

# **Pilgrim Nuclear Power Station**

## **Radioactive Effluent and Waste Disposal Report including Radiological Impact on Humans**

**January 1 through June 30, 1982**

**By: Nuclear Operations Support Department  
Environmental and Radiological  
Health and Safety Group**

**Date: September 1, 1982**

# **Boston Edison Company**

PILGRIM NUCLEAR POWER STATION  
RADIOACTIVE EFFLUENT AND WASTE DISPOSAL REPORT  
INCLUDING RADIOLOGICAL IMPACT ON HUMANS

JANUARY 1 THROUGH JUNE 30, 1982

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1. INTRODUCTION AND SUMMARY

This report is issued for the period January-June 1982 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  
January - June 1982

Facility Pilgrim Nuclear Power Station Licensee EPR-35

## 1. Regulatory Limits

- a. Fission and activation gases:  $\frac{Q_s}{0.25/\bar{E}} + \frac{Q_v}{0.10/\bar{E}} \leq 1$
- b. Iodines: 2Ci/Quarter
- c. Particulates, half-lives > 8 days:  $13(1.8E4Q_s + 1.8E5Q_v) \leq 1$
- 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 =  $1 \times 10^{-5}$   $\mu$ Ci/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.  
MS=0.324; RBV=0.503

## 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: } Isotopic  
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: 121
2. Total time period for batch releases: 192.92hrs
3. Maximum time period for a batch release: 7.75hrs
4. Average time period for batch releases: 1.59hrs
5. Minimum time period for a batch release: 0.25hrs
6. Average stream flow during periods of release of effluent into a flowing stream: 1.90E+5GPM

### b. Gaseous (Not Applicable)

## 6. Abnormal Releases

- a. None
- b. None

**TABLE 1A**  
**EFFLUENT AND WASTE DISPOSAL SEMIANNUAL REPORT**  
**GASEOUS EFFLUENTS - SUMMATION OF ALL RELEASES**  
January - June 1982

Unit	Quarter 1	Quarter 2	Est. Total Error, %
------	--------------	--------------	------------------------

**A. Fission and activation gases**

1. Total release	Ci	-	3.55E+3	2.50E+1
2. Average release rate for period	$\mu\text{Ci/sec}$	-	4.52E+2	
3. Percent of Technical Specification limit	%	-	6.92E-2	

**B. Iodines**

1. Total iodine-131	Ci	-	3.97E-3	2.54E+1
2. Average release rate for period	$\mu\text{Ci/sec}$	-	5.05E-4	
3. Percent of Technical Specification limit	%	-	1.99E-1	

**C. Particulates**

1. Particulates with half-lives > 8 days	Ci	$\leq 3.68\text{E-}4$	4.26E-3	3.05E+1
2. Average release rate for period	$\mu\text{Ci/sec}$	$\leq 4.73\text{E-}5$	5.42E-4	
3. Percent of Technical Specification limit	%	$\leq 8.39\text{E-}3$	6.98E-2	
4. Gross alpha radioactivity	Ci	$\leq 4.52\text{E-}7$	$\leq 5.61\text{E-}7$	

**D. Tritium**

1. Total release	Ci	2.34E0	5.92E0	3.20E+1
2. Average release rate for period	$\mu\text{Ci/sec}$	3.01E-1	7.52E-1	
3. Percent of Technical Specification limit	%	-	-	

**TABLE 1B**  
**EFFLUENT AND WASTE DISPOSAL SEMIANNUAL REPORT ( 1982 )**  
**GASEOUS EFFLUENTS - ELEVATED RELEASE**  
January - June 1982

CONTINUOUS MODE

BATCH MODE

Nuclides Released	Unit	Quarter	Quarter	Quarter	Quarter
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**1. Fission gases**

krypton-85	Ci	-	1.37E-2		
krypton-85m	Ci	-	2.93E+2		
krypton-87	Ci	-	6.55E+1		
krypton-88	Ci	-	3.62E+2		
xenon-133	Ci	-	2.28E+3		
xenon-135	Ci	-	2.61E+2		
xenon-135m	Ci	-	<6.06E+0		
xenon-138	Ci	-	<2.38E+1		
xenon-131m	Ci	-	-		
xenon-137	Ci	-	-		
xenon-133m	Ci	-	4.28E+1		
Total for period	Ci	-	3.33E+3		

**2. Iodines**

iodine-131	Ci	-	2.53E-3		
iodine-133	Ci	-	7.90E-3		
iodine-135	Ci	-	<6.55E-3		
Total for period	Ci	-	<1.70E-2		

**3. Particulates**

strontium-89	Ci	< 6.32E-7	5.16E-4		
strontium-90	Ci	< 6.26E-8	5.50E-6		
cesium-134	Ci				
cesium-137	Ci	<1.04E-5	1.14E-5		
barium-lanthanum-140	Ci		1.57E-3		
chromium-51	Ci				
manganese-54	Ci	8.90E-6	2.90E-6		
cobalt-58	Ci				
iron-59	Ci				
cobalt-60	Ci	< 7.86E-5	3.00E-5		
zinc-65	Ci				
zirconium niobium-95	Ci				
cerium-141	Ci				
cerium-144	Ci				
ruthenium-103	Ci				
ruthenium-106	Ci				

**TABLE 1C**  
**EFFLUENT AND WASTE DISPOSAL SEMIANNUAL REPORT (1982)**  
**GASEOUS EFFLUENTS - GROUND LEVEL RELEASE**  
January - June 1982

Nuclides Released	Unit	CONTINUOUS MODE		BATCH MODE	
		Quarter	Quarter	Quarter	Quarter

**1. Fission gases**

krypton-85	Ci	-	1.01E-5		
krypton-85m	Ci	-	2.47E+1		
krypton-87	Ci	-	2.51E+0		
krypton-88	Ci	-	4.55E+1		
xenon-133	Ci	-	4.19E+1		
xenon-135	Ci	-	1.07E+2		
xenon-135m	Ci	-	-		
xenon-138	Ci	-	-		
Total for period	Ci	-	2.22E+2		

**2. Iodines**

iodine-131	Ci	-	1.44E-3		
iodine-133	Ci	-	6.50E-3		
iodine-135	Ci	-	<1.02E-2		
Total for period	Ci	-	<1.81E-2		

**3. Particulates**

strontium-89	Ci	1.64E-5	1.46E-3		
strontium-90	Ci	4.76E-7	1.44E-6		
cesium-134	Ci	1.17E-6			
cesium-137	Ci	2.42E-5	3.67E-5		
barium-lanthanum-140	Ci		3.95E-4		
manganese-54	Ci	1.08E-5	5.88E-6		
cobalt-58	Ci				
iron-59	Ci				
cobalt-60	Ci	2.16E-4	2.27E-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 (1982)**  
**LIQUID EFFLUENTS - SUMMATION OF ALL RELEASES**  
 January - June 1982

Unit	Quarter 1	Quarter 2	Est. Total Error, %
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**A. Fission and activation products**

1. Total release (not including tritium, noble gases, or alpha)	Ci	5.72E-1	1.44E-1	3.00E+1
2. Average diluted concentration during period	$\mu\text{Ci/ml}$	8.91E-8	7.58E-8	
3. Percent of applicable limit	%	5.72E0	1.44E0	

**B. Tritium**

1. Total release	Ci	5.26E0	1.99E-1	3.00E+1
2. Average diluted concentration during period	$\mu\text{Ci/ml}$	8.19E-7	1.05E-7	
3. Percent of applicable limit	%	8.19E0	1.05E0	

**C. Dissolved and entrained gases**

1. Total release	Ci	-	-	-
2. Average diluted concentration during period	$\mu\text{Ci/ml}$	-	-	
3. Percent of applicable limit	%	-	-	

**D. Gross alpha radioactivity**

1. Total release	Ci	$\leq 1.44\text{E-4}$	$\leq 1.73\text{E-5}$	4.00E+1
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<b>E. Volume of waste released (prior to dilution)</b>	liters	1.61E6	1.10E5	2.00E+1
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<b>F. Volume of dilution water used during period</b>	liters	6.42E9	1.90E9	2.00E+1
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**TABLE 2B**  
**EFFLUENT AND WASTE DISPOSAL SEMIANNUAL REPORT (1982)**

**LIQUID EFFLUENTS**  
**January - June 1982**

Nuclides Released	Unit	CONTINUOUS MODE		BATCH MODE	
		Quarter	Quarter	Quarter	Quarter
strontium-89	Ci			6.70E-4	1.89E-3
strontium-90	Ci			4.17E-4	1.65E-4
cesium-134	Ci			1.46E-2	7.42E-4
cesium-137	Ci			1.08E-1	6.60E-3
iodine-131	Ci			-	2.25E-6
cobalt-58	Ci			2.54E-3	8.23E-4
cobalt-60	Ci			2.44E-1	7.00E-2
iron-59	Ci			4.27E-5	3.06E-6
zinc-65	Ci			4.28E-3	1.20E-3
manganese-54	Ci			2.61E-2	1.01E-2
chromium-51	Ci			-	1.20E-5
zirconium-niobium-95	Ci			5.16E-4	6.74E-4
molybdenum 99- technetium 99m	Ci			-	-
barium-lanthanum-140	Ci			-	4.96E-5
cerium-141	Ci			1.65E-5	-
iodine-133	Ci			-	2.70E-6
cerium-144	Ci			-	1.75E-5
silver-110m	Ci			-	-
iron-55	Ci			1.47E-1	2.43E-2
unidentified	Ci			2.40E-2	2.72E-2
Total for period (above)	Ci			5.72E-1	1.44E-1
xenon-133	Ci			-	-
xenon-135	Ci			-	-



TABLE 3

EFFLUENT AND WASTE DISPOSAL SEMI-ANNUAL REPORT (1982)  
SOLID WASTE AND IRRADIATED FUEL SHIPMENTS  
JANUARY - JUNE 1982

## 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 <sup>3</sup> Ci	97.299 123.60353	N/A N/A
b. Dry compressible waste, contaminated equipment, etc.	m <sup>3</sup> Ci	1539.11 10.67373	N/A N/A
c. Irradiated components, control rods, etc.	m <sup>3</sup> Ci	NONE	N/A
d. Other (Describe) Miscellaneous low-level waste	m <sup>3</sup> Ci	NONE	N/A

## 2. ESTIMATE OF MAJOR NUCLIDE COMPOSITION. (By Type of Waste)

		%	E(Curies)
a. Spent Resins, Filter	Sr90	.522	.64564
Sludges, Evap. Bottoms,	Sr89	19.972	24.68618
Diatomaceous Earth, Etc.	Fe55	12.697	15.69454
	Cs134	4.156	5.13671
	Cs137	26.327	32.54062
	Co58	1.220	1.50773
	Mn54	2.712	3.35228
	Zn65	.450	.55669
	Co60	31.633	39.09916
	La-140	.019	.02323
	Ba-140	.005	.00623
	I-131	.004	.00494
	Cr-51	.283	.35258
	TOTALS	100.000	123.60353

		%	E(Curies)
b. Dry Compressible Waste	Co60	50.24	5.36260
Contaminated Equipment	Co58	7.63	.81467
	Cs137	22.48	2.39956
	Cs134	6.75	.72011
	Fe55	1.75	.18635
	Fe59	1.14	.12171
	Sr89	.12	.01328
	Sr90	.01	.00027
	Zn65	.23	.02488
	Mn54	9.65	1.03030
	TOTALS	100.00	10.67373

c. N/A

d. N/A

### 3. SOLID WASTE DISPOSITION

<u>Number of Shipments</u>	<u>Mode of Transportation</u>	<u>Destination</u>
20	Tractor Trailer	Richland, Wash.
32	Tractor Trailer	Barnwell, S.C.

### B. IRRADIATED FUEL SHIPMENTS (Disposition)

<u>Number of Shipments</u>	<u>Mode of Transportation</u>	<u>Destination</u>
NONE	N/A	N/A

160 FT TOWER - 33 FT EL

33.0 FT WIND DATA  
 STABILITY CLASS A-- DELTA T LESS THAN -1.9 DEG C PER 100 METERS  
 1/1/82 - 3/31/82  
 CLASS FREQUENCY (PERCENT) = 6.83

WIND DISTRIBUTION SUMMARY

SPEED (KPH)	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	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	3.0	0.0	0.0	0.0	0.0	3.0
(2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.2
.6-7.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	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	0.0	0.0	3.0	3.0
(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	0.2	0.2
7.6-12.5	0	0	0	0	0	0	0	0	0	0	3	0	6	0	9	0	18
(1)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	6.1	0.0	9.1	0.0	18.2
(2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.4	0.0	0.6	0.0	1.2
12.6-18.5	0	0	0	0	0	0	0	0	0	0	0	0	0	24	42	6	72
(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	24.2	42.4	6.1	72.7
(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	1.7	2.9	0.4	5.0
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	3	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	0.0	0.0	3.0	3.0
(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	0.2	0.2
ALL SPEEDS	0	0	0	0	0	0	0	0	0	0	3	3	6	24	51	12	99
(1)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	3.0	6.1	24.2	51.5	12.1	100.0
(2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.4	1.7	3.5	0.8	6.8

(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= 99

CALM=WIND SPEED LESS THAN 1.0MPH

TABLE 4A-1

Distribution of Wind Directions and Speeds  
 33 Ft. Level of 160 Ft. Tower

160 FT TOWER - 33 FT EL

10 FT WIND DATA

1/1/82 - 3/31/82

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

CLASS FREQUENCY (PERCENT) = 3.93

WIND DISTRIBUTION SUMMARY

SPEED(MPH)	N	NNE	NE	ENE	E	ESE	SE	SSE	DIRECTION SSE	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	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	5.3	0.0	0.0	0.0	0.0	5.3
(2)	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	0.2
3.6- 7.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	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	0.0	5.3	0.0	5.3
(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	0.2	0.0	0.2
7.6-12.5	0	0	0	0	0	0	0	0	0	0	0	0	0	12	3	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	21.1	5.3	10.5	36.8
(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	0.8	0.2	0.4	1.4
12.6-18.5	0	3	0	0	0	0	0	0	0	0	0	0	3	3	12	3	24
(1)	0.0	5.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.3	5.3	21.1	5.3	42.1
(2)	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.8	0.2	1.7
18.6-24.0	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	5.3	0.0	0.0	0.0	0.0	0.0	0.0	5.3
(2)	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	0.2
OVER-24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	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	0.0	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	0	0	0	0	0	3	0	3	3	3	15	18	57
(1)	0.0	5.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.3	0.0	5.3	5.3	5.3	26.3	31.6	100.0
(2)	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.2	0.2	0.2	1.0	1.2	3.9

(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= 57

CALM=WIND SPEED LESS THAN 1.00MPH

TABLE 4A-1 (Cont.)

Distribution of Wind Directions and Speeds  
33 Ft. Level of 160 Ft. Tower

160 FT TOWER - 33 FT EL

33.0 FT WIND DATA

1/1/82 - 3/31/82  
CLASS FREQUENCY (PERCENT) = 4.76

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

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	0	0	0	3	0	0	0	0	0	0	0	3
(1)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.3
(2)	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	0.2
3.6- 7.5	0	0	0	0	0	0	0	0	0	0	0	0	3	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	0.0	0.0	4.3	4.3	0.0	0.0	8.7
(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	0.2	0.2	0.0	0.0	0.4
7.6-12.5	0	0	0	0	0	0	0	0	0	0	0	3	0	9	6	6	24
(1)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.3	0.0	13.0	8.7	8.7	34.8
(2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.6	0.4	0.4	1.7
12.6-18.5	0	0	0	0	0	0	0	0	0	3	0	0	6	6	13	6	36
(1)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.3	0.0	0.0	8.7	8.7	21.7	8.7	52.2
(2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.4	0.4	1.0	0.4	2.5
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	0	0	0	0	0	0	3	3	0	3	9	18	21	12	69
(1)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.3	4.3	0.0	4.3	13.0	26.1	30.4	17.4	100.0
(2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.0	0.2	0.6	1.2	1.4	0.8	4.8

(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= 69

CALM=WIND SPEED LESS THAN 1.00MPH

TABLE 4A-1 (Cont.)  
Distribution of Wind Directions and Speeds  
33 Ft. Level of 160 Ft. Tower

160 FT TOWER - 33 FT EL

33.0 FT WIND DATA

1/1/82 - 3/31/82  
CLASS FREQUENCY (PERCENT) = 41.61

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

WIND DISTRIBUTION SUMMARY

SPEED(MPH)	DIRECTION																TOTAL
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
-CALM	0	0	3	0	3	0	0	0	0	0	0	3	0	0	3	0	12
(1)	0.0	0.0	0.5	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.5	0.0	2.0
(2)	0.0	0.0	0.2	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.2	0.0	0.8
CALM - 3.5	0	0	0	0	3	0	0	0	0	0	0	3	9	3	3	0	21
(1)	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.5	1.5	0.5	0.5	0.0	3.5
(2)	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.6	0.2	0.2	0.0	1.4
3.6 - 7.5	6	3	0	0	0	0	0	6	12	9	0	15	24	27	27	6	135
(1)	1.0	0.5	0.0	0.0	0.0	0.0	0.0	1.0	2.0	1.5	0.0	2.5	4.0	4.5	4.5	1.0	22.4
(2)	0.4	0.2	0.0	0.0	0.0	0.0	0.0	0.4	0.8	0.6	0.0	1.0	1.7	1.9	1.9	0.4	9.3
7.6 - 12.5	18	0	0	0	0	0	0	0	0	3	6	21	57	75	78	15	273
(1)	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	1.0	3.5	9.5	12.4	12.9	2.5	45.3
(2)	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.4	1.4	3.9	5.2	5.4	1.0	18.8
12.6 - 18.5	9	0	0	0	0	0	0	0	9	3	9	3	9	39	48	15	144
(1)	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	0.5	1.5	0.5	1.5	6.5	8.0	2.5	23.9
(2)	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.2	0.6	0.2	0.6	2.7	3.3	1.0	9.9
18.6 - 24.0	3	0	0	0	0	0	0	0	0	0	0	0	3	3	3	6	18
(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	0.5	0.5	0.5	1.0	3.0
(2)	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.2	0.4	1.2
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	3	3	0	6	0	0	6	21	15	15	45	102	147	162	42	603
(1)	6.0	0.5	0.5	0.0	1.0	0.0	0.0	1.0	3.5	2.5	2.5	7.5	16.9	24.4	26.9	7.0	100.0
(2)	2.5	0.2	0.2	0.0	0.4	0.0	0.0	0.4	1.4	1.0	1.0	3.1	7.0	10.1	11.2	2.9	41.6

(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 = 603

CALM = WIND SPEED LESS THAN 1.00MPH

TABLE 4A-1 (Cont.)  
Distribution of Wind Directions and Speeds  
33Ft. Level of 160 Ft. Tower



## 160 FT TOWER - 33 FT EL

33.0 FT WIND DATA

1/1/82 - 3/31/82

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

CLASS FREQUENCY (PERCENT) = 39.13

## WIND DISTRIBUTION SUMMARY

SPEED(MPH)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
-CALM	3	3	3	6	0	0	3	0	3	6	0	12	12	6	0	0	57
(1)	0.5	0.5	0.5	1.1	0.0	0.0	0.5	0.0	0.5	1.1	0.0	2.1	2.1	1.1	0.0	0.0	10.1
(2)	0.2	0.2	0.2	0.4	0.0	0.0	0.2	0.0	0.2	0.4	0.0	0.8	0.8	0.4	0.0	0.0	3.9
CALM- 3.3	3	0	6	0	0	0	3	9	0	3	12	21	15	3	3	6	84
(1)	0.5	0.0	1.1	0.0	0.0	0.0	0.5	1.6	0.0	0.5	2.1	3.7	2.6	0.5	0.5	1.1	14.8
(2)	0.2	0.0	0.4	0.0	0.0	0.0	0.2	0.6	0.0	0.2	0.8	1.4	1.0	0.2	0.2	0.4	5.8
3.6- 7.5	0	0	3	0	0	3	15	21	3	18	33	39	36	15	24	0	210
(1)	0.0	0.0	0.5	0.0	0.0	0.5	2.6	3.7	0.5	3.2	5.8	6.9	6.3	2.6	4.2	0.0	37.0
(2)	0.0	0.0	0.2	0.0	0.0	0.2	1.0	1.4	0.2	1.2	2.3	2.7	2.5	1.0	1.7	0.0	14.5
7.6-12.5	0	0	3	0	0	0	6	36	18	6	30	42	9	3	9	0	162
(1)	0.0	0.0	0.5	0.0	0.0	0.0	1.1	6.3	3.2	1.1	5.3	7.4	1.6	0.5	1.6	0.0	28.6
(2)	0.0	0.0	0.2	0.0	0.0	0.0	0.4	2.5	1.2	0.4	2.1	2.9	0.6	0.2	0.6	0.0	11.2
12.6-18.5	0	0	0	3	0	0	0	3	3	0	18	0	0	0	12	3	42
(1)	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.5	0.5	0.0	3.2	0.0	0.0	0.0	2.1	0.5	7.4
(2)	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.2	0.2	0.0	1.2	0.0	0.0	0.0	0.8	0.2	2.9
18.6-24.0	3	0	0	0	0	0	0	0	0	6	0	0	0	0	0	0	9
(1)	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	0.0	0.0	0.0	0.0	0.0	0.0	1.6
(2)	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.6
OVER-24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	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	0.0	0.0	0.5	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	0.0	0.0	0.0	0.0	0.2	0.2
ALL SPEEDS	9	3	15	9	0	3	27	69	27	39	93	114	72	27	48	12	567
(1)	1.6	0.5	2.6	1.6	0.0	0.5	4.8	12.2	4.8	6.9	16.4	20.1	12.7	4.8	8.5	2.1	100.0
(2)	0.6	0.2	1.0	0.6	0.0	0.2	1.9	4.8	1.9	2.7	6.4	7.9	5.0	1.9	3.3	0.8	39.1

(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= 567

CALM=WIND SPEED LESS THAN 1.00MPH

TABLE 4A-1 (Cont.)  
Distribution of Wind Directions and Speeds  
33 Ft. Level of 160 Ft. Tower

160 FT TOWER - 33 FT EL

33.0 FT WIND DATA  
 STABILITY CLASS F-- DELTA T 1.6 TO 4.0 DEG C PER 100 METERS  
 1/1/82 - 3/31/82  
 CLASS FREQUENCY (PERCENT) = 3.11

