

PILGRIM NUCLEAR POWER STATION

Radioactive Effluent and Waste Disposal Report

including

Radiological Impact on Humans

JULY 1 THROUGH DECEMBER 31, 1978

**BY: NUCLEAR ENGINEERING DEPT.
ENVIRONMENTAL SCIENCES GROUP**

**DATE
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BOSTON EDISON COMPANY

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

JULY 1 THROUGH DECEMBER 31, 1978

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1. INTRODUCTION AND SUMMARY

This report is issued for the period July-December 1978 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. The calculated doses are below the limits specified in 10 CFR 50, Appendix I .

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.

It should be noted that data recovery at the 160' elevation of the Pilgrim Meteorological Tower averaged 95.6% for the period July 1 through December 31, 1978.

EFFLUENT AND WASTE DISPOSAL SEMI-ANNUAL REPORT

Supplemental Information

JULY-DECEMBER, 1978

Facility Pilgrim Nuclear Power Station Licensee DPR-35

1. Regulatory Limits

- a. Fission and activation gases: $Q_s / (0.25 / \bar{E}) + Q_v / (0.10 / \bar{E}) \leq 1$
- b. Iodines: 2Ci/Quarter
- c. Particulates, half-lives > 8 days: $13(Q_s \times 1.8E4 + Q_v \times 1.8E5) \leq 1$
- 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 = 1×10^{-5} μ 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. $\bar{E} = 1$ Mev

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: 51
 - 2. Total time period for batch releases: 72.8 hrs
 - 3. Maximum time period for a batch release: - 16.2 hrs
 - 4. Average time period for batch releases: 1.43 hrs
 - 5. Minimum time period for a batch release: - 5 min
 - 6. Average stream flow during periods of release of effluent into a flowing stream: 3.00 E + 5GPM
- b. Gaseous (Not Applicable)

6. Abnormal Releases

- a. Liquid - None
- b. Gaseous - None

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

JULY - DECEMBER 1978

Unit	Quarter 3	Quarter 4	Est. Total Error, %
------	--------------	--------------	------------------------

A. Fission and activation gases

1. Total release	Ci	4.24 E+3	2.83 E+3	5.00 E+1
2. Average release rate for period	$\mu\text{Ci/sec}$	5.33 E+2	3.56 E+2	
3. Percent of Technical Specification limit	%	2.33 E-1	1.54 E-1	

B. Iodines

1. Total iodine-131	Ci	2.66 E-2	4.00 E-2	3.75 E+1
2. Average release rate for period	$\mu\text{Ci/sec}$	3.35 E-3	5.03 E-3	
3. Percent of Technical Specification limit	%	1.33 E0	2.00 E0	

C. Particulates

1. Particulates with half-lives > 8 days	Ci	9.84 E-3	1.11 E-2	3.75 E+1
2. Average release rate for period	$\mu\text{Ci/sec}$	1.24 E-3	1.40 E-3	
3. Percent of Technical Specification limit	%	1.19 E-1	1.71 E-1	
4. Gross alpha radioactivity	Ci	< 4.43 E-7	< 5.10 E-7	

D. Tritium

1. Total release	Ci	2.61 E+1	3.76 E+1	5.00 E+1
2. Average release rate for period	$\mu\text{Ci/sec}$	3.28 E0	4.73 E0	
3. Percent of Technical Specification limit	%			

TABLE 1B
EFFLUENT AND WASTE DISPOSAL SEMIANNUAL REPORT (1978)
GASEOUS EFFLUENTS – ELEVATED RELEASE
JULY - DECEMBER, 1978

CONTINUOUS MODE

BATCH MODE

Nuclides Released	Unit	Quarter	Quarter	Quarter	Quarter
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1. Fission gases

krypton-85	Ci	1.25 E-2	7.98 E-3		
krypton-85m	Ci	9.52 E+2	6.06 E+2		
krypton-87	Ci	5.06 E+2	2.27 E+2		
krypton-88	Ci	1.74 E+3	1.06 E+3		
xenon-133	Ci	5.86 E+2	4.07 E+2		
xenon-135	Ci	7.45 E+1	4.76 E+1		
xenon-135m	Ci	4.33 E+1	7.54 E+1		
xenon-138	Ci	8.02 E+1	2.61 E+2		
	Ci				
	Ci				
	Ci				
Total for period	Ci	3.98 E+3	2.68 E+3		

2. Iodines

iodine-131	Ci	1.69 E-2	2.44 E-2		
iodine-133	Ci	6.47 E-2	8.08 E-2		
iodine-135	Ci	7.53 E-2	6.00 E-2		
Total for period	Ci	1.57 E-1	1.65 E-1		

3. Particulates

strontium-89	Ci	1.40 E-3	1.45 E-3		
strontium-90	Ci	2.83 E-5	1.29 E-5		
cesium-134	Ci	2.30 E-6	2.49 E-6		
cesium-137	Ci	3.31 E-5	4.04 E-5		
barium-lanthanum-140	Ci	4.86 E-3	4.22 E-3		
chromium-51	Ci		1.49 E-5		
manganese-54	Ci	9.19 E-6	1.09 E-5		
	Ci				
	Ci				
cobalt-60	Ci	3.27 E-5	4.11 E-5		
	Ci				
	Ci				
cerium-141	Ci	8.59 E-6	4.66 E-6		
cerium-144	Ci	1.67 E-5	4.10 E-6		
ruthenium-103	Ci	3.19 E-6	1.28 E-6		
ruthenium-106	Ci	4.48 E-5	3.12 E-5		

TABLE 1C
EFFLUENT AND WASTE DISPOSAL SEMIANNUAL REPORT (1978)
GASEOUS EFFLUENTS - GROUND LEVEL RELEASE

JULY - DECEMBER 1978

Nuclides Released	Unit	CONTINUOUS MODE		BATCH MODE	
		Quarter	Quarter	Quarter	Quarter

1. Fission gases

krypton-85	Ci				
krypton-85m	Ci				
krypton-87	Ci				
krypton-88	Ci				
xenon-133	Ci		5.49 E+1		
xenon-135	Ci	2.59 E+2	9.57 E+1		
xenon-135m	Ci				
xenon-138	Ci				
Total for period	Ci	2.59 E+2	1.51 E+2		

2. Iodines

iodine-131	Ci	9.67 E-3	1.56 E-2		
iodine-133	Ci	7.08 E-2	1.14 E-1		
iodine-135	Ci	1.32 E-1	1.99 E-1		
Total for period	Ci	2.12 E-1	3.29 E-1		

3. Particulates

strontium-89	Ci	6.75 E-4	8.25 E-4		
strontium-90	Ci	3.30 E-6	4.96 E-6		
cesium-134	Ci	2.38 E-5	2.95 E-5		
cesium-137	Ci	9.59 E-5	1.06 E-4		
barium-lanthanum-140	Ci	2.36 E-3	3.99 E-3		
manganese-54	Ci	1.58 E-5	1.17 E-5		
cobalt-58	Ci	2.26 E-6	1.58 E-6		
chromium-51	Ci	5.80 E-5	6.73 E-5		
cobalt-60	Ci	1.33 E-4	8.86 E-5		
zinc-65	Ci		8.58 E-6		
	Ci				
cerium-141	Ci	2.45 E-5	8.85 E-5		
cerium-144	Ci	9.46 E-6			
	Ci				

TABLE 2A
EFFLUENT AND WASTE DISPOSAL SEMIANNUAL REPORT (1978)
LIQUID EFFLUENTS - SUMMATION OF ALL RELEASES

JULY - DECEMBER 1978

Unit	Quarter 3	Quarter 4	Est. Total Error, %
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A. Fission and activation products

1. Total release (not including tritium, noble gases, or alpha)	Ci	< 2.34 E-1	< 1.30 E-1	3.20 E+1
2. Average diluted concentration during period	μ Ci/ml	1.46 E-7	3.88 E-8	
3. Percent of applicable limit	%	2.34 E0	1.30 E0	

B. Tritium

1. Total release	Ci	2.39 E-3	1.44 E-2	3.30 E+1
2. Average diluted concentration during period	μ Ci/ml	1.49 E-9	4.30 E-9	
3. Percent of applicable limit	%	1.49 E-2	4.30 E-2	

C. Dissolved and entrained gases

1. Total release	Ci	< 3.00 E-5	< 6.75 E-5	4.50 E+1
2. Average diluted concentration during period	μ Ci/ml	< 1.88 E-11	< 2.01 E-11	
3. Percent of applicable limit	%			

D. Gross alpha radioactivity

1. Total release	Ci	< 2.77 E-6	< 8.49 E-6	4.40 E+1
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E. Volume of waste released (prior to dilution)	liters	3.97 E+4	9.01 E+4	2.00 E+1
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F. Volume of dilution water used during period	liters	1.60 E+9	3.35 E+9	1.00 E+1
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TABLE 2B
EFFLUENT AND WASTE DISPOSAL SEMIANNUAL REPORT (1978)

LIQUID EFFLUENTS

JULY-DECEMBER 1978

Nuclides Released	Unit	BATCH MODE		CONTINUOUS MODE	
		Quarter	Quarter	Quarter	Quarter
strontium-89	Ci	< 2.33 E-5	<1.68 E-4		
strontium-90	Ci	2.06 E-4	4.67 E-4		
cesium-134	Ci	2.41 E-3	1.10 E-3		
cesium-137	Ci	8.46 E-3	5.88 E-3		
iodine-131	Ci	3.76 E-6	<1.80 E-5		
cobalt-58	Ci	4.81 E-4	1.09 E-4		
cobalt-60	Ci	5.95 E-2	2.39 E-2		
iron-59	Ci				
zinc-65	Ci	1.10 E-3	3.68 E-4		
manganese-54	Ci	1.43 E-2	4.81 E-3		
chromium-51	Ci	6.07 E-5	1.06 E-4		
zirconium-niobium-95	Ci	5.38 E-5	7.13 E-7		
molybdenum 99- technetium 99m	Ci	2.13 E-5	7.80 E-7		
barium-lanthanum-140	Ci	1.84 E-4	<6.31 E-5		
cerium-141	Ci		<1.89 E-5		
iodine-133	Ci	2.18 E-6	<2.25 E-5		
cerium-144	Ci	1.21 E-3	3.49 E-4		
	Ci				
iron-55	Ci	1.06 E-1	8.11 E-2		
unidentified	Ci	3.97 E-2	1.18 E-2		
Total for period (above)	Ci	<2.34 E-1	<1.30 E-1		
xenon-133	Ci	<2.00 E-5	<4.50 E-5		
xenon-135	Ci	< 9.93 E-6	<2.25 E-5		

TABLE 3
EFFLUENT AND WASTE DISPOSAL SEMIANNUAL REPORT (1978)
SOLID WASTE AND IRRADIATED FUEL SHIPMENTS

July - December 1978

A. SOLID WASTE SHIPPED OFFSITE FOR BURIAL OR DISPOSAL (Not Irradiated fuel)

1. Type of waste	Unit	6-month Period	Est. Total Error, %
a. Spent resins, filter sludges, evaporator bottoms, etc.	m ³ Ci	110.59 1633.61	NA
b. Dry compressible waste, contaminated equip, etc.	m ³ Ci	1313.52 75.838	NA
c. Irradiated components, control rods, etc.	m ³ Ci	2.52 39606	NA
d. Other (describe) Miscellaneous low-level waste	m ³ Ci	None	NA

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

		%	E
a.			
Diatomaceous Earth & Spent Resin	Cs137	14.83	249.68
	Co60	24.74	416.50
	Mn54	5.25	88.40
	Cs134	5.38	90.58
	LA140	8.94	150.50
	FE55	26.13	439.90
b. Dry Compressible Waste, Contaminated Equipment, etc.	LA140	8.94	6.78
	Co60	24.74	18.76
	Mn54	5.25	3.98
	Cs137	14.83	11.25
	Cs134	5.38	4.08
	Cr51	5.89	4.46
	Fe55	26.13	19.82
c. Irradiated Components	Co60	37.70	14931.46
	Mn54	8.00	3168.48
	Cr51	8.98	3556.62
	Fe55	39.82	15771.11

3. Solid Waste Disposition

<u>Number of Shipments</u>	<u>Mode of Transportation</u>	<u>Destination</u>
93	Tractor Trailer	Barnwell, S.C.
1	Tractor Trailer	Hanford, Wash.

B. IRRADIATED FUEL SHIPMENTS (Disposition)

<u>Number of Shipments</u>	<u>Mode of Transportation</u>	<u>Destination</u>
None		

33 FT WIND
PILGRIM 160 FT TOWER
7/1/78 - 9/30/78

160-33 FT DELTA T STABILITY A - DELTA T LESS THAN -1.8 DEG C PER 100 METERS

SPEED (MPH)	DIRECTION												N	TOTAL			
	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W			WNW	NW	NNW
1.0-3.5	1	2	6	4	3	1	0	0	0	0	0	0	0	0	1	0	18
(1)	0.2	0.5	1.5	1.0	0.7	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	4.4
(2)	0.0	0.1	0.3	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	0.8
3.6-7.5	16	10	10	11	20	29	12	6	0	3	2	8	7	6	17	15	172
(1)	3.9	2.4	2.4	2.7	4.8	7.0	2.9	1.5	0.0	0.7	0.5	1.9	1.7	1.5	4.1	3.6	41.6
(2)	0.7	0.5	0.5	0.5	0.9	1.4	0.6	0.3	0.0	0.1	0.1	0.4	0.3	0.3	0.8	0.7	8.0
7.6-12.5	8	5	2	0	1	4	6	8	49	43	7	2	2	1	6	19	163
(1)	1.9	1.2	0.5	0.0	0.2	1.0	1.5	1.9	11.9	10.4	1.7	0.5	0.5	0.2	1.5	4.6	39.5
(2)	0.4	0.2	0.1	0.0	0.0	0.2	0.3	0.4	2.3	2.0	0.3	0.1	0.1	0.0	0.3	0.9	7.6
12.6-18.5	17	1	0	0	0	0	0	0	8	11	0	0	0	0	3	8	48
(1)	4.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0	1.9	2.7	0.0	0.0	0.0	0.0	0.7	1.9	11.6
(2)	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.5	0.0	0.0	0.0	0.0	0.1	0.4	2.2
18.6-24.0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	3	2	8
(1)	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.5	1.9
(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	0.1	0.1	0.4
OVER 24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	1	0	4
(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	0.7	0.2	0.0	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	0.1	0.0	0.0	0.2
ALL SPEEDS	45	18	18	15	24	34	18	14	57	57	9	10	9	10	31	44	413
(1)	10.9	4.4	4.4	3.6	5.8	8.2	4.4	1.4	13.8	13.8	2.2	2.4	2.2	2.4	7.5	10.7	100.0
(2)	2.1	0.8	0.8	0.7	1.1	1.6	0.8	0.7	2.7	2.7	0.4	0.5	0.4	0.5	1.5	2.1	19.3

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

413 HRS ON THIS PAGE 0 HRS (0.0 PCT) LESS THAN 1.0 MPH (0.0 PCT OF ALL HRS)

TABLE 4A-1 (Continued)

PILGRIM 160 FT TOWER

7/1/78 - 9/30/78

33 FT WIND

DISTRIBUTION OF WIND DIRECTIONS AND SPEEDS

160-33 FT DELTA Y STABILITY B - DELTA Y -1.8 TO -1.7 DEG C PER 100 METERS

SPEED (MPH)	MNE	ME	ENE	E	ESE	DIRECTION					WSW	W	WNW	NW	NNW	N	TOTAL
						SE	SSE	S	SSW	SW							
1.0-3.5	0	0	1	3	1	0	0	0	0	0	0	0	0	0	0	1	7
(1)	0.0	0.0	0.8	2.3	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	5.3
(2)	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	0.3
3.6-7.5	3	0	2	1	2	2	1	1	0	3	6	2	3	1	2	1	31
(1)	2.3	0.0	1.5	0.8	1.5	1.5	0.8	0.8	0.0	2.3	9.5	1.5	2.3	0.8	1.5	0.8	23.5
(2)	0.1	0.0	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.1	0.3	0.1	0.1	0.0	0.1	0.0	1.5
7.6-12.5	9	9	1	1	0	0	0	2	11	16	9	0	0	0	2	1	96
(1)	3.0	3.0	0.8	0.8	0.0	0.0	0.0	1.5	8.3	12.1	3.0	0.0	0.0	0.0	1.5	0.8	39.8
(2)	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.1	0.5	0.7	0.2	0.0	0.0	0.0	0.1	0.0	2.2
12.6-18.5	11	2	1	0	0	0	0	0	5	6	0	0	0	3	1	2	31
(1)	8.3	1.5	0.8	0.0	0.0	0.0	0.0	0.0	3.8	9.5	0.0	0.0	0.0	2.3	0.8	1.5	23.5
(2)	0.5	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.3	0.0	0.0	0.0	0.1	0.0	0.1	1.5
18.6-24.0	8	0	0	0	0	0	0	0	0	0	0	0	0	2	2	1	13
(1)	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	1.5	1.5	0.8	9.8
(2)	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	0.1	0.1	0.0	0.6
OVER 24.0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	9
(1)	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	2.3	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	0.0	0.0	0.0	0.1	0.0	0.2
ALL SPEEDS	27	6	5	5	3	2	2	3	16	25	10	2	3	6	11	6	132
(1)	20.5	4.5	3.8	3.8	2.3	1.5	1.5	2.3	12.1	18.9	7.6	1.5	2.3	9.5	8.3	4.5	100.0
(2)	1.3	0.3	0.2	0.2	0.1	0.1	0.1	0.1	0.7	1.2	0.5	0.1	0.1	0.3	0.5	0.3	6.2

(1) = PERCENT OF ALL GOOD OBS FOR THIS PAGE

(2) = PERCENT OF ALL GOOD OBS FOR THE PERIOD

132 HRS ON THIS PAGE 0 HRS (0.0 PCT) LESS THAN 1.0 MPH 1 0.0 PCT OF ALL HRS)

PILGRIM 160 FT TOWER

33 FT WIND

DISTRIBUTION OF WIND DIRECTIONS AND SPEEDS

7/ 1/78 - 9/30/78

160-33 FT DELTA T STABILITY C - DELTA T -1.6 TO -1.5 DEG C PER 100 METERS

SPEED (MPH)	DIRECTION															
	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	MNW	N TOTAL
1.0- 3.5	0	1	0	1	1	0	1	0	0	0	0	0	0	0	1	1
(1)	0.0	0.7	0.0	0.7	0.7	0.0	0.7	0.0	0.0	0.0	0.7	0.0	0.0	0.0	0.7	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	0.3
3.6- 7.5	0	0	1	2	1	4	5	2	1	2	2	1	4	7	2	1
(1)	0.0	0.0	0.7	1.4	0.7	2.9	3.6	1.4	0.7	1.4	1.4	0.7	2.9	5.1	1.4	25.4
(2)	0.0	0.0	0.0	0.1	0.0	0.2	0.2	0.1	0.0	0.1	0.1	0.0	0.2	0.3	0.1	1.6
7.6-12.5	5	6	5	2	0	0	1	1	13	11	1	1	2	1	0	3
(1)	3.6	4.3	3.6	1.4	0.0	0.0	0.7	9.4	9.4	8.0	0.7	0.7	1.4	0.7	0.0	37.7
(2)	0.2	0.3	0.2	0.1	0.0	0.0	0.0	0.6	0.6	0.5	0.0	0.0	0.1	0.0	0.0	2.4
12.6-18.5	4	11	3	0	0	0	0	0	4	4	0	0	0	0	1	5
(1)	2.9	8.0	2.2	0.0	0.0	0.0	0.0	0.0	2.9	2.9	0.0	0.0	0.0	0.0	0.7	23.2
(2)	0.2	0.5	0.1	0.0	0.0	0.0	0.0	0.2	0.2	0.2	0.0	0.0	0.0	0.0	0.0	1.5
18.6-24.0	0	4	1	0	0	0	0	0	0	0	0	0	0	1	1	7
(1)	0.0	2.9	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.7	5.1
(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	0.0	0.0	0.0	0.3
OVER 24.0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	1	5
(1)	1.4	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	3.6
(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	0.0	0.2
ALL SPEEDS	11	24	10	5	2	4	7	3	18	17	4	2	6	9	6	10
(1)	8.0	17.4	7.2	3.6	1.4	2.9	5.1	2.2	13.0	12.3	2.9	1.4	4.3	6.5	4.3	7.2
(2)	0.5	1.1	0.5	0.2	0.1	0.2	0.3	0.1	0.8	0.8	0.2	0.1	0.3	0.4	0.3	0.5

(1)=PERCENT OF ALL GOOD OBS FOR THIS PAGE

(2)=PERCENT OF ALL GOOD OBS FOR THE PERIOD

138 HRS ON THIS PAGE 0 HRS (0.0 PCT) LESS THAN 1.0 MPH (0.0 PCT OF ALL HRS)

TABLE 4A-1 (Continued)

PILGRIM 160 FT TOWER																		
33 FT WIND		DISTRIBUTION OF WIND DIRECTIONS AND SPEEDS																
160-33 FT DELTA T STABILITY D - DELTA T -1.4 TO -0.5 DEG C PER 100 METERS																		
SPEED (MPH)		DIRECTION																
		MNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	MNW	N	TOTAL
1.0-3.5	(1)	1	4	4	8	8	10	10	3	1	1	0	1	3	5	7	3	69
	(11)	0.2	0.6	0.6	1.3	1.3	1.6	1.6	0.5	0.2	0.2	0.0	0.2	0.5	0.8	1.1	0.5	11.0
	(12)	0.0	0.2	0.2	0.4	0.4	0.5	0.5	0.1	0.0	0.0	0.0	0.0	0.1	0.2	0.3	0.1	3.2
3.6-7.5	(1)	2	5	8	8	7	21	18	10	32	19	12	9	11	26	19	6	215
	(11)	0.3	0.8	1.3	1.3	1.1	3.3	2.9	1.6	5.1	3.0	1.9	1.4	1.7	4.4	3.0	1.0	34.1
	(12)	0.1	0.2	0.4	0.4	0.3	1.0	0.8	0.5	1.5	0.9	0.6	0.4	0.5	1.3	0.9	0.3	10.1
7.6-12.5	(1)	11	14	8	6	0	0	5	6	68	60	6	10	7	11	12	3	227
	(11)	1.7	2.2	1.3	1.0	0.0	0.0	0.8	1.0	10.8	9.5	1.0	1.6	1.1	1.7	1.9	0.5	36.0
	(12)	0.5	0.7	0.4	0.3	0.0	0.0	0.2	0.3	3.2	2.8	0.3	0.5	0.3	0.5	0.6	0.1	10.6
12.6-18.5	(1)	1	19	8	0	0	0	0	1	14	36	0	0	0	10	6	4	99
	(11)	0.2	3.0	1.3	0.0	0.0	0.0	0.0	0.2	2.2	5.7	0.0	0.0	0.0	1.6	1.0	0.6	15.7
	(12)	0.0	0.9	0.4	0.0	0.0	0.0	0.0	0.0	0.7	1.7	0.0	0.0	0.0	0.5	0.3	0.2	4.6
18.6-24.0	(1)	3	6	0	0	0	0	0	0	2	2	0	0	0	0	2	0	13
	(11)	0.5	1.0	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	0.0	2.1
	(12)	0.1	0.3	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	0.0	0.6
OVER 24.0	(1)	4	2	0	0	0	0	0	0	0	0	0	0	0	0	1	0	7
	(11)	0.6	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	0.2	0.0	1.1
	(12)	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	0.3
ALL SPEEDS	(1)	22	50	28	22	15	31	33	20	115	118	18	20	21	54	47	16	630
	(11)	3.5	7.9	4.4	3.5	2.4	4.9	5.2	3.2	18.3	18.7	2.9	3.2	3.3	8.6	7.5	2.5	100.0
	(12)	1.0	2.3	1.3	1.0	0.7	1.5	1.5	0.9	5.4	5.5	0.8	0.9	1.0	2.5	2.2	0.7	29.5

(1)=PERCENT OF ALL GOOD OBS FOR THIS PAGE

(2)=PERCENT OF ALL GOOD OBS FOR THE PERIOD

630 HRS ON THIS PAGE

0 HRS (0.0 PCT) LESS THAN 1.0 MPH

(0.0 PCT OF ALL HRS)

TABLE 4A-1 (Continued)

PILGRIM 160 FT TOWER														7/1/78 - 9/30/78	
33 FT WIND															
DISTRIBUTION OF WIND DIRECTIONS AND SPEEDS															
160-33 FT DELTA Y STABILITY E - DELTA Y -0.4 TO +1.5 DEG C PER 100 METERS															
SPEED (MPH)	DIRECTION													N	TOTAL
	MNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	MNW	MNW	
1.0-3.5	1	1	4	7	2	7	5	8	2	2	1	1	4	1	49
(1)	0.2	0.2	0.9	1.5	0.4	1.5	1.1	1.7	0.4	0.4	0.2	0.2	0.9	0.2	
(2)	0.0	0.0	0.2	0.3	0.1	0.3	0.2	0.4	0.1	0.1	0.0	0.0	0.2	0.0	10.4
3.6-7.5	0	6	4	9	8	8	13	21	20	11	15	17	15	6	165
(1)	0.0	1.3	0.9	1.9	1.7	1.7	2.8	4.5	4.3	2.3	3.2	3.6	3.2	1.3	
(2)	0.0	0.3	0.2	0.4	0.4	0.4	0.6	1.0	0.9	0.5	0.7	0.8	0.7	0.3	35.1
7.6-12.5	2	2	3	0	0	0	0	2	48	59	33	2	5	9	176
(1)	0.4	0.4	0.6	0.0	0.0	0.0	0.0	0.4	10.2	12.6	7.0	0.4	1.1	1.9	
(2)	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.1	2.2	2.8	1.5	0.1	0.2	0.4	37.4
12.6-18.5	1	0	2	0	0	0	0	0	8	53	0	0	0	0	70
(1)	0.2	0.0	0.4	0.0	0.0	0.0	0.0	0.0	1.7	11.3	0.0	0.0	0.0	0.0	
(2)	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.4	2.5	0.0	0.0	0.0	0.0	14.9
18.6-24.0	1	0	5	0	0	0	0	0	0	0	0	0	0	0	6
(1)	0.2	0.0	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
(2)	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	1.3
OVER 24.0	3	1	0	0	0	0	0	0	0	0	0	0	0	0	4
(1)	0.6	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	
(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	0.9
ALL SPEEDS	8	10	18	14	10	15	18	31	78	125	49	20	24	14	470
(1)	1.7	2.1	3.8	3.4	2.1	3.2	3.8	6.6	16.6	26.6	10.4	4.3	5.1	3.4	
(2)	0.4	0.5	0.8	0.7	0.5	0.7	0.8	1.5	3.6	5.8	2.3	0.9	1.1	0.7	2.8
														0.6	22.0

