TABLE 2.3-1

RESULTANT WIND DIRECTION AND SPEED - GRAND GULF SITE
2001 – 2003

Year	Most Common Wind Angle at 33 ft (Degrees Clockwise from North)	Average Wind Speed at 33 ft (mph)
1996		4.3
1997		3.7
1998		4.2
1999		4.2
2000		4.3
2001	146	4.1
2002	38	4.4
2003	53	4.2

NOTES:

1. Data from GGNS Site Meteorological Tower (Reference 2). Most common wind angles are based on new post-2000 tower instrumentation only.

TABLE 2.3-3

DESIGN WET AND DRY BULB TEMPERATURES (DEGREES FAHRENHEIT)

	ASHRAE Design Value [2]	Grand Gulf Site Data [3]
Number of Data [1]	-	34,149
Average of Annual Extreme Low Dry Bulb	14	-
Minimum Annual Dry Bulb 99.6% Exceedance	21	25.5
Minimum Annual Dry Bulb 99% Exceedance	25	28.7
Number of data [1]	-	34,159
Maximum Annual Dry Bulb 99.6% Exceedance	95	94.6
Maximum Annual Dry Bulb 98% Exceedance	92	91.4
Average of Annual Extreme High Dry Bulb	98	-
Number of data [1]	-	25,830
Maximum Annual Wet Bulb 99.6% Exceedance	80	80.4
Maximum Annual Wet Bulb 98% Exceedance	78	78.5

NOTES:

1. "Number of data" is the number of hourly temperature measurements in the database.
2. "ASHRAE Design Value" is from the 2001 ASHRAE Fundamentals Handbook for Jackson, Mississippi (Reference 51).
3. "Grand Gulf Site" data is from meteorological tower measurements. Dry bulb temperatures are available for 2000-2003, and wet bulb for 2001-2003 (Reference 2).

TABLE 2.3-5

FREQUENCY OF HURRICANES (BY MONTH) FOR THE STATES OF FLORIDA, ALABAMA, MISSISSIPPI, LOUISIANA, AND TEXAS

	Category of Storm							
	1	2	3	4	5	Monthly Total	Annual Frequency	
	(No.)	(No.)	(No.)	(No.)	(No.)	(No.)	(yr^{-1})	% of Total
May	0	0	0	0	0	0	0	0%
Jun	6	2	1	1	0	10	0.10	8%
Jul	3	3	3	0	0	9	0.09	8%
Aug	8	7	10	2	1	28	0.28	24%
Sep	11	9	15	7	1	43	0.43	37%
Oct	9	7	7	0	0	23	0.23	20%
Nov	2	2	0	0	0	4	0.04	3%
Total	39	30	36	10	2	117	1.2	100%

Where the definition of Storm Category is as follows:

Storm Category	Wind Speed (mph)	Storm Surge (ft. Above Normal)
1	74 to 95	4 to 5
2	96 to 110	6 to 8
3	111 to 130	9 to 12
4	131 to 155	13 to 18
5	Greater than 155	Greater than 18

NOTES:

1. Data is from "Atlantic Tropical Storms And Hurricanes Affecting The United States:1899-2000," NOAA Technical Memorandum NWS SR-206 (Reference 6).

TABLE 2.3-16

HOURLY METEOROLOGICAL DATA
WORST 1-DAY – AUGUST 1, 1998

Hour	Wet Bulb Temperature (F)	Associated Dry Bulb Temperature (F)
00	78	78
03	78	78
06	80	81
09	83	91
12	83	96
15	85	96
18	83	88
21	80	82
AVERAGE	81.0	86.3

Period of Record – approximately 36 years
Data is the highest average wet bulb of any 24 hours in the periods 1948-1975 (taken from GGNS UFSAR Table 2.3-18), July 1, 1996 - 2000 (Vicksburg, MS, Reference 3), and 2001-2003 (Grand Gulf Site, Reference 2)

TABLE 2.3-17

DAILY AVERAGE METEOROLOGICAL DATA
DAILY AVERAGE – WORST 5 CONSECUTIVE DAY PERIOD

Date	Wet Bulb Temperature (F)	Associated Dry Bulb Temperature (F)
7-6-98	80.2	85.5
7-7-98	80.6	86.3
7-8-98	80.6	86.7
7-9-98	79.6	86.8
7-10-98	79.9	85.8
AVERAGE	80.2	86.2

Period of Record – approximately 36 years
Data is the highest average wet bulb of any 120 hours in the periods 1948-1975 (taken from GGNS UFSAR Table 2.3-19), July 1, 1996 - 2000 (Vicksburg, MS, Reference 3), and 2001-2003 (Grand Gulf Site, Reference 2)