WIND DISTRIBUTION SUMMARY

SPEED (MPH)	DIRECTION																TOTAL
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
-CALM (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 0.0	0 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 6.7 0.2	0 0.0 0.0	3 6.7 0.2	0 0.0 0.0	0 0.0 0.0	0 0.0 0.0	6 13.3 0.4
CALM- 3.5 (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 0.0	0 0.0 0.0	0 0.0 0.0	0 0.0 0.0	0 0.0 0.0	6 13.3 0.4	3 6.7 0.2	6 13.3 0.4	3 6.7 0.2	0 0.0 0.0	0 0.0 0.0	0 0.0 0.0	18 40.0 1.2
3.6- 7.5 (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 0.0	0 0.0 0.0	3 6.7 0.2	3 6.7 0.2	0 0.0 0.0	0 0.0 0.0	3 6.7 0.2	3 6.7 0.2	3 6.7 0.2	0 0.0 0.0	0 0.0 0.0	0 0.0 0.0	15 33.3 1.0
7.6-12.5 (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 0.0	0 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 6.7 0.2	3 6.7 0.2	0 0.0 0.0	0 0.0 0.0	0 0.0 0.0	0 0.0 0.0	6 13.3 0.4
12.6-18.5 (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 0.0	0 0.0 0.0	0 0.0 0.0	0 0.0 0.0	0 0.0 0.0	0 0.0 0.0	0 0.0 0.0	0 0.0 0.0	0 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 (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 0.0	0 0.0 0.0	0 0.0 0.0	0 0.0 0.0	0 0.0 0.0	0 0.0 0.0	0 0.0 0.0	0 0.0 0.0	0 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 (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 0.0	0 0.0 0.0	0 0.0 0.0	0 0.0 0.0	0 0.0 0.0	0 0.0 0.0	0 0.0 0.0	0 0.0 0.0	0 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 (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 0.0	0 0.0 0.0	3 6.7 0.2	3 6.7 0.2	0 0.0 0.0	6 13.3 0.4	12 26.7 0.8	12 26.7 0.8	9 20.0 0.6	0 0.0 0.0	0 0.0 0.0	0 0.0 0.0	45 100.0 3.1

(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= 45

CALM=WIND SPEED LESS THAN 1.00MPH

TABLE 4A-1 (Cont.)  
 Distribution of Wind Directions and Speeds  
 33 Ft. Level of 160 Ft. Tower



TABLE 4A-1 (Cont.)  
Distribution of Wind Directions and Speeds  
33 Ft. Level of 160 Ft. Tower

160 FT TOWER - 33 FT EL																		
33.0 FT WIND DATA				1/1/82 - 3/31/82											CLASS FREQUENCY (PERCENT) = 0.62			
STABILITY CLASS G--- DELTA T GREATER THAN 4.0 DEG C PER 100 METERS																		
WIND DISTRIBUTION SUMMARY																		
SPEED(MPH)	N	NNE	NE	ENE	E	ESE	SE	DIRECTION			SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
								SSE	S	SSW								
-CALM	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	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	0.0
CALM- 3.5	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	0.0	33.3	0.0	0.0	0.0	0.0	0.0	0.0	33.3
(2)	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	0.2
3.5- 7.5	0	0	0	0	0	0	0	3	0	0	0	0	0	3	0	0	0	6
(1)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	33.3	0.0	0.0	0.0	0.0	0.0	33.3	0.0	0.0	0.0	66.7
(2)	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	0.2	0.0	0.0	0.0	0.4
7.6-12.5	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	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	0.0
12.6-18.5	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	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	0.0
18.6-24.0	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	0.0	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	0.0
OVER-24.0	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	0.0	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	0.0
ALL SPEEDS	0	0	0	0	0	0	0	3	0	0	3	0	3	3	0	0	0	9
(1)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	33.3	0.0	0.0	0.0	0.0	33.3	33.3	0.0	0.0	0.0	100.0
(2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.2	0.0	0.2	0.2	0.0	0.0	0.0	0.6

(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= 9

CALM=WIND SPEED LESS THAN 1.00MPH

## 160 FT TOWER - 33 FT EL

33.0 FT WIND DATA

1/1/82 - 3/31/82

STABILITY CLASS ALL-- ALL STABILITIES COMBINED

CLASS FREQUENCY (PERCENT) = 100.00

## WIND DISTRIBUTION SUMMARY

SPEED(MPH)	DIRECTION																TOTAL
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
-CALM	3	3	6	6	3	0	3	0	3	6	3	15	15	6	3	0	75
(1)	0.2	0.2	0.4	0.4	0.2	0.0	0.2	0.0	0.2	0.4	0.2	1.0	1.0	0.4	0.2	0.0	5.2
(2)	0.2	0.2	0.4	0.4	0.2	0.0	0.2	0.0	0.2	0.4	0.2	1.0	1.0	0.4	0.2	0.0	5.2
CALM- 3.5	3	0	6	0	3	0	3	9	3	9	15	39	27	6	6	6	135
(1)	0.2	0.0	0.4	0.0	0.2	0.0	0.2	0.6	0.2	0.6	1.0	2.7	1.9	0.4	0.4	0.4	9.3
(2)	0.2	0.0	0.4	0.0	0.2	0.0	0.2	0.6	0.2	0.6	1.0	2.7	1.9	0.4	0.4	0.4	9.3
3.6- 7.5	6	3	3	0	0	3	18	33	15	27	36	57	69	45	54	9	378
(1)	0.4	0.2	0.2	0.0	0.0	0.2	1.2	2.3	1.0	1.9	2.5	3.9	4.8	3.1	3.7	0.6	26.1
(2)	0.4	0.2	0.2	0.0	0.0	0.2	1.2	2.3	1.0	1.9	2.5	3.9	4.8	3.1	3.7	0.6	26.1
7.6-12.5	18	0	3	0	0	0	6	36	18	9	42	69	72	99	105	27	504
(1)	1.2	0.0	0.2	0.0	0.0	0.0	0.4	2.5	1.2	0.6	2.9	4.8	5.0	6.8	7.2	1.9	34.8
(2)	1.2	0.0	0.2	0.0	0.0	0.0	0.4	2.5	1.2	0.6	2.9	4.8	5.0	6.8	7.2	1.9	34.8
12.6-18.5	9	3	0	3	0	0	0	3	12	6	27	3	18	72	129	33	318
(1)	0.6	0.2	0.0	0.2	0.0	0.0	0.0	0.2	0.8	0.4	1.9	0.2	1.2	5.0	8.9	2.3	21.9
(2)	0.6	0.2	0.0	0.2	0.0	0.0	0.0	0.2	0.8	0.4	1.9	0.2	1.2	5.0	8.9	2.3	21.9
18.6-24.0	6	0	0	0	0	0	0	0	0	9	0	0	3	3	3	6	30
(1)	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0	0.2	0.2	0.2	0.4	2.1
(2)	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0	0.2	0.2	0.2	0.4	2.1
OVER-24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9	9
(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	0.6	0.6
(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	0.6	0.6
ALL SPEEDS	45	9	18	9	6	3	30	81	51	66	123	183	204	231	300	90	1449
(1)	3.1	0.6	1.2	0.6	0.4	0.2	2.1	5.6	3.5	4.6	8.5	12.6	14.1	15.9	20.7	6.2	100.0
(2)	3.1	0.6	1.2	0.6	0.4	0.2	2.1	5.6	3.5	4.6	8.5	12.6	14.1	15.9	20.7	6.2	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=1449  
 NUMBER OF HOURS IN THIS PERIOD= 2160

CALM=WIND SPEED LESS THAN 1.00MPH

67.1 PERCENT DATA RECOVERY

TABLE 4A-1 (Cont.)  
 Distribution of Wind Directions and Speeds  
 33 Ft. Level of 160 Ft. Tower

## 160 FT TOWER - 33 FT EL

33.0 FT WIND DATA

4/1/82 - 6/31/82

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

CLASS FREQUENCY (PERCENT) = 21.49

## WIND DISTRIBUTION SUMMARY

SPEED(MPH)	DIRECTION																TOTAL
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
-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	1	0	0	2	1	0	1	0	1	1	0	0	0	0	0	0	7
(1)	0.2	0.0	0.0	0.5	0.2	0.0	0.2	0.0	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	1.7
(2)	0.1	0.0	0.0	0.1	0.1	0.0	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.4
3.6- 7.5	11	6	8	6	12	31	20	4	3	12	5	2	2	3	7	4	136
(1)	2.6	1.4	1.9	1.4	2.8	7.3	4.7	0.9	0.7	2.8	1.2	0.5	0.5	0.7	1.7	0.9	32.2
(2)	0.6	0.3	0.4	0.3	0.6	1.6	1.0	0.2	0.2	0.6	0.3	0.1	0.1	0.2	0.4	0.2	6.9
7.6-12.5	5	1	3	1	0	5	3	6	2	29	19	7	21	34	6	6	148
(1)	1.2	0.2	0.7	0.2	0.0	1.2	0.7	1.4	0.5	6.9	4.5	1.7	5.0	8.0	1.4	1.4	35.0
(2)	0.3	0.1	0.2	0.1	0.0	0.3	0.2	0.3	0.1	1.5	1.0	0.4	1.1	1.7	0.3	0.3	7.5
12.6-18.5	7	4	1	1	2	0	0	0	5	24	20	8	6	29	6	1	114
(1)	1.7	0.9	0.2	0.2	0.5	0.0	0.0	0.0	1.2	5.7	4.7	1.9	1.4	6.9	1.4	0.2	27.0
(2)	0.4	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.3	1.2	1.0	0.4	0.3	1.5	0.3	0.1	5.8
18.6-24.0	3	5	0	1	0	0	0	0	0	0	0	0	0	2	1	0	12
(1)	0.7	1.2	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.2	0.0	2.8
(2)	0.2	0.3	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.6
OVER-24.0	2	0	0	3	1	0	0	0	0	0	0	0	0	0	0	0	6
(1)	0.5	0.0	0.0	0.7	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4
(2)	0.1	0.0	0.0	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	0.3
ALL SPEEDS	29	16	12	14	16	36	24	10	11	66	44	17	29	68	20	11	423
(1)	6.9	3.8	2.8	3.3	3.8	8.5	5.7	2.4	2.6	15.6	10.4	4.0	6.9	16.1	4.7	2.6	100.0
(2)	1.5	0.8	0.6	0.7	0.8	1.8	1.2	0.5	0.6	3.4	2.2	0.9	1.5	3.5	1.0	0.6	21.5

(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= 423

CALM=WIND SPEED LESS THAN 1.00MPH

TABLE 4A-1 (Cont.)  
Distribution of Wind Directions and Speeds  
33 Ft. Level of 160 Ft. Tower

## 160 FT TOWER - 33 FT EL

53.0 FT WIND DATA

4/1/82 - 6/31/82

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

CLASS FREQUENCY (PERCENT) = 5.84

## WIND DISTRIBUTION SUMMARY

SPEED(MPH)	DIRECTION																TOTAL
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
-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	2	2	1	0	0	0	0	0	0	0	0	0	0	5
(1)	0.0	0.0	0.0	1.7	1.7	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.3
(2)	0.0	0.0	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	0.3
3.6- 7.5	2	1	1	5	4	9	4	2	3	1	2	1	0	2	0	2	39
(1)	1.7	0.9	0.9	4.3	3.5	7.8	3.5	1.7	2.6	0.9	1.7	0.9	0.0	1.7	0.0	1.7	33.9
(2)	0.1	0.1	0.1	0.3	0.2	0.5	0.2	0.1	0.2	0.1	0.1	0.1	0.0	0.1	0.0	0.1	2.0
7.6-12.5	1	1	3	0	0	1	0	0	2	11	2	2	4	3	2	6	38
(1)	0.9	0.9	2.6	0.0	0.0	0.9	0.0	0.0	1.7	9.6	1.7	1.7	3.5	2.6	1.7	5.2	33.0
(2)	0.1	0.1	0.2	0.0	0.0	0.1	0.0	0.0	0.1	0.6	0.1	0.1	0.2	0.2	0.1	0.3	1.9
12.6-18.5	4	6	0	0	1	0	0	0	0	6	0	0	3	2	0	4	26
(1)	3.5	5.2	0.0	0.0	0.9	0.0	0.0	0.0	0.0	5.2	0.0	0.0	2.6	1.7	0.0	3.5	22.6
(2)	0.2	0.3	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.2	0.1	0.0	0.2	1.3
18.6-24.0	1	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	3
(1)	0.9	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.0	0.0	0.0	0.0	2.6
(2)	0.1	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	0.0	0.0	0.2
OVER-24.0	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
(1)	2.6	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.5
(2)	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	0.2
ALL SPEEDS	11	10	4	7	7	11	4	2	5	18	5	3	7	7	2	12	115
(1)	9.6	8.7	3.5	6.1	6.1	9.6	3.5	1.7	4.3	15.7	4.3	2.6	6.1	6.1	1.7	10.4	100.0
(2)	0.6	0.5	0.2	0.4	0.4	0.6	0.2	0.1	0.3	0.9	0.3	0.2	0.4	0.4	0.1	0.6	5.8

(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= 115

CALM=WIND SPEED LESS THAN 1.00MPH

TABLE 4A-1 (Cont.)  
Distribution of Wind Directions and Speeds  
33 Ft. Level of 160 Ft. Tower

## 160 FT TOWER - 33 FT EL

33.0 FT WIND DATA

4/1/82 - 6/31/82

\$ ABILITY CLASS C-- DELTA T -1.6 TO -1.5 DEG C PER 100 METERS

CLASS FREQUENCY (PERCENT) = 6.66

## WIND DISTRIBUTION SUMMARY

SPEED(MPH)	DIRECTION																TOTAL
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
-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	1	0	2	1	1	0	0	0	0	0	1	0	0	0	0	6
(1)	0.0	0.8	0.0	1.5	0.8	0.8	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.0	0.0	0.0	4.6
(2)	0.0	0.1	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.3
3.6- 7.5	1	1	5	6	5	7	3	1	4	2	2	2	2	0	4	1	46
(1)	0.8	0.8	3.8	4.6	3.8	5.3	2.3	0.8	3.1	1.5	1.5	1.5	1.5	0.0	3.1	0.8	35.1
(2)	0.1	0.1	0.3	0.3	0.3	0.4	0.2	0.1	0.2	0.1	0.1	0.1	0.1	0.0	0.2	0.1	2.3
7.6-12.5	4	4	1	4	0	2	1	2	2	7	6	2	5	1	1	2	44
(1)	3.1	3.1	0.8	3.1	0.0	1.5	0.8	1.5	1.5	5.3	4.6	1.5	3.8	0.8	0.8	1.5	33.6
(2)	0.2	0.2	0.1	0.2	0.0	0.1	0.1	0.1	0.1	0.4	0.3	0.1	0.3	0.1	0.1	0.1	2.2
12.6-18.5	4	6	0	3	0	0	0	1	1	3	0	0	0	2	1	0	21
(1)	3.1	4.6	0.0	2.3	0.0	0.0	0.0	0.8	0.8	2.3	0.0	0.0	0.0	1.5	0.8	0.0	16.0
(2)	0.2	0.3	0.0	0.2	0.0	0.0	0.0	0.1	0.1	0.2	0.0	0.0	0.0	0.1	0.1	0.0	1.1
18.6-24.0	7	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	9
(1)	5.3	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	0.0	0.8	6.9
(2)	0.4	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	0.1	0.5
OVER-24.0	2	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
(1)	1.5	2.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.8
(2)	0.1	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	0.3
ALL SPEEDS	18	16	6	15	6	10	4	4	7	12	8	5	7	3	6	4	131
(1)	13.7	12.2	4.6	11.5	4.6	7.6	3.1	3.1	5.3	9.2	6.1	3.8	5.3	2.3	4.6	3.1	100.0
(2)	0.9	0.8	0.3	0.8	0.3	0.5	0.2	0.2	0.4	0.6	0.4	0.3	0.4	0.2	0.3	0.2	6.7

(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= 131

CALM=WIND SPEED LESS THAN 1.00MPH

TABLE 4A-1 (Cont.)  
Distribution of Wind Directions and Speeds  
33 Ft. Level of 160 Ft. Tower

## 160 FT TOWER - 33 FT EL

33.0 Ft WIND DATA

4/1/82 - 6/31/82

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

CLASS FREQUENCY (PERCENT) = 35.87

## WIND DISTRIBUTION SUMMARY

SPEED(MPH)	DIRECTION																TOTAL
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
-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	4	3	2	7	3	6	3	2	3	1	1	0	2	1	2	2	42
(1)	0.6	0.4	0.3	1.0	0.4	0.8	0.4	0.3	0.4	0.1	0.1	0.0	0.3	0.1	0.3	0.3	5.9
(2)	0.2	0.2	0.1	0.4	0.2	0.3	0.2	0.1	0.2	0.1	0.1	0.0	0.1	0.1	0.1	0.1	2.1
3.6- 7.5	9	7	17	18	17	47	24	16	13	18	6	9	12	14	13	12	252
(1)	1.3	1.0	2.4	2.5	2.4	6.7	3.4	2.3	1.8	2.5	0.8	1.3	1.7	2.0	1.8	1.7	35.7
(2)	0.5	0.4	0.9	0.9	0.9	2.4	1.2	0.8	0.7	0.9	0.3	0.5	0.6	0.7	0.7	0.6	12.8
7.6-12.5	13	21	24	11	7	6	0	9	12	39	22	16	19	17	22	16	254
(1)	1.8	3.0	3.4	1.6	1.0	0.8	0.0	1.3	1.7	5.5	3.1	2.3	2.7	2.4	3.1	2.3	36.0
(2)	0.7	1.1	1.2	0.6	0.4	0.3	0.0	0.5	0.6	2.0	1.1	0.8	1.0	0.9	1.1	0.8	12.9
12.6-18.5	27	10	1	4	3	0	0	2	2	27	18	3	4	16	2	9	128
(1)	3.8	1.4	0.1	0.6	0.4	0.0	0.0	0.3	0.3	3.8	2.5	0.4	0.6	2.3	0.3	1.3	18.1
(2)	1.4	0.5	0.1	0.2	0.2	0.0	0.0	0.1	0.1	1.4	0.9	0.2	0.2	0.8	0.1	0.5	6.5
18.6-24.0	12	2	1	0	0	0	0	0	1	2	1	0	0	0	0	1	20
(1)	1.7	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.3	0.1	0.0	0.0	0.0	0.0	0.1	2.8
(2)	0.6	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.1	1.0
OVER-24.0	5	3	1	1	0	0	0	0	0	0	0	0	0	0	0	0	10
(1)	0.7	0.4	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	1.4
(2)	0.3	0.2	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	0.5
ALL SPEEDS	70	45	46	41	30	59	27	29	31	87	48	28	37	48	39	40	706
(1)	9.9	6.5	6.5	5.8	4.2	8.4	3.8	4.1	4.4	12.3	6.8	4.0	5.2	6.8	5.5	5.7	100.0
(2)	3.6	2.3	2.3	2.1	1.5	3.0	1.4	1.5	1.6	4.4	2.4	1.4	1.9	2.4	2.0	2.0	35.9

(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= 706

CALM=WIND SPEED LESS THAN 1.00MPH

TABLE 4A-1 (Cont.)  
Distribution of Wind Directions and Speeds  
33 Ft. Level of 160 Ft. Tower



## 160 FT TOWER - 33 FT EL

33.0 FT WIND DATA

4/1/82 - 6/31/82

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

CLASS FREQUENCY (PERCENT) = 19.97

## WIND DISTRIBUTION SUMMARY

SPEED(MPH)	N	NNE	NE	ENE	E	ESE	SE	DIRECTION 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	1	5	1	2	1	5	3	4	6	4	2	1	6	2	3	0	46
(1)	0.3	1.3	0.3	0.5	0.3	1.3	0.8	1.0	1.5	1.0	0.5	0.3	1.5	0.5	0.8	0.0	11.7
(2)	0.1	0.3	0.1	0.1	0.1	0.3	0.2	0.2	0.3	0.2	0.1	0.1	0.3	0.1	0.2	0.0	2.3
3.6- 7.5	7	6	2	1	4	14	11	24	28	17	10	14	12	11	12	14	187
(1)	1.8	1.5	0.5	0.3	1.0	3.6	2.8	6.1	7.1	4.3	2.5	3.6	3.1	2.8	3.1	3.6	47.6
(2)	0.4	0.3	0.1	0.1	0.2	0.7	0.6	1.2	1.4	0.9	0.5	0.7	0.6	0.6	0.6	0.7	9.5
7.6-12.5	4	1	1	0	0	4	0	6	3	29	26	32	8	5	3	2	124
(1)	1.0	0.3	0.3	0.0	0.0	1.0	0.0	1.5	0.8	7.4	6.6	8.1	2.0	1.3	0.8	0.5	31.6
(2)	0.2	0.1	0.1	0.0	0.0	0.2	0.0	0.3	0.2	1.5	1.3	1.6	0.4	0.3	0.2	0.1	6.3
12.6-18.5	4	1	0	0	0	0	0	0	1	4	16	3	0	0	2	1	32
(1)	1.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.3	1.0	4.1	0.8	0.0	0.0	0.5	0.3	8.1
(2)	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.8	0.2	0.0	0.0	0.1	0.1	1.6
18.6-24.0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	2	3
(1)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.5	0.8
(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	0.0	0.0	0.1	0.2
OVER-24.0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
(1)	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3
(2)	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	0.1
ALL SPEEDS	16	14	4	3	5	23	14	34	38	54	55	50	26	18	20	19	393
(1)	4.1	3.6	1.0	0.8	1.3	5.9	3.6	8.7	9.7	13.7	14.0	12.7	6.6	4.6	5.1	4.8	100.0
(2)	0.8	0.7	0.2	0.2	0.3	1.2	0.7	1.7	1.9	2.7	2.8	2.5	1.3	0.9	1.0	1.0	20.0

(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= 393

CALM=WIND SPEED LESS THAN 1.00MPH

TABLE 4A-1 (Cont.)  
Distribution of Wind Directions and Speeds  
33 Ft. Level of 160 Ft. Tower

## 160 FT TOWER - 33 FT EL

3.0 FT WIND DATA

4/1/82 - 6/31/82

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

CLASS FREQUENCY (PERCENT) = 6.61

## WIND DISTRIBUTION SUMMARY

SPEED(MPH)	DIRECTION																TOTAL
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
-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	2	1	0	3	5	3	2	2	2	1	0	0	21
(1)	0.0	0.0	0.0	0.0	1.5	0.8	0.0	2.3	3.8	2.3	1.5	1.5	1.5	0.8	0.0	0.0	16.2
(2)	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.2	0.3	0.2	0.1	0.1	0.1	0.1	0.0	0.0	1.1
3.6- 7.5	3	1	0	0	2	4	3	2	12	6	8	10	6	0	3	4	64
(1)	2.3	0.8	0.0	0.0	1.5	3.1	2.3	1.5	9.2	4.6	6.2	7.7	4.6	0.0	2.3	3.1	49.2
(2)	0.2	0.1	0.0	0.0	0.1	0.2	0.2	0.1	0.6	0.3	0.4	0.5	0.3	0.0	0.2	0.2	3.3
7.6-12.5	0	0	0	0	0	0	0	0	2	3	13	6	3	5	2	1	35
(1)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	2.3	10.0	4.6	2.3	3.8	1.5	0.8	26.9
(2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.7	0.3	0.2	0.3	0.1	0.1	1.8
12.6-18.5	0	1	0	0	0	0	0	0	0	1	6	2	0	0	0	0	10
(1)	0.0	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	4.6	1.5	0.0	0.0	0.0	0.0	7.7
(2)	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.3	0.1	0.0	0.0	0.0	0.0	0.5
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	2	0	0	4	5	3	5	19	13	29	20	11	6	5	5	130
(1)	2.3	1.5	0.0	0.0	3.1	3.8	2.3	3.8	14.6	10.0	22.3	15.4	8.5	4.6	3.8	3.8	100.0
(2)	0.2	0.1	0.0	0.0	0.2	0.3	0.2	0.3	1.0	0.7	1.5	1.0	0.6	0.3	0.3	0.3	6.6

