Average time period for batch releases: 1.47 hours
      5. Minimum time period for a batch release: 0.42 hours
      6. Average stream flow during periods of release of effluent into a flowing stream: 2.37E+5 GPM

   b. Gaseous **(Not Applicable)**

6. **Abnormal Releases**

   a. None
   b.

TABLE 1A
EFFLUENT AND WASTE DISPOSAL SEMIANNUAL REPORT
GASEOUS EFFLUENTS - SUMMATION OF ALL RELEASES
JULY - DECEMBER 1983

	Unit	Quarter 3	Quarter 4	Est. Total Error, %
A. Fission and activation gases				
1. Total release	Ci	2.04E+3	1.34E+3	25
2. Average release rate for period	μCi/sec	2.57E+2	1.69E+2	
3. Percent of Technical Specification limit	%	0.04	0.02	
B. Iodines				
1. Total iodine-131	Ci	1.09E-2	<7.80E-3	25
2. Average release rate for period	μCi/sec	1.37E-3	<9.81E-4	
3. Percent of Technical Specification limit	%	0.55	<0.39	
C. Particulates				
1. Particulates with half-lives > 8 days	Ci	<4.26E-3	<3.41E-3	30
2. Average release rate for period	μCi/sec	<5.36E-4	<4.29E-4	
3. Percent of Technical Specification limit	%	<0.05	<0.04	
4. Gross alpha radioactivity	Ci	<2.58E-6	<5.07E-7	
D. Tritium				
1. Total release	Ci	2.58E0	2.77E0	40
2. Average release rate for period	μCi/sec	3.25E-1	3.48E-1	
3. Percent of Technical Specification limit	%			

TABLE 1B
EFFLUENT AND WASTE DISPOSAL SEMIANNUAL REPORT (1983)
GASEOUS EFFLUENTS – ELEVATED RELEASE

JULY - DECEMBER 1983

		CONTINUOUS MODE		BATCH MODE	
Nuclides Released	Unit	Quarter -3	Quarter-4	Quarter	Quarter
1. Fission gases					
krypton-85	Ci	2.39E-2	1.49E-2		
krypton-85m	Ci	2.57E+2	1.02E+2		
krypton-87	Ci	4.58E0	-		
krypton-88	Ci	3.07E+2	4.61E+2		
xenon-133	Ci	1.28E+3	6.25E+2		
xenon-135	Ci	5.85E+1	6.60E0		
xenon-135m	Ci	2.11E0	-		
xenon-138	Ci	7.22E0	1.16E+1		
xenon-131m	Ci				
xenon-137	Ci				
xenon-133m	Ci				
Total for period	Ci	1.92E+3	1.21E+3		
2. Iodines					
iodine-131	Ci	7.97E-3	< 4.67E-3		
iodine-133	Ci	2.75E-2	< 2.51E-2		
iodine-135	Ci	3.38E-2	< 1.87E-2		
Total for period	Ci	6.93E-2	< 4.85E-2		
3. Particulates					
strontium-89	Ci	7.40E-4	4.53E-4		
strontium-90	Ci	4.14E-6	5.33E-6		
cesium-134	Ci	1.69E-7	9.95E-6		
cesium-137	Ci	< 3.47E-5	5.52E-5		
barium-lanthanum-140	Ci	< 1.87E-3	< 1.57E-3		
chromium-51	Ci				
manganese-54	Ci	< 7.41E-6	3.29E-7		
cobalt-58	Ci				
iron-59	Ci				
cobalt-60	Ci	< 7.63E-5	< 1.11E-4		
zinc-65	Ci	3.00E-6			
zirconium-niobium-95	Ci	1.83E-6			
cerium-141	Ci				
cerium-144	Ci				
ruthenium-103	Ci				
ruthenium-106	Ci				

TABLE 1C
EFFLUENT AND WASTE DISPOSAL SEMIANNUAL REPORT (1983)
GASEOUS EFFLUENTS - GROUND LEVEL RELEASE

JULY - DECEMBER 1983

		CONTINUOUS MODE		BATCH MODE	
Nuclides Released	Unit	Quarter	Quarter	Quarter	Quarter
1. Fission gases					
krypton-85	Ci	3.62E-6	3.30E-6		
krypton-85m	Ci	8.26E0	7.84E0		
krypton-87	Ci	2.75E+1	3.83E+1		
krypton-88	Ci	2.43E+1	1.63E+1		
xenon-133	Ci	1.18E+1	1.78E+1		
xenon-135	Ci	4.81E+1	4.49E+1		
xenon-135m	Ci				
xenon-138	Ci				
Total for period	Ci	1.20E+2	1.25E+2		
2. Iodines					
iodine-131	Ci	2.88E-3	<3.13E-3		
iodine-133	Ci	2.43E-2	<1.69E-2		
iodine-135	Ci	<5.04E-2	<2.98E-2		
Total for period	Ci	<7.76E-2	<4.98E-2		
3. Particulates					
strontium-89	Ci	5.49E-4	4.12E-4		
strontium-90	Ci	8.60E-7	8.17E-7		
cesium-134	Ci	3.78E-6	4.67E-6		
cesium-137	Ci	<1.65E-4	7.01E-5		
barium-lanthanum-140	Ci	6.21E-4	<5.10E-4		
manganese-54	Ci	2.69E-5	7.46E-6		
cobalt-58	Ci				
iron-59	Ci				
cobalt-60	Ci	1.51E-4	2.00E-4		
zinc-65	Ci				
zirconium-niobium-95	Ci				
cerium-141	Ci				
ruthenium-103	Ci				
ruthenium-106	Ci				

TABLE 2A

EFFLUENT AND WASTE DISPOSAL SEMIANNUAL REPORT (1983)

LIQUID EFFLUENTS - SUMMATION OF ALL RELEASES

JULY - DECEMBER 1983

	Unit	Quarter 3	Quarter 4	Est. Total Error, %
A. Fission and activation products				
1. Total release (not including tritium, noble gases, or alpha)	Ci	2.92E-2	8.58E-1	30
2. Average diluted concentration during period	μCi/ml	7.09E-9	1.48E-7	
3. Percent of applicable limit	%	0.29	8.58	
B. Tritium				
1. Total release	Ci	9.36E-1	1.47E+1	30
2. Average diluted concentration during period	μCi/ml	2.27E-7	2.53E-6	
3. Percent of applicable limit	%	2.27	25.30	
C. Dissolved and entrained gases				
1. Total release	Ci	1.97E-3	1.43E-3	40
2. Average diluted concentration during period	μCi/ml	4.78E-10	2.46E-10	
3. Percent of applicable limit	%			
D. Gross alpha radioactivity				
1. Total release	Ci	<1.11E-4	<1.42E-3	40
E. Volume of waste released (prior to dilution)	liters	4.09E+5	1.80E+6	20
F. Volume of dilution water used during period	liters	4.12E+9	5.81E+9	20

TABLE 2B
EFFLUENT AND WASTE DISPOSAL SEMIANNUAL REPORT (1983)

LIQUID EFFLUENTS

JULY - DECEMBER 1983

		CONTINUOUS MODE		BATCH MODE	
Nuclides Released	Unit	Quarter	Quarter	Quarter 3	Quarter 4
strontium-89	Ci			< 2.62E-5	3.87E-2
strontium-90	Ci			4.71E-5	5.29E-3
cesium-134	Ci			9.28E-5	2.01E-4
cesium-137	Ci			1.56E-3	6.59E-3
iodine-131	Ci			2.91E-5	5.82E-5
cobalt-58	Ci			1.59E-3	2.61E-3
cobalt-60	Ci			9.31E-3	5.72E-2
iron-59	Ci			2.00E-4	1.55E-3
zinc-65	Ci			8.56E-5	1.49E-3
manganese-54	Ci			1.27E-3	7.25E-3
chromium-51	Ci			9.36E-4	4.48E-3
zirconimum-niobium-95	Ci			4.33E-6	1.73E-4
molybdenum 99-technetium 99m	Ci			2.23E-5	-
barium-lanthanum-140	Ci			3.95E-5	1.82E-4
cerium-141	Ci			2.87E-5	1.97E-3
iodine-133	Ci			-	6.44E-5
cerium-144	Ci			-	-
silver-110m	Ci			8.29E-3	7.04E-1
iron-55	Ci				
unidentified	Ci			5.68E-3	2.59E-2
Total for period (above)	Ci			2.92E-2	8.58E-1
xenon-133	Ci			3.38E-4	3.35E-4
xenon 135	Ci			1.63E-3	1.09E-3

TABLE 3

EFFLUENT AND WASTE DISPOSAL SEMI-ANNUAL REPORT (1983)
SOLID WASTE AND IRRADIATED FUEL SHIPMENTS
JULY - DECEMBER 1983

A. SOLID WASTE SHIPPED OFF SITE FOR BURIAL OR DISPOSAL. (not irradiated fuel)

1.	TYPE OF WASTE	UNIT	6 MONTH PERIOD	EST. TOTAL ERROR %
a.	Spent resins, filter sludges, evaporator bottoms, etc.	m^3 Ci	118.23 891.933	N/A
b.	Dry compressible waste, contaminated equipment, etc.	m^3 Ci	217.76 0.90127	N/A
c.	Irradiated components, control rods, etc.	m^3 Ci	N/A	N/A
d.	Other (Describe) Miscellaneous low-level waste	m^3 Ci	N/A	N/A

2. ESTIMATE OF MAJOR NUCLIDE COMPOSITION. (by type of waste)

		%	E(Curies)
a. Spent Resin, Filter Sludges, Evaporator Bottoms, etc.	Co-60	40.430	360.60798
	Co-58	2.351	20.96700
	Co-57	0.000	.00200
	Cs-137	27.127	241.95268
	Cs-134	2.780	24.79250
	Fe-55	13.365	119.20150
	Fe-59	.088	.78900
	I-131	.086	.76500
	I-133	.036	.32200
	La-140	.136	1.21200
	Ba-140	.056	.50400
	Sr-89	7.424	66.21680
	Sr-90	.213	1.89910
	Sr-91	.024	.21100
	Tc-99m	.181	1.61600
	Mo-99	0.000	.00200
	Zn-65	1.539	13.73000
	Mn-54	2.157	19.23840
	Cr-51	1.995	17.79910
	Np-239	.001	.00600
	Ce-141	.006	.05500
	Ru-103	.001	.00700
	Na-24	.004	.03415
	Xe-133	0.000	.00200
	TOTALS	100.000	891.93300

TABLE 3 (continued)

		%	E(Curies)
b. Dry Compressible Waste	Co-60	17.811	0.16064
Contaminated Equipment	Co-58	14.426	0.13011
	Cs-137	.564	0.00509
	Fe-55	.110	0.00100
	Fe-59	9.655	0.08704
	I-131	1.109	0.01000
	Ba-140	1.664	0.01500
	Zn-65	1.717	0.01548
	Mn-54	9.111	0.08214
	Nb-95	1.287	0.01160
	Zr-95	.684	0.00617
	Cr-51	41.862	0.37744
	TOTAL	100.000	0.90127

c. N/A

d. N/A

3. SOLID WASTE DISPOSITION

Number of Shipments	Mode of Transportation	Destination
35	Tractor-Trailer	Barnwell, S.C.

4. IRRADIATED FUEL SHIPMENTS (Disposition)

Number of Shipments	Mode of Transportation	Destination
None	N/A	N/A

TABLE 4A-1

DISTRIBUTION OF WIND DIRECTIONS
AND SPEEDS FOR THE 33 FT. LEVEL
OF THE 220 FT. TOWER

220 FT TOWER 33 FT EL

33.0 FT WIND DATA 7/1/83 - 9/30/83

STABILITY CLASS A-- DELTA T LESS THAN -1.9 DEG C PER 100 METERS CLASS FREQUENCY (PERCENT) = 18.41

WIND DISTRIBUTION SUMMARY

DIRECTION

SPEED(MPH)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
-CALM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
(1)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
(2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CALM- 3.5	9	21	9	18	15	3	3	3	3	0	3	0	3	12	9	15	126
(1)	2.3	5.3	2.3	[illegible]	3.8	0.8	0.8	0.8	0.8	0.0	0.8	0.0	0.8	3.0	2.3	3.8	31.8
(2)	0.4	1.0	0.4	0.8	0.7	0.1	0.1	0.1	0.1	0.0	0.1	0.0	0.1	0.6	0.4	0.7	[illegible]
3.6- 7.5	27	9	12	3	3	6	6	6	12	36	48	6	21	12	9	0	216
(1)	6.8	2.3	3.0	0.8	0.8	1.5	1.5	1.5	3.0	9.1	12.1	1.5	5.3	3.0	2.3	0.0	54.5
(2)	1.3	0.4	0.6	0.1	0.1	0.3	0.3	0.3	0.6	1.7	2.2	0.3	1.0	0.6	0.4	0.0	10.0
7.6-12.5	0	0	0	0	0	0	0	0	0	27	27	0	0	0	0	0	54
(1)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.8	6.8	0.0	0.0	0.0	0.0	0.0	13.6
(2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	1.3	0.0	0.0	0.0	0.0	0.0	2.5
12.6-18.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
(1)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
(2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
18.6-24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
(1)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
(2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OVER-24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
(1)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
(2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ALL SPEEDS	36	30	21	21	18	9	9	9	15	63	78	6	24	24	18	15	396
(1)	9.1	7.6	5.3	5.3	4.5	2.3	2.3	2.3	3.8	15.9	19.7	1.5	6.1	6.1	4.5	3.8	100.0
(2)	1.7	1.4	1.0	1.0	0.8	0.4	0.4	0.4	0.7	2.9	3.6	0.3	1.1	1.1	0.8	0.7	18.1

(1) PERCENT OF ALL GOOD OBSERVATIONS FOR THIS PAGE
(2) PERCENT OF ALL GOOD OBSERVATIONS FOR THE PERIOD

NUMBER OF GOOD OBSERVATIONS ON THIS PAGE 396

CALM-WIND SPEED LESS THAN 1.00MPH

TABLE 4A-1 (Continued)

220 FT TOWER - 33 FT EL.

33.0 FT WIND DATA

7/1/83 - 9/30/87

STABILITY CLASS B-- DELTA T -1.9 TO -1.7 DEG C PER 100 METERS

CLASS FREQUENCY (PERCENT) = 0.70

WIND DISTRIBUTION SUMMARY

SPEED(MPH)	DIRECTION																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
-CALM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
(1)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
(2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CALM- 3.5	0	0	3	0	0	0	0	0	0	0	0	0	0	3	3	0	9
(1)	0.0	0.0	20.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	20.0	20.0	0.0	60.0
(2)	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.4
3.6- 7.5	0	0	0	0	0	0	0	0	0	2	0	0	0	3	0	0	5
(1)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	20.7	0.0	0.0	0.0	20.0	0.0	0.0	40.9
(2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.3
7.6-12.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
(1)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
(2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12.6-18.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
(1)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
(2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
18.6-24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
(1)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
(2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OVER-24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
(1)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
(2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ALL SPEEDS	0	0	3	0	0	0	0	0	0	2	0	0	0	6	3	0	15
(1)	0.0	0.0	20.0	0.0	0.0	0.0	0.0	0.0	0.0	20.7	0.0	0.0	0.0	40.0	20.0	0.0	100.0
(2)	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.3	0.1	0.0	0.7

(1) PERCENT OF ALL GOOD OBSERVATIONS FOR THIS PAGE
(2) PERCENT OF ALL GOOD OBSERVATIONS FOR THE PERIOD

NUMBER OF GOOD OBSERVATIONS ON THIS PAGE = 15

CALM WIND SPEED LESS THAN 1.00 MPH

TABLE 4A-1 (Continued)

TABLE 4A-1 (Continued)

220 FT TOWER - 33 Ft EL

33.0 Ft WIND DATA

7/1/83 - 9/30/83

STABILITY CLASS B-- DELTA T -1.4 TO -0.5 DEG C PER 100 METERS

CLASS FREQUENCY (PERCENT) = 18.41

WIND DISTRIBUTION SUMMARY

SPEED(MPH)	DIRECTION	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
-CALM		0	3	3	3	0	0	0	0	0	0	0	0	0	0	0	0	9
	(1)	0.0	0.8	0.8	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.3
	(2)	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4
CALM- 3.5		9	12	3	15	30	6	15	15	6	9	6	6	9	0	15	6	133
	(1)	2.3	3.0	0.8	3.8	7.6	1.5	3.8	3.8	1.5	0.0	1.5	1.5	2.3	0.0	3.8	1.5	33.8
	(2)	0.4	0.6	0.1	0.7	1.4	0.3	0.7	0.7	0.3	0.4	0.3	0.3	0.4	0.0	0.7	0.3	6.1
3.6- 7.5		3	9	15	3	3	6	3	3	3	75	81	3	12	9	3	3	228
	(1)	0.8	2.3	3.8	0.8	0.8	1.5	0.8	0.8	0.8	19.2	20.5	0.8	3.0	2.3	0.8	0.8	57.6
	(2)	0.1	0.4	0.7	0.1	0.1	0.2	0.1	0.1	0.1	3.5	3.8	0.1	0.6	0.4	0.1	0.1	10.6
7.6-12.5		0	0	0	0	0	0	0	0	0	0	3	0	0	3	0	0	6
	(1)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.0	0.8	0.0	0.0	1.5
	(2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.3
12.6-18.5		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	(1)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	(2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
18.6-24.0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	(1)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	(2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OVER-24.0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	(1)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	(2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ALL SPEEDS		12	24	21	21	33	6	18	18	9	75	90	9	21	12	18	9	396
	(1)	3.0	6.1	5.3	5.3	8.3	1.5	4.5	4.5	2.3	18.9	22.7	2.3	5.3	3.0	4.5	2.3	100.0
	(2)	0.6	1.1	1.0	1.0	1.5	0.3	0.8	0.8	0.4	3.5	4.2	0.4	1.0	0.6	0.8	0.4	18.4

(1) PERCENT OF ALL GOOD OBSERVATIONS FOR THIS PAGE
(2) PERCENT OF ALL GOOD OBSERVATIONS FOR THE PERIOD

NUMBER OF GOOD OBSERVATIONS ON THIS PAGE = 396

CALM WIND SPEED LESS THAN 1.0 MPH

TABLE 4A-1 (Continued)

220 FT TOWER - 33 FT EL

33.0 FT WIND DATA

7/1/83 - 9/30/83

STABILITY CLASS E-- DELTA T -0.4 TO 1.0 DEG C PER 100 ME LAP

CLASS FREQUENCY (PERCENT) = 27.89

WIND DISTRIBUTION SUMMARY

SPEED(MPH)	DIRECTION N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
-CALM	0	0	6	3	6	3	3	0	3	0	3	0	0	3	0	0	30
(1)	0.0	0.0	1.0	0.5	1.0	0.5	0.5	0.0	0.5	0.0	0.5	0.0	0.0	0.5	0.0	0.0	5.0
(2)	0.0	0.0	0.7	0.1	0.3	0.1	0.1	0.0	0.1	0.0	0.1	0.0	0.0	0.1	0.0	0.0	1.4
CALM- 3.5	12	6	3	9	9	3	8	6	9	15	9	7	27	12	12	6	153
(1)	2.0	1.0	0.5	1.5	1.5	0.5	1.3	1.0	1.5	2.5	1.5	1.2	4.5	2.0	2.0	1.0	25.5
(2)	0.6	0.3	0.1	0.4	0.4	0.1	0.4	0.3	0.4	0.7	0.4	0.3	1.3	0.6	0.6	0.3	7.1
3.6- 7.5	3	18	12	3	6	0	6	6	9	123	111	36	21	15	0	15	384
(1)	0.5	3.0	2.0	0.5	1.0	0.0	1.0	1.0	1.5	20.5	18.5	6.0	3.5	2.5	0.0	2.5	64.0
(2)	0.1	0.8	0.6	0.1	0.3	0.0	0.3	0.3	0.4	5.7	5.1	1.7	1.1	0.7	0.0	0.7	17.8
7.6-12.5	0	0	0	0	0	0	0	0	0	9	6	0	6	12	6	0	33
(1)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	1.0	0.0	0.0	2.0	1.0	0.0	5.5
(2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.3	0.0	0.0	0.6	0.3	0.0	1.5
12.6-18.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
(1)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
(2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
18.6-24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
(1)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
(2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OVER-24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
(1)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
(2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ALL SPEEDS	15	24	21	15	15	6	17	12	21	147	129	43	54	42	18	21	600
(1)	2.5	4.0	3.5	2.5	2.5	1.0	2.8	2.0	3.5	24.5	21.5	7.2	9.0	7.0	3.0	3.5	100.0
(2)	0.7	1.1	1.0	0.7	0.7	0.2	0.8	0.6	1.0	6.8	6.1	2.1	2.4	2.0	0.8	1.0	27.8

(1) PERCENT OF ALL GOOD OBSERVATIONS FOR THIS PAGE
(2) PERCENT OF ALL GOOD OBSERVATIONS FOR THE PERIOD

NUMBER OF GOOD OBSERVATIONS ON THIS PAGE = 600

CALM WIND SPEED LESS THAN 1.0 MPH

TABLE 4A-1 (continued)

220 FT TOWER - 33 FT EL

33.0 FT WIND DATA

7/1/83 - 9/30/83

STABILITY CLASS F -- DELTA T 1.6 TO 4.0 DEG C PER 100METERS

CLASS FREQUENCY (PERCENT) = 19.39

WIND DISTRIBUTION (CHANN)

SPEED(MPH)		N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
	DIRECTION																	
-CALM		0	6	0	3	0	0	0	0	0	6	3	0	3	3	0	3	27
	(1)	0.0	1.4	0.0	0.7	0.0	0.0	0.0	0.0	0.0	1.4	0.7	0.0	0.7	0.7	0.0	0.7	6.5
	(2)	0.0	0.3	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.3	0.1	0.0	0.1	0.1	0.0	0.1	1.3
CALM- 3.5		6	0	0	6	6	0	0	0	3	9	52	18	33	51	6	9	159
	(1)	1.4	0.0	0.0	1.4	1.4	0.0	0.0	0.0	0.7	2.1	12.5	4.3	7.9	12.2	1.4	2.2	38.1
	(2)	0.3	0.0	0.0	0.3	0.3	0.0	0.0	0.0	0.1	0.4	2.4	0.8	1.5	2.4	0.3	0.4	7.4
3.6- 7.5		0	0	0	0	0	0	0	0	0	15	99	51	9	15	30	12	231
	(1)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.6	23.7	12.2	2.2	3.6	7.2	2.9	55.4
	(2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	4.6	2.4	0.4	0.7	1.4	0.6	10.7
7.6-12.5		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	(1)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	(2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12.6-18.5		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	(1)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	(2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
18.6-24.0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	(1)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	(2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OVER-24.0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	(1)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	(2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ALL SPEEDS		6	6	0	9	6	0	0	0	3	30	154	69	45	69	36	24	457
	(1)	1.4	1.4	0.0	2.2	1.4	0.0	0.0	0.0	0.7	7.2	37.5	16.5	10.8	16.5	8.6	5.9	109.9
	(2)	0.3	0.3	0.0	0.4	0.3	0.0	0.0	0.0	0.1	1.4	6.9	3.2	2.1	3.2	1.7	1.1	19.4

(1) PERCENT OF ALL GOOD OBSERVATIONS FOR THIS PAGE
(2) PERCENT OF ALL GOOD OBSERVATIONS FOR THE PERIOD

NUMBER OF GOOD OBSERVATIONS ON THIS PAGE 411

CALM WIND SPEED LESS THAN 1.00MPH

TABLE 4A-1 (Continued)

220 FT TOWER - 33 FT EL

33.0 FT WIND DATA

7/1/83 - 9/30/83

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

CLASS FREQUENCY (PERCENT) = 10.46

WIND DISTRIBUTION SUMMARY

SPEED(MPH)	DIRECTION N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
-CALM	0	0	0	0	0	0	0	0	0	0	2	0	0	3	0	0	6
(1)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0	0.0	1.9	0.0	0.0	3.7
(2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.3
CALM- 3.5	0	3	0	0	0	0	0	0	0	3	27	36	24	15	0	0	105
(1)	0.0	1.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9	16.8	22.4	14.9	9.3	0.0	0.0	65.2
(2)	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	1.7	2.2	1.5	0.9	0.0	0.0	6.5
3.6- 7.5	0	0	0	0	3	0	0	0	0	0	75	30	0	0	0	6	114
(1)	0.0	0.0	0.0	0.0	1.9	0.0	0.0	0.0	0.0	0.0	33.3	13.3	0.0	0.0	0.0	2.7	50.7
(2)	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	4.6	1.8	0.0	0.0	0.0	0.3	7.0
7.6-12.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
(1)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
(2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12.6-18.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
(1)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
(2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
18.6-24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
(1)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
(2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OVER-24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
(1)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
(2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ALL SPEEDS	0	3	0	0	3	0	0	0	0	3	104	63	24	18	0	6	225
(1)	0.0	1.9	0.0	0.0	1.9	0.0	0.0	0.0	0.0	1.9	46.7	28.0	10.7	8.0	0.0	2.7	100.0
(2)	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1	2.3	1.4	0.5	0.4	0.0	0.1	4.9