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

470 HRS ON THIS PAGE 0 HRS (0.0 PCT) LESS THAN 1.0 MPH (0.0 PCT OF ALL HRS)

TABLE 4A-1 (Continued)

PILGRIM 160 FT TOWER																		
33 FT WIND		DISTRIBUTION OF WIND DIRECTIONS AND SPEEDS																
160-33 FT DELTA T STABILITY F - DELTA T 1.6 TO 4.0 DEG C PER 100 METERS																		
SPEED (MPH)		DIRECTION																
		MNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	MNW	NW	NNW	N	TOTAL
1.0-3.5		0	1	1	2	0	2	1	5	3	1	0	0	0	1	0	3	31
(1)		0.0	0.4	0.4	0.9	0.0	0.9	0.4	2.2	1.3	0.4	0.0	0.0	0.0	0.4	0.0	1.3	13.4
(2)		0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	1.5
3.6-7.5		0	0	2	2	2	0	5	14	12	18	17	0	0	1	0	0	99
(1)		0.0	0.0	0.9	0.9	0.9	0.0	2.2	11.3	5.2	7.8	7.4	0.0	0.0	0.4	0.0	0.0	42.9
(2)		0.0	0.0	0.1	0.1	0.1	0.0	0.2	1.2	0.6	0.8	0.8	0.0	0.0	0.0	0.0	0.0	4.6
7.6-12.5		1	0	0	0	0	0	0	2	36	23	2	0	0	2	1	0	87
(1)		0.4	0.0	0.0	0.0	0.0	0.0	0.0	8.7	15.6	10.0	0.9	0.0	0.0	0.9	0.4	0.0	37.7
(2)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	1.7	1.1	0.1	0.0	0.0	0.1	0.0	0.0	4.1
12.6-18.5		0	0	0	0	0	0	0	0	11	1	0	0	0	0	1	1	14
(1)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.8	0.4	0.0	0.0	0.0	0.0	0.4	0.4	6.1
(2)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7
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	1	3	4	2	2	6	39	62	43	19	0	0	4	2	4	231
(1)		0.4	0.4	1.3	1.7	0.9	0.9	2.6	16.9	26.8	18.6	8.2	0.0	0.0	1.7	0.9	1.7	100.0
(2)		0.0	0.0	0.1	0.2	0.1	0.1	0.3	1.8	2.9	2.0	0.9	0.0	0.0	0.1	0.1	0.2	10.4

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

231 HRS ON THIS PAGE 0 HRS (0.0 PCT) LESS THAN 1.0 MPH (0.0 PCT OF ALL HRS)

PILGRIM 160 FT TOWER

33 FT WIND

DISTRIBUTION OF WIND DIRECTIONS AND SPEEDS

7/1/78 - 9/30/78

160-33 FT DELTA T STABILITY 6 - DELTA T GREATER THAN 4.0 DEG C PER 100 METERS

SPEED (MPH)	MNE	NE	ENE	E	ESE	SE	DIRECTION				WSW	W	WNW	NW	NNW	N	TOTAL
							SSE	S	SSW	SW							
1.0-3.5	0	0	0	2	0	0	0	10	16	10	1	2	0	0	0	0	41
(1)	0.0	0.0	0.0	1.6	0.0	0.0	0.0	8.1	13.0	8.1	0.8	1.6	0.0	0.0	0.0	0.0	33.3
(2)	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.5	0.7	0.5	0.0	0.1	0.0	0.0	0.0	0.0	1.9
3.6-7.5	0	0	0	0	0	0	1	17	11	17	8	2	0	0	1	0	57
(1)	0.0	0.0	0.0	0.0	0.0	0.0	0.8	13.8	8.9	13.8	6.5	1.6	0.0	0.0	0.8	0.0	46.3
(2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.5	0.8	0.4	0.1	0.0	0.0	0.0	0.0	2.7
7.6-12.5	0	0	0	0	0	0	0	1	0	16	7	0	0	0	0	0	24
(1)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0	13.0	5.7	0.0	0.0	0.0	0.0	0.0	19.5
(2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.3	0.0	0.0	0.0	0.0	0.0	1.1
12.6-18.5	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
(1)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.8
(2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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	2	0	0	1	28	27	44	16	4	0	1	0	0	123
(1)	0.0	0.0	0.0	1.6	0.0	0.0	0.8	22.8	22.0	35.8	13.0	3.3	0.0	0.8	0.0	0.0	100.0
(2)	0.0	0.0	0.0	0.1	0.0	0.0	0.0	1.3	1.3	2.1	0.7	0.2	0.0	0.0	0.0	0.0	5.8

(1)=PERCENT OF ALL GOOD OBS FOR THIS PAGE

(2)=PERCENT OF ALL GOOD OBS FOR THE PERIOD

123 HRS ON THIS PAGE 0 HRS (0.0 PCT) LESS THAN 1.0 MPH (0.0 PCT OF ALL HRS)

7/1/78 - 9/30/78

PILGRIM 160 FT TOWER

DISTRIBUTION OF WIND DIRECTIONS AND SPEEDS

33 FT WIND

160-33 FT DELTA Y ALL STABILITIES COMBINED

SPEED (MPH)	NNE	NE	ENE	E	ESE	SE	DIRECTION								NW	NNW	N	TOTAL
							SSE	S	SSW	SW	WSW	W	WNW					
1.0-3.5	3	9	16	27	15	20	17	32	24	16	4	0.2	0.3	7	7	11	10	222
(1)	0.1	0.4	0.7	1.3	0.7	0.9	0.8	1.5	1.1	0.7	0.2	0.2	0.3	0.3	0.3	0.5	0.5	10.4
(2)	0.1	0.4	0.7	1.3	0.7	0.9	0.8	1.5	1.1	0.7	0.2	0.2	0.3	0.3	0.3	0.5	0.5	10.4
3.6-7.5	21	21	27	33	40	64	56	83	78	67	63	56	40	50	46	29	29	774
(1)	1.0	1.0	1.3	1.5	1.9	3.0	2.6	3.9	3.6	3.1	2.9	2.6	1.9	2.3	2.2	1.4	1.4	36.2
(2)	1.0	1.0	1.3	1.5	1.9	3.0	2.6	3.9	3.6	3.1	2.9	2.6	1.9	2.3	2.2	1.4	1.4	36.2
7.6-12.5	31	31	19	9	1	4	12	22	209	241	81	17	16	24	28	30	30	775
(1)	1.5	1.5	0.9	0.4	0.0	0.2	0.6	1.0	9.8	11.3	3.8	0.8	0.7	1.1	1.3	1.4	1.4	36.3
(2)	1.5	1.5	0.9	0.4	0.0	0.2	0.6	1.0	9.8	11.3	3.8	0.8	0.7	1.1	1.3	1.4	1.4	36.3
12.6-18.5	34	33	14	0	0	0	0	1	39	122	1	0	0	13	17	21	21	295
(1)	1.6	1.5	0.7	0.0	0.0	0.0	0.0	0.0	1.8	5.7	0.0	0.0	0.0	0.6	0.8	1.0	1.0	13.8
(2)	1.6	1.5	0.7	0.0	0.0	0.0	0.0	0.0	1.8	5.7	0.0	0.0	0.0	0.6	0.8	1.0	1.0	13.8
18.6-24.0	15	10	6	0	0	0	0	0	0	2	0	0	0	3	8	3	3	47
(1)	0.7	0.5	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.4	0.1	0.1	2.2
(2)	0.7	0.5	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.4	0.1	0.1	2.2
OVER 24.0	10	5	0	0	0	0	0	0	0	0	0	0	0	3	6	0	0	24
(1)	0.5	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.3	0.0	0.0	1.1
(2)	0.5	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.3	0.0	0.0	1.1
ALL SPEEDS	114	109	82	69	56	88	85	138	350	448	149	77	63	100	116	93	93	2137
(1)	5.3	5.1	3.8	3.2	2.6	4.1	4.0	6.5	16.4	21.0	7.0	3.6	2.9	4.7	5.4	4.4	4.4	100.0
(2)	5.3	5.1	3.8	3.2	2.6	4.1	4.0	6.5	16.4	21.0	7.0	3.6	2.9	4.7	5.4	4.4	4.4	100.0

(1)=PERCENT OF ALL GOOD OBS FOR THIS PAGE

(2)=PERCENT OF ALL GOOD OBS FOR THE PERIOD

96.8 PCT DATA RECOVERY

2208 HRS IN THE TIME PERIOD

0 HRS (0.0 PCT) LESS THAN 1.0 MPH

2137 GOOD HRS

160 FT WIND
PILGRIM 160 FT TOWER
DISTRIBUTION OF WIND DIRECTIONS AND SPEEDS
7/1/78 - 9/30/78
160-33 FT DELTA Y STABILITY A - DELTA Y LESS THAN -1.8 DEG C PER 100 METERS

SPEED (MPH)	MNE	NE	ENE	E	ESE	SE	DIRECTION								NW	NNW	N	TOTAL
							SSE	S	SSW	SW	WSW	W	WNW	NW				
1.0-3.5	0	4	2	1	0	0	0	0	0	0	0	0	0	0	0	2	13	
(1)	0.0	1.0	0.5	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	3.1	
(2)	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	0.0	0.1	0.6	
3.6-7.5	11	11	14	14	3	5	4	1	3	3	3	3	3	1	16	18	118	
(1)	2.7	2.7	1.9	3.4	0.7	1.2	1.0	0.2	0.7	0.7	0.7	0.7	0.7	0.2	3.9	4.3	28.5	
(2)	0.5	0.5	0.4	0.6	0.1	0.2	0.2	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.7	0.8	5.5	
7.6-12.5	5	6	0	1	10	19	5	12	16	21	7	4	5	3	5	19	138	
(1)	1.2	1.4	0.0	0.2	2.4	4.6	1.2	2.9	3.9	5.1	1.7	1.0	1.2	0.7	1.2	4.6	33.3	
(2)	0.2	0.3	0.0	0.0	0.5	0.9	0.2	0.6	0.7	1.0	0.3	0.2	0.2	0.1	0.2	0.9	6.4	
12.6-18.5	9	1	0	0	8	5	5	7	43	20	0	0	2	1	7	11	119	
(1)	2.2	0.2	0.0	0.0	1.9	1.2	1.2	1.7	10.4	4.8	0.0	0.0	0.5	0.2	1.7	2.7	28.7	
(2)	0.4	0.0	0.0	0.0	0.4	0.2	0.2	0.3	2.0	0.9	0.0	0.0	0.1	0.0	0.3	0.5	5.5	
18.6-24.0	3	0	0	0	0	0	0	0	1	1	0	0	0	0	2	11	18	
(1)	0.7	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	2.7	4.3	
(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	0.1	0.5	0.8	
OVER 24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	4	1	8	
(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	0.7	1.0	0.2	1.9	
(2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.0	0.4	
ALL SPEEDS	28	22	12	17	33	27	15	23	61	45	10	7	10	8	34	62	414	
(1)	6.8	5.3	2.9	4.1	8.0	6.5	3.4	5.6	14.7	10.9	2.4	1.7	2.4	1.9	8.2	15.0	100.0	
(2)	1.3	1.0	0.6	0.8	1.5	1.3	0.7	1.1	2.8	2.1	0.5	0.3	0.5	0.4	1.6	2.9	19.2	

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

414 HRS ON THIS PAGE 0 HRS (0.0 PCT) LESS THAN 1.0 MPH (0.0 PCT OF ALL HRS)

TABLE 4A-1 (Continued)

PILGRIM 160 FT TOWER																	
160 FT WIND		DISTRIBUTION OF WIND DIRECTIONS AND SPEEDS															
160-33 FT DELTA T STABILITY B - DELTA T -1.8 TO -1.7 DEG C PER 100 METERS																	
SPEED (MPH)		DIRECTION															
		NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	WSW	W	WNW	NW	MNW	N	TOTAL
1.0- 3.5	(1)	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	2
	(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	1.5
3.6- 7.5	(1)	1	0	2	3	2	0	1	0	0	1	5	1	0	0	0	20
	(2)	0.0	0.0	1.5	2.3	1.5	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	15.2
7.6-12.5	(1)	4	5	0	0	0	3	0	3	3	9	1	2	0	0	2	38
	(2)	0.2	0.2	0.0	0.0	0.0	0.1	0.0	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.1	28.8
12.6-18.5	(1)	7	0	0	1	1	0	1	0	14	10	0	0	2	2	3	41
	(2)	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.6	7.6	0.0	0.0	1.5	1.5	2.3	31.1
18.6-24.0	(1)	4	0	0	0	0	0	0	0	3	4	0	0	3	0	5	19
	(2)	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.3	3.0	0.0	0.0	2.3	0.0	3.0	14.4
OVER 24.0	(1)	3	0	0	0	0	0	0	0	0	0	0	0	1	4	4	12
	(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	0.2	0.6
ALL SPEEDS	(1)	19	5	3	5	3	3	2	3	20	24	6	3	6	8	19	132
	(2)	0.9	0.2	0.1	0.2	0.1	0.1	0.1	0.1	0.9	1.1	0.3	0.1	0.3	0.4	0.9	6.1

(1) = PERCENT OF ALL GOOD OBS FOR THIS PAGE

(2) = PERCENT OF ALL GOOD OBS FOR THE PERIOD

132 HRS ON THIS PAGE 0 HRS (0.0 PCT) LESS THAN 1.0 MPH (0.0 PCT OF ALL HRS)

TABLE 4A-1 (Continued)

PILGRIM 160 FT TOWER

7/1/78 - 9/30/78

DISTRIBUTION OF WIND DIRECTIONS AND SPEEDS

160-33 FT DELTA T STABILITY C - DELTA T -1.6 TO -1.5 DEG C PER 100 METERS

SPEED (MPH)	DIRECTION															
	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	MNW	N TOTAL
1.0-3.5	1	0	0	0	0	0	0	0	0	0	0	0	0	0	2	3
(1)	0.7	0.0	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	2.1
(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	0.1
3.6-7.5	0	2	1	1	2	0	3	1	0	1	1	0	4	0	3	19
(1)	0.0	1.4	0.7	0.7	1.4	0.0	2.1	0.7	0.0	0.7	0.7	0.0	2.8	0.0	2.1	13.5
(2)	0.0	0.1	0.0	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.1	0.9
7.6-12.5	4	5	4	0	2	5	0	2	4	6	2	4	3	2	4	48
(1)	2.8	3.5	2.8	0.0	1.4	3.5	0.0	1.4	2.8	4.3	1.4	2.8	2.1	1.4	2.8	34.0
(2)	0.2	0.2	0.2	0.0	0.1	0.2	0.0	0.1	0.2	0.3	0.1	0.2	0.1	0.1	0.2	2.2
12.6-18.5	6	9	2	4	0	0	1	1	15	6	0	1	2	0	1	51
(1)	4.3	6.4	1.4	2.8	0.0	0.0	0.7	0.7	10.6	4.3	0.0	0.7	1.4	0.0	0.7	36.2
(2)	0.3	0.4	0.1	0.2	0.0	0.0	0.0	0.0	0.7	0.3	0.0	0.0	0.1	0.0	0.0	2.4
18.6-24.0	2	2	0	0	0	0	0	0	2	0	0	0	0	0	2	14
(1)	1.4	1.4	0.0	0.0	0.0	0.0	0.0	0.0	1.4	0.0	0.0	0.0	0.0	0.0	1.4	9.9
(2)	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.6
OVER 24.0	1	2	0	0	0	0	0	0	0	0	0	0	0	1	1	6
(1)	0.7	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.7	4.3
(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	0.3
ALL SPEEDS	14	20	7	5	4	5	4	4	21	13	7	5	9	3	13	141
(1)	9.9	14.2	5.0	3.5	2.8	3.5	2.8	2.8	14.9	9.2	2.1	3.5	6.4	2.1	9.2	100.0
(2)	0.6	0.9	0.3	0.2	0.2	0.2	0.2	0.2	1.0	0.6	0.1	0.2	0.4	0.1	0.6	6.5

(1) - PERCENT OF ALL GOOD OBS FOR THIS PAGE

(2) - PERCENT OF ALL GOOD OBS FOR THE PERIOD

141 HRS ON THIS PAGE 0 HRS (0.0 PCT) LESS THAN 1.0 MPH (0.0 PCT OF ALL HRS)

PILGRIM 160 FT TOWER

7/1/78 - 9/30/78

DISTRIBUTION OF WIND DIRECTIONS AND SPEEDS

160-33 FT DELTA T STABILITY D - DELTA T -1.4 TO -0.5 DEG C PER 100 METERS

SPEED (MPH)	MNE	NE	ENE	E	ESE	SE	DIRECTION				WSW	W	WNW	NW	NNW	N	TOTAL
							SSE	S	SSW	SW							
1.0-3.5	2	1	5	3	2	1	0	1	0	2	0	1	0	3	4	3	28
(1)	0.3	0.2	0.8	0.5	0.3	0.2	0.0	0.2	0.0	0.3	0.0	0.2	0.0	0.5	0.6	0.5	4.4
(2)	0.1	0.0	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.2	0.1	1.3
3.6-7.5	3	7	13	13	7	10	15	4	3	4	5	2	8	9	22	13	138
(1)	0.5	1.1	2.0	2.0	1.1	1.6	2.4	0.6	0.5	0.6	0.8	0.3	1.3	1.4	3.5	2.0	21.7
(2)	0.1	0.3	0.6	0.6	0.3	0.5	0.7	0.2	0.1	0.2	0.2	0.1	0.4	0.4	1.0	0.6	6.4
7.6-12.5	6	7	11	10	6	9	4	11	26	27	6	11	3	15	17	6	175
(1)	0.9	1.1	1.7	1.6	0.9	1.4	0.6	1.7	4.1	4.2	0.9	1.7	0.5	2.4	2.7	0.9	27.5
(2)	0.3	0.3	0.5	0.5	0.3	0.4	0.2	0.5	1.2	1.3	0.3	0.5	0.1	0.7	0.8	0.3	8.1
12.6-18.5	12	14	2	7	6	0	5	7	62	60	5	10	9	11	2	1	213
(1)	1.9	2.2	0.3	1.1	0.9	0.0	0.8	1.1	9.7	9.4	0.8	1.6	1.4	1.7	0.3	0.2	33.5
(2)	0.6	0.6	0.1	0.3	0.3	0.0	0.2	0.3	2.9	2.8	0.2	0.5	0.4	0.5	0.1	0.0	9.9
18.6-24.0	4	4	0	0	0	0	2	0	18	26	0	0	0	4	7	4	69
(1)	0.6	0.6	0.0	0.0	0.0	0.0	0.3	0.0	2.8	4.1	0.0	0.0	0.0	0.6	1.1	0.6	10.8
(2)	0.2	0.2	0.0	0.0	0.0	0.0	0.1	0.0	0.8	1.2	0.0	0.0	0.0	0.2	0.3	0.2	3.2
OVER 24.0	7	3	0	0	0	0	0	0	0	1	0	0	0	0	2	0	13
(1)	1.1	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.3	0.0	2.0
(2)	0.3	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	0.1	0.0	0.6
ALL SPEEDS	34	36	31	33	21	20	26	23	109	120	16	24	20	42	54	27	636
(1)	5.3	5.7	4.9	5.2	3.3	3.1	4.1	3.6	17.1	18.9	2.5	3.8	3.1	6.6	8.5	4.2	100.0
(2)	1.6	1.7	1.4	1.5	1.0	0.9	1.2	1.1	5.1	5.6	0.7	1.1	0.9	1.9	2.5	1.3	29.5

(1) - PERCENT OF ALL GOOD OBS FOR THIS PAGE

(2) - PERCENT OF ALL GOOD OBS FOR THE PERIOD

636 HRS ON THIS PAGE 0 HRS (0.0 PCT) LESS THAN 1.0 MPH (0.0 PCT OF ALL HRS)

PILGRIM 160 FT TOWER

7/1/78 - 9/30/78

DISTRIBUTION OF WIND DIRECTIONS AND SPEEDS

160 FT WIND

160-33 FT DELTA T STABILITY E - DELTA T -0.4 TO +1.5 DEG C PER 100 METERS

SPEED (MPH)	MNE	NE	ENE	E	ESE	SE	DIRECTION											N	TOTAL
							SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	N	TOTAL		
1.0-3.5	2	3	2	4	2	1	3	2	1	1	1	1	0	0	0	1	26		
(1)	0.4	0.6	0.4	0.8	0.4	0.2	0.6	0.4	0.2	0.2	0.2	0.2	0.0	0.0	0.0	0.2	5.5		
(2)	0.1	0.1	0.1	0.2	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2		
3.6-7.5	3	4	11	4	3	5	6	2	4	6	2	3	3	6	3	3	71		
(1)	0.6	0.8	2.3	0.8	0.6	1.1	1.3	0.4	0.8	1.3	0.4	0.6	0.6	1.3	0.6	0.6	14.9		
(2)	0.1	0.2	0.5	0.2	0.1	0.2	0.3	0.1	0.2	0.3	0.1	0.1	0.1	0.3	0.1	0.1	3.3		
7.6-12.5	1	1	3	6	5	3	9	12	21	14	10	11	12	3	5	5	130		
(1)	0.2	0.2	0.6	1.3	1.1	0.6	1.9	2.5	4.4	2.9	2.1	2.3	2.5	0.4	1.1	1.1	27.3		
(2)	0.0	0.0	0.1	0.3	0.2	0.1	0.4	0.6	1.0	0.6	0.5	0.5	0.6	0.1	0.2	0.2	6.0		
12.6-18.5	2	1	7	1	1	0	0	12	40	52	26	7	8	7	2	2	176		
(1)	0.4	0.2	1.5	0.2	0.2	0.0	0.0	2.5	8.4	10.9	5.5	1.5	1.7	1.5	0.4	0.4	37.0		
(2)	0.1	0.0	0.3	0.0	0.0	0.0	0.0	0.6	1.9	2.4	1.2	0.3	0.4	0.3	0.1	0.1	8.2		
18.6-24.0	1	0	0	0	0	0	0	0	11	42	1	0	1	5	1	1	62		
(1)	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.3	8.8	0.2	0.0	0.2	1.1	0.2	0.2	13.0		
(2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	1.9	0.0	0.0	0.0	0.2	0.0	0.0	2.9		
OVER 24.0	4	1	0	0	0	0	0	0	0	5	0	0	0	0	0	0	10		
(1)	0.8	0.2	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	2.1		
(2)	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	0.0	0.0	0.0	0.5		
ALL SPEEDS	13	10	23	15	11	9	18	28	77	120	40	32	24	21	12	12	475		
(1)	2.7	2.1	4.8	3.2	2.3	1.9	3.8	5.9	16.2	25.2	8.4	6.7	5.0	4.4	2.5	2.5	99.8		
(2)	0.6	0.5	1.1	0.7	0.5	0.4	1.3	3.6	5.6	1.9	1.9	1.5	1.1	1.0	0.6	0.6	22.0		

(1)=PERCENT OF ALL GOOD OBS FOR THIS PAGE

(2)=PERCENT OF ALL GOOD OBS FOR THE PERIOD

476 HRS ON THIS PAGE 1 HRS (0.2 PCT) LESS THAN 1.0 MPH (0.0 PCT OF ALL HRS)

TABLE 4A-1 (Continued)

PILGRIM 160 FT TOWER

160 FT WIND

DISTRIBUTION OF WIND DIRECTIONS AND SPEEDS

7/ 1/78 - 9/30/78

160-33 FT DELTA T STABILITY F - DELTA T 1.6 TO 4.0 DEG C PER 100 METERS

SPEED (MPH)	MNE	WE	ENE	E	ESE	SE	DIRECTION				WSW	W	WNW	NW	NNW	N	TOTAL
							SSE	S	SSW	SW							
1.0- 3.5	1	0	1	1	0	1	0	0	0	2	1	1	0	2	2	2	14
(1)	0.4	0.0	0.4	0.4	0.0	0.4	0.0	0.0	0.0	0.8	0.4	0.4	0.0	0.8	0.8	0.8	5.9
(2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.1	0.1	0.6
3.6- 7.5	0	2	1	0	0	2	4	1	2	0	4	4	2	3	1	1	27
(1)	0.0	0.8	0.4	0.0	0.0	0.8	1.7	0.4	0.8	0.0	1.7	1.7	0.8	1.3	0.4	0.4	11.3
(2)	0.0	0.1	0.0	0.0	0.0	0.1	0.2	0.0	0.1	0.0	0.2	0.2	0.1	0.1	0.0	0.0	1.3
7.6-12.5	0	0	0	0	1	0	6	21	18	9	9	17	9	3	0	0	93
(1)	0.0	0.0	0.0	0.0	0.4	0.0	2.5	8.8	7.5	3.8	3.8	7.1	3.8	1.3	0.0	0.0	38.9
(2)	0.0	0.0	0.0	0.0	0.0	0.0	0.3	1.0	0.8	0.4	0.4	0.8	0.4	0.1	0.0	0.0	4.3
12.6-18.5	0	0	0	0	0	0	1	10	18	20	22	9	2	1	2	1	86
(1)	0.0	0.0	0.0	0.0	0.0	0.0	0.4	4.2	7.5	8.4	9.2	3.8	0.8	0.4	0.8	0.4	36.0
(2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.8	0.9	1.0	0.4	0.1	0.0	0.1	0.0	4.0
18.6-24.0	0	0	0	0	0	0	0	0	1	15	0	0	0	0	2	0	18
(1)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	6.3	0.0	0.0	0.0	0.0	0.8	0.0	7.5
(2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.0	0.0	0.0	0.0	0.1	0.0	0.8
OVER 24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
(1)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
(2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ALL SPEEDS	1	2	2	1	1	3	11	32	39	46	36	31	13	9	7	4	238
(1)	0.4	0.8	0.8	0.4	0.4	1.3	4.6	13.4	16.3	19.2	15.1	13.0	5.4	3.8	2.9	1.7	99.6
(2)	0.0	0.1	0.1	0.0	0.0	0.1	0.5	1.5	1.8	2.1	1.7	1.4	0.6	0.4	0.3	0.2	11.0