(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= 130

CALM=WIND SPEED LESS THAN 1.00MPH

TABLE 4A-1 (Cont.)  
 Distribution of Wind Directions and Speeds  
 33 Ft. Level of 160 Ft. Tower



160 FT TOWER - 33 FT EL

33.0 FT WIND DATA

4/1/82 - 6/31/82

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

CLASS FREQUENCY (PERCENT) = 3.56

# WIND DISTRIBUTION SUMMARY

SPEED (MPH)	DIRECTION																TOTAL
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
-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	2	1	0	0	1	1	1	0	5	4	3	1	0	0	0	19
(1)	0.0	2.9	1.4	0.0	0.0	1.4	1.4	1.4	0.0	7.1	5.7	4.3	1.4	0.0	0.0	0.0	27.1
(2)	0.0	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.0	0.3	0.2	0.2	0.1	0.0	0.0	0.0	1.0
3.6-.5	1	0	0	1	0	1	0	0	3	3	8	5	1	0	1	1	25
(1)	1.4	0.0	0.0	1.4	0.0	1.4	0.0	0.0	4.3	4.3	11.4	7.1	1.4	0.0	1.4	1.4	35.7
(2)	0.1	0.0	0.0	0.1	0.0	0.1	0.0	0.0	0.2	0.2	0.4	0.3	0.1	0.0	0.1	0.1	1.3
7.6-12.5	0	0	0	0	0	0	0	0	0	2	10	10	0	0	0	0	22
(1)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.9	14.3	14.3	0.0	0.0	0.0	0.0	31.4
(2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.5	0.5	0.0	0.0	0.0	0.0	1.1
12.6-18.5	0	0	0	0	0	0	0	0	0	0	3	1	0	0	0	0	4
(1)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.3	1.4	0.0	0.0	0.0	0.0	5.7
(2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.1	0.0	0.0	0.0	0.0	0.2
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	1	2	1	1	0	2	1	1	3	10	25	19	2	0	1	1	70
(1)	1.4	2.9	1.4	1.4	0.0	2.9	1.4	1.4	4.3	14.3	35.7	27.1	2.9	0.0	1.4	1.4	100.0
(2)	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.2	0.5	1.3	1.0	0.1	0.0	0.1	0.1	3.6

(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= 70

CALM=WIND SPEED LESS THAN 1.00MPH

## 160 FT TOWER - 33 FT EL

## 33.0 FT WIND DATA

4/1/82 - 6/31/82

STABILITY CLASS ALL-- ALL STABILITIES COMBINED

CLASS FREQUENCY (PERCENT) = 100.00

## WIND DISTRIBUTION SUMMARY

SPEED(MPH)	DIRECTION																TOTAL
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
-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	11	4	15	10	15	8	10	15	14	9	7	11	4	5	2	146
(1)	0.3	0.6	0.2	0.8	0.5	0.8	0.4	0.5	0.8	0.7	0.5	0.4	0.6	0.2	0.3	0.1	7.4
(2)	0.3	0.6	0.2	0.8	0.5	0.8	0.4	0.5	0.8	0.7	0.5	0.4	0.6	0.2	0.3	0.1	7.4
3.6- 7.5	34	22	33	37	44	113	65	49	66	59	41	43	35	30	40	38	749
(1)	1.7	1.1	1.7	1.9	2.2	5.7	3.3	2.5	3.4	3.0	2.1	2.2	1.8	1.5	2.0	1.9	38.1
(2)	1.7	1.1	1.7	1.9	2.2	5.7	3.3	2.5	3.4	3.0	2.1	2.2	1.8	1.5	2.0	1.9	38.1
7.6-12.5	27	28	32	16	7	18	4	23	23	120	98	75	60	65	36	33	665
(1)	1.4	1.4	1.6	0.8	0.4	0.9	0.2	1.2	1.2	6.1	5.0	3.8	3.0	3.3	1.8	1.7	33.8
(2)	1.4	1.4	1.6	0.8	0.4	0.9	0.2	1.2	1.2	6.1	5.0	3.8	3.0	3.3	1.8	1.7	33.8
12.6-18.5	46	28	2	8	6	0	0	3	9	65	63	17	13	49	11	15	335
(1)	2.3	1.4	0.1	0.4	0.3	0.0	0.0	0.2	0.5	3.3	3.2	0.9	0.7	2.5	0.6	0.8	17.0
(2)	2.3	1.4	0.1	0.4	0.3	0.0	0.0	0.2	0.5	3.3	3.2	0.9	0.7	2.5	0.6	0.8	17.0
18.6-24.0	23	9	1	1	0	0	0	0	1	2	3	0	0	2	1	4	47
(1)	1.2	0.5	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.0	0.0	0.1	0.1	0.2	2.4
(2)	1.2	0.5	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.0	0.0	0.1	0.1	0.2	2.4
OVER-24.0	12	8	1	4	1	0	0	0	0	0	0	0	0	0	0	0	26
(1)	0.6	0.4	0.1	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	1.3
(2)	0.6	0.4	0.1	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	1.3
ALL SPEEDS	148	106	73	81	68	146	77	85	114	260	214	142	119	150	93	92	1968
(1)	7.5	5.4	3.7	4.1	3.5	7.4	3.9	4.3	5.8	13.2	10.9	7.2	6.0	7.6	4.7	4.7	100.0
(2)	7.5	5.4	3.7	4.1	3.5	7.4	3.9	4.3	5.8	13.2	10.9	7.2	6.0	7.6	4.7	4.7	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=1968  
 NUMBER OF HOURS IN THIS PERIOD= 2184

CALM=WIND SPEED LESS THAN 1.00MPH

90.1 PERCENT DATA RECOVERY

TABLE 4A-1 (Cont.)  
 Distribution of Wind Directions and Speeds  
 33 Ft. Level of 160 Ft. Tower

160 FT TOWER - 160 FT EL

160 FT WIND DATA

1/1/82 - 3/31/82

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

CLASS FREQUENCY (PERCENT) = 6.34

WIND DISTRIBUTION SUMMARY

SPEED(MPH)	N	NNE	NE	ENE	E	ESE	SE	SSE	DIRECTION	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
(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
(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
CALM- 3.5	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
(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
3.6- 7.5	0	0	0	0	0	0	0	0		0	0	0	0	0	3	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	3.7	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	0.0	0.0	0.0	0.2	0.0	0.2
7.6-12.5	0	0	0	0	0	0	0	0		0	3	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	3.7	0.0	0.0	0.0	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	0.2	0.0	0.0	0.0	0.0	0.0	0.2
12.6-18.5	0	0	0	0	0	0	0	0		0	0	0	6	12	9	3	30
(1)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	7.4	14.8	11.1	3.7	37.0
(2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.5	0.9	0.7	0.2	2.3
18.6-24.0	0	0	0	0	0	0	0	0		0	0	0	18	3	15	0	36
(1)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	22.2	3.7	18.5	0.0	44.4
(2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	1.4	0.2	1.2	0.0	2.8
OVER-24.0	0	0	0	0	0	0	0	0		0	0	0	3	3	3	0	9
(1)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	3.7	3.7	3.7	0.0	11.1
(2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.2	0.2	0.2	0.0	0.7
ALL SPEEDS	0	0	0	0	0	0	0	0		0	3	0	27	18	30	3	81
(1)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	3.7	0.0	33.3	22.2	37.0	3.7	100.0
(2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.2	0.0	2.1	1.4	2.3	0.2	6.3

(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= 81

CALM=WIND SPEED LESS THAN 1.00MPH

TABLE 4A-2  
Distribution of Wind Directions and Speeds  
160 Ft. Level of 160 Ft. Tower

160.0 FT WIND DATA

160 FT TOWER - 160 FT EL	1/1/82 - 3/31/82	CLASS FREQUENCY (PERCENT) = 3.52
STABILITY CLASS B--	DELTA T -1.9 TO -1.7 DEG C PER 100 METERS	

(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= 45

CALM=WIND SPEED LESS THAN 1.00MPH

160 FT TOWER - 160 FT EL

160.0 FT WIND DATA

1/1/82 - 3/31/82

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

CLASS FREQUENCY (PERCENT) = 3.76

WIND DISTRIBUTION SUMMARY

SPEED(MPH)	DIRECTION																TOTAL
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
-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	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
3.6- 7.5	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	3
(1)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.2
(2)	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	0.2
7.6-12.5	0	0	0	0	0	0	0	0	0	0	0	0	3	0	6	0	9
(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	6.2	0.0	12.5	0.0	18.7
(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	0.2	0.0	0.5	0.0	0.7
12.6-18.5	0	0	0	0	0	0	0	0	0	0	0	6	6	12.5	0	0	18
(1)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	12.5	12.5	0.0	0.0	0.0	37.5
(2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.5	0.0	0.0	0.0	1.4
18.6-24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0	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	12.5	0.0	12.5
(2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.5
OVER-24.0	0	0	0	0	0	0	0	0	3	0	0	0	3	3	3	0	12
(1)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.2	0.0	0.0	0.0	6.2	6.2	6.2	0.0	25.0
(2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.2	0.2	0.2	0.0	0.9
ALL SPEEDS	0	0	0	0	0	0	0	0	6	0	0	6	12	9	15	0	48
(1)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	12.5	0.0	0.0	12.5	25.0	18.7	31.2	0.0	100.0
(2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.5	0.9	0.7	1.2	0.0	3.8

(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= 48

CALM=WIND SPEED LESS THAN 1.00MPH

TABLE 4A-2 (Cont.)  
Distribution of Wind Directions and Speeds  
160 Ft. Level of 160 Ft. Tower

## 160 FT TOWER - 160 FT EL

160.0 FT WIND DATA

1/1/82 - 3/31/82

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

CLASS FREQUENCY (PERCENT) = 44.13

## WIND DISTRIBUTION SUMMARY

SPEED(MPH)	DIRECTION																TOTAL
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
-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	3	3	0	0	0	0	0	0	0	0	0	0	0	6
(1)	0.0	0.0	0.0	0.5	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1
(2)	0.0	0.0	0.0	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5
3.6- 7.5	0	0	0	0	0	0	0	0	3	3	3	0	9	6	3	3	30
(1)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.5	0.5	0.0	1.6	1.1	0.5	0.5	5.3
(2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.2	0.0	0.7	0.5	0.2	0.2	2.3
7.6-12.5	3	0	0	0	0	0	0	0	6	3	3	15	42	21	15	9	117
(1)	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	0.5	0.5	2.7	7.4	3.7	2.7	1.6	20.7
(2)	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.2	0.2	1.2	3.3	1.6	1.2	0.7	9.2
12.6-18.5	15	6	0	0	0	0	6	0	0	3	6	33	75	75	18	24	261
(1)	2.7	1.1	0.0	0.0	0.0	0.0	1.1	0.0	0.0	0.5	1.1	5.9	13.3	13.3	3.2	4.3	46.3
(2)	1.2	0.5	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.2	0.5	2.6	5.9	5.9	1.4	1.9	20.4
18.6-24.0	12	3	0	0	0	0	0	0	0	9	0	3	12	36	9	12	96
(1)	2.1	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	0.0	0.5	2.1	6.4	1.6	2.1	17.0
(2)	0.9	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.0	0.2	0.9	2.8	0.7	0.9	7.5
OVER-24.0	0	0	0	0	0	0	0	6	6	0	0	0	12	9	15	6	54
(1)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	1.1	0.0	0.0	0.0	2.1	1.6	2.7	1.1	9.6
(2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.5	0.0	0.0	0.0	0.9	0.7	1.2	0.5	4.2
ALL SPEEDS	30	9	0	3	3	0	6	6	15	18	12	51	150	147	60	54	564
(1)	5.3	1.6	0.0	0.5	0.5	0.0	1.1	1.1	2.7	3.2	2.1	9.0	26.6	26.1	10.6	7.6	100.0
(2)	2.3	0.7	0.0	0.2	0.2	0.0	0.5	0.5	1.2	1.4	0.9	4.0	11.7	11.5	4.7	4.2	44.1

(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= 564

CALM=WIND SPEED LESS THAN 1.00MPH

TABLE 4A-2 (Cont.)  
Distribution of Wind Directions and Speeds  
160 Ft. Level of 160 Ft. Tower



## 160 FT TOWER - 160 FT EL

160.0 FT WIND DATA

1/1/82 - 3/31/82

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

CLASS FREQUENCY (PERCENT) = 38.97

## WIND DISTRIBUTION SUMMARY

SPEED(MPH)	DIRECTION																TOTAL
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
-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	3	0	0	3	0	3	0	0	0	3	0	6	6	6	33
(1)	0.6	0.0	0.6	0.0	0.0	0.6	0.0	0.6	0.0	0.0	0.0	0.6	0.0	1.2	1.2	1.2	6.6
(2)	0.2	0.0	0.2	0.0	0.0	0.2	0.0	0.2	0.0	0.0	0.0	0.2	0.0	0.5	0.5	0.5	2.6
3.6- 7.5	0	0	0	0	0	3	6	3	6	0	12	9	18	15	6	0	78
(1)	0.0	0.0	0.0	0.0	0.0	0.6	1.2	0.6	1.2	0.0	2.4	1.8	3.6	3.0	1.2	0.0	15.7
(2)	0.0	0.0	0.0	0.0	0.0	0.2	0.5	0.2	0.5	0.0	0.9	0.7	1.4	1.2	0.5	0.0	6.1
7.6-12.5	0	0	0	0	0	3	15	0	9	21	51	30	33	15	0	0	177
(1)	0.0	0.0	0.0	0.0	0.0	0.6	3.0	0.0	1.8	4.2	10.2	6.0	6.6	3.0	0.0	0.0	35.5
(2)	0.0	0.0	0.0	0.0	0.0	0.2	1.2	0.0	0.7	1.6	4.0	2.3	2.6	1.2	0.0	0.0	13.8
12.6-18.5	0	3	0	0	0	15	12	15	6	21	12	33	3	3	6	0	129
(1)	0.0	0.6	0.0	0.0	0.0	3.0	2.4	3.0	1.2	4.2	2.4	6.6	0.6	0.6	1.2	0.0	25.9
(2)	0.0	0.2	0.0	0.0	0.0	1.2	0.9	1.2	0.5	1.6	0.9	2.6	0.2	0.2	0.5	0.0	10.1
18.6-24.0	0	0	0	0	3	3	24	6	0	6	6	0	0	15	0	0	63
(1)	0.0	0.0	0.0	0.0	0.6	0.6	4.8	1.2	0.0	1.2	1.2	0.0	0.0	3.0	0.0	0.0	12.7
(2)	0.0	0.0	0.0	0.0	0.2	0.2	1.9	0.5	0.0	0.5	0.5	0.0	0.0	1.2	0.0	0.0	4.9
OVER-24.0	3	0	0	0	3	0	0	0	6	3	0	0	0	0	0	3	18
(1)	0.6	0.0	0.0	0.0	0.6	0.0	0.0	0.0	1.2	0.6	0.0	0.0	0.0	0.0	0.0	0.6	3.6
(2)	0.2	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.5	0.2	0.0	0.0	0.0	0.0	0.0	0.2	1.4
ALL SPEEDS	6	3	3	0	6	27	57	27	27	51	81	75	54	54	18	9	498
(1)	1.2	0.6	0.6	0.0	1.2	5.4	11.4	5.4	5.4	10.2	16.3	15.1	10.8	10.8	3.6	1.8	100.0
(2)	0.5	0.2	0.2	0.0	0.5	2.1	4.5	2.1	2.1	4.0	6.3	5.9	4.2	4.2	1.4	0.7	39.0

(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= 498

CALM=WIND SPEED LESS THAN 1.00MPH

TABLE 4A-2 (Cont.)  
Distribution of Wind Directions and Speeds  
160 Ft. Level of 160 Ft. Tower

## 160 FT TOWER - 160 FT EL

160.0 FT WIND DATA

1/1/82 - 3/31/82

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

CLASS FREQUENCY (PERCENT) = 3.05

## WIND DISTRIBUTION SUMMARY

SPEED(MPH)	DIRECTION																TOTAL
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
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	3	0	0	0	6
(1)	0.0	0.0	0.0	0.0	0.0	7.7	0.0	0.0	0.0	0.0	0.0	0.0	7.7	0.0	0.0	0.0	15.4
(2)	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.5
3.6- 7.5	0	0	0	0	0	0	0	0	0	0	3	3	0	0	0	0	6
(1)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.7	7.7	0.0	0.0	0.0	0.0	15.4
(2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.0	0.0	0.0	0.0	0.5
7.6-12.5	0	0	0	0	3	0	3	0	0	3	6	6	0	0	0	0	21
(1)	0.0	0.0	0.0	0.0	7.7	0.0	7.7	0.0	0.0	7.7	15.4	15.4	0.0	0.0	0.0	0.0	53.8
(2)	0.0	0.0	0.0	0.0	0.2	0.0	0.2	0.0	0.0	0.2	0.5	0.5	0.0	0.0	0.0	0.0	1.6
12.6-18.5	0	0	0	0	0	0	0	0	0	0	3	3	0	0	0	0	6
(1)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.7	7.7	0.0	0.0	0.0	0.0	15.4
(2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.0	0.0	0.0	0.0	0.5
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	0	0	3	3	3	0	0	3	12	12	3	0	0	0	39
(1)	0.0	0.0	0.0	0.0	7.7	7.7	7.7	0.0	0.0	7.7	30.8	30.8	7.7	0.0	0.0	0.0	100.0
(2)	0.0	0.0	0.0	0.0	0.2	0.2	0.2	0.0	0.0	0.2	0.9	0.9	0.2	0.0	0.0	0.0	3.1

(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= 39

CALM=WIND SPEED LESS THAN 1.00MPH

TABLE 4A-2 (Cont.)  
Distribution of Wind Directions and Speeds  
160 Ft. Level of 160 Ft. Tower



160 FT TOWER - 160 FT EL

160.0 FT WIND DATA

1/1/82 - 3/31/82  
STABILITY CLASS B-- DELTA T GREATER THAN 4.0 DEG C PER 100 METERS CLASS FREQUENCY (PERCENT) = 0.23

WIND DISTRIBUTION SUMMARY

SPEED(MPH)	N	NNE	NE	ENE	E	DIRECTION				SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
						ESE	SE	SSE	S								
-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	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
3.6- 7.5	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
7.6-12.5	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	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0
(2)	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	0.2
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	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	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0
(2)	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	0.2

(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= 3

CALM=WIND SPEED LESS THAN 1.00MPH

TABLE 4A-2 (Cont.)  
Distribution of Wind Directions and Speeds  
160 Ft. Level of 160 Ft. Tower

## 160 FT TOWER - 160 FT EL

160.0 FT WIND DATA

1/1/82 - 3/31/82

STABILITY CLASS ALL-- ALL STABILITIES COMBINED

CLASS FREQUENCY (PERCENT) = 100.00

## WIND DISTRIBUTION SUMMARY

SPEED(MPH)	DIRECTION																TOTAL
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
-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	3	3	3	6	0	3	0	0	0	3	3	6	6	6	45
(1)	0.2	0.0	0.2	0.2	0.2	0.5	0.0	0.2	0.0	0.0	0.0	0.2	0.2	0.5	0.5	0.5	3.5
(2)	0.2	0.0	0.2	0.2	0.2	0.5	0.0	0.2	0.0	0.0	0.0	0.2	0.2	0.5	0.5	0.5	3.5
3.6- 7.5	0	0	0	0	0	3	6	3	12	3	18	12	27	24	12	3	123
(1)	0.0	0.0	0.0	0.0	0.0	0.2	0.5	0.2	0.9	0.2	1.4	0.9	2.1	1.9	0.9	0.2	9.6
(2)	0.0	0.0	0.0	0.0	0.0	0.2	0.5	0.2	0.9	0.2	1.4	0.9	2.1	1.9	0.9	0.2	9.6
7.6-12.5	3	0	0	0	3	6	18	0	15	27	63	51	78	36	21	9	330
(1)	0.2	0.0	0.0	0.0	0.2	0.5	1.4	0.0	1.2	2.1	4.9	4.0	6.1	2.8	1.6	0.7	25.8
(2)	0.2	0.0	0.0	0.0	0.2	0.5	1.4	0.0	1.2	2.1	4.9	4.0	6.1	2.8	1.6	0.7	25.8
12.6-18.5	15	9	0	0	0	15	18	15	6	24	21	75	93	99	39	33	462
(1)	1.2	0.7	0.0	0.0	0.0	1.2	1.4	1.2	0.5	1.9	1.6	5.9	7.3	7.7	3.1	2.6	36.2
(2)	1.2	0.7	0.0	0.0	0.0	1.2	1.4	1.2	0.5	1.9	1.6	5.9	7.3	7.7	3.1	2.6	36.2
18.6-24.0	12	6	0	0	3	3	24	6	0	15	6	6	33	57	33	12	216
(1)	0.9	0.5	0.0	0.0	0.2	0.2	1.9	0.5	0.0	1.2	0.5	0.5	2.6	4.5	2.6	0.9	16.9
(2)	0.9	0.5	0.0	0.0	0.2	0.2	1.9	0.5	0.0	1.2	0.5	0.5	2.6	4.5	2.6	0.9	16.9
OVER-24.0	3	0	0	0	3	0	0	6	18	3	0	0	18	18	24	9	102
(1)	0.2	0.0	0.0	0.0	0.2	0.0	0.0	0.5	1.4	0.2	0.0	0.0	1.4	1.4	1.9	0.7	8.0
(2)	0.2	0.0	0.0	0.0	0.2	0.0	0.0	0.5	1.4	0.2	0.0	0.0	1.4	1.4	1.9	0.7	8.0
ALL SPEEDS	36	15	3	3	12	33	66	33	51	72	108	147	252	240	135	72	1278
(1)	2.8	1.2	0.2	0.2	0.9	2.6	5.2	2.6	4.0	5.6	8.5	11.5	19.7	18.8	10.6	5.6	100.0
(2)	2.8	1.2	0.2	0.2	0.9	2.6	5.2	2.6	4.0	5.6	8.5	11.5	19.7	18.8	10.6	5.6	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=1278  
 NUMBER OF HOURS IN THIS PERIOD= 2160

CALM=WIND SPEED LESS THAN 1.00MPH

59.2 PERCENT DATA RECOVERY

TABLE 4A-2 (Cont.)  
 Distribution of Wind Directions and Speeds  
 160 Ft. Level of 160 Ft. Tower