TABLE 2.3-18

DAILY AVERAGE METEOROLOGICAL DATA
WORST 30 CONSECUTIVE DAY PERIOD

Date	Wet Bulb Temperature (F)	Associated Dry Bulb Temperature (F)
7/4/1998	78.3	81.7
5	79.0	82.3
6	80.2	85.5
7	80.6	86.3
8	80.6	86.7
9	79.6	86.8
10	79.9	85.8
11	77.6	81.8
12	77.0	80.1
13	76.5	77.8
14	77.0	78.5
15	78.8	81.9
16	78.5	82.5
17	76.8	81.3
18	76.2	82.2
19	77.8	83.5
20	78.7	84.5
21	76.3	79.3
22	76.9	80.7
23	78.4	82.7
24	77.8	83.3
25	77.5	81.0
26	77.8	81.6
27	79.1	83.6
28	80.1	85.8
29	78.4	84.4
30	79.1	85.4
31	79.0	85.7
8/1/1998	81.0	86.3
2	80.0	84.8
AVERAGE	78.5	83.1

Period of Record – approximately 36 years
Data is the highest average wet bulb of any 720 hours in the periods 1948-1975 (taken from GGNS UFSAR Table 2.3-20), July 1, 1996 - 2000 (Vicksburg, MS, Reference 3), and 2001-2003 (Grand Gulf Site, Reference 2)

TABLE 2.3-32

PERCENTAGE FREQUENCY OF WIND DIRECTION AND SPEED (MPH)
DURING JANUARY, GGNS SITE

Direction From	Wind Speed (mph) 0-3	4-7	8-12	13-17	18-22	23-27	≥ 28	Total (%)	Avg. Speed
	Frequency of Occurrence (%)								
N	2.7	6.6	3.9	0.2	0.0	0.0	0.0	13.5	6.1
N-NE	3.4	5.6	0.6	0.0	0.0	0.0	0.0	9.6	4.6
NE	3.7	3.2	0.2	0.0	0.0	0.0	0.0	7.1	3.8
E-NE	3.3	0.9	0.0	0.0	0.0	0.0	0.0	4.2	2.4
E	3.2	1.3	0.0	0.0	0.0	0.0	0.0	4.5	2.9
E-SE	2.7	2.2	0.0	0.0	0.0	0.0	0.0	4.9	3.1
SE	1.5	4.1	0.1	0.0	0.0	0.0	0.0	5.7	4.2
S-SE	0.9	3.9	1.3	0.0	0.0	0.0	0.0	6.1	5.9
S	0.9	4.9	2.1	0.0	0.0	0.0	0.0	7.9	5.6
S-SW	0.6	1.9	2.3	0.0	0.0	0.0	0.0	4.8	6.9
SW	1.1	2.2	1.6	0.4	0.0	0.0	0.0	5.2	6.5
W-SW	1.7	2.8	0.9	0.0	0.0	0.0	0.0	5.5	4.8
W	1.2	2.5	0.8	0.0	0.0	0.0	0.0	4.5	5.4
W-NW	1.3	2.0	0.3	0.0	0.0	0.0	0.0	3.6	4.5
NW	1.1	2.4	0.2	0.0	0.0	0.0	0.0	3.7	4.8
N-NW	1.8	5.2	2.2	0.0	0.0	0.0	0.0	9.2	5.7
Total	31.2	51.6	16.5	0.7	0.0	0.0	0.0	100.0	4.8

NOTES:

1. Data from Site Meteorological Tower, 2001 – 2003 (Reference 2).

TABLE 2.3-33

PERCENTAGE FREQUENCY OF WIND DIRECTION AND SPEED (MPH)
DURING FEBRUARY, GGNS SITE

Direction From	Wind Speed (mph) 0-3	4-7	8-12	13-17	18-22	23-27	≥ 28	Total (%)	Avg. Speed
	Frequency of Occurrence (%)								
N	1.4	4.8	3.7	0.0	0.0	0.0	0.0	9.9	6.6
N-NE	2.9	5.1	0.9	0.0	0.0	0.0	0.0	9.0	4.5
NE	2.8	3.4	0.4	0.0	0.0	0.0	0.0	6.6	4.2
E-NE	2.6	2.9	0.1	0.0	0.0	0.0	0.0	5.5	3.7
E	3.8	1.8	0.0	0.0	0.0	0.0	0.0	5.6	2.9
E-SE	3.4	2.0	0.0	0.0	0.0	0.0	0.0	5.4	3.0
SE	1.8	2.6	0.5	0.0	0.0	0.0	0.0	4.9	4.5
S-SE	1.1	4.5	3.5	0.8	0.1	0.0	0.0	9.9	7.4
S	0.8	2.5	2.9	0.2	0.0	0.0	0.0	6.5	7.0
S-SW	1.1	1.5	1.1	0.1	0.0	0.0	0.0	3.8	6.2
SW	0.6	1.0	1.0	0.0	0.0	0.0	0.0	2.6	6.9
W-SW	1.9	1.9	0.3	0.1	0.0	0.0	0.0	4.2	4.5
W	1.5	1.6	0.5	0.0	0.0	0.0	0.0	3.6	4.6
W-NW	0.9	3.5	0.6	0.0	0.0	0.0	0.0	4.9	4.8
NW	1.5	3.5	0.5	0.0	0.0	0.0	0.0	5.5	4.7
N-NW	1.6	6.8	3.7	0.1	0.0	0.0	0.0	12.2	6.2
Total	29.9	49.4	19.5	1.2	0.1	0.0	0.0	100.0	5.1