(1) = PERCENT OF ALL GOOD OBS FOR THIS PAGE

(2) = PERCENT OF ALL GOOD OBS FOR THE PERIOD

239 HRS ON THIS PAGE

1 HRS (0.4 PCT) LESS THAN 1.0 MPH 1 0.0 PCT OF ALL HRS

7/1/78 - 9/30/78

PILGRIM 160 FT TOWER

160 FT WIND

DISTRIBUTION OF WIND DIRECTIONS AND SPEEDS

160-33 FT DELTA T STABILITY 6 - DELTA T GREATER THAN 4.0 DEG C PER 100 METERS

SPEED (MPH)	MNE	NE	ENE	E	ESE	SE	DIRECTION								NW	MNM	N	TOTAL
							SSE	S	SSW	SW	WSW	W	MNW	NW				
1.0-3.5	0	4	4	2	1	1	1	1	1	1	3	1	2	2	0	0	0	24
(1)	0.0	3.4	3.4	1.7	0.8	0.8	0.8	0.8	0.8	0.8	2.5	0.8	1.7	1.7	0.0	0.0	0.0	20.2
(2)	0.0	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.1	0.0	0.0	0.0	1.1
3.6-7.5	1	1	1	1	6	2	4	4	1	4	1	4	5	0	4	1	40	
(1)	0.8	0.8	0.8	0.8	5.0	1.7	3.4	3.4	0.8	3.4	0.8	3.4	4.2	0.0	3.4	0.8	33.6	
(2)	0.0	0.0	0.0	0.0	0.3	0.1	0.2	0.2	0.0	0.2	0.0	0.2	0.2	0.0	0.2	0.0	1.9	
7.6-12.5	0	0	0	0	1	2	5	3	5	6	4	0	1	1	0	0	28	
(1)	0.0	0.0	0.0	0.0	0.8	1.7	4.2	2.5	4.2	5.0	3.4	0.0	0.8	0.8	0.0	0.0	23.5	
(2)	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.1	0.2	0.3	0.2	0.0	0.0	0.0	0.0	0.0	1.3	
12.6-18.5	0	0	0	0	0	0	1	3	0	12	8	0	0	0	0	0	24	
(1)	0.0	0.0	0.0	0.0	0.0	0.0	0.8	2.5	0.0	10.1	6.7	0.0	0.0	0.0	0.0	0.0	20.2	
(2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.6	0.4	0.0	0.0	0.0	0.0	0.0	1.1	
18.6-24.0	0	0	0	0	0	0	0	0	0	2	1	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	1.7	0.8	0.0	0.0	0.0	0.0	0.0	2.5	
(2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	
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	5	5	3	8	5	11	11	7	25	17	5	8	3	4	1	119	
(1)	0.8	4.2	4.2	2.5	6.7	4.2	9.2	9.2	5.9	21.0	14.3	4.2	6.7	2.5	3.4	0.8	100.0	
(2)	0.0	0.2	0.2	0.1	0.4	0.2	0.5	0.5	0.3	1.2	0.8	0.2	0.4	0.1	0.2	0.0	5.5	

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

119 HRS ON THIS PAGE 0 HRS (0.0 PCT) LESS THAN 1.0 MPH (0.0 PCT OF ALL HRS)

TABLE 4A-1 (Continued)

PILGRIM 160 FT TOWER

7/1/78 - 9/30/78

DISTRIBUTION OF WIND DIRECTIONS AND SPEEDS

160 FT WIND

ALL STABILITIES COMBINED

160-33 FT DELTA T

SPEED (MPH)	MNE	NE	ENE	E	ESE	SE	DIRECTION				WSW	W	WNW	NW	NNW	N	TOTAL
							SSE	S	SSW	SW							
1.0-3.5	6	12	17	13	6	4	4	2	2	6	5	5	3	7	8	8	110
(1)	0.3	0.6	0.8	0.6	0.3	0.2	0.2	0.1	0.3	0.3	0.2	0.2	0.1	0.3	0.4	0.4	5.1
(2)	0.3	0.6	0.8	0.6	0.3	0.2	0.2	0.1	0.3	0.3	0.2	0.2	0.1	0.3	0.4	0.4	5.1
3.6-7.5	19	27	37	36	34	22	38	16	11	19	21	21	26	16	52	38	433
(1)	0.9	1.3	1.7	1.7	1.6	1.0	1.8	0.7	0.5	0.9	1.0	1.0	1.2	0.7	2.4	1.8	20.1
(2)	0.9	1.3	1.7	1.7	1.6	1.0	1.8	0.7	0.5	0.9	1.0	1.0	1.2	0.7	2.4	1.8	20.1
7.6-12.5	20	24	18	17	25	41	29	64	93	92	39	51	34	36	31	36	650
(1)	0.9	1.1	0.8	0.8	1.2	1.9	1.3	3.0	4.3	4.3	1.8	2.4	1.6	1.7	1.4	1.7	30.1
(2)	0.9	1.1	0.8	0.8	1.2	1.9	1.3	3.0	4.3	4.3	1.8	2.4	1.6	1.7	1.4	1.7	30.1
12.6-18.5	36	25	11	13	16	5	14	40	192	180	61	30	22	23	21	21	710
(1)	1.7	1.2	0.5	0.6	0.7	0.2	0.6	1.9	8.9	8.3	2.8	1.4	1.0	1.1	1.0	1.0	32.9
(2)	1.7	1.2	0.5	0.6	0.7	0.2	0.6	1.9	8.9	8.3	2.8	1.4	1.0	1.1	1.0	1.0	32.9
18.6-24.0	14	6	0	0	0	0	2	0	36	90	2	0	0	8	18	27	203
(1)	0.6	0.3	0.0	0.0	0.0	0.0	0.1	0.0	1.7	4.2	0.1	0.0	0.0	0.4	0.8	1.3	9.4
(2)	0.6	0.3	0.0	0.0	0.0	0.0	0.1	0.0	1.7	4.2	0.1	0.0	0.0	0.4	0.8	1.3	9.4
OVER 24.0	15	6	0	0	0	0	0	0	0	6	0	0	0	5	11	6	49
(1)	0.7	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.2	0.5	0.3	2.3
(2)	0.7	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.2	0.5	0.3	2.3
ALL SPEEDS	110	100	83	79	81	72	87	124	334	393	128	107	85	95	141	136	2155
(1)	5.1	4.6	3.8	3.7	3.8	3.3	4.0	5.7	15.5	18.2	5.9	5.0	3.9	4.4	6.5	6.3	99.9
(2)	5.1	4.6	3.8	3.7	3.8	3.3	4.0	5.7	15.5	18.2	5.9	5.0	3.9	4.4	6.5	6.3	99.9

(1)=PERCENT OF ALL GOOD OBS FOR THIS PAGE

(2)=PERCENT OF ALL GOOD OBS FOR THE PERIOD

2157 6000 HRS

2 HRS (0.1 PCT) LESS THAN 1.0 MPH

2208 HRS IN THE TIME PERIOD

97.7 PCT DATA RECOVERY

TABLE 4A-1 (Continued)

PILGRIM 160 FT TOWER

33 FT WIND

DISTRIBUTION OF WIND DIRECTIONS AND SPEEDS

10/ 1/78 - 12/31/78

160-33 FT DELTA T SIMILARITY A - DELTA T LESS THAN -1.8 DEG C PER 100 METERS

SPEED (MPH)	NNE	NE	ENE	E	ESE	SE	DIRECTION			WSW	W	WNW	NW	NNW	N	TOTAL
							SSE	S	SSW							
1.0- 3.5	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
(1)	0.0	0.0	0.0	3.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.2
(2)	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	0.1
3.6- 7.5	0	1	0	0	1	1	0	0	0	0	0	0	0	0	0	3
(1)	0.0	3.2	0.0	0.0	3.2	3.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.7
(2)	0.0	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
7.6-12.5	0	1	0	1	0	1	0	0	1	0	0	0	0	0	1	5
(1)	0.0	3.2	0.0	3.2	0.0	3.2	0.0	0.0	3.2	0.0	0.0	0.0	0.0	0.0	3.2	16.1
(2)	0.0	0.1	0.0	0.1	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.3
12.6-18.5	1	11	0	0	0	0	0	0	1	0	0	0	0	0	1	17
(1)	3.2	35.5	0.0	0.0	0.0	0.0	0.0	0.0	3.2	0.0	0.0	0.0	0.0	0.0	3.2	54.6
(2)	0.1	0.6	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	0.9
18.6-24.0	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.2
(2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1
OVER 24.0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	4
(1)	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	3.2	12.9
(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	0.1	0.1	0.2
ALL SPEEDS	2	13	0	2	1	2	0	0	2	0	0	0	0	0	3	31
(1)	6.5	41.9	0.0	6.5	3.2	6.5	0.0	0.0	6.5	0.0	0.0	0.0	0.0	0.0	9.7	100.0
(2)	0.1	0.7	0.0	0.1	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.2	0.3	1.7

(1) - PERCENT OF ALL GOOD OBS FOR THIS PAGE

(2) - PERCENT OF ALL GOOD OBS FOR THE PERIOD

31 HRS ON THIS PAGE

0 HRS (0.0 PCT) LESS THAN 1.0 MPH (0.0 PCT OF ALL HRS)

PILGRIM 160 FT TOWER																	10/ 1/78 - 12/31/78			
DISTRIBUTION OF WIND DIRECTIONS AND SPEEDS																				
160-33 FT DELTA T STABILITY B - DELTA T -1.8 TO -1.7 DEG C PER 100 METERS																				
SPEED (MPH)	DIRECTION															N TOTAL				
	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW					
1.0- 3.5	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1				
(1)	1.7	0.0	0.0	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)	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				
3.6- 7.5	0	0	3	2	1	1	1	0	0	0	0	0	0	0	0	10				
(1)	0.0	0.0	5.0	3.3	1.7	6.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	16.7				
(2)	0.0	0.0	0.2	0.1	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6				
7.6-12.5	0	2	2	3	1	1	0	0	1	2	1	0	3	0	2	20				
(1)	0.0	3.3	3.3	5.0	1.7	1.7	0.0	0.0	1.7	3.3	1.7	0.0	5.0	0.0	3.3	33.3				
(2)	0.0	0.1	0.1	0.2	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.0	0.2	0.0	0.1	1.1				
12.6-18.5	1	6	0	0	0	0	0	0	1	1	0	0	0	0	1	19				
(1)	6.7	10.0	0.0	0.0	0.0	0.0	0.0	0.0	6.7	1.7	0.0	0.0	0.0	0.0	1.7	31.7				
(2)	0.2	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.1	0.0	0.0	0.0	0.0	0.1	1.1				
18.6-24.0	1	3	0	0	0	0	0	0	0	0	0	0	0	0	2	9				
(1)	6.7	5.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.3	15.0				
(2)	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	0.0	0.1	0.5				
OVER 24.0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1				
(1)	1.7	0.0	0.0	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)	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	10	11	5	5	2	5	0	0	5	3	1	0	3	0	5	60				
(1)	16.7	18.3	8.3	8.3	3.3	8.3	0.0	0.0	8.3	5.0	1.7	0.0	5.0	0.0	8.3	100.0				
(2)	0.6	0.6	0.3	0.3	0.1	0.3	0.0	0.0	0.3	0.2	0.1	0.0	0.2	0.0	0.3	3.3				

(1) = PERCENT OF ALL GOOD OBS FOR THIS PAGE

(2) = PERCENT OF ALL GOOD OBS FOR THE PERIOD

60 HRS ON THIS PAGE 0 HRS (0.0 PCT) LESS THAN 1.0 MPH (0.0 PCT OF ALL HRS)

10/ 1/78 - 12/31/78

33 FT WIND

PILGRIM 160 FT TOWER

DISTRIBUTION OF WIND DIRECTIONS AND SPEEDS

160-33 FT DELTA Y STABILITY C - DELTA Y -1.6 TO -1.5 DEG C PER 100 METERS

SPEED (MPH)	DIRECTION																TOTAL
	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	MNW	N	
1.0- 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	1	2	0	1	2	1	2	2	0	0	3	0	0	0	12
(1)	0.0	0.0	1.0	2.0	0.0	1.0	2.0	1.0	2.0	2.0	0.0	0.0	3.1	0.0	0.0	0.0	12.2
(2)	0.0	0.0	0.1	0.1	0.0	0.1	0.1	0.0	0.1	0.1	0.0	0.0	0.2	0.0	0.0	0.0	0.7
7.6-12.5	3	0	0	1	1	2	1	0	1	5	6	1	11	3	0	3	44
(1)	3.1	0.0	0.0	1.0	1.0	2.0	1.0	0.0	1.1	5.1	6.1	1.1	11.2	3.1	0.0	3.1	44.9
(2)	0.2	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.2	0.3	0.3	0.2	0.6	0.2	0.0	0.2	2.4
12.6-18.5	5	3	0	0	0	0	1	1	1	1	0	2	7	0	1	8	32
(1)	5.1	3.1	0.0	0.0	0.0	0.0	1.1	1.0	1.1	1.0	0.0	2.0	7.1	0.0	1.0	8.2	32.7
(2)	0.3	0.2	0.0	0.0	0.0	0.0	0.1	0.0	0.2	0.1	0.0	0.1	0.4	0.0	0.1	0.4	1.8
18.6-24.0	2	3	0	0	0	0	0	0	0	0	0	0	0	1	1	1	8
(1)	2.0	3.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	1.0	8.2
(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	0.1	0.1	0.1	0.4
OVER 24.0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
(1)	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	0.0	0.0	2.0
(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	0.0	0.0	0.1
ALL SPEEDS	11	7	1	3	1	3	1	2	10	8	6	6	21	4	2	12	98
(1)	11.2	7.1	1.0	3.1	1.0	3.1	1.0	2.0	10.2	8.2	6.1	6.1	21.4	4.1	2.0	12.2	100.0
(2)	0.6	0.4	0.1	0.2	0.1	0.2	0.1	0.1	0.6	0.4	0.3	0.3	1.2	0.2	0.1	0.7	5.4

(1) = PERCENT OF ALL GOOD OBS FOR THIS PAGE

(2) = PERCENT OF ALL GOOD OBS FOR THE PERIOD

98 HRS ON THIS PAGE

6 HRS (0.0 PCT) LESS THAN 1.0 MPH

1 0.0 PCT OF ALL HRS

10/ 1/78 - 12/31/78

PILGRIM 160 FT TOWER

33 FT WIND

DISTRIBUTION OF WIND DIRECTIONS AND SPEEDS

160-33 FT DELTA T STABILITY D - DELTA T -1.0 TO -0.5 DEG C PER 100 METERS

SPEED (MPH)	DIRECTION																TOTAL
	MNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	MNW	N	
1.0- 3.5	2	4	5	1	6	3	8	5	1	3	4	1	1	1	2	3	50
(1)	0.2	0.4	0.5	0.1	0.6	0.3	0.8	0.5	0.1	0.3	0.4	0.1	0.1	0.1	0.2	0.3	5.1
(2)	0.1	0.2	0.3	0.1	0.3	0.2	0.4	0.3	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.2	2.8
3.6- 7.5	11	8	14	14	20	20	18	9	13	20	21	16	24	20	6	18	252
(1)	1.1	0.8	1.4	1.4	2.1	2.1	1.9	0.9	1.3	2.1	2.2	1.6	2.5	2.1	0.6	1.9	26.0
(2)	0.6	0.4	0.8	0.8	1.1	1.1	1.0	0.5	0.7	1.1	1.2	0.9	1.3	1.1	0.3	1.0	13.9
7.6-12.5	30	35	27	1	4	4	11	14	44	33	38	47	44	43	18	13	411
(1)	3.1	3.6	2.8	0.1	0.4	0.4	1.1	1.4	4.5	3.4	3.9	4.8	4.5	4.4	1.9	1.9	42.3
(2)	1.7	1.9	1.5	0.1	0.2	0.2	0.6	0.8	2.4	1.8	2.1	2.6	2.4	2.4	1.0	1.0	22.7
12.6-18.5	21	54	7	1	0	0	0	0	13	22	11	34	8	10	12	12	205
(1)	2.2	5.6	0.7	0.1	0.0	0.0	0.0	0.0	1.3	2.3	1.1	3.5	0.4	1.0	1.2	1.2	21.1
(2)	1.2	3.0	0.4	0.1	0.0	0.0	0.0	0.0	0.7	1.2	0.6	1.9	0.4	0.6	0.7	0.7	11.3
18.6-24.0	3	17	0	0	0	0	0	0	0	1	0	3	3	1	12	3	44
(1)	0.4	1.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.3	0.3	0.1	1.2	0.3	4.5
(2)	0.2	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.2	0.2	0.1	0.7	0.2	2.4
OVER 24.0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	5	1	9
(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	0.5	0.1	0.9
(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	0.0	0.0	0.3	0.1	0.5
ALL SPEEDS	71	118	53	17	30	27	37	28	71	79	74	101	80	75	55	55	971
(1)	7.3	12.2	5.5	1.8	3.1	2.8	3.8	2.9	7.3	8.1	7.6	10.4	8.2	7.7	5.7	5.7	100.0
(2)	3.9	6.5	2.9	0.9	1.7	1.5	2.0	1.5	3.9	4.4	4.1	5.6	4.4	4.1	3.0	3.0	53.7

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

971 HRS ON THIS PAGE 0 HRS (0.0 PCT) LESS THAN 1.0 MPH (0.0 PCT OF ALL HRS)

PILGRIM 160 FT TOWER

10/ 1/78 - 12 778

33 FT WIND

DISTRIBUTION OF WIND DIRECTIONS AND SPEEDS

160-33 FT DELTA T STABILITY E - DELTA T -0.4 TO +1.5 DEG C PER 100 METERS

SPEED (MPH)	DIRECTION															
	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	N
1.0-3.5	0	0	1	2	0	7	5	9	1	0	1	1	3	1	0	1
(1)	0.0	0.0	0.2	0.5	0.0	1.7	1.2	2.2	0.2	0.0	0.2	0.2	0.7	0.2	0.0	0.2
(2)	0.0	0.0	0.1	0.1	0.0	0.4	0.3	0.5	0.1	0.0	0.1	0.1	0.2	0.1	0.0	0.1
3.6-7.5	2	0	0	1	4	9	19	17	31	31	29	45	14	11	2	0
(1)	0.5	0.0	0.0	0.2	1.0	2.2	4.7	4.2	7.6	7.6	7.1	11.0	3.4	2.7	0.5	0.0
(2)	0.1	0.0	0.0	0.1	0.2	0.5	1.1	0.9	1.7	1.7	1.6	2.5	0.8	0.6	0.1	0.0
7.6-12.5	0	0	0	0	0	7	9	5	27	25	34	15	4	2	0	0
(1)	0.0	0.0	0.0	0.0	0.0	1.7	2.2	1.2	6.6	6.1	8.3	3.7	1.0	0.5	0.0	0.0
(2)	0.0	0.0	0.0	0.0	0.0	0.4	0.5	0.3	1.5	1.4	1.9	0.8	0.2	0.1	0.0	0.0
12.6-18.5	0	0	1	0	0	0	0	0	1	28	0	0	0	0	1	0
(1)	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.2	6.9	0.0	0.0	0.0	0.0	0.2	0.0
(2)	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.1	1.5	0.0	0.0	0.0	0.0	0.1	0.0
18.6-24.0	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
(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
OVER 24.0	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
(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
ALL SPEEDS	2	0	2	3	4	23	33	31	60	84	64	61	21	14	3	1
(1)	0.5	0.0	0.5	0.7	1.0	5.6	8.1	7.6	14.7	20.6	15.7	15.0	5.1	3.4	0.7	0.2
(2)	0.1	0.0	0.1	0.2	0.2	1.3	1.8	1.7	3.3	4.6	3.5	3.4	1.2	0.8	0.2	0.1

(1) = PERCENT OF ALL GOOD OBS FOR THIS PAGE

(2) = PERCENT OF ALL GOOD OBS FOR THE PERIOD

408 HRS ON THIS PAGE

2 HRS (0.5 PCT) LESS THAN 1.0 MPH

(0.1 PCT OF ALL HRS)

PILGRIM 160 FT TOWER
 DISTRIBUTION OF WIND DIRECTIONS AND SPEEDS
 10/ 1/78 - 12/31/78

33 FT WIND
 160-33 FT DELTA Y STABILITY F - DELTA Y 1.6 TO 4.0 DEG C PER 100 METERS

SPEED (MPH)	MNE	NE	ENE	E	ESE	SE	DIRECTION				SW	WSW	W	WNW	NW	NNW	N	TOTAL
							SSE	S	SSW									
1.0- 3.5	0	0	0	0	0	1	4	9	3	2	2	1	0	0	0	0	0	22
(1)	0.0	0.0	0.0	0.0	0.0	0.5	2.0	4.6	1.5	1.0	1.0	0.5	0.0	0.0	0.0	0.0	0.0	11.2
(2)	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.5	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	1.2
3.6- 7.5	0	0	0	1	0	1	14	18	7	15	23	18	3	0	0	0	0	100
(1)	0.0	0.0	0.0	0.5	0.0	0.5	7.1	9.1	3.6	7.6	11.7	9.1	1.5	0.0	0.0	0.0	0.0	50.8
(2)	0.0	0.0	0.0	0.1	0.0	0.1	0.8	1.0	0.4	0.8	1.3	1.0	0.2	0.0	0.0	0.0	0.0	5.5
7.6-12.5	0	0	0	0	0	0	0	1	7	18	21	3	0	0	0	0	0	50
(1)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	3.6	9.1	10.7	1.5	0.0	0.0	0.0	0.0	0.0	25.4
(2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.4	1.0	1.2	0.2	0.0	0.0	0.0	0.0	0.0	2.8
12.6-18.5	0	0	0	0	0	0	0	0	0	24	1	0	0	0	0	0	0	25
(1)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	12.2	0.5	0.0	0.0	0.0	0.0	0.0	0.0	12.7
(2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.1	0.0	0.0	0.0	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	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	1	0	2	18	28	17	59	47	22	3	0	0	0	0	197
(1)	0.0	0.0	0.0	0.5	0.0	1.0	9.1	14.2	8.6	29.9	23.9	11.2	1.5	0.0	0.0	0.0	0.0	100.0
(2)	0.0	0.0	0.0	0.1	0.0	0.1	1.0	1.5	0.9	3.3	2.6	1.2	0.2	0.0	0.0	0.0	0.0	10.9

(1) - PERCENT OF ALL 6000 OBS FOR THIS PAGE
 (2) - PERCENT OF ALL 6000 OBS FOR THE PERIOD

197 HRS ON THIS PAGE 0 HRS (0.0 PCT) LESS THAN 1.0 MPH (0.0 PCT OF ALL HRS)

10/ 1/78 - 12/31/78

PILGRIM 160 FT TOWER

33 FT WIND

DISTRIBUTION OF WIND DIRECTIONS AND SPEEDS

160-33 FT DELTA T STABILITY 6 - DELTA T GREATER THAN 4.0 DEG C PER 100 METERS

SPEED (MPH)	DIRECTION															
	NNE	N	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	N TOTAL
1.0- 3.5	0	0	0	0	0	0	0	5	3	4	1	3	0	0	0	16
(1)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.4	6.8	9.1	2.3	6.8	0.0	0.0	0.0	36.4
(2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.2	0.2	0.1	0.2	0.0	0.0	0.0	0.9
3.6- 7.5	0	0	0	0	0	0	0	5	3	3	5	2	0	0	0	18
(1)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.4	6.8	6.8	11.4	4.5	0.0	0.0	0.0	40.9
(2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.2	0.2	0.3	0.1	0.0	0.0	0.0	1.0
7.6-12.5	0	0	0	0	0	0	0	0	0	4	4	0	0	0	0	8
(1)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.1	9.1	0.0	0.0	0.0	0.0	18.2
(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	0.0	0.0	0.4
12.6-18.5	0	0	0	0	0	0	0	9	0	1	1	0	0	0	0	2
(1)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.3	2.3	0.0	0.0	0.0	0.0	4.5
(2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.1
18.6-24.0	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
(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
OVER 24.0	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
(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
ALL SPEEDS	0	0	0	0	0	0	0	10	3	12	11	5	0	0	0	44
(1)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	22.7	13.6	27.3	25.0	11.4	0.0	0.0	0.0	100.0
(2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.3	0.7	0.6	0.3	0.0	0.0	0.0	2.4

(1) = PERCENT OF ALL 5000 OBS FOR THIS PAGE

(2) = PERCENT OF ALL 6000 OBS FOR THE PERIOD

44 HRS ON THIS PAGE

0 HRS (0.0 PCT) LESS THAN 1.0 MPH (0.0 PCT OF ALL HRS)

TABLE 4A-1 (Continued)