(1)-PERCENT OF ALL GOOD OBSERVATIONS FORTHIS PAGE
(2)-PERCENT OF ALL GOOD OBSERVATIONS FOR THE PERIOD

NUMBER OF GOOD OBSERVATIONS ON THIS PAGE = 225

CALM WIND SPEED LESS THAN 1.00MPH

220 FT TOWER - 33 FT EL

33.0 FT WIND DATA — 7/1/83 - 9/30/83

STABILITY CLASS ALL-- ALL STABILITIES COMBINED — CLASS FREQUENCY (PERCENT) = 100.00

WIND DISTRIBUTION SUMMARY

SPEED(MPH)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
-CALM	0	9	9	9	6	3	3	0	3	6	9	0	3	9	0	3	72
(1)	0.0	0.4	0.4	0.4	0.3	0.1	0.1	0.0	0.1	0.3	0.4	0.0	0.1	0.4	0.0	0.1	3.3
(2)	0.0	0.4	0.4	0.4	0.3	0.1	0.1	0.0	0.1	0.3	0.4	0.0	0.1	0.4	0.0	0.1	3.3
CALM- 3.5	39	42	18	54	69	12	24	27	24	27	60	66	99	99	45	36	741
(1)	1.8	2.0	0.8	2.5	3.2	0.6	1.1	1.3	1.1	1.3	2.8	3.1	4.6	4.6	2.1	1.7	34.4
(2)	1.8	2.0	0.8	2.5	3.2	0.6	1.1	1.3	1.1	1.3	2.8	3.1	4.6	4.6	2.1	1.7	34.4
3.6- 7.5	33	42	39	9	18	15	15	15	27	255	432	129	66	54	42	36	1227
(1)	1.5	2.0	1.8	0.4	0.8	0.7	0.7	0.7	1.3	11.9	20.1	6.0	3.1	2.5	2.0	1.7	57.0
(2)	1.5	2.0	1.8	0.4	0.8	0.7	0.7	0.7	1.3	11.9	20.1	6.0	3.1	2.5	2.0	1.7	57.0
7.6-12.5	0	0	0	0	0	0	0	0	0	42	48	0	0	15	6	0	111
(1)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	2.2	0.0	0.0	0.7	0.3	0.0	5.2
(2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	2.2	0.0	0.0	0.7	0.3	0.0	5.2
12.6-18.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
(1)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
(2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
18.6-24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
(1)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
(2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OVER 24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
(1)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
(2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ALL SPEEDS	72	93	66	72	93	30	42	42	54	330	549	195	168	177	93	75	2151
(1)	3.3	4.3	3.1	3.3	4.3	1.4	2.0	2.0	2.5	15.3	25.5	9.1	7.8	8.2	4.3	3.5	100.0
(2)	3.3	4.3	3.1	3.3	4.3	1.4	2.0	2.0	2.5	15.3	25.5	9.1	7.8	8.2	4.3	3.5	100.0

(1) PERCENT OF ALL GOOD OBSERVATIONS FOR THIS PAGE
(2) PERCENT OF ALL GOOD OBSERVATIONS FOR THE PERIOD

NUMBER OF GOOD OBSERVATIONS ON THIS PAGE 2151
NUMBER OF HOURS IN THIS PERIOD 2184

98.5 PERCENT DATA RECOVERY

CALM-WIND SPEED LESS THAN 1.00MPH

220 FT TOWER - 33 FT EL

33.0 FT WIND DATA

10/1/83 - 12/31/83

STABILITY CLASS A-- DELTA T LESS THAN -1.9 DEG C PER 100 METERS

CLASS FREQUENCY (PERCENT) = 18.41

WIND DISTRIBUTION SUMMARY

SPEED(MPH)	DIRECTION N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
-CALM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
(1)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
(2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CALM- 3.5	9	21	9	18	15	3	3	3	3	0	3	0	3	12	9	15	126
(1)	2.3	5.3	2.3	4.5	3.8	0.8	0.8	0.8	0.8	0.0	0.8	0.0	0.8	3.0	2.3	3.8	31.8
(2)	0.4	1.0	0.4	0.8	0.7	0.1	0.1	0.1	0.1	0.0	0.1	0.0	0.1	0.6	0.4	0.7	5.9
3.6- 7.5	27	9	12	3	3	6	6	6	12	36	48	6	21	12	9	0	216
(1)	6.8	2.3	3.0	0.8	0.8	1.5	1.5	1.5	3.0	9.1	12.1	1.5	5.3	3.0	2.3	0.0	54.5
(2)	1.3	0.4	0.6	0.1	0.1	0.3	0.3	0.3	0.6	1.7	2.2	0.3	1.0	0.6	0.4	0.0	10.0
7.6-12.5	0	0	0	0	0	0	0	0	0	27	27	0	0	0	0	0	54
(1)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.8	6.8	0.0	0.0	0.0	0.0	0.0	13.6
(2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	1.3	0.0	0.0	0.0	0.0	0.0	2.5
12.6-18.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
(1)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
(2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
18.6-24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
(1)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
(2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OVER-24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
(1)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
(2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ALL SPEEDS	36	30	21	21	18	9	9	9	15	63	78	6	24	24	18	15	396
(1)	9.1	7.6	5.3	5.3	4.5	2.3	2.3	2.3	3.8	15.9	19.7	1.5	6.1	6.1	4.5	3.8	100.0
(2)	1.7	1.4	1.0	1.0	0.8	0.4	0.4	0.4	0.7	2.9	3.6	0.3	1.1	1.1	0.8	0.7	18.4

(1)=PERCENT OF ALL GOOD OBSERVATIONS FORTHIS PAGE
(2)=PERCENT OF ALL GOOD OBSERVATIONS FOR THE PERIOD

NUMBER OF GOOD OBSERVATIONS ON THIS PAGE= 396

CALM=WIND SPEED LESS THAN 1.00MPH

TABLE 4A-1 (Continued)

220 FT TOWER - 33 FT EL

33.0 FT WIND DATA

10/1/83 - 12/31/83

STABILITY CLASS B-- DELTA T -1.9 TO -1.7 DEG C PER 100 METERS

CLASS FREQUENCY (PERCENT) = 0.70

WIND DISTRIBUTION SUMMARY

SPEED(MPH)	DIRECTION N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
-CALM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
(1)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
(2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CALM- 3.5	0	0	3	0	0	0	0	0	0	0	0	0	0	3	3	0	9
(1)	0.0	0.0	20.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	20.0	20.0	0.0	60.0
(2)	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.4
3.6- 7.5	0	0	0	0	0	0	0	0	0	3	0	0	0	3	0	0	6
(1)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	20.0	0.0	0.0	0.0	20.0	0.0	0.0	40.0
(2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.3
7.6-12.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
(1)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
(2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12.6-18.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
(1)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
(2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
18.6-24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
(1)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
(2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OVER-24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
(1)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
(2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ALL SPEEDS	0	0	3	0	0	0	0	0	0	3	0	0	0	6	3	0	15
(1)	0.0	0.0	20.0	0.0	0.0	0.0	0.0	0.0	0.0	20.0	0.0	0.0	0.0	40.0	20.0	0.0	100.0
(2)	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.3	0.1	0.0	0.7

(1)=PERCENT OF ALL GOOD OBSERVATIONS FORTHIS PAGE
(2)=PERCENT OF ALL GOOD OBSERVATIONS FOR THE PERIOD

NUMBER OF GOOD OBSERVATIONS ON THIS PAGE= 15

CALM=WIND SPEED LESS THAN 1.00MPH

TABLE 4A-1 (Continued)

220 FT TOWER - 33 FT EL

33.0 FT WIND DATA

10/1/83 - 12/31/83

STABILITY CLASS C-- DELTA T -1.6 TO -1.5 DEG C PER 100 METERS

CLASS FREQUENCY (PERCENT) = 4.74

WIND DISTRIBUTION SUMMARY

SPEED(MPH)	DIRECTION N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
-CALM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
(1)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
(2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CALM- 3.5	3	0	0	6	9	0	3	0	3	0	3	0	3	6	0	0	36
(1)	2.9	0.0	0.0	5.9	8.8	0.0	2.9	0.0	2.9	0.0	2.9	0.0	2.9	5.9	0.0	0.0	35.3
(2)	0.1	0.0	0.0	0.3	0.4	0.0	0.1	0.0	0.1	0.0	0.1	0.0	0.1	0.3	0.0	0.0	1.7
3.6- 7.5	0	6	0	0	9	9	0	0	3	3	15	3	0	0	0	0	48
(1)	0.0	5.9	0.0	0.0	8.8	8.8	0.0	0.0	2.9	2.9	14.7	2.9	0.0	0.0	0.0	0.0	47.1
(2)	0.0	0.3	0.0	0.0	0.4	0.4	0.0	0.0	0.1	0.1	0.7	0.1	0.0	0.0	0.0	0.0	2.2
7.6-12.5	0	0	0	0	0	0	0	0	0	6	12	0	0	0	0	0	18
(1)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.9	11.8	0.0	0.0	0.0	0.0	0.0	17.6
(2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.6	0.0	0.0	0.0	0.0	0.0	0.8
12.6-18.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
(1)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
(2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
18.6-24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
(1)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
(2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OVER-24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
(1)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
(2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ALL SPEEDS	3	6	0	6	18	9	3	0	6	9	30	3	3	6	0	0	102
(1)	2.9	5.9	0.0	5.9	17.6	8.8	2.9	0.0	5.9	8.8	29.4	2.9	2.9	5.9	0.0	0.0	100.0
(2)	0.1	0.3	0.0	0.3	0.8	0.4	0.1	0.0	0.3	0.4	1.4	0.1	0.1	0.3	0.0	0.0	4.7

(1)=PERCENT OF ALL GOOD OBSERVATIONS FORTHIS PAGE
(2)=PERCENT OF ALL GOOD OBSERVATIONS FOR THE PERIOD

NUMBER OF GOOD OBSERVATIONS ON THIS PAGE= 102

CALM=WIND SPEED LESS THAN 1.00MPH

TABLE 4A-1 (Continued)

220 FT TOWER - 33 FT EL

33.0 FT WIND DATA

10/1/83 - 12/31/83

STABILITY CLASS D-- DELTA T -1.4 TO -0.5 DEG C PER 100 METERS

CLASS FREQUENCY (PERCENT) = 18.41

WIND DISTRIBUTION SUMMARY

SPEED(MPH)	DIRECTION N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
-CALM	0	3	3	3	0	0	0	0	0	0	0	0	0	0	0	0	9
(1)	0.0	0.8	0.8	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.3
(2)	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4
CALM- 3.5	9	12	3	15	30	6	15	15	6	0	6	6	9	0	15	6	153
(1)	2.3	3.0	0.8	3.8	7.6	1.5	3.8	3.8	1.5	0.0	1.5	1.5	2.3	0.0	3.8	1.5	38.6
(2)	0.4	0.6	0.1	0.7	1.4	0.3	0.7	0.7	0.3	0.0	0.3	0.3	0.4	0.0	0.7	0.3	7.1
3.6- 7.5	3	9	15	3	3	0	3	3	3	75	81	3	12	9	3	3	228
(1)	0.8	2.3	3.8	0.8	0.8	0.0	0.8	0.8	0.8	18.9	20.5	0.8	3.0	2.3	0.8	0.8	57.6
(2)	0.1	0.4	0.7	0.1	0.1	0.0	0.1	0.1	0.1	3.5	3.8	0.1	0.6	0.4	0.1	0.1	10.6
7.6-12.5	0	0	0	0	0	0	0	0	0	0	3	0	0	3	0	0	6
(1)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.0	0.8	0.0	0.0	1.5
(2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.3
12.6-18.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
(1)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
(2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
18.6-24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
(1)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
(2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OVER-24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
(1)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
(2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ALL SPEEDS	12	24	21	21	33	6	18	18	9	75	90	9	21	12	18	9	396
(1)	3.0	6.1	5.3	5.3	8.3	1.5	4.5	4.5	2.3	18.9	22.7	2.3	5.3	3.0	4.5	2.3	100.0
(2)	0.6	1.1	1.0	1.0	1.5	0.3	0.8	0.8	0.4	3.5	4.2	0.4	1.0	0.6	0.8	0.4	18.4

(1)=PERCENT OF ALL GOOD OBSERVATIONS FORTHIS PAGE
(2)=PERCENT OF ALL GOOD OBSERVATIONS FOR THE PERIOD

NUMBER OF GOOD OBSERVATIONS ON THIS PAGE= 396

CALM=WIND SPEED LESS THAN 1.00MPH

TABLE 4A-1 (Continued)

220 FT TOWER - 33 FT EL

33.0 FT WIND DATA

10/1/83 - 12/31/83

STABILITY CLASS E-- DELTA T -0.4 TO +1.5 DEG C PER 100 METERS

CLASS FREQUENCY (PERCENT) = 27.89

WIND DISTRIBUTION SUMMARY

SPEED(MPH)	DIRECTION N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
-CALM	0	0	6	3	6	3	3	0	3	0	3	0	0	3	0	0	30
(1)	0.0	0.0	1.0	0.5	1.0	0.5	0.5	0.0	0.5	0.0	0.5	0.0	0.0	0.5	0.0	0.0	5.0
(2)	0.0	0.0	0.3	0.1	0.3	0.1	0.1	0.0	0.1	0.0	0.1	0.0	0.0	0.1	0.0	0.0	1.4
CALM- 3.5	12	6	3	9	9	3	3	9	9	15	9	9	27	12	12	6	153
(1)	2.0	1.0	0.5	1.5	1.5	0.5	0.5	1.5	1.5	2.5	1.5	1.5	4.5	2.0	2.0	1.0	25.5
(2)	0.6	0.3	0.1	0.4	0.4	0.1	0.1	0.4	0.4	0.7	0.4	0.4	1.3	0.6	0.6	0.3	7.1
3.6- 7.5	3	18	12	3	0	0	6	6	9	123	114	36	24	15	0	15	384
(1)	0.5	3.0	2.0	0.5	0.0	0.0	1.0	1.0	1.5	20.5	19.0	6.0	4.0	2.5	0.0	2.5	64.0
(2)	0.1	0.8	0.6	0.1	0.0	0.0	0.3	0.3	0.4	5.7	5.3	1.7	1.1	0.7	0.0	0.7	17.9
7.6-12.5	0	0	0	0	0	0	0	0	0	9	6	0	0	12	6	0	33
(1)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	1.0	0.0	0.0	2.0	1.0	0.0	5.5
(2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.3	0.0	0.0	0.6	0.3	0.0	1.5
12.6-18.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
(1)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
(2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
18.6-24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
(1)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
(2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OVER-24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
(1)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
(2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ALL SPEEDS	15	24	21	15	15	6	12	15	21	147	132	45	51	42	18	21	600
(1)	2.5	4.0	3.5	2.5	2.5	1.0	2.0	2.5	3.5	24.5	22.0	7.5	8.5	7.0	3.0	3.5	100.0
(2)	0.7	1.1	1.0	0.7	0.7	0.3	0.6	0.7	1.0	6.8	6.1	2.1	2.4	2.0	0.8	1.0	27.9

(1)=PERCENT OF ALL GOOD OBSERVATIONS FORTHIS PAGE
(2)=PERCENT OF ALL GOOD OBSERVATIONS FOR THE PERIOD

NUMBER OF GOOD OBSERVATIONS ON THIS PAGE= 600

CALM=WIND SPEED LESS THAN 1.00MPH

TABLE 4A-1 (Continued)

220 FT TOWER - 33 FT EL

33.0 FT WIND DATA

10/1/83 - 12/31/83

STABILITY CLASS F-- DELTA T 1.6 TO 4.0 DEG C PER 100METERS

CLASS FREQUENCY (PERCENT) = 19.39

WIND DISTRIBUTION SUMMARY

SPEED(MPH)	DIRECTION N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
-CALM	0	6	0	3	0	0	0	0	0	6	3	0	3	3	0	3	27
(1)	0.0	1.4	0.0	0.7	0.0	0.0	0.0	0.0	0.0	1.4	0.7	0.0	0.7	0.7	0.0	0.7	6.5
(2)	0.0	0.3	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.3	0.1	0.0	0.1	0.1	0.0	0.1	1.3
CALM- 3.5	6	0	0	6	6	0	0	0	3	9	12	18	33	51	6	9	159
(1)	1.4	0.0	0.0	1.4	1.4	0.0	0.0	0.0	0.7	2.2	2.9	4.3	7.9	12.2	1.4	2.2	38.1
(2)	0.3	0.0	0.0	0.3	0.3	0.0	0.0	0.0	0.1	0.4	0.6	0.8	1.5	2.4	0.3	0.4	7.4
3.6- 7.5	0	0	0	0	0	0	0	0	0	15	99	51	9	15	30	12	231
(1)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.6	23.7	12.2	2.2	3.6	7.2	2.9	55.4
(2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	4.6	2.4	0.4	0.7	1.4	0.6	10.7
7.6-12.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
(1)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
(2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12.6-18.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
(1)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
(2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
18.6-24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
(1)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
(2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OVER-24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
(1)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
(2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ALL SPEEDS	6	6	0	9	6	0	0	0	3	30	114	69	45	69	36	24	417
(1)	1.4	1.4	0.0	2.2	1.4	0.0	0.0	0.0	0.7	7.2	27.3	16.5	10.8	16.5	8.6	5.8	100.0
(2)	0.3	0.3	0.0	0.4	0.3	0.0	0.0	0.0	0.1	1.4	5.3	3.2	2.1	3.2	1.7	1.1	19.4

(1)=PERCENT OF ALL GOOD OBSERVATIONS FORTHIS PAGE
(2)=PERCENT OF ALL GOOD OBSERVATIONS FOR THE PERIOD

NUMBER OF GOOD OBSERVATIONS ON THIS PAGE= 417

CALM=WIND SPEED LESS THAN 1.00MPH

220 FT TOWER - 33 FT EL

33.0 FT WIND DATA 10/1/83 - 12/31/83

STABILITY CLASS G-- DELTA T GREATER THAN 4.0 DEG C PER 100 METERS CLASS FREQUENCY (PERCENT) = 10.46

WIND DISTRIBUTION SUMMARY

SPEED(MPH)	DIRECTION N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
-CALM	0	0	0	0	0	0	0	0	0	0	3	0	0	3	0	0	6
(1)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0	0.0	1.3	0.0	0.0	2.7
(2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.3
CALM- 3.5	0	3	0	0	0	0	0	0	0	3	27	33	24	15	0	0	105
(1)	0.0	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	12.0	14.7	10.7	6.7	0.0	0.0	46.7
(2)	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	1.3	1.5	1.1	0.7	0.0	0.0	4.9
3.6- 7.5	0	0	0	0	3	0	0	0	0	0	75	30	0	0	0	6	114
(1)	0.0	0.0	0.0	0.0	1.3	0.0	0.0	0.0	0.0	0.0	33.3	13.3	0.0	0.0	0.0	2.7	50.7
(2)	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	3.5	1.4	0.0	0.0	0.0	0.3	5.3
7.6-12.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
(1)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
(2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12.6-18.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
(1)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
(2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
18.6-24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
(1)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
(2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OVER-24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
(1)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
(2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ALL SPEEDS	0	3	0	0	3	0	0	0	0	3	105	63	24	18	0	6	225
(1)	0.0	1.3	0.0	0.0	1.3	0.0	0.0	0.0	0.0	1.3	46.7	28.0	10.7	8.0	0.0	2.7	100.0
(2)	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1	4.9	2.9	1.1	0.8	0.0	0.3	10.5

(1)=PERCENT OF ALL GOOD OBSERVATIONS FORTHIS PAGE
(2)=PERCENT OF ALL GOOD OBSERVATIONS FOR THE PERIOD

NUMBER OF GOOD OBSERVATIONS ON THIS PAGE= 225

CALM=WIND SPEED LESS THAN 1.00MPH

220 FT TOWER - 33 FT EL

33.0 FT WIND DATA

10/1/83 - 12/31/83

STABILITY CLASS ALL-- ALL STABILITIES COMBINED

CLASS FREQUENCY (PERCENT) = 100.00

WIND DISTRIBUTION SUMMARY

SPEED(MPH)	DIRECTION N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
-CALM	0	9	9	9	6	3	3	0	3	6	9	0	3	9	0	3	72
(1)	0.0	0.4	0.4	0.4	0.3	0.1	0.1	0.0	0.1	0.3	0.4	0.0	0.1	0.4	0.0	0.1	3.3
(2)	0.0	0.4	0.4	0.4	0.3	0.1	0.1	0.0	0.1	0.3	0.4	0.0	0.1	0.4	0.0	0.1	3.3
CALM- 3.5	39	42	18	54	69	12	24	27	24	27	60	66	99	99	45	36	741
(1)	1.8	2.0	0.8	2.5	3.2	0.6	1.1	1.3	1.1	1.3	2.8	3.1	4.6	4.6	2.1	1.7	34.4
(2)	1.8	2.0	0.8	2.5	3.2	0.6	1.1	1.3	1.1	1.3	2.8	3.1	4.6	4.6	2.1	1.7	34.4
3.6- 7.5	33	42	39	9	18	15	15	15	27	255	432	129	66	54	42	36	1227
(1)	1.5	2.0	1.8	0.4	0.8	0.7	0.7	0.7	1.3	11.9	20.1	6.0	3.1	2.5	2.0	1.7	57.0
(2)	1.5	2.0	1.8	0.4	0.8	0.7	0.7	0.7	1.3	11.9	20.1	6.0	3.1	2.5	2.0	1.7	57.0
7.6-12.5	0	0	0	0	0	0	0	0	0	42	48	0	0	15	6	0	111
(1)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	2.2	0.0	0.0	0.7	0.3	0.0	5.2
(2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	2.2	0.0	0.0	0.7	0.3	0.0	5.2
12.6-18.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
(1)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
(2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
18.6-24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
(1)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
(2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OVER-24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
(1)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
(2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ALL SPEEDS	72	93	66	72	93	30	42	42	54	330	549	195	168	177	93	75	2151
(1)	3.3	4.3	3.1	3.3	4.3	1.4	2.0	2.0	2.5	15.3	25.5	9.1	7.8	8.2	4.3	3.5	100.0
(2)	3.3	4.3	3.1	3.3	4.3	1.4	2.0	2.0	2.5	15.3	25.5	9.1	7.8	8.2	4.3	3.5	100.0

(1)=PERCENT OF ALL GOOD OBSERVATIONS FORTHIS PAGE
(2)=PERCENT OF ALL GOOD OBSERVATIONS FOR THE PERIOD

NUMBER OF GOOD OBSERVATIONS ON THIS PAGE=2151
NUMBER OF HOURS IN THIS PERIOD= 2184

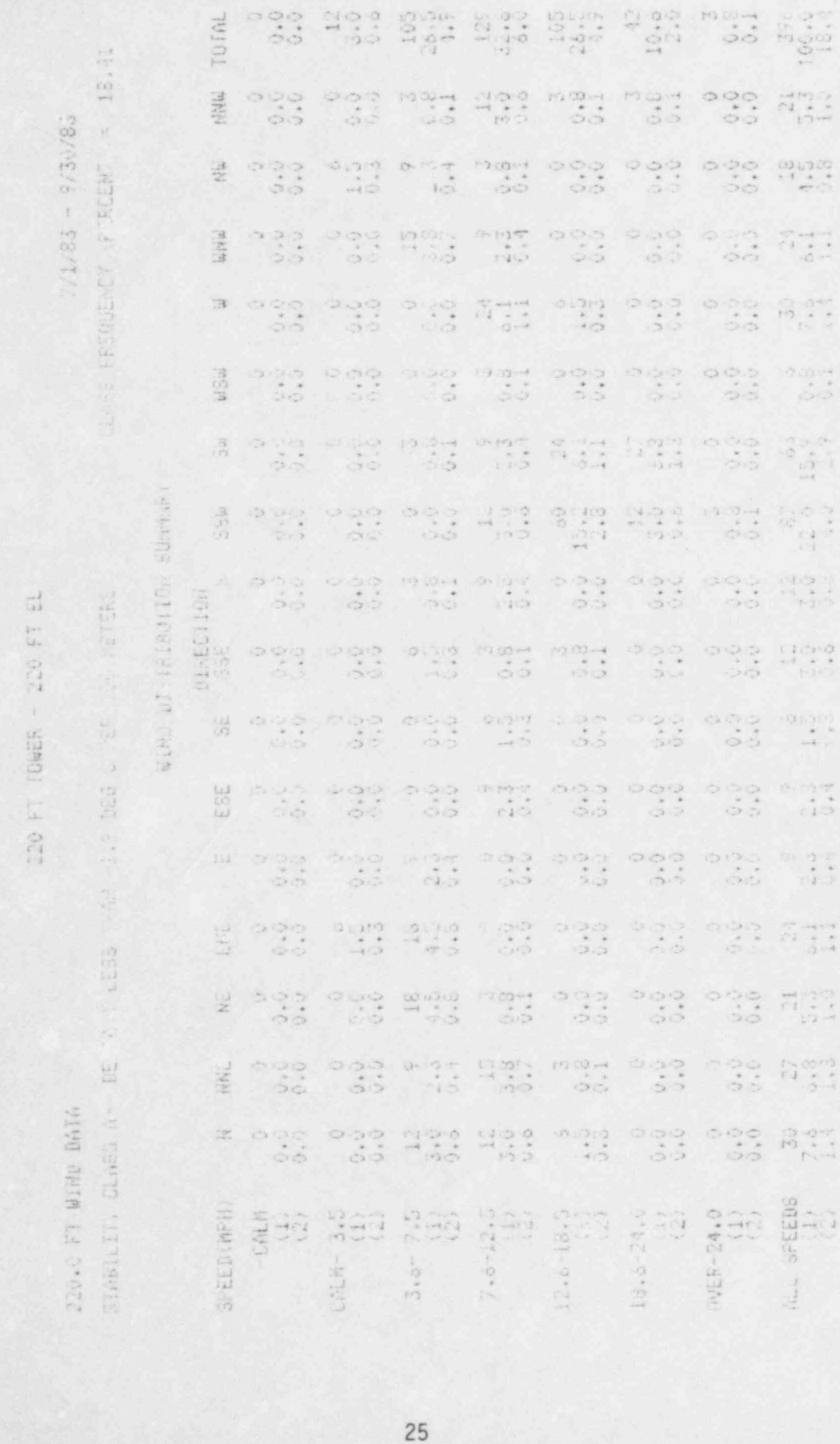
98.5 PERCENT DATA RECOVERY

CALM=WIND SPEED LESS THAN 1.00MPH

TABLE 4A-1 (Continued)