NOTES:

1. Data from Site Meteorological Tower, 2001 – 2003 (Reference 2).

TABLE 2.3-34

PERCENTAGE FREQUENCY OF WIND DIRECTION AND SPEED (MPH)
DURING MARCH, GGNS SITE

Direction From	Wind Speed (mph) 0-3	4-7	8-12	13-17	18-22	23-27	≥ 28	Total (%)	Avg. Speed
	Frequency of Occurrence (%)								
N	1.4	5.3	3.5	0.3	0.0	0.0	0.0	10.5	6.6
N-NE	1.8	4.3	2.6	0.1	0.0	0.0	0.0	8.8	5.7
NE	2.4	2.3	1.0	0.0	0.0	0.0	0.0	5.8	4.4
E-NE	2.9	1.4	0.0	0.0	0.0	0.0	0.0	4.3	2.9
E	4.1	2.2	0.1	0.0	0.0	0.0	0.0	6.3	2.9
E-SE	4.1	2.2	0.1	0.0	0.0	0.0	0.0	6.3	3.3
SE	2.4	4.4	1.4	0.1	0.0	0.0	0.0	8.2	4.6
S-SE	1.2	4.5	2.8	0.0	0.0	0.0	0.0	8.5	5.2
S	0.8	3.8	1.8	0.0	0.0	0.0	0.0	6.3	5.3
S-SW	0.7	1.4	1.4	0.3	0.0	0.0	0.0	3.8	6.0
SW	0.6	1.3	1.0	0.2	0.0	0.0	0.0	3.1	6.7
W-SW	0.8	3.0	1.2	0.1	0.0	0.0	0.0	5.1	6.1
W	1.1	4.3	0.9	0.0	0.0	0.0	0.0	6.3	5.3
W-NW	0.8	1.9	0.3	0.0	0.0	0.0	0.0	3.0	4.6
NW	1.4	2.6	0.3	0.0	0.0	0.0	0.0	4.2	4.5
N-NW	1.6	4.3	3.3	0.1	0.0	0.0	0.0	9.3	6.3
Total	28.1	49.4	21.6	1.0	0.0	0.0	0.0	100.0	5.0

NOTES:

1. Data from Site Meteorological Tower, 2001 – 2003 (Reference 2).

TABLE 2.3-35

PERCENTAGE FREQUENCY OF WIND DIRECTION AND SPEED (MPH)
DURING APRIL, GGNS SITE

Direction From	Wind Speed (mph) 0-3	4-7	8-12	13-17	18-22	23-27	≥ 28	Total (%)	Avg. Speed
	Frequency of Occurrence (%)								
N	0.6	2.0	1.8	0.1	0.0	0.0	0.0	4.6	6.6
N-NE	1.2	3.6	0.7	0.1	0.0	0.0	0.0	5.6	4.9
NE	2.9	2.3	0.4	0.0	0.0	0.0	0.0	5.6	3.7
E-NE	5.1	1.1	0.1	0.0	0.0	0.0	0.0	6.4	2.6
E	5.4	1.6	0.0	0.0	0.0	0.0	0.0	6.9	2.5
E-SE	5.4	2.1	0.0	0.0	0.0	0.0	0.0	7.5	3.0
SE	3.4	7.5	0.2	0.0	0.0	0.0	0.0	11.1	4.3
S-SE	1.7	6.4	3.1	0.2	0.0	0.0	0.0	11.4	6.0
S	1.8	8.1	4.4	0.0	0.0	0.0	0.0	14.4	6.1
S-SW	0.7	3.8	2.8	0.0	0.0	0.0	0.0	7.4	6.5
SW	1.0	2.3	1.4	0.0	0.0	0.0	0.0	4.6	6.0
W-SW	0.7	2.5	0.3	0.0	0.0	0.0	0.0	3.5	5.1
W	0.8	1.8	0.0	0.0	0.0	0.0	0.0	2.5	3.8
W-NW	0.6	1.1	0.0	0.0	0.0	0.0	0.0	1.7	4.2
NW	0.6	0.9	0.0	0.0	0.0	0.0	0.0	1.6	3.7
N-NW	0.9	2.7	1.4	0.0	0.0	0.0	0.0	5.0	5.6
Total	33.0	49.7	16.8	0.6	0.0	0.0	0.0	100.0	4.7

NOTES:

1. Data from Site Meteorological Tower, 2001 – 2003 (Reference 2).

TABLE 2.3-36

PERCENTAGE FREQUENCY OF WIND DIRECTION AND SPEED (MPH)
DURING MAY, GGNS SITE

Direction From	Wind Speed (mph) 0-3	4-7	8-12	13-17	18-22	23-27	≥ 28	Total (%)	Avg. Speed
	Frequency of Occurrence (%)								
N	1.3	3.0	1.4	0.0	0.0	0.0	0.0	5.7	5.6
N-NE	1.9	3.2	0.4	0.0	0.0	0.0	0.0	5.4	4.3
NE	6.5	2.1	0.3	0.0	0.0	0.0	0.0	9.0	3.1
E-NE	6.7	0.7	0.0	0.0	0.0	0.0	0.0	7.4	2.1
E	6.7	0.7	0.0	0.0	0.0	0.0	0.0	7.4	2.3
E-SE	3.7	0.6	0.0	0.0	0.0	0.0	0.0	4.3	2.6
SE	4.3	3.5	0.0	0.0	0.0	0.0	0.0	7.8	3.5
S-SE	2.5	4.9	0.4	0.0	0.0	0.0	0.0	7.8	4.6
S	2.1	9.9	3.2	0.0	0.0	0.0	0.0	15.2	5.6
S-SW	2.0	6.8	2.0	0.0	0.0	0.0	0.0	10.8	5.6
SW	1.2	5.3	0.9	0.0	0.0	0.0	0.0	7.3	5.4
W-SW	1.0	2.2	0.0	0.0	0.0	0.0	0.0	3.3	4.0
W	1.5	0.9	0.0	0.0	0.0	0.0	0.0	2.4	3.5
W-NW	1.1	0.7	0.0	0.0	0.0	0.0	0.0	1.8	3.3
NW	0.6	0.7	0.0	0.0	0.0	0.0	0.0	1.3	3.6
N-NW	0.8	2.3	0.0	0.0	0.0	0.0	0.0	3.1	4.7
Total	43.8	47.5	8.7	0.0	0.0	0.0	0.0	100.0	4.0

NOTES:

1. Data from Site Meteorological Tower, 2001 – 2003 (Reference 2).

TABLE 2.3-37

PERCENTAGE FREQUENCY OF WIND DIRECTION AND SPEED (MPH)
DURING JUNE, GGNS SITE

Direction From	Wind Speed (mph) 0-3	4-7	8-12	13-17	18-22	23-27	≥ 28	Total (%)	Avg. Speed
	Frequency of Occurrence (%)								
N	1.4	2.3	0.2	0.0	0.0	0.0	0.0	3.9	4.6
N-NE	2.5	3.2	0.2	0.0	0.0	0.0	0.0	5.9	4.1
NE	10.3	6.0	0.4	0.0	0.0	0.0	0.0	16.7	3.4
E-NE	9.5	1.9	0.0	0.0	0.0	0.0	0.0	11.4	2.5
E	8.0	1.2	0.0	0.0	0.0	0.0	0.0	9.2	2.4
E-SE	6.7	1.4	0.0	0.0	0.0	0.0	0.0	8.1	2.6
SE	6.2	4.2	0.1	0.0	0.0	0.0	0.0	10.5	3.5
S-SE	3.1	2.9	0.1	0.0	0.0	0.0	0.0	6.1	4.0
S	2.1	2.6	0.2	0.0	0.0	0.0	0.0	5.0	4.0
S-SW	1.7	2.8	0.3	0.0	0.0	0.0	0.0	4.8	4.4
SW	1.2	2.6	0.1	0.0	0.0	0.0	0.0	3.9	4.5
W-SW	1.3	1.6	0.0	0.0	0.0	0.0	0.0	3.0	3.7
W	1.2	1.2	0.0	0.0	0.0	0.0	0.0	2.4	3.6
W-NW	1.2	1.1	0.0	0.0	0.0	0.0	0.0	2.3	3.4
NW	1.3	1.6	0.0	0.0	0.0	0.0	0.0	3.0	3.5
N-NW	1.4	2.5	0.0	0.0	0.0	0.0	0.0	3.9	4.1
Total	59.1	39.3	1.6	0.0	0.0	0.0	0.0	100.0	3.6

NOTES:

1. Data from Site Meteorological Tower, 2001 – 2003 (Reference 2).

TABLE 2.3-38

PERCENTAGE FREQUENCY OF WIND DIRECTION AND SPEED (MPH)
DURING JULY, GGNS SITE

Direction From	Wind Speed (mph) 0-3	4-7	8-12	13-17	18-22	23-27	≥ 28	Total (%)	Avg. Speed
	Frequency of Occurrence (%)								
N	0.9	1.3	0.0	0.0	0.0	0.0	0.0	2.2	4.0
N-NE	1.3	1.0	0.0	0.0	0.0	0.0	0.0	2.3	3.3
NE	5.7	1.6	0.0	0.0	0.0	0.0	0.0	7.3	2.5
E-NE	7.8	0.7	0.0	0.0	0.0	0.0	0.0	8.5	2.0
E	7.0	0.8	0.0	0.0	0.0	0.0	0.0	7.8	2.2
E-SE	6.5	0.5	0.0	0.0	0.0	0.0	0.0	7.1	2.4
SE	7.1	1.6	0.0	0.0	0.0	0.0	0.0	8.7	2.8
S-SE	4.3	2.6	0.0	0.0	0.0	0.0	0.0	7.0	3.2
S	6.0	2.6	0.0	0.0	0.0	0.0	0.0	8.6	3.0
S-SW	5.9	3.8	0.1	0.0	0.0	0.0	0.0	9.8	3.3
SW	3.5	5.6	0.0	0.0	0.0	0.0	0.0	9.1	3.9
W-SW	3.1	3.8	0.0	0.0	0.0	0.0	0.0	6.9	3.5
W	3.5	2.1	0.0	0.0	0.0	0.0	0.0	5.7	3.4
W-NW	2.9	1.0	0.0	0.0	0.0	0.0	0.0	3.9	3.1
NW	1.3	1.1	0.0	0.0	0.0	0.0	0.0	2.4	3.3
N-NW	1.2	1.4	0.0	0.0	0.0	0.0	0.0	2.6	3.8
Total	68.2	31.5	0.3	0.0	0.0	0.0	0.0	100.0	3.1

NOTES:

1. Data from Site Meteorological Tower, 2001 – 2003 (Reference 2).

TABLE 2.3-39

PERCENTAGE FREQUENCY OF WIND DIRECTION AND SPEED (MPH)
DURING AUGUST, GGNS SITE

Direction From	Wind Speed (mph) 0-3	4-7	8-12	13-17	18-22	23-27	≥ 28	Total (%)	Avg. Speed
	Frequency of Occurrence (%)								
N	1.2	1.3	0.1	0.0	0.0	0.0	0.0	2.6	3.9
N-NE	2.8	2.3	0.0	0.0	0.0	0.0	0.0	5.1	3.6
NE	9.0	6.5	0.5	0.0	0.0	0.0	0.0	16.0	3.6
E-NE	9.7	2.3	0.0	0.0	0.0	0.0	0.0	12.0	2.5
E	9.8	0.9	0.0	0.0	0.0	0.0	0.0	10.7	2.1
E-SE	8.7	1.2	0.0	0.0	0.0	0.0	0.0	9.9	2.4
SE	5.9	3.1	0.0	0.0	0.0	0.0	0.0	8.9	3.1
S-SE	3.8	1.6	0.1	0.0	0.0	0.0	0.0	5.5	3.3
S	4.2	1.6	0.0	0.0	0.0	0.0	0.0	5.8	3.0
S-SW	1.9	2.1	0.1	0.0	0.0	0.0	0.0	4.1	3.5
SW	1.9	3.9	0.1	0.0	0.0	0.0	0.0	5.8	3.9
W-SW	1.9	1.8	0.0	0.0	0.0	0.0	0.0	3.7	3.6
W	2.4	0.9	0.0	0.0	0.0	0.0	0.0	3.3	3.3
W-NW	1.4	0.9	0.0	0.0	0.0	0.0	0.0	2.3	3.4
NW	1.2	0.9	0.0	0.0	0.0	0.0	0.0	2.0	3.4
N-NW	1.1	1.6	0.1	0.0	0.0	0.0	0.0	2.7	3.8
Total	66.5	32.6	0.9	0.0	0.0	0.0	0.0	100.0	3.3

NOTES:

1. Data from Site Meteorological Tower, 2001 – 2003 (Reference 2).

TABLE 2.3-40

PERCENTAGE FREQUENCY OF WIND DIRECTION AND SPEED (MPH)
DURING SEPTEMBER, GGNS SITE

Direction From	Wind Speed (mph) 0-3	4-7	8-12	13-17	18-22	23-27	≥ 28	Total (%)	Avg. Speed
	Frequency of Occurrence (%)								
N	1.3	4.9	1.3	0.2	0.0	0.0	0.0	7.7	5.7
N-NE	3.3	8.3	2.1	0.0	0.0	0.0	0.0	13.8	5.0
NE	12.2	5.5	0.7	0.1	0.0	0.0	0.0	18.5	3.4
E-NE	10.6	2.2	0.0	0.0	0.0	0.0	0.0	12.8	2.4
E	7.5	0.8	0.0	0.0	0.0	0.0	0.0	8.3	2.1
E-SE	6.6	1.2	0.0	0.0	0.0	0.0	0.0	7.8	2.5
SE	4.6	3.1	0.0	0.0	0.0	0.0	0.0	7.7	3.4
S-SE	2.2	2.2	0.2	0.0	0.0	0.0	0.0	4.6	4.0
S	1.6	2.0	0.4	0.0	0.0	0.0	0.0	4.1	4.3
S-SW	1.0	1.6	0.1	0.0	0.0	0.0	0.0	2.7	3.9
SW	0.9	0.6	0.0	0.0	0.0	0.0	0.0	1.6	3.4
W-SW	1.4	0.5	0.0	0.0	0.0	0.0	0.0	1.9	3.1
W	1.0	0.6	0.1	0.0	0.0	0.0	0.0	1.7	3.5
W-NW	1.1	0.5	0.1	0.0	0.0	0.0	0.0	1.8	3.5
NW	0.6	0.8	0.1	0.0	0.0	0.0	0.0	1.5	3.9
N-NW	1.1	1.9	0.2	0.0	0.0	0.0	0.0	3.3	4.3
Total	57.1	37.1	5.4	0.3	0.0	0.0	0.0	100.0	3.6

NOTES:

1. Data from Site Meteorological Tower, 2001 – 2003 (Reference 2).

TABLE 2.3-41

PERCENTAGE FREQUENCY OF WIND DIRECTION AND SPEED (MPH)
DURING OCTOBER, GGNS SITE

Direction From	Wind Speed (mph) 0-3	4-7	8-12	13-17	18-22	23-27	≥ 28	Total (%)	Avg. Speed
	Frequency of Occurrence (%)								
N	1.9	5.3	1.7	0.0	0.0	0.0	0.0	8.9	5.8
N-NE	3.5	5.9	1.0	0.0	0.0	0.0	0.0	10.4	4.8
NE	8.2	5.5	0.9	0.0	0.0	0.0	0.0	14.6	3.7
E-NE	9.5	0.9	0.0	0.0	0.0	0.0	0.0	10.4	2.1
E	8.4	0.5	0.1	0.0	0.0	0.0	0.0	9.1	2.0
E-SE	6.7	2.2	0.1	0.0	0.0	0.0	0.0	9.0	2.8
SE	4.5	5.4	0.1	0.0	0.0	0.0	0.0	10.0	3.8
S-SE	1.7	2.9	0.5	0.1	0.0	0.0	0.0	5.3	4.9
S	1.2	3.0	0.4	0.1	0.0	0.0	0.0	4.7	5.3
S-SW	1.1	1.8	0.6	0.1	0.0	0.0	0.0	3.6	5.1
SW	0.9	1.4	0.1	0.0	0.0	0.0	0.0	2.4	4.8
W-SW	1.6	1.3	0.0	0.0	0.0	0.0	0.0	3.0	3.5
W	1.5	0.6	0.0	0.0	0.0	0.0	0.0	2.1	3.0
W-NW	0.6	0.7	0.0	0.0	0.0	0.0	0.0	1.3	3.6
NW	1.2	0.6	0.0	0.0	0.0	0.0	0.0	1.8	3.7
N-NW	1.3	2.2	0.2	0.0	0.0	0.0	0.0	3.6	4.7
Total	53.7	40.1	5.8	0.4	0.0	0.0	0.0	100.0	4.0

NOTES:

1. Data from Site Meteorological Tower, 2001 – 2003 (Reference 2).

TABLE 2.3-42

PERCENTAGE FREQUENCY OF WIND DIRECTION AND SPEED (MPH)
DURING NOVEMBER, GGNS SITE

Direction From	Wind Speed (mph) 0-3	4-7	8-12	13-17	18-22	23-27	≥ 28	Total (%)	Avg. Speed
	Frequency of Occurrence (%)								
N	2.2	5.6	1.9	0.0	0.0	0.0	0.0	9.7	5.5
N-NE	2.6	6.4	1.4	0.0	0.0	0.0	0.0	10.5	5.0
NE	6.2	1.9	0.1	0.0	0.0	0.0	0.0	8.1	2.9
E-NE	8.1	1.0	0.0	0.0	0.0	0.0	0.0	9.1	1.9
E	7.3	1.1	0.0	0.0	0.0	0.0	0.0	8.4	2.2
E-SE	6.7	2.5	0.0	0.0	0.0	0.0	0.0	9.2	2.9
SE	2.4	5.4	0.5	0.0	0.0	0.0	0.0	8.3	4.7
S-SE	1.6	3.2	1.6	0.0	0.0	0.0	0.0	6.5	5.7
S	1.3	3.0	2.5	0.0	0.0	0.0	0.0	6.8	6.2
S-SW	0.7	1.5	1.0	0.2	0.0	0.0	0.0	3.4	6.0
SW	0.6	1.3	0.3	0.0	0.0	0.0	0.0	2.3	5.0
W-SW	1.0	2.8	0.9	0.0	0.0	0.0	0.0	4.7	5.3
W	1.2	1.5	0.2	0.0	0.0	0.0	0.0	2.9	4.4
W-NW	0.5	1.5	0.1	0.0	0.0	0.0	0.0	2.0	4.5
NW	0.6	1.2	0.1	0.0	0.0	0.0	0.0	2.0	4.2
N-NW	1.2	3.2	1.7	0.0	0.0	0.0	0.0	6.1	5.5
Total	44.3	43.2	12.3	0.3	0.0	0.0	0.0	100.0	4.5