33 FT WIND			PILGRIM 160 FT TOWER												10/ 1/78 - 12/31/78			
160-33 FT DELTA Y			DISTRIBUTION OF WIND DIRECTIONS AND SPEEDS															
ALL STABILITIES COMBINED			DIRECTION															
SPEED (MPH)	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	N	TOTAL	
1.0- 3.5	3	4	6	4	6	11	17	28	8	9	8	6	4	2	2	4	122	
(1)	0.2	0.2	0.3	0.2	0.3	0.6	0.9	1.5	0.4	0.5	0.4	0.3	0.2	0.1	0.1	0.2	6.7	
(2)	0.2	0.2	0.3	0.2	0.3	0.6	0.6	1.5	0.4	0.5	0.4	0.3	0.2	0.1	0.1	0.2	6.7	
3.6- 7.5	13	9	18	20	26	36	51	50	56	71	78	81	44	31	8	18	610	
(1)	0.7	0.5	1.0	1.1	1.4	2.0	2.8	2.8	3.1	3.9	4.3	4.5	2.4	1.7	0.4	1.0	33.7	
(2)	0.7	0.5	1.0	1.1	1.4	2.0	2.8	2.8	3.1	3.9	4.3	4.5	2.4	1.7	0.4	1.0	33.7	
7.6-12.5	33	38	29	6	6	15	21	20	84	87	104	69	62	48	20	24	666	
(1)	1.8	2.1	1.6	0.3	0.3	0.8	1.2	1.1	4.6	4.8	5.7	3.0	3.4	2.7	1.1	1.3	36.8	
(2)	1.8	2.1	1.6	0.3	0.3	0.8	1.2	1.1	4.6	4.8	5.7	3.0	3.4	2.7	1.1	1.3	36.8	
12.6-18.5	31	74	8	1	0	0	0	1	23	77	13	36	15	10	16	26	331	
(1)	1.7	4.1	0.4	0.1	0.0	0.0	0.0	0.1	1.3	4.3	0.7	2.0	0.8	0.6	0.9	1.4	18.3	
(2)	1.7	4.1	0.4	0.1	0.0	0.0	0.0	0.1	1.3	4.3	0.7	2.0	0.8	0.6	0.9	1.4	18.3	
18.6-24.0	10	23	0	0	0	0	0	0	0	1	0	3	3	2	16	4	62	
(1)	0.6	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.2	0.2	0.1	0.9	0.2	3.4	
(2)	0.6	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.2	0.2	0.1	0.9	0.2	3.4	
OVER 24.0	6	1	0	0	0	0	0	0	0	0	0	0	0	0	6	3	16	
(1)	0.3	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	0.3	0.2	0.9	
(2)	0.3	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	0.3	0.2	0.9	
ALL SPEEDS	96	149	61	31	38	62	89	99	171	245	203	195	128	93	68	79	1807	
(1)	5.3	8.2	3.4	1.7	2.1	3.4	4.9	5.5	9.5	13.5	11.2	10.8	7.1	5.1	3.8	4.4	99.9	
(2)	5.3	8.2	3.4	1.7	2.1	3.4	4.9	5.5	9.5	13.5	11.2	10.8	7.1	5.1	3.8	4.4	99.9	

(1) = PERCENT OF ALL GOOD OBS FOR THIS PAGE

(2) = PERCENT OF ALL GOOD OBS FOR THE PERIOD

1809 6000 HRS 2 HRS (0.1 PCT) LESS THAN 1.0 MPH 2208 HRS IN THE TIME PERIOD 81.9 PCT DATA RECOVERY

TABLE 4A-1 (Continued)

PILGRIM 160 FT TOWER

10/ 1/78 - 12/31/78

160 FT WIND

DISTRIBUTION OF WIND DIRECTIONS AND SPEEDS

160-33 FT DELTA T STABILITY A - DELTA T LESS THAN -1.8 DEG C PER 100 METERS

SPEED (MPH)	MNE	NE	ENE	E	ESE	SE	SSE	DIRECTION				WNW	NW	NNW	N	TOTAL
								S	SSW	WSW	WSW					
1.0- 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	1	0	0	0	0	0	0	0	0	0	0	0	1
(1)	0.0	0.0	0.0	3.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.3
(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	0.0	0.0
7.6-12.5	1	1	1	0	0	1	1	0	0	0	0	1	0	0	0	6
(1)	3.3	3.3	3.3	0.0	0.0	3.3	3.3	0.0	0.0	0.0	0.0	3.3	0.0	0.0	0.0	20.0
(2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3
12.6-18.5	3	6	0	0	0	1	0	0	2	0	0	0	0	2	0	14
(1)	10.0	20.0	0.0	0.0	0.0	3.3	0.0	0.0	6.7	0.0	0.0	0.0	0.0	6.7	0.0	46.7
(2)	0.1	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.7
18.6-24.0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	1	4
(1)	10.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.3	13.3
(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	0.2
OVER 24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	1	5
(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	13.3	3.3	16.7
(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
ALL SPEEDS	7	7	1	1	0	2	1	0	2	0	0	1	0	6	2	30
(1)	23.3	23.3	3.3	3.3	0.0	6.7	3.3	0.0	6.7	0.0	0.0	3.3	0.0	20.0	6.7	100.0
(2)	0.3	0.3	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.3	0.1	1.5

(1) = PERCENT OF ALL GOOD OBS FOR THIS PAGE

(2) = PERCENT OF ALL GOOD OBS FOR THE PERIOD

30 HRS ON THIS PAGE

0 HRS (0.0 PCT) LESS THAN 1.0 MPH (0.0 PCT OF ALL HRS)

TABLE 4A-1 (Continued)

PILGRIM 160 FT TOWER

10/ 1/78 - 12/31/78

160 FT WIND

DISTRIBUTION OF WIND DIRECTIONS AND SPEEDS

160-33 FT DELTA Y STABILITY B - DELTA Y -1.8 TO -1.7 DEG C PER 100 METERS

SPEED (MPH)	MNE	NE	ENE	E	ESE	SE	SSE	DIRECTION				WSW	SW	WSW	W	WNW	NW	NNW	N	TOTAL
								S	SSW	SW	WSW									
1.0- 3.5	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
(1)	1.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6
(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	0.0	0.0	0.0	0.0	0.0
3.6- 7.5	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
(1)	0.0	3.3	3.3	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	0.0	6.6
(2)	0.0	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	0.0	0.0	0.0	0.0	0.2
7.6-12.5	2	2	2	3	2	3	0	0	0	0	2	2	0	0	0	0	0	0	0	18
(1)	3.3	3.3	3.3	4.9	3.3	4.9	0.0	0.0	0.0	0.0	3.3	3.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	29.5
(2)	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9
12.6-18.5	2	2	0	0	1	0	0	0	3	2	0	0	0	0	0	2	0	2	2	16
(1)	3.3	3.3	0.0	0.0	1.6	0.0	0.0	0.0	4.9	3.3	0.0	0.0	0.0	0.0	0.0	3.3	0.0	3.3	3.3	26.2
(2)	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.1	0.8
18.6-24.0	8	1	0	0	1	0	0	1	1	1	0	0	0	0	0	0	0	2	2	17
(1)	13.1	1.6	0.0	0.0	1.6	0.0	0.0	1.6	1.6	1.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.3	3.3	27.9
(2)	0.4	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	0.0	0.0	0.0	0.1	0.1	0.8
OVER 24.0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	5
(1)	3.3	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	1.6	1.6	1.6	8.2
(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	0.0	0.0	0.0	0.2
ALL SPEEDS	15	7	4	3	4	3	0	1	4	3	2	2	2	2	2	2	1	5	5	61
(1)	24.6	11.5	6.6	4.9	6.6	4.9	0.0	1.6	6.6	4.9	3.3	3.3	4.9	3.3	3.3	3.3	1.6	8.2	8.2	100.0
(2)	0.7	0.3	0.2	0.1	0.2	0.1	0.0	0.0	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.2	0.2	3.0

(1) = PERCENT OF ALL GOOD OBS FOR THIS PAGE

(2) = PERCENT OF ALL GOOD OBS FOR THE PERIOD

61 HRS ON THIS PAGE

0 HRS (0.0 PCT) LESS THAN 1.0 MPH (0.0 PCT OF ALL HRS)

PILGRIM 160 FT TOWER

10/ 1/78 - 12/31/78

160 FT WIND

DISTRIBUTION OF WIND DIRECTIONS AND SPEEDS

160-33 FT DELTA T STABILITY C - DELTA T -1.6 TO -1.5 DEG C PER 100 METERS

SPEED (MPH)	DIRECTION															
	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	N TOTAL
1.0- 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	1	1	0	0	0	0	0	0	0	0	0	1	0	0	3
(1)	0.0	0.9	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.0	2.7
(2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
7.6-12.5	1	0	1	1	0	0	0	1	2	3	7	5	4	0	2	1
(1)	0.9	0.0	0.9	0.9	0.0	0.0	0.0	0.9	1.8	2.7	6.4	4.5	3.6	0.0	1.8	0.9
(2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.3	0.2	0.2	0.0	0.1	0.0
12.6-18.5	3	2	0	0	0	2	0	2	5	4	2	7	10	0	2	4
(1)	2.7	1.8	0.0	0.0	0.0	1.8	0.0	1.8	4.5	3.6	1.8	6.4	9.1	0.0	1.8	3.6
(2)	0.1	0.1	0.0	0.0	0.0	0.1	0.0	0.1	0.2	0.2	0.1	0.3	0.5	0.0	0.1	0.2
18.6-24.0	2	1	0	1	2	0	1	2	1	0	0	2	5	2	2	4
(1)	1.8	0.9	0.0	0.9	1.8	0.0	0.9	1.8	0.9	0.0	0.0	1.8	4.5	1.8	1.8	3.6
(2)	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.2	0.1	0.1	0.2
OVER 24.0	1	2	0	1	0	0	0	0	0	0	0	0	3	1	1	2
(1)	0.9	1.8	0.0	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.7	0.9	0.9	1.8
(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	0.1	0.0	0.0	0.1
ALL SPEEDS	7	6	2	3	2	2	1	5	8	7	9	14	23	3	7	11
(1)	6.4	5.5	1.8	2.7	1.8	1.8	0.9	4.5	7.3	6.4	8.2	12.7	20.9	2.7	6.4	10.0
(2)	0.3	0.3	0.1	0.1	0.1	0.1	0.0	0.2	0.4	0.3	0.4	0.7	1.1	0.1	0.3	0.5

(1) = PERCENT OF ALL GOOD OBS FOR THIS PAGE

(2) = PERCENT OF ALL GOOD OBS FOR THE PERIOD

110 HRS ON THIS PAGE 0 HRS (0.0 PCT) LESS THAN 1.0 MPH (0.0 PCT OF ALL HRS)

PILGRIM 160 FT TOWER

160 FT WIND

DISTRIBUTION OF WIND DIRECTIONS AND SPEEDS

10/1/78 - 12/31/78

160-33 FT DELTA T STABILITY D - DELTA T -1.4 TO -0.5 DEG C PER 100 METERS

SPEED (MPH)	NNE	NE	ENE	E	ESE	SE	DIRECTION								NNW	NW	NNW	N	TOTAL
							SSE	S	SSW	SW	WSW	W	WNW	NW					
1.0-3.5	6	4	1	5	1	0	0	0	1	3	1	2	1	3	3	1	3	1	32
(1)	0.5	0.4	0.1	0.4	0.1	0.0	0.0	0.0	0.1	0.3	0.1	0.2	0.1	0.3	0.3	0.1	0.3	0.1	2.8
(2)	0.3	0.2	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.1	0.1	0.0	0.1	0.0	1.6
3.6-7.5	5	15	20	4	3	1	12	6	3	9	6	17	18	10	11	9	10	11	149
(1)	0.4	1.3	1.8	0.4	0.3	0.1	1.1	0.5	0.3	0.8	0.5	1.5	1.6	0.9	1.0	0.8	0.9	1.0	13.3
(2)	0.2	0.7	1.0	0.2	0.1	0.0	0.6	0.3	0.1	0.4	0.3	0.8	0.9	0.5	0.5	0.4	0.5	0.4	7.2
7.6-12.5	15	32	7	18	5	12	22	8	15	33	38	34	44	22	14	12	22	14	331
(1)	1.3	2.8	0.6	1.6	0.4	1.1	2.0	0.7	1.3	2.9	3.4	3.0	3.9	2.0	1.2	1.1	2.0	1.1	29.4
(2)	0.7	1.6	0.3	0.9	0.2	0.6	1.1	0.4	0.7	1.6	1.8	1.6	2.1	1.1	0.7	0.6	1.1	0.6	16.0
12.6-18.5	37	24	0	12	9	10	11	12	49	34	22	58	62	24	11	15	24	11	390
(1)	3.3	2.1	0.0	1.1	0.8	0.9	1.0	1.1	4.4	3.0	2.0	5.2	5.5	2.1	1.0	1.3	2.1	1.0	34.7
(2)	1.8	1.2	0.0	0.6	0.4	0.5	0.5	0.6	2.4	1.6	1.1	2.8	3.0	1.2	0.5	0.7	1.2	0.5	18.9
18.6-24.0	16	4	0	4	3	3	2	3	9	7	8	42	34	16	15	7	16	15	173
(1)	1.4	0.4	0.0	0.4	0.3	0.3	0.2	0.3	0.8	0.6	0.7	3.7	3.0	1.4	1.3	0.6	1.4	1.3	15.4
(2)	0.8	0.2	0.0	0.2	0.1	0.1	0.1	0.1	0.4	0.3	0.4	2.0	1.6	0.8	0.7	0.3	0.8	0.7	8.4
OVER 24.0	4	1	0	6	1	0	0	0	2	3	0	8	7	7	4	4	7	4	47
(1)	0.4	0.1	0.0	0.5	0.1	0.0	0.0	0.0	0.2	0.3	0.0	0.7	0.6	0.6	0.4	0.4	0.6	0.4	4.2
(2)	0.2	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.4	0.3	0.3	0.2	0.2	0.3	0.2	2.3
ALL SPEEDS	83	80	28	49	22	26	47	29	79	89	75	161	166	82	58	48	82	58	1122
(1)	7.4	7.1	2.5	4.4	2.0	2.3	4.2	2.6	7.0	7.9	6.7	14.3	14.8	7.3	5.2	4.3	7.3	5.2	99.8
(2)	4.0	3.9	1.4	2.4	1.1	1.3	2.3	1.4	3.8	4.3	3.6	7.8	8.0	4.0	2.8	2.3	4.0	2.8	54.4

(1) = PERCENT OF ALL GOOD OBS FOR THIS PAGE

(2) = PERCENT OF ALL GOOD OBS FOR THE PERIOD

1124 HRS ON THIS PAGE

2 HRS (0.2 PCT) LESS THAN 1.0 MPH (0.1 PCT OF ALL HRS)

TABLE 4A-1 (Continued)

PILGRIM 160 FT TOWER																	
DISTRIBUTION OF WIND DIRECTIONS AND SPEEDS																	
160-33 FT DELTA T STABILITY E - DELTA T -0.4 TO +1.5 DEG C PER 100 METERS																	
SPEED (MPH)	MNE	NE	ENE	E	ESE	SE	DIRECTION				WSW	W	WNW	NW	NNW	N	TOTAL
							SSE	S	SSW	SW							
1.0- 3.5	0	0	0	1	0	0	1	1	0	2	0	0	1	0	0	2	8
(1)	0.0	0.0	0.0	0.2	0.0	0.0	0.2	0.2	0.0	0.4	0.0	0.0	0.2	0.0	0.0	0.4	1.7
(2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.4
3.6- 7.5	1	2	0	3	4	6	1	5	4	1	10	8	8	5	0	2	60
(1)	0.2	0.4	0.0	0.6	0.8	1.3	0.2	1.1	0.8	0.2	2.1	1.7	1.7	1.1	0.0	0.4	12.6
(2)	0.0	0.1	0.0	0.1	0.2	0.3	0.0	0.2	0.2	0.0	0.5	0.4	0.4	0.2	0.0	0.1	2.9
7.6-12.5	0	0	0	5	5	10	19	11	18	43	32	39	18	11	2	1	214
(1)	0.0	0.0	0.0	1.1	1.1	2.1	4.0	2.3	3.8	9.1	6.7	8.2	3.8	2.3	0.4	0.2	45.1
(2)	0.0	0.0	0.0	0.2	0.2	0.5	0.9	0.5	0.9	2.1	1.6	1.9	0.9	0.5	0.1	0.0	10.4
12.6-18.5	0	1	0	3	4	6	10	5	32	26	41	17	7	4	0	1	157
(1)	0.0	0.2	0.0	0.6	0.8	1.3	2.1	1.1	6.7	5.5	8.6	3.6	1.5	0.8	0.0	0.2	33.1
(2)	0.0	0.0	0.0	0.1	0.2	0.3	0.5	0.2	1.6	1.3	2.0	0.8	0.3	0.2	0.0	0.0	7.6
18.6-24.0	1	0	0	0	5	5	2	0	2	11	0	1	0	0	1	0	28
(1)	0.2	0.0	0.0	0.0	1.1	1.1	0.4	0.0	0.4	2.3	0.0	0.2	0.0	0.0	0.2	0.0	5.9
(2)	0.0	0.0	0.0	0.0	0.2	0.2	0.1	0.0	0.1	0.5	0.0	0.0	0.0	0.0	0.0	0.0	1.4
OVER 24.0	0	0	0	1	1	0	0	0	0	6	0	0	0	0	0	0	8
(1)	0.0	0.0	0.0	0.2	0.2	0.0	0.0	0.0	0.0	1.3	0.0	0.0	0.0	0.0	0.0	0.0	1.7
(2)	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	0.0	0.0	0.4
ALL SPEEDS	2	3	0	13	19	27	33	22	56	89	83	65	34	20	3	6	475
(1)	0.4	0.6	0.0	2.7	4.0	5.7	6.9	4.6	11.8	18.7	17.5	13.7	7.2	4.2	0.6	1.3	100.0
(2)	0.1	0.2	0.0	0.6	0.9	1.3	1.6	1.1	2.7	4.3	4.0	3.2	1.6	1.0	0.1	0.3	23.0

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

475 HRS ON THIS PAGE 0 HRS (0.0 PCT) LESS THAN 1.0 MPH (0.0 PCT OF ALL HRS)

PILGRIM 160 FT TOWER

10/ 1/78 - 12/31/78

160 FT WIND

DISTRIBUTION OF WIND DIRECTIONS AND SPEEDS

160-33 FT DELTA Y STABILITY F - DELTA Y 1.6 TO 4.0 DEG C PER 100 METERS

SPEED (MPH)	MNE	NE	ENE	E	ESE	SE	DIRECTION				WSW	W	WNW	NW	NNW	N	TOTAL
							SSE	S	SSW	SW							
1.0- 3.5	1	1	1	0	0	0	2	0	1	0	0	0	0	0	0	0	6
(1)	0.5	0.5	0.5	0.0	0.0	0.0	0.9	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.8
(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	0.0	0.0	0.0	0.3
3.6- 7.5	0	0	0	1	4	3	3	2	2	2	2	4	1	2	1	0	27
(1)	0.0	0.0	0.0	0.5	1.9	1.4	1.4	0.9	0.9	0.9	0.9	1.9	0.5	0.9	0.5	0.0	12.7
(2)	0.0	0.0	0.0	0.0	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.0	0.1	0.0	0.0	1.3
7.6-12.5	0	0	0	0	1	8	6	9	6	1	12	32	11	2	0	0	88
(1)	0.0	0.0	0.0	0.0	0.5	3.8	2.8	4.2	2.8	0.5	5.6	15.0	5.2	0.9	0.0	0.0	41.3
(2)	0.0	0.0	0.0	0.0	0.0	0.4	0.3	0.4	0.3	0.0	0.6	1.6	0.5	0.1	0.0	0.0	4.3
12.6-18.5	0	0	0	0	0	0	0	5	8	21	21	5	3	0	0	0	63
(1)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.3	3.8	9.9	9.9	2.3	1.4	0.0	0.0	0.0	29.6
(2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.4	1.0	1.0	0.2	0.1	0.0	0.0	0.0	3.1
18.6-24.0	0	0	0	0	0	0	0	0	1	9	6	0	0	0	0	0	16
(1)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	4.2	2.8	0.0	0.0	0.0	0.0	0.0	7.5
(2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.3	0.0	0.0	0.0	0.0	0.0	0.8
OVER 24.0	0	0	0	0	0	0	0	0	0	8	4	0	0	0	0	0	12
(1)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.8	1.9	0.0	0.0	0.0	0.0	0.0	5.6
(2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.2	0.0	0.0	0.0	0.0	0.0	0.6
ALL SPEEDS	1	1	1	1	5	11	11	16	18	41	45	41	15	4	1	0	212
(1)	0.5	0.5	0.5	0.5	2.3	5.2	5.2	7.5	8.5	19.2	21.1	19.2	7.0	1.9	0.5	0.0	99.5
(2)	0.0	0.0	0.0	0.0	0.2	0.5	0.5	0.8	0.9	2.0	2.2	2.0	0.7	0.2	0.0	0.0	10.3

(1)-PERCENT OF ALL GOOD OBS FOR THIS PAGE

(2)-PERCENT OF ALL GOOD OBS FOR THE PERIOD

213 HRS ON THIS PAGE

1 HRS (0.5 PCT) LESS THAN 1.0 MPH (0.0 PCT OF ALL HRS)

160 FT WIND
 PTLGRIM 160 FT TOWER
 DISTRIBUTION OF WIND DIRECTIONS AND SPEEDS
 10/ 1/78 - 12/31/78
 160-33 FT DELTA Y STABILITY 6 - DELTA Y GREATER THAN 4.0 DEG C PER 100 METERS

SPEED (MPH)	MNE	NE	ENE	E	ESE	SE	DIRECTION				SW	WSW	W	WNW	NW	NNW	N	TOTAL
							SSE	S	SSW									
1.0- 3.5	0	0	1	1	0	0	1	1	0	0	0	0	0	0	0	0	0	4
(1)	0.0	0.0	2.0	2.0	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	8.0
(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	0.2
3.6- 7.5	0	0	1	1	3	1	2	3	1	2	2	2	0	1	1	2	2	22
(1)	0.0	0.0	2.0	2.0	6.0	2.0	4.0	6.0	2.0	4.0	4.0	4.0	0.0	2.0	2.0	4.0	4.0	44.0
(2)	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.1	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.1	1.1
7.6-12.5	0	0	0	0	1	0	1	0	3	1	5	10	3	0	0	0	0	14
(1)	0.0	0.0	0.0	0.0	2.0	0.0	2.0	0.0	6.0	2.0	10.0	6.0	0.0	0.0	0.0	0.0	0.0	28.0
(2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.7
12.6-18.5	0	0	0	0	0	0	0	1	1	2	4	8	0	0	0	0	0	8
(1)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	2.0	4.0	8.0	8.0	0.0	0.0	0.0	0.0	0.0	16.0
(2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.4
18.6-24.0	0	0	0	0	0	0	0	0	0	0	1	2	0	0	0	0	0	1
(1)	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	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	0.0	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	1	1	0	0	0	0	0	1
(1)	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	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ALL SPEEDS	0	0	2	2	4	1	4	5	5	5	13	26	3	1	1	2	2	50
(1)	0.0	0.0	4.0	4.0	8.0	2.0	8.0	10.0	10.0	10.0	26.0	26.0	6.0	2.0	2.0	4.0	4.0	100.0
(2)	0.0	0.0	0.1	0.1	0.2	0.0	0.2	0.2	0.2	0.2	0.6	0.6	0.1	0.0	0.0	0.1	0.1	2.4

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

50 HRS ON THIS PAGE 0 HRS (0.0 PCT) LESS THAN 1.0 MPH (0.0 PCT OF ALL HRS)

10/ 1/78 - 12/31/78

PILGRIM 160 FT TOWER

DISTRIBUTION OF WIND DIRECTIONS AND SPEEDS

160 FT WIND

160-33 FT DELTA T ALL STABILITIES COMBINED

SPEED (MPH)	MNE	NE	ENE	E	ESE	DIRECTION				WSW	W	WNW	NW	NNW	N	TOTAL
						S	SSE	SSE	SSE							
1.0- 3.5	8	5	3	7	1	0	4	2	2	5	1	2	3	2	3	51
(1)	0.4	0.2	0.1	0.3	0.0	0.0	0.2	0.1	0.1	0.2	0.0	0.1	0.1	0.1	0.1	2.5
(2)	0.4	0.2	0.1	0.3	0.0	0.0	0.2	0.1	0.1	0.2	0.0	0.1	0.1	0.1	0.1	2.5
3.6- 7.5	6	20	24	10	14	11	18	16	10	14	20	29	18	14	13	266
(1)	0.3	1.0	1.2	0.5	0.7	0.5	0.9	0.8	0.5	0.7	1.0	1.4	0.9	0.7	0.6	12.9
(2)	0.3	1.0	1.2	0.5	0.7	0.5	0.9	0.8	0.5	0.7	1.0	1.4	0.9	0.7	0.6	12.9
7.6-12.5	19	35	11	27	14	34	49	29	44	81	96	115	35	18	14	699
(1)	0.9	1.7	0.5	1.3	0.7	1.6	2.4	1.4	2.1	3.9	4.7	5.6	1.7	0.9	0.7	33.9
(2)	0.9	1.7	0.5	1.3	0.7	1.6	2.4	1.4	2.1	3.9	4.7	5.6	1.7	0.9	0.7	33.9
12.6-18.5	45	35	0	15	14	19	21	25	100	89	90	87	28	17	22	691
(1)	2.2	1.7	0.0	0.7	0.7	0.9	1.0	1.2	4.8	4.3	4.4	4.2	1.4	0.8	1.1	33.5
(2)	2.2	1.7	0.0	0.7	0.7	0.9	1.0	1.2	4.8	4.3	4.4	4.2	1.4	0.8	1.1	33.5
18.6-24.0	30	6	0	5	11	8	5	6	14	28	15	45	18	20	14	264
(1)	1.5	0.3	0.0	0.2	0.5	0.4	0.2	0.3	0.7	1.4	0.7	2.2	0.9	1.0	0.7	12.8
(2)	1.5	0.3	0.0	0.2	0.5	0.4	0.2	0.3	0.7	1.4	0.7	2.2	0.9	1.0	0.7	12.8
OVER 24.0	7	3	0	8	2	0	0	0	2	17	5	8	9	10	8	89
(1)	0.3	0.1	0.0	0.4	0.1	0.0	0.0	0.0	0.1	0.8	0.2	0.4	0.4	0.5	0.4	4.3
(2)	0.3	0.1	0.0	0.4	0.1	0.0	0.0	0.0	0.1	0.8	0.2	0.4	0.4	0.5	0.4	4.3
ALL SPEEDS	115	104	38	72	56	72	97	78	172	234	227	286	111	82	74	2060
(1)	5.6	5.0	1.8	3.5	2.7	3.5	4.7	3.8	8.3	11.3	11.0	13.9	5.4	4.0	3.6	99.9
(2)	5.6	5.0	1.8	3.5	2.7	3.5	4.7	3.8	8.3	11.3	11.0	13.9	5.4	4.0	3.6	99.9

(1) = PERCENT OF ALL GOOD OBS FOR THIS PAGE

(2) = PERCENT OF ALL GOOD OBS FOR THE PERIOD

2063 6000 HRS

3 HRS (0.1 PCT) LESS THAN 1.0 MPH

2208 HRS IN THE TIME PERIOD

93.4 PCT DATA RECOVERY

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 the Unit #1¹. Population data are those of the Appendix I submittal, 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
July-December 1977 Liquid Release Maximum Individual
Doses from all Pathways for Adults (MREM)

Pathway	Bone	Liver	Thyroid	Kidney	Lung	GI-LLI	Skin	Total Body
Salt Water Fish	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	0.0	< 0.01
Salt Water Shell Fish	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	0.014	0.0	< 0.01
Discharge Canal Shoreline	< 0.01	< 0.01	< 0.01	0.01	< 0.01	< 0.01	< 0.01	< 0.01
Ocean Shoreline Deposits	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Swimming	< 0.01	< 0.01	< 0.01	0.01	< 0.01	< 0.01	< 0.01	< 0.01
Boating	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	0.01	< 0.01	< 0.01
Total	0.013	0.015	< 0.01	< 0.01	< 0.01	0.025	< 0.01	0.011

Table 3.2-2
July-December 1978 Liquid Release Maximum Individual
Doses from all Pathways for Teenagers (MREM)

Pathway	Bone	Liver	Thyroid	Kidney	Lung	GI-LLI	Skin	Total Body
Salt Water Fish	<0.01	0.04	0.01	0.01	0.02	0.04	0.0	0.06
Salt Water Shell Fish	<0.01	0.10	0.01	0.02	0.04	0.09	0.0	0.53
Discharge Canal Shoreline	<0.01	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Ocean Shoreline Deposits	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Swimming	<0.01	0.03	0.03	0.03	0.03	0.03	0.03	0.03
Boating	<0.01	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Total	<0.01	0.017	<0.01	0.012	0.012	0.022	<0.01	0.014

Table 3.2-3
July-December 1978 Liquid Release Maximum Individual
Doses from all Pathways for Children (MREM)

Pathways	Bone	Liver	Thyroid	Kidney	Lung	GI-LLI	Skin	Total Body
Salt Water Fish	<0.01	<0.01	0.01	0.01	<0.01	<0.01	<0.01	<0.01
Salt Water Shell Fish	<0.01	<0.01	0.01	0.01	<0.01	<0.01	<0.01	<0.01
Discharge Canal Shoreline	<0.01	<0.01	0.01	0.01	0.01	<0.01	<0.01	<0.01
Ocean Shoreline Deposits	<0.01	<0.01	<0.01	0.01	<0.01	<0.01	<0.01	<0.01
Swimming	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Boating	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Total	<0.012	0.012	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01

Table 3.3-1
Population Doses Resulting from the
July-December 1978 Liquid Effluents

Pathway	Thyroid (MAN-REM)	Total Body (MAN-REM)
Salt Water Fish	<0.01	0.017
Salt Water Shell Fish	< 0.01	0.036
Salt Water Plants	<0.01	0.01
Ocean Shoreline Deposits	0.051	0.051
Swimming	0.064	0.064
Total	0.115	0.169

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 #1¹. The gaseous releases for both reactor building vent and the main stack, for the period July-December 1978 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 AEOLUS³ 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. Tables 4.1-1 through 4.1-12, are based on data taken at the 160-foot elevation.