TABLE 4A-2

DISTRIBUTION OF WIND DIRECTIONS
AND SPEEDS FOR THE 220 FT. LEVEL
OF THE 220 FT. TOWER



220 FT TOWER - 220 FT EL

220.0 FT WIND DATA 7/1/83 - 9/30/83

STABILITY CLASS B-- DELTA T -1.9 TO -1.7 DEG C PER 100 METERS CLASS FREQUENCY (PERCENT) = 0.70

WIND DISTRIBUTION SUMMARY

SPEED(MPH)	DIRECTION N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
-CALM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
(1)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
(2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CALM- 3.5	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
(1)	20.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	20.0
(2)	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
3.6- 7.5	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3
(1)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	20.0	0.0	0.0	20.0
(2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1
7.6-12.5	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3
(1)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	20.0	0.0	0.0	20.0
(2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1
12.6-18.5	0	0	0	0	0	0	0	0	0	3	0	0	0	3	0	0	6
(1)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	20.0	0.0	0.0	0.0	20.0	0.0	0.0	40.0
(2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.3
18.6-24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
(1)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
(2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OVER-24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
(1)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
(2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ALL SPEEDS	3	0	0	0	0	0	0	0	0	3	0	0	0	9	0	0	15
(1)	20.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	20.0	0.0	0.0	0.0	60.0	0.0	0.0	100.0
(2)	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.4	0.0	0.0	0.7

(1)-PERCENT OF ALL GOOD OBSERVATIONS FORTHIS PAGE
(2) PERCENT OF ALL GOOD OBSERVATIONS FOR THE PERIOD

NUMBER OF GOOD OBSERVATIONS ON THIS PAGE = 15

CALM-WIND SPEED LESS THAN 1.0 MPH

TABLE 4A-2 (Continued)

TABLE 4A-2 (Continued)

220 FT TOWER - 220 FT RL

220.0 FT WIND DATA — 7/1/83 - 9/30/83

STABILITY CLASS C-- DELTA T -1.6 TO -1.5 DEG C PER 100 METERS — CLASS FREQUENCY (PERCENT) = 4.74

WIND DISTRIBUTION SUMMARY

	DIRECTION																
SPEED(MPH)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
-CALM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
(1)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
(2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CALM- 3.5	0	0	3	0	6	0	0	0	0	0	6	4	0	3	0	3	15
(1)	0.0	0.0	2.5	0.0	5.0	0.0	0.0	0.0	0.0	0.0	5.0	3.3	0.0	2.5	0.0	2.5	12.4
(2)	0.0	0.0	0.1	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.3	0.2	0.0	0.1	0.0	0.1	0.7
3.6- 7.5	0	0	6	0	6	0	0	0	0	0	3	0	0	6	0	0	21
(1)	0.0	0.0	5.0	0.0	5.0	0.0	0.0	0.0	0.0	0.0	2.5	0.0	0.0	5.0	0.0	0.0	17.4
(2)	0.0	0.0	0.5	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.5	0.0	0.0	1.7
7.6-12.5	3	0	0	0	0	9	6	6	3	0	3	0	0	6	0	0	21
(1)	2.5	0.0	0.0	0.0	0.0	7.5	5.0	5.0	2.5	0.0	2.5	0.0	0.0	5.0	0.0	0.0	17.4
(2)	0.1	0.0	0.0	0.0	0.0	0.4	0.2	0.2	0.1	0.0	0.1	0.0	0.0	0.2	0.0	0.0	1.2
12.6-18.5	0	0	0	0	0	0	0	0	3	3	12	3	0	0	0	0	21
(1)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.5	2.5	9.9	2.5	0.0	0.0	0.0	0.0	17.4
(2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.4	0.1	0.0	0.0	0.0	0.0	1.2
18.6-24.0	0	0	0	0	0	0	0	0	0	6	12	0	0	0	0	6	18
(1)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.1	10.2	0.0	0.0	0.0	0.0	5.1	15.3
(2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.7	0.0	0.0	0.0	0.0	0.3	1.0
OVER-24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
(1)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
(2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ALL SPEEDS	3	0	9	0	12	15	6	9	6	9	36	6	0	15	0	9	135
(1)	2.5	0.0	7.5	0.0	10.0	12.5	5.0	7.5	5.0	7.5	30.0	5.0	0.0	12.5	0.0	7.5	112.5
(2)	0.1	0.0	0.1	0.0	0.2	0.2	0.1	0.1	0.1	0.1	0.5	0.1	0.0	0.2	0.0	0.1	1.7

(1) PERCENT OF ALL GOOD OBSERVATIONS FOR THIS PAGE
(2) PERCENT OF ALL GOOD OBSERVATIONS FOR THE PERIOD

NUMBER OF GOOD OBSERVATIONS ON THIS PAGE = 112

CALM WIND SPEED LESS THAN 1.0 MPH

TABLE 4A-2 (Continued)

220 FT TOWER - 220 FT EL

220.0 FT WIND DATA 7/1/83 - 9/30/83

STABILITY CLASS B-- DELTA T -1.7 TO -0.5 DEG C PER 100 METERS CLASS FREQUENCY (PERCENT) = 16.41

WIND DISTRIBUTION SUMMARY

	DIRECTION																
SPEED(MPH)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
-CALM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
(1)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
(2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CALM- 3.5	3	3	6	18	6	3	3	0	0	0	0	0	0	0	0	0	42
(1)	0.8	0.8	1.5	4.5	1.5	0.8	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.6
(2)	0.1	0.1	0.3	0.8	0.3	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.8
3.6- 7.5	6	3	0	3	9	18	3	9	0	3	0	6	0	6	6	3	76
(1)	1.5	0.8	0.0	0.8	2.3	4.5	1.5	2.3	0.0	0.8	0.0	1.5	0.0	1.5	1.5	0.8	19.2
(2)	0.3	0.1	0.0	0.1	0.4	0.8	0.3	0.4	0.0	0.1	0.0	0.3	0.0	0.3	0.3	0.1	3.8
7.6-12.5	9	3	0	0	0	3	3	12	12	15	12	0	0	9	3	9	90
(1)	2.3	0.8	0.0	0.0	0.0	0.8	0.8	3.0	3.0	3.8	3.0	0.0	0.0	2.3	0.8	2.3	22.7
(2)	0.4	0.1	0.0	0.0	0.0	0.1	0.1	0.5	0.5	0.7	0.5	0.0	0.0	0.4	0.1	0.4	4.2
12.6-16.5	9	9	9	0	0	0	0	0	0	39	66	6	0	6	0	0	144
(1)	2.3	2.3	2.3	0.0	0.0	0.0	0.0	0.0	0.0	9.8	16.7	1.5	0.0	1.5	0.0	0.0	36.4
(2)	0.4	0.4	0.4	0.0	0.0	0.0	0.0	0.0	0.0	1.8	3.1	0.3	0.0	0.3	0.0	0.0	6.7
16.6-21.0	3	0	3	0	0	0	0	0	0	6	27	6	0	0	6	0	39
(1)	0.8	0.0	0.8	0.0	0.0	0.0	0.0	0.0	0.0	1.5	6.8	1.5	0.0	0.0	1.5	0.0	9.8
(2)	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.3	1.3	0.3	0.0	0.0	0.3	0.0	1.8
OVER-21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3
(1)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.0	0.8
(2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1
ALL SPEEDS	30	18	18	21	15	24	12	21	12	63	105	12	0	24	9	12	396
(1)	7.6	4.5	4.5	5.3	3.8	6.1	3.0	5.3	3.0	15.9	26.5	3.0	0.0	6.1	2.3	3.0	100.0
(2)	1.4	0.8	0.8	1.0	0.7	1.1	0.6	1.0	0.6	2.9	4.9	0.6	0.0	1.1	0.4	0.6	18.4

(1)-PERCENT OF ALL GOOD OBSERVATIONS FOR THIS PAGE
(2)-PERCENT OF ALL GOOD OBSERVATIONS FOR THE PERIOD

NUMBER OF GOOD OBSERVATIONS ON THIS PAGE= 396

CALM-WIND SPEED LESS THAN 1.0 MPH

TABLE 4A-2 (Continued)

220 FT TOWER - 220 FT EL

WIND DISTRIBUTION SUMMARY

SPEED(MPH)	DIRECTION N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
-CALM	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	3
(1)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.5
(2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1
CALM- 3.5	0	3	6	0	0	6	3	3	0	0	0	0	0	0	0	0	21
(1)	0.0	0.5	1.0	0.0	0.0	1.0	0.5	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.5
(2)	0.0	0.1	0.3	0.0	0.0	0.3	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0
3.6- 7.5	0	6	3	3	0	6	9	6	3	6	0	0	0	9	0	3	54
(1)	0.0	1.0	0.5	0.5	0.0	1.0	1.5	1.0	0.5	1.0	0.0	0.0	0.0	1.5	0.0	0.5	9.0
(2)	0.0	0.3	0.1	0.1	0.0	0.3	0.4	0.3	0.1	0.3	0.0	0.0	0.0	0.4	0.0	0.1	2.5
7.6-12.5	6	0	6	0	0	0	3	6	12	6	6	12	6	9	15	6	93
(1)	1.0	0.0	1.0	0.0	0.0	0.0	0.5	1.0	2.0	1.0	1.0	2.0	1.0	1.5	2.5	1.0	15.5
(2)	0.3	0.0	0.3	0.0	0.0	0.0	0.1	0.3	0.6	0.3	0.3	0.6	0.3	0.4	0.7	0.3	4.3
12.6-18.5	12	9	9	0	0	0	0	9	3	81	51	9	21	15	6	12	237
(1)	2.0	1.5	1.5	0.0	0.0	0.0	0.0	1.5	0.5	13.5	8.5	1.5	3.5	2.5	1.0	2.0	39.5
(2)	0.6	0.4	0.4	0.0	0.0	0.0	0.0	0.4	0.1	3.8	2.4	0.4	1.0	0.7	0.3	0.6	11.0
18.6-24.0	3	3	0	0	0	0	0	0	0	27	75	0	3	12	6	6	165
(1)	0.5	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.5	12.5	0.0	0.5	2.0	1.0	1.0	27.5
(2)	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	3.5	0.0	0.1	0.6	0.3	0.3	7.7
OVER-24.0	3	0	0	0	0	0	0	0	0	0	0	0	0	15	9	0	27
(1)	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.5	1.5	0.0	4.5
(2)	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.4	0.0	1.3
ALL SPEEDS	24	21	24	3	0	12	15	24	18	150	132	24	30	60	36	27	600
(1)	4.0	3.5	4.0	0.5	0.0	2.0	2.5	4.0	3.0	25.0	22.0	4.0	5.0	10.0	6.0	4.5	100.0
(2)	1.1	1.0	1.1	0.1	0.0	0.6	0.7	1.1	0.8	7.0	6.1	1.1	1.4	2.8	1.7	1.3	27.7

(1) PERCENT OF ALL GOOD OBSERVATIONS FOR THIS PAGE
(2) PERCENT OF ALL GOOD OBSERVATIONS FOR THE PERIOD

NUMBER OF GOOD OBSERVATIONS ON THIS PAGE= 600

CALM WIND SPEED LESS THAN 1.0MPH

220 FT TOWER - 220 FT EL

220.0 FT WIND DATA

7/1/83 - 9/30/83

STABILITY CLASS F-- DELTA T 1.6 TO 4.0 DEG C PER 100METERS

CLASS FREQUENCY (PERCENT) = 19.39

WIND DISTRIBUTION SUMMARY

SPEED(MPH)	DIRECTION N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
-CALM	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
(1)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
(2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CALM- 3.5	6	0	0	0	0	3	0	0	0	0	0	0	0	0	3	0	12
(1)	1.4	0.0	0.0	0.0	0.0	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.0	2.9
(2)	0.3	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.6
3.6- 7.5	3	3	0	0	3	0	3	3	3	0	0	3	0	0	3	9	33
(1)	0.7	0.7	0.0	0.0	0.7	0.0	0.7	0.7	0.7	0.0	0.0	0.7	0.0	0.0	0.7	2.2	7.9
(2)	0.1	0.1	0.0	0.0	0.1	0.0	0.1	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.1	0.4	1.5
7.6-12.5	3	0	6	3	0	0	0	3	6	0	6	3	6	6	12	18	72
(1)	0.7	0.0	1.4	0.7	0.0	0.0	0.0	0.7	1.4	0.0	1.4	0.7	1.4	1.4	2.9	4.3	17.3
(2)	0.1	0.0	0.3	0.1	0.0	0.0	0.0	0.1	0.3	0.0	0.3	0.1	0.3	0.3	0.6	0.8	3.3
12.6-18.5	3	3	0	0	0	0	0	0	3	3	39	39	18	18	30	18	174
(1)	0.7	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.7	9.4	9.4	4.3	4.3	7.2	4.3	41.7
(2)	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	1.8	1.8	0.8	0.8	1.4	0.8	8.1
18.6-24.5	3	0	0	0	0	0	0	0	6	6	48	12	3	6	16	9	105
(1)	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4	11.5	2.9	0.7	1.4	4.3	2.2	25.2
(2)	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	2.2	0.6	0.1	0.3	0.8	0.4	4.9
OVER-24.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15	6	21
(1)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.6	1.4	5.0
(2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.3	1.0
ALL SPEEDS	18	6	6	3	3	3	3	6	18	9	93	57	27	30	81	60	417
(1)	4.3	1.4	1.4	0.7	0.7	0.7	0.7	1.4	2.9	2.2	22.3	13.7	6.5	7.2	19.4	14.4	100.0
(2)	0.8	0.3	0.3	0.1	0.1	0.1	0.1	0.3	0.8	0.4	4.3	2.6	1.3	1.4	3.8	2.8	19.4

(1) PERCENT OF ALL GOOD OBSERVATIONS FOR THIS PAGE
(2) PERCENT OF ALL GOOD OBSERVATIONS FOR THE PERIOD

NUMBER OF GOOD OBSERVATIONS ON THIS PAGE: 417

CALM WIND SPEED LESS THAN 1.00MPH

TABLE 4A-2 (Continued)

220 FT TOWER - 220 FT EL

220.0 FT WIND DATA 7/1/83 - 9/30/83

STABILITY CLASS G-- DELTA T GREATER THAN 4.0 DEG C PER 100 METERS CLASS FREQUENCY (PERCENT) = 10.46

WIND DISTRIBUTION SUMMARY

SPEED(MPH)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
-CALM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
(1)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
(2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CALM- 3.5	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	3
(1)	0.0	0.0	0.0	0.0	0.0	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3
(2)	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
3.6- 7.5	3	0	6	0	0	0	0	0	3	3	3	6	0	3	0	0	27
(1)	1.3	0.0	2.7	0.0	0.0	0.0	0.0	0.0	1.3	1.3	1.3	2.7	0.0	1.3	0.0	0.0	12.0
(2)	0.1	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.3	0.0	0.1	0.0	0.0	1.3
7.6-12.5	0	0	0	0	0	0	0	3	0	12	9	6	27	9	6	18	90
(1)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0	5.3	4.0	2.7	12.0	4.0	2.7	8.0	40.0
(2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.6	0.4	0.3	1.3	0.4	0.3	0.8	4.2
12.6-18.5	0	0	3	0	0	0	0	0	3	0	12	21	12	9	0	3	63
(1)	0.0	0.0	1.3	0.0	0.0	0.0	0.0	0.0	1.3	0.0	5.3	9.3	5.3	4.0	0.0	1.3	28.0
(2)	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.6	1.0	0.6	0.4	0.0	0.1	2.9
18.6-24.0	0	0	0	0	0	0	0	0	0	0	15	21	0	0	0	0	36
(1)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.7	9.3	0.0	0.0	0.0	0.0	16.0
(2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	1.0	0.0	0.0	0.0	0.0	1.7
OVER-24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	6
(1)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.7	2.7
(2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.3
ALL SPEEDS	3	0	9	0	0	3	0	3	6	15	39	54	39	21	6	27	225
(1)	1.3	0.0	4.0	0.0	0.0	1.3	0.0	1.3	2.7	6.7	17.3	24.0	17.3	9.3	2.7	12.0	100.0
(2)	0.1	0.0	0.4	0.0	0.0	0.1	0.0	0.1	0.3	0.7	1.8	2.5	1.8	1.0	0.3	1.3	10.5

(1) PERCENT OF ALL GOOD OBSERVATIONS FOR THIS PAGE
(2) PERCENT OF ALL GOOD OBSERVATIONS FOR THE PERIOD

NUMBER OF GOOD OBSERVATIONS ON THIS PAGE= 225

CALM WIND SPEED LESS THAN 1.00MPH

TABLE 4A-2 (Continued)

220 FT TOWER - 220 FT EL

220.0 FT WIND DATA — 7/1/83 - 9/30/83

STABILITY CLASS ALL-- ALL STABILITIES COMBINED — CLASS FREQUENCY (PERCENT) = 100.00

WIND DISTRIBUTION SUMMARY

SPEED(MPH)	DIRECTION N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
-CALM	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	3
(1)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1
(2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1
CALM- 3.5	12	6	15	24	12	15	6	3	0	6	6	3	0	0	9	3	108
(1)	0.6	0.3	0.7	1.1	0.6	0.7	0.3	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.1	5.0
(2)	0.6	0.3	0.7	1.1	0.6	0.7	0.3	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.4	0.1	5.0
3.6- 7.5	24	21	33	24	27	30	18	24	12	12	9	15	0	42	18	18	327
(1)	1.1	1.0	1.5	1.1	1.3	1.4	0.8	1.1	0.6	0.6	0.4	0.7	0.0	2.0	0.8	0.8	15.1
(2)	1.1	1.0	1.5	1.1	1.3	1.4	0.8	1.1	0.6	0.6	0.4	0.7	0.0	2.0	0.8	0.8	15.2
7.6-12.5	33	18	15	3	0	21	12	30	42	45	45	24	63	45	39	66	498
(1)	1.5	0.8	0.7	0.1	0.0	1.0	0.6	1.4	2.0	2.1	2.1	1.1	2.9	2.1	1.8	2.9	23.2
(2)	1.5	0.8	0.7	0.1	0.0	1.0	0.6	1.1	2.0	2.1	2.1	1.1	2.9	2.1	1.8	2.9	23.2
12.6-18.5	30	24	21	0	0	0	0	12	12	189	204	78	57	51	36	36	750
(1)	1.4	1.1	1.0	0.0	0.0	0.0	0.0	0.6	0.6	8.8	9.5	3.6	2.6	2.4	1.7	1.7	34.9
(2)	1.1	1.1	1.0	0.0	0.0	0.0	0.0	0.6	0.6	8.8	9.5	3.6	2.6	2.4	1.7	1.7	34.9
18.6-24.0	9	3	3	0	0	0	0	0	0	87	204	33	6	18	24	12	405
(1)	0.4	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	4.0	9.5	1.5	0.3	0.8	1.1	0.6	18.8
(2)	0.4	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	4.0	9.5	1.5	0.3	0.8	1.1	0.6	18.8
OVER-24.0	3	0	0	0	0	0	0	0	0	3	0	0	0	18	24	12	60
(1)	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.8	1.1	0.6	2.8
(2)	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.8	1.1	0.6	2.8
ALL SPEEDS	111	72	87	81	87	66	36	69	66	336	462	156	126	174	150	150	2151
(1)	5.2	3.3	4.0	2.4	1.8	3.1	1.7	3.2	3.1	15.6	21.5	7.3	5.9	8.1	7.0	7.0	100.0
(2)	5.2	3.3	4.0	2.4	1.8	3.1	1.7	3.2	3.1	15.6	21.5	7.3	5.9	8.1	7.0	7.0	100.0

(1) PERCENT OF ALL GOOD OBSERVATIONS FORTHIS PAGE
(2) PERCENT OF ALL GOOD OBSERVATIONS FOR THE PERIOD

NUMBER OF GOOD OBSERVATIONS ON THIS PAGE 2151 — 90.0 PERCENT DATA RECOVERY
NUMBER OF HOURS IN THIS PERIOD 2184

CALM WIND SPEED LESS THAN 1.00MPH

220 FT TOWER - 220 FT EL

220.0 FT WIND DATA 10/1/83 - 12/31/83

STABILITY CLASS A-- DELTA T LESS THAN -1.9 DEG C PER 100 METERS CLASS FREQUENCY (PERCENT) = 18.41

WIND DISTRIBUTION SUMMARY

SPEED(MPH)	DIRECTION N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
-CALM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
(1)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
(2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CALM- 3.5	0	0	0	6	0	0	0	0	0	0	0	0	0	0	6	0	12
(1)	0.0	0.0	0.0	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	0.0	3.0
(2)	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.6
3.6- 7.5	12	9	18	18	9	0	0	6	3	0	3	0	0	15	9	3	105
(1)	3.0	2.3	4.5	4.5	2.3	0.0	0.0	1.5	0.8	0.0	0.8	0.0	0.0	3.8	2.3	0.8	26.5
(2)	0.6	0.4	0.8	0.8	0.4	0.0	0.0	0.3	0.1	0.0	0.1	0.0	0.0	0.7	0.4	0.1	4.9
7.6-12.5	12	15	3	0	0	9	6	3	9	12	9	3	24	9	3	12	129
(1)	3.0	3.8	0.8	0.0	0.0	2.3	1.5	0.8	2.3	3.0	2.3	0.8	6.1	2.3	0.8	3.0	32.6
(2)	0.6	0.7	0.1	0.0	0.0	0.4	0.3	0.1	0.4	0.6	0.4	0.1	1.1	0.4	0.1	0.6	6.0
12.6-18.5	6	3	0	0	0	0	0	3	0	60	24	0	6	0	0	3	105
(1)	1.5	0.8	0.0	0.0	0.0	0.0	0.0	0.8	0.0	15.2	6.1	0.0	1.5	0.0	0.0	0.8	26.5
(2)	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0	2.8	1.1	0.0	0.3	0.0	0.0	0.1	4.9
18.6-24.0	0	0	0	0	0	0	0	0	0	12	27	0	0	0	0	3	42
(1)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	6.8	0.0	0.0	0.0	0.0	0.8	10.6
(2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	1.3	0.0	0.0	0.0	0.0	0.1	2.0
OVER-24.0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	3
(1)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.8
(2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1
ALL SPEEDS	30	27	21	24	9	9	6	12	12	87	63	3	30	24	18	21	396
(1)	7.6	6.8	5.3	6.1	2.3	2.3	1.5	3.0	3.0	22.0	15.9	0.8	7.6	6.1	4.5	5.3	100.0
(2)	1.4	1.3	1.0	1.1	0.4	0.4	0.3	0.6	0.6	4.0	2.9	0.1	1.4	1.1	0.8	1.0	18.4

(1)=PERCENT OF ALL GOOD OBSERVATIONS FORTHIS PAGE
(2)=PERCENT OF ALL GOOD OBSERVATIONS FOR THE PERIOD

NUMBER OF GOOD OBSERVATIONS ON THIS PAGE= 396

CALM=WIND SPEED LESS THAN 1.00MPH

TABLE 4A-2 (Continued)

220 FT TOWER - 220 FT EL

220.0 FT WIND DATA 10/1/83 - 12/31/83

STABILITY CLASS B-- DELTA T -1.9 TO -1.7 DEG C PER 100 METERS CLASS FREQUENCY (PERCENT) = 0.70

WIND DISTRIBUTION SUMMARY

SPEED(MPH)	DIRECTION N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
-CALM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
(1)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
(2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CALM- 3.5	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
(1)	20.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	20.0
(2)	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
3.6- 7.5	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3
(1)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	20.0	0.0	0.0	20.0
(2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1
7.6-12.5	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3
(1)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	20.0	0.0	0.0	20.0
(2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1
12.6-18.5	0	0	0	0	0	0	0	0	0	3	0	0	0	3	0	0	6
(1)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	20.0	0.0	0.0	0.0	20.0	0.0	0.0	40.0
(2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.3
18.6-24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
(1)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
(2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OVER-24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
(1)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
(2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ALL SPEEDS	3	0	0	0	0	0	0	0	0	3	0	0	0	9	0	0	15
(1)	20.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	20.0	0.0	0.0	0.0	60.0	0.0	0.0	100.0
(2)	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.4	0.0	0.0	0.7

(1)=PERCENT OF ALL GOOD OBSERVATIONS FORTHIS PAGE
(2)=PERCENT OF ALL GOOD OBSERVATIONS FOR THE PERIOD

NUMBER OF GOOD OBSERVATIONS ON THIS PAGE= 15

CALM=WIND SPEED LESS THAN 1.00MPH

TABLE 4A-2 (Continued)