## 160 FT TOWER - 160 FT EL

160.0 FT WIND DATA

4/1/82 - 6/31/82

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

CLASS FREQUENCY (PERCENT) = 22.17

## WIND DISTRIBUTION SUMMARY

SPEED(MPH)	DIRECTION																TOTAL
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
-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	1	2	0	1	0	0	0	0	0	0	1	0	0	0	5
(1)	0.0	0.0	0.3	0.5	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	1.4
(2)	0.0	0.0	0.1	0.1	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
3.6- 7.5	6	4	7	5	4	8	5	2	5	1	2	1	1	2	0	0	53
(1)	1.6	1.1	1.9	1.4	1.1	2.2	1.4	0.5	1.4	0.3	0.5	0.3	0.3	0.5	0.0	0.0	14.4
(2)	0.4	0.2	0.4	0.3	0.2	0.5	0.3	0.1	0.3	0.1	0.1	0.1	0.1	0.1	0.0	0.0	3.2
7.6-12.5	3	2	1	2	3	8	21	12	7	17	9	5	6	8	0	2	106
(1)	0.8	0.5	0.3	0.5	0.8	2.2	5.7	3.3	1.9	4.6	2.4	1.4	1.6	2.2	0.0	0.5	28.8
(2)	0.2	0.1	0.1	0.1	0.2	0.5	1.3	0.7	0.4	1.0	0.5	0.3	0.4	0.5	0.0	0.1	6.4
12.6-18.5	7	3	3	4	1	0	6	5	2	36	27	18	5	18	3	0	138
(1)	1.9	0.8	0.8	1.1	0.3	0.0	1.6	1.4	0.5	9.8	7.3	4.9	1.4	4.9	0.8	0.0	37.5
(2)	0.4	0.2	0.2	0.2	0.1	0.0	0.4	0.3	0.1	2.2	1.6	1.1	0.3	1.1	0.2	0.0	8.3
18.6-24.0	0	5	0	2	0	0	0	0	2	14	5	7	6	9	3	0	53
(1)	0.0	1.4	0.0	0.5	0.0	0.0	0.0	0.0	0.5	3.8	1.4	1.9	1.6	2.4	0.8	0.0	14.4
(2)	0.0	0.3	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.8	0.3	0.4	0.4	0.5	0.2	0.0	3.2
OVER-24.0	0	2	4	0	0	0	0	0	0	0	0	0	3	4	0	0	13
(1)	0.0	0.5	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	1.1	0.0	0.0	3.5
(2)	0.0	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.0	0.0	0.8
ALL SPEEDS	16	16	16	15	8	17	32	19	16	68	43	31	22	41	6	2	368
(1)	4.3	4.3	4.3	4.1	2.2	4.6	8.7	5.2	4.3	18.5	11.7	8.4	6.0	11.1	1.6	0.5	100.0
(2)	1.0	1.0	1.0	0.9	0.5	1.0	1.9	1.1	1.0	4.1	2.6	1.9	1.3	2.5	0.4	0.1	22.2

(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= 368

CALM=WIND SPEED LESS THAN 1.00MPH

TABLE 4A-2 (Cont.)  
Distribution of Wind Directions and Speeds  
160 Ft. Level of 160 Ft. Tower

## 160 FT TOWER - 160 FT EL

160.0 FT WIND DATA

4/1/82 - 6/31/82

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

CLASS FREQUENCY (PERCENT) = 6.02

## WIND DISTRIBUTION SUMMARY

SPEED(MPH)	DIRECTION																TOTAL
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
-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	1	0	1	2	1	0	1	0	0	0	0	0	0	0	0	6
(1)	0.0	1.0	0.0	1.0	2.0	1.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.0
(2)	0.0	0.1	0.0	0.1	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4
3.6- 7.5	1	1	2	2	2	5	3	2	0	1	0	0	0	0	1	0	20
(1)	1.0	1.0	2.0	2.0	2.0	5.0	3.0	2.0	0.0	1.0	0.0	0.0	0.0	0.0	1.0	0.0	20.0
(2)	0.1	0.1	0.1	0.1	0.1	0.3	0.2	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.0	1.2
7.6-12.5	5	1	0	4	1	2	3	2	3	0	3	1	0	0	0	1	26
(1)	5.0	1.0	0.0	4.0	1.0	2.0	3.0	2.0	3.0	0.0	3.0	1.0	0.0	0.0	0.0	1.0	26.0
(2)	0.3	0.1	0.0	0.2	0.1	0.1	0.2	0.1	0.2	0.0	0.2	0.1	0.0	0.0	0.0	0.1	1.6
12.6-18.5	3	4	4	0	0	0	0	3	0	5	7	2	4	2	0	0	34
(1)	3.0	4.0	4.0	0.0	0.0	0.0	0.0	3.0	0.0	5.0	7.0	2.0	4.0	2.0	0.0	0.0	34.0
(2)	0.2	0.2	0.2	0.0	0.0	0.0	0.0	0.2	0.0	0.3	0.4	0.1	0.2	0.1	0.0	0.0	2.0
18.6-24.0	1	1	1	0	0	0	0	0	0	0	1	1	2	0	0	0	7
(1)	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	2.0	0.0	0.0	0.0	7.0
(2)	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.4
OVER-24.0	2	0	3	0	0	0	0	0	0	2	0	0	0	0	0	0	7
(1)	2.0	0.0	3.0	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	7.0
(2)	0.1	0.0	0.2	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	0.4
ALL SPEEDS	12	8	10	7	5	8	6	8	3	8	11	4	6	2	1	1	100
(1)	12.0	8.0	10.0	7.0	5.0	8.0	6.0	8.0	3.0	8.0	11.0	4.0	6.0	2.0	1.0	1.0	100.0
(2)	0.7	0.5	0.6	0.4	0.3	0.5	0.4	0.5	0.2	0.5	0.7	0.2	0.4	0.1	0.1	0.1	6.0

(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= 100

CALM=WIND SPEED LESS THAN 1.00MPH

TABLE 4A-2 (Cont.)  
Distribution of Wind Directions and Speeds  
160 Ft. Level of 160 Ft. Tower

## 160 FT TOWER - 160 FT EL

160.0 FT WIND DATA

4/1/82 - 6/31/82

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

CLASS FREQUENCY (PERCENT) = 7.05

## WIND DISTRIBUTION SUMMARY

SPEED(MPH)	DIRECTION																TOTAL
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
-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- 0.5	0	0	2	1	1	0	0	0	0	0	0	0	0	0	0	0	4
(1)	0.0	0.0	1.7	0.9	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.4
(2)	0.0	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	0.2
3.6- 7.5	2	2	2	3	7	6	2	0	3	3	1	1	0	0	1	3	36
(1)	1.7	1.7	1.7	2.6	6.0	5.1	1.7	0.0	2.6	2.6	0.9	0.9	0.0	0.0	0.9	2.6	30.8
(2)	0.1	0.1	0.1	0.2	0.4	0.4	0.1	0.0	0.2	0.2	0.1	0.1	0.0	0.0	0.1	0.2	2.2
7.6-12.5	0	3	1	1	2	1	7	2	3	4	2	2	2	0	1	0	31
(1)	0.0	2.6	0.9	0.9	1.7	0.9	6.0	1.7	2.6	3.4	1.7	1.7	1.7	0.0	0.9	0.0	26.5
(2)	0.0	0.2	0.1	0.1	0.1	0.1	0.4	0.1	0.2	0.2	0.1	0.1	0.1	0.0	0.1	0.0	1.9
12.6-18.5	1	3	6	0	2	0	1	2	2	3	4	3	1	1	0	0	29
(1)	0.9	2.6	5.1	0.0	1.7	0.0	0.9	1.7	1.7	2.6	3.4	2.6	0.9	0.9	0.0	0.0	24.8
(2)	0.1	0.2	0.4	0.0	0.1	0.0	0.1	0.1	0.1	0.2	0.2	0.2	0.1	0.1	0.0	0.0	1.7
18.6-24.0	0	3	0	0	0	0	0	1	1	1	1	2	0	0	2	0	11
(1)	0.0	2.6	0.0	0.0	0.0	0.0	0.0	0.9	0.9	0.9	0.9	1.7	0.0	0.0	1.7	0.0	9.4
(2)	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.0	0.7
OVER-24.0	1	1	4	0	0	0	0	0	0	0	0	0	0	0	0	0	6
(1)	0.9	0.9	3.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.1
(2)	0.1	0.1	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	0.4
ALL SPEEDS	4	12	15	5	12	7	10	5	9	11	8	8	3	1	4	3	117
(1)	3.4	10.3	12.8	4.3	10.3	6.0	8.5	4.3	7.7	9.4	6.8	6.8	2.6	0.9	3.4	2.6	100.0
(2)	0.2	0.7	0.9	0.3	0.7	0.4	0.6	0.3	0.5	0.7	0.5	0.5	0.2	0.1	0.2	0.2	7.0

(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= 117

CAL WIND SPEED LESS THAN 1.00MPH

TABLE 4A-2 (Cont.)  
Distribution of Wind Directions and Speeds  
160 Ft. Level of 160 Ft. Tower

## 160 FT TOWER - 160 FT EL

160.0 FT WIND DATA

4/1/82 - 6/31/82

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

CLASS FREQUENCY (PERCENT) = 3/4.01

## WIND DISTRIBUTION SUMMARY

SPEED(MPH)	N	NNE	NE	ENE	E	ESE	SE	DIRECTION SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
-CALM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
(1)	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	0.2
(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	0.0	0.0	0.0	0.1
CALM- 3.5	3	2	2	5	7	3	1	2	1	3	0	0	0	0	2	1	32
(1)	0.5	0.3	0.3	0.8	1.1	0.5	0.2	0.3	0.2	0.5	0.0	0.0	0.0	0.0	0.3	0.2	5.1
(2)	0.2	0.1	0.1	0.3	0.4	0.2	0.1	0.1	0.1	0.2	0.0	0.0	0.0	0.0	0.1	0.1	1.9
3.6- 7.5	5	7	14	10	15	13	15	5	11	13	4	0	3	3	4	2	124
(1)	0.8	1.1	2.2	1.6	2.4	2.1	2.4	0.8	1.7	2.1	0.6	0.0	0.5	0.5	0.6	0.3	19.7
(2)	0.3	0.4	0.8	0.6	0.9	0.8	0.9	0.3	0.7	0.8	0.2	0.0	0.2	0.2	0.2	0.1	7.5
7.6-12.5	15	9	18	20	15	9	26	18	12	15	24	7	5	5	4	4	206
(1)	2.4	1.4	2.9	3.2	2.4	1.4	4.1	2.9	1.9	2.4	3.8	1.1	0.8	0.8	0.6	0.6	32.6
(2)	0.9	0.5	1.1	1.2	0.9	0.5	1.6	1.1	0.7	0.9	1.4	0.4	0.3	0.3	0.2	0.2	12.4
12.6-18.5	4	15	12	2	2	8	10	3	4	28	44	27	11	4	1	1	176
(1)	0.6	2.4	1.9	0.3	0.3	1.3	1.6	0.5	0.6	4.4	7.0	4.3	1.7	0.6	0.2	0.2	27.9
(2)	0.2	0.9	0.7	0.1	0.1	0.5	0.6	0.2	0.2	1.7	2.7	1.6	0.7	0.2	0.1	0.1	10.6
18.6-24.0	1	20	2	0	0	0	0	4	0	24	10	6	1	7	1	2	78
(1)	0.2	3.2	0.3	0.0	0.0	0.0	0.0	0.6	0.0	3.8	1.6	1.0	0.2	1.1	0.2	0.3	12.4
(2)	0.1	1.2	0.1	0.0	0.0	0.0	0.0	0.2	0.0	1.4	0.6	0.4	0.1	0.4	0.1	0.1	4.7
OVER-24.0	0	3	5	0	0	0	0	2	0	2	0	0	0	2	0	0	14
(1)	0.0	0.5	0.8	0.0	0.0	0.0	0.0	0.3	0.0	0.3	0.0	0.0	0.0	0.3	0.0	0.0	2.2
(2)	0.0	0.2	0.3	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.8
ALL SPEEDS	28	56	54	37	39	33	52	34	28	85	82	40	20	21	12	10	631
(1)	4.4	8.9	8.6	5.9	6.2	5.2	8.2	5.4	4.4	13.5	13.0	6.3	3.2	3.3	1.9	1.6	100.0
(2)	1.7	3.4	3.3	2.2	2.3	2.0	3.1	2.0	1.7	5.1	4.9	2.4	1.2	1.3	0.7	0.6	38.0

(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= 631

CALM=WIND SPEED LESS THAN 1.0MPH

TABLE 4A-2 (Cont.)  
Distribution of Wind Directions and Speeds  
160 Ft. Level of 160 Ft. Tower



160 FT TOWER - 160 FT EL

160.0 FT WIND DATA

4/1/82 - 6/31/82

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

CLASS FREQUENCY (PERCENT) = 18.80

WIND DISTRIBUTION SUMMARY

SPEED(MPH)	DIRECTION																TOTAL
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
-CALM	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
(1)	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3
(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
CALM- 3.5	1	0	1	3	0	0	2	4	1	0	1	0	0	0	1	0	14
(1)	0.3	0.0	0.3	1.0	0.0	0.0	0.6	1.3	0.3	0.0	0.3	0.0	0.0	0.0	0.3	0.0	4.5
(2)	0.1	0.0	0.1	0.2	0.0	0.0	0.1	0.2	0.1	0.0	0.1	0.0	0.0	0.0	0.1	0.0	0.8
3.6- 7.5	3	5	4	4	2	2	5	8	14	3	9	3	0	1	3	5	71
(1)	1.0	1.6	1.3	1.3	0.6	0.6	1.6	2.6	4.5	1.0	2.9	1.0	0.0	0.3	1.0	1.6	22.8
(2)	0.2	0.3	0.2	0.2	0.1	0.1	0.3	0.5	0.8	0.2	0.5	0.2	0.0	0.1	0.2	0.3	4.3
7.6-12.5	6	1	1	0	0	0	2	13	9	10	20	8	2	6	6	4	108
(1)	1.9	0.3	0.3	0.0	0.0	0.0	0.6	4.2	2.9	9.6	6.4	2.6	0.6	1.9	1.9	1.3	34.6
(2)	0.4	0.1	0.1	0.0	0.0	0.0	0.1	0.8	0.5	1.8	1.2	0.5	0.1	0.4	0.4	0.2	6.5
12.6-18.5	4	2	1	0	0	0	2	3	5	20	21	10	12	1	0	3	84
(1)	1.3	0.6	0.3	0.0	0.0	0.0	0.6	1.0	1.6	6.4	6.7	3.2	3.8	0.3	0.0	1.0	26.9
(2)	0.2	0.1	0.1	0.0	0.0	0.0	0.1	0.2	0.3	1.2	1.3	0.6	0.7	0.1	0.0	0.2	5.1
18.6-24.0	2	2	0	0	0	0	0	0	0	8	5	10	2	0	0	0	29
(1)	0.6	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.6	1.6	3.2	0.6	0.0	0.0	0.0	9.3
(2)	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.3	0.6	0.1	0.0	0.0	0.0	1.7
OVER-24.0	0	0	1	0	0	0	0	1	0	0	0	2	1	0	0	0	5
(1)	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.6	0.3	0.0	0.0	0.0	1.6
(2)	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.3
ALL SPEEDS	17	10	8	7	2	2	11	29	29	61	56	33	17	8	10	12	312
(1)	5.4	3.2	2.6	2.2	0.6	0.6	3.5	9.3	9.3	19.6	17.9	10.6	5.4	2.6	3.2	3.8	100.0
(2)	1.0	0.6	0.5	0.4	0.1	0.1	0.7	1.7	1.7	3.7	3.4	2.0	1.0	0.5	0.6	0.7	18.8

(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= 312

CALM=WIND SPEED LESS THAN 1.00MPH

TABLE 4A-2 (Cont.)  
Distribution of Wind Directions and Speeds  
160 Ft. Level of 160 Ft. Tower

160 FT TOWER - 160 FT EL

160.0 FT WIND DATA

4/1/82 - 6/31/82

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

CLASS FREQUENCY (PERCENT) = 5.42

WIND DISTRIBUTION SUMMARY

SPEED(MPH)	DIRECTION																TOTAL
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
-CALM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
(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	1.1	0.0	1.1
(2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1
CALM- 3.0	0	1	0	0	1	0	0	1	0	1	1	0	0	0	0	1	6
(1)	0.0	1.1	0.0	0.0	1.1	0.0	0.0	1.1	0.0	1.1	1.1	0.0	0.0	0.0	0.0	1.1	6.7
(2)	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.4
3.6- 7.5	0	1	0	1	0	1	4	5	3	4	3	7	1	0	1	0	31
(1)	0.0	1.1	0.0	1.1	0.0	1.1	4.4	5.6	3.3	4.4	3.3	7.8	1.1	0.0	1.1	0.0	34.4
(2)	0.0	0.1	0.0	0.1	0.0	0.1	0.2	0.3	0.2	0.2	0.2	0.4	0.1	0.0	0.1	0.0	1.9
7.6-12.5	0	1	1	0	0	0	1	2	1	1	4	3	2	5	2	0	23
(1)	0.0	1.1	1.1	0.0	0.0	0.0	1.1	2.2	1.1	1.1	4.4	3.3	2.2	5.6	2.2	0.0	25.6
(2)	0.0	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.3	0.1	0.0	1.4
12.6-18.5	1	0	1	0	0	0	0	0	0	3	2	2	7	2	2	3	23
(1)	1.1	0.0	1.1	0.0	0.0	0.0	0.0	0.0	0.0	3.3	2.2	2.2	7.8	2.2	2.2	3.3	25.6
(2)	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.1	0.1	0.4	0.1	0.1	0.2	1.4
18.6-24.0	0	0	0	0	0	0	0	0	0	3	1	0	2	0	0	0	6
(1)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.3	1.1	0.0	2.2	0.0	0.0	0.0	6.7
(2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.1	0.0	0.1	0.0	0.0	0.0	0.4
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	1	3	2	1	1	1	5	8	4	12	11	12	12	7	6	4	90
(1)	1.1	3.3	2.2	1.1	1.1	1.1	5.6	8.9	4.4	13.3	12.2	13.3	13.3	7.8	6.7	4.4	100.0
(2)	0.1	0.2	0.1	0.1	0.1	0.1	0.3	0.5	0.2	0.7	0.7	0.7	0.7	0.4	0.4	0.2	5.4

(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= 90

CALM=WIND SPEED LESS THAN 1.00MPH

TABLE 4A-2 (Cont.)  
Distribution of Wind Directions and Speeds  
160 Ft. Level of 160 Ft. Tower

160 FT TOWER - 160 FT EL.

160.0 FT WIND DATA

4/1/82 - 6/31/82

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

CLASS FREQUENCY (PERCENT) = 2.53

WIND DISTRIBUTION SUMMARY

SP ED(MPH)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
-CALM (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 0.0	0 0.0 0.0	0 0.0 0.0	0 0.0 0.0	0 0.0 0.0	0 0.0 0.0	0 0.0 0.0	0 0.0 0.0	0 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 (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 0.0	2 4.8 0.1	0 0.0 0.0	0 0.0 0.0	0 0.0 0.0	3 7.1 0.2	1 2.4 0.1	0 0.0 0.0	0 0.0 0.0	1 2.4 0.1	0 0.0 0.0	1 2.4 0.1	8 19.0 0.5
3.6- 7.5 (1) (2)	2 4.8 0.1	1 2.4 0.1	0 0.0 0.0	0 0.0 0.0	0 0.0 0.0	2 4.8 0.1	1 2.4 0.1	1 2.4 0.1	0 0.0 0.0	0 0.0 0.0	0 0.0 0.0	2 4.8 0.1	1 2.4 0.1	0 0.0 0.0	3 7.1 0.2	2 4.8 0.1	15 35.7 0.9
7.6-12.5 (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 0.0	0 0.0 0.0	0 0.0 0.0	0 0.0 0.0	0 0.0 0.0	2 4.8 0.1	0 0.0 0.0	0 0.0 0.0	1 2.4 0.1	0 0.0 0.0	0 0.0 0.0	0 0.0 0.0	3 7.1 0.2
12.6-18.5 (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 0.0	0 0.0 0.0	0 0.0 0.0	0 0.0 0.0	0 0.0 0.0	5 11.9 0.3	1 2.4 0.1	2 4.8 0.1	2 4.8 0.1	2 4.8 0.1	0 0.0 0.0	0 0.0 0.0	12 28.6 0.7
18.6-24.0 (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 0.0	0 0.0 0.0	0 0.0 0.0	0 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 4.8 0.1	2 4.8 0.1	0 0.0 0.0	0 0.0 0.0	4 9.5 0.2
OVER-24.0 (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 0.0	0 0.0 0.0	0 0.0 0.0	0 0.0 0.0	0 0.0 0.0	0 0.0 0.0	0 0.0 0.0	0 0.0 0.0	0 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 (1) (2)	2 4.8 0.1	1 2.4 0.1	0 0.0 0.0	0 0.0 0.0	0 0.0 0.0	4 9.5 0.2	1 2.4 0.1	1 2.4 0.1	0 0.0 0.0	10 23.8 0.6	2 4.8 0.1	4 9.5 0.2	6 14.3 0.4	5 11.9 0.3	3 7.1 0.2	3 7.1 0.2	42 100.0 2.5

(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= 42

CALM=WIND SPEED LESS THAN 1.00MPH

TABLE 4A-2 (Cont.)  
Distribution of Wind Directions and Speeds  
160 Ft. Level of 160 Ft. Tower

## 160 FT TOWER - 160 FT EL

160.0 FT WIND DATA

4/1/82 - 6/31/82

STABILITY CLASS ALL-- ALL STABILITIES COMBINED

CLASS FREQUENCY (PERCENT) = 100.00

## WIND DISTRIBUTION SUMMARY

SPEED(MPH)	DIRECTION																TOTAL
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
-CALM	1	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	3
(1)	0.1	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	0.1	0.0	0.2
(2)	0.1	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	0.1	0.0	0.2
CALM- 3.5	4	4	6	12	11	7	3	8	2	7	3	0	1	1	3	3	75
(1)	0.2	0.2	0.4	0.7	0.7	0.4	0.2	0.5	0.1	0.4	0.2	0.0	0.1	0.1	0.2	0.2	4.5
(2)	0.2	0.2	0.4	0.7	0.7	0.4	0.2	0.5	0.1	0.4	0.2	0.0	0.1	0.1	0.2	0.2	4.5
3.6- 7.5	19	21	29	25	30	37	35	23	36	25	19	14	6	6	13	12	350
(1)	1.1	1.3	1.7	1.5	1.8	2.2	2.1	1.4	2.2	1.5	1.1	0.8	0.4	0.4	0.8	0.7	21.1
(2)	1.1	1.3	1.7	1.5	1.8	2.2	2.1	1.4	2.2	1.5	1.1	0.8	0.4	0.4	0.8	0.7	21.1
7.6-12.5	29	17	22	27	21	20	60	49	35	69	62	26	18	24	13	11	503
(1)	1.7	1.0	1.3	1.6	1.3	1.2	3.6	3.0	2.1	4.2	3.7	1.6	1.1	1.4	0.8	0.7	30.3
(2)	1.7	1.0	1.3	1.6	1.3	1.2	3.6	3.0	2.1	4.2	3.7	1.6	1.1	1.4	0.8	0.7	30.3
12.6-18.5	20	27	27	6	5	8	19	16	13	100	106	64	42	30	6	7	496
(1)	1.2	1.6	1.6	0.4	0.3	0.5	1.1	1.0	0.8	6.0	6.4	3.9	2.5	1.8	0.4	0.4	29.9
(2)	1.2	1.6	1.6	0.4	0.3	0.5	1.1	1.0	0.8	6.0	6.4	3.9	2.5	1.8	0.4	0.4	29.9
18.6-24.0	4	31	3	2	0	0	0	5	3	50	23	26	15	18	6	2	188
(1)	0.2	1.9	0.2	0.1	0.0	0.0	0.0	0.3	0.2	3.0	1.4	1.6	0.9	1.1	0.4	0.1	11.3
(2)	0.2	1.9	0.2	0.1	0.0	0.0	0.0	0.3	0.2	3.0	1.4	1.6	0.9	1.1	0.4	0.1	11.3
OVER-24.0	3	6	17	0	0	0	0	3	0	4	0	2	4	6	0	0	45
(1)	0.2	0.4	1.0	0.0	0.0	0.0	0.0	0.2	0.0	0.2	0.0	0.1	0.2	0.4	0.0	0.0	2.7
(2)	0.2	0.4	1.0	0.0	0.0	0.0	0.0	0.2	0.0	0.2	0.0	0.1	0.2	0.4	0.0	0.0	2.7
ALL SPEEDS	80	106	105	72	67	72	117	104	89	255	213	132	86	85	42	35	1660
(1)	4.8	6.4	6.3	4.3	4.0	4.3	7.0	6.3	5.4	15.4	12.8	8.0	5.2	5.1	2.5	2.1	100.0
(2)	4.8	6.4	6.3	4.3	4.0	4.3	7.0	6.3	5.4	15.4	12.8	8.0	5.2	5.1	2.5	2.1	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=1660  
 NUMBER OF HOURS IN THIS PERIOD= 2184

CALM=WIND SPEED LESS THAN 1.00MPH

76.0 PERCENT DATA RECOVERY

TABLE 4A-2 (Cont.)  
 Distribution of Wind Directions and Speeds  
 160 Ft. Level of 160 Ft. Tower

### 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<sup>1</sup>. Population data are based upon the 1980 census data<sup>3</sup>; effluent releases are given elsewhere in this report.