Three departures were made from the Appendix I method of analysis:

- 1) The sea breeze effect was not considered in calculating the X/Q's, depleted X/Q's and D/Q's (The Appendix I study demonstrated the sea breeze effect was not important),
- 2) Meteorological data were collected at the 160-foot elevation as described in Appendix I, and
- 3) Gamma immersion doses were calculated using the semi-infinite cloud model. To insure conservatism in the calculation of gamma immersion doses due to releases from the main stack to receptors within 0.75 miles of the plant, these doses were multiplied by a factor of 4 to represent the increase observed as a result of a finite cloud calculation. Such a calculation was performed for the March 1977 semiannual report and indicated that a factor of 4 is appropriate (see Table 4.1-13).

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. 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.

TABLE 4.1-1

UNDEPLETED X/Q FOR THE REACTOR BUILDING VENT JULY - SEPTEMBER 1978

RECPT NO.	DOWNWIND DISTANCE METERS	WEIGHTED AVERAGES SEC/M**3							
		S - (1)	SSW - (2)	SW - (3)	WSW - (4)	W - (5)	WNW - (6)	NW - (7)	NNW - (8)
		#.#	22.5	45.0	67.5	90.0	112.5	135.0	157.5
1	201.20	1.540E-06	1.540E-06	1.230E-06	9.540E-07	8.050E-07	1.030E-06	8.840E-07	1.410E-06
2	402.30	1.950E-06	1.530E-06	4.600E-06	2.350E-06	1.240E-06	5.870E-07	3.760E-07	4.770E-07
3	804.70	1.030E-06	1.170E-06	1.590E-06	9.560E-07	7.410E-07	9.000E-07	1.250E-07	1.610E-07
4	1207.00	5.140E-07	5.990E-07	8.090E-07	8.330E-07	3.360E-07	1.860E-07	6.510E-08	1.000E-07
5	1609.40	3.260E-07	3.790E-07	5.020E-07	6.470E-07	2.990E-07	5.780E-08	5.320E-08	7.940E-08
6	2414.00	1.710E-07	1.960E-07	2.600E-07	1.250E-07	7.780E-08	4.460E-08	4.050E-08	5.930E-08
7	3218.70	1.100E-07	1.240E-07	7.440E-08	9.510E-08	6.750E-08	3.570E-08	3.200E-08	4.600E-08
8	4023.40	7.070E-08	8.730E-08	5.470E-08	8.070E-08	6.140E-08	2.920E-08	2.600E-08	3.810E-08
9	4828.10	6.010E-08	6.220E-08	5.440E-08	7.140E-08	5.230E-08	2.440E-08	2.150E-08	3.170E-08
10	5632.70	4.770E-08	5.170E-08	5.060E-08	6.410E-08	4.500E-08	2.000E-08	1.830E-08	2.700E-08
11	6437.40	3.790E-08	4.230E-08	5.750E-08	5.040E-08	3.900E-08	1.810E-08	1.820E-08	2.350E-08
12	7242.10	3.060E-08	3.530E-08	4.030E-08	5.620E-08	3.830E-08	1.600E-08	1.590E-08	2.070E-08
13	8046.80	2.760E-08	2.950E-08	4.340E-08	5.850E-08	4.300E-08	3.170E-08	2.400E-08	2.130E-08
14	12070.10	1.640E-08	1.650E-08	2.270E-08	3.150E-08	2.340E-08	1.920E-08	1.270E-08	1.530E-08
15	16093.49	1.150E-08	1.010E-08	1.270E-08	1.040E-08	1.600E-08	1.100E-08	1.110E-08	1.570E-08
16	24140.29	6.730E-09	6.300E-09	8.740E-09	1.300E-08	8.160E-09	7.790E-09	6.570E-09	9.210E-09
17	32187.00	4.620E-09	4.300E-09	6.000E-09	9.640E-09	5.710E-09	5.730E-09	4.580E-09	6.130E-09
18	40233.79	3.440E-09	2.970E-09	5.350E-09	7.290E-09	4.770E-09	4.360E-09	3.470E-09	4.040E-09
19	48280.48	2.030E-09	2.920E-09	4.310E-09	5.040E-09	4.000E-09	3.510E-09	2.790E-09	3.340E-09
20	56327.29	2.350E-09	2.510E-09	3.590E-09	4.850E-09	3.310E-09	2.920E-09	2.310E-09	2.450E-09
21	64373.99	2.000E-09	2.160E-09	3.060E-09	3.530E-09	2.810E-09	2.490E-09	1.970E-09	2.700E-09
22	72420.75	1.460E-09	1.670E-09	2.660E-09	3.500E-09	2.440E-09	2.170E-09	1.710E-09	2.340E-09
23	80467.44	1.300E-09	1.470E-09	2.350E-09	3.160E-09	2.150E-09	1.910E-09	1.510E-09	2.060E-09

RECPT NO.	DOWNWIND DISTANCE METERS	WEIGHTED AVERAGES SEC/M**3							
		N - (9)	NNE - (10)	NE - (11)	ENE - (12)	E - (13)	ESE - (14)	SE - (15)	SSE - (16)
		100.0	202.5	225.0	247.5	270.0	292.5	315.0	337.5
1	201.20	2.360E-06	6.550E-06	1.040E-05	3.550E-06	1.940E-06	1.200E-06	1.500E-06	2.060E-06
2	402.30	7.800E-07	2.110E-06	3.240E-06	1.090E-06	6.170E-07	4.510E-07	4.950E-07	8.020E-07
3	804.70	2.530E-07	7.410E-07	1.140E-06	3.610E-07	2.170E-07	1.860E-07	2.330E-07	3.610E-07
4	1207.00	1.500E-07	4.370E-07	6.620E-07	2.090E-07	1.340E-07	1.010E-07	1.460E-07	2.660E-07
5	1609.40	1.120E-07	3.130E-07	4.650E-07	1.490E-07	1.020E-07	7.650E-08	1.150E-07	1.930E-07
6	2414.00	7.750E-08	1.970E-07	2.890E-07	9.970E-08	7.270E-08	5.360E-08	9.510E-08	1.270E-07
7	3218.70	6.000E-08	1.420E-07	2.060E-07	7.550E-08	5.750E-08	4.920E-08	6.600E-08	9.570E-08
8	4023.40	4.800E-08	1.090E-07	1.570E-07	6.050E-08	4.740E-08	3.310E-08	5.240E-08	6.790E-08
9	4828.10	4.000E-08	8.770E-08	1.260E-07	5.020E-08	4.000E-08	2.750E-08	3.250E-08	5.440E-08
10	5632.70	3.500E-08	7.200E-08	1.040E-07	4.200E-08	3.440E-08	2.340E-08	2.750E-08	4.360E-08
11	6437.40	3.060E-08	6.100E-08	8.840E-08	3.720E-08	3.010E-08	2.030E-08	2.370E-08	3.700E-08
12	7242.10	2.700E-08	5.340E-08	7.640E-08	3.290E-08	2.670E-08	1.790E-08	2.000E-08	4.000E-08
13	8046.80	2.420E-08	4.690E-08	6.700E-08	2.940E-08	2.390E-08	1.590E-08	1.840E-08	3.770E-08
14	12070.10	1.500E-08	2.860E-08	4.000E-08	1.920E-08	1.550E-08	1.030E-08	1.160E-08	2.160E-08
15	16093.49	1.160E-08	2.010E-08	2.870E-08	1.410E-08	1.130E-08	7.570E-09	8.260E-09	1.510E-08
16	24140.29	7.440E-09	1.220E-08	1.750E-08	1.050E-08	7.170E-09	4.850E-09	5.940E-09	8.700E-09
17	32187.00	5.430E-09	8.570E-09	1.230E-08	8.240E-09	5.190E-09	5.450E-09	5.510E-09	5.300E-09
18	40233.79	4.250E-09	6.540E-09	9.440E-09	7.520E-09	5.660E-09	4.060E-09	3.540E-09	3.470E-09
19	48280.48	3.480E-09	5.270E-09	7.610E-09	4.310E-09	4.330E-09	3.300E-09	2.240E-09	2.000E-09
20	56327.29	2.930E-09	4.390E-09	6.350E-09	3.640E-09	2.750E-09	2.350E-09	2.000E-09	2.300E-09
21	64373.99	3.790E-09	3.740E-09	5.420E-09	3.150E-09	2.370E-09	1.670E-09	1.600E-09	2.000E-09
22	72420.75	3.410E-09	3.260E-09	4.730E-09	2.770E-09	2.070E-09	1.470E-09	1.420E-09	1.830E-09
23	80467.44	3.000E-09	2.870E-09	4.100E-09	2.470E-09	1.830E-09	1.310E-09	1.250E-09	1.620E-09

TABLE 4.1-2

DEPLETED X/Q FOR THE REACTOR BUILDING VENT JULY - SEPTEMBER 1978

RECPT NO.	DOWNWIND DISTANCE METERS	WEIGHTED AVERAGES SEC/M**3							
		S - (1)	SSW - (2)	SW - (3)	WSW - (4)	W - (5)	WNW - (6)	NW - (7)	NNW - (8)
		0.0	22.5	45.0	67.5	90.0	112.5	135.0	157.5
1	201.20	1.440E-06	1.440E-06	1.150E-06	8.950E-07	8.390E-07	9.760E-07	8.340E-07	1.320E-06
2	402.30	1.800E-06	1.400E-06	4.170E-06	2.190E-06	1.170E-06	5.480E-07	3.470E-07	4.310E-07
3	804.70	8.800E-07	1.010E-06	1.380E-06	8.860E-07	6.870E-07	8.210E-07	1.130E-07	1.410E-07
4	1207.00	4.270E-07	4.950E-07	6.650E-07	7.420E-07	3.140E-07	1.730E-07	5.790E-08	8.700E-08
5	1609.40	2.620E-07	3.040E-07	4.000E-07	5.470E-07	2.740E-07	5.170E-08	4.760E-08	6.920E-08
6	2414.00	1.320E-07	1.510E-07	2.000E-07	1.160E-07	7.220E-08	4.020E-08	3.640E-08	5.230E-08
7	3218.70	8.190E-08	9.190E-08	6.710E-08	8.800E-08	6.220E-08	3.210E-08	2.860E-08	4.120E-08
8	4023.40	5.670E-08	6.290E-08	4.900E-08	7.450E-08	5.610E-08	2.600E-08	2.300E-08	3.340E-08
9	4828.10	4.200E-08	5.150E-08	4.910E-08	6.570E-08	4.750E-08	2.160E-08	1.890E-08	2.770E-08
10	5632.70	3.330E-08	4.010E-08	5.100E-08	5.800E-08	4.130E-08	1.840E-08	1.600E-08	2.350E-08
11	6437.40	2.970E-08	3.320E-08	4.400E-08	5.310E-08	3.500E-08	1.590E-08	1.500E-08	2.030E-08
12	7242.10	2.530E-08	2.820E-08	3.520E-08	4.990E-08	3.390E-08	1.400E-08	1.380E-08	1.780E-08
13	8046.80	2.160E-08	2.460E-08	2.940E-08	4.510E-08	2.730E-08	2.630E-08	2.070E-08	1.850E-08
14	12070.10	1.170E-08	1.370E-08	1.790E-08	2.550E-08	1.710E-08	1.470E-08	1.000E-08	1.320E-08
15	16093.49	6.590E-09	8.410E-09	1.060E-08	1.570E-08	1.110E-08	9.160E-09	6.840E-09	8.480E-09
16	24140.29	3.690E-09	5.010E-09	6.410E-09	8.980E-09	6.240E-09	5.210E-09	3.620E-09	4.470E-09
17	32187.00	2.530E-09	3.380E-09	4.120E-09	4.560E-09	4.060E-09	2.760E-09	2.110E-09	3.540E-09
18	40233.79	1.880E-09	2.520E-09	2.280E-09	3.020E-09	2.620E-09	1.790E-09	1.450E-09	2.810E-09
19	48280.48	1.240E-09	1.690E-09	1.710E-09	2.370E-09	1.630E-09	1.340E-09	1.070E-09	2.110E-09
20	56327.29	9.360E-10	1.100E-09	1.310E-09	1.810E-09	1.200E-09	1.050E-09	8.350E-10	1.830E-09
21	64373.99	7.670E-10	7.530E-10	1.060E-09	2.130E-09	9.610E-10	8.510E-10	6.740E-10	9.270E-10
22	72420.75	9.350E-10	1.170E-09	8.810E-10	1.170E-09	7.940E-10	7.050E-10	5.570E-10	7.750E-10
23	80467.44	8.110E-10	1.010E-09	7.410E-10	9.860E-10	6.670E-10	5.950E-10	4.690E-10	6.510E-10

RECPT NO.	DOWNWIND DISTANCE METERS	WEIGHTED AVERAGES SEC/M**3							
		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	2.210E-06	6.120E-06	9.690E-06	3.320E-06	1.810E-06	1.190E-06	1.400E-06	1.930E-06
2	402.30	7.040E-07	1.900E-06	2.900E-06	9.770E-07	5.540E-07	4.080E-07	4.440E-07	7.320E-07
3	804.70	2.200E-07	6.420E-07	9.830E-07	3.120E-07	1.800E-07	1.660E-07	2.000E-07	3.260E-07
4	1207.00	1.280E-07	3.720E-07	5.590E-07	1.760E-07	1.150E-07	8.740E-08	1.290E-07	2.410E-07
5	1609.40	9.520E-08	2.630E-07	3.800E-07	1.250E-07	8.590E-08	6.650E-08	1.020E-07	1.730E-07
6	2414.00	6.620E-08	1.650E-07	2.380E-07	6.340E-08	6.290E-08	4.680E-08	8.530E-08	1.130E-07
7	3218.70	5.130E-08	1.180E-07	1.680E-07	6.310E-08	5.010E-08	4.360E-08	5.950E-08	8.480E-08
8	4023.40	4.170E-08	9.000E-08	1.270E-07	5.040E-08	4.130E-08	2.880E-08	4.630E-08	5.890E-08
9	4828.10	3.470E-08	7.160E-08	1.000E-07	4.160E-08	3.480E-08	2.380E-08	2.810E-08	4.670E-08
10	5632.70	2.970E-08	5.890E-08	8.230E-08	3.540E-08	3.000E-08	2.020E-08	2.370E-08	3.710E-08
11	6437.40	2.590E-08	4.970E-08	6.920E-08	3.070E-08	2.620E-08	1.750E-08	2.030E-08	3.110E-08
12	7242.10	2.290E-08	4.200E-08	5.930E-08	2.710E-08	2.320E-08	1.540E-08	1.770E-08	2.300E-08
13	8046.80	2.040E-08	3.730E-08	5.170E-08	2.420E-08	2.000E-08	1.370E-08	1.560E-08	2.870E-08
14	12070.10	1.320E-08	2.230E-08	3.070E-08	1.570E-08	1.340E-08	8.790E-09	9.670E-09	1.560E-08
15	16093.49	9.640E-09	1.540E-08	2.120E-08	1.150E-08	9.720E-09	6.400E-09	6.820E-09	8.330E-09
16	24140.29	6.090E-09	9.030E-09	1.240E-08	8.530E-09	6.100E-09	4.060E-09	4.820E-09	4.360E-09
17	32187.00	4.400E-09	6.210E-09	8.540E-09	6.430E-09	4.370E-09	3.830E-09	3.040E-09	3.610E-09
18	40233.79	3.410E-09	4.650E-09	6.390E-09	4.910E-09	3.220E-09	2.780E-09	2.490E-09	2.450E-09
19	48280.48	2.760E-09	3.680E-09	5.060E-09	3.350E-09	2.600E-09	2.080E-09	1.750E-09	2.000E-09
20	56327.29	2.310E-09	3.010E-09	4.140E-09	2.810E-09	2.280E-09	1.810E-09	1.560E-09	1.550E-09
21	64373.99	1.590E-09	2.530E-09	3.480E-09	2.410E-09	1.940E-09	1.340E-09	1.230E-09	1.340E-09
22	72420.75	1.120E-09	2.180E-09	3.000E-09	2.110E-09	1.690E-09	1.170E-09	1.090E-09	1.180E-09
23	80467.44	9.420E-10	1.900E-09	2.620E-09	1.870E-09	1.490E-09	1.040E-09	9.680E-10	1.020E-09

TABLE 4.1-3

D/Q FOR THE REACTOR BUILDING VENT JULY - SEPTEMBER 1978

RECPT NO.	DOWNWIND DISTANCE METERS	WEIGHTED AVERAGES 1/M**2							
		S - (1)	SSW - (2)	SW - (3)	WSW - (4)	W - (5)	WNW - (6)	NW - (7)	NNW - (8)
		0.0	22.5	45.0	67.5	90.0	112.5	135.0	157.5
1	201.20	7.630E-08	7.380E-08	5.120E-08	2.100E-08	2.450E-08	3.000E-08	2.200E-08	2.460E-08
2	402.30	5.030E-08	4.260E-08	3.000E-08	2.100E-08	2.100E-08	2.100E-08	1.350E-08	1.040E-08
3	804.70	1.860E-08	1.510E-08	1.310E-08	7.400E-09	7.820E-09	8.300E-09	4.940E-09	4.140E-09
4	1207.00	9.150E-09	7.500E-09	6.830E-09	3.950E-09	3.670E-09	3.620E-09	2.460E-09	2.320E-09
5	1609.40	5.470E-09	4.490E-09	4.090E-09	2.790E-09	2.290E-09	1.820E-09	1.600E-09	1.510E-09
6	2414.00	2.630E-09	2.160E-09	1.940E-09	9.400E-10	9.410E-10	9.490E-10	8.400E-10	7.970E-10
7	3218.70	1.570E-09	1.290E-09	8.740E-10	5.900E-10	6.110E-10	6.030E-10	5.370E-10	5.070E-10
8	4023.40	1.060E-09	8.640E-10	5.900E-10	4.070E-10	4.270E-10	4.190E-10	3.740E-10	3.530E-10
9	4828.10	7.770E-10	5.860E-10	4.320E-10	2.960E-10	3.110E-10	3.060E-10	2.740E-10	2.600E-10
10	5632.70	5.020E-10	4.630E-10	3.470E-10	2.270E-10	2.370E-10	2.350E-10	2.110E-10	2.000E-10
11	6437.40	4.140E-10	3.590E-10	3.090E-10	1.810E-10	1.870E-10	1.860E-10	1.600E-10	1.500E-10
12	7242.10	3.150E-10	2.850E-10	2.180E-10	1.530E-10	1.540E-10	1.520E-10	1.370E-10	1.290E-10
13	8046.00	2.700E-10	2.270E-10	2.200E-10	1.610E-10	1.820E-10	1.370E-10	1.190E-10	1.070E-10
14	12070.10	1.510E-10	1.090E-10	1.150E-10	1.020E-10	9.490E-11	9.810E-11	5.640E-11	5.110E-11
15	16093.49	8.180E-11	6.050E-11	5.240E-11	5.100E-11	7.200E-11	4.460E-11	5.630E-11	5.200E-11
16	24140.29	4.020E-11	2.990E-11	3.660E-11	4.120E-11	2.660E-11	3.700E-11	2.450E-11	2.400E-11
17	32187.00	2.620E-11	1.820E-11	1.960E-11	1.400E-11	1.560E-11	1.520E-11	1.200E-11	2.380E-11
18	40233.79	1.810E-11	1.260E-11	1.150E-11	9.260E-12	1.150E-11	8.760E-12	7.710E-12	8.970E-12
19	48280.40	1.140E-11	9.930E-12	8.240E-12	7.000E-12	6.540E-12	6.220E-12	5.470E-12	7.820E-12
20	56327.29	8.290E-12	7.110E-12	5.990E-12	5.150E-12	4.500E-12	4.650E-12	4.000E-12	4.410E-12
21	64373.99	6.620E-12	4.930E-12	4.660E-12	4.900E-12	3.560E-12	3.600E-12	3.170E-12	3.770E-12
22	72420.75	5.700E-12	4.700E-12	3.830E-12	3.070E-12	2.870E-12	2.910E-12	2.560E-12	3.000E-12
23	80467.44	4.700E-12	3.910E-12	3.140E-12	2.510E-12	2.350E-12	2.380E-12	2.090E-12	2.520E-12

RECPT NO.	DOWNWIND DISTANCE METERS	WEIGHTED AVERAGES 1/M**2							
		N - (9)	NNE - (10)	NE - (11)	ENE - (12)	E - (13)	ESE - (14)	SE - (15)	SSE - (16)
		100.0	202.5	225.0	247.5	270.0	292.5	315.0	337.5
1	201.20	4.160E-08	1.970E-07	2.640E-07	5.260E-08	3.230E-08	2.420E-08	4.340E-08	6.740E-08
2	402.30	1.730E-08	7.420E-08	9.590E-08	1.960E-08	1.250E-08	1.140E-08	1.710E-08	2.900E-08
3	804.70	6.710E-09	2.660E-08	3.370E-08	7.000E-09	4.710E-09	4.630E-09	6.650E-09	1.200E-08
4	1207.00	3.620E-09	1.400E-08	1.760E-08	3.660E-09	2.580E-09	2.290E-09	3.450E-09	6.560E-09
5	1609.40	2.290E-09	8.730E-09	1.090E-08	2.270E-09	1.650E-09	1.470E-09	2.210E-09	4.030E-09
6	2414.00	1.170E-09	4.300E-09	5.470E-09	1.140E-09	8.400E-10	7.640E-10	1.170E-09	2.020E-09
7	3218.70	7.310E-10	2.700E-09	3.360E-09	7.040E-10	5.300E-10	4.930E-10	7.090E-10	1.250E-09
8	4023.40	5.040E-10	1.850E-09	2.300E-09	4.820E-10	3.660E-10	3.340E-10	4.830E-10	8.470E-10
9	4828.10	3.690E-10	1.360E-09	1.690E-09	3.540E-10	2.690E-10	2.450E-10	3.450E-10	6.200E-10
10	5632.70	2.830E-10	1.040E-09	1.290E-09	2.720E-10	2.060E-10	1.880E-10	2.660E-10	4.730E-10
11	6437.40	2.240E-10	8.200E-10	1.020E-09	2.150E-10	1.630E-10	1.490E-10	2.100E-10	3.740E-10
12	7242.10	1.820E-10	6.620E-10	8.240E-10	1.740E-10	1.320E-10	1.210E-10	1.700E-10	3.060E-10
13	8046.00	1.510E-10	5.460E-10	6.790E-10	1.440E-10	1.090E-10	1.000E-10	1.400E-10	2.710E-10
14	12070.10	7.240E-11	2.590E-10	3.210E-10	6.030E-11	5.220E-11	4.040E-11	6.690E-11	1.550E-10
15	16093.49	4.330E-11	1.530E-10	1.890E-10	4.040E-11	3.110E-11	2.910E-11	3.960E-11	8.350E-11
16	24140.29	2.150E-11	7.400E-11	9.060E-11	1.950E-11	1.510E-11	1.440E-11	1.860E-11	3.900E-11
17	32187.00	1.330E-11	4.490E-11	5.460E-11	1.200E-11	9.220E-12	1.790E-11	2.040E-11	2.270E-11
18	40233.79	9.190E-12	3.040E-11	3.670E-11	1.890E-11	1.970E-11	1.030E-11	9.560E-12	1.470E-11
19	48280.40	6.780E-12	2.200E-11	2.660E-11	6.050E-12	1.140E-11	8.620E-12	5.350E-12	1.070E-11
20	56327.29	5.260E-12	1.680E-11	2.030E-11	4.750E-12	3.500E-12	4.330E-12	4.210E-12	8.110E-12
21	64373.99	7.670E-12	1.330E-11	1.600E-11	3.800E-12	2.900E-12	2.800E-12	3.190E-12	6.430E-12
22	72420.75	4.600E-12	1.090E-11	1.310E-11	3.270E-12	2.430E-12	2.320E-12	2.640E-12	5.470E-12
23	80467.44	3.750E-12	9.110E-12	1.090E-11	2.810E-12	2.070E-12	1.950E-12	2.210E-12	4.570E-12