220 FT TOWER - 220 FT EL

220.0 FT WIND DATA 10/1/83 - 12/31/83

STABILITY CLASS C-- DELTA T -1.6 TO -1.5 DEG C PER 100 METERS CLASS FREQUENCY (PERCENT) = 4.74

WIND DISTRIBUTION SUMMARY

SPEED(MPH)	DIRECTION N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
-CALM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
(1)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
(2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CALM- 3.5	0	0	3	0	6	0	0	0	0	0	0	3	0	0	0	3	15
(1)	0.0	0.0	2.9	0.0	5.9	0.0	0.0	0.0	0.0	0.0	0.0	2.9	0.0	0.0	0.0	2.9	14.7
(2)	0.0	0.0	0.1	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.7
3.6- 7.5	0	0	6	0	6	6	0	0	0	0	3	0	0	6	0	0	27
(1)	0.0	0.0	5.9	0.0	5.9	5.9	0.0	0.0	0.0	0.0	2.9	0.0	0.0	5.9	0.0	0.0	26.5
(2)	0.0	0.0	0.3	0.0	0.3	0.3	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.3	0.0	0.0	1.3
7.6-12.5	3	0	0	0	0	9	0	3	3	0	3	0	0	0	0	0	21
(1)	2.9	0.0	0.0	0.0	0.0	8.8	0.0	2.9	2.9	0.0	2.9	0.0	0.0	0.0	0.0	0.0	20.6
(2)	0.1	0.0	0.0	0.0	0.0	0.4	0.0	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	1.0
12.6-18.5	0	0	0	0	0	0	0	0	3	3	12	3	0	0	0	0	21
(1)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.9	2.9	11.8	2.9	0.0	0.0	0.0	0.0	20.6
(2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.6	0.1	0.0	0.0	0.0	0.0	1.0
18.6-24.0	0	0	0	0	0	0	0	0	0	6	12	0	0	0	0	0	18
(1)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.9	11.8	0.0	0.0	0.0	0.0	0.0	17.6
(2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.6	0.0	0.0	0.0	0.0	0.0	0.8
OVER-24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
(1)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
(2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ALL SPEEDS	3	0	9	0	12	15	0	3	6	9	30	6	0	6	0	3	102
(1)	2.9	0.0	8.8	0.0	11.8	14.7	0.0	2.9	5.9	8.8	29.4	5.9	0.0	5.9	0.0	2.9	100.0
(2)	0.1	0.0	0.4	0.0	0.6	0.7	0.0	0.1	0.3	0.4	1.4	0.3	0.0	0.3	0.0	0.1	4.7

(1)=PERCENT OF ALL GOOD OBSERVATIONS FORTHIS PAGE
(2)=PERCENT OF ALL GOOD OBSERVATIONS FOR THE PERIOD

NUMBER OF GOOD OBSERVATIONS ON THIS PAGE= 102

CALM=WIND SPEED LESS THAN 1.00MPH

TABLE 4A-2 (Continued)

220 FT TOWER - 220 FT EL

220.0 FT WIND DATA

10/1/83 - 12/31/83

STABILITY CLASS D-- DELTA T -1.4 TO -0.5 DEG C PER 100 METERS

CLASS FREQUENCY (PERCENT) = 18.41

WIND DISTRIBUTION SUMMARY

SPEED(MPH)	DIRECTION N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
-CALM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
(1)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
(2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CALM- 3.5	3	3	6	18	6	3	3	0	0	0	0	0	0	0	0	0	42
(1)	0.8	0.8	1.5	4.5	1.5	0.8	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.6
(2)	0.1	0.1	0.3	0.8	0.3	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0
3.6- 7.5	6	3	0	3	9	18	6	9	0	3	0	6	0	6	6	3	78
(1)	1.5	0.8	0.0	0.8	2.3	4.5	1.5	2.3	0.0	0.8	0.0	1.5	0.0	1.5	1.5	0.8	19.7
(2)	0.3	0.1	0.0	0.1	0.4	0.8	0.3	0.4	0.0	0.1	0.0	0.3	0.0	0.3	0.3	0.1	3.6
7.6-12.5	9	3	0	0	0	3	3	12	12	15	12	0	0	9	3	9	90
(1)	2.3	0.8	0.0	0.0	0.0	0.8	0.8	3.0	3.0	3.8	3.0	0.0	0.0	2.3	0.8	2.3	22.7
(2)	0.4	0.1	0.0	0.0	0.0	0.1	0.1	0.6	0.6	0.7	0.6	0.0	0.0	0.4	0.1	0.1	4.2
12.6-18.5	9	9	9	0	0	0	0	0	0	39	66	6	0	6	0	0	144
(1)	2.3	2.3	2.3	0.0	0.0	0.0	0.0	0.0	0.0	9.8	16.7	1.5	0.0	1.5	0.0	0.0	36.4
(2)	0.4	0.4	0.4	0.0	0.0	0.0	0.0	0.0	0.0	1.8	3.1	0.3	0.0	0.3	0.0	0.0	6.7
18.6-24.0	3	0	3	0	0	0	0	0	0	6	27	0	0	0	0	0	39
(1)	0.8	0.0	0.8	0.0	0.0	0.0	0.0	0.0	0.0	1.5	6.8	0.0	0.0	0.0	0.0	0.0	9.8
(2)	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.3	1.3	0.0	0.0	0.0	0.0	0.0	1.8
OVER-24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3
(1)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.0	0.8
(2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1
ALL SPEEDS	30	18	18	21	15	24	12	21	12	63	105	12	0	24	9	12	396
(1)	7.6	4.5	4.5	5.3	3.8	6.1	3.0	5.3	3.0	15.9	26.5	3.0	0.0	6.1	2.3	3.0	100.0
(2)	1.4	0.8	0.8	1.0	0.7	1.1	0.6	1.0	0.6	2.9	4.9	0.6	0.0	1.1	0.4	0.6	18.4

(1)=PERCENT OF ALL GOOD OBSERVATIONS FORTHIS PAGE
(2)=PERCENT OF ALL GOOD OBSERVATIONS FOR THE PERIOD

NUMBER OF GOOD OBSERVATIONS ON THIS PAGE= 396

CALM=WIND SPEED LESS THAN 1.00MPH

TABLE 4A-2 (Continued)

220 FT TOWER - 220 FT EL

220.0 FT WIND DATA

10/1/83 - 12/31/83

STABILITY CLASS E-- DELTA T -0.4 TO +1.5 DEG C PER 100 METERS

CLASS FREQUENCY (PERCENT) = 27.89

WIND DISTRIBUTION SUMMARY

SPEED(MPH)	DIRECTION N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
-CALM	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	3
(1)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.5
(2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1
CALM- 3.5	0	3	6	0	0	6	3	3	0	0	0	0	0	0	0	0	21
(1)	0.0	0.5	1.0	0.0	0.0	1.0	0.5	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.5
(2)	0.0	0.1	0.3	0.0	0.0	0.3	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0
3.6- 7.5	0	6	3	3	0	6	9	6	3	6	0	0	0	9	0	3	54
(1)	0.0	1.0	0.5	0.5	0.0	1.0	1.5	1.0	0.5	1.0	0.0	0.0	0.0	1.5	0.0	0.5	9.0
(2)	0.0	0.3	0.1	0.1	0.0	0.3	0.4	0.3	0.1	0.3	0.0	0.0	0.0	0.4	0.0	0.1	2.5
7.6-12.5	6	0	6	0	0	0	3	6	12	6	6	12	6	9	15	6	93
(1)	1.0	0.0	1.0	0.0	0.0	0.0	0.5	1.0	2.0	1.0	1.0	2.0	1.0	1.5	2.5	1.0	15.5
(2)	0.3	0.0	0.3	0.0	0.0	0.0	0.1	0.3	0.6	0.3	0.3	0.6	0.3	0.4	0.7	0.3	4.3
12.6-18.5	12	9	9	0	0	0	0	9	3	81	51	9	21	15	6	12	237
(1)	2.0	1.5	1.5	0.0	0.0	0.0	0.0	1.5	0.5	13.5	8.5	1.5	3.5	2.5	1.0	2.0	39.5
(2)	0.6	0.4	0.4	0.0	0.0	0.0	0.0	0.4	0.1	3.8	2.4	0.4	1.0	0.7	0.3	0.6	11.0
18.6-24.0	3	3	0	0	0	0	0	0	0	57	75	0	3	12	6	6	165
(1)	0.5	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.5	12.5	0.0	0.5	2.0	1.0	1.0	27.5
(2)	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.6	3.5	0.0	0.1	0.6	0.3	0.3	7.7
OVER-24.0	3	0	0	0	0	0	0	0	0	0	0	0	0	15	9	0	27
(1)	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.5	1.5	0.0	4.5
(2)	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.4	0.0	1.3
ALL SPEEDS	24	21	24	3	0	12	15	24	18	150	132	24	30	60	36	27	600
(1)	4.0	3.5	4.0	0.5	0.0	2.0	2.5	4.0	3.0	25.0	22.0	4.0	5.0	10.0	6.0	4.5	100.0
(2)	1.1	1.0	1.1	0.1	0.0	0.6	0.7	1.1	0.8	7.0	6.1	1.1	1.4	2.8	1.7	1.3	27.9

(1)=PERCENT OF ALL GOOD OBSERVATIONS FORTHIS PAGE
(2)=PERCENT OF ALL GOOD OBSERVATIONS FOR THE PERIOD

NUMBER OF GOOD OBSERVATIONS ON THIS PAGE= 600

CALM=WIND SPEED LESS THAN 1.00MPH

TABLE 4A-2 (Continued)

220 FT TOWER - 220 FT EL

220.0 FT WIND DATA

10/1/83 - 12/31/83

STABILITY CLASS F-- DELTA T 1.6 TO 4.0 DEG C PER 100METERS

CLASS FREQUENCY (PERCENT) = 19.39

WIND DISTRIBUTION SUMMARY

SPEED(MPH)	DIRECTION N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
-CALM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
(1)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
(2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CALM- 3.5	6	0	0	0	0	3	0	0	0	0	0	0	0	0	3	0	12
(1)	1.4	0.0	0.0	0.0	0.0	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.0	2.9
(2)	0.3	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.6
3.6- 7.5	3	3	0	0	3	0	3	3	3	0	0	3	0	0	3	9	33
(1)	0.7	0.7	0.0	0.0	0.7	0.0	0.7	0.7	0.7	0.0	0.0	0.7	0.0	0.0	0.7	2.2	7.9
(2)	0.1	0.1	0.0	0.0	0.1	0.0	0.1	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.1	0.4	1.5
7.6-12.5	3	0	6	3	0	0	0	3	6	0	6	3	6	6	12	18	72
(1)	0.7	0.0	1.4	0.7	0.0	0.0	0.0	0.7	1.4	0.0	1.4	0.7	1.4	1.4	2.9	4.3	17.3
(2)	0.1	0.0	0.3	0.1	0.0	0.0	0.0	0.1	0.3	0.0	0.3	0.1	0.3	0.3	0.6	0.8	3.3
12.6-18.5	3	3	0	0	0	0	0	0	3	3	39	39	18	18	30	18	174
(1)	0.7	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.7	9.4	9.4	4.3	4.3	7.2	4.3	41.7
(2)	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	1.8	1.8	0.8	0.8	1.4	0.8	8.1
18.6-24.0	3	0	0	0	0	0	0	0	0	6	48	12	3	6	18	9	105
(1)	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4	11.5	2.9	0.7	1.4	4.3	2.2	25.2
(2)	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	2.2	0.6	0.1	0.3	0.8	0.4	4.9
OVER-24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15	6	21
(1)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.6	1.4	5.0
(2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.3	1.0
ALL SPEEDS	18	6	6	3	3	3	3	6	12	9	93	57	27	30	81	60	417
(1)	4.3	1.4	1.4	0.7	0.7	0.7	0.7	1.4	2.9	2.2	22.3	13.7	6.5	7.2	19.4	14.4	100.0
(2)	0.8	0.3	0.3	0.1	0.1	0.1	0.1	0.3	0.6	0.4	4.3	2.6	1.3	1.4	3.8	2.8	19.4

(1)=PERCENT OF ALL GOOD OBSERVATIONS FORTHIS PAGE
(2)=PERCENT OF ALL GOOD OBSERVATIONS FOR THE PERIOD

NUMBER OF GOOD OBSERVATIONS ON THIS PAGE= 417

CALM=WIND SPEED LESS THAN 1.00MPH

TABLE 4A-2 (Continued)

220 FT TOWER - 220 FT EL

220.0 FT WIND DATA

10/1/83 - 12/31/83

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

CLASS FREQUENCY (PERCENT) = 10.46

WIND DISTRIBUTION SUMMARY

SPEED(MPH)	DIRECTION N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
-CALM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
(1)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
(2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CALM- 3.5	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	3
(1)	0.0	0.0	0.0	0.0	0.0	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3
(2)	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
3.6- 7.5	3	0	6	0	0	0	0	0	3	3	3	6	0	3	0	0	27
(1)	1.3	0.0	2.7	0.0	0.0	0.0	0.0	0.0	1.3	1.3	1.3	2.7	0.0	1.3	0.0	0.0	12.0
(2)	0.1	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.3	0.0	0.1	0.0	0.0	1.3
7.6-12.5	0	0	0	0	0	0	0	3	0	12	9	6	27	9	6	18	90
(1)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0	5.3	4.0	2.7	12.0	4.0	2.7	8.0	40.0
(2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.6	0.4	0.3	1.3	0.4	0.3	0.8	4.2
12.6-18.5	0	0	3	0	0	0	0	0	3	0	12	21	12	9	0	3	63
(1)	0.0	0.0	1.3	0.0	0.0	0.0	0.0	0.0	1.3	0.0	5.3	9.3	5.3	4.0	0.0	1.3	28.0
(2)	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.6	1.0	0.6	0.4	0.0	0.1	2.9
18.6-24.0	0	0	0	0	0	0	0	0	0	0	15	21	0	0	0	0	36
(1)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.7	9.3	0.0	0.0	0.0	0.0	16.0
(2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	1.0	0.0	0.0	0.0	0.0	1.7
OVER-24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	6
(1)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.7	2.7
(2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.3
ALL SPEEDS	3	0	9	0	0	3	0	3	6	15	39	54	39	21	6	27	225
(1)	1.3	0.0	4.0	0.0	0.0	1.3	0.0	1.3	2.7	6.7	17.3	24.0	17.3	9.3	2.7	12.0	100.0
(2)	0.1	0.0	0.4	0.0	0.0	0.1	0.0	0.1	0.3	0.7	1.8	2.5	1.8	1.0	0.3	1.3	10.5

(1)=PERCENT OF ALL GOOD OBSERVATIONS FORTHIS PAGE
(2)=PERCENT OF ALL GOOD OBSERVATIONS FOR THE PERIOD

NUMBER OF GOOD OBSERVATIONS ON THIS PAGE= 225

CALM=WIND SPEED LESS THAN 1.00MPH

220 FT TOWER - 220 FT EL

220.0 FT WIND DATA

10/1/83 - 12/31/83

STABILITY CLASS ALL-- ALL STABILITIES COMBINED

CLASS FREQUENCY (PERCENT) = 100.00

WIND DISTRIBUTION SUMMARY

SPEED(MPH)	DIRECTION N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
-CALM	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	3
(1)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1
(2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1
CALM- 3.5	12	6	15	24	12	15	6	3	0	0	0	3	0	0	9	3	108
(1)	0.6	0.3	0.7	1.1	0.6	0.7	0.3	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.4	0.1	5.0
(2)	0.6	0.3	0.7	1.1	0.6	0.7	0.3	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.4	0.1	5.0
3.6- 7.5	24	21	33	24	27	30	18	24	12	12	9	15	0	42	18	18	327
(1)	1.1	1.0	1.5	1.1	1.3	1.4	0.8	1.1	0.6	0.6	0.4	0.7	0.0	2.0	0.8	0.8	15.2
(2)	1.1	1.0	1.5	1.1	1.3	1.4	0.8	1.1	0.6	0.6	0.4	0.7	0.0	2.0	0.8	0.8	15.2
7.6-12.5	33	18	15	3	0	21	12	30	42	45	45	24	63	45	39	63	498
(1)	1.5	0.8	0.7	0.1	0.0	1.0	0.6	1.4	2.0	2.1	2.1	1.1	2.9	2.1	1.8	2.9	23.2
(2)	1.5	0.8	0.7	0.1	0.0	1.0	0.6	1.4	2.0	2.1	2.1	1.1	2.9	2.1	1.8	2.9	23.2
12.6-18.5	30	24	21	0	0	0	0	12	12	189	204	78	57	51	36	36	750
(1)	1.4	1.1	1.0	0.0	0.0	0.0	0.0	0.6	0.6	8.8	9.5	3.6	2.6	2.4	1.7	1.7	34.9
(2)	1.4	1.1	1.0	0.0	0.0	0.0	0.0	0.6	0.6	8.8	9.5	3.6	2.6	2.4	1.7	1.7	34.9
18.6-24.0	9	3	3	0	0	0	0	0	0	87	204	33	6	18	24	18	405
(1)	0.4	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	4.0	9.5	1.5	0.3	0.8	1.1	0.8	18.8
(2)	0.4	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	4.0	9.5	1.5	0.3	0.8	1.1	0.8	18.8
OVER-24.0	3	0	0	0	0	0	0	0	0	3	0	0	0	18	24	12	60
(1)	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.8	1.1	0.6	2.8
(2)	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.8	1.1	0.6	2.8
ALL SPEEDS	111	72	87	51	39	66	36	69	66	336	462	156	126	174	150	150	2151
(1)	5.2	3.3	4.0	2.4	1.8	3.1	1.7	3.2	3.1	15.6	21.5	7.3	5.9	8.1	7.0	7.0	100.0
(2)	5.2	3.3	4.0	2.4	1.8	3.1	1.7	3.2	3.1	15.6	21.5	7.3	5.9	8.1	7.0	7.0	100.0

(1)=PERCENT OF ALL GOOD OBSERVATIONS FORTHIS PAGE
(2)=PERCENT OF ALL GOOD OBSERVATIONS FOR THE PERIOD

NUMBER OF GOOD OBSERVATIONS ON THIS PAGE=2151
NUMBER OF HOURS IN THIS PERIOD= 2184

98.5 PERCENT DATA RECOVERY

CALM=WIND SPEED LESS THAN 1.00MPH

3. OFF-SITE DOSES RESULTING FROM RADIOACTIVE LIQUID EFFLUENTS

3.1 General Dose Assessment

The methods and parameters used to calculate the off-site doses are presented in the Appendix I analysis for Unit #1[1]. Population data are based upon the 1980 census data[3]; effluent releases are given elsewhere in this report.

Numberical constants used in the analyses have been updated to conform to Revision 1 of Regulatory Guide 1.109 dated October 1977.

3.2 Maximum Individual Doses

The maximum individual doses and pathways considered are shown in Tables 3.2-1 thorugh 3.2-3.

3.3 Population Doses

The population doses are shown in Table 3.3-1.

Table 3.2-1

July - December 1983 Liquid Release Maximum Individual Doses From All Pathways for Adults (MREM)

Pathway	Bone	Liver	Thyroid	Kidney	Lung	GI-LLI	Skin	Total Body
Salt Water Fish	0.054	0.038	< 0.001	< 0.001	0.020	0.026	0.0	0.010
Salt Water Shell Fish	0.155	0.110	< 0.001	0.003	0.058	0.078	0.0	0.029
Discharge Canal Shoreline	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Ocean Shoreline Deposits	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0 001
Swimming	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Boating	< 0.010	< 0.010	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Total	0.210	0.148	< 0.001	0.004	0.079	0.105	< 0.001	0.039

Table 3.2-2

July - December 1983 Liquid Release Maximum Individual Doses From All Pathways for Teenagers (MREM)

Pathway	Bone	Liver	Thyroid	Kidney	Lung	GI-LLI	Skin	Total Body
Salt Water Fish	0.056	0.040	<0.001	<0.001	0.025	0.021	0.0	0.010
Salt Water Shell Fish	0.142	0.103	<0.001	0.003	0.062	0.054	0.0	0.027
Discharge Canal Shoreline	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003
Ocean Shoreline Deposits	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Swimming	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Boating	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Total	0.201	0.147	0.004	0.007	0.090	0.078	0.004	0.040

Table 3.2-3

July - December 1983 Liquid Release Maximum Individual Doses From All Pathways for Children (MREM)

Pathway	Bone	Liver	Thyroid	Kidney	Lung	GI-LLI	Skin	Total Body
Salt Water Fish	0.073	0.039	< 0.001	< 0.001	0.022	0.008	0.0	0.013
Salt Water Shell Fish	0.214	0.116	< 0.001	0.002	0.063	0.025	0.0	0.039
Discharge Canal Shoreline	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Ocean Shoreline Deposits	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Swimming	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Boating	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Total	0.288	0.156	< 0.001	0.003	0.085	0.034	< 0.001	0.053

Table 3.3-1
Population Doses Resulting From The
July - December 1983 Liquid Effluents

Pathway	Thyroid	Total Body (MAN-REM)
Salt Water Fish	<0.01	0.18
Salt Water Shell Fish	<0.01	0.32
Salt Water Plants	<0.01	<0.01
Ocean Shoreline Deposits	0.05	0.05
Swimming	<0.01	<0.01
Total	0.05	0.54

NOTE: These are the major pathways for liquid effluents.

4. OFF-SITE DOSES RESULTING FROM RADIOACTIVE GASEOUS EFFLUENTS

4.1 General Dose Assessment

The methods and parameters used to calculate the off-site doses are presented in the Appendix I analysis for Unit #1[1]. The gaseous releases for both reactor building vent and the main stack, for the period July - December 1983, are elsewhere in this report. Meteorological information for calculating dispersion of these releases are shown in Tables 4.1-1 through 4.1-12. For each quarter year, values of X/Q, X/Q depleted and D/Q are tabulated for twenty-three radial distances at sixteen compass directions using the AEOLUS program which was provided to Boston Edison by the Yankee Atomic Electric Company.

AEOLUS is a computer code for evaluating atmospheric dispersion of routine radioactive effluents from commercial nuclear power stations, and for computing statistical distributions of radiation doses which would result from postulated accidental releases of assumed intensity. The code is based, in part, on Regulatory Guide 1.111 developed by the U. S. Nuclear Regulatory Commission as guidance toward implementation of Appendix I to 10 CFR Part 50 and the "as low as reasonably achievable" objectives. Table 4.1-1 through 4.1-12 are based on data taken at the 220 ft. elevation for the main stack and the 33-foot elevation for the reactor building vent.

4.2 Maximum Individual Doses

The maximum individual dose locations and pathways assumed are presented in Table 4.2-1. The resultant maximum individual adult, teenage, child and infant doses are reported in Tables 4.2-2 through 4.2-5. In the summary Table 4.2-6, doses from noble gas immersion are included for skin and total body; individual organ doses are due to iodine and air particulates only.

4.3 Population Doses

The assumed population distribution is shown in Table 4.3-1 and is based upon 1980 Census Data for the permanent population.[3] The population doses by pathway are presented in Table 4.3-2.

In accordance with Regulatory Guide 1.21, only pathways yielding significant contribution to the total dose have been included; those pathways not included account for a total of less than 5% of the overall population doses.