Numerical 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 through 3.2-3.

#### 3.3 Population Doses

The population doses are shown in Table 3.3-1.

Table 3.2-1

January-June 1982 Liquid Release Maximum Individual  
Doses From All Pathways For Adults (MREM)

<u>Pathway</u>	<u>Bone</u>	<u>Liver</u>	<u>Thyroid</u>	<u>Kidney</u>	<u>Lung</u>	<u>GI-LLI</u>	<u>Skin</u>	<u>Total Body</u>
Salt Water Fish	0.47	.48	<0.01	0.09	0.15	0.66	0.0	0.22
Salt Water Shell Fish	1.20	1.28	<0.01	0.32	0.40	2.09	0.0	0.56
Discharge Canal Shoreline	0.08	0.08	0.08	0.08	0.08	0.08	0.09	0.08
Ocean Shoreline Deposits	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Swimming	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002
Boating	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Total	1.77	1.85	0.10	0.50	0.65	2.84	0.12	0.88



Table 3.2-2

January-June 1982 Liquid Release Maximum Individual  
Doses From All Pathways For Teenagers (MREM)

<u>Pathway</u>	<u>Bone</u>	<u>Liver</u>	<u>Thyroid</u>	<u>Kidney</u>	<u>Lung</u>	<u>GI-LLI</u>	<u>Skin</u>	<u>Total Body</u>
Salt Water Fish	0.50	0.50	<0.01	0.09	0.19	0.47	0.0	0.18
Salt Water Shell Fish	1.08	1.16	<0.01	0.27	0.42	1.30	0.0	0.50
Discharge Canal Shoreline	0.42	0.42	0.42	0.42	0.42	0.42	0.50	0.42
43 Ocean Shoreline Deposits	0.11	0.11	0.11	0.11	0.11	0.11	0.12	0.11
Swimming	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002
Boating	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Total	2.11	2.2	0.54	0.89	1.15	2.31	0.63	1.21

Table 3.2-3

January-June 1982 Liquid Release Maximum Individual  
Doses From All Pathways For Children (MREM)

<u>Pathway</u>	<u>Bone</u>	<u>Liver</u>	<u>Thyroid</u>	<u>Kidney</u>	<u>Lung</u>	<u>GI-LLI</u>	<u>Skin</u>	<u>Total Body</u>
Salt Water Fish	0.64	0.46	<0.01	0.07	0.16	0.17	0.0	0.17
Salt Water Shell Fish	1.6	1.21	<0.01	0.24	0.43	0.54	0.0	0.64
Discharge Canal Shoreline	0.09	0.09	0.09	0.09	0.09	0.09	0.10	0.09
Ocean Shoreline Deposits	0.02	0.02	0.02	0.02	0.02	0.02	0.03	0.02
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	2.35	1.79	0.11	0.42	0.70	0.82	0.13	0.92

Table 3.3-1  
Population Doses Resulting From The  
January-June 1982 Liquid Effluents

<u>Pathway</u>	<u>Thyroid (MAN-REM)</u>	<u>Total Body (MAN-REM)</u>
Salt Water Fish	< 0.01	3.58
Salt Water Shell Fish	< 0.01	5.87
Salt Water Plants	< 0.01	0.05
Ocean Shoreline Deposits	7.45	7.45
Swimming	0.03	0.03
Total	7.48	17.0

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<sup>1</sup>. The gaseous releases for both reactor building vent and the main stack, for the period January-June 1982 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 160-foot 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.<sup>3</sup> 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 dose.

UNDEPLETED X/Q FOR THE REACTOR BUILDING VENT JAN - MAR , 1982

RECPT 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	2.390E-05	7.450E-06	1.200E-05	1.030E-05	1.670E-05	1.250E-05	2.400E-05	4.300E-05
2	402.30	6.780E-06	2.110E-06	3.390E-06	2.920E-06	4.740E-06	3.540E-06	6.790E-06	1.220E-05
3	804.70	2.490E-06	7.680E-07	1.270E-06	1.090E-06	1.640E-06	1.230E-06	2.470E-06	4.280E-06
4	1207.00	1.370E-06	4.210E-07	7.070E-07	6.030E-07	8.840E-07	6.610E-07	1.350E-06	2.310E-06
5	1609.40	8.860E-07	2.730E-07	4.600E-07	3.920E-07	5.680E-07	4.240E-07	8.760E-07	1.490E-06
6	2414.00	4.820E-07	1.490E-07	2.490E-07	2.120E-07	3.150E-07	2.350E-07	4.780E-07	8.230E-07
7	3218.70	3.150E-07	9.740E-08	1.610E-07	1.380E-07	2.090E-07	1.560E-07	3.130E-07	5.440E-07
8	4023.40	2.280E-07	7.050E-08	1.160E-07	9.940E-08	1.530E-07	1.140E-07	2.270E-07	3.970E-07
9	4828.10	1.760E-07	5.460E-08	8.950E-08	7.680E-08	1.190E-07	8.880E-08	1.760E-07	3.080E-07
10	5632.70	1.420E-07	4.390E-08	7.180E-08	6.170E-08	9.590E-08	7.170E-08	1.410E-07	2.490E-07
11	6437.40	1.170E-07	3.640E-08	5.930E-08	5.100E-08	7.970E-08	5.960E-08	1.170E-07	2.060E-07
12	7242.10	9.880E-08	3.070E-08	4.990E-08	4.290E-08	6.760E-08	5.050E-08	9.870E-08	1.750E-07
13	8046.80	8.490E-08	2.640E-08	4.280E-08	3.680E-08	5.840E-08	4.360E-08	8.490E-08	1.510E-07
14	12070.10	4.820E-08	1.500E-08	2.410E-08	2.080E-08	3.360E-08	2.510E-08	4.830E-08	8.660E-08
15	16093.49	3.270E-08	1.020E-08	1.630E-08	1.410E-08	2.300E-08	1.720E-08	3.280E-08	5.920E-08
16	24140.29	1.920E-08	5.990E-09	9.480E-09	8.210E-09	1.370E-08	1.020E-08	1.930E-08	3.510E-08
17	32187.00	1.310E-08	4.110E-09	6.470E-09	5.620E-09	9.460E-09	7.080E-09	1.320E-08	2.420E-08
18	40233.79	9.880E-09	3.090E-09	4.850E-09	4.210E-09	7.160E-09	5.360E-09	9.960E-09	1.830E-08
19	48280.48	7.870E-09	2.470E-09	3.850E-09	3.350E-09	5.740E-09	4.300E-09	7.950E-09	1.470E-08
20	56327.29	6.500E-09	2.040E-09	3.170E-09	2.760E-09	4.760E-09	3.570E-09	6.570E-09	1.220E-08
21	64373.99	5.500E-09	1.730E-09	2.680E-09	2.340E-09	4.050E-09	3.030E-09	5.570E-09	1.030E-08
22	72420.75	4.770E-09	1.500E-09	2.320E-09	2.020E-09	3.520E-09	2.640E-09	4.830E-09	8.980E-09
23	80467.44	4.190E-09	1.320E-09	2.030E-09	1.770E-09	3.100E-09	2.320E-09	4.240E-09	7.900E-09

RECPT 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	4.440E-05	3.440E-05	5.320E-05	6.260E-05	5.330E-05	4.410E-05	3.940E-05	1.980E-05
2	402.30	1.250E-05	9.740E-06	1.510E-05	1.780E-05	1.510E-05	1.250E-05	1.120E-05	5.610E-06
3	804.70	4.640E-06	3.590E-06	5.120E-06	6.280E-06	5.330E-06	4.450E-06	3.960E-06	2.010E-06
4	1207.00	2.560E-06	1.980E-06	2.730E-06	3.400E-06	2.880E-06	2.420E-06	2.150E-06	1.100E-06
5	1609.40	1.660E-06	1.280E-06	1.740E-06	2.190E-06	1.860E-06	1.560E-06	1.380E-06	7.070E-07
6	2414.00	9.020E-07	6.970E-07	9.760E-07	1.210E-06	1.020E-06	8.580E-07	7.620E-07	3.880E-07
7	3218.70	5.880E-07	4.540E-07	6.530E-07	7.980E-07	6.770E-07	5.650E-07	5.030E-07	2.550E-07
8	4023.40	4.240E-07	3.280E-07	4.800E-07	5.810E-07	4.930E-07	4.110E-07	3.660E-07	1.850E-07
9	4828.10	3.280E-07	2.540E-07	3.730E-07	4.510E-07	3.830E-07	3.190E-07	2.840E-07	1.440E-07
10	5632.70	2.640E-07	2.040E-07	3.020E-07	3.640E-07	3.090E-07	2.570E-07	2.290E-07	1.160E-07
11	6437.40	2.180E-07	1.690E-07	2.520E-07	3.020E-07	2.560E-07	2.130E-07	1.900E-07	9.590E-08
12	7242.10	1.840E-07	1.420E-07	2.140E-07	2.550E-07	2.170E-07	1.800E-07	1.610E-07	8.110E-08
13	8046.80	1.580E-07	1.220E-07	1.850E-07	2.200E-07	1.870E-07	1.550E-07	1.390E-07	6.980E-08
14	12070.10	8.940E-08	6.930E-08	1.070E-07	1.260E-07	1.070E-07	8.890E-08	7.940E-08	3.990E-08
15	16093.49	6.050E-08	4.700E-08	7.370E-08	8.610E-08	7.340E-08	6.060E-08	5.420E-08	2.720E-08
16	24140.29	3.540E-08	2.750E-08	4.410E-08	5.100E-08	4.340E-08	3.580E-08	3.200E-08	1.600E-08
17	32187.00	2.420E-08	1.880E-08	3.060E-08	3.520E-08	3.000E-08	2.470E-08	2.210E-08	1.100E-08
18	40233.79	1.820E-08	1.410E-08	2.320E-08	2.650E-08	2.260E-08	1.860E-08	1.670E-08	8.320E-09
19	48280.48	1.450E-08	1.130E-08	1.870E-08	2.120E-08	1.810E-08	1.490E-08	1.340E-08	6.650E-09
20	56327.29	1.190E-08	9.290E-09	1.550E-08	1.760E-08	1.500E-08	1.230E-08	1.110E-08	5.500E-09
21	64373.99	1.010E-08	7.870E-09	1.320E-08	1.500E-08	1.280E-08	1.050E-08	9.400E-09	4.670E-09
22	72420.75	8.750E-09	6.820E-09	1.150E-08	1.300E-08	1.110E-08	9.080E-09	8.160E-09	4.050E-09
23	80467.44	7.680E-09	5.990E-09	1.020E-08	1.140E-08	9.760E-09	7.980E-09	7.180E-09	3.560E-09

TABLE 4.1-1  
Undepleted Relative Concentrations Per Unit Emission  
For Reactor Building Vent For January-March 1982



DEPLETED X/Q FOR THE REACTOR BUILDING VENT JAN - MAR , 1982

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	2.230E-05	6.960E-06	1.120E-05	9.650E-06	1.550E-05	1.160E-05	2.240E-05	4.010E-05
2	402.30	6.030E-06	1.880E-06	3.010E-06	2.600E-06	4.210E-06	3.150E-06	6.040E-06	1.090E-05
3	804.70	2.120E-06	6.550E-07	1.090E-06	9.300E-07	1.400E-06	1.050E-06	2.110E-06	3.650E-06
4	1207.00	1.120E-06	3.450E-07	5.800E-07	4.940E-07	7.250E-07	5.420E-07	1.110E-06	1.900E-06
5	1609.40	7.050E-07	2.170E-07	3.660E-07	3.120E-07	4.520E-07	3.380E-07	6.970E-07	1.180E-06
6	2414.00	3.680E-07	1.140E-07	1.900E-07	1.620E-07	2.400E-07	1.800E-07	3.650E-07	6.280E-07
7	3218.70	2.310E-07	7.150E-08	1.180E-07	1.010E-07	1.540E-07	1.150E-07	2.300E-07	4.000E-07
8	4023.40	1.610E-07	5.000E-08	8.220E-08	7.050E-08	1.080E-07	8.100E-08	1.610E-07	2.810E-07
9	4828.10	1.210E-07	3.750E-08	6.140E-08	5.270E-08	8.150E-08	6.100E-08	1.200E-07	2.110E-07
10	5632.70	9.450E-08	2.930E-08	4.790E-08	4.120E-08	6.400E-08	4.790E-08	9.430E-08	1.660E-07
11	6437.40	7.630E-08	2.370E-08	3.860E-08	3.320E-08	5.190E-08	3.880E-08	7.620E-08	1.340E-07
12	7242.10	6.300E-08	1.960E-08	3.180E-08	2.740E-08	4.310E-08	3.220E-08	6.290E-08	1.110E-07
13	8046.80	5.310E-08	1.650E-08	2.680E-08	2.300E-08	3.650E-08	2.730E-08	5.310E-08	9.440E-08
14	12070.10	2.790E-08	8.670E-09	1.390E-08	1.200E-08	1.940E-08	1.450E-08	2.790E-08	5.000E-08
15	16093.49	1.770E-08	5.520E-09	8.810E-09	7.620E-09	1.240E-08	9.310E-09	1.780E-08	3.200E-08
16	24140.29	9.290E-09	2.900E-09	4.600E-09	3.980E-09	6.630E-09	4.960E-09	9.350E-09	1.700E-08
17	32187.00	5.810E-09	1.820E-09	2.860E-09	2.480E-09	4.180E-09	3.130E-09	5.860E-09	1.070E-08
18	40233.79	4.040E-09	1.270E-09	1.980E-09	1.720E-09	2.930E-09	2.190E-09	4.080E-09	7.490E-09
19	48280.48	3.010E-09	9.440E-10	1.470E-09	1.280E-09	2.200E-09	1.640E-09	3.040E-09	5.610E-09
20	56327.29	2.340E-09	7.350E-10	1.140E-09	9.950E-10	1.720E-09	1.280E-09	2.370E-09	4.380E-09
21	64373.99	1.880E-09	5.900E-10	9.150E-10	7.970E-10	1.380E-09	1.040E-09	1.900E-09	3.530E-09
22	72420.75	1.550E-09	4.870E-10	7.540E-10	6.580E-10	1.150E-09	8.580E-10	1.570E-09	2.920E-09
23	80467.44	1.300E-09	4.090E-10	6.320E-10	5.520E-10	9.640E-10	7.220E-10	1.320E-09	2.460E-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	4.140E-05	3.210E-05	4.960E-05	5.840E-05	4.970E-05	4.110E-05	3.680E-05	1.850E-05
2	402.30	1.120E-05	8.660E-06	1.350E-05	1.580E-05	1.350E-05	1.110E-05	9.950E-06	5.000E-06
3	804.70	3.960E-06	3.060E-06	4.370E-06	5.360E-06	4.550E-06	3.800E-06	3.380E-06	1.720E-06
4	1207.00	2.100E-06	1.620E-06	2.240E-06	2.790E-06	2.370E-06	1.990E-06	1.760E-06	8.980E-07
5	1609.40	1.320E-06	1.020E-06	1.390E-06	1.740E-06	1.480E-06	1.240E-06	1.100E-06	5.620E-07
6	2414.00	6.890E-07	5.320E-07	7.450E-07	9.220E-07	7.820E-07	6.550E-07	5.810E-07	2.960E-07
7	3218.70	4.320E-07	3.340E-07	4.800E-07	5.860E-07	4.970E-07	4.150E-07	3.690E-07	1.870E-07
8	4023.40	3.010E-07	2.330E-07	3.400E-07	4.120E-07	3.500E-07	2.910E-07	2.590E-07	1.310E-07
9	4828.10	2.250E-07	1.740E-07	2.560E-07	3.090E-07	2.630E-07	2.190E-07	1.950E-07	9.860E-08
10	5632.70	1.760E-07	1.360E-07	2.020E-07	2.430E-07	2.060E-07	1.720E-07	1.530E-07	7.730E-08
11	6437.40	1.420E-07	1.100E-07	1.640E-07	1.960E-07	1.670E-07	1.390E-07	1.240E-07	6.250E-08
12	7242.10	1.170E-07	9.070E-08	1.360E-07	1.630E-07	1.380E-07	1.150E-07	1.020E-07	5.170E-08
13	8046.80	9.870E-08	7.640E-08	1.160E-07	1.380E-07	1.170E-07	9.720E-08	8.670E-08	4.370E-08
14	12070.10	5.160E-08	4.000E-08	6.200E-08	7.290E-08	6.200E-08	5.130E-08	4.590E-08	2.300E-08
15	16093.49	3.270E-08	2.540E-08	3.990E-08	4.660E-08	3.970E-08	3.280E-08	2.930E-08	1.470E-08
16	24140.29	1.710E-08	1.330E-08	2.140E-08	2.470E-08	2.110E-08	1.730E-08	1.550E-08	7.770E-09
17	32187.00	1.070E-08	8.330E-09	1.350E-08	1.550E-08	1.330E-08	1.090E-08	9.780E-09	4.880E-09
18	40233.79	7.430E-09	5.780E-09	9.510E-09	1.090E-08	9.260E-09	7.610E-09	6.830E-09	3.400E-09
19	48280.48	5.540E-09	4.310E-09	7.150E-09	8.130E-09	6.940E-09	5.690E-09	5.110E-09	2.540E-09
20	56327.29	4.300E-09	3.350E-09	5.600E-09	6.340E-09	5.410E-09	4.440E-09	3.990E-09	1.980E-09
21	64373.99	3.450E-09	2.690E-09	4.520E-09	5.110E-09	4.360E-09	3.570E-09	3.210E-09	1.590E-09
22	72420.75	2.850E-09	2.220E-09	3.750E-09	4.220E-09	3.610E-09	2.950E-09	2.650E-09	1.320E-09
23	80467.44	2.390E-09	1.860E-09	3.160E-09	3.550E-09	3.030E-09	2.480E-09	2.230E-09	1.110E-09

TABLE 4.1-2  
Depleted Relative Concentrations Per Unit Emission  
For Reactor Building Vent For January-March 1982



DEPOSITION FACTORS FOR THE REACTOR BUILDING VENT JAN - MAR , 1982

RECPT 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	2.010E-07	7.450E-08	4.910E-08	3.960E-08	4.910E-08	5.230E-08	8.710E-08	1.850E-07
2	402.30	6.680E-08	2.470E-08	1.630E-08	1.320E-08	1.630E-08	1.740E-08	2.890E-08	6.160E-08
3	804.70	2.120E-08	7.850E-09	5.180E-09	4.180E-09	5.180E-09	5.510E-09	9.190E-09	1.950E-08
4	1207.00	1.040E-08	3.860E-09	2.550E-09	2.050E-09	2.550E-09	2.710E-09	4.520E-09	9.610E-09
5	1609.40	6.230E-09	2.300E-09	1.520E-09	1.230E-09	1.520E-09	1.620E-09	2.700E-09	5.740E-09
6	2414.00	2.990E-09	1.110E-09	7.290E-10	5.880E-10	7.290E-10	7.760E-10	1.290E-09	2.750E-09
7	3218.70	1.780E-09	6.600E-10	4.350E-10	3.510E-10	4.350E-10	4.630E-10	7.720E-10	1.640E-09
8	4023.40	1.200E-09	4.450E-10	2.940E-10	2.370E-10	2.940E-10	3.130E-10	5.210E-10	1.110E-09
9	4828.10	8.860E-10	3.280E-10	2.160E-10	1.740E-10	2.160E-10	2.300E-10	3.840E-10	8.170E-10
10	5632.70	6.790E-10	2.510E-10	1.660E-10	1.340E-10	1.660E-10	1.760E-10	2.940E-10	6.250E-10
11	6437.40	5.350E-10	1.980E-10	1.310E-10	1.050E-10	1.310E-10	1.390E-10	2.320E-10	4.930E-10
12	7242.10	4.300E-10	1.590E-10	1.050E-10	8.460E-11	1.050E-10	1.120E-10	1.860E-10	3.960E-10
13	8046.80	3.530E-10	1.310E-10	8.620E-11	6.950E-11	8.620E-11	9.170E-11	1.530E-10	3.250E-10
14	12070.10	1.620E-10	6.010E-11	3.960E-11	3.190E-11	3.960E-11	4.220E-11	7.030E-11	1.500E-10
15	16093.49	9.320E-11	3.450E-11	2.280E-11	1.840E-11	2.280E-11	2.420E-11	4.040E-11	8.590E-11
16	24140.29	4.310E-11	1.590E-11	1.050E-11	8.480E-12	1.050E-11	1.120E-11	1.860E-11	3.970E-11
17	32187.00	2.510E-11	9.270E-12	6.120E-12	4.930E-12	6.120E-12	6.510E-12	1.090E-11	2.310E-11
18	40233.79	1.650E-11	6.090E-12	4.020E-12	3.240E-12	4.020E-12	4.280E-12	7.130E-12	1.520E-11
19	48280.48	1.170E-11	4.330E-12	2.850E-12	2.300E-12	2.850E-12	3.040E-12	5.060E-12	1.080E-11
20	56327.29	8.730E-12	3.230E-12	2.130E-12	1.720E-12	2.130E-12	2.270E-12	3.780E-12	8.040E-12
21	64373.99	6.770E-12	2.500E-12	1.650E-12	1.330E-12	1.650E-12	1.760E-12	2.930E-12	6.230E-12
22	72420.75	5.460E-12	2.020E-12	1.330E-12	1.080E-12	1.330E-12	1.420E-12	2.370E-12	5.030E-12
23	80467.44	4.470E-12	1.660E-12	1.090E-12	8.800E-13	1.090E-12	1.160E-12	1.940E-12	4.120E-12