TABLE 4.1-4

UNDEPLETED X/Q FOR THE MAIN STACK JULY - SEPTEMBER 1976

RECPT NO.	DOWNWIND DISTANCE METERS	WEIGHTED AVERAGES SEC/M**3							
		S - (1)	SSW - (2)	SW - (3)	WSW - (4)	W - (5)	WNW - (6)	NW - (7)	NNW - (8)
		0.0	22.5	45.0	67.5	90.0	112.5	135.0	157.5
1	201.20	9.24E-09	5.88E-09	1.06E-08	5.03E-09	4.07E-09	7.38E-09	4.55E-09	1.10E-09
2	402.30	4.64E-07	2.83E-07	2.43E-07	1.55E-07	1.64E-07	1.69E-07	7.72E-08	4.13E-08
3	804.70	2.24E-07	1.64E-07	1.43E-07	6.64E-08	6.47E-08	5.19E-08	3.00E-08	1.93E-08
4	1207.00	1.45E-07	2.15E-07	1.12E-07	1.02E-07	4.05E-08	2.20E-08	1.60E-08	1.28E-08
5	1609.40	1.78E-07	3.10E-07	1.04E-07	1.25E-07	2.78E-08	1.87E-08	1.50E-08	1.28E-08
6	2414.00	1.35E-07	1.65E-07	5.94E-08	3.44E-08	2.17E-08	1.71E-08	1.45E-08	1.45E-08
7	3218.70	9.62E-08	1.00E-07	2.49E-08	3.36E-08	2.09E-08	1.61E-08	1.38E-08	1.49E-08
8	4023.40	5.88E-08	5.03E-08	2.48E-08	3.08E-08	2.79E-08	1.48E-08	1.27E-08	1.43E-08
9	4828.10	4.53E-08	3.08E-08	2.39E-08	3.17E-08	2.58E-08	1.34E-08	1.14E-08	1.32E-08
10	5632.70	3.16E-08	2.09E-08	2.36E-08	2.80E-08	2.37E-08	1.21E-08	1.02E-08	1.20E-08
11	6437.40	2.33E-08	2.40E-08	2.34E-08	2.67E-08	2.10E-08	1.10E-08	9.21E-09	1.10E-08
12	7242.10	1.88E-08	2.04E-08	1.75E-08	2.46E-08	2.06E-08	1.00E-08	8.35E-09	1.01E-08
13	8046.00	1.77E-08	1.69E-08	1.97E-08	2.62E-08	2.92E-08	1.30E-08	1.06E-08	9.31E-09
14	12070.10	1.13E-08	1.73E-08	1.27E-08	1.68E-08	1.79E-08	8.43E-09	6.84E-09	6.48E-09
15	16093.49	9.19E-09	6.22E-09	6.68E-09	9.57E-09	9.83E-09	5.41E-09	5.92E-09	1.24E-08
16	24140.29	5.42E-09	4.17E-09	4.49E-09	6.91E-09	5.12E-09	3.92E-09	3.73E-09	7.55E-09
17	32187.00	3.70E-09	2.96E-09	3.21E-09	6.42E-09	3.67E-09	3.44E-09	2.93E-09	3.36E-09
18	40233.79	2.74E-09	2.14E-09	3.49E-09	6.58E-09	3.16E-09	3.70E-09	2.36E-09	2.12E-09
19	48280.48	2.39E-09	2.22E-09	2.85E-09	4.85E-09	2.98E-09	3.51E-09	2.79E-09	1.78E-09
20	56327.29	2.02E-09	2.05E-09	2.67E-09	3.64E-09	3.31E-09	2.93E-09	2.06E-09	1.33E-09
21	64373.99	1.71E-09	2.02E-09	2.30E-09	2.02E-09	2.82E-09	2.47E-09	1.76E-09	2.16E-09
22	72420.75	1.24E-09	1.26E-09	1.89E-09	3.56E-09	2.44E-09	2.17E-09	1.72E-09	1.72E-09
23	80467.44	1.11E-09	1.13E-09	1.69E-09	3.14E-09	2.15E-09	1.92E-09	1.51E-09	1.53E-09

RECPT NO.	DOWNWIND DISTANCE METERS	WEIGHTED AVERAGES SEC/M**3							
		N - (9)	NNE - (10)	NE - (11)	ENE - (12)	E - (13)	ESE - (14)	SE - (15)	SSE - (16)
		100.0	202.5	225.0	247.5	270.0	292.5	315.0	337.5
1	201.20	1.05E-09	4.17E-09	3.22E-09	7.57E-10	5.33E-10	7.42E-10	5.09E-10	2.66E-09
2	402.30	6.99E-08	1.23E-07	1.10E-07	3.17E-08	2.23E-08	2.91E-08	1.79E-08	1.66E-07
3	804.70	2.96E-08	6.59E-08	7.01E-08	2.35E-08	1.54E-08	2.20E-08	1.22E-08	1.32E-07
4	1207.00	1.62E-08	4.27E-08	4.62E-08	1.51E-08	1.09E-08	1.62E-08	1.05E-08	1.40E-07
5	1609.40	1.45E-08	3.98E-08	4.27E-08	1.23E-08	1.04E-08	1.47E-08	1.21E-08	8.95E-08
6	2414.00	1.47E-08	4.19E-08	4.72E-08	1.22E-08	1.20E-08	1.39E-08	1.08E-08	4.26E-08
7	3218.70	1.48E-08	4.14E-08	4.89E-08	1.31E-08	1.31E-08	1.33E-08	1.97E-08	3.86E-08
8	4023.40	1.42E-08	3.87E-08	4.70E-08	1.30E-08	1.32E-08	1.26E-08	1.86E-08	3.10E-08
9	4828.10	1.33E-08	3.52E-08	4.34E-08	1.24E-08	1.25E-08	1.11E-08	1.49E-08	2.62E-08
10	5632.70	1.23E-08	3.18E-08	3.97E-08	1.17E-08	1.18E-08	1.01E-08	1.37E-08	2.40E-08
11	6437.40	1.15E-08	2.89E-08	3.64E-08	1.11E-08	1.11E-08	9.18E-09	1.24E-08	2.06E-08
12	7242.10	1.07E-08	2.64E-08	3.34E-08	1.04E-08	1.04E-08	8.42E-09	1.14E-08	2.31E-08
13	8046.00	9.97E-09	2.42E-08	3.08E-08	9.82E-09	9.80E-09	7.75E-09	1.04E-08	2.28E-08
14	12070.10	7.29E-09	1.66E-08	2.14E-08	7.34E-09	7.27E-09	5.43E-09	7.13E-09	1.41E-08
15	16093.49	5.67E-09	1.24E-08	1.61E-08	5.79E-09	5.69E-09	4.13E-09	5.28E-09	1.20E-08
16	24140.29	3.89E-09	8.01E-09	1.04E-08	4.03E-09	3.91E-09	2.74E-09	3.49E-09	6.97E-09
17	32187.00	2.96E-09	5.88E-09	7.64E-09	3.11E-09	2.98E-09	2.58E-09	3.55E-09	3.74E-09
18	40233.79	2.38E-09	4.68E-09	5.99E-09	3.22E-09	3.35E-09	1.98E-09	2.17E-09	2.67E-09
19	48280.48	1.99E-09	3.77E-09	4.91E-09	2.69E-09	2.50E-09	1.69E-09	1.56E-09	2.16E-09
20	56327.29	1.70E-09	3.18E-09	4.14E-09	1.82E-09	1.71E-09	1.20E-09	1.31E-09	1.81E-09
21	64373.99	2.22E-09	2.75E-09	3.58E-09	1.59E-09	1.49E-09	1.01E-09	1.13E-09	1.56E-09
22	72420.75	2.56E-09	2.42E-09	3.15E-09	1.42E-09	1.37E-09	8.94E-10	9.94E-10	1.37E-09
23	80467.44	2.27E-09	2.15E-09	2.81E-09	1.29E-09	1.90E-09	8.02E-10	8.86E-10	1.21E-09

TABLE 4.1-5

DEPLETED X/Q FOR THE MAIN STACK JULY - SEPTEMBER 1978

RECPT NO.	DOWNWIND DISTANCE METERS	WEIGHTED AVERAGES SEC/M**3							
		S - (1) 180.0	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	9.240E-09	5.880E-09	1.060E-08	5.030E-09	4.870E-09	7.300E-09	4.550E-09	1.100E-09
2	402.30	4.530E-07	2.760E-07	2.390E-07	1.540E-07	1.620E-07	1.680E-07	7.640E-08	4.090E-08
3	804.70	2.130E-07	1.560E-07	1.370E-07	6.430E-08	6.250E-08	5.010E-08	2.910E-08	1.870E-08
4	1207.00	1.380E-07	2.010E-07	1.060E-07	9.910E-08	3.910E-08	2.090E-08	1.590E-08	1.210E-08
5	1609.40	1.650E-07	2.760E-07	9.850E-08	1.210E-07	2.640E-08	1.750E-08	1.410E-08	1.210E-08
6	2414.00	1.210E-07	1.460E-07	5.590E-08	3.200E-08	2.050E-08	1.590E-08	1.360E-08	1.300E-08
7	3218.70	8.360E-08	9.090E-08	2.310E-08	3.100E-08	2.730E-08	1.490E-08	1.200E-08	1.400E-08
8	4023.40	5.200E-08	4.630E-08	2.290E-08	2.900E-08	2.620E-08	1.360E-08	1.170E-08	1.330E-08
9	4828.10	4.030E-08	2.830E-08	2.200E-08	2.900E-08	2.410E-08	1.230E-08	1.040E-08	1.230E-08
10	5632.70	2.820E-08	2.640E-08	2.150E-08	2.610E-08	2.200E-08	1.110E-08	9.320E-09	1.120E-08
11	6437.40	2.070E-08	2.190E-08	2.110E-08	2.400E-08	1.940E-08	9.970E-09	8.340E-09	1.020E-08
12	7242.10	1.670E-08	1.840E-08	1.570E-08	2.200E-08	1.800E-08	9.050E-09	7.510E-09	9.320E-09
13	8046.00	1.560E-08	1.520E-08	1.760E-08	2.410E-08	2.610E-08	1.180E-08	9.500E-09	8.540E-09
14	12070.10	9.640E-09	1.410E-08	1.120E-08	1.530E-08	1.560E-08	7.470E-09	6.010E-09	5.830E-09
15	16093.40	7.590E-09	5.350E-09	5.660E-09	8.520E-09	8.590E-09	4.680E-09	5.150E-09	1.070E-08
16	24140.20	4.320E-09	3.500E-09	3.750E-09	6.060E-09	4.330E-09	3.330E-09	3.190E-09	6.040E-09
17	32187.00	2.850E-09	2.400E-09	2.610E-09	5.510E-09	3.040E-09	2.920E-09	2.460E-09	2.970E-09
18	40233.70	2.030E-09	1.660E-09	2.060E-09	4.030E-09	2.600E-09	2.450E-09	1.930E-09	1.820E-09
19	48280.40	1.730E-09	1.700E-09	2.300E-09	3.360E-09	2.370E-09	1.340E-09	1.070E-09	1.520E-09
20	56327.20	1.430E-09	1.640E-09	1.950E-09	2.790E-09	1.250E-09	1.050E-09	1.120E-09	1.100E-09
21	64373.90	1.100E-09	1.210E-09	1.640E-09	1.640E-09	9.620E-10	9.270E-10	9.070E-10	1.560E-09
22	72420.75	7.750E-10	9.350E-10	1.420E-09	1.270E-09	7.940E-10	7.070E-10	5.500E-10	1.400E-09
23	80467.44	6.750E-10	8.250E-10	1.250E-09	1.060E-09	6.670E-10	5.960E-10	4.700E-10	1.220E-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	1.850E-09	4.170E-09	3.220E-09	7.500E-10	5.330E-10	7.420E-10	5.090E-10	2.660E-09
2	402.30	6.920E-08	1.220E-07	1.090E-07	3.130E-08	2.200E-08	2.800E-08	1.700E-08	1.650E-07
3	804.70	2.870E-08	6.300E-08	6.700E-08	2.200E-08	1.490E-08	2.130E-08	1.100E-08	1.200E-07
4	1207.00	1.540E-08	4.060E-08	4.390E-08	1.430E-08	1.040E-08	1.540E-08	1.010E-08	1.350E-07
5	1609.40	1.360E-08	3.770E-08	4.050E-08	1.150E-08	9.800E-09	1.300E-08	1.160E-08	0.620E-08
6	2414.00	1.390E-08	3.970E-08	4.500E-08	1.160E-08	1.150E-08	1.310E-08	1.010E-08	4.030E-08
7	3218.70	1.390E-08	3.890E-08	4.630E-08	1.240E-08	1.250E-08	1.240E-08	1.000E-08	3.610E-08
8	4023.40	1.330E-08	3.620E-08	4.420E-08	1.230E-08	1.250E-08	1.170E-08	1.760E-08	2.060E-08
9	4828.10	1.240E-08	3.280E-08	4.070E-08	1.100E-08	1.190E-08	1.030E-08	1.400E-08	2.410E-08
10	5632.70	1.150E-08	2.950E-08	3.720E-08	1.110E-08	1.120E-08	9.320E-09	1.270E-08	2.190E-08
11	6437.40	1.060E-08	2.670E-08	3.390E-08	1.050E-08	1.050E-08	8.470E-09	1.150E-08	1.070E-08
12	7242.10	9.900E-09	2.430E-08	3.110E-08	9.850E-09	9.850E-09	7.750E-09	1.050E-08	2.070E-08
13	8046.00	9.220E-09	2.210E-08	2.850E-08	9.260E-09	9.240E-09	7.110E-09	9.560E-09	2.010E-08
14	12070.10	6.660E-09	1.490E-08	1.950E-08	6.880E-09	6.790E-09	4.910E-09	6.300E-09	1.220E-08
15	16093.40	5.130E-09	1.090E-08	1.440E-08	5.390E-09	5.270E-09	3.600E-09	4.640E-09	9.890E-09
16	24140.20	3.470E-09	6.910E-09	9.160E-09	3.730E-09	3.600E-09	2.410E-09	3.000E-09	5.550E-09
17	32187.00	2.620E-09	4.970E-09	6.620E-09	2.850E-09	2.720E-09	2.290E-09	3.100E-09	2.920E-09
18	40233.70	2.000E-09	3.030E-09	5.120E-09	3.000E-09	3.110E-09	1.730E-09	1.840E-09	1.990E-09
19	48280.40	1.720E-09	3.090E-09	4.150E-09	2.490E-09	2.310E-09	1.470E-09	1.200E-09	1.570E-09
20	56327.20	1.470E-09	2.570E-09	3.470E-09	1.640E-09	1.540E-09	1.010E-09	1.070E-09	1.200E-09
21	64373.90	1.990E-09	2.200E-09	2.970E-09	1.440E-09	1.340E-09	8.340E-10	9.150E-10	1.070E-09
22	72420.75	2.040E-09	1.910E-09	2.590E-09	1.200E-09	1.190E-09	7.350E-10	7.990E-10	9.290E-10
23	80467.44	1.780E-09	1.690E-09	2.300E-09	1.150E-09	1.060E-09	6.550E-10	7.000E-10	8.030E-10

TABLE 4.1-6

D/Q FOR THE MAIN STACK JULY - SEPTEMBER 1978

RECPT NO.	DOWNWIND DISTANCE METERS	WEIGHTED AVERAGES 1/M**2							
		S - (1) #.#	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	5.20E-09	3.72E-09	3.45E-09	1.41E-09	1.59E-09	2.32E-09	1.96E-09	1.18E-09
2	402.30	2.40E-08	1.70E-08	1.01E-08	4.05E-09	4.65E-09	6.30E-09	4.14E-09	2.49E-09
3	804.70	1.19E-08	8.63E-09	5.45E-09	2.36E-09	2.91E-09	3.62E-09	2.73E-09	1.69E-09
4	1207.00	5.95E-09	5.57E-09	3.73E-09	2.00E-09	1.75E-09	1.92E-09	1.69E-09	1.14E-09
5	1609.40	3.95E-09	3.78E-09	2.48E-09	1.40E-09	1.13E-09	1.33E-09	1.18E-09	8.56E-10
6	2414.00	2.00E-09	1.77E-09	1.21E-09	6.02E-10	5.86E-10	7.65E-10	6.83E-10	5.30E-10
7	3218.70	1.22E-09	1.01E-09	6.62E-10	4.09E-10	4.71E-10	5.00E-10	4.48E-10	3.58E-10
8	4023.40	7.51E-10	6.20E-10	4.89E-10	2.96E-10	3.44E-10	3.53E-10	3.17E-10	2.58E-10
9	4828.10	5.48E-10	4.52E-10	3.73E-10	2.29E-10	2.59E-10	2.58E-10	2.32E-10	1.92E-10
10	5632.70	4.30E-10	3.46E-10	2.97E-10	1.78E-10	2.04E-10	2.00E-10	1.80E-10	1.51E-10
11	6437.40	3.42E-10	2.74E-10	2.39E-10	1.46E-10	1.64E-10	1.61E-10	1.45E-10	1.22E-10
12	7242.10	2.79E-10	2.23E-10	1.93E-10	1.21E-10	1.39E-10	1.35E-10	1.22E-10	1.03E-10
13	8046.80	2.35E-10	1.86E-10	1.61E-10	1.02E-10	1.17E-10	1.20E-10	1.00E-10	8.74E-11
14	12070.10	1.17E-10	1.21E-10	7.89E-11	5.06E-11	5.61E-11	5.97E-11	5.38E-11	4.51E-11
15	16093.49	7.03E-11	5.76E-11	5.00E-11	3.14E-11	3.56E-11	3.70E-11	3.26E-11	2.63E-11
16	24140.29	3.72E-11	2.99E-11	2.57E-11	1.58E-11	1.84E-11	1.91E-11	1.60E-11	1.21E-11
17	32187.00	2.40E-11	1.96E-11	1.86E-11	9.75E-12	1.17E-11	1.20E-11	1.07E-11	8.28E-12
18	40233.70	1.78E-11	1.39E-11	1.10E-11	5.44E-12	7.93E-12	1.09E-11	7.52E-12	6.28E-12
19	48280.40	1.30E-11	9.96E-12	8.24E-12	5.44E-12	5.89E-12	6.22E-12	5.47E-12	4.58E-12
20	56327.29	1.01E-11	7.57E-12	6.02E-12	5.02E-12	4.79E-12	4.65E-12	5.71E-12	3.54E-12
21	64373.99	8.06E-12	6.77E-12	5.60E-12	3.03E-12	3.56E-12	4.23E-12	4.47E-12	4.49E-12
22	72420.75	6.99E-12	5.12E-12	4.43E-12	2.50E-12	2.87E-12	2.91E-12	2.56E-12	3.10E-12
23	80467.44	5.81E-12	4.24E-12	3.74E-12	2.84E-12	2.35E-12	2.38E-12	2.09E-12	2.74E-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	1.05E-09	5.72E-09	4.77E-09	1.07E-09	0.41E-10	1.23E-09	9.54E-10	3.08E-09
2	402.30	3.90E-09	1.21E-08	1.01E-08	2.25E-09	1.70E-09	2.60E-09	2.02E-09	8.45E-09
3	804.70	2.59E-09	8.16E-09	6.91E-09	1.50E-09	1.23E-09	1.75E-09	1.46E-09	7.11E-09
4	1207.00	1.63E-09	5.40E-09	4.79E-09	9.65E-10	8.65E-10	1.13E-09	1.13E-09	4.52E-09
5	1609.40	1.16E-09	3.96E-09	3.65E-09	6.94E-10	6.69E-10	8.20E-10	9.15E-10	2.71E-09
6	2414.00	6.80E-10	2.43E-09	2.30E-09	4.15E-10	4.25E-10	4.93E-10	6.10E-10	1.29E-09
7	3218.70	4.49E-10	1.63E-09	1.56E-09	2.76E-10	2.90E-10	3.29E-10	4.25E-10	8.65E-10
8	4023.40	3.19E-10	1.17E-09	1.13E-09	1.97E-10	2.11E-10	2.35E-10	3.12E-10	6.10E-10
9	4828.10	2.35E-10	8.73E-10	8.47E-10	1.46E-10	1.58E-10	1.74E-10	2.35E-10	4.51E-10
10	5632.70	1.82E-10	6.03E-10	6.65E-10	1.13E-10	1.24E-10	1.36E-10	1.86E-10	3.53E-10
11	6437.40	1.47E-10	5.53E-10	5.40E-10	9.17E-11	1.01E-10	1.10E-10	1.52E-10	2.85E-10
12	7242.10	1.24E-10	4.64E-10	4.53E-10	7.70E-11	8.48E-11	9.22E-11	1.27E-10	2.50E-10
13	8046.80	1.05E-10	3.96E-10	3.86E-10	6.56E-11	7.22E-11	7.86E-11	1.00E-10	2.11E-10
14	12070.10	5.43E-11	2.04E-10	1.99E-10	3.30E-11	3.73E-11	4.06E-11	5.59E-11	1.05E-10
15	16093.49	3.36E-11	1.26E-10	1.22E-10	2.09E-11	2.29E-11	2.50E-11	3.43E-11	6.17E-11
16	24140.29	1.74E-11	6.42E-11	6.19E-11	1.07E-11	1.15E-11	1.20E-11	1.71E-11	3.16E-11
17	32187.00	1.13E-11	4.12E-11	3.94E-11	6.96E-12	7.31E-12	8.31E-12	1.05E-11	2.14E-11
18	40233.79	7.99E-12	2.80E-11	2.73E-11	4.88E-12	5.02E-12	5.80E-12	7.30E-12	1.50E-11
19	48280.40	5.93E-12	2.12E-11	2.01E-11	3.59E-12	3.66E-12	4.24E-12	5.31E-12	1.11E-11
20	56327.29	4.67E-12	1.63E-11	1.53E-11	2.78E-12	2.83E-12	3.31E-12	4.04E-12	8.49E-12
21	64373.99	3.56E-12	1.29E-11	1.21E-11	2.20E-12	2.23E-12	2.61E-12	3.17E-12	6.71E-12
22	72420.75	5.32E-12	1.05E-11	9.81E-12	1.80E-12	1.81E-12	2.14E-12	2.56E-12	5.48E-12
23	80467.44	4.78E-12	8.67E-12	8.09E-12	1.49E-12	1.49E-12	1.77E-12	2.10E-12	4.53E-12

TABLE 4.1-7

UNDEPLETED X/Q FOR THE REACTOR BUILDING VENT OCTOBER - DECEMBER 1978

RECPYR NO.	DOWNWIND DISTANCE METERS	WEIGHTED AVERAGES SEC/M**3							
		S - (1) 8.0	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	1.130E-06	1.950E-06	1.310E-06	3.320E-07	1.020E-06	3.590E-06	1.420E-06	1.550E-06
2	402.30	1.460E-06	1.690E-06	2.780E-06	8.740E-07	1.120E-06	1.650E-06	4.730E-07	4.780E-07
3	804.70	7.190E-07	7.120E-07	9.490E-07	3.940E-07	5.910E-07	2.000E-06	1.930E-07	1.850E-07
4	1207.00	3.630E-07	3.940E-07	5.160E-07	3.170E-07	2.620E-07	5.960E-07	1.060E-07	1.270E-07
5	1609.40	2.250E-07	2.670E-07	3.200E-07	2.250E-07	2.150E-07	2.130E-07	8.030E-08	1.030E-07
6	2414.00	1.160E-07	1.300E-07	1.650E-07	5.340E-08	6.120E-08	1.450E-07	5.530E-08	7.580E-08
7	3218.70	7.450E-08	8.670E-08	8.050E-08	3.970E-08	5.010E-08	1.000E-07	4.200E-08	5.870E-08
8	4023.40	5.200E-08	5.920E-08	5.810E-08	3.100E-08	4.450E-08	8.540E-08	3.350E-08	4.720E-08
9	4828.10	3.990E-08	4.290E-08	4.790E-08	2.690E-08	3.770E-08	6.960E-08	2.750E-08	3.890E-08
10	5632.70	3.130E-08	3.460E-08	4.060E-08	2.320E-08	3.270E-08	5.830E-08	2.320E-08	3.290E-08
11	6437.40	2.400E-08	2.820E-08	3.440E-08	2.040E-08	2.790E-08	4.980E-08	2.250E-08	2.830E-08
12	7242.10	1.990E-08	2.350E-08	2.760E-08	1.800E-08	2.650E-08	4.330E-08	1.950E-08	2.470E-08
13	8046.00	1.770E-08	1.990E-08	2.470E-08	1.850E-08	2.710E-08	5.960E-08	2.290E-08	2.400E-08
14	12070.10	1.020E-08	1.110E-08	1.350E-08	1.010E-08	1.510E-08	3.460E-08	1.240E-08	1.690E-08
15	16093.49	6.930E-09	7.000E-09	8.560E-09	6.090E-09	1.030E-08	2.130E-08	9.190E-09	1.630E-08
16	24140.29	3.900E-09	3.970E-09	4.820E-09	4.040E-09	5.490E-09	1.320E-08	5.300E-09	9.420E-09
17	32187.00	2.610E-09	2.640E-09	3.200E-09	2.920E-09	3.770E-09	9.180E-09	3.610E-09	6.140E-09
18	40233.79	1.900E-09	1.890E-09	2.410E-09	2.220E-09	2.960E-09	6.840E-09	2.700E-09	4.070E-09
19	48280.48	1.540E-09	1.560E-09	1.880E-09	1.760E-09	2.380E-09	5.420E-09	2.150E-09	3.330E-09
20	56327.29	1.260E-09	1.200E-09	1.530E-09	1.450E-09	1.970E-09	4.440E-09	1.760E-09	2.470E-09
21	64373.99	1.060E-09	1.070E-09	1.280E-09	1.100E-09	1.660E-09	3.740E-09	1.490E-09	2.660E-09
22	72420.75	7.440E-10	8.920E-10	1.090E-09	1.070E-09	1.430E-09	3.220E-09	1.280E-09	2.290E-09
23	80467.44	6.530E-10	7.770E-10	9.470E-10	9.420E-10	1.250E-09	2.810E-09	1.120E-09	2.010E-09