UNDEPLETED X/Q FOR THE REACTOR BUILDING VENT - 7/1/83 TO 9/30/83

RECPTR NO.	DOWNWIND DISTANCE METERS	WEIGHTED AVERAGES SEC/M**3 S - (1) 0.0	SSW - (2) 22.5	SW - (3) 45.0	WSW - (4) 67.5	W- (5) 90.0	WNW - (6) 112.5	NW - (7) 135.0	NNW - (8) 157.5
1	201.20	1.900E-05	2.180E-05	4.240E-05	3.310E-05	3.020E-05	3.790E-05	3.640E-05	2.730E-05
2	402.30	4.840E-06	5.770E-06	1.180E-05	8.840E-06	8.040E-06	1.070E-05	1.020E-05	7.690E-06
3	804.70	1.200E-06	1.580E-06	3.240E-06	2.360E-06	2.030E-06	3.010E-06	2.870E-06	2.160E-06
4	1207.00	5.870E-07	7.940E-07	1.660E-06	1.170E-06	1.010E-06	1.480E-06	1.420E-06	1.070E-06
5	1609.40	3.840E-07	5.150E-07	1.070E-06	7.490E-07	6.560E-07	9.200E-07	8.880E-07	6.700E-07
6	2414.00	2.280E-07	2.990E-07	6.260E-07	4.440E-07	3.930E-07	5.520E-07	5.310E-07	3.980E-07
7	3218.70	1.590E-07	2.060E-07	4.310E-07	3.100E-07	2.750E-07	3.900E-07	3.740E-07	2.790E-07
8	4023.40	1.200E-07	1.540E-07	3.230E-07	2.340E-07	2.080E-07	2.960E-07	2.830E-07	2.110E-07
9	4828.10	9.550E-08	1.220E-07	2.540E-07	1.850E-07	1.650E-07	2.340E-07	2.240E-07	1.660E-07
10	5632.70	7.880E-08	9.990E-08	2.080E-07	1.520E-07	1.360E-07	1.920E-07	1.840E-07	1.360E-07
11	6437.40	6.680E-08	8.420E-08	1.750E-07	1.290E-07	1.150E-07	1.620E-07	1.550E-07	1.140E-07
12	7242.10	5.770E-08	7.240E-08	1.510E-07	1.110E-07	9.980E-08	1.400E-07	1.340E-07	9.870E-08
13	8046.80	5.080E-08	6.340E-08	1.320E-07	9.750E-08	8.770E-08	1.230E-07	1.170E-07	8.650E-08
14	12070.10	3.110E-08	3.820E-08	7.950E-08	5.910E-08	5.370E-08	7.400E-08	7.070E-08	5.210E-08
15	16093.49	2.220E-08	2.690E-08	5.600E-08	4.180E-08	3.820E-08	5.220E-08	4.980E-08	3.670E-08
16	24140.29	1.390E-08	1.660E-08	3.440E-08	2.600E-08	2.380E-08	3.240E-08	3.090E-08	2.260E-08
17	32187.00	9.990E-09	1.180E-08	2.440E-08	1.860E-08	1.710E-08	2.300E-08	2.190E-08	1.610E-08
18	40233.79	7.760E-09	9.150E-09	1.870E-08	1.440E-08	1.320E-08	1.770E-08	1.690E-08	1.240E-08
19	48280.48	6.350E-09	7.450E-09	1.520E-08	1.170E-08	1.080E-08	1.450E-08	1.380E-08	1.010E-08
20	56327.29	5.360E-09	6.260E-09	1.280E-08	9.880E-09	9.090E-09	1.220E-08	1.160E-08	8.460E-09
21	64373.99	4.630E-09	5.390E-09	1.090E-08	8.510E-09	7.830E-09	1.050E-08	9.980E-09	7.280E-09
22	72420.75	4.070E-09	4.720E-09	9.560E-09	7.460E-09	6.860E-09	9.160E-09	8.730E-09	6.370E-09
23	80467.44	3.620E-09	4.190E-09	8.470E-09	6.630E-09	6.100E-09	8.130E-09	7.750E-09	5.650E-09

RECPTR NO.	DOWNWIND DISTANCE METERS	WEIGHTED AVERAGES SEC/M**3 N - (9) 180.0	NNE -(10) 202.5	NE -(11) 225.0	ENE -(12) 247.5	E-(13) 270.0	ESE -(14) 292.5	SE -(15) 315.0	SSE -(16) 337.5
1	201.20	2.950E-05	7.920E-05	1.020E-04	3.720E-05	4.780E-05	3.930E-05	3.960E-05	2.920E-05
2	402.30	8.180E-06	2.210E-05	2.870E-05	1.040E-05	1.340E-05	1.100E-05	1.110E-05	8.230E-06
3	804.70	2.250E-06	6.240E-06	8.100E-06	2.890E-06	3.750E-06	3.050E-06	3.040E-06	2.300E-06
4	1207.00	1.120E-06	3.170E-06	4.070E-06	1.440E-06	1.860E-06	1.510E-06	1.530E-06	1.160E-06
5	1609.40	7.110E-07	2.030E-06	2.570E-06	9.080E-07	1.170E-06	9.540E-07	9.700E-07	7.340E-07
6	2414.00	4.230E-07	1.190E-06	1.520E-06	5.400E-07	6.980E-07	5.700E-07	5.780E-07	4.370E-07
7	3218.70	2.960E-07	8.190E-07	1.060E-06	3.780E-07	4.900E-07	4.000E-07	4.050E-07	3.060E-07
8	4023.40	2.240E-07	6.140E-07	7.980E-07	2.860E-07	3.700E-07	3.030E-07	3.060E-07	2.310E-07
9	4828.10	1.770E-07	4.830E-07	6.290E-07	2.250E-07	2.920E-07	2.390E-07	2.410E-07	1.820E-07
10	5632.70	1.450E-07	3.950E-07	5.150E-07	1.850E-07	2.400E-07	1.960E-07	1.980E-07	1.490E-07
11	6437.40	1.220E-07	3.320E-07	4.330E-07	1.560E-07	2.020E-07	1.660E-07	1.670E-07	1.260E-07
12	7242.10	1.050E-07	2.850E-07	3.730E-07	1.340E-07	1.740E-07	1.430E-07	1.440E-07	1.080E-07
13	8046.80	9.250E-08	2.500E-07	3.270E-07	1.180E-07	1.530E-07	1.250E-07	1.260E-07	9.510E-08
14	12070.10	5.590E-08	1.500E-07	1.970E-07	7.120E-08	9.210E-08	7.580E-08	7.640E-08	5.740E-08
15	16093.49	3.940E-08	1.050E-07	1.380E-07	5.020E-08	6.490E-08	5.350E-08	5.390E-08	4.040E-08
16	24140.29	2.440E-08	6.470E-08	8.530E-08	3.100E-08	4.020E-08	3.320E-08	3.340E-08	2.500E-08
17	32187.00	1.740E-08	4.580E-08	6.040E-08	2.200E-08	2.850E-08	2.360E-08	2.370E-08	1.770E-08
18	40233.79	1.340E-08	3.520E-08	4.650E-08	1.700E-08	2.200E-08	1.820E-08	1.830E-08	1.360E-08
19	48280.48	1.090E-08	2.860E-08	3.780E-08	1.380E-08	1.790E-08	1.480E-08	1.490E-08	1.110E-08
20	56327.29	9.170E-09	2.400E-08	3.180E-08	1.160E-08	1.500E-08	1.240E-08	1.250E-08	9.310E-09
21	64373.99	7.890E-09	2.060E-08	2.730E-08	9.990E-09	1.290E-08	1.070E-08	1.070E-08	8.000E-09
22	72420.75	6.900E-09	1.800E-08	2.380E-08	8.740E-09	1.130E-08	9.370E-09	9.390E-09	6.990E-09
23	80467.44	6.120E-09	1.590E-08	2.110E-08	7.750E-09	1.000E-08	8.310E-09	8.330E-09	6.190E-09

TABLE 4.1-1

UNDEPLETED RELATIVE CONCENTRATIONS PER UNIT EMISSION FOR REACTOR BUILDING VENT FOR JULY- SEPTEMBER 1983

DEPLETED X/Q FOR THE REACTOR BUILDING VENT - 7/1/83 TO 9/30/83

RECPTR NO.	DOWNWIND DISTANCE METERS	WEIGHTED AVERAGES SEC/M**3 S - (1) 0.0	SSW - (2) 22.5	SW - (3) 45.0	WSW - (4) 67.5	W- (5) 90.0	WNW - (6) 112.5	NW - (7) 135.0	NNW - (8) 157.5
1	201.20	1.800E-05	2.060E-05	3.930E-05	3.080E-05	2.820E-05	3.420E-05	3.300E-05	2.480E-05
2	402.30	4.480E-06	5.290E-06	1.060E-05	7.980E-06	7.270E-06	9.310E-06	8.940E-06	6.780E-06
3	804.70	1.070E-06	1.400E-06	2.810E-06	2.040E-06	1.760E-06	2.500E-06	2.400E-06	1.820E-06
4	1207.00	5.110E-07	6.890E-07	1.400E-06	9.880E-07	8.500E-07	1.200E-06	1.160E-06	8.790E-07
5	1609.40	3.310E-07	4.410E-07	8.940E-07	6.250E-07	5.460E-07	7.300E-07	7.090E-07	5.420E-07
6	2414.00	1.920E-07	2.500E-07	5.070E-07	3.600E-07	3.180E-07	4.220E-07	4.090E-07	3.110E-07
7	3218.70	1.310E-07	1.680E-07	3.390E-07	2.450E-07	2.170E-07	2.880E-07	2.790E-07	2.110E-07
8	4023.40	9.770E-08	1.240E-07	2.480E-07	1.810E-07	1.610E-07	2.120E-07	2.050E-07	1.540E-07
9	4828.10	7.660E-08	9.590E-08	1.910E-07	1.400E-07	1.250E-07	1.630E-07	1.570E-07	1.180E-07
10	5632.70	6.230E-08	7.740E-08	1.530E-07	1.130E-07	1.010E-07	1.300E-07	1.260E-07	9.440E-08
11	6437.40	5.220E-08	6.420E-08	1.260E-07	9.370E-08	8.410E-08	1.060E-07	1.030E-07	7.760E-08
12	7242.10	4.460E-08	5.440E-08	1.060E-07	7.950E-08	7.150E-08	8.960E-08	8.690E-08	6.530E-08
13	8046.80	3.870E-08	4.700E-08	9.150E-08	6.860E-08	6.190E-08	7.670E-08	7.440E-08	5.600E-08
14	12070.10	2.260E-08	2.660E-08	5.080E-08	3.860E-08	3.530E-08	4.120E-08	4.020E-08	3.040E-08
15	16093.49	1.540E-08	1.780E-08	3.320E-08	2.560E-08	2.360E-08	2.620E-08	2.570E-08	1.940E-08
16	24140.29	9.020E-09	1.010E-08	1.800E-08	1.420E-08	1.320E-08	1.340E-08	1.330E-08	1.010E-08
17	32187.00	6.130E-09	6.660E-09	1.140E-08	9.270E-09	8.640E-09	8.040E-09	8.050E-09	6.180E-09
18	40233.79	4.540E-09	4.830E-09	7.960E-09	6.630E-09	6.200E-09	5.310E-09	5.370E-09	4.170E-09
19	48280.48	3.560E-09	3.710E-09	5.920E-09	5.030E-09	4.730E-09	3.740E-09	3.830E-09	3.000E-09
20	56327.29	2.900E-09	2.970E-09	4.590E-09	3.900E-09	3.750E-09	2.750E-09	2.850E-09	2.250E-09
21	64373.99	2.420E-09	2.450E-09	3.670E-09	3.250E-09	3.070E-09	2.090E-09	2.190E-09	1.750E-09
22	72420.75	2.070E-09	2.060E-09	3.010E-09	2.720E-09	2.570E-09	1.630E-09	1.730E-09	1.400E-09
23	80467.44	1.800E-09	1.770E-09	2.520E-09	2.310E-09	2.200E-09	1.300E-09	1.400E-09	1.140E-09

RECPTR NO.	DOWNWIND DISTANCE METERS	WEIGHTED AVERAGES SEC/M**3 N - (9) 180.0	NNE -(10) 202.5	NE -(11) 225.0	ENE -(12) 247.5	E-(13) 270.0	ESE -(14) 292.5	SE -(15) 315.0	SSE -(16) 337.5
1	201.20	2.700E-05	7.300E-05	9.280E-05	3.400E-05	4.350E-05	3.580E-05	3.620E-05	2.650E-05
2	402.30	7.240E-06	1.980E-05	2.530E-05	9.220E-06	1.180E-05	9.670E-06	9.760E-06	7.230E-06
3	804.70	1.910E-06	5.380E-06	6.870E-06	2.450E-06	3.160E-06	2.560E-06	2.570E-06	1.930E-06
4	1207.00	8.270E-07	2.670E-06	3.370E-06	1.190E-06	1.530E-06	1.240E-06	1.260E-06	9.480E-07
5	1609.40	5.780E-07	1.680E-06	2.090E-06	7.350E-07	9.450E-07	7.670E-07	7.850E-07	5.910E-07
6	2414.00	3.320E-07	9.520E-07	1.200E-06	4.220E-07	5.430E-07	4.430E-07	4.520E-07	3.400E-07
7	3218.70	2.260E-07	6.390E-07	8.070E-07	2.870E-07	3.690E-07	3.010E-07	3.070E-07	2.300E-07
8	4023.40	1.660E-07	4.660E-07	5.900E-07	2.100E-07	2.710E-07	2.210E-07	2.250E-07	1.680E-07
9	4828.10	1.280E-07	3.580E-07	4.520E-07	1.610E-07	2.080E-07	1.700E-07	1.730E-07	1.290E-07
10	5632.70	1.020E-07	2.860E-07	3.610E-07	1.290E-07	1.660E-07	1.360E-07	1.380E-07	1.030E-07
11	6437.40	8.420E-08	2.350E-07	2.970E-07	1.060E-07	1.360E-07	1.120E-07	1.140E-07	8.480E-08
12	7242.10	7.100E-08	1.980E-07	2.500E-07	8.960E-08	1.150E-07	9.420E-08	9.620E-08	7.140E-08
13	8046.80	6.100E-08	1.700E-07	2.140E-07	7.680E-08	9.850E-08	8.080E-08	8.250E-08	6.120E-08
14	12070.10	3.350E-08	9.350E-08	1.160E-07	4.190E-08	5.350E-08	4.390E-08	4.510E-08	3.320E-08
15	16093.49	2.170E-08	6.060E-08	7.450E-08	2.700E-08	3.430E-08	2.820E-08	2.910E-08	2.120E-08
16	24140.29	1.150E-08	3.230E-08	3.890E-08	1.420E-08	1.790E-08	1.480E-08	1.530E-08	1.100E-08
17	32187.00	7.150E-09	2.030E-08	2.380E-08	8.740E-09	1.090E-08	9.030E-09	9.450E-09	6.690E-09
18	40233.79	4.900E-09	1.400E-08	1.610E-08	5.930E-09	7.340E-09	6.090E-09	6.410E-09	4.470E-09
19	48280.48	3.590E-09	1.030E-08	1.160E-08	4.300E-09	5.280E-09	4.390E-09	4.650E-09	3.190E-09
20	56327.29	2.730E-09	7.930E-09	8.710E-09	3.250E-09	3.960E-09	3.290E-09	3.510E-09	2.370E-09
21	64373.99	2.160E-09	6.290E-09	6.760E-09	2.540E-09	3.070E-09	2.560E-09	2.740E-09	1.820E-09
22	72420.75	1.740E-09	5.120E-09	5.390E-09	2.040E-09	2.440E-09	2.040E-09	2.200E-09	1.440E-09
23	80467.44	1.440E-09	4.250E-09	4.400E-09	1.670E-09	1.990E-09	1.660E-09	1.800E-09	1.160E-09

TABLE 4.1-2

DEPLETED RELATIVE CONCENTRATION PER UNIT
EMISSION FOR REACTOR BUILDING VENT FOR
JULY - SEPTEMBER 1983

TABLE 4.1-3

RELATIVE DEPOSITION CONCENTRATIONS PER UNIT EMISSION FOR REACTOR BUILDING VENT FOR JULY - SEPTEMBER 1983

DEPOSITION FACTORS FOR THE REACTOR BUILDING VENT - 7/1/83 TO 9/30/83

RECPTR NO.	DOWNWIND DISTANCE METERS	WEIGHTED AVERAGES 1/M**2 S - (1) 0.0	SSW - (2) 22.5	SW - (3) 45.0	WSW - (4) 67.5	W- (5) 90.0	WNW - (6) 112.5	NW - (7) 135.0	NNW - (8) 157.5
1	201.20	4.070E-08	4.960E-08	6.470E-08	3.510E-08	4.230E-08	2.530E-08	3.900E-08	2.910E-08
2	402.30	1.050E-08	1.300E-08	1.710E-08	8.960E-09	1.090E-08	6.720E-09	1.050E-08	7.990E-09
3	804.70	2.740E-09	3.540E-09	4.540E-09	2.190E-09	2.600E-09	1.730E-09	2.850E-09	2.190E-09
4	1207.00	1.380E-09	1.780E-09	2.290E-09	1.060E-09	1.250E-09	8.290E-10	1.400E-09	1.080E-09
5	1609.40	8.950E-10	1.150E-09	1.490E-09	6.800E-10	8.070E-10	5.170E-10	8.740E-10	6.740E-10
6	2414.00	5.070E-10	6.410E-10	8.320E-10	3.940E-10	4.710E-10	2.990E-10	4.990E-10	3.820E-10
7	3218.70	3.390E-10	4.270E-10	5.520E-10	2.690E-10	3.220E-10	2.040E-10	3.370E-10	2.560E-10
8	4023.40	2.480E-10	3.110E-10	4.010E-10	1.990E-10	2.380E-10	1.500E-10	2.460E-10	1.870E-10
9	4828.10	1.930E-10	2.410E-10	3.100E-10	1.550E-10	1.860E-10	1.160E-10	1.890E-10	1.430E-10
10	5632.70	1.550E-10	1.940E-10	2.490E-10	1.260E-10	1.500E-10	9.290E-11	1.510E-10	1.140E-10
11	6437.40	1.290E-10	1.600E-10	2.070E-10	1.050E-10	1.250E-10	7.680E-11	1.250E-10	9.350E-11
12	7242.10	1.090E-10	1.360E-10	1.750E-10	8.900E-11	1.070E-10	6.500E-11	1.050E-10	7.870E-11
13	8046.80	9.440E-11	1.170E-10	1.510E-10	7.710E-11	9.250E-11	5.590E-11	9.000E-11	6.740E-11
14	12070.10	5.380E-11	6.590E-11	8.610E-11	4.420E-11	5.300E-11	3.100E-11	4.910E-11	3.670E-11
15	16093.49	3.610E-11	4.400E-11	5.770E-11	2.970E-11	3.560E-11	2.030E-11	3.170E-11	2.360E-11
16	24140.29	2.040E-11	2.470E-11	3.270E-11	1.690E-11	2.010E-11	1.100E-11	1.680E-11	1.240E-11
17	32187.00	1.360E-11	1.630E-11	2.170E-11	1.120E-11	1.330E-11	6.950E-12	1.040E-11	7.680E-12
18	40233.79	9.840E-12	1.180E-11	1.580E-11	8.130E-12	9.580E-12	4.850E-12	7.120E-12	5.240E-12
19	48280.48	7.580E-12	9.050E-12	1.220E-11	6.270E-12	7.350E-12	3.610E-12	5.200E-12	3.810E-12
20	56327.29	6.070E-12	7.220E-12	9.830E-12	5.020E-12	5.860E-12	2.800E-12	3.950E-12	2.900E-12
21	64373.99	5.000E-12	5.930E-12	8.120E-12	4.140E-12	4.820E-12	2.250E-12	3.110E-12	2.270E-12
22	72420.75	4.210E-12	4.990E-12	6.860E-12	3.490E-12	4.050E-12	1.850E-12	2.510E-12	1.830E-12
23	80467.44	3.610E-12	4.270E-12	5.900E-12	3.000E-12	3.470E-12	1.550E-12	2.070E-12	1.510E-12

RECPTR NO.	DOWNWIND DISTANCE METERS	WEIGHTED AVERAGES 1/M**2 N - (9) 180.0	NNE -(10) 202.5	NE -(11) 225.0	ENE -(12) 247.5	E-(13) 270.0	ESE -(14) 292.5	SE -(15) 315.0	SSE -(16) 337.5
1	201.20	4.240E-08	1.680E-07	2.380E-07	7.730E-08	8.960E-08	5.820E-08	5.400E-08	3.110E-08
2	402.30	1.140E-08	4.480E-08	6.490E-08	2.100E-08	2.420E-08	1.560E-08	1.450E-08	8.310E-09
3	804.70	3.010E-09	1.190E-08	1.770E-08	5.610E-09	6.430E-09	4.090E-09	3.840E-09	2.180E-09
4	1207.00	1.490E-09	5.920E-09	8.730E-09	2.740E-09	3.130E-09	1.980E-09	1.860E-09	1.050E-09
5	1609.40	9.440E-10	3.760E-09	5.460E-09	1.700E-09	1.940E-09	1.230E-09	1.150E-09	6.540E-10
6	2414.00	5.380E-10	2.140E-09	3.110E-09	9.750E-10	1.120E-09	7.110E-10	6.650E-10	3.780E-10
7	3218.70	3.620E-10	1.440E-09	2.090E-09	6.600E-10	7.580E-10	4.830E-10	4.520E-10	2.570E-10
8	4023.40	2.640E-10	1.050E-09	1.520E-09	4.830E-10	5.560E-10	3.550E-10	3.320E-10	1.890E-10
9	4828.10	2.040E-10	8.090E-10	1.170E-09	3.710E-10	4.280E-10	2.730E-10	2.550E-10	1.460E-10
10	5632.70	1.630E-10	6.480E-10	9.310E-10	2.960E-10	3.420E-10	2.190E-10	2.040E-10	1.170E-10
11	6437.40	1.350E-10	5.350E-10	7.650E-10	2.440E-10	2.810E-10	1.800E-10	1.680E-10	9.630E-11
12	7242.10	1.140E-10	4.520E-10	6.440E-10	2.050E-10	2.370E-10	1.520E-10	1.420E-10	8.130E-11
13	8046.80	9.780E-11	3.880E-10	5.520E-10	1.760E-10	2.030E-10	1.310E-10	1.220E-10	6.980E-11
14	12070.10	5.420E-11	2.160E-10	3.010E-10	9.620E-11	1.110E-10	7.170E-11	6.670E-11	3.830E-11
15	16093.49	3.540E-11	1.410E-10	1.930E-10	6.190E-11	7.140E-11	4.640E-11	4.310E-11	2.480E-11
16	24140.29	1.920E-11	7.650E-11	1.010E-10	3.250E-11	3.750E-11	2.460E-11	2.280E-11	1.320E-11
17	32187.00	1.220E-11	4.870E-11	6.250E-11	2.000E-11	2.310E-11	1.530E-11	1.410E-11	8.190E-12
18	40233.79	8.490E-12	3.410E-11	4.250E-11	1.360E-11	1.560E-11	1.050E-11	9.660E-12	5.610E-12
19	48280.48	6.330E-12	2.540E-11	3.080E-11	9.860E-12	1.130E-11	7.660E-12	7.040E-12	4.100E-12
20	56327.29	4.910E-12	1.980E-11	2.330E-11	7.460E-12	8.550E-12	5.840E-12	5.350E-12	3.130E-12
21	64373.99	3.930E-12	1.580E-11	1.820E-11	5.830E-12	6.670E-12	4.600E-12	4.210E-12	2.460E-12
22	72420.75	3.230E-12	1.300E-11	1.460E-11	4.670E-12	5.350E-12	3.720E-12	3.400E-12	1.990E-12
23	80467.44	2.700E-12	1.090E-11	1.190E-11	3.840E-12	4.380E-12	3.080E-12	2.800E-12	1.650E-12

UNDEPLETED X/Q FOR THE MAIN STACK - 7/1/83 TO 9/30/83

RECPTR NO.	DOWNWIND DISTANCE METERS	WEIGHTED AVERAGES SEC/M**3 S - (1) 0.0	SSW - (2) 22.5	SW - (3) 45.0	WSW - (4) 67.5	W- (5) 90.0	WNW - (6) 112.5	NW - (7) 135.0	NNW - (8) 157.5
1	201.20	2.340E-07	5.830E-08	1.940E-07	1.950E-07	8.570E-08	7.000E-08	3.890E-08	1.570E-08
2	402.30	3.540E-06	6.580E-07	9.200E-07	9.010E-07	6.640E-07	6.360E-07	3.490E-07	2.670E-07
3	804.70	5.960E-07	1.250E-07	1.730E-07	1.640E-07	1.330E-07	1.260E-07	9.470E-08	7.980E-08
4	1207.00	2.450E-07	1.510E-07	8.210E-08	7.800E-08	6.040E-08	5.090E-08	3.880E-08	3.300E-08
5	1609.40	3.440E-07	4.040E-07	7.550E-08	6.790E-08	4.890E-08	3.980E-08	2.920E-08	2.510E-08
6	2414.00	3.970E-07	2.160E-07	6.160E-08	4.780E-08	3.700E-08	2.840E-08	1.970E-08	1.750E-08
7	3218.70	3.070E-07	1.440E-07	5.180E-08	3.670E-08	3.040E-08	2.210E-08	1.500E-08	1.370E-08
8	4023.40	2.320E-07	1.050E-07	4.450E-08	3.000E-08	2.600E-08	1.800E-08	1.200E-08	1.130E-08
9	4828.10	1.830E-07	8.070E-08	3.930E-08	2.560E-08	2.280E-08	1.520E-08	1.010E-08	9.500E-09
10	5632.70	1.510E-07	6.500E-08	3.510E-08	2.240E-08	2.040E-08	1.320E-08	8.650E-09	8.360E-09
11	6437.40	1.280E-07	5.400E-08	3.160E-08	1.980E-08	1.860E-08	1.160E-08	7.580E-09	7.410E-09
12	7242.10	1.100E-07	4.620E-08	2.860E-08	1.770E-08	1.700E-08	1.040E-08	6.750E-09	6.670E-09
13	8046.80	9.720E-08	4.020E-08	2.610E-08	1.610E-08	3.790E-08	9.920E-09	7.570E-09	6.060E-09
14	12070.10	5.970E-08	2.370E-08	1.800E-08	1.090E-08	2.440E-08	6.940E-09	5.930E-09	4.170E-09
15	16093.49	4.270E-08	1.660E-08	1.360E-08	8.170E-09	1.780E-08	5.360E-09	7.440E-09	1.090E-08
16	24140.29	2.690E-08	1.020E-08	9.020E-09	5.400E-09	1.130E-08	3.670E-09	5.300E-09	6.430E-09
17	32187.00	1.950E-08	7.230E-09	6.720E-09	4.140E-09	8.190E-09	3.330E-09	4.740E-09	5.020E-09
18	40233.79	1.520E-08	5.570E-09	5.330E-09	3.850E-09	6.390E-09	3.450E-09	4.050E-09	3.910E-09
19	48280.48	1.250E-08	4.540E-09	4.410E-09	3.160E-09	5.240E-09	3.040E-09	5.080E-09	3.200E-09
20	56327.29	1.050E-08	3.810E-09	4.110E-09	2.680E-09	5.050E-09	2.570E-09	4.270E-09	2.710E-09
21	64373.99	9.120E-09	3.280E-09	3.560E-09	2.310E-09	4.340E-09	2.220E-09	3.680E-09	2.340E-09
22	72420.75	8.030E-09	2.870E-09	3.130E-09	2.070E-09	3.790E-09	1.950E-09	3.220E-09	2.050E-09
23	80467.44	7.160E-09	2.550E-09	2.790E-09	1.850E-09	3.360E-09	1.740E-09	2.860E-09	1.830E-09