RECPT 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	1.570E-07	1.930E-07	2.600E-07	2.600E-07	3.170E-07	3.800E-07	3.440E-07	2.000E-07
2	402.30	5.210E-08	6.420E-08	8.630E-08	8.630E-08	1.050E-07	1.260E-07	1.140E-07	6.630E-08
3	804.70	1.650E-08	2.040E-08	2.740E-08	2.740E-08	3.340E-08	4.010E-08	3.620E-08	2.100E-08
4	1207.00	8.130E-09	1.000E-08	1.350E-08	1.350E-08	1.640E-08	1.970E-08	1.780E-08	1.040E-08
5	1609.40	4.850E-09	5.980E-09	8.040E-09	8.040E-09	9.800E-09	1.180E-08	1.060E-08	6.180E-09
6	2414.00	2.330E-09	2.870E-09	3.860E-09	3.860E-09	4.710E-09	5.650E-09	5.110E-09	2.960E-09
7	3218.70	1.390E-09	1.710E-09	2.300E-09	2.300E-09	2.810E-09	3.370E-09	3.050E-09	1.770E-09
8	4023.40	9.380E-10	1.160E-09	1.550E-09	1.550E-09	1.890E-09	2.270E-09	2.060E-09	1.190E-09
9	4828.10	6.910E-10	8.510E-10	1.140E-09	1.140E-09	1.400E-09	1.670E-09	1.510E-09	8.790E-10
10	5632.70	5.290E-10	6.520E-10	8.770E-10	8.770E-10	1.070E-09	1.280E-09	1.160E-09	6.730E-10
11	6437.40	4.170E-10	5.140E-10	6.910E-10	6.910E-10	8.430E-10	1.010E-09	9.140E-10	5.310E-10
12	7242.10	3.350E-10	4.130E-10	5.550E-10	5.550E-10	6.770E-10	8.130E-10	7.350E-10	4.270E-10
13	8046.80	2.750E-10	3.390E-10	4.560E-10	4.560E-10	5.560E-10	6.670E-10	6.030E-10	3.500E-10
14	12070.10	1.270E-10	1.560E-10	2.100E-10	2.100E-10	2.560E-10	3.070E-10	2.770E-10	1.610E-10
15	16093.49	7.270E-11	8.960E-11	1.200E-10	1.200E-10	1.470E-10	1.760E-10	1.590E-10	9.250E-11
16	24140.29	3.360E-11	4.140E-11	5.560E-11	5.560E-11	6.780E-11	8.140E-11	7.360E-11	4.270E-11
17	32187.00	1.950E-11	2.410E-11	3.240E-11	3.240E-11	3.950E-11	4.740E-11	4.280E-11	2.490E-11
18	40233.79	1.280E-11	1.580E-11	2.130E-11	2.130E-11	2.590E-11	3.110E-11	2.810E-11	1.630E-11
19	48280.48	9.110E-12	1.120E-11	1.510E-11	1.510E-11	1.840E-11	2.210E-11	2.000E-11	1.160E-11
20	56327.29	6.810E-12	8.390E-12	1.130E-11	1.130E-11	1.370E-11	1.650E-11	1.490E-11	8.660E-12
21	64373.99	5.270E-12	6.500E-12	8.740E-12	8.740E-12	1.070E-11	1.280E-11	1.160E-11	6.710E-12
22	72420.75	4.260E-12	5.250E-12	7.050E-12	7.050E-12	8.600E-12	1.030E-11	9.330E-12	5.420E-12
23	80467.44	3.490E-12	4.300E-12	5.780E-12	5.780E-12	7.040E-12	8.450E-12	7.640E-12	4.440E-12

TABLE 4.1-3  
Relative Deposition Concentrations Per Unit Emission  
For Reactor Building Vent For January-March 1982

UNDEPLETED X/Q FOR THE MAIN STACK JAN - MAR , 1982

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	0.000E-01	0.000E-01	0.000E-01	0.000E-01	0.000E-01	0.000E-01	0.000E-01	0.000E-01
2	402.30	2.120E-09	9.890E-10	2.440E-11	1.530E-11	3.000E-12	4.210E-14	1.420E-20	6.640E-23
3	804.70	3.640E-07	9.380E-08	3.810E-08	1.640E-08	7.900E-09	2.050E-09	1.270E-11	2.290E-12
4	1207.00	3.450E-07	2.840E-07	6.230E-08	1.120E-07	3.250E-08	1.650E-08	9.980E-10	4.180E-10
5	1609.40	4.160E-07	3.560E-07	7.210E-08	1.620E-07	4.830E-08	3.260E-08	5.050E-09	3.010E-09
6	2414.00	2.890E-07	1.840E-07	5.430E-08	1.220E-07	5.350E-08	4.620E-08	1.650E-08	1.340E-08
7	3218.70	1.950E-07	1.180E-07	4.050E-08	9.220E-08	4.660E-08	4.460E-08	2.250E-08	2.080E-08
8	4023.40	1.400E-07	8.440E-08	3.160E-08	7.250E-08	3.910E-08	3.940E-08	2.390E-08	2.360E-08
9	4828.10	1.080E-07	6.440E-08	2.570E-08	5.970E-08	3.310E-08	3.430E-08	2.290E-08	2.360E-08
10	5632.70	8.610E-08	5.130E-08	2.150E-08	5.030E-08	2.840E-08	3.000E-08	2.160E-08	2.280E-08
11	6437.40	7.100E-08	4.230E-08	1.830E-08	4.330E-08	2.480E-08	2.650E-08	2.020E-08	2.180E-08
12	7242.10	5.980E-08	3.560E-08	1.580E-08	3.760E-08	2.180E-08	2.350E-08	1.880E-08	2.070E-08
13	8046.80	5.130E-08	3.060E-08	1.390E-08	3.310E-08	2.890E-08	2.280E-08	2.580E-08	1.950E-08
14	12070.10	2.900E-08	1.730E-08	8.370E-09	2.040E-08	1.690E-08	1.430E-08	1.640E-08	1.420E-08
15	16093.49	1.960E-08	1.170E-08	5.860E-09	1.450E-08	1.160E-08	1.020E-08	1.340E-08	2.490E-08
16	24140.29	1.150E-08	6.890E-09	3.530E-09	8.860E-09	6.880E-09	6.240E-09	8.110E-09	1.490E-08
17	32187.00	7.890E-09	4.760E-09	2.480E-09	6.470E-09	4.780E-09	4.860E-09	5.950E-09	1.040E-08
18	40233.79	5.930E-09	3.590E-09	1.890E-09	5.880E-09	3.610E-09	4.210E-09	4.610E-09	7.850E-09
19	48280.48	4.730E-09	2.870E-09	1.520E-09	4.710E-09	2.890E-09	3.480E-09	4.260E-09	6.300E-09
20	56327.29	3.910E-09	2.380E-09	1.330E-09	3.900E-09	2.560E-09	2.870E-09	3.520E-09	5.240E-09
21	64373.99	3.310E-09	2.020E-09	1.130E-09	3.320E-09	2.170E-09	2.430E-09	2.980E-09	4.460E-09
22	72420.75	2.870E-09	1.760E-09	9.810E-10	2.930E-09	1.880E-09	2.100E-09	2.580E-09	3.880E-09
23	80467.44	2.520E-09	1.540E-09	8.640E-10	2.580E-09	1.650E-09	1.850E-09	2.270E-09	3.420E-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	0.000E-01	0.000E-01	0.000E-01	0.000E-01	0.000E-01	0.000E-01	0.000E-01	0.000E-01
2	402.30	5.710E-23	5.000E-23	5.880E-23	7.020E-23	9.990E-23	1.090E-22	6.710E-23	9.620E-15
3	804.70	1.970E-12	1.720E-12	2.030E-12	2.420E-12	3.440E-12	1.240E-11	1.620E-11	4.300E-08
4	1207.00	3.600E-10	3.150E-10	3.700E-10	4.420E-10	6.290E-10	1.350E-09	1.270E-09	1.230E-07
5	1609.40	2.590E-09	2.260E-09	2.660E-09	3.180E-09	4.520E-09	7.810E-09	6.440E-09	1.330E-07
6	2414.00	1.150E-08	1.010E-08	1.190E-08	1.410E-08	2.010E-08	2.870E-08	2.100E-08	1.120E-07
7	3218.70	1.790E-08	1.570E-08	1.840E-08	2.200E-08	3.130E-08	4.120E-08	2.870E-08	8.750E-08
8	4023.40	2.030E-08	1.780E-08	2.090E-08	2.490E-08	3.550E-08	4.490E-08	3.050E-08	6.960E-08
9	4828.10	2.030E-08	1.770E-08	2.090E-08	2.490E-08	3.550E-08	4.380E-08	2.930E-08	5.730E-08
10	5632.70	1.960E-08	1.720E-08	2.020E-08	2.410E-08	3.440E-08	4.170E-08	2.760E-08	4.830E-08
11	6437.40	1.870E-08	1.640E-08	1.930E-08	2.300E-08	3.280E-08	3.930E-08	2.580E-08	4.140E-08
12	7242.10	1.780E-08	1.560E-08	1.830E-08	2.190E-08	3.110E-08	3.690E-08	2.400E-08	3.600E-08
13	8046.80	1.670E-08	1.470E-08	1.720E-08	2.060E-08	2.930E-08	3.440E-08	2.230E-08	3.170E-08
14	12070.10	1.220E-08	1.070E-08	1.260E-08	1.510E-08	2.140E-08	2.450E-08	1.580E-08	1.940E-08
15	16093.49	9.270E-09	8.160E-09	9.620E-09	1.150E-08	1.640E-08	1.850E-08	1.190E-08	1.530E-08
16	24140.29	6.070E-09	5.390E-09	6.370E-09	7.690E-09	1.090E-08	1.210E-08	7.750E-09	9.150E-09
17	32187.00	4.450E-09	3.980E-09	4.710E-09	5.730E-09	8.060E-09	1.030E-08	8.570E-09	6.400E-09
18	40233.79	3.470E-09	3.130E-09	3.710E-09	4.730E-09	9.170E-09	8.060E-09	6.680E-09	4.860E-09
19	48280.48	2.830E-09	2.570E-09	3.050E-09	4.730E-09	7.530E-09	6.560E-09	5.440E-09	3.900E-09
20	56327.29	2.380E-09	2.170E-09	2.580E-09	4.020E-09	6.380E-09	5.520E-09	4.580E-09	3.230E-09
21	64373.99	2.620E-09	1.870E-09	2.230E-09	3.500E-09	5.520E-09	4.750E-09	3.940E-09	2.750E-09
22	72420.75	2.700E-09	1.650E-09	1.970E-09	3.100E-09	4.880E-09	4.170E-09	3.460E-09	2.390E-09
23	80467.44	2.380E-09	1.470E-09	1.760E-09	2.780E-09	4.360E-09	3.710E-09	3.080E-09	2.110E-09

Undepleted Relative Concentrations Per Unit Emission  
For Main Stack For January-March 1982

TABLE 4.1-4

TABLE 4.1-5

Depleted Relative Concentrations Per Unit Emission  
For Main Stack For January-March 1982

DEPLETED X/Q FOR THE MAIN STACK JAN - MAR , 1982

RECPT NO.	DOWNWIND DISTANCE METERS	S - (1) SSW - (2) SW - (3) WSW - (4) W - (5) WNW - (6) NW - (7) NNW - (8)	WEIGHTED AVERAGES SEC/M <sup>3</sup>	SSE - (9)	ENE - (10)	ENE - (11)	ENE - (12)	E - (13)	ESE - (14)	SE - (15)	SSE - (16)
		0.0	22.5	45.0	67.5	90.0	112.5	135.0	157.5		
1	201.20	0.000E-01	0.000E-01	0.000E-01	0.000E-01	0.000E-01	0.000E-01	0.000E-01	0.000E-01	0.000E-01	0.000E-01
2	402.30	2.120E-09	9.890E-10	2.440E-11	1.530E-11	3.000E-12	4.210E-14	1.420E-20	6.640E-23		
3	804.70	3.640E-07	9.380E-08	3.810E-08	1.640E-08	7.900E-09	2.050E-09	1.270E-11	2.290E-12		
4	1207.00	3.450E-07	2.740E-07	6.230E-08	1.120E-07	3.250E-08	1.650E-08	9.980E-10	4.180E-10		
5	1609.40	4.010E-07	2.830E-07	7.210E-08	1.620E-07	4.830E-08	3.260E-08	5.050E-09	3.010E-09		
6	2414.00	2.570E-07	1.410E-07	5.430E-08	1.220E-07	5.350E-08	4.620E-08	1.650E-08	1.340E-08		
7	3218.70	1.640E-07	8.690E-08	4.050E-08	9.220E-08	4.660E-08	3.940E-08	2.250E-08	2.080E-08		
8	4023.40	1.160E-07	6.000E-08	3.160E-08	7.250E-08	3.910E-08	3.430E-08	2.290E-08	2.360E-08		
9	4828.10	8.750E-08	4.430E-08	2.570E-08	5.960E-08	3.310E-08	3.000E-08	2.160E-08	2.280E-08		
10	5632.70	6.890E-08	3.430E-08	2.140E-08	5.020E-08	2.840E-08	2.650E-08	2.020E-08	2.180E-08		
11	6437.40	5.600E-08	2.760E-08	1.820E-08	4.310E-08	2.480E-08	2.350E-08	1.880E-08	2.070E-08		
12	7242.10	4.660E-08	2.280E-08	1.570E-08	3.740E-08	2.180E-08	2.800E-08	1.580E-08	1.950E-08		
13	8046.80	3.950E-08	1.920E-08	1.380E-08	3.290E-08	1.800E-08	1.430E-08	1.640E-08	1.420E-08		
14	12070.10	2.100E-08	1.000E-08	8.180E-09	1.990E-08	1.580E-08	1.030E-08	1.310E-08	2.140E-08		
15	16093.49	1.340E-08	6.360E-09	5.600E-09	1.380E-08	1.030E-08	5.470E-09	7.850E-09	1.140E-08		
16	24140.29	6.900E-09	3.350E-09	2.230E-09	8.100E-09	5.470E-09	3.410E-09	5.380E-09	7.090E-09		
17	32187.00	4.230E-09	2.110E-09	2.180E-09	5.480E-09	3.410E-09	2.500E-09	3.910E-09	4.870E-09		
18	40233.79	2.880E-09	1.470E-09	1.600E-09	3.010E-09	2.340E-09	1.720E-09	1.630E-09	3.560E-09		
19	48280.48	2.100E-09	1.100E-09	1.250E-09	2.200E-09	1.720E-09	1.030E-09	1.270E-09	2.730E-09		
20	56327.29	1.600E-09	8.590E-10	8.640E-10	1.680E-09	9.720E-10	1.020E-09	1.020E-09	2.170E-09		
21	64373.99	1.260E-09	6.910E-10	7.020E-10	1.330E-09	7.400E-10	8.290E-10	8.390E-10	1.790E-09		
22	72420.75	1.030E-09	5.710E-10	5.900E-10	9.530E-10	6.110E-10	6.850E-10	7.040E-10	1.500E-09		
23	80467.44	8.580E-10	4.800E-10	5.040E-10	8.010E-10	5.130E-10	5.740E-10				

  

RECPT NO.	DOWNWIND DISTANCE METERS	N - (9)	NNE - (10)	NE - (11)	ENE - (12)	E - (13)	ESE - (14)	SE - (15)	SSE - (16)
		180.0	202.5	225.0	247.5	270.0	292.5	315.0	337.5
1	201.20	0.000E-01	0.000E-01	0.000E-01	0.000E-01	0.000E-01	0.000E-01	0.000E-01	0.000E-01
2	402.30	5.710E-23	5.000E-23	5.880E-23	7.020E-23	9.990E-23	1.090E-22	6.710E-23	9.620E-15
3	804.70	1.970E-12	1.720E-12	2.030E-12	2.420E-12	3.440E-12	1.240E-11	1.620E-11	4.300E-08
4	1207.00	3.600E-10	3.150E-10	3.700E-10	4.420E-10	6.290E-10	1.350E-09	1.270E-09	1.230E-07
5	1609.40	2.590E-09	2.260E-09	2.660E-09	3.180E-09	4.520E-09	7.810E-09	6.440E-09	1.330E-07
6	2414.00	1.150E-08	1.010E-08	1.190E-08	1.410E-08	2.010E-08	2.870E-08	2.100E-08	1.120E-07
7	3218.70	1.790E-08	1.570E-08	1.840E-08	2.200E-08	3.130E-08	4.120E-08	2.870E-08	8.750E-08
8	4023.40	2.030E-08	1.780E-08	2.090E-08	2.490E-08	3.550E-08	4.490E-08	3.050E-08	6.960E-08
9	4828.10	2.030E-08	1.770E-08	2.020E-08	2.410E-08	3.550E-08	4.380E-08	2.930E-08	5.720E-08
10	5632.70	1.960E-08	1.720E-08	2.020E-08	2.410E-08	3.440E-08	4.170E-08	2.760E-08	4.820E-08
11	6437.40	1.870E-08	1.640E-08	1.930E-08	2.300E-08	3.280E-08	3.930E-08	2.580E-08	4.130E-08
12	7242.10	1.780E-08	1.560E-08	1.830E-08	2.190E-08	3.110E-08	3.690E-08	2.400E-08	3.590E-08
13	8046.80	1.670E-08	1.470E-08	1.720E-08	2.060E-08	2.930E-08	3.440E-08	2.230E-08	3.150E-08
14	12070.10	1.220E-08	1.070E-08	1.260E-08	1.510E-08	2.140E-08	2.450E-08	1.580E-08	1.910E-08
15	16093.49	9.270E-09	8.160E-09	9.620E-09	1.150E-08	1.640E-08	1.850E-08	1.190E-08	1.430E-08
16	24140.29	6.070E-09	5.390E-09	6.370E-09	7.690E-09	1.090E-08	1.210E-08	7.750E-09	7.970E-09
17	32187.00	4.450E-09	3.980E-09	4.710E-09	5.730E-09	8.060E-09	1.030E-08	8.500E-09	5.220E-09
18	40233.79	3.470E-09	3.130E-09	3.710E-09	4.730E-09	6.170E-09	8.060E-09	6.610E-09	3.750E-09
19	48280.48	2.830E-09	2.570E-09	3.050E-09	4.730E-09	6.530E-09	8.560E-09	5.370E-09	2.860E-09
20	56327.29	2.380E-09	2.170E-09	2.580E-09	4.020E-09	5.520E-09	7.520E-09	4.500E-09	2.280E-09
21	64373.99	2.600E-09	1.870E-09	2.230E-09	3.500E-09	5.570E-09	8.750E-09	3.850E-09	1.870E-09
22	72420.75	1.940E-09	1.650E-09	1.970E-09	3.100E-09	4.880E-09	7.470E-09	3.380E-09	1.590E-09
23	80467.44	1.670E-09	1.470E-09	1.760E-09	2.780E-09	4.360E-09	3.710E-09	2.990E-09	1.360E-09



# DEPOSITION FACTORS FOR THE MAIN STACK JAN - MAR , 1982

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	7.030E-14	3.180E-14	1.850E-14	2.810E-14	2.370E-14	3.110E-14	5.840E-14	7.400E-14
2	402.30	3.510E-14	1.590E-14	9.250E-15	1.410E-14	1.180E-14	1.550E-14	2.920E-14	3.700E-14
3	804.70	1.760E-14	7.950E-15	4.620E-15	7.030E-15	5.980E-15	8.390E-15	1.530E-14	1.850E-14
4	1207.00	6.190E-14	3.850E-13	6.420E-15	8.060E-15	3.950E-15	5.180E-15	9.740E-15	1.230E-14
5	1609.40	5.640E-12	2.130E-09	1.810E-14	2.750E-14	2.960E-15	3.880E-15	7.310E-15	9.250E-15
6	2414.00	2.030E-10	1.040E-09	3.680E-14	5.600E-14	1.970E-15	2.590E-15	4.870E-15	6.170E-15
7	3218.70	6.100E-10	6.300E-10	6.260E-14	9.520E-14	1.480E-15	1.940E-15	3.650E-15	4.620E-15
8	4023.40	6.140E-10	4.270E-10	6.780E-14	0.30E-13	1.180E-15	1.550E-15	2.920E-15	3.700E-15
9	4828.10	3.720E-10	3.140E-10	4.510E-14	8.60E-14	9.860E-16	1.290E-15	2.440E-15	3.080E-15
10	5632.70	2.670E-10	2.400E-10	3.480E-14	5.290E-14	8.460E-16	1.110E-15	2.090E-15	2.640E-15
11	6437.40	2.130E-10	1.890E-10	2.970E-14	4.510E-14	7.400E-16	9.710E-16	1.830E-15	2.310E-15
12	7242.10	1.760E-10	1.520E-10	2.610E-14	3.960E-14	6.580E-16	8.630E-16	1.620E-15	2.060E-15
13	8046.80	1.580E-10	1.250E-10	2.470E-14	3.750E-14	5.060E-16	7.770E-16	1.460E-15	1.850E-15
14	12070.10	2.590E-10	5.850E-11	3.480E-14	5.290E-14	2.920E-11	5.180E-16	9.740E-16	1.230E-15
15	16093.49	2.630E-10	3.380E-11	7.870E-14	1.200E-13	6.180E-11	5.130E-16	9.960E-15	3.010E-10
16	24140.29	9.550E-11	1.550E-11	3.250E-13	4.940E-13	2.930E-11	5.020E-15	1.060E-13	1.220E-10
17	32187.00	4.470E-11	9.020E-12	7.450E-12	2.050E-12	1.530E-11	4.050E-13	1.340E-12	5.760E-11
18	40233.79	2.520E-11	5.910E-12	1.160E-12	1.150E-11	9.150E-12	1.420E-11	3.650E-12	3.240E-11
19	48280.48	1.620E-11	4.190E-12	1.400E-12	7.250E-12	6.050E-12	4.060E-12	7.640E-12	2.060E-11
20	56327.29	1.120E-11	3.130E-12	2.680E-12	4.940E-12	2.310E-12	3.030E-12	5.710E-12	1.410E-11
21	64373.99	8.130E-12	2.420E-12	2.240E-12	3.560E-12	1.790E-12	2.350E-12	4.420E-12	1.010E-11
22	72420.75	6.260E-12	1.950E-12	1.870E-12	1.720E-12	1.450E-12	1.900E-12	3.570E-12	7.680E-12
23	80467.44	4.920E-12	1.600E-12	1.570E-12	1.410E-12	1.180E-12	1.550E-12	2.920E-12	5.960E-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	7.030E-14	1.030E-13	9.020E-14	1.340E-13	1.840E-13	1.750E-13	1.030E-13	7.100E-14
2	402.30	3.510E-14	5.140E-14	4.510E-14	6.700E-14	9.210E-14	8.730E-14	5.140E-14	3.550E-14
3	804.70	1.760E-14	2.570E-14	2.260E-14	3.350E-14	4.610E-14	4.470E-14	2.700E-14	1.780E-14
4	1207.00	1.170E-14	1.710E-14	1.500E-14	2.230E-14	3.070E-14	2.910E-14	1.710E-14	2.030E-14
5	1609.40	8.790E-15	1.290E-14	1.130E-14	1.670E-14	2.300E-14	2.180E-14	1.290E-14	2.920E-14
6	2414.00	5.860E-15	8.570E-15	7.520E-15	1.120E-14	1.540E-14	1.460E-14	8.570E-15	3.710E-14
7	3218.70	4.390E-15	6.430E-15	5.640E-15	8.370E-15	1.150E-14	1.090E-14	6.430E-15	4.470E-14
8	4023.40	3.510E-15	5.140E-15	4.510E-15	6.700E-15	9.210E-15	8.730E-15	5.140E-15	4.260E-14
9	4828.10	2.930E-15	4.280E-15	3.760E-15	5.580E-15	7.680E-15	7.270E-15	4.280E-15	3.120E-14
10	5632.70	2.510E-15	3.670E-15	3.220E-15	4.780E-15	6.580E-15	6.240E-15	3.670E-15	2.510E-14
11	6437.40	2.200E-15	3.210E-15	2.820E-15	4.180E-15	5.760E-15	5.460E-15	3.210E-15	2.170E-14
12	7242.10	1.950E-15	2.860E-15	2.510E-15	3.720E-15	5.120E-15	4.850E-15	2.860E-15	1.910E-14
13	8046.80	1.760E-15	2.570E-15	2.260E-15	3.350E-15	4.610E-15	4.370E-15	2.570E-15	1.770E-14
14	12070.10	1.170E-15	1.710E-15	1.500E-15	2.230E-15	3.070E-15	2.910E-15	1.710E-15	1.560E-14
15	16093.49	8.790E-16	1.290E-15	1.130E-15	1.670E-15	2.300E-15	2.180E-15	1.290E-15	3.960E-12
16	24140.29	5.850E-16	8.550E-16	7.510E-16	1.110E-15	1.530E-15	1.460E-15	8.990E-16	7.140E-12
17	32187.00	4.390E-16	6.430E-16	5.640E-16	8.370E-16	1.150E-15	1.640E-14	2.710E-13	9.270E-12
18	40233.79	3.510E-16	5.140E-16	4.510E-16	1.760E-14	1.910E-13	3.930E-14	7.270E-13	9.980E-12
19	48280.48	2.930E-16	4.290E-16	3.760E-16	2.700E-14	3.460E-13	6.420E-14	1.250E-12	9.570E-12
20	56327.29	2.510E-16	3.670E-16	3.220E-16	3.560E-14	5.100E-13	8.840E-14	1.780E-12	8.810E-12
21	64373.99	6.650E-13	3.210E-16	2.820E-16	4.240E-14	6.560E-13	1.080E-13	2.210E-12	7.920E-12
22	72420.75	6.400E-12	2.860E-16	2.510E-16	4.570E-14	7.390E-13	1.190E-13	2.420E-12	6.950E-12
23	80467.44	5.810E-12	2.570E-16	2.260E-16	4.770E-14	7.970E-13	1.260E-13	2.550E-12	6.090E-12