RECPYR 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	1.400E-06	3.620E-06	5.600E-06	5.210E-06	5.490E-06	4.300E-06	2.000E-06	1.380E-06
2	402.30	4.300E-07	1.130E-06	1.700E-06	1.580E-06	1.750E-06	1.470E-06	6.620E-07	4.710E-07
3	804.70	1.560E-07	4.250E-07	6.180E-07	5.670E-07	6.700E-07	6.670E-07	3.290E-07	2.230E-07
4	1207.00	1.000E-07	2.630E-07	3.870E-07	3.540E-07	4.260E-07	3.640E-07	2.030E-07	1.540E-07
5	1609.40	7.760E-08	1.930E-07	2.800E-07	2.640E-07	3.130E-07	2.730E-07	1.550E-07	1.000E-07
6	2414.00	5.500E-08	1.250E-07	1.900E-07	1.700E-07	2.000E-07	1.800E-07	1.150E-07	6.770E-08
7	3218.70	4.350E-08	9.050E-08	1.390E-07	1.330E-07	1.540E-07	1.480E-07	7.780E-08	4.950E-08
8	4023.40	3.510E-08	6.980E-08	1.000E-07	1.040E-07	1.210E-07	1.010E-07	5.840E-08	3.520E-08
9	4828.10	2.920E-08	5.600E-08	8.710E-08	8.470E-08	9.790E-08	8.030E-08	3.850E-08	2.790E-08
10	5632.70	2.480E-08	4.640E-08	7.240E-08	7.090E-08	8.180E-08	6.600E-08	3.180E-08	2.230E-08
11	6437.40	2.150E-08	3.940E-08	6.140E-08	6.060E-08	6.990E-08	5.560E-08	2.690E-08	1.870E-08
12	7242.10	1.890E-08	3.400E-08	5.300E-08	5.260E-08	6.070E-08	4.770E-08	2.310E-08	1.980E-08
13	8046.00	1.600E-08	2.900E-08	4.640E-08	4.630E-08	5.340E-08	4.150E-08	2.010E-08	1.870E-08
14	12070.10	1.060E-08	1.800E-08	2.800E-08	2.840E-08	3.200E-08	2.450E-08	1.190E-08	1.060E-08
15	16093.49	7.640E-09	1.250E-08	1.940E-08	1.990E-08	2.300E-08	1.680E-08	8.140E-09	7.320E-09
16	24140.29	4.750E-09	7.450E-09	1.150E-08	1.290E-08	1.380E-08	9.650E-09	5.010E-09	4.000E-09
17	32187.00	3.400E-09	5.190E-09	7.960E-09	9.240E-09	9.650E-09	7.340E-09	3.780E-09	2.390E-09
18	40233.79	2.620E-09	3.930E-09	6.000E-09	7.460E-09	8.820E-09	5.470E-09	2.620E-09	1.520E-09
19	48280.48	2.130E-09	3.150E-09	4.790E-09	5.160E-09	6.830E-09	5.080E-09	1.870E-09	1.250E-09
20	56327.29	1.700E-09	2.610E-09	3.950E-09	4.280E-09	4.870E-09	3.360E-09	1.580E-09	9.790E-10
21	64373.99	2.150E-09	2.210E-09	3.350E-09	3.640E-09	4.140E-09	2.700E-09	1.290E-09	8.490E-10
22	72420.75	1.910E-09	1.920E-09	2.900E-09	3.160E-09	3.590E-09	2.320E-09	1.120E-09	7.710E-10
23	80467.44	1.680E-09	1.690E-09	2.540E-09	2.780E-09	3.160E-09	2.030E-09	9.790E-10	6.760E-10

TABLE 4.1-8

DEPLETED X/Q FOR THE REACTOR BUILDING VENT OCTOBER - DECEMBER 1978

RECPT NO.	DOWNWIND DISTANCE METERS	WEIGHTED AVERAGES SEC/M**3							
		S - (1) #.#	SSW - (2) 22.5	SW - (3) 45.#	WSW - (4) 67.5	W - (5) 9#.#	WNW - (6) 112.5	NW - (7) 135.#	NNW - (8) 157.5
1	2#1.2#	1.06#E-#6	1.82#E-#6	1.22#E-#6	3.11#E-#7	9.52#E-#7	3.35#E-#6	1.33#E-#6	1.45#E-#6
2	4#2.3#	1.34#E-#6	1.53#E-#6	2.51#E-#6	8.23#E-#7	1.04#E-#6	1.52#E-#6	4.25#E-#7	4.26#E-#7
3	8#4.7#	6.17#E-#7	6.15#E-#7	8.26#E-#7	3.65#E-#7	5.35#E-#7	1.78#E-#6	1.78#E-#7	1.6#E-#7
4	12#7.0#	2.99#E-#7	3.38#E-#7	4.29#E-#7	2.79#E-#7	2.37#E-#7	5.38#E-#7	9.88#E-#8	1.1#E-#7
5	16#9.4#	1.88#E-#7	2.16#E-#7	2.64#E-#7	1.87#E-#7	1.89#E-#7	1.83#E-#7	6.88#E-#8	9.01#E-#8
6	2414.0#	8.98#E-#8	1.88#E-#7	1.28#E-#7	4.84#E-#8	5.46#E-#8	1.25#E-#7	4.78#E-#8	6.78#E-#8
7	3218.7#	5.51#E-#8	6.58#E-#8	6.98#E-#8	3.49#E-#8	4.45#E-#8	9.29#E-#8	3.64#E-#8	5.19#E-#8
8	4#23.4#	3.79#E-#8	4.42#E-#8	4.92#E-#8	2.88#E-#8	3.93#E-#8	7.27#E-#8	2.89#E-#8	4.15#E-#8
9	4828.1#	7.8#E-#8	3.24#E-#8	3.94#E-#8	2.33#E-#8	3.31#E-#8	5.87#E-#8	2.36#E-#8	3.48#E-#8
10	5632.7#	2.19#E-#8	2.51#E-#8	3.18#E-#8	1.99#E-#8	2.86#E-#8	4.88#E-#8	1.98#E-#8	2.86#E-#8
11	6437.4#	1.98#E-#8	2.83#E-#8	2.49#E-#8	1.73#E-#8	2.42#E-#8	4.15#E-#8	1.94#E-#8	2.45#E-#8
12	7242.1#	1.59#E-#8	1.69#E-#8	2.13#E-#8	1.56#E-#8	2.24#E-#8	3.58#E-#8	1.67#E-#8	2.13#E-#8
13	8#46.8#	1.36#E-#8	1.44#E-#8	1.68#E-#8	1.34#E-#8	1.84#E-#8	4.62#E-#8	1.85#E-#8	2.15#E-#8
14	12#7#1#	7.18#E-#9	7.82#E-#9	9.44#E-#9	7.56#E-#9	1.85#E-#8	2.47#E-#8	1.82#E-#8	1.44#E-#8
15	16#93.4#	4.85#E-#9	4.99#E-#9	6.18#E-#9	4.77#E-#9	6.79#E-#9	1.64#E-#8	5.48#E-#9	8.83#E-#9
16	2414#29	2.14#E-#9	2.59#E-#9	3.11#E-#9	2.64#E-#9	3.96#E-#9	8.28#E-#9	2.78#E-#9	4.57#E-#9
17	32187.0#	1.43#E-#9	1.64#E-#9	1.95#E-#9	1.48#E-#9	2.51#E-#9	4.33#E-#9	1.62#E-#9	3.68#E-#9
18	48233.7#	1.85#E-#9	1.16#E-#9	1.88#E-#9	9.66#E-#10	1.68#E-#9	2.86#E-#9	1.11#E-#9	2.88#E-#9
19	48288.4#	6.83#E-#10	7.88#E-#10	7.88#E-#10	7.48#E-#10	1.87#E-#9	2.89#E-#9	8.21#E-#10	2.16#E-#9
20	56327.2#	5.13#E-#10	5.54#E-#10	5.85#E-#10	5.72#E-#10	8.18#E-#10	1.61#E-#9	6.36#E-#10	1.89#E-#9
21	64373.9#	4.18#E-#10	4.18#E-#10	4.64#E-#10	6.16#E-#10	6.31#E-#10	1.38#E-#9	3.88#E-#10	9.18#E-#10
22	72428.7#	4.96#E-#10	4.55#E-#10	3.85#E-#10	3.79#E-#10	5.15#E-#10	1.86#E-#9	4.17#E-#10	7.57#E-#10
23	8#467.44	4.38#E-#10	3.85#E-#10	3.21#E-#10	3.19#E-#10	4.31#E-#10	8.83#E-#10	3.49#E-#10	6.33#E-#10

RECPT NO.	DOWNWIND DISTANCE METERS	WEIGHTED AVERAGES SEC/M**3							
		N - (9) 18#.#	NNE - (10) 202.5	NE - (11) 225.#	ENE - (12) 247.5	E - (13) 27#.#	ESE - (14) 292.5	SE - (15) 315.#	SSE - (16) 337.5
1	2#1.2#	1.38#E-#6	3.38#E-#6	5.22#E-#6	4.86#E-#6	5.12#E-#6	4.88#E-#6	1.87#E-#6	1.28#E-#6
2	4#2.3#	3.83#E-#7	1.88#E-#6	1.51#E-#6	1.48#E-#6	1.56#E-#6	1.32#E-#6	5.91#E-#7	4.21#E-#7
3	8#4.7#	1.35#E-#7	3.67#E-#7	5.33#E-#7	4.89#E-#7	5.79#E-#7	5.89#E-#7	2.93#E-#7	1.99#E-#7
4	12#7.0#	8.57#E-#8	2.24#E-#7	3.29#E-#7	3.81#E-#7	3.59#E-#7	3.13#E-#7	1.79#E-#7	1.36#E-#7
5	16#9.4#	6.67#E-#8	1.63#E-#7	2.43#E-#7	2.24#E-#7	2.67#E-#7	2.35#E-#7	1.36#E-#7	9.42#E-#8
6	2414.0#	4.86#E-#8	1.86#E-#7	1.61#E-#7	1.52#E-#7	1.78#E-#7	1.55#E-#7	1.81#E-#7	5.85#E-#8
7	3218.7#	3.79#E-#8	7.63#E-#8	1.17#E-#7	1.13#E-#7	1.31#E-#7	1.27#E-#7	6.73#E-#8	4.28#E-#8
8	4#23.4#	3.86#E-#8	5.84#E-#8	9.82#E-#8	8.88#E-#8	1.82#E-#7	8.53#E-#8	4.99#E-#8	2.95#E-#8
9	4828.1#	2.53#E-#8	4.65#E-#8	7.21#E-#8	7.11#E-#8	8.26#E-#8	6.73#E-#8	3.25#E-#8	2.31#E-#8
10	5632.7#	2.15#E-#8	3.83#E-#8	5.94#E-#8	5.91#E-#8	6.87#E-#8	5.48#E-#8	2.66#E-#8	1.82#E-#8
11	6437.4#	1.86#E-#8	3.23#E-#8	5.81#E-#8	5.83#E-#8	5.84#E-#8	4.58#E-#8	2.23#E-#8	1.52#E-#8
12	7242.1#	1.63#E-#8	2.77#E-#8	4.29#E-#8	4.34#E-#8	5.85#E-#8	3.98#E-#8	1.98#E-#8	1.57#E-#8
13	8#46.8#	1.44#E-#8	2.41#E-#8	3.74#E-#8	3.81#E-#8	4.43#E-#8	3.37#E-#8	1.64#E-#8	1.39#E-#8
14	12#7#1#	9.87#E-#9	1.43#E-#8	2.19#E-#8	2.29#E-#8	2.68#E-#8	1.94#E-#8	9.48#E-#9	7.47#E-#9
15	16#93.4#	6.47#E-#9	9.81#E-#9	1.49#E-#8	1.58#E-#8	1.86#E-#8	1.29#E-#8	6.32#E-#9	4.28#E-#9
16	2414#29	3.97#E-#9	5.71#E-#9	8.52#E-#9	9.93#E-#9	1.18#E-#8	7.18#E-#9	3.78#E-#9	2.12#E-#9
17	32187.0#	2.82#E-#9	3.98#E-#9	5.74#E-#9	6.76#E-#9	7.56#E-#9	4.57#E-#9	1.96#E-#9	1.55#E-#9
18	48233.7#	2.16#E-#9	2.91#E-#9	4.24#E-#9	4.51#E-#9	4.95#E-#9	3.25#E-#9	1.65#E-#9	9.92#E-#10
19	48288.4#	1.74#E-#9	2.38#E-#9	3.32#E-#9	3.81#E-#9	3.99#E-#9	2.34#E-#9	1.32#E-#9	7.97#E-#10
20	56327.2#	1.45#E-#9	1.88#E-#9	2.78#E-#9	3.12#E-#9	3.71#E-#9	2.16#E-#9	1.89#E-#9	6.83#E-#10
21	64373.9#	9.85#E-#10	1.58#E-#9	2.25#E-#9	2.63#E-#9	3.13#E-#9	1.81#E-#9	8.83#E-#10	5.18#E-#10
22	72428.7#	6.29#E-#10	1.36#E-#9	1.93#E-#9	2.27#E-#9	2.78#E-#9	1.55#E-#9	7.58#E-#10	4.59#E-#10
23	8#467.44	5.27#E-#10	1.19#E-#9	1.67#E-#9	1.98#E-#9	2.36#E-#9	1.34#E-#9	6.56#E-#10	3.95#E-#10

TABLE 4.1-9

D/Q FOR THE REACTOR BUILDING VENT OCTOBER - DECEMBER 1978

RECPT NO.	DOWNWIND DISTANCE METERS	WEIGHTED AVERAGES 1/M**2							
		S - (1) #.#	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	201.2#	4.46E-08	8.35E-08	4.63E-08	7.61E-09	3.68E-08	9.73E-08	3.22E-08	2.94E-08
2	402.3#	2.69E-08	4.48E-08	4.11E-08	1.18E-08	2.11E-08	4.82E-08	1.35E-08	1.03E-08
3	804.7#	9.97E-09	1.52E-08	1.37E-08	4.65E-09	7.46E-09	2.11E-08	4.81E-09	3.96E-09
4	1207.0#	4.91E-09	7.58E-09	6.91E-09	2.39E-09	3.66E-09	9.70E-09	2.37E-09	2.41E-09
5	1609.4#	2.93E-09	4.56E-09	4.14E-09	1.49E-09	2.23E-09	4.56E-09	1.52E-09	1.65E-09
6	2414.0#	1.41E-09	2.19E-09	1.98E-09	5.63E-10	9.62E-10	2.41E-09	7.85E-10	8.99E-10
7	3218.7#	8.41E-10	1.31E-09	1.06E-09	3.54E-10	6.09E-10	1.53E-09	4.91E-10	5.76E-10
8	4023.4#	5.68E-10	8.79E-10	7.09E-10	2.44E-10	4.20E-10	1.06E-09	3.38E-10	4.03E-10
9	4828.1#	4.10E-10	6.35E-10	5.10E-10	1.77E-10	3.07E-10	7.83E-10	2.49E-10	2.98E-10
10	5632.7#	3.14E-10	4.91E-10	4.06E-10	1.34E-10	2.34E-10	6.02E-10	1.91E-10	2.29E-10
11	6437.4#	2.29E-10	3.85E-10	3.38E-10	1.06E-10	1.85E-10	4.76E-10	1.51E-10	1.82E-10
12	7242.1#	1.76E-10	3.08E-10	2.54E-10	8.60E-11	1.54E-10	3.84E-10	1.22E-10	1.46E-10
13	8046.0#	1.49E-10	2.49E-10	2.28E-10	7.83E-11	1.62E-10	3.51E-10	1.16E-10	1.21E-10
14	12070.1#	7.96E-11	1.14E-10	1.03E-10	3.84E-11	8.16E-11	2.27E-10	5.64E-11	5.69E-11
15	16093.4#	4.64E-11	6.39E-11	5.68E-11	2.08E-11	5.41E-11	1.08E-10	6.22E-11	5.88E-11
16	24140.2#	2.24E-11	3.08E-11	2.88E-11	1.21E-11	2.51E-11	7.68E-11	2.66E-11	2.68E-11
17	32187.0#	1.33E-11	1.78E-11	1.61E-11	6.10E-12	1.39E-11	3.19E-11	1.25E-11	2.54E-11
18	40233.7#	8.34E-12	1.22E-11	1.10E-11	4.10E-12	9.06E-12	2.01E-11	8.03E-12	9.23E-12
19	48280.4#	5.81E-12	8.65E-12	7.84E-12	2.86E-12	5.50E-12	1.43E-11	5.70E-12	7.94E-12
20	56327.2#	4.25E-12	6.51E-12	5.82E-12	2.16E-12	4.07E-12	1.07E-11	4.25E-12	4.27E-12
21	64373.9#	3.31E-12	4.99E-12	4.52E-12	1.81E-12	3.15E-12	8.28E-12	3.30E-12	4.20E-12
22	72420.7#	2.43E-12	4.04E-12	3.66E-12	1.36E-12	2.54E-12	6.69E-12	2.66E-12	4.00E-12
23	80467.4#	2.09E-12	3.31E-12	2.99E-12	1.12E-12	2.08E-12	5.47E-12	2.18E-12	2.78E-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	201.2#	2.79E-08	9.24E-08	1.25E-07	9.90E-08	1.45E-07	1.36E-07	6.27E-08	5.73E-08
2	402.3#	9.73E-09	3.22E-08	4.32E-08	3.46E-08	5.05E-08	5.09E-08	2.33E-08	2.13E-08
3	804.7#	3.53E-09	1.14E-08	1.51E-08	1.23E-08	1.80E-08	1.98E-08	9.18E-09	8.07E-09
4	1207.0#	2.00E-09	6.19E-09	8.23E-09	6.71E-09	9.90E-09	9.81E-09	4.77E-09	4.39E-09
5	1609.4#	1.31E-09	3.93E-09	5.26E-09	4.29E-09	6.37E-09	6.38E-09	3.05E-09	2.69E-09
6	2414.0#	6.87E-10	2.01E-09	2.70E-09	2.21E-09	3.28E-09	3.33E-09	1.61E-09	1.35E-09
7	3218.7#	4.32E-10	1.24E-09	1.67E-09	1.37E-09	2.05E-09	2.15E-09	9.74E-10	8.25E-10
8	4023.4#	3.00E-10	8.52E-10	1.15E-09	9.45E-10	1.41E-09	1.44E-09	6.62E-10	5.57E-10
9	4828.1#	2.21E-10	6.27E-10	8.58E-10	6.97E-10	1.04E-09	1.06E-09	4.72E-10	4.08E-10
10	5632.7#	1.70E-10	4.80E-10	6.52E-10	5.34E-10	7.97E-10	8.17E-10	3.62E-10	3.12E-10
11	6437.4#	1.34E-10	3.79E-10	5.15E-10	4.22E-10	6.30E-10	6.46E-10	2.87E-10	2.46E-10
12	7242.1#	1.08E-10	3.04E-10	4.14E-10	3.40E-10	5.06E-10	5.20E-10	2.30E-10	2.00E-10
13	8046.0#	8.90E-11	2.50E-10	3.41E-10	2.79E-10	4.17E-10	4.20E-10	1.89E-10	1.71E-10
14	12070.1#	4.24E-11	1.18E-10	1.61E-10	1.32E-10	1.97E-10	2.03E-10	9.00E-11	8.66E-11
15	16093.4#	2.50E-11	6.92E-11	9.46E-11	7.78E-11	1.16E-10	1.20E-10	5.30E-11	4.84E-11
16	24140.2#	1.18E-11	3.27E-11	4.46E-11	3.65E-11	5.49E-11	5.69E-11	2.44E-11	2.24E-11
17	32187.0#	7.01E-12	1.93E-11	2.64E-11	2.26E-11	3.25E-11	4.12E-11	2.14E-11	1.25E-11
18	40233.7#	4.66E-12	1.28E-11	1.75E-11	2.88E-11	4.26E-11	2.58E-11	1.08E-11	8.38E-12
19	48280.4#	3.33E-12	9.18E-12	1.25E-11	1.05E-11	2.58E-11	1.99E-11	6.74E-12	5.92E-12
20	56327.2#	2.54E-12	6.97E-12	9.46E-12	8.05E-12	1.15E-11	1.26E-11	5.13E-12	4.44E-12
21	64373.9#	4.44E-12	5.54E-12	7.50E-12	6.46E-12	9.13E-12	9.22E-12	3.92E-12	3.45E-12
22	72420.7#	2.73E-12	4.56E-12	6.16E-12	5.37E-12	7.46E-12	7.46E-12	3.19E-12	2.83E-12
23	80467.4#	2.23E-12	3.83E-12	5.16E-12	4.56E-12	6.23E-12	6.15E-12	2.64E-12	2.33E-12

TABLE 4.1-10
UNDEPLETED X/Q FOR THE MAIN STACK OCTOBER - DECEMBER 1978

RECPT NO.	DOWNWIND DISTANCE METERS	WEIGHTED AVERAGES SEC/M**3							
		S - (1) #.#	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	2.210E-10	1.360E-09	3.330E-09	5.890E-10	3.060E-10	4.290E-10	6.600E-10	7.680E-11
2	402.30	5.260E-08	1.050E-07	6.020E-07	2.620E-08	2.050E-08	1.910E-08	1.150E-08	2.760E-09
3	804.70	1.640E-07	1.810E-07	1.400E-07	2.490E-08	2.310E-08	3.000E-08	8.090E-09	1.400E-09
4	1207.00	1.230E-07	2.700E-07	1.470E-07	6.050E-08	2.170E-08	1.350E-08	6.120E-09	3.070E-09
5	1609.40	1.430E-07	2.590E-07	1.410E-07	6.650E-08	1.470E-08	2.030E-08	6.790E-09	7.220E-09
6	2414.00	9.920E-08	1.340E-07	7.880E-08	1.890E-08	1.360E-08	3.270E-08	9.500E-09	1.460E-08
7	3218.70	6.880E-08	0.290E-08	3.090E-08	1.770E-08	2.250E-08	3.600E-08	1.070E-08	1.710E-08
8	4023.40	4.200E-08	5.020E-08	3.220E-08	1.570E-08	2.300E-08	3.500E-08	1.070E-08	1.710E-08
9	4828.10	3.180E-08	3.360E-08	3.070E-08	1.530E-08	2.210E-08	3.240E-08	1.010E-08	1.610E-08
10	5632.70	2.240E-08	2.900E-08	2.920E-08	1.320E-08	2.070E-08	2.940E-08	9.400E-09	1.490E-08
11	6437.40	1.660E-08	2.380E-08	2.710E-08	1.230E-08	1.850E-08	2.670E-08	8.710E-09	1.360E-08
12	7242.10	1.330E-08	2.000E-08	2.090E-08	1.110E-08	1.820E-08	2.420E-08	8.090E-09	1.260E-08
13	8046.00	1.230E-08	1.600E-08	2.000E-08	1.140E-08	2.370E-08	3.360E-08	1.230E-08	1.160E-08
14	12070.10	7.410E-09	1.150E-08	1.210E-08	7.190E-09	1.400E-08	2.100E-08	7.960E-09	8.000E-09
15	16093.49	5.650E-09	6.000E-09	7.110E-09	4.250E-09	0.130E-08	1.310E-08	6.640E-09	1.340E-08
16	24140.29	3.140E-09	3.540E-09	4.210E-09	2.860E-09	4.240E-09	8.940E-09	4.040E-09	7.920E-09
17	32187.00	2.060E-09	2.380E-09	2.840E-09	2.380E-09	2.940E-09	7.050E-09	2.970E-09	3.840E-09
18	40233.79	1.490E-09	1.720E-09	2.270E-09	2.180E-09	2.370E-09	6.320E-09	2.300E-09	2.470E-09
19	48280.40	1.260E-09	1.460E-09	1.780E-09	1.440E-09	2.070E-09	5.430E-09	2.150E-09	2.650E-09
20	56327.29	1.050E-09	1.220E-09	1.470E-09	1.250E-09	1.990E-09	4.460E-09	1.690E-09	1.540E-09
21	64373.99	0.740E-10	1.060E-09	1.230E-09	7.850E-10	1.670E-09	3.740E-09	1.430E-09	2.200E-09
22	72420.75	6.330E-10	8.320E-10	1.050E-09	1.100E-09	1.440E-09	3.230E-09	1.290E-09	1.780E-09
23	80467.44	5.560E-10	7.280E-10	9.110E-10	9.580E-10	1.250E-09	2.820E-09	1.120E-09	1.570E-09