RECPTR NO.	DOWNWIND DISTANCE METERS	WEIGHTED AVERAGES SEC/M**3 N - (9) 180.0	NNE -(10) 202.5	NE -(11) 225.0	ENE -(12) 247.5	E-(13) 270.0	ESE -(14) 292.5	SE -(15) 315.0	SSE -(16) 337.5
1	201.20	2.500E-08	6.280E-08	3.280E-08	1.160E-08	1.240E-08	1.190E-08	1.010E-08	9.030E-09
2	402.30	4.230E-07	1.060E-06	5.570E-07	1.970E-07	2.100E-07	2.020E-07	1.720E-07	1.940E-07
3	804.70	1.240E-07	3.150E-07	1.660E-07	6.000E-08	6.240E-08	6.210E-08	5.210E-08	4.060E-08
4	1207.00	5.070E-08	1.290E-07	6.980E-08	2.480E-08	2.610E-08	2.560E-08	2.200E-08	1.660E-08
5	1609.40	3.850E-08	9.700E-08	5.440E-08	1.840E-08	2.000E-08	1.910E-08	1.670E-08	1.290E-08
6	2414.00	2.650E-08	6.510E-08	3.970E-08	1.230E-08	1.410E-08	1.330E-08	1.140E-08	9.550E-09
7	3218.70	2.040E-08	4.930E-08	3.180E-08	9.110E-09	1.110E-08	1.070E-08	8.560E-09	8.060E-09
8	4023.40	1.660E-08	3.980E-08	2.650E-08	7.640E-09	9.220E-09	9.340E-09	6.860E-09	7.320E-09
9	4828.10	1.400E-08	3.350E-08	2.260E-08	6.460E-09	7.860E-09	8.410E-09	5.730E-09	7.000E-09
10	5632.70	1.210E-08	2.890E-08	1.980E-08	5.620E-09	6.860E-09	7.740E-09	4.920E-09	6.690E-09
11	6437.40	1.060E-08	2.550E-08	1.750E-08	4.980E-09	6.090E-09	7.230E-09	4.330E-09	6.370E-09
12	7242.10	9.470E-09	2.280E-08	1.570E-08	4.490E-09	5.490E-09	6.810E-09	3.870E-09	6.020E-09
13	8046.80	8.550E-09	2.070E-08	1.430E-08	4.090E-09	5.000E-09	6.450E-09	3.510E-09	5.690E-09
14	12070.10	5.720E-09	1.410E-08	9.800E-09	2.900E-09	3.540E-09	5.210E-09	2.520E-09	4.450E-09
15	16093.49	4.300E-09	1.080E-08	7.490E-09	2.310E-09	2.840E-09	4.490E-09	2.050E-09	5.000E-09
16	24140.29	2.870E-09	7.370E-09	5.120E-09	1.690E-09	2.120E-09	3.580E-09	1.560E-09	3.350E-09
17	32187.00	2.160E-09	5.680E-09	3.950E-09	1.380E-09	1.780E-09	5.180E-09	3.930E-09	2.510E-09
18	40233.79	1.740E-09	4.620E-09	3.230E-09	1.810E-09	4.080E-09	4.450E-09	3.270E-09	1.990E-09
19	48280.48	1.450E-09	3.890E-09	2.720E-09	1.570E-09	3.530E-09	3.850E-09	2.780E-09	1.650E-09
20	56327.29	1.250E-09	3.370E-09	2.360E-09	1.390E-09	3.120E-09	3.410E-09	2.420E-09	1.410E-09
21	64373.99	1.390E-09	2.980E-09	2.080E-09	1.250E-09	2.800E-09	3.060E-09	2.150E-09	1.230E-09
22	72420.75	1.530E-09	2.670E-09	1.870E-09	1.140E-09	2.540E-09	2.780E-09	1.930E-09	1.090E-09
23	80467.44	1.370E-09	2.420E-09	1.700E-09	1.050E-09	2.330E-09	2.550E-09	1.750E-09	9.730E-10

TABLE 4.1-4

UNDEPLETED RELATIVE CONCENTRATION PER UNIT EMISSION FOR MAIN STACK FOR JULY - SEPTEMBER 1983

DEPLETED X/Q FOR THE MAIN STACK - 7/1/83 TO 9/30/83

RECPTR NO.	DOWNWIND DISTANCE METERS	WEIGHTED AVERAGES SEC/M**3 S - (1) 0.0	SSW - (2) 22.5	SW - (3) 45.0	WSW - (4) 67.5	W- (5) 90.0	WNW - (6) 112.5	NW - (7) 135.0	NNW - (8) 157.5
1	201.20	2.340E-07	5.830E-08	1.940E-07	1.950E-07	8.570E-08	7.000E-08	3.890E-08	1.570E-08
2	402.30	3.530E-06	6.570E-07	9.190E-07	9.000E-07	6.630E-07	6.350E-07	3.490E-07	2.670E-07
3	804.70	5.930E-07	1.250E-07	1.730E-07	1.630E-07	1.320E-07	1.260E-07	9.440E-08	7.960E-08
4	1207.00	2.440E-07	1.500E-07	8.180E-08	7.770E-08	6.010E-08	5.070E-08	3.870E-08	3.280E-08
5	1609.40	3.430E-07	4.030E-07	7.530E-08	6.760E-08	4.870E-08	3.960E-08	2.900E-08	2.500E-08
6	2414.00	3.970E-07	2.160E-07	6.130E-08	4.750E-08	3.680E-08	2.830E-08	1.960E-08	1.740E-08
7	3218.70	3.060E-07	1.440E-07	5.150E-08	3.640E-08	3.020E-08	2.200E-08	1.490E-08	1.360E-08
8	4023.40	2.310E-07	1.050E-07	4.420E-08	2.970E-08	2.570E-08	1.790E-08	1.200E-08	1.120E-08
9	4828.10	1.820E-07	8.010E-08	3.900E-08	2.530E-08	2.260E-08	1.510E-08	9.980E-09	9.520E-09
10	5632.70	1.500E-07	6.420E-08	3.480E-08	2.210E-08	2.020E-08	1.300E-08	8.560E-09	8.280E-09
11	6437.40	1.260E-07	5.330E-08	3.120E-08	1.950E-08	1.830E-08	1.150E-08	7.500E-09	7.330E-09
12	7242.10	1.090E-07	4.530E-08	2.820E-08	1.750E-08	1.680E-08	1.030E-08	6.670E-09	6.580E-09
13	8046.80	9.580E-08	3.930E-08	2.570E-08	1.580E-08	3.730E-08	9.770E-09	7.490E-09	5.970E-09
14	12070.10	5.790E-08	2.260E-08	1.750E-08	1.060E-08	2.370E-08	6.780E-09	5.840E-09	4.080E-09
15	16093.49	4.060E-08	1.540E-08	1.310E-08	7.880E-09	1.690E-08	5.200E-09	7.300E-09	1.040E-08
16	24140.29	2.460E-08	8.860E-09	8.400E-09	5.110E-09	1.030E-08	3.520E-09	5.120E-09	6.360E-09
17	32187.00	1.710E-08	5.910E-09	6.070E-09	3.830E-09	7.200E-09	3.120E-09	4.440E-09	4.420E-09
18	40233.79	1.280E-08	4.270E-09	4.660E-09	3.300E-09	5.370E-09	3.000E-09	3.670E-09	3.300E-09
19	48280.48	1.010E-08	3.260E-09	3.730E-09	2.620E-09	4.210E-09	2.060E-09	2.030E-09	2.580E-09
20	56327.29	8.200E-09	2.570E-09	3.270E-09	2.140E-09	3.080E-09	1.560E-09	1.550E-09	2.080E-09
21	64373.99	6.820E-09	2.080E-09	2.720E-09	1.790E-09	2.010E-09	1.280E-09	1.220E-09	1.720E-09
22	72420.75	5.780E-09	1.720E-09	2.310E-09	1.450E-09	1.570E-09	1.030E-09	9.880E-10	1.440E-09
23	80467.44	4.980E-09	1.440E-09	1.980E-09	1.250E-09	1.300E-09	9.270E-10	8.190E-10	1.230E-09

RECPTR NO.	DOWNWIND DISTANCE METERS	WEIGHTED AVERAGES SEC/M**3 N - (9) 180.0	NNE -(10) 202.5	NE -(11) 225.0	ENE -(12) 247.5	E-(13) 270.0	ESE -(14) 292.5	SE -(15) 315.0	SSE -(16) 337.5
1	201.20	2.500E-08	6.280E-08	3.280E-08	1.160E-08	1.240E-08	1.190E-08	1.010E-08	9.030E-09
2	402.30	4.230E-07	1.060E-06	5.560E-07	1.970E-07	2.100E-07	2.020E-07	1.720E-07	1.930E-07
3	804.70	1.240E-07	3.140E-07	1.660E-07	5.980E-08	6.220E-08	6.190E-08	5.200E-08	4.050E-08
4	1207.00	5.050E-08	1.290E-07	6.960E-08	2.470E-08	2.600E-08	2.550E-08	2.190E-08	1.650E-08
5	1609.40	3.830E-08	9.660E-08	5.420E-08	1.840E-08	2.000E-08	1.900E-08	1.670E-08	1.290E-08
6	2414.00	2.640E-08	6.470E-08	3.960E-08	1.230E-08	1.410E-08	1.320E-08	1.130E-08	9.500E-09
7	3218.70	2.030E-08	4.900E-08	3.160E-08	9.350E-09	1.110E-08	1.070E-08	8.500E-09	8.020E-09
8	4023.40	1.650E-08	3.960E-08	2.630E-08	7.590E-09	9.160E-09	9.280E-09	6.810E-09	7.280E-09
9	4828.10	1.390E-08	3.320E-08	2.240E-08	6.410E-09	7.800E-09	8.350E-09	5.680E-09	6.950E-09
10	5632.70	1.200E-08	2.870E-08	1.950E-08	5.570E-09	6.800E-09	7.680E-09	4.870E-09	6.650E-09
11	6437.40	1.050E-08	2.530E-08	1.730E-08	4.940E-09	6.020E-09	7.170E-09	4.280E-09	6.330E-09
12	7242.10	9.360E-09	2.260E-08	1.550E-08	4.440E-09	5.420E-09	6.740E-09	3.820E-09	5.970E-09
13	8046.80	8.430E-09	2.040E-08	1.410E-08	4.040E-09	4.930E-09	6.380E-09	3.470E-09	5.650E-09
14	12070.10	5.610E-09	1.390E-08	9.560E-09	2.850E-09	3.460E-09	5.110E-09	2.470E-09	4.390E-09
15	16093.49	4.190E-09	1.050E-08	7.250E-09	2.260E-09	2.760E-09	4.370E-09	2.010E-09	4.880E-09
16	24140.29	2.760E-09	7.130E-09	4.880E-09	1.640E-09	2.040E-09	3.420E-09	1.520E-09	3.180E-09
17	32187.00	2.060E-09	5.420E-09	3.710E-09	1.320E-09	1.690E-09	4.850E-09	3.730E-09	2.310E-09
18	40233.79	1.640E-09	4.370E-09	2.990E-09	1.710E-09	3.830E-09	4.070E-09	3.030E-09	1.770E-09
19	48280.48	1.360E-09	3.640E-09	2.480E-09	1.460E-09	3.250E-09	3.440E-09	2.510E-09	1.410E-09
20	56327.29	1.150E-09	3.110E-09	2.120E-09	1.270E-09	2.810E-09	2.970E-09	2.130E-09	1.160E-09
21	64373.99	1.240E-09	2.710E-09	1.840E-09	1.120E-09	2.460E-09	2.600E-09	1.840E-09	9.700E-10
22	72420.75	1.270E-09	2.400E-09	1.630E-09	1.000E-09	2.180E-09	2.310E-09	1.600E-09	8.240E-10
23	80467.44	1.110E-09	2.150E-09	1.460E-09	9.050E-10	1.950E-09	2.060E-09	1.410E-09	7.090E-10

TABLE 4.1-5

DEPLETED RELATIVE CONCENTRATIONS PER UNIT
EMISSION FOR MAIN STACK FOR
JULY - SEPTEMBER 1983

DEPOSITION FACTORS FOR THE MAIN STACK - 7/1/83 TO 9/30/83

RECPTR NO.	DOWNWIND DISTANCE METERS	WEIGHTED AVERAGES 1/M**2 S - (1) 0.0	SSW - (2) 22.5	SW - (3) 45.0	WSW - (4) 67.5	W- (5) 90.0	WNW - (6) 112.5	NW - (7) 135.0	NNW - (8) 157.5
1	201.20	2.750E-10	2.080E-10	7.630E-10	6.920E-10	2.940E-10	1.640E-10	7.760E-11	3.230E-11
2	402.30	4.150E-09	2.350E-09	3.610E-09	3.190E-09	2.420E-09	1.490E-09	7.010E-10	5.520E-10
3	804.70	8.390E-10	5.210E-10	7.510E-10	5.840E-10	5.990E-10	2.950E-10	1.960E-10	1.730E-10
4	1207.00	4.490E-10	7.690E-10	4.110E-10	2.700E-10	3.530E-10	1.200E-10	8.180E-11	7.340E-11
5	1609.40	1.360E-09	1.640E-09	3.900E-10	2.230E-10	3.160E-10	9.520E-11	6.120E-11	5.610E-11
6	2414.00	1.960E-09	8.690E-10	3.080E-10	1.520E-10	2.700E-10	6.980E-11	4.140E-11	4.150E-11
7	3218.70	1.520E-09	5.730E-10	2.510E-10	1.150E-10	2.380E-10	5.500E-11	3.170E-11	3.440E-11
8	4023.40	1.130E-09	4.150E-10	2.110E-10	9.320E-11	2.100E-10	4.500E-11	2.560E-11	2.960E-11
9	4828.10	8.760E-10	3.180E-10	1.820E-10	7.900E-11	1.880E-10	3.820E-11	2.150E-11	2.580E-11
10	5632.70	7.080E-10	2.540E-10	1.600E-10	6.860E-11	1.700E-10	3.320E-11	1.860E-11	2.300E-11
11	6437.40	5.900E-10	2.100E-10	1.420E-10	6.050E-11	1.560E-10	2.950E-11	1.640E-11	2.070E-11
12	7242.10	5.050E-10	1.790E-10	1.280E-10	5.400E-11	1.440E-10	2.660E-11	1.470E-11	1.880E-11
13	8046.80	4.390E-10	1.550E-10	1.150E-10	4.880E-11	3.670E-10	2.600E-11	2.010E-11	1.720E-11
14	12070.10	2.550E-10	8.850E-11	7.690E-11	3.270E-11	2.300E-10	1.870E-11	1.720E-11	1.210E-11
15	16093.49	1.740E-10	5.980E-11	5.670E-11	2.440E-11	1.620E-10	1.460E-11	2.550E-11	3.650E-11
16	24140.29	1.010E-10	3.420E-11	3.590E-11	1.590E-11	9.720E-11	1.010E-11	1.810E-11	2.180E-11
17	32187.00	6.700E-11	2.270E-11	2.570E-11	1.190E-11	6.650E-11	9.730E-12	1.620E-11	1.500E-11
18	40233.79	4.830E-11	1.630E-11	1.960E-11	1.010E-11	4.890E-11	1.000E-11	1.340E-11	1.100E-11
19	48280.48	3.680E-11	1.250E-11	1.560E-11	8.110E-12	3.780E-11	6.490E-12	6.790E-12	8.540E-12
20	56327.29	2.900E-11	9.820E-12	1.360E-11	6.680E-12	2.680E-11	4.690E-12	5.000E-12	6.830E-12
21	64373.99	2.330E-11	7.940E-12	1.130E-11	5.640E-12	1.630E-11	3.780E-12	3.810E-12	5.580E-12
22	72420.75	1.910E-11	6.540E-12	9.570E-12	4.620E-12	1.220E-11	3.110E-12	2.980E-12	4.640E-12
23	80467.44	1.590E-11	5.480E-12	8.210E-12	4.010E-12	9.790E-12	2.620E-12	2.390E-12	3.920E-12

RECPTR NO.	DOWNWIND DISTANCE METERS	WEIGHTED AVERAGES 1/M**2 N - (9) 180.0	NNE -(10) 202.5	NE -(11) 225.0	ENE -(12) 247.5	E-(13) 270.0	ESE -(14) 292.5	SE -(15) 315.0	SSE -(16) 337.5
1	201.20	4.910E-11	2.220E-10	2.060E-10	7.020E-11	6.600E-11	6.740E-11	3.650E-11	4.750E-11
2	402.30	8.310E-10	3.760E-09	3.500E-09	1.190E-09	1.120E-09	1.150E-09	6.180E-10	1.020E-09
3	804.70	2.430E-10	1.140E-09	1.050E-09	3.600E-10	3.330E-10	3.490E-10	1.910E-10	2.140E-10
4	1207.00	1.000E-10	4.760E-10	4.450E-10	1.490E-10	1.420E-10	1.440E-10	8.330E-11	9.180E-11
5	1609.40	7.810E-11	3.570E-10	3.440E-10	1.110E-10	1.100E-10	1.080E-10	6.420E-11	7.380E-11
6	2414.00	5.780E-11	2.420E-10	2.500E-10	7.530E-11	7.780E-11	7.630E-11	4.400E-11	5.720E-11
7	3218.70	4.710E-11	1.870E-10	2.010E-10	5.790E-11	6.120E-11	6.080E-11	3.320E-11	4.960E-11
8	4023.40	3.980E-11	1.530E-10	1.680E-10	4.720E-11	5.050E-11	5.100E-11	2.660E-11	4.580E-11
9	4828.10	3.420E-11	1.300E-10	1.440E-10	4.000E-11	4.290E-11	4.390E-11	2.220E-11	4.430E-11
10	5632.70	2.990E-11	1.140E-10	1.270E-10	3.480E-11	3.730E-11	3.860E-11	1.900E-11	4.260E-11
11	6437.40	2.660E-11	1.010E-10	1.130E-10	3.080E-11	3.300E-11	3.460E-11	1.670E-11	4.080E-11
12	7242.10	2.380E-11	9.090E-11	1.020E-10	2.770E-11	2.960E-11	3.130E-11	1.490E-11	3.860E-11
13	8046.80	2.160E-11	8.270E-11	9.300E-11	2.520E-11	2.680E-11	2.860E-11	1.340E-11	3.650E-11
14	12070.10	1.450E-11	5.710E-11	6.470E-11	1.760E-11	1.820E-11	2.040E-11	9.460E-12	2.850E-11
15	16093.49	1.080E-11	4.370E-11	4.990E-11	1.370E-11	1.380E-11	1.610E-11	7.590E-12	3.220E-11
16	24140.29	7.130E-12	2.980E-11	3.450E-11	9.680E-12	9.310E-12	1.160E-11	5.610E-12	2.090E-11
17	32187.00	5.350E-12	2.270E-11	2.670E-11	7.650E-12	7.120E-12	1.380E-11	1.270E-11	1.510E-11
18	40233.79	4.260E-12	1.830E-11	2.170E-11	8.980E-12	9.060E-12	1.150E-11	1.030E-11	1.150E-11
19	48280.48	3.520E-12	1.520E-11	1.820E-11	7.590E-12	7.520E-12	9.710E-12	8.500E-12	9.190E-12
20	56327.29	3.000E-12	1.290E-11	1.560E-11	6.570E-12	6.410E-12	8.400E-12	7.200E-12	7.510E-12
21	64373.99	4.190E-12	1.130E-11	1.360E-11	5.780E-12	5.550E-12	7.370E-12	6.190E-12	6.260E-12
22	72420.75	4.840E-12	9.930E-12	1.210E-11	5.150E-12	4.880E-12	6.550E-12	5.400E-12	5.300E-12
23	80467.44	4.180E-12	8.870E-12	1.090E-11	4.620E-12	4.340E-12	5.880E-12	4.750E-12	4.540E-12

TABLE 4.1-6

RELATIVE DEPOSITION CONCENTRATIONS PER UNIT EMISSION FOR MAIN STACK FOR JULY - SEPTEMBER 1983

UNDEPLETED X/Q FOR THE REACTOR BUILDING VENT - 10/1/83 TO 12/31/83

RECPTR NO.	DOWNWIND DISTANCE METERS	WEIGHTED AVERAGES SEC/M**3 S - (1) 0.0	SSW - (2) 22.5	SW - (3) 45.0	WSW - (4) 67.5	W- (5) 90.0	WNW - (6) 112.5	NW - (7) 135.0	NNW - (8) 157.5
1	201.20	7.060E-06	4.090E-06	1.070E-05	7.540E-06	7.210E-06	1.660E-05	2.960E-05	4.410E-05
2	402.30	1.880E-06	9.270E-07	2.580E-06	1.850E-06	1.870E-06	4.510E-06	8.250E-06	1.260E-05
3	804.70	4.850E-07	1.530E-07	5.660E-07	3.960E-07	4.550E-07	1.240E-06	2.330E-06	3.650E-06
4	1207.00	2.480E-07	6.630E-08	2.750E-07	1.830E-07	2.250E-07	6.320E-07	1.190E-06	1.820E-06
5	1609.40	1.630E-07	4.810E-08	1.890E-07	1.210E-07	1.490E-07	4.100E-07	7.660E-07	1.140E-06
6	2414.00	9.640E-08	3.060E-08	1.110E-07	7.340E-08	8.820E-08	2.370E-07	4.480E-07	6.770E-07
7	3218.70	6.660E-08	2.210E-08	7.680E-08	5.190E-08	6.120E-08	1.620E-07	3.100E-07	4.740E-07
8	4023.40	5.000E-08	1.730E-08	5.790E-08	3.970E-08	4.610E-08	1.210E-07	2.320E-07	3.580E-07
9	4828.10	3.950E-08	1.420E-08	4.630E-08	3.190E-08	3.660E-08	9.490E-08	1.830E-07	2.820E-07
10	5632.70	3.250E-08	1.200E-08	3.840E-08	2.650E-08	3.010E-08	7.760E-08	1.490E-07	2.310E-07
11	6437.40	2.740E-08	1.040E-08	3.270E-08	2.260E-08	2.550E-08	6.520E-08	1.260E-07	1.940E-07
12	7242.10	2.370E-08	9.150E-09	2.830E-08	1.970E-08	2.210E-08	5.610E-08	1.080E-07	1.680E-07
13	8046.80	2.080E-08	8.180E-09	2.500E-08	1.740E-08	1.940E-08	4.900E-08	9.460E-08	1.470E-07
14	12070.10	1.270E-08	5.330E-09	1.550E-08	1.090E-08	1.190E-08	2.950E-08	5.680E-08	8.820E-08
15	16093.49	8.970E-09	3.940E-09	1.120E-08	7.930E-09	8.490E-09	2.070E-08	3.990E-08	6.190E-08
16	24140.29	5.570E-09	2.580E-09	7.070E-09	5.090E-09	5.300E-09	1.270E-08	2.450E-08	3.820E-08
17	32187.00	3.970E-09	1.910E-09	5.130E-09	3.710E-09	3.800E-09	9.040E-09	1.740E-08	2.700E-08
18	40233.79	3.060E-09	1.520E-09	4.010E-09	2.920E-09	2.950E-09	6.960E-09	1.330E-08	2.080E-08
19	48280.48	2.500E-09	1.260E-09	3.290E-09	2.410E-09	2.410E-09	5.660E-09	1.080E-08	1.690E-08
20	56327.29	2.100E-09	1.070E-09	2.790E-09	2.040E-09	2.030E-09	4.750E-09	9.090E-09	1.420E-08
21	64373.99	1.800E-09	9.340E-10	2.410E-09	1.770E-09	1.750E-09	4.070E-09	7.800E-09	1.220E-08
22	72420.75	1.580E-09	8.270E-10	2.120E-09	1.570E-09	1.540E-09	3.560E-09	6.810E-09	1.070E-08
23	80467.44	1.400E-09	7.410E-10	1.900E-09	1.400E-09	1.370E-09	3.160E-09	6.030E-09	9.450E-09