TABLE 4.1-6  
Relative Deposition Concentrations Per Unit Emission  
For Main Stack For January-March 1982

Undepleted Relative Concentrations Per Unit Emission  
For Reactor Building Vent For April-June 1982

UNDEPLETED X/Q FOR THE REACTOR BUILDING VENT APR - JUN , 1982

RECPTR NO.	DOWNWIND DISTANCE METERS	WEIGHTED AVERAGES SEC/M#33										N - (9)	NNE - (10)	NE - (11)	ENE - (12)	WEIGHTED AVERAGES SEC/M#33				SE - (15)	SSE - (16)																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
		S - (1)	SSW - (2)	SW - (3)	WSW - (4)	W - (5)	WNW - (6)	NW - (7)	NNW - (8)	E - (13)	ESE - (14)					SE	SSE																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
		0.0	22.5	45.0	67.5	90.0	112.5	135.0	NNW - (8)																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		

DEPLETED X/Q FOR THE REACTOR BUILDING VENT APR - JUN , 1982

RECPT 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	1.570E-05	1.550E-05	1.390E-05	1.440E-05	1.420E-05	2.650E-05	1.490E-05	1.690E-05
2	402.30	4.240E-06	4.190E-06	3.760E-06	3.890E-06	3.840E-06	7.140E-06	4.020E-06	4.560E-06
3	804.70	1.520E-06	1.470E-06	1.290E-06	1.380E-06	1.350E-06	2.590E-06	1.450E-06	1.600E-06
4	1207.00	8.070E-07	7.740E-07	6.730E-07	7.330E-07	7.110E-07	1.380E-06	7.740E-07	8.460E-07
5	1609.40	5.090E-07	4.860E-07	4.210E-07	4.610E-07	4.470E-07	8.730E-07	4.890E-07	5.310E-07
6	2414.00	2.640E-07	2.540E-07	2.220E-07	2.400E-07	2.330E-07	4.520E-07	2.530E-07	2.780E-07
7	3218.70	1.650E-07	1.600E-07	1.410E-07	1.500E-07	1.470E-07	2.810E-07	1.580E-07	1.750E-07
8	4023.40	1.150E-07	1.120E-07	9.870E-08	1.050E-07	1.030E-07	1.950E-07	1.100E-07	1.220E-07
9	4828.10	8.590E-08	8.380E-08	7.400E-08	7.850E-08	7.680E-08	1.460E-07	8.190E-08	9.130E-08
10	5632.70	6.710E-08	6.550E-08	5.800E-08	6.140E-08	6.010E-08	1.140E-07	6.400E-08	7.140E-08
11	6437.40	5.410E-08	5.290E-08	4.700E-08	4.950E-08	4.850E-08	9.170E-08	5.150E-08	5.770E-08
12	7242.10	4.460E-08	4.370E-08	3.890E-08	4.080E-08	4.010E-08	7.550E-08	4.240E-08	4.760E-08
13	8046.80	3.750E-08	3.690E-08	3.290E-08	3.440E-08	3.380E-08	6.350E-08	3.570E-08	4.020E-08
14	12070.10	1.960E-08	1.940E-08	1.740E-08	1.800E-08	1.770E-08	3.300E-08	1.860E-08	2.110E-08
15	16093.49	1.240E-08	1.230E-08	1.110E-08	1.140E-08	1.130E-08	2.090E-08	1.180E-08	1.340E-08
16	24140.29	6.490E-09	6.470E-09	5.860E-09	5.980E-09	5.930E-09	1.090E-08	6.130E-09	7.040E-09
17	32187.00	4.040E-09	4.050E-09	3.680E-09	3.740E-09	3.710E-09	6.760E-09	3.820E-09	4.400E-09
18	40233.79	2.800E-09	2.820E-09	2.570E-09	2.590E-09	2.580E-09	4.680E-09	2.640E-09	3.060E-09
19	48280.48	2.090E-09	2.100E-09	1.920E-09	1.930E-09	1.920E-09	3.480E-09	1.960E-09	2.280E-09
20	56327.29	1.620E-09	1.640E-09	1.500E-09	1.500E-09	1.500E-09	2.700E-09	1.520E-09	1.780E-09
21	64373.99	1.300E-09	1.310E-09	1.210E-09	1.200E-09	1.200E-09	2.160E-09	1.220E-09	1.420E-09
22	72420.75	1.070E-09	1.080E-09	9.970E-10	9.930E-10	9.930E-10	1.780E-09	1.010E-09	1.180E-09
23	80467.44	8.970E-10	9.100E-10	8.380E-10	8.330E-10	8.330E-10	1.490E-09	8.420E-10	9.870E-10

RECPT 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	2.050E-05	3.150E-05	2.940E-05	1.970E-05	2.000E-05	1.720E-05	1.200E-05	1.180E-05
2	402.30	5.510E-06	8.480E-06	7.940E-06	5.330E-06	5.400E-06	4.640E-06	3.220E-06	3.180E-06
3	804.70	1.990E-06	3.040E-06	2.730E-06	1.890E-06	1.870E-06	1.650E-06	1.170E-06	1.130E-06
4	1207.00	1.060E-06	1.620E-06	1.430E-06	1.000E-06	9.820E-07	8.770E-07	6.250E-07	5.980E-07
5	1609.40	6.710E-07	1.020E-06	8.980E-07	6.290E-07	6.160E-07	5.520E-07	3.950E-07	3.760E-07
6	2414.00	3.480E-07	5.290E-07	4.720E-07	3.280E-07	3.230E-07	2.870E-07	2.040E-07	1.960E-07
7	3218.70	2.170E-07	3.310E-07	2.990E-07	2.050E-07	2.040E-07	1.800E-07	1.270E-07	1.230E-07
8	4023.40	1.510E-07	2.300E-07	2.090E-07	1.430E-07	1.430E-07	1.250E-07	8.820E-08	8.560E-08
9	4828.10	1.120E-07	1.720E-07	1.570E-07	1.070E-07	1.070E-07	9.380E-08	6.590E-08	6.410E-08
10	5632.70	8.780E-08	1.340E-07	1.230E-07	8.380E-08	8.390E-08	7.330E-08	5.140E-08	5.010E-08
11	6437.40	7.070E-08	1.080E-07	9.940E-08	6.760E-08	6.780E-08	5.910E-08	4.140E-08	4.040E-08
12	7242.10	5.820E-08	8.920E-08	8.220E-08	5.580E-08	5.610E-08	4.870E-08	3.410E-08	3.330E-08
13	8046.80	4.900E-08	7.510E-08	6.950E-08	4.700E-08	4.730E-08	4.100E-08	2.870E-08	2.810E-08
14	12070.10	2.550E-08	3.920E-08	3.660E-08	2.460E-08	2.490E-08	2.150E-08	1.490E-08	1.470E-08
15	16093.49	1.610E-08	2.480E-08	2.330E-08	1.560E-08	1.590E-08	1.360E-08	9.410E-09	9.320E-09
16	24140.29	8.400E-09	1.300E-08	1.230E-08	8.190E-09	8.370E-09	7.120E-09	4.900E-09	4.890E-09
17	32187.00	5.230E-09	8.080E-09	7.740E-09	5.110E-09	5.250E-09	4.440E-09	3.050E-09	3.050E-09
18	40233.79	3.620E-09	5.610E-09	5.390E-09	3.550E-09	3.650E-09	3.080E-09	2.110E-09	2.120E-09
19	48280.48	2.690E-09	4.170E-09	4.030E-09	2.650E-09	2.730E-09	2.300E-09	1.570E-09	1.580E-09
20	56327.29	2.090E-09	3.240E-09	3.140E-09	2.060E-09	2.130E-09	1.780E-09	1.210E-09	1.230E-09
21	64373.99	1.670E-09	2.590E-09	2.520E-09	1.650E-09	1.710E-09	1.430E-09	9.710E-10	9.840E-10
22	72420.75	1.380E-09	2.140E-09	2.090E-09	1.360E-09	1.410E-09	1.180E-09	8.010E-10	8.120E-10
23	80467.44	1.150E-09	1.790E-09	1.750E-09	1.140E-09	1.180E-09	9.890E-10	6.700E-10	6.810E-10

TABLE 4.1-8  
Depleted Relative Concentrations Per unit Emission  
For Reactor Building Vent for April-June 1982



# DEPOSITION FACTORS FOR THE REACTOR BUILDING VENT APR - JUN , 1982

RECPT 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	2.050E-07	1.700E-07	1.410E-07	1.240E-07	1.030E-07	2.000E-07	1.050E-07	1.220E-07
2	402.30	6.830E-08	5.660E-08	4.670E-08	4.130E-08	3.410E-08	6.650E-08	3.500E-08	4.040E-08
3	804.70	2.170E-08	1.800E-08	1.480E-08	1.310E-08	1.080E-08	2.110E-08	1.110E-08	1.280E-08
4	1207.00	1.070E-08	8.830E-09	7.290E-09	6.450E-09	5.330E-09	1.040E-08	5.470E-09	6.310E-09
5	1609.40	6.360E-09	5.270E-09	4.350E-09	3.850E-09	3.180E-09	6.190E-09	3.260E-09	3.760E-09
6	2414.00	3.050E-09	2.530E-09	2.090E-09	1.850E-09	1.530E-09	2.970E-09	1.570E-09	1.810E-09
7	3218.70	1.820E-09	1.510E-09	1.250E-09	1.100E-09	9.110E-10	1.770E-09	9.350E-10	1.080E-09
8	4023.40	1.230E-09	1.020E-09	8.400E-10	7.430E-10	6.140E-10	1.200E-09	6.300E-10	7.270E-10
9	4828.10	9.050E-10	7.500E-10	6.190E-10	5.480E-10	4.530E-10	8.810E-10	4.650E-10	5.360E-10
10	5632.70	6.930E-10	5.750E-10	4.740E-10	4.200E-10	3.470E-10	6.750E-10	3.560E-10	4.110E-10
11	6437.40	5.470E-10	4.530E-10	3.740E-10	3.310E-10	2.730E-10	5.320E-10	2.800E-10	3.240E-10
12	7242.10	4.390E-10	3.640E-10	3.000E-10	2.660E-10	2.200E-10	4.280E-10	2.250E-10	2.600E-10
13	8046.80	3.610E-10	2.990E-10	2.470E-10	2.180E-10	1.800E-10	3.510E-10	1.850E-10	2.130E-10
14	12070.10	1.660E-10	1.370E-10	1.130E-10	1.000E-10	8.290E-11	1.610E-10	8.510E-11	9.810E-11
15	16093.49	9.520E-11	7.890E-11	6.520E-11	5.760E-11	4.760E-11	9.270E-11	4.890E-11	5.640E-11
16	24140.29	4.400E-11	3.640E-11	3.010E-11	2.660E-11	2.200E-11	4.280E-11	2.260E-11	2.600E-11
17	32187.00	2.560E-11	2.120E-11	1.750E-11	1.550E-11	1.280E-11	2.490E-11	1.310E-11	1.520E-11
18	40233.79	1.680E-11	1.390E-11	1.150E-11	1.020E-11	8.400E-12	1.640E-11	8.630E-12	9.950E-12
19	48280.48	1.190E-11	9.900E-12	8.170E-12	7.230E-12	5.970E-12	1.160E-11	6.130E-12	7.070E-12
20	56327.29	8.920E-12	7.390E-12	6.100E-12	5.400E-12	4.460E-12	8.680E-12	4.580E-12	5.280E-12
21	64373.99	6.910E-12	5.730E-12	4.730E-12	4.180E-12	3.450E-12	6.730E-12	3.550E-12	4.090E-12
22	72420.75	5.580E-12	4.620E-12	3.820E-12	3.380E-12	2.790E-12	5.430E-12	2.860E-12	3.300E-12
23	80467.44	4.570E-12	3.790E-12	3.130E-12	2.760E-12	2.280E-12	4.450E-12	2.340E-12	2.700E-12

RECPT 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	1.570E-07	3.620E-07	3.120E-07	2.030E-07	1.770E-07	2.110E-07	1.270E-07	1.280E-07
2	402.30	5.210E-08	1.200E-07	1.040E-07	6.740E-08	5.880E-08	7.010E-08	4.220E-08	4.270E-08
3	804.70	1.650E-08	3.820E-08	3.290E-08	2.140E-08	1.870E-08	2.220E-08	1.340E-08	1.350E-08
4	1207.00	8.130E-09	1.880E-08	1.620E-08	1.050E-08	9.180E-09	1.090E-08	6.590E-09	6.660E-09
5	1609.40	4.850E-09	1.120E-08	9.660E-09	6.270E-09	5.480E-09	6.530E-09	3.930E-09	3.970E-09
6	2414.00	2.330E-09	5.380E-09	4.640E-09	3.010E-09	2.630E-09	3.130E-09	1.890E-09	1.910E-09
7	3218.70	1.390E-09	3.210E-09	2.770E-09	1.800E-09	1.570E-09	1.870E-09	1.130E-09	1.140E-09
8	4023.40	9.370E-10	2.170E-09	1.870E-09	1.210E-09	1.060E-09	1.260E-09	7.600E-10	7.680E-10
9	4828.10	6.910E-10	1.600E-09	1.380E-09	8.930E-10	7.800E-10	9.290E-10	5.600E-10	5.660E-10
10	5632.70	5.290E-10	1.220E-09	1.050E-09	6.840E-10	5.980E-10	7.120E-10	4.290E-10	4.330E-10
11	6437.40	4.170E-10	9.640E-10	8.310E-10	5.390E-10	4.710E-10	5.610E-10	3.380E-10	3.420E-10
12	7242.10	3.350E-10	7.740E-10	6.670E-10	4.330E-10	3.780E-10	4.510E-10	2.720E-10	2.740E-10
13	8046.80	2.750E-10	6.360E-10	5.480E-10	3.560E-10	3.110E-10	3.700E-10	2.230E-10	2.250E-10
14	12070.10	1.260E-10	2.920E-10	2.520E-10	1.640E-10	1.430E-10	1.700E-10	1.030E-10	1.040E-10
15	16093.49	7.270E-11	1.680E-10	1.450E-10	9.400E-11	8.210E-11	9.770E-11	5.890E-11	5.950E-11
16	24140.29	3.360E-11	7.750E-11	6.680E-11	4.340E-11	3.790E-11	4.510E-11	2.720E-11	2.750E-11
17	32187.00	1.950E-11	4.510E-11	3.890E-11	2.530E-11	2.210E-11	2.630E-11	1.580E-11	1.600E-11
18	40233.79	1.280E-11	2.960E-11	2.550E-11	1.660E-11	1.450E-11	1.730E-11	1.040E-11	1.050E-11
19	48280.48	9.110E-12	2.110E-11	1.810E-11	1.180E-11	1.030E-11	1.230E-11	7.380E-12	7.460E-12
20	56327.29	6.810E-12	1.570E-11	1.360E-11	8.800E-12	7.690E-12	9.150E-12	5.510E-12	5.570E-12
21	64373.99	5.270E-12	1.220E-11	1.050E-11	6.820E-12	5.960E-12	7.090E-12	4.270E-12	4.320E-12
22	72420.75	4.260E-12	9.840E-12	8.480E-12	5.500E-12	4.810E-12	5.730E-12	3.450E-12	3.490E-12
23	80467.44	3.490E-12	8.050E-12	6.940E-12	4.510E-12	3.940E-12	4.690E-12	2.830E-12	2.860E-12

TABLE 4.1-9  
Relative Deposition Concentrations Per Unit Emission  
For Reactor Building Vent For April-June 1982

UNDEPLETED X/Q FOR THE MAIN STACK APR - JUN , 1982

RECPT 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	0.000E-01	0.000E-01	0.000E-01	0.000E-01	0.000E-01	0.000E-01	0.000E-01	0.000E-01
2	402.30	2.580E-09	2.260E-09	9.780E-11	2.500E-11	6.010E-12	6.440E-14	2.330E-20	8.250E-23
3	804.70	4.420E-07	2.140E-07	1.530E-07	2.680E-08	1.580E-08	3.130E-09	2.080E-11	2.840E-12
4	1207.00	4.190E-07	6.210E-07	2.500E-07	1.830E-07	6.520E-08	2.530E-08	1.630E-09	5.190E-10
5	1609.40	4.810E-07	6.430E-07	2.890E-07	2.630E-07	9.690E-08	4.980E-08	8.270E-09	3.730E-09
6	2414.00	3.060E-07	3.310E-07	2.180E-07	1.980E-07	1.070E-07	7.070E-08	2.700E-08	1.660E-08
7	3218.70	2.010E-07	2.110E-07	1.620E-07	1.470E-07	9.340E-08	6.820E-08	3.690E-08	2.580E-08
8	4023.40	1.430E-07	1.500E-07	1.270E-07	1.140E-07	7.840E-08	6.030E-08	3.910E-08	2.930E-08
9	4828.10	1.100E-07	1.150E-07	1.030E-07	9.260E-08	6.620E-08	5.240E-08	3.760E-08	2.930E-08
10	5632.70	8.790E-08	9.140E-08	8.610E-08	7.710E-08	5.680E-08	4.590E-08	3.540E-08	2.840E-08
11	6437.40	7.230E-08	7.520E-08	7.330E-08	6.550E-08	4.930E-08	4.050E-08	3.310E-08	2.700E-08
12	7242.10	6.070E-08	6.310E-08	6.330E-08	5.640E-08	4.330E-08	3.600E-08	3.080E-08	2.560E-08
13	8046.80	5.190E-08	5.410E-08	5.550E-08	4.930E-08	5.450E-08	3.480E-08	4.170E-08	2.410E-08
14	12070.10	2.910E-08	3.040E-08	3.340E-08	2.950E-08	3.160E-08	2.180E-08	2.610E-08	1.750E-08
15	16093.49	1.960E-08	2.050E-08	2.340E-08	2.050E-08	2.160E-08	1.560E-08	2.020E-08	2.120E-08
16	24140.29	1.140E-08	1.200E-08	1.410E-08	1.230E-08	1.270E-08	9.550E-09	1.200E-08	1.230E-08
17	32187.00	7.760E-09	8.210E-09	9.880E-09	8.720E-09	8.800E-09	7.430E-09	8.520E-09	8.420E-09
18	40233.79	5.810E-09	6.160E-09	7.510E-09	7.320E-09	6.630E-09	6.420E-09	6.460E-09	6.300E-09
19	48280.48	4.610E-09	4.910E-09	6.030E-09	5.830E-09	5.290E-09	5.300E-09	5.420E-09	5.000E-09
20	56327.29	3.800E-09	4.050E-09	5.280E-09	4.810E-09	4.610E-09	4.380E-09	4.450E-09	4.110E-09
21	64373.99	3.210E-09	3.430E-09	4.480E-09	4.080E-09	3.900E-09	3.700E-09	3.760E-09	3.470E-09
22	72420.75	2.780E-09	2.970E-09	3.900E-09	3.570E-09	3.380E-09	3.210E-09	3.250E-09	3.000E-09
23	80467.44	2.430E-09	2.610E-09	3.430E-09	3.130E-09	2.960E-09	2.820E-09	2.850E-09	2.630E-09