RECPT NO.	DOWNWIND DISTANCE METERS	WEIGHTED AVERAGES SEC/M**3							
		N - (9) 100.0	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	9.900E-14	1.290E-10	2.890E-13	1.700E-13	1.700E-13	7.690E-11	1.050E-13	3.690E-10
2	402.30	3.270E-10	4.580E-09	1.080E-09	9.400E-10	1.000E-09	4.140E-09	2.380E-10	1.070E-08
3	804.70	2.800E-09	8.350E-09	6.950E-09	7.440E-09	9.760E-09	1.000E-08	2.310E-09	6.180E-09
4	1207.00	4.420E-09	1.060E-08	1.070E-08	1.100E-08	1.700E-08	2.320E-08	7.710E-09	8.350E-08
5	1609.40	6.330E-09	1.470E-08	1.670E-08	1.580E-08	2.640E-08	3.250E-08	1.320E-08	5.260E-08
6	2414.00	9.940E-09	2.200E-08	2.840E-08	2.540E-08	4.160E-08	4.620E-08	2.500E-08	2.400E-08
7	3218.70	1.120E-08	2.410E-08	3.290E-08	2.920E-08	4.520E-08	4.790E-08	2.610E-08	2.200E-08
8	4023.40	1.120E-08	2.350E-08	3.310E-08	2.640E-08	4.370E-08	4.620E-08	2.440E-08	1.040E-08
9	4828.10	1.050E-08	2.170E-08	3.120E-08	2.700E-08	4.040E-08	4.060E-08	1.950E-08	1.570E-08
10	5632.70	9.790E-09	1.990E-08	2.900E-08	2.590E-08	3.680E-08	3.640E-08	1.760E-08	1.430E-08
11	6437.40	9.060E-09	1.810E-08	2.670E-08	2.400E-08	3.350E-08	3.250E-08	1.590E-08	1.230E-08
12	7242.10	8.400E-09	1.660E-08	2.460E-08	2.230E-08	3.060E-08	2.920E-08	1.440E-08	1.310E-08
13	8046.00	7.700E-09	1.530E-08	2.270E-08	2.070E-08	2.800E-08	2.640E-08	1.300E-08	1.250E-08
14	12070.10	5.530E-09	1.050E-08	1.500E-08	1.460E-08	1.920E-08	1.720E-08	8.550E-09	7.420E-09
15	16093.49	4.200E-09	7.760E-09	1.180E-08	1.110E-08	1.430E-08	1.240E-08	6.130E-09	5.880E-09
16	24140.29	2.760E-09	4.930E-09	7.530E-09	7.200E-09	9.120E-09	7.490E-09	3.770E-09	3.270E-09
17	32187.00	2.050E-09	3.500E-09	5.460E-09	5.300E-09	6.650E-09	5.850E-09	3.120E-09	1.780E-09
18	40233.79	1.620E-09	2.780E-09	4.230E-09	4.040E-09	6.550E-09	4.360E-09	2.000E-09	1.260E-09
19	48280.40	1.330E-09	2.260E-09	3.440E-09	3.930E-09	4.970E-09	3.520E-09	1.550E-09	9.970E-10
20	56327.29	1.130E-09	1.890E-09	2.800E-09	2.870E-09	3.570E-09	2.700E-09	1.200E-09	8.170E-10
21	64373.99	1.370E-09	1.630E-09	2.470E-09	2.470E-09	3.070E-09	2.260E-09	1.000E-09	6.090E-10
22	72420.75	1.500E-09	1.430E-09	2.170E-09	2.170E-09	2.700E-09	1.960E-09	9.300E-10	5.960E-10
23	80467.44	1.330E-09	1.270E-09	1.920E-09	1.940E-09	2.400E-09	1.730E-09	8.250E-10	5.200E-10

TABLE 4.1-11

DEPLETED X/Q FOR THE MAIN STACK OCTOBER - DECEMBER 1978

RECPT NO.	DOWNWIND DISTANCE METERS	WEIGHTED AVERAGES SEC/M**3							
		S - (1) 22.5	SSW - (2) 45.0	SW - (3) 67.5	WSW - (4) 90.0	W - (5) 112.5	VNW - (6) 135.0	NW - (7) 157.5	NNW - (8)
1	201.20	2.210E-10	1.360E-09	3.330E-09	5.890E-10	3.860E-10	4.290E-10	6.600E-10	7.680E-11
2	402.30	5.110E-08	1.030E-07	5.910E-08	2.590E-08	2.030E-08	1.890E-08	1.140E-08	2.730E-09
3	804.70	1.500E-07	1.750E-07	1.370E-07	2.420E-08	2.260E-08	2.930E-08	7.830E-09	1.350E-09
4	1207.00	1.170E-07	2.490E-07	1.420E-07	5.690E-08	2.130E-08	1.310E-08	5.850E-09	3.020E-09
5	1609.40	1.310E-07	2.190E-07	1.340E-07	6.340E-08	1.440E-08	1.970E-08	6.510E-09	7.100E-09
6	2414.00	0.730E-08	1.100E-07	7.480E-08	1.030E-07	1.320E-08	3.160E-08	9.150E-09	1.420E-08
7	3218.70	5.890E-08	6.840E-08	2.930E-08	1.680E-08	2.150E-08	3.440E-08	1.020E-08	1.640E-08
8	4023.40	3.690E-08	4.370E-08	3.010E-08	1.460E-08	2.180E-08	3.300E-08	1.020E-08	1.630E-08
9	4828.10	2.780E-08	3.010E-08	2.830E-08	1.410E-08	2.070E-08	3.030E-08	9.590E-09	1.530E-08
10	5632.70	1.990E-08	2.520E-08	2.620E-08	1.200E-08	1.920E-08	2.740E-08	8.910E-09	1.400E-08
11	6437.40	1.490E-08	2.050E-08	2.360E-08	1.160E-08	1.710E-08	2.470E-08	8.230E-09	1.200E-08
12	7242.10	1.200E-08	1.710E-08	1.840E-08	9.820E-09	1.660E-08	2.230E-08	7.630E-09	1.180E-08
13	8046.80	1.050E-08	1.430E-08	1.750E-08	9.770E-09	2.070E-08	3.040E-08	1.160E-08	1.000E-08
14	12070.10	6.350E-09	8.010E-09	9.740E-09	5.980E-09	1.180E-08	1.070E-08	7.450E-09	7.320E-09
15	16093.49	4.640E-09	4.920E-09	5.810E-09	3.470E-09	6.920E-09	1.140E-08	6.170E-09	1.150E-08
16	24140.29	2.500E-09	2.680E-09	3.220E-09	2.210E-09	3.490E-09	7.660E-09	3.720E-09	6.320E-09
17	32187.00	1.610E-09	1.720E-09	2.090E-09	1.700E-09	2.350E-09	5.930E-09	2.660E-09	3.440E-09
18	40233.79	1.130E-09	1.180E-09	1.530E-09	1.280E-09	1.860E-09	4.050E-09	1.980E-09	2.180E-09
19	48280.48	9.390E-10	9.550E-10	1.170E-09	1.020E-09	1.530E-09	2.090E-09	8.230E-10	1.810E-09
20	56327.29	7.680E-10	7.580E-10	8.880E-10	8.350E-10	8.150E-10	1.610E-09	9.100E-10	1.330E-09
21	64373.99	6.320E-10	5.350E-10	7.220E-10	5.240E-10	6.130E-10	1.400E-09	7.250E-10	1.620E-09
22	72420.75	4.390E-10	4.980E-10	6.260E-10	4.210E-10	4.960E-10	1.060E-09	4.180E-10	1.470E-09
23	80467.44	3.790E-10	4.240E-10	5.330E-10	3.520E-10	4.150E-10	8.850E-10	3.490E-10	1.290E-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	9.900E-14	1.290E-10	2.890E-13	1.700E-13	1.700E-13	7.690E-11	1.050E-13	3.690E-10
2	402.30	3.240E-10	4.540E-09	1.070E-09	9.300E-10	9.930E-10	4.100E-09	2.350E-10	1.860E-08
3	804.70	2.790E-09	8.090E-09	6.730E-09	7.210E-09	9.460E-09	1.750E-08	2.250E-09	6.840E-08
4	1207.00	4.240E-09	1.020E-08	1.030E-08	1.060E-08	1.640E-08	2.230E-08	7.680E-09	8.100E-08
5	1609.40	6.100E-09	1.420E-08	1.620E-08	1.520E-08	2.560E-08	3.130E-08	1.300E-08	5.110E-08
6	2414.00	9.590E-09	2.130E-08	2.750E-08	2.450E-08	4.020E-08	4.440E-08	2.430E-08	2.310E-08
7	3218.70	1.070E-08	2.300E-08	3.160E-08	2.800E-08	4.320E-08	4.550E-08	2.500E-08	2.160E-08
8	4023.40	1.260E-08	2.230E-08	3.160E-08	2.810E-08	4.140E-08	4.340E-08	2.310E-08	1.720E-08
9	4828.10	1.000E-08	2.060E-08	2.970E-08	2.650E-08	3.800E-08	3.790E-08	1.830E-08	1.460E-08
10	5632.70	9.260E-09	1.870E-08	2.740E-08	2.470E-08	3.450E-08	3.370E-08	1.650E-08	1.320E-08
11	6437.40	8.540E-09	1.700E-08	2.520E-08	2.200E-08	3.120E-08	2.590E-08	1.470E-08	1.110E-08
12	7242.10	7.890E-09	1.550E-08	2.320E-08	2.110E-08	2.840E-08	2.670E-08	1.320E-08	1.160E-08
13	8046.80	7.300E-09	1.420E-08	2.130E-08	1.950E-08	2.590E-08	2.400E-08	1.190E-08	1.000E-08
14	12070.10	5.110E-09	9.580E-09	1.460E-08	1.360E-08	1.740E-08	1.510E-08	7.560E-09	6.400E-09
15	16093.49	3.840E-09	7.000E-09	1.070E-08	1.020E-08	1.270E-08	1.060E-08	5.280E-09	4.040E-09
16	24140.29	2.500E-09	4.380E-09	6.740E-09	6.560E-09	7.980E-09	6.180E-09	3.140E-09	2.410E-09
17	32187.00	1.840E-09	3.140E-09	4.840E-09	4.790E-09	5.750E-09	4.740E-09	2.530E-09	1.380E-09
18	40233.79	1.450E-09	2.410E-09	3.720E-09	4.400E-09	5.720E-09	3.460E-09	1.670E-09	8.790E-10
19	48280.48	1.100E-09	1.940E-09	3.000E-09	3.560E-09	4.300E-09	2.740E-09	1.210E-09	6.690E-10
20	56327.29	9.990E-10	1.620E-09	2.500E-09	2.550E-09	3.010E-09	2.060E-09	9.850E-10	5.300E-10
21	64373.99	1.250E-09	1.380E-09	2.140E-09	2.190E-09	2.580E-09	1.690E-09	8.240E-10	4.340E-10
22	72420.75	1.210E-09	1.210E-09	1.860E-09	1.920E-09	2.260E-09	1.450E-09	7.050E-10	3.660E-10
23	80467.44	1.060E-09	1.070E-09	1.640E-09	1.710E-09	2.000E-09	1.260E-09	6.140E-10	3.110E-10

TABLE 4.1-12

D/Q FOR THE MAIN STACK OCTOBER - DECEMBER 1978

RECPT NO.	DOWNWIND DISTANCE METERS	WEIGHTED AVERAGES 1/M**2							
		S - (1) #.#	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	1.060E-09	1.850E-09	1.620E-09	5.010E-10	4.590E-10	8.560E-10	5.050E-10	1.130E-10
2	402.30	7.050E-09	1.160E-08	5.730E-09	1.570E-09	1.860E-09	2.730E-09	1.070E-09	2.450E-10
3	804.70	5.910E-09	8.380E-09	5.690E-09	1.050E-09	1.570E-09	2.520E-09	7.860E-10	3.230E-10
4	1207.00	3.200E-09	7.040E-09	3.920E-09	1.200E-09	1.160E-09	1.630E-09	6.430E-10	5.150E-10
5	1609.40	2.460E-09	4.500E-09	2.860E-09	9.590E-10	7.900E-10	1.570E-09	5.450E-10	5.530E-10
6	2414.00	1.220E-09	2.130E-09	1.300E-09	3.610E-10	5.300E-10	1.160E-09	3.710E-10	4.310E-10
7	3210.70	7.260E-10	1.220E-09	6.940E-10	2.550E-10	4.020E-10	8.400E-10	2.600E-10	3.170E-10
8	4023.40	4.490E-10	7.600E-10	5.440E-10	1.900E-10	3.070E-10	6.330E-10	1.930E-10	2.410E-10
9	4820.10	3.190E-10	5.360E-10	4.350E-10	1.530E-10	2.380E-10	4.800E-10	1.470E-10	1.800E-10
10	5632.70	2.430E-10	4.120E-10	3.550E-10	1.200E-10	1.900E-10	3.900E-10	1.160E-10	1.510E-10
11	6437.40	1.090E-10	3.230E-10	2.800E-10	9.800E-11	1.530E-10	3.200E-10	9.490E-11	1.240E-10
12	7242.10	1.510E-10	2.600E-10	2.270E-10	8.120E-11	1.200E-10	2.600E-10	7.960E-11	1.040E-10
13	8046.00	1.260E-10	2.140E-10	1.910E-10	6.850E-11	1.090E-10	2.370E-10	7.030E-11	8.820E-11
14	12070.10	6.250E-11	1.100E-10	9.250E-11	3.300E-11	5.160E-11	1.100E-10	3.510E-11	4.560E-11
15	16093.40	3.670E-11	6.540E-11	5.810E-11	2.090E-11	3.200E-11	7.260E-11	2.100E-11	4.400E-11
16	24140.20	1.040E-11	3.250E-11	2.860E-11	1.020E-11	1.600E-11	3.500E-11	1.030E-11	2.520E-11
17	32107.00	1.160E-11	2.010E-11	1.760E-11	5.930E-12	9.710E-12	2.050E-11	6.340E-12	8.040E-12
18	40233.70	7.900E-12	1.360E-11	1.100E-11	4.200E-12	6.330E-12	2.400E-11	4.630E-12	5.330E-12
19	48200.40	5.540E-12	9.570E-12	7.890E-12	2.870E-12	4.640E-12	1.430E-11	5.700E-12	3.750E-12
20	56327.20	4.180E-12	6.990E-12	5.930E-12	2.200E-12	4.090E-12	1.070E-11	6.710E-12	2.830E-12
21	64373.90	3.290E-12	5.350E-12	4.680E-12	1.770E-12	3.150E-12	8.800E-12	4.670E-12	4.450E-12
22	72420.75	2.930E-12	4.600E-12	3.760E-12	1.300E-12	2.540E-12	6.600E-12	2.560E-12	2.930E-12
23	80467.44	2.320E-12	3.840E-12	3.100E-12	1.120E-12	2.000E-12	5.470E-12	2.100E-12	2.650E-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	3.370E-10	7.800E-10	5.620E-10	6.180E-10	9.000E-10	1.570E-09	2.260E-10	1.010E-09
2	402.30	7.140E-10	1.670E-09	1.200E-09	1.310E-09	1.920E-09	3.340E-09	4.870E-10	3.000E-09
3	804.70	5.620E-10	1.360E-09	1.050E-09	1.110E-09	1.800E-09	2.750E-09	6.260E-10	3.070E-09
4	1207.00	5.230E-10	1.330E-09	1.240E-09	1.160E-09	2.160E-09	2.750E-09	9.450E-10	2.890E-09
5	1609.40	4.730E-10	1.230E-09	1.220E-09	1.100E-09	2.150E-09	2.550E-09	9.800E-10	1.720E-09
6	2414.00	3.360E-10	8.800E-10	9.070E-10	8.020E-10	1.610E-09	1.850E-09	7.680E-10	7.900E-10
7	3210.70	2.390E-10	6.370E-10	6.570E-10	5.770E-10	1.170E-09	1.330E-09	5.640E-10	5.600E-10
8	4023.40	1.790E-10	4.770E-10	4.960E-10	4.340E-10	8.030E-10	9.900E-10	4.280E-10	3.980E-10
9	4820.10	1.370E-10	3.670E-10	3.830E-10	3.340E-10	6.040E-10	7.600E-10	3.300E-10	3.010E-10
10	5632.70	1.090E-10	2.920E-10	3.060E-10	2.670E-10	5.470E-10	6.120E-10	2.650E-10	2.400E-10
11	6437.40	8.930E-11	2.390E-10	2.510E-10	2.190E-10	4.490E-10	5.020E-10	2.170E-10	1.950E-10
12	7242.10	7.400E-11	2.010E-10	2.110E-10	1.830E-10	3.760E-10	4.200E-10	1.820E-10	1.720E-10
13	8046.00	6.370E-11	1.710E-10	1.790E-10	1.560E-10	3.200E-10	3.500E-10	1.550E-10	1.450E-10
14	12070.10	3.290E-11	8.020E-11	9.250E-11	9.050E-11	1.650E-10	1.850E-10	7.100E-11	7.180E-11
15	16093.40	2.010E-11	5.380E-11	5.630E-11	4.910E-11	1.010E-10	1.130E-10	4.130E-11	4.130E-11
16	24140.20	9.050E-12	2.620E-11	2.740E-11	2.390E-11	4.000E-11	5.500E-11	2.040E-11	2.040E-11
17	32107.00	6.020E-12	1.600E-11	1.650E-11	1.450E-11	2.940E-11	3.390E-11	1.350E-11	1.350E-11
18	40233.70	4.070E-12	1.000E-11	1.110E-11	9.830E-12	1.970E-11	2.270E-11	9.400E-12	9.160E-12
19	48200.40	2.940E-12	7.700E-12	7.950E-12	6.950E-12	1.390E-11	1.600E-11	6.660E-12	6.640E-12
20	56327.20	2.220E-12	5.870E-12	5.900E-12	5.790E-12	1.060E-11	1.220E-11	4.990E-12	5.030E-12
21	64373.90	1.700E-12	4.500E-12	4.650E-12	4.130E-12	8.250E-12	9.550E-12	3.870E-12	3.940E-12
22	72420.75	2.760E-12	3.660E-12	3.700E-12	3.290E-12	6.560E-12	7.630E-12	3.070E-12	3.170E-12
23	80467.44	2.500E-12	2.990E-12	3.020E-12	2.690E-12	5.350E-12	6.230E-12	2.500E-12	2.600E-12

TABLE 4.1-13
SPECIAL PARAMETERS USED IN
FINITE CLOUD MODEL

Stack Height	100 meters (above grade)
Shielding Factor	0.7
Depth for total Body Dose	5 cm.
Human Tissue Density	1 gm./cm. ³

Table 4.2-1
Minimum Individual Locations and Pathways 1
July-December 1978

Pathway	0.5 miles SE	0.8 miles SSW	0.8 miles WSW	1.0 miles SSE	1.0 miles W	1.5 miles WSW	2.3 miles S
Noble Gas Immersion	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Ground Plane Deposition	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Inhalation	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Fruit & Vegetable Garden	Yes	No	Yes	Yes	Yes	Yes	Yes
Meat	No	No	No	No	No	No	Yes
Cows Milk	No	No	No	No	No	No	No
Goats Milk	No	No	Yes	No	No	No	No

1. Yes indicates that the pathways is considered.
No indicates that it is not considered.

Table 4.2-2
July-December 1978 Gaseous Release Maximum Individual
Doses from all Pathways for Adults (MREM)

Location	Bone	Liver	Thyroid	Kidney	Lung	GI-LLI	Skin	Total Body
0.5 Miles SE	0.08	0.07	0.42	0.08	0.07	0.10	0.09	0.07
0.8 Miles SSW	0.47	0.47	0.49	0.47	0.47	0.47	0.69	0.47
0.8 Miles* WSW	0.15	0.16	0.69	0.16	0.15	0.16	0.23	0.15
1.0 Mile SSE	0.16	0.15	0.29	0.15	0.15	0.18	0.21	0.15
1.0 Mile W	0.06	0.06	0.13	0.06	0.06	0.07	0.08	0.06
1.5 Miles WSW	0.05	0.05	0.18	0.05	0.05	0.05	0.07	0.05
2.3 Miles S	0.12	0.12	0.17	0.12	0.12	0.13	0.19	0.12

*Maximum dose location for infant age group.

Table 4.2-3
July-December 1978 Gaseous Release Maximum Individual
Doses from all Pathways for Teenagers (MREM)

Location	Bone	Liver	Thyroid	Kidney	Lung	GI-LLI	Skin	Total Body
0.5 Miles SE	0.9	.08	.37	.08	.08	0.10	0.09	0.07
0.8 Miles SSW	0.47	0.47	0.05	0.47	0.47	0.47	0.69	0.47
0.8 Miles* WSW	0.16	0.16	0.92	0.16	0.16	0.16	0.23	0.16
1.0 Mile SSE	0.16	0.15	0.27	0.15	0.16	0.19	0.21	0.15
1.0 Mile W	0.06	0.06	0.12	0.06	0.06	0.07	0.08	0.06
1.5 Miles WSW	0.05	0.05	0.18	0.05	0.05	0.05	0.07	0.05
2.3 Miles S	0.13	0.12	0.16	0.12	0.13	0.13	0.19	0.12

*Maximum dose location for infant age group.

Table 4.2-4
July-December 1978 Gaseous Release Maximum Individual
Doses from all Pathways for Children (MREM)

Location	Bone	Liver	Thyroid	Kidney	Lung	GI-LII	Skin	Total Body
0.5 Miles S	0.10	0.08	0.57	0.08	0.07	0.10	0.09	0.08
0.8 Miles SSW	0.47	0.47	0.50	0.47	0.47	0.47	0.69	0.47
0.8 Miles* WSW	0.17	0.16	0.82	0.16	0.15	0.16	0.23	0.16
1.0 Mile SSE	0.18	0.15	0.34	0.15	0.15	0.18	0.21	0.15
1.0 Mile W	0.07	0.06	0.16	0.06	0.06	0.07	0.08	0.06
1.5 Miles WSW	0.05	0.05	0.25	0.05	0.05	0.05	0.07	0.05
2.3 Miles S	0.13	0.12	0.18	0.12	0.12	0.13	0.19	0.12

*Maximum dose location for infant age group.

Table 4.2-5
July-December 1978 Gaseous Release Maximum Individual
Doses from all Pathways for Infants (MREM)

Location	Bone	Liver	Thyroid	Kidney	Lung	GI-LLI	Skin	Total Body
0.5 Miles SE	0.07	0.07	0.09	0.07	0.07	0.07	0.09	0.07
0.8 Miles SSW	0.47	0.47	0.50	0.07	0.47	0.47	0.69	0.47
0.8 Miles* WSW	0.16	0.17	1.66	0.17	0.15	0.15	0.23	0.16
1.0 Mile SSE	0.15	0.15	0.16	0.15	0.15	0.15	0.21	0.15
1.0 Mile W	0.06	0.06	0.07	0.06	0.06	0.06	0.08	0.06
1.5 Miles WSW	0.05	0.05	0.09	0.05	0.05	0.05	0.07	0.05
2.3 Miles S	0.12	0.12	0.13	0.12	0.12	0.12	0.19	0.12

*Maximum dose location for infant age group.

Table 4.2-6
July-December 1978 Gaseous Release Maximum
Individual Doses (0.8 Miles WSW)

<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	0.054	0.055	0.589	0.055	0.052	0.063	0.229	0.15
Teenager	0.058	0.057	0.82	0.058	0.055	0.063	0.229	0.16
Child	0.069	0.062	0.88	0.062	0.054	0.062	0.229	0.16
Infant	0.064	0.066	1.65	0.065	0.051	0.052	0.229	0.16

None -- (1) Organ Doses are based on radioiodine and particulates only (Tables 4.2-2 through 4.2-5 included noble gas doses)

(2) Skin and total body doses are from all isotopes

Table 4.3-1
Population Distribution

SECTOR	Distance (Miles/Meters)									
	.5 804.7	1.5 2414.0	2.5 4023.4	3.5 5632.7	4.5 7242.0	7.5 12070.1	15.0 24140.2	25.0 40233.6	35.0 56327.0	45.0 72420.5
S	8.00E+00	7.44E+02	3.88E+02	6.26E+02	1.74E+02	4.81E+02	1.18E+04	2.07E+04	5.19E+03	7.20E+02
SSW	1.40E+01	5.80E+01	9.90E+01	1.12E+02	1.32E+02	1.12E+02	1.46E+04	1.62E+04	2.90E+02	2.10E+02
SW	1.00E+01	5.60E+01	1.79E+02	1.86E+02	5.04E+02	6.30E+01	1.16E+04	1.11E+05	9.00E+04	7.64E+04
WSW	8.00E+00	1.37E+02	7.02E+02	2.46E+02	3.36E+02	5.85E+02	9.89E+03	7.68E+04	9.87E+04	3.47E+05
W	8.00E+00	2.99E+02	3.39E+02	1.28E+03	3.55E+03	6.95E+03	1.61E+04	8.38E+04	1.07E+05	3.97E+05
WNW	1.44E+02	4.60E+01	0.	0.	1.39E+03	1.69E+04	3.36E+04	1.71E+05	1.33E+05	1.55E+05
NW	1.00E+00	0.	0.	0.	3.00E+00	1.58E+04	5.15E+04	1.75E+05	8.19E+05	1.01E+05
NNW	0.	0.	0.	0.	3.00E+00	5.05E+03	2.55E+04	1.43E+04	3.16E+04	4.15E+05
N	0.	0.	0.	0.	0.	0.	0.	0.	0.	3.01E+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.	0.	1.82E+03	0.	0.
E	0.	0.	0.	0.	0.	0.	0.	4.22E+03	3.19E+03	0.
ESE	0.	0.	0.	0.	0.	0.	0.	1.61E+04	1.70E+04	0.
SE	1.33E+02	1.79E+02	9.50E+01	0.	0.	0.	9.90E+02	3.87E+04	3.12E+03	0.
SSE	5.60E+01	3.33E+02	7.47E+02	7.77E+02	2.34E+02	4.15E+02	7.24E+03	1.64E+04	0.	0.

Table 4.3-2
Population Doses Via Major Pathways Resulting from
Gaseous Effluents during July-December 1978

Pathway	Thyroid (MAN-REM)	Total Body (MAN-REM)
Noble Gas Immersion (Gamma)	5.3	5.3
Ground Plane Deposition	0.59	0.59
Inhalation	0.21	0.059

5. OFF-SITE DOSES FROM DIRECT RADIATION

Doses due to direct radiation as measured by thermoluminescent dosimeter for the period July-December 1978 averaged 12.4 microrad/hour in the Exclusion Area (.25-.68 miles from the plant) and 9.24 microrad hour at the background stations (8-23 miles from the plant).

These measured values indicate a small but measurable dose contribution due to direct radiation at locations within the Exclusion Area boundary of the Pilgrim Station.

REFERENCES

1. "Pilgrim Station Unit 1 Appendix I Evaluation" Submitted in Accordance with 10CFR 50 Appendix I, April 1977.
2. Pilgrim Station Environmental Report, Amendment 4 April 1975 pg. 2-329/330.
3. Hamawi, J.N., "AEOLUS - A Computer Code for Determining Hourly and Long-Term Atmospheric Dispersion of Power-Plant Effluents and for Computing Statistical Distributions of Dose Intensity from Accidental Releases", Yankee Atomic Electric Company Technical Report, YAEC-1120, January, 1977.