RECPTR NO.	DOWNWIND DISTANCE METERS	WEIGHTED AVERAGES SEC/M**3 N - (9) 180.0	NNE -(10) 202.5	NE -(11) 225.0	ENE -(12) 247.5	E-(13) 270.0	ESE -(14) 292.5	SE -(15) 315.0	SSE -(16) 337.5
1	201.20	4.670E-05	6.240E-05	8.170E-05	4.600E-05	2.260E-05	1.270E-05	1.150E-05	9.940E-06
2	402.30	1.340E-05	1.770E-05	2.300E-05	1.260E-05	5.920E-06	3.250E-06	3.010E-06	2.660E-06
3	804.70	3.850E-06	5.110E-06	6.550E-06	3.380E-06	1.490E-06	7.750E-07	7.690E-07	6.730E-07
4	1207.00	1.990E-06	2.620E-06	3.350E-06	1.690E-06	7.320E-07	3.730E-07	3.730E-07	3.440E-07
5	1609.40	1.280E-06	1.670E-06	2.140E-06	1.090E-06	4.760E-07	2.440E-07	2.400E-07	2.280E-07
6	2414.00	7.440E-07	9.770E-07	1.250E-06	6.410E-07	2.830E-07	1.460E-07	1.430E-07	1.350E-07
7	3218.70	5.120E-07	6.730E-07	8.650E-07	4.460E-07	1.980E-07	1.030E-07	9.960E-08	9.310E-08
8	4023.40	3.820E-07	5.030E-07	6.470E-07	3.360E-07	1.500E-07	7.830E-08	7.550E-08	6.990E-08
9	4828.10	3.000E-07	3.950E-07	5.090E-07	2.650E-07	1.190E-07	6.250E-08	6.000E-08	5.530E-08
10	5632.70	2.440E-07	3.230E-07	4.160E-07	2.180E-07	9.800E-08	5.170E-08	4.940E-08	4.550E-08
11	6437.40	2.050E-07	2.710E-07	3.500E-07	1.830E-07	8.290E-08	4.390E-08	4.180E-08	3.840E-08
12	7242.10	1.760E-07	2.330E-07	3.010E-07	1.580E-07	7.170E-08	3.810E-08	3.610E-08	3.320E-08
13	8046.80	1.540E-07	2.040E-07	2.630E-07	1.390E-07	6.310E-08	3.360E-08	3.180E-08	2.910E-08
14	12070.10	9.230E-08	1.220E-07	1.580E-07	8.420E-08	3.860E-08	2.070E-08	1.940E-08	1.780E-08
15	16093.49	6.460E-08	8.550E-08	1.110E-07	5.950E-08	2.750E-08	1.480E-08	1.380E-08	1.260E-08
16	24140.29	3.950E-08	5.240E-08	6.790E-08	3.690E-08	1.720E-08	9.360E-09	8.640E-09	7.840E-09
17	32187.00	2.780E-08	3.700E-08	4.800E-08	2.620E-08	1.230E-08	6.750E-09	6.200E-09	5.590E-09
18	40233.79	2.130E-08	2.840E-08	3.680E-08	2.030E-08	9.550E-09	5.260E-09	4.820E-09	4.320E-09
19	48280.48	1.730E-08	2.300E-08	2.990E-08	1.650E-08	7.810E-09	4.310E-09	3.940E-09	3.520E-09
20	56327.29	1.450E-08	1.930E-08	2.510E-08	1.390E-08	6.580E-09	3.640E-09	3.330E-09	2.960E-09
21	64373.99	1.240E-08	1.650E-08	2.150E-08	1.190E-08	5.670E-09	3.150E-09	2.870E-09	2.540E-09
22	72420.75	1.080E-08	1.440E-08	1.880E-08	1.040E-08	4.980E-09	2.770E-09	2.520E-09	2.220E-09
23	80467.44	9.550E-09	1.280E-08	1.660E-08	9.270E-09	4.430E-09	2.460E-09	2.250E-09	1.970E-09

TABLE 4.1-7

UNDEPLETED RELATIVE CONCENTRATIONS PER UNIT EMISSION FOR REACTOR BUILDING VENT FOR OCTOBER - DECEMBER 1983

DEPLETED X/Q FOR THE REACTOR BUILDING VENT - 10/1/83 TO 12/31/83

RECPTR NO.	DOWNWIND DISTANCE METERS	WEIGHTED AVERAGES SEC/M**3 S - (1) 0.0	SSW - (2) 22.5	SW - (3) 45.0	WSW - (4) 67.5	W- (5) 90.0	WNW - (6) 112.5	NW - (7) 135.0	NNW - (8) 157.5
1	201.20	6.630E-06	4.020E-06	1.050E-05	7.240E-06	6.850E-06	1.550E-05	2.730E-05	3.980E-05
2	402.30	1.720E-06	9.030E-07	2.490E-06	1.750E-06	1.730E-06	4.130E-06	7.380E-06	1.100E-05
3	804.70	4.260E-07	1.470E-07	5.340E-07	3.600E-07	4.060E-07	1.100E-06	2.010E-06	3.050E-06
4	1207.00	2.120E-07	6.240E-08	2.550E-07	1.620E-07	1.960E-07	5.480E-07	1.000E-06	1.480E-06
5	1609.40	1.380E-07	4.520E-08	1.740E-07	1.070E-07	1.290E-07	3.510E-07	6.340E-07	9.070E-07
6	2414.00	7.940E-08	2.860E-08	1.010E-07	6.380E-08	7.460E-08	1.970E-07	3.590E-07	5.190E-07
7	3218.70	5.360E-08	2.060E-08	6.950E-08	4.450E-08	5.070E-08	1.320E-07	2.410E-07	3.520E-07
8	4023.40	3.940E-08	1.620E-08	5.210E-08	3.370E-08	3.760E-08	9.600E-08	1.760E-07	2.570E-07
9	4828.10	3.060E-08	1.310E-08	4.150E-08	2.680E-08	2.940E-08	7.400E-08	1.350E-07	1.960E-07
10	5632.70	2.470E-08	1.110E-08	3.420E-08	2.210E-08	2.390E-08	5.950E-08	1.080E-07	1.560E-07
11	6437.40	2.050E-08	9.590E-09	2.900E-08	1.870E-08	2.000E-08	4.920E-08	8.890E-08	1.280E-07
12	7242.10	1.740E-08	8.430E-09	2.500E-08	1.610E-08	1.710E-08	4.160E-08	7.490E-08	1.070E-07
13	8046.80	1.510E-08	7.520E-09	2.200E-08	1.420E-08	1.480E-08	3.580E-08	6.420E-08	9.160E-08
14	12070.10	8.600E-09	4.850E-09	1.350E-08	8.620E-09	8.680E-09	2.020E-08	3.530E-08	4.880E-08
15	16093.49	5.760E-09	3.550E-09	9.550E-09	6.090E-09	5.930E-09	1.340E-08	2.290E-08	3.070E-08
16	24140.29	3.230E-09	2.290E-09	5.900E-09	3.740E-09	3.450E-09	7.440E-09	1.220E-08	1.550E-08
17	32187.00	2.120E-09	1.670E-09	4.200E-09	2.640E-09	2.340E-09	4.860E-09	7.620E-09	9.130E-09
18	40233.79	1.530E-09	1.310E-09	3.230E-09	2.020E-09	1.730E-09	3.490E-09	5.250E-09	5.920E-09
19	48280.48	1.170E-09	1.070E-09	2.610E-09	1.620E-09	1.350E-09	2.660E-09	3.860E-09	4.090E-09
20	56327.29	9.300E-10	9.040E-10	2.170E-09	1.350E-09	1.100E-09	2.110E-09	2.950E-09	2.950E-09
21	64373.99	7.610E-10	7.790E-10	1.850E-09	1.140E-09	9.170E-10	1.720E-09	2.330E-09	2.190E-09
22	72420.75	6.380E-10	6.830E-10	1.610E-09	9.930E-10	7.820E-10	1.440E-09	1.890E-09	1.660E-09
23	80467.44	5.450E-10	6.060E-10	1.420E-09	8.750E-10	6.790E-10	1.230E-09	1.560E-09	1.300E-09

RECPTR NO.	DOWNWIND DISTANCE METERS	WEIGHTED AVERAGES SEC/M**3 N - (9) 180.0	NNE -(10) 202.5	NE -(11) 225.0	ENE -(12) 247.5	E-(13) 270.0	ESE -(14) 292.5	SE -(15) 315.0	SSE -(16) 337.5
1	201.20	4.280E-05	5.730E-05	7.520E-05	4.260E-05	2.120E-05	1.200E-05	1.080E-05	9.340E-06
2	402.30	1.190E-05	1.570E-05	2.050E-05	1.130E-05	5.410E-06	3.000E-06	2.750E-06	2.430E-06
3	804.70	3.300E-06	4.380E-06	5.630E-06	2.910E-06	1.310E-06	6.840E-07	6.730E-07	5.910E-07
4	1207.00	1.670E-06	2.190E-06	2.810E-06	1.420E-06	6.260E-07	3.210E-07	3.190E-07	2.950E-07
5	1609.40	1.050E-06	1.380E-06	1.770E-06	9.000E-07	4.020E-07	2.080E-07	2.030E-07	1.930E-07
6	2414.00	5.930E-07	7.790E-07	1.000E-06	5.150E-07	2.330E-07	1.220E-07	1.180E-07	1.110E-07
7	3218.70	3.950E-07	5.200E-07	6.710E-07	3.490E-07	1.590E-07	8.440E-08	8.040E-08	7.500E-08
8	4023.40	2.860E-07	3.780E-07	4.890E-07	2.560E-07	1.180E-07	6.310E-08	5.960E-08	5.510E-08
9	4828.10	2.190E-07	2.900E-07	3.750E-07	1.980E-07	9.220E-08	4.960E-08	4.650E-08	4.280E-08
10	5632.70	1.740E-07	2.310E-07	2.990E-07	1.590E-07	7.470E-08	4.040E-08	3.770E-08	3.460E-08
11	6437.40	1.430E-07	1.900E-07	2.460E-07	1.310E-07	6.230E-08	3.390E-08	3.140E-08	2.880E-08
12	7242.10	1.200E-07	1.590E-07	2.070E-07	1.110E-07	5.310E-08	2.910E-08	2.670E-08	2.450E-08
13	8046.80	1.030E-07	1.360E-07	1.770E-07	9.570E-08	4.600E-08	2.530E-08	2.320E-08	2.120E-08
14	12070.10	5.560E-08	7.410E-08	9.700E-08	5.340E-08	2.650E-08	1.480E-08	1.330E-08	1.210E-08
15	16093.49	3.560E-08	4.760E-08	6.260E-08	3.510E-08	1.780E-08	1.020E-08	8.960E-09	8.140E-09
16	24140.29	1.850E-08	2.490E-08	3.310E-08	1.920E-08	1.020E-08	5.960E-09	5.130E-09	4.580E-09
17	32187.00	1.130E-08	1.530E-08	2.050E-08	1.230E-08	6.780E-09	4.050E-09	3.430E-09	3.020E-09
18	40233.79	7.580E-09	1.040E-08	1.410E-08	8.640E-09	4.940E-09	3.010E-09	2.500E-09	2.170E-09
19	48280.48	5.440E-09	7.510E-09	1.030E-08	6.480E-09	3.820E-09	2.360E-09	1.940E-09	1.660E-09
20	56327.29	4.070E-09	5.660E-09	7.810E-09	5.060E-09	3.070E-09	1.920E-09	1.560E-09	1.320E-09
21	64373.99	3.140E-09	4.400E-09	6.130E-09	4.080E-09	2.540E-09	1.610E-09	1.290E-09	1.080E-09
22	72420.75	2.480E-09	3.520E-09	4.940E-09	3.370E-09	2.150E-09	1.370E-09	1.100E-09	9.090E-10
23	80467.44	2.010E-09	2.870E-09	4.070E-09	2.840E-09	1.850E-09	1.190E-09	9.480E-10	7.760E-10

TABLE 4.1-8

DEPLETED RELATIVE CONCENTRATIONS PER UNIT
EMISSION FOR REACTOR BUILDING VENT FOR
OCTOBER - DECEMBER 1983

DEPOSITION FACTORS FOR THE REACTOR BUILDING VENT - 10/1/83 TO 12/31/83

RECPTR NO.	DOWNWIND DISTANCE METERS	WEIGHTED AVERAGES 1/M**2 S - (1) 0.0	SSW - (2) 22.5	SW - (3) 45.0	WSW - (4) 67.5	W- (5) 90.0	WNW - (6) 112.5	NW - (7) 135.0	NNW - (8) 157.5
1	201.20	1.300E-08	1.980E-08	2.830E-08	1.560E-08	2.430E-08	4.780E-08	7.210E-08	5.050E-08
2	402.30	3.270E-09	4.350E-09	6.400E-09	3.810E-09	6.170E-09	1.300E-08	1.970E-08	1.410E-08
3	804.70	7.630E-10	6.600E-10	1.130E-09	8.260E-10	1.450E-09	3.580E-09	5.440E-09	3.960E-09
4	1207.00	3.740E-10	2.660E-10	4.940E-10	3.840E-10	7.080E-10	1.820E-09	2.720E-09	1.990E-09
5	1609.40	2.480E-10	1.960E-10	3.500E-10	2.540E-10	4.660E-10	1.170E-09	1.710E-09	1.250E-09
6	2414.00	1.440E-10	1.270E-10	2.150E-10	1.480E-10	2.690E-10	6.530E-10	9.690E-10	7.030E-10
7	3218.70	9.750E-11	9.360E-11	1.530E-10	1.020E-10	1.820E-10	4.320E-10	6.490E-10	4.690E-10
8	4023.40	7.230E-11	7.390E-11	1.180E-10	7.650E-11	1.350E-10	3.130E-10	4.720E-10	3.400E-10
9	4828.10	5.660E-11	6.100E-11	9.620E-11	6.050E-11	1.050E-10	2.400E-10	3.620E-10	2.600E-10
10	5632.70	4.610E-11	5.190E-11	8.080E-11	4.970E-11	8.560E-11	1.920E-10	2.890E-10	2.060E-10
11	6437.40	3.850E-11	4.510E-11	6.960E-11	4.190E-11	7.150E-11	1.580E-10	2.370E-10	1.690E-10
12	7242.10	3.300E-11	3.990E-11	6.090E-11	3.610E-11	6.110E-11	1.330E-10	2.000E-10	1.420E-10
13	8046.80	2.870E-11	3.570E-11	5.410E-11	3.160E-11	5.310E-11	1.140E-10	1.710E-10	1.210E-10
14	12070.10	1.680E-11	2.340E-11	3.460E-11	1.900E-11	3.100E-11	6.360E-11	9.310E-11	6.520E-11
15	16093.49	1.150E-11	1.730E-11	2.520E-11	1.330E-11	2.120E-11	4.170E-11	5.990E-11	4.150E-11
16	24140.29	6.680E-12	1.130E-11	1.620E-11	8.110E-12	1.230E-11	2.270E-11	3.140E-11	2.130E-11
17	32187.00	4.530E-12	8.370E-12	1.180E-11	5.690E-12	8.330E-12	1.460E-11	1.940E-11	1.290E-11
18	40233.79	3.350E-12	6.600E-12	9.240E-12	4.330E-12	6.160E-12	1.030E-11	1.310E-11	8.580E-12
19	48280.48	2.620E-12	5.430E-12	7.560E-12	3.470E-12	4.820E-12	7.720E-12	9.510E-12	6.100E-12
20	56327.29	2.130E-12	4.600E-12	6.370E-12	2.870E-12	3.910E-12	6.030E-12	7.180E-12	4.520E-12
21	64373.99	1.770E-12	3.980E-12	5.490E-12	2.440E-12	3.260E-12	4.860E-12	5.590E-12	3.450E-12
22	72420.75	1.510E-12	3.500E-12	4.810E-12	2.110E-12	2.780E-12	4.010E-12	4.470E-12	2.700E-12
23	80467.44	1.310E-12	3.110E-12	4.270E-12	1.850E-12	2.410E-12	3.380E-12	3.650E-12	2.170E-12

RECPTR NO.	DOWNWIND DISTANCE METERS	WEIGHTED AVERAGES 1/M**2 N - (9) 180.0	NNE -(10) 202.5	NE -(11) 225.0	ENE -(12) 247.5	E-(13) 270.0	ESE -(14) 292.5	SE -(15) 315.0	SSE -(16) 337.5
1	201.20	8.310E-08	1.270E-07	1.600E-07	1.110E-07	5.280E-08	2.740E-08	1.840E-08	1.310E-08
2	402.30	2.310E-08	3.460E-08	4.290E-08	2.860E-08	1.310E-08	6.480E-09	4.270E-09	3.150E-09
3	804.70	6.400E-09	9.470E-09	1.160E-08	6.940E-09	2.950E-09	1.280E-09	8.220E-10	6.390E-10
4	1207.00	3.260E-09	4.710E-09	5.680E-09	3.320E-09	1.400E-09	5.740E-10	3.650E-10	2.890E-10
5	1609.40	2.070E-09	2.960E-09	3.570E-09	2.120E-09	9.150E-10	3.880E-10	2.500E-10	1.920E-10
6	2414.00	1.160E-09	1.680E-09	2.030E-09	1.230E-09	5.370E-10	2.340E-10	1.500E-10	1.150E-10
7	3218.70	7.710E-10	1.120E-09	1.370E-09	8.390E-10	3.700E-10	1.650E-10	1.060E-10	8.100E-11
8	4023.40	5.580E-10	8.180E-10	9.990E-10	6.210E-10	2.760E-10	1.250E-10	8.090E-11	6.150E-11
9	4828.10	4.260E-10	6.280E-10	7.690E-10	4.830E-10	2.170E-10	1.000E-10	6.510E-11	4.900E-11
10	5632.70	3.400E-10	5.020E-10	6.150E-10	3.910E-10	1.770E-10	8.320E-11	5.420E-11	4.050E-11
11	6437.40	2.790E-10	4.130E-10	5.070E-10	3.250E-10	1.490E-10	7.080E-11	4.630E-11	3.440E-11
12	7242.10	2.340E-10	3.470E-10	4.280E-10	2.770E-10	1.270E-10	6.140E-11	4.030E-11	2.970E-11
13	8046.80	2.010E-10	2.980E-10	3.670E-10	2.400E-10	1.110E-10	5.410E-11	3.570E-11	2.610E-11
14	12070.10	1.090E-10	1.630E-10	2.020E-10	1.370E-10	6.550E-11	3.340E-11	2.230E-11	1.590E-11
15	16093.49	7.050E-11	1.060E-10	1.310E-10	9.230E-11	4.500E-11	2.370E-11	1.610E-11	1.120E-11
16	24140.29	3.710E-11	5.610E-11	7.050E-11	5.240E-11	2.650E-11	1.470E-11	1.020E-11	6.850E-12
17	32187.00	2.290E-11	3.500E-11	4.440E-11	3.470E-11	1.810E-11	1.040E-11	7.340E-12	4.810E-12
18	40233.79	1.560E-11	2.400E-11	3.080E-11	2.520E-11	1.350E-11	7.990E-12	5.700E-12	3.660E-12
19	48280.48	1.140E-11	1.760E-11	2.280E-11	1.940E-11	1.060E-11	6.440E-12	4.640E-12	2.930E-12
20	56327.29	8.600E-12	1.350E-11	1.760E-11	1.560E-11	8.650E-12	5.360E-12	3.890E-12	2.430E-12
21	64373.99	6.720E-12	1.060E-11	1.400E-11	1.280E-11	7.250E-12	4.570E-12	3.340E-12	2.060E-12
22	72420.75	5.380E-12	8.610E-12	1.140E-11	1.080E-11	6.210E-12	3.970E-12	2.920E-12	1.790E-12
23	80467.44	4.410E-12	7.130E-12	9.550E-12	9.320E-12	5.410E-12	3.500E-12	2.590E-12	1.570E-12

TABLE 4.1-9

RELATIVE DEPOSITION CONCENTRATIONS PER UNIT EMISSION FOR REACTOR BUILDING VENT FOR OCTOBER - DECEMBER 1983

UNDEPLETED X/Q FOR THE MAIN STACK - 10/1/83 TO 12/31/83

RECPTR NO.	DOWNWIND DISTANCE METERS	WEIGHTED AVERAGES SEC/M**3 S - (1) 0.0	SSW - (2) 22.5	SW - (3) 45.0	WSW - (4) 67.5	W- (5) 90.0	WNW - (6) 112.5	NW - (7) 135.0	NNW - (8) 157.5
1	201.20	3.740E-08	2.600E-07	6.260E-07	1.420E-07	4.820E-08	1.810E-08	1.770E-08	6.100E-09
2	402.30	5.650E-07	2.930E-06	3.030E-06	6.600E-07	3.660E-07	1.710E-07	1.600E-07	1.030E-07
3	804.70	1.030E-07	4.820E-07	5.960E-07	1.280E-07	6.980E-08	4.020E-08	4.520E-08	3.030E-08
4	1207.00	6.340E-08	3.400E-07	2.490E-07	6.510E-08	3.160E-08	1.880E-08	1.930E-08	1.250E-08
5	1609.40	1.260E-07	4.760E-07	1.870E-07	5.830E-08	2.580E-08	1.490E-08	1.490E-08	9.700E-09
6	2414.00	1.120E-07	2.680E-07	1.220E-07	4.180E-08	1.890E-08	1.120E-08	1.120E-08	7.300E-09
7	3218.70	7.920E-08	1.810E-07	9.040E-08	3.220E-08	1.500E-08	9.150E-09	9.390E-09	6.130E-09
8	4023.40	5.820E-08	1.350E-07	7.170E-08	2.590E-08	1.260E-08	7.760E-09	8.120E-09	5.350E-09
9	4828.10	4.550E-08	1.070E-07	5.940E-08	2.170E-08	1.110E-08	6.750E-09	7.130E-09	4.730E-09
10	5632.70	3.710E-08	8.830E-08	5.070E-08	1.860E-08	1.010E-08	6.010E-09	6.360E-09	4.260E-09
11	6437.40	3.110E-08	7.490E-08	4.420E-08	1.630E-08	9.350E-09	5.430E-09	5.750E-09	3.870E-09
12	7242.10	2.670E-08	6.500E-08	3.920E-08	1.440E-08	8.700E-09	4.960E-09	5.250E-09	3.560E-09
13	8046.80	2.340E-08	5.730E-08	3.520E-08	1.290E-08	2.660E-08	5.170E-09	7.350E-09	3.290E-09
14	12070.10	1.420E-08	3.570E-08	2.320E-08	8.440E-09	1.740E-08	3.840E-09	5.540E-09	2.380E-09
15	16093.49	9.990E-09	2.570E-08	1.740E-08	6.230E-09	1.270E-08	3.070E-09	6.590E-09	7.740E-09
16	24140.29	6.130E-09	1.630E-08	1.150E-08	4.040E-09	8.160E-09	2.170E-09	4.540E-09	4.840E-09
17	32187.00	4.360E-09	1.180E-08	8.630E-09	3.030E-09	5.950E-09	2.270E-09	3.930E-09	3.470E-09
18	40233.79	3.360E-09	9.250E-09	6.890E-09	2.630E-09	4.650E-09	2.660E-09	3.310E-09	2.690E-09
19	48280.48	2.730E-09	7.600E-09	5.730E-09	2.150E-09	3.820E-09	2.390E-09	4.010E-09	2.190E-09
20	56327.29	2.290E-09	6.440E-09	4.970E-09	1.820E-09	3.820E-09	2.000E-09	3.350E-09	1.840E-09
21	64373.99	1.960E-09	5.570E-09	4.340E-09	1.570E-09	3.280E-09	1.720E-09	2.880E-09	1.590E-09
22	72420.75	1.710E-09	4.900E-09	3.850E-09	1.390E-09	2.870E-09	1.500E-09	2.510E-09	1.390E-09
23	80467.44	1.510E-09	4.370E-09	3.460E-09	1.240E-09	2.540E-09	1.330E-09	2.220E-09	1.230E-09

RECPTR NO.	DOWNWIND DISTANCE METERS	WEIGHTED AVERAGES SEC/M**3 N - (9) 180.0	NNE -(10) 202.5	NE -(11) 225.0	ENE -(12) 247.5	E-(13) 270.0	ESE -(14) 292.5	SE -(15) 315.0	SSE -(16) 337.5
1	201.20	4.610E-09	1.310E-08	1.940E-08	2.290E-08	2.510E-08	1.630E-08	2.590E-08	2.890E-08
2	402.30	7.820E-08	2.240E-07	3.290E-07	3.890E-07	4.270E-07	2.770E-07	4.390E-07	6.220E-07
3	804.70	2.350E-08	7.260E-08	9.790E-08	1.180E-07	1.290E-07	8.580E-08	1.320E-07	1.330E-07
4	1207.00	1.050E-08	3.230E-08	4.110E-08	5.010E-08	5.400E-08	3.700E-08	5.690E-08	5.810E-08
5	1609.40	8.770E-09	2.470E-08	3.220E-08	3.850E-08	4.090E-08	2.840E-08	4.770E-08	4.710E-08
6	2414.00	7.080E-09	1.790E-08	2.450E-08	2.770E-08	2.840E-08	1.990E-08	4.000E-08	3.610E-08
7	3218.70	5.910E-09	1.450E-08	2.060E-08	2.230E-08	2.220E-08	1.570E-08	3.440E-08	2.930E-08
8	4023.40	5.060E-09	1.220E-08	1.780E-08	1.870E-08	1.830E-08	1.300E-08	2.980E-08	2.450E-08
9	4828.10	4.420E-09	1.060E-08	1.570E-08	1.610E-08	1.570E-08	1.120E-08	2.580E-08	2.100E-08
10	5632.70	3.930E-09	9.420E-09	1.400E-08	1.410E-08	1.370E-08	9.910E-09	2.270E-08	1.830E-08
11	6437.40	3.540E-09	8.470E-09	1.260E-08	1.260E-08	1.220E-08	8.880E-09	2.010E-08	1.620E-08
12	7242.10	3.230E-09	7.710E-09	1.150E-08	1.140E-08	1.100E-08	8.070E-09	1.810E-08	1.450E-08
13	8046.80	2.970E-09	7.080E-09	1.060E-08	1.040E-08	9.990E-09	7.390E-09	1.640E-08	1.310E-08
14	12070.10	2.130E-09	5.030E-09	7.450E-09	7.150E-09	6.920E-09	5.220E-09	1.090E-08	8.810E-09
15	16093.49	1.680E-09	3.920E-09	5.750E-09	5.480E-09	5.320E-09	4.050E-09	8.100E-09	7.290E-09
16	24140.29	1.190E-09	2.740E-09	3.970E-09	3.760E-09	3.650E-09	2.810E-09	5.250E-09	4.710E-09
17	32187.00	9.420E-10	2.130E-09	3.060E-09	2.900E-09	2.810E-09	2.540E-09	5.100E-09	3.470E-09
18	40233.79	7.790E-10	1.740E-09	2.490E-09	2.980E-09	3.100E-09	2.050E-09	4.020E-09	2.730E-09
19	48280.48	6.620E-10	1.470E-09	2.100E-09	2.520E-09	2.600E-09	1.710E-09	3.310E-09	2.250E-09
20	56327.29	5.770E-10	1.270E-09	1.810E-09	2.190E-09	2.240E-09	1.470E-09	2.810E-09	1.910E-09
21	64373.99	5.500E-10	1.130E-09	1.600E-09	1.940E-09	1.970E-09	1.290E-09	2.440E-09	1.650E-09
22	72420.75	1.230E-09	1.010E-09	1.430E-09	1.740E-09	1.750E-09	1.150E-09	2.160E-09	1.460E-09
23	80467.44	1.090E-09	9.150E-10	1.300E-09	1.580E-09	1.580E-09	1.030E-09	1.930E-09	1.300E-09