RECPT 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	0.000E-01	0.000E-01	0.000E-01	0.000E-01	0.000E-01	0.000E-01	0.000E-01	0.000E-01
2	402.30	6.730E-23	1.320E-22	1.070E-22	6.200E-23	3.960E-23	4.130E-23	4.960E-23	6.220E-15
3	804.70	2.320E-12	4.540E-12	3.690E-12	2.140E-12	1.370E-12	4.710E-12	1.200E-11	2.780E-08
4	1207.00	4.240E-10	8.290E-10	6.730E-10	3.900E-10	2.490E-10	5.120E-10	9.420E-10	7.950E-08
5	1609.40	3.050E-09	5.960E-09	4.840E-09	2.810E-09	1.790E-09	2.960E-09	4.760E-09	8.630E-08
6	2414.00	1.360E-08	2.650E-08	2.160E-08	1.250E-08	7.990E-09	1.090E-08	1.560E-08	7.250E-08
7	3218.70	2.110E-08	4.130E-08	3.350E-08	1.940E-08	1.240E-08	1.570E-08	2.120E-08	5.640E-08
8	4023.40	2.390E-08	4.680E-08	3.800E-08	2.200E-08	1.410E-08	1.700E-08	2.250E-08	4.480E-08
9	4828.10	2.390E-08	4.670E-08	3.800E-08	2.200E-08	1.410E-08	1.660E-08	2.170E-08	3.680E-08
10	5632.70	2.310E-08	4.530E-08	3.680E-08	2.130E-08	1.360E-08	1.580E-08	2.040E-08	3.090E-08
11	6437.40	2.210E-08	4.320E-08	3.510E-08	2.030E-08	1.300E-08	1.490E-08	1.900E-08	2.650E-08
12	7242.10	2.090E-08	4.100E-08	3.330E-08	1.930E-08	1.230E-08	1.400E-08	1.780E-08	2.290E-08
13	8046.80	1.970E-08	3.860E-08	3.130E-08	1.810E-08	1.160E-08	1.310E-08	1.650E-08	2.010E-08
14	12070.10	1.430E-08	2.800E-08	2.280E-08	1.320E-08	8.460E-09	9.290E-09	1.160E-08	1.220E-08
15	16093.49	1.090E-08	2.130E-08	1.730E-08	1.000E-08	6.450E-09	6.990E-09	8.640E-09	9.440E-09
16	24140.29	7.130E-09	1.390E-08	1.130E-08	6.540E-09	4.240E-09	4.530E-09	5.560E-09	5.630E-09
17	32187.00	5.220E-09	1.020E-08	8.250E-09	4.770E-09	3.120E-09	3.710E-09	5.050E-09	3.920E-09
18	40233.79	4.060E-09	7.910E-09	6.420E-09	4.110E-09	3.220E-09	2.850E-09	3.850E-09	2.970E-09
19	48280.48	3.310E-09	6.440E-09	5.230E-09	3.310E-09	2.620E-09	2.310E-09	3.090E-09	2.380E-09
20	56327.29	2.780E-09	5.410E-09	4.390E-09	2.760E-09	2.200E-09	1.930E-09	2.570E-09	1.970E-09
21	64373.99	2.950E-09	4.640E-09	3.760E-09	2.360E-09	1.890E-09	1.650E-09	2.190E-09	1.670E-09
22	72420.75	2.940E-09	4.060E-09	3.300E-09	2.060E-09	1.660E-09	1.440E-09	1.910E-09	1.450E-09
23	80467.44	2.590E-09	3.600E-09	2.920E-09	1.810E-09	1.480E-09	1.270E-09	1.680E-09	1.280E-09

TABLE 4.1-10  
Undepleted Relative Concentrations Per Unit Emission  
For Main Stack For April-June 1982

# DEPLETED X/O FOR THE MAIN STACK APR - JUN , 1982

TABLE 4.1-11  
Depleted Relative Concentrations Per Unit Emission  
For Main Stack For April-June 1982

RECPT NO.	DOWNWIND DISTANCE METERS	WEIGHTED AVERAGES SEC/M883										WEIGHTED AVERAGES SEC/M883									
		S - (1)	SSW - (2)	SW - (3)	WSW - (4)	W - (5)	WNW - (6)	NW - (7)	NNW - (8)			N - (9)	NNE - (10)	NE - (11)	ENE - (12)	E - (13)	ESE - (14)	SE - (15)	SSE - (16)		
		0.0	22.5	45.0	87.5	90.0	112.5	135.0	157.5			180.0	202.5	225.0	247.5	270.0	292.5	315.0	337.5		
1	201.20	0.000E-01	0.000E-01	0.000E-01	0.000E-01	0.000E-01	0.000E-01	0.000E-01	0.000E-01	0.000E-01	0.000E-01	0.000E-01	0.000E-01	0.000E-01	0.000E-01	0.000E-01	0.000E-01	0.000E-01	0.000E-01	0.000E-01	0.000E-01
2	402.30	2.580E-09	2.260E-09	9.780E-11	2.500E-11	6.010E-12	6.440E-14	2.330E-20	8.250E-23			6.730E-23	1.320E-22	1.070E-22	6.200E-23	3.960E-23	4.130E-23	4.940E-23	6.220E-15		
3	804.70	4.420E-07	2.140E-07	1.530E-07	2.880E-08	1.580E-08	3.130E-09	2.080E-11	2.840E-12			2.320E-12	4.540E-12	3.690E-12	2.140E-12	1.370E-12	4.710E-12	1.200E-11	2.780E-08		
4	1207.00	4.190E-07	6.010E-07	2.500E-07	1.630E-07	6.520E-08	2.530E-08	1.630E-09	5.190E-10			4.240E-10	8.290E-10	6.730E-10	3.900E-10	2.490E-10	5.120E-10	9.420E-10	7.950E-08		
5	1609.40	4.630E-07	5.120E-07	2.890E-07	2.630E-07	9.690E-08	4.980E-08	8.270E-09	3.730E-09			3.050E-09	5.960E-09	4.840E-09	2.810E-09	1.790E-09	2.760E-09	4.760E-09	8.630E-08		
6	2414.00	2.720E-07	2.530E-07	2.180E-07	1.980E-07	1.070E-07	7.070E-08	2.700E-08	1.660E-08			1.360E-08	2.650E-08	2.160E-08	1.250E-08	7.990E-09	1.090E-08	1.560E-08	7.250E-08		
7	3218.70	1.690E-07	1.550E-07	1.620E-07	1.470E-07	9.340E-08	6.820E-08	3.690E-08	2.580E-08			2.110E-08	4.130E-08	3.350E-08	1.940E-08	1.240E-08	1.570E-08	2.120E-08	5.640E-08		
8	4023.40	1.190E-07	1.070E-07	1.270E-07	1.140E-07	7.840E-08	6.030E-08	3.910E-08	2.930E-08			2.390E-08	4.680E-08	3.800E-08	2.200E-08	1.410E-08	1.700E-08	2.250E-08	4.480E-08		
9	4828.10	8.940E-08	7.890E-08	1.030E-07	9.250E-08	6.620E-08	5.240E-08	3.760E-08	2.930E-08			2.390E-08	4.670E-08	3.800E-08	2.200E-08	1.410E-08	1.700E-08	2.250E-08	4.480E-08		
10	5632.70	7.030E-08	6.120E-08	8.580E-08	7.690E-08	5.680E-08	4.590E-08	3.540E-08	2.840E-08			2.310E-08	4.530E-08	3.680E-08	2.130E-08	1.360E-08	1.580E-08	2.040E-08	3.090E-08		
11	6437.40	5.710E-08	4.910E-08	7.300E-08	6.520E-08	4.930E-08	4.050E-08	3.310E-08	2.700E-08			2.210E-08	4.320E-08	3.510E-08	2.030E-08	1.300E-08	1.490E-08	1.900E-08	2.640E-08		
12	7242.10	4.730E-08	4.040E-08	6.290E-08	5.610E-08	4.330E-08	3.600E-08	3.080E-08	2.560E-08			2.090E-08	4.100E-08	3.330E-08	1.930E-08	1.230E-08	1.400E-08	1.780E-08	2.290E-08		
13	8046.80	4.000E-08	3.390E-08	5.510E-08	4.890E-08	3.520E-08	2.950E-08	2.610E-08	2.1750E-08			1.970E-08	3.860E-08	3.130E-08	1.810E-08	1.160E-08	1.310E-08	1.650E-08	2.010E-08		
14	12070.10	2.110E-08	1.760E-08	3.270E-08	2.880E-08	1.920E-08	1.560E-08	1.990E-08	1.830E-08			1.430E-08	2.800E-08	2.280E-08	1.320E-08	8.460E-09	9.290E-09	1.160E-08	1.210E-08		
15	16093.49	1.340E-08	1.110E-08	2.230E-08	1.960E-08	1.200E-08	9.550E-09	1.160E-08	9.440E-09			1.090E-08	2.130E-08	1.730E-08	1.000E-08	6.450E-09	6.990E-09	8.640E-09	8.820E-09		
16	24140.29	6.830E-09	5.810E-09	1.290E-08	1.120E-08	6.280E-09	6.910E-09	7.710E-09	5.760E-09			7.130E-09	1.390E-08	1.130E-08	6.540E-09	4.240E-09	4.530E-09	5.560E-09	4.910E-09		
17	32187.00	4.160E-09	3.640E-09	8.680E-09	7.390E-09	4.310E-09	3.810E-09	5.480E-09	3.900E-09			5.220E-09	1.020E-08	8.250E-09	4.770E-09	3.120E-09	3.710E-09	5.010E-09	3.200E-09		
18	40233.79	2.820E-09	2.520E-09	6.370E-09	5.370E-09	3.150E-09	2.030E-09	2.070E-09	2.820E-09			4.060E-09	7.910E-09	6.420E-09	4.110E-09	3.220E-09	2.850E-09	3.810E-09	2.290E-09		
19	48280.48	2.040E-09	1.880E-09	4.960E-09	4.270E-09	2.720E-09	1.580E-09	1.600E-09	2.150E-09			3.310E-09	6.440E-09	5.230E-09	3.310E-09	2.620E-09	2.310E-09	3.050E-09	1.750E-09		
20	56327.29	1.550E-09	1.460E-09	3.430E-09	2.070E-09	1.660E-09	1.580E-09	1.600E-09	2.150E-09			2.780E-09	5.410E-09	4.390E-09	2.760E-09	2.200E-09	1.930E-09	2.520E-09	1.390E-09		
21	64373.99	1.220E-09	1.170E-09	2.790E-09	1.630E-09	1.330E-09	1.260E-09	1.280E-09	1.690E-09			2.940E-09	4.640E-09	3.760E-09	2.360E-09	1.890E-09	1.650E-09	2.140E-09	1.140E-09		
22	72420.75	9.980E-10	9.680E-10	2.350E-09	1.160E-09	1.100E-09	1.040E-09	1.060E-09	1.390E-09			2.110E-09	4.060E-09	3.300E-09	2.060E-09	1.660E-09	1.440E-09	1.860E-09	9.640E-10		
23	80467.44	8.280E-10	8.120E-10	2.000E-09	9.730E-10	9.210E-10	8.750E-10	8.850E-10	1.150E-09			1.820E-09	3.600E-09	2.920E-09	1.810E-09	1.480E-09	1.270E-09	1.630E-09	8.270E-10		



# DEPOSITION FACTORS FOR THE MAIN STACK APR - JUN , 1982

RECPT 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	5.840E-14	7.810E-14	9.640E-14	6.400E-14	5.420E-14	5.700E-14	8.300E-14	7.320E-14
2	402.30	2.920E-14	3.910E-14	4.820E-14	3.200E-14	2.710E-14	2.850E-14	4.150E-14	3.660E-14
3	804.70	1.460E-14	1.950E-14	2.410E-14	1.600E-14	1.370E-14	1.540E-14	2.180E-14	1.830E-14
4	1207.00	5.140E-14	9.460E-13	3.350E-14	1.830E-14	9.030E-15	9.500E-15	1.380E-14	1.220E-14
5	1609.40	4.690E-12	5.240E-09	9.440E-14	6.270E-14	6.770E-15	7.120E-15	1.040E-14	9.150E-15
6	2414.00	1.690E-10	2.560E-09	1.920E-13	1.270E-13	4.520E-15	4.750E-15	6.920E-15	6.100E-15
7	3218.70	5.070E-10	1.550E-09	3.260E-13	2.170E-13	3.390E-15	3.560E-15	5.190E-15	4.570E-15
8	4023.40	5.100E-10	1.050E-09	3.530E-13	2.350E-13	2.710E-15	2.850E-15	4.150E-15	3.660E-15
9	4828.10	3.090E-10	7.710E-10	2.350E-13	1.560E-13	2.260E-15	2.370E-15	3.460E-15	3.050E-15
10	5632.70	2.210E-10	5.900E-10	1.820E-13	1.210E-13	1.940E-15	2.040E-15	2.970E-15	2.610E-15
11	6437.40	1.770E-10	4.650E-10	1.550E-13	1.030E-13	1.690E-15	1.780E-15	2.590E-15	2.290E-15
12	7242.10	1.460E-10	3.740E-10	1.360E-13	9.030E-14	1.500E-15	1.580E-15	2.310E-15	2.030E-15
13	8046.80	1.320E-10	3.070E-10	1.290E-13	8.540E-14	1.160E-11	1.430E-15	2.080E-15	1.830E-15
14	12070.10	2.150E-10	1.440E-10	1.820E-13	1.210E-13	6.680E-11	9.500E-16	1.380E-15	1.220E-15
15	16093.49	2.190E-10	8.310E-11	4.100E-13	2.730E-13	1.410E-10	9.410E-16	1.420E-14	2.980E-10
16	24140.29	7.930E-11	3.800E-11	1.690E-12	1.120E-12	6.700E-11	9.200E-15	1.510E-13	1.210E-10
17	32187.00	3.710E-11	2.220E-11	3.880E-12	4.660E-12	3.490E-11	7.420E-13	1.910E-12	5.700E-11
18	40233.79	2.100E-11	1.450E-11	6.030E-12	2.610E-11	2.090E-11	2.600E-11	5.190E-12	3.210E-11
19	48280.48	1.340E-11	1.030E-11	7.310E-12	1.650E-11	1.380E-11	7.450E-12	1.090E-11	2.040E-11
20	56327.29	9.280E-12	7.680E-12	1.400E-11	1.130E-11	5.290E-12	5.570E-12	8.110E-12	1.390E-11
21	64373.99	6.760E-12	5.950E-12	1.170E-11	8.120E-12	4.100E-12	4.310E-12	6.280E-12	1.000E-11
22	72420.75	5.200E-12	4.800E-12	9.730E-12	3.910E-12	3.310E-12	3.480E-12	5.070E-12	7.600E-12
23	80467.44	4.090E-12	3.930E-12	8.170E-12	3.200E-12	2.710E-12	2.850E-12	4.150E-12	5.900E-12

RECPT 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	6.610E-14	1.870E-13	1.560E-13	9.500E-14	7.180E-14	6.470E-14	3.380E-14	2.670E-14
2	402.30	3.310E-14	9.360E-14	7.810E-14	4.750E-14	3.590E-14	3.240E-14	1.690E-14	1.340E-14
3	804.70	1.650E-14	4.680E-14	3.910E-14	2.370E-14	1.790E-14	1.660E-14	8.860E-15	6.680E-15
4	1207.00	1.100E-14	3.120E-14	2.600E-14	1.580E-14	1.200E-14	1.080E-14	5.630E-15	7.660E-15
5	1609.40	8.270E-15	2.340E-14	1.950E-14	1.190E-14	8.970E-15	8.090E-15	4.220E-15	1.100E-14
6	2414.00	5.510E-15	1.560E-14	1.300E-14	7.920E-15	5.980E-15	5.390E-15	2.810E-15	1.400E-14
7	3218.70	4.130E-15	1.170E-14	9.760E-15	5.940E-15	4.490E-15	4.050E-15	2.110E-15	1.680E-14
8	4023.40	3.310E-15	9.360E-15	7.810E-15	4.750E-15	3.590E-15	3.240E-15	1.690E-15	1.600E-14
9	4828.10	2.760E-15	7.800E-15	6.510E-15	3.960E-15	2.990E-15	2.700E-15	1.410E-15	1.170E-14
10	5632.70	2.360E-15	6.690E-15	5.580E-15	3.390E-15	2.560E-15	2.310E-15	1.210E-15	9.470E-15
11	6437.40	2.070E-15	5.850E-15	4.880E-15	2.970E-15	2.240E-15	2.020E-15	1.060E-15	8.150E-15
12	7242.10	1.840E-15	5.200E-15	4.340E-15	2.640E-15	1.990E-15	1.800E-15	9.380E-16	7.260E-15
13	8046.80	1.650E-15	4.680E-15	3.910E-15	2.380E-15	1.790E-15	1.620E-15	8.440E-16	6.670E-15
14	12070.10	1.100E-15	3.120E-15	2.600E-15	1.580E-15	1.200E-15	1.080E-15	5.630E-16	5.890E-15
15	16093.49	8.270E-16	2.340E-15	1.950E-15	1.190E-15	8.970E-16	8.090E-16	4.220E-16	1.490E-12
16	24140.29	5.500E-16	1.560E-15	1.300E-15	7.900E-16	5.970E-16	5.410E-16	2.950E-16	2.690E-12
17	32187.00	4.130E-16	1.170E-15	9.760E-16	5.940E-16	4.490E-16	4.070E-16	8.890E-16	3.490E-12
18	40233.79	3.310E-16	9.360E-16	7.810E-16	1.250E-14	7.450E-14	1.460E-14	2.390E-13	3.760E-12
19	48280.48	2.760E-16	7.800E-16	6.510E-16	1.920E-14	1.350E-13	2.380E-14	4.120E-13	3.600E-12
20	56327.29	2.360E-16	6.680E-16	5.580E-16	2.530E-14	1.990E-13	3.280E-14	5.840E-13	3.320E-12
21	64373.99	6.250E-13	5.850E-16	4.880E-16	3.010E-14	2.560E-13	4.020E-14	7.260E-13	2.980E-12
22	72420.75	6.020E-12	5.200E-16	4.340E-16	3.240E-14	2.880E-13	4.410E-14	7.950E-13	2.620E-12
23	80467.44	5.470E-12	4.680E-16	3.910E-16	3.390E-14	3.110E-13	4.670E-14	8.360E-13	2.290E-12

TABLE 4.1-12  
Relative Deposition Concentrations Per Unit Emission  
For Main Stack For April-June 1982

Table 4.2-1

Maximum Individual Locations and Pathways<sup>1</sup>  
 January-June 1982

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<u>Pathway</u>	<u>0.5 Miles</u> <u>SE</u>	<u>0.5 Miles</u> <u>NW</u>	<u>2.2 Miles</u> <u>W</u>
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

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<sup>1</sup> Yes indicates that the pathway is analyzed  
 No indicates that it is not considered

Table 4.2-2

January-June 1982 Gaseous Release Maximum Individual  
Doses From All Pathways For Adults (MREM)

<u>Location</u>	<u>Bone</u>	<u>Liver</u>	<u>Thyroid</u>	<u>Kidney</u>	<u>Lung</u>	<u>GI-LLI</u>	<u>Skin</u>	<u>Total Body</u>
*0.5 Miles SE	0.10	0.09	0.10	0.09	0.09	0.10	0.10	0.09
0.5 Miles NW	0.06	0.05	0.06	0.05	0.05	0.05	0.08	0.05
2.2 Miles W	0.02	0.02	0.02	0.02	0.02	0.02	0.03	0.02

\*Maximum dose location



Table 4.2-3

January-June 1982 Gaseous Release Maximum Individual  
Doses From All Pathways for Teenagers (MREM)

<u>Location</u>	<u>Bone</u>	<u>Liver</u>	<u>Thyroid</u>	<u>Kidney</u>	<u>Lung</u>	<u>GI-LLI</u>	<u>Skin</u>	<u>Total Body</u>
*0.5 Miles SE	0.10	0.09	0.10	0.09	0.09	0.10	0.10	0.09
0.5 Miles NW	0.06	0.05	0.06	0.05	0.05	0.06	0.08	0.05
2.2 Miles W	0.02	0.02	0.02	0.02	0.02	0.02	0.03	0.02

\*Maximum dose location

Table 4.2-4

January-June 1982 Gaseous Release Maximum Individual  
Doses From All Pathways For Children (MREM)

<u>Location</u>	<u>Bone</u>	<u>Liver</u>	<u>Thyroid</u>	<u>Kidney</u>	<u>Lung</u>	<u>GI-LLI</u>	<u>Skin</u>	<u>Total Body</u>
*0.5 Miles SE	0.10	0.09	0.10	0.09	0.09	0.10	0.10	0.09
0.5 Miles NW	0.08	0.05	0.07	0.05	0.05	0.06	0.08	0.06
2.2 Miles W	0.02	0.02	0.02	0.02	0.02	0.02	0.03	0.02

\*Maximum dose location

Table 4.2-5

January-June 1982 Gaseous Release Maximum Individual  
Doses From All Pathways For Infants (MREM)

<u>Location</u>	<u>Bone</u>	<u>Liver</u>	<u>Thyroid</u>	<u>Kidney</u>	<u>Lung</u>	<u>GI-LLI</u>	<u>Skin</u>	<u>Total Body</u>
*0.5 Miles SE	0.09	0.09	0.09	0.09	0.09	0.09	0.10	0.09
0.5 Miles NW	0.05	0.05	0.05	0.05	0.05	0.05	0.08	0.05
2.2 Miles W	0.02	0.02	0.04	0.02	0.02	0.02	0.03	0.02

\*Maximum dose location

Table 4.2-6

January - June 1982 Gaseous Release Maximum  
Individual Doses 0.5 Miles SE

<u>Age Group</u>	<u>Bone (MREM)</u>	<u>Liver (MREM)</u>	<u>Thyroid (MREM)</u>	<u>Kidney (MREM)</u>	<u>Lung (MREM)</u>	<u>GI-LLI (MREM)</u>	<u>Skin (MREM)</u>	<u>Total Body (MREM)</u>
Adult	0.10	0.09	0.10	0.09	0.09	0.10	0.10	0.09
Teenager	0.10	0.09	0.10	0.09	0.09	0.10	0.10	0.09
Child	0.10	0.09	0.10	0.09	0.09	0.10	0.10	0.09
Infant	0.09	0.09	0.09	0.09	0.09	0.09	0.10	0.09

TABLE 4.3-1  
POPULATION DISTRIBUTION

SECTOR	Distance (Miles/Meters)										
	.5	1.5	2.5	3.5	4.5	7.5	15.0	25.0	35.0	45.0	
	104.7	2414.0	4023.4	5632.7	7242.0	12070.1	24140.2	40233.6	56327.0	72420.5	
S	0.	3.90E+01	2.00E+02	5.30E+01	2.20E+01	2.39E+03	1.66E+04	2.52E+04	7.80E+03	7.12E+02	
SW	1.90E+01	0.	2.30E+01	0.	0.	9.98E+02	1.58E+04	7.80E+03	3.16E+02	3.59E+02	
SV	0.	3.90E+01	1.23E+02	6.50E+01	3.49E+02	4.97E+02	1.28E+04	1.42E+05	4.44E+04	4.65E+04	
WSV	0.	7.70E+01	2.36E+02	3.80E+00	2.17E+02	2.52E+03	1.18E+04	5.04E+04	1.37E+05	1.85E+05	
V	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	
WNV	1.17E+02	0.	0.	0.	7.11E+02	1.03E+04	2.83E+04	1.65E+05	1.13E+05	1.08E+05	
NV	1.90E+01	0.	0.	0.	8.00E+00	5.65E+03	3.96E+04	2.07E+05	8.21E+05	6.36E+05	
WNV	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 January-June 1982

<u>Pathway</u>	<u>Thyroid (MAN-REM)</u>	<u>Total Body (MAN-REM)</u>
Noble Gas Immersion (Gamma)	2.07	2.07
Ground Plane Deposition	0.10	0.10
Inhalation	0.05	0.02



##### 5. OFF-SITE DOSES FROM DIRECT RADIATION

Doses due to direct radiation as measured by thermoluminescent dosimeter for the period January-June 1982 were as follows:

	<u>Average Dose Rate</u> <u>uR/hour</u>
Near Plant (0 - 0.16 miles from the Plant)	8.4
Exclusion Area (0.25 - 0.68 miles from the Plant)	3.7
Distant Neighborhood (0.7 - 6.5 miles from the Plant)	2.6
Background (8 - 23 miles from the Plant)	1.9

These measured values 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.

#### REFERENCES

1. "Pilgrim Station Unit 1 Appendix Evaluation" Submitted in Accordance with 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, pgs. 2-3 and 2-7.