TABLE 4.1-10

UNDEPLETED RELATIVE CONCENTRATIONS PER UNIT EMISSION FOR MAIN STACK FOR OCTOBER - DECEMBER 1983

TABLE 4.1-11

DEPLETED RELATIVE CONCENTRATIONS PER UNIT EMISSION FOR MAIN STACK FOR OCTOBER - DECEMBER 1983

DEPLETED X/Q FOR THE MAIN STACK - 10/1/83 TO 12/31/83

RECPTR NO.	DOWNWIND DISTANCE METERS	WEIGHTED AVERAGES SEC/M**3 S - (1) 0.0	SSW - (2) 22.5	SW - (3) 45.0	WSW - (4) 67.5	W- (5) 90.0	WNW - (6) 112.5	NW - (7) 135.0	NNW - (8) 157.5
1	201.20	3.740E-08	2.600E-07	6.260E-07	1.420E-07	4.820E-08	1.810E-08	1.770E-08	6.100E-09
2	402.30	5.640E-07	2.920E-06	3.020E-06	6.600E-07	3.650E-07	1.710E-07	1.600E-07	1.030E-07
3	804.70	1.020E-07	4.800E-07	5.940E-07	1.270E-07	6.960E-08	4.010E-08	4.510E-08	3.020E-08
4	1207.00	6.320E-08	3.390E-07	2.480E-07	6.490E-08	3.150E-08	1.870E-08	1.920E-08	1.240E-08
5	1609.40	1.250E-07	4.750E-07	1.860E-07	5.800E-08	2.570E-08	1.490E-08	1.480E-08	9.660E-09
6	2414.00	1.120E-07	2.670E-07	1.210E-07	4.150E-08	1.880E-08	1.110E-08	1.110E-08	7.270E-09
7	3218.70	7.880E-08	1.800E-07	8.970E-08	3.190E-08	1.490E-08	9.090E-09	9.330E-09	6.100E-09
8	4023.40	5.770E-08	1.340E-07	7.100E-08	2.570E-08	1.250E-08	7.700E-09	8.060E-09	5.310E-09
9	4828.10	4.490E-08	1.060E-07	5.880E-08	2.150E-08	1.100E-08	6.680E-09	7.060E-09	4.690E-09
10	5632.70	3.640E-08	8.690E-08	5.010E-08	1.840E-08	9.980E-09	5.930E-09	6.290E-09	4.220E-09
11	6437.40	3.040E-08	7.340E-08	4.370E-08	1.600E-08	9.230E-09	5.350E-09	5.680E-09	3.830E-09
12	7242.10	2.600E-08	6.340E-08	3.860E-08	1.410E-08	8.580E-09	4.880E-09	5.170E-09	3.510E-09
13	8046.80	2.260E-08	5.570E-08	3.460E-08	1.260E-08	2.630E-08	5.080E-09	7.210E-09	3.240E-09
14	12070.10	1.330E-08	3.400E-08	2.280E-08	8.160E-09	1.700E-08	3.730E-09	5.380E-09	2.310E-09
15	16093.49	9.100E-09	2.400E-08	1.690E-08	5.950E-09	1.230E-08	2.950E-09	6.330E-09	7.300E-09
16	24140.29	5.270E-09	1.460E-08	1.110E-08	3.760E-09	7.580E-09	2.040E-09	4.250E-09	4.360E-09
17	32187.00	3.550E-09	1.030E-08	8.210E-09	2.740E-09	5.300E-09	2.060E-09	3.550E-09	2.980E-09
18	40233.79	2.590E-09	7.760E-09	6.470E-09	2.220E-09	3.960E-09	2.180E-09	2.870E-09	2.190E-09
19	48280.48	2.000E-09	6.180E-09	5.320E-09	1.770E-09	3.110E-09	1.330E-09	1.540E-09	1.690E-09
20	56327.29	1.600E-09	5.090E-09	4.530E-09	1.450E-09	2.240E-09	9.230E-10	1.150E-09	1.350E-09
21	64373.99	1.310E-09	4.290E-09	3.910E-09	1.220E-09	1.360E-09	7.230E-10	8.910E-10	1.100E-09
22	72420.75	1.100E-09	3.680E-09	3.430E-09	1.000E-09	1.030E-09	5.800E-10	7.090E-10	9.160E-10
23	80467.44	9.320E-10	3.210E-09	3.050E-09	8.720E-10	8.380E-10	4.740E-10	5.760E-10	7.710E-10

RECPTR NO.	DOWNWIND DISTANCE METERS	WEIGHTED AVERAGES SEC/M**3 N - (9) 180.0	NNE -(10) 202.5	NE -(11) 225.0	ENE -(12) 247.5	E-(13) 270.0	ESE -(14) 292.5	SE -(15) 315.0	SSE -(16) 337.5
1	201.20	4.610E-09	1.310E-08	1.940E-08	2.290E-08	2.510E-08	1.630E-08	2.590E-08	2.890E-08
2	402.30	7.810E-08	2.240E-07	3.290E-07	3.880E-07	4.260E-07	2.770E-07	4.390E-07	6.220E-07
3	804.70	2.340E-08	7.240E-08	9.770E-08	1.180E-07	1.290E-07	8.550E-08	1.710E-07	1.330E-07
4	1207.00	1.050E-08	3.220E-08	4.090E-08	4.990E-08	5.380E-08	3.690E-08	5.670E-08	5.780E-08
5	1609.40	8.740E-09	2.460E-08	3.210E-08	3.830E-08	4.080E-08	2.820E-08	4.760E-08	4.720E-08
6	2414.00	7.050E-09	1.780E-08	2.440E-08	2.760E-08	2.830E-08	1.980E-08	3.980E-08	3.590E-08
7	3218.70	5.870E-09	1.440E-08	2.050E-08	2.220E-08	2.210E-08	1.560E-08	3.420E-08	2.920E-08
8	4023.40	5.020E-09	1.210E-08	1.770E-08	1.860E-08	1.820E-08	1.300E-08	2.950E-08	2.430E-08
9	4828.10	4.370E-09	1.050E-08	1.550E-08	1.600E-08	1.550E-08	1.110E-08	2.560E-08	2.080E-08
10	5632.70	3.880E-09	9.320E-09	1.380E-08	1.400E-08	1.360E-08	9.810E-09	2.240E-08	1.810E-08
11	6437.40	3.490E-09	8.370E-09	1.250E-08	1.240E-08	1.200E-08	8.780E-09	1.980E-08	1.600E-08
12	7242.10	3.180E-09	7.600E-09	1.130E-08	1.120E-08	1.080E-08	7.970E-09	1.780E-08	1.430E-08
13	8046.80	2.910E-09	6.970E-09	1.040E-08	1.020E-08	9.850E-09	7.290E-09	1.600E-08	1.290E-08
14	12070.10	2.070E-09	4.900E-09	7.240E-09	6.970E-09	6.770E-09	5.100E-09	1.050E-08	8.550E-09
15	16093.49	1.620E-09	3.780E-09	5.530E-09	5.300E-09	5.170E-09	3.930E-09	7.710E-09	6.950E-09
16	24140.29	1.130E-09	2.590E-09	3.730E-09	3.570E-09	3.500E-09	2.670E-09	4.880E-09	4.360E-09
17	32187.00	8.710E-10	1.980E-09	2.820E-09	2.710E-09	2.650E-09	2.330E-09	4.590E-09	3.120E-09
18	40233.79	7.040E-10	1.580E-09	2.250E-09	2.730E-09	2.820E-09	1.840E-09	3.540E-09	2.390E-09
19	48280.48	5.850E-10	1.310E-09	1.850E-09	2.270E-09	2.320E-09	1.500E-09	2.850E-09	1.910E-09
20	56327.29	4.980E-10	1.110E-09	1.570E-09	1.930E-09	1.950E-09	1.260E-09	2.380E-09	1.580E-09
21	64373.99	7.600E-10	9.570E-10	1.360E-09	1.680E-09	1.680E-09	1.070E-09	2.000E-09	1.340E-09
22	72420.75	8.660E-10	9.400E-10	1.190E-09	1.480E-09	1.460E-09	9.340E-10	1.730E-09	1.150E-09
23	80467.44	7.370E-10	7.450E-10	1.060E-09	1.320E-09	1.290E-09	8.210E-10	1.510E-09	1.000E-09

DEPOSITION FACTORS FOR THE MAIN STACK - 10/1/83 TO 12/31/83

RECPTR NO.	DOWNWIND DISTANCE METERS	WEIGHTED AVERAGES 1/M**2 S - (1) 0.0	SSW - (2) 22.5	SW - (3) 45.0	WSW - (4) 67.5	W- (5) 90.0	WNW - (6) 112.5	NW - (7) 135.0	NNW - (8) 157.5
1	201.20	8.390E-11	3.180E-10	9.050E-10	3.850E-10	3.500E-10	8.990E-11	1.200E-10	2.820E-11
2	402.30	1.270E-09	3.580E-09	4.300E-09	1.790E-09	2.650E-09	8.690E-10	1.090E-09	4.770E-10
3	804.70	2.310E-10	5.950E-10	7.900E-10	3.410E-10	5.110E-10	2.220E-10	3.220E-10	1.400E-10
4	1207.00	1.130E-10	4.270E-10	3.380E-10	1.630E-10	2.400E-10	1.130E-10	1.420E-10	5.860E-11
5	1609.40	1.440E-10	7.330E-10	2.710E-10	1.370E-10	2.010E-10	9.450E-11	1.100E-10	4.750E-11
6	2414.00	1.210E-10	4.060E-10	1.860E-10	9.660E-11	1.510E-10	7.690E-11	8.400E-11	3.920E-11
7	3218.70	8.750E-11	2.750E-10	1.410E-10	7.460E-11	1.220E-10	6.660E-11	7.110E-11	3.490E-11
8	4023.40	6.540E-11	2.040E-10	1.130E-10	6.110E-11	1.010E-10	5.850E-11	6.180E-11	3.150E-11
9	4828.10	5.170E-11	1.590E-10	9.450E-11	5.230E-11	8.650E-11	5.190E-11	5.440E-11	2.860E-11
10	5632.70	4.250E-11	1.300E-10	8.100E-11	4.560E-11	7.570E-11	4.670E-11	4.860E-11	2.620E-11
11	6437.40	3.590E-11	1.090E-10	7.080E-11	4.040E-11	6.740E-11	4.240E-11	4.380E-11	2.420E-11
12	7242.10	3.100E-11	9.410E-11	6.280E-11	3.620E-11	6.060E-11	3.890E-11	4.000E-11	2.250E-11
13	8046.80	2.720E-11	8.240E-11	5.630E-11	3.270E-11	1.040E-10	4.110E-11	5.360E-11	2.100E-11
14	12070.10	1.650E-11	4.960E-11	3.700E-11	2.200E-11	6.550E-11	2.990E-11	3.760E-11	1.550E-11
15	16093.49	1.160E-11	3.470E-11	2.740E-11	1.640E-11	4.660E-11	2.330E-11	3.830E-11	5.630E-11
16	24140.29	7.040E-12	2.090E-11	1.770E-11	1.060E-11	2.850E-11	1.580E-11	2.480E-11	3.320E-11
17	32187.00	4.920E-12	1.450E-11	1.300E-11	7.980E-12	1.990E-11	1.560E-11	1.970E-11	2.250E-11
18	40233.79	3.710E-12	1.090E-11	1.020E-11	6.870E-12	1.490E-11	1.610E-11	1.550E-11	1.640E-11
19	48280.48	2.950E-12	8.610E-12	8.320E-12	5.440E-12	1.170E-11	9.730E-12	8.900E-12	1.260E-11
20	56327.29	2.420E-12	7.020E-12	7.100E-12	4.440E-12	8.840E-12	6.670E-12	6.810E-12	9.960E-12
21	64373.99	2.030E-12	5.870E-12	6.080E-12	3.710E-12	6.210E-12	5.180E-12	5.380E-12	8.070E-12
22	72420.75	1.740E-12	5.000E-12	5.310E-12	2.970E-12	5.010E-12	4.120E-12	4.360E-12	6.660E-12
23	80467.44	1.510E-12	4.330E-12	4.690E-12	2.560E-12	4.240E-12	3.330E-12	3.610E-12	5.570E-12

RECPTR NO.	DOWNWIND DISTANCE METERS	WEIGHTED AVERAGES 1/M**2 N - (9) 180.0	NNE -(10) 202.5	NE -(11) 225.0	ENE -(12) 247.5	E-(13) 270.0	ESE -(14) 292.5	SE -(15) 315.0	SSE -(16) 337.5
1	201.20	2.820E-11	8.460E-11	1.450E-10	1.780E-10	2.240E-10	1.480E-10	1.320E-10	8.280E-11
2	402.30	4.770E-10	1.460E-09	2.470E-09	3.020E-09	3.800E-09	2.500E-09	2.240E-09	1.790E-09
3	804.70	1.450E-10	4.960E-10	7.360E-10	9.140E-10	1.130E-09	7.650E-10	6.710E-10	3.890E-10
4	1207.00	6.580E-11	2.270E-10	3.100E-10	3.880E-10	4.730E-10	3.250E-10	2.730E-10	1.650E-10
5	1609.40	5.450E-11	1.730E-10	2.440E-10	3.000E-10	3.610E-10	2.470E-10	2.070E-10	1.300E-10
6	2414.00	4.340E-11	1.260E-10	1.870E-10	2.190E-10	2.520E-10	1.690E-10	1.450E-10	9.290E-11
7	3218.70	3.640E-11	1.020E-10	1.580E-10	1.770E-10	1.970E-10	1.290E-10	1.130E-10	7.300E-11
8	4023.40	3.170E-11	8.690E-11	1.370E-10	1.490E-10	1.620E-10	1.050E-10	9.310E-11	6.000E-11
9	4828.10	2.820E-11	7.550E-11	1.200E-10	1.280E-10	1.380E-10	8.890E-11	7.890E-11	5.090E-11
10	5632.70	2.560E-11	6.680E-11	1.070E-10	1.120E-10	1.200E-10	7.720E-11	6.840E-11	4.420E-11
11	6437.40	2.360E-11	6.000E-11	9.700E-11	9.960E-11	1.060E-10	6.830E-11	6.040E-11	3.900E-11
12	7242.10	2.190E-11	5.450E-11	8.840E-11	8.970E-11	9.530E-11	6.130E-11	5.400E-11	3.480E-11
13	8046.80	2.040E-11	5.000E-11	8.110E-11	8.140E-11	8.650E-11	5.560E-11	4.880E-11	3.140E-11
14	12070.10	1.540E-11	3.510E-11	5.680E-11	5.530E-11	5.890E-11	3.810E-11	3.280E-11	2.100E-11
15	16093.49	1.240E-11	2.710E-11	4.360E-11	4.170E-11	4.460E-11	2.900E-11	2.460E-11	1.710E-11
16	24140.29	8.930E-12	1.850E-11	2.950E-11	2.780E-11	2.990E-11	1.960E-11	1.620E-11	1.090E-11
17	32187.00	6.990E-12	1.400E-11	2.240E-11	2.090E-11	2.260E-11	1.660E-11	1.520E-11	7.900E-12
18	40233.79	5.680E-12	1.120E-11	1.800E-11	2.030E-11	2.350E-11	1.320E-11	1.190E-11	6.110E-12
19	48280.48	4.710E-12	9.210E-12	1.480E-11	1.680E-11	1.930E-11	1.090E-11	9.770E-12	4.940E-12
20	56327.29	4.000E-12	7.790E-12	1.260E-11	1.430E-11	1.630E-11	9.170E-12	8.210E-12	4.120E-12
21	64373.99	5.860E-12	6.710E-12	1.090E-11	1.240E-11	1.410E-11	7.900E-12	7.050E-12	3.500E-12
22	72420.75	6.420E-12	5.880E-12	9.580E-12	1.090E-11	1.230E-11	6.920E-12	6.150E-12	3.030E-12
23	80467.44	5.430E-12	5.200E-12	8.520E-12	9.680E-12	1.090E-11	6.120E-12	5.430E-12	2.660E-12

TABLE 4.1-12

RELATIVE DEPOSITION CONCENTRATIONS PER UNIT
EMISSION FOR MAIN STACK FOR
OCTOBER - DECEMBER 1983

Table 4.2-1

Maximum Individual Locations and Pathways[1]
July - December 1983

Pathway	0.5 Miles SE	0.6 Miles ESE	2.2 Miles W
Noble Gas Immersion	Yes	Yes	Yes
Inhalation	Yes	Yes	Yes
Fruit & Vegetable Garden	Yes	Yes	Yes
Meat	No	No	No
Cows Milk	No	No	Yes
Goats Milk	No	No	No

1. Yes indicates that the pathway is analyzed.
No indicates that it is not considered.

Table 4.2-2

July -December 1983 Gaseous Release Maximum Individual DOSES From All Pathways for Adults (MREM)

Location	Bone	Liver	Thyroid	Kidney	Lung	GI-LLI	Skin	Total Body
*0.5 Miles SE	0.08	0.08	0.11	0.08	0.08	0.08	0.15	0.08
0.6 Miles ESE	0.04	0.03	0.05	0.04	0.04	0.04	0.07	0.04
2.2 Miles W	0.01	0.01	0.02	0.01	0.01	0.01	0.02	0.01

*Maximum dose location

Table 4.2-3

July -December 1983 Gaseous Release Maximum Individual
Doses From All Pathways for Teenagers (MREM)

Location	Bone	Liver	Thyroid	Kidney	Lung	GI-LLI	Skin	Total Body
*0.5 Miles SE	0.08	0.08	0.11	0.08	0.08	0.08	0.15	0.08
0.6 Miles ESE	0.04	0.04	0.05	0.04	0.04	0.04	0.07	0.04
2.2 Miles W	0.01	0.01	0.03	0.01	0.01	0.01	0.02	0.01

*Maximum dose location

Table 4.2-4

July -December 1983 Gaseous Release Maximum Individual Doses From All Pathways for Children (MREM)

Location	Bone	Liver	Thyroid	Kidney	Lung	GI-LLI	Skin	Total Body
*0.5 Miles SE	0.09	0.08	0.12	0.08	0.08	0.08	0.15	0.08
0.6 Miles ESE	0.04	0.04	0.06	0.04	0.04	0.04	0.07	0.04
2.2 Miles W	0.01	0.01	0.05	0.01	0.01	0.01	0.02	0.01

*Maximum dose location

Table 4.2-5

July -December 1983 Gaseous Release Maximum Individual Doses From All Pathways for Infants (MREM)

Location	Bone	Liver	Thyroid	Kidney	Lung	GI-LLI	Skin	Total Body
*0.5 Miles SE	0.08	0.08	0.10	0.08	0.08	0.08	0.15	0.08
0.6 Miles ESE	0.03	0.03	0.04	0.03	0.03	0.03	0.07	0.03
2.2 Miles W	0.01	0.01	0.08	0.01	0.01	0.01	0.02	0.01

*Maximum dose location

Table 4.2-6

July - December 1983 Gaseous Release Maximum Individual Doses 0.5 Miles SE

Age Group	Bone (MREM)	Liver (MREM)	Thyroid (MREM)	Kidney (MREM)	Lung (MREM)	GI-LLI (MREM)	Skin (MREM)	Total Body (MREM)
Adult	0.08	0.08	0.11	0.08	0.08	0.08	0.15	0.08
Teenager	0.08	0.08	0.11	0.08	0.08	0.08	0.15	0.08
Child	0.08	0.08	0.12	0.08	0.08	0.08	0.15	0.08
Infant	0.08	0.08	0.10	0.08	0.08	0.08	0.15	0.08

TABLE 4.3-1
POPULATION DISTRIBUTION

Distance (Miles/Meters)

SECTOR	.5 804.7	1.5 2414.0	2.5 4023.4	3.5 5632.7	4.5 7242.0	7.5 12070.1	15.0 24140.2	25.0 40233.6	35.0 56327.0	45.0 72420.5
S	0.	3.90E+01	2.08E+02	5.30E+01	2.20E.01	2.39E+03	1.66E+04	2.52E+04	7.80+03	7.12+02
SSW	1.90E+01	0.	2.30E+01	0.	0.	9.98E+02	1.58E+04	7.80E+03	3.16E+02	3.59E+02
SW	0.	3.90E+01	1.23E+02	6.50E+01	3.49E+02	4.97E+02	1.28E+04	1.42E+05	4.64E+04	4.65E+04
WSW	0.	7.70E+01	2.36E+02	3.00E+00	2.17E+02	2.52E+03	1.18E+04	5.04E+04	1.37E+05	1.85E+05
W	5.80E+01	9.50E+01	4.75E+02	1.25E+03	4.52E+03	9.56E+03	1.76E+04	6.05E+04	1.42E+05	3.78E+05
WNW	1.17E+02	0.	0.	0.	7.11E+02	1.03E+04	2.83E+04	1.65E+05	1.13E+05	1.08E+05
NW	1.90E+01	0.	0.	0.	8.00E+00	5.65E+03	3.96E+04	2.07E+05	8.21E+05	6.36E+05
NNW	0.	0.	0.	0.	1.30E+01	1.55E+03	2.66E+04	2.83E+04	1.04E+05	4.14E+05
N	0.	0.	0.	0.	0.	0.	0.	0.	0.	3.09E+04
NNE	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
NE	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
ENE	0.	0.	0.	0	0.	0.	5.30E+02	3.48E+03	0.	0.
E	0.	0.	0.	0.	0.	0.	0.	3.29E+03	3.41E+02	0.
ESE	0.	0.	1.50E+01	0.	0.	0.	0.	5.88E+03	1.31E+04	0.
SE	5.70E+02	1.76E+02	4.76E+02	0.	0.	0.	1.24E+03	4.02E+04	5.91E+03	0.
SSE	1.90E+01	2.10E+02	5.30E+02	2.03E+03	8.19E+02	1.39E+03	1.32E+04	1.95E+04	0.	7.12E+02

Table 4.3-2

Population Doses Via Major Pathways Resulting
From Gaseous Effluents During July - December 1983

Pathway	Thyroid (MAN-REM)	Total Body (MAN-REM)
Noble Gas Immersion (gamma)	3.05	3.05
Ground Plane Deposition	0.23	0.23
Inhalation	0.30	0.039

5. OFF-SITE FROM DIRECT RADIATION

Doses due to direct radiation as measured by thermoluminescent dosimeter for the period July-December 1983 were as follows:

	Dose Rate uR/hr	
QTR:	3	4*
Near Plant (0-0.16 Miles from the Plant)	13.3	24.7
Exclusion Area (0.25-0.68 Miles from the Plant)	6.3	23.3
Distant Neighborhood (0.7-6.5 Miles from Plant)	6.5	21.8
Background (8-21 Miles from Plant)	7.4	28.5

The measured values for the third quarter indicate a small but measurable dose contribution due to direct radiation at Near Plant Locations (within 0.16 miles) but no statistically significant contribution beyond about 0.25 miles.

* The measured values for the fourth quarter indicate a problem with the majority of the TLDs used in this quarter. There were no abnormal occurances at the station or in the environment during this time period, and the same procedure was used in processing the TLDs. The immediate action taken to rectify this situation was to remove the suspect TLDs from the program.

REFERENCES

1. "Pilgrim Station Unit 1 Appendix Evaluation" Submitted in Accordance with 10 CFR 50 Appendix I, April 1977

2. Pilgrim Station Environmental Report, Amendment 4, April 1975, pg. 2-329/330.

3. "An Update of Population Distribution Around the Pilgrim Site," prepared for Boston Edison by HMM Associates, July 31, 1981, ppg. 2-3 and 2-7.

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WILLIAM D. HARRINGTON
SENIOR VICE PRESIDENT
NUCLEAR

BECo 84-33
March 1, 1984

Mr. Thomas E. Murley
Office of Inspection and Enforcement
Region I
U.S. Nuclear Regulatory Commission
631 Park Avenue
King of Prussia, PA 19406

License No. DPR-35
Docket No. 50-293

Radioactive Effluent Release Report
July 1 through December 31, 1983

Dear Sir:

In accordance with Pilgrim Nuclear Power Station Technical Specification 6.9.C.1, Boston Edison Company hereby submits 2 copies of the Pilgrim Nuclear Power Station Radioactive Effluent Release Report. The reporting period is from July 1, 1983 through December 31, 1983.

The report format and content are in accordance with NRC Regulatory Guide 1.21: MEASURING, EVALUATING, AND REPORTING RADIOACTIVITY IN SOLID WASTES AND RELEASES OF RADIOACTIVE MATERIALS IN LIQUID AND GASEOUS EFFLUENTS FROM LIGHT-WATER COOLED NUCLEAR POWER PLANTS, Revision 1, Tables 1A, 1B, 1C, 2A, 2B, 3, 4A-1 - 4A-2 and Supplemental Information.

Very truly yours,

WDH

PMK/kmc

(2 copies)

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