NOTES:

1. Data from Site Meteorological Tower, 2001 – 2003 (Reference 2).

TABLE 2.3-43

PERCENTAGE FREQUENCY OF WIND DIRECTION AND SPEED (MPH)
DURING DECEMBER, GGNS SITE

Direction From	Wind Speed (mph) 0-3	4-7	8-12	13-17	18-22	23-27	≥ 28	Total (%)	Avg. Speed
	Frequency of Occurrence (%)								
N	2.5	4.3	1.5	0.0	0.0	0.0	0.0	8.4	5.0
N-NE	2.1	3.0	0.1	0.0	0.0	0.0	0.0	5.3	3.9
NE	2.8	2.6	0.2	0.0	0.0	0.0	0.0	5.5	3.6
E-NE	3.6	1.3	0.0	0.0	0.0	0.0	0.0	5.0	2.6
E	8.5	2.4	0.0	0.0	0.0	0.0	0.0	10.8	2.6
E-SE	4.8	3.6	0.0	0.0	0.0	0.0	0.0	8.4	3.3
SE	2.9	5.9	1.8	0.0	0.0	0.0	0.0	10.6	5.2
S-SE	1.3	3.3	4.8	0.2	0.0	0.0	0.0	9.5	7.3
S	1.0	2.2	2.4	0.0	0.0	0.0	0.0	5.5	6.5
S-SW	0.4	1.7	0.6	0.0	0.0	0.0	0.0	2.7	5.8
SW	0.4	1.2	0.3	0.0	0.0	0.0	0.0	1.9	5.2
W-SW	1.0	2.6	1.4	0.0	0.0	0.0	0.0	4.9	5.8
W	0.9	3.8	2.1	0.3	0.0	0.0	0.0	7.1	6.7
W-NW	1.0	2.7	0.6	0.0	0.0	0.0	0.0	4.3	4.8
NW	1.4	2.3	0.2	0.0	0.0	0.0	0.0	3.9	4.2
N-NW	1.4	4.0	0.8	0.0	0.0	0.0	0.0	6.2	5.4
Total	36.0	46.7	16.9	0.4	0.0	0.0	0.0	100.0	4.9

NOTES:

1. Data from Site Meteorological Tower, 2001 – 2003 (Reference 2).

TABLE 2.3-44

PERCENTAGE FREQUENCY OF WIND DIRECTION AND SPEED (MPH)
DURING ALL YEARS, GGNS SITE

Direction From	Wind Speed (mph) 0-3	4-7	8-12	13-17	18-22	23-27	≥ 28	Total (%)	Avg. Speed
	Frequency of Occurrence (%)								
N	1.6	3.9	1.7	0.1	0.0	0.0	0.0	7.2	5.7
N-NE	2.4	4.3	0.8	0.0	0.0	0.0	0.0	7.6	4.7
NE	6.1	3.6	0.4	0.0	0.0	0.0	0.0	10.1	3.5
E-NE	6.7	1.4	0.0	0.0	0.0	0.0	0.0	8.1	2.4
E	6.7	1.3	0.0	0.0	0.0	0.0	0.0	8.0	2.4
E-SE	5.5	1.8	0.0	0.0	0.0	0.0	0.0	7.3	2.8
SE	3.9	4.3	0.4	0.0	0.0	0.0	0.0	8.6	4.0
S-SE	2.1	3.6	1.5	0.1	0.0	0.0	0.0	7.3	5.4
S	2.0	3.9	1.7	0.0	0.0	0.0	0.0	7.6	5.4
S-SW	1.5	2.6	1.0	0.1	0.0	0.0	0.0	5.2	5.3
SW	1.2	2.4	0.6	0.0	0.0	0.0	0.0	4.2	5.1
W-SW	1.5	2.3	0.4	0.0	0.0	0.0	0.0	4.2	4.6
W	1.5	1.8	0.4	0.0	0.0	0.0	0.0	3.7	4.6
W-NW	1.1	1.4	0.2	0.0	0.0	0.0	0.0	2.7	4.1
NW	1.1	1.5	0.1	0.0	0.0	0.0	0.0	2.7	4.1
N-NW	1.3	3.1	1.1	0.0	0.0	0.0	0.0	5.5	5.4
Total	46.2	43.1	10.3	0.4	0.0	0.0	0.0	100.0	4.3

NOTES:

1. Data from Site Meteorological Tower, 2001 – 2003 (Reference 2).

TABLE 2.3-48

MAXIMUM NUMBER OF CONSECUTIVE HOURS WITH WIND FROM A SINGLE SECTOR, GRAND GULF SITE

Sector	2001	2002	2003	All	Avg.
N	17	18	22	22	19.0
N-NE	13	19	17	19	16.3
NE	15	32	21	32	22.7
E-NE	7	6	8	8	7.0
E	7	9	8	9	8.0
E-SE	9	8	9	9	8.7
SE	12	17	12	17	13.7
S-SE	18	12	12	18	14.0
S	23	18	15	23	18.7
S-SW	7	17	13	17	12.3
SW	9	8	10	10	9.0
W-SW	6	11	9	11	8.7
W	16	17	15	17	16.0
W-NW	6	10	6	10	7.3
NW	6	7	6	7	6.3
N-NW	16	8	11	16	11.7

NOTES:

1. Data from Site Meteorological Tower, 2001 – 2003 (Reference 2).

TABLE 2.3-49

MAXIMUM NUMBER OF CONSECUTIVE HOURS WITH WIND FROM 3 ADJACENT SECTORS, GRAND GULF SITE

Sector	2001	2002	2003	All	Avg.
N	51	57	58	58	55.3
N-NE	48	102	61	102	70.3
NE	31	55	82	82	56.0
E-NE	45	59	37	59	47.0
E	23	17	16	23	18.7
E-SE	21	27	18	27	22.0
SE	40	39	25	40	34.7
S-SE	55	64	28	64	49.0
S	53	41	55	55	49.7
S-SW	43	51	37	51	43.7
SW	18	19	37	37	24.7
W-SW	20	22	18	22	20.0
W	23	23	25	25	23.7
W-NW	19	32	23	32	24.7
NW	27	24	27	27	26.0
N-NW	41	39	46	46	42.0

NOTES:

1. Data from Site Meteorological Tower, 2001 – 2003 (Reference 2).

TABLE 2.3-50

MAXIMUM NUMBER OF CONSECUTIVE HOURS WITH WIND FROM 5 ADJACENT SECTORS, GRAND GULF SITE

Sector	2001	2002	2003	All	Avg.
N	85	108	88	108	93.7
N-NE	68	106	111	122	113.0
NE	67	102	110	110	93.0
E-NE	74	109	92	109	91.7
E	60	81	67	81	69.3
E-SE	64	49	53	64	55.3
SE	83	78	56	83	72.3
S-SE	83	67	63	83	71.0
S	86	87	74	87	82.3
S-SW	71	75	55	75	67.0
SW	44	75	60	75	59.7
W-SW	31	28	37	37	32.0
W	23	37	27	37	29.0
W-NW	32	37	43	43	37.3
NW	53	48	50	53	50.3
N-NW	62	57	59	62	59.3

NOTES:

1. Data from Site Meteorological Tower, 2001 – 2003 (Reference 2).

TABLE 2.3-51

COMPARISON OF MAXIMUM WIND PERSISTENCE
AT GRAND GULF SITE AND JACKSON, MS

	Single Sector		Three Adjacent Sectors		Five Adjacent Sectors	
Sector	GGNS	Jackson	GGNS	Jackson	GGNS	Jackson
N	22	19	58	88	108	158
N-NE	19	15	102	56	122	114
NE	32	26	82	84	110	84
E-NE	8	14	59	47	109	98
E	9	12	23	56	81	87
E-SE	9	14	27	50	64	114
SE	17	27	40	79	83	90
S-SE	18	29	64	75	83	171
S	23	17	55	97	87	182
S-SW	17	16	51	71	75	112
SW	10	17	37	55	75	109
W-SW	11	18	22	42	37	72
W	17	9	25	36	37	66
W-NW	10	20	32	41	43	59
NW	7	26	27	51	53	56
N-NW	16	23	46	43	62	84

NOTES:

1. Period of record at GGNS site, 2001 – 2003 (Reference 2).
2. Period of record at Jackson, 1955 – 1964 (UFSAR Table 2.3-55, Reference 4).

TABLE 2.3-52

COMPARISON OF MAXIMUM WIND PERSISTENCE AT THE GRAND GULF SITE AND VICKSBURG, MS

	Single Sector		Three Adjacent Sectors		Five Adjacent Sectors	
Sector	GGNS	Vicksburg	GGNS	Vicksburg	GGNS	Vicksburg
N	22	28	58	68	108	76
N-NE	19	15	102	74	122	104
NE	32	17	82	28	110	78
E-NE	8	8	59	35	109	67
E	9	15	23	43	81	45
E-SE	9	16	27	74	64	56
SE	17	12	40	51	83	68
S-SE	18	16	64	68	83	105
S	23	27	55	109	87	101
S-SW	17	15	51	61	75	68
SW	10	11	37	34	75	64
W-SW	11	7	22	31	37	34
W	17	12	25	34	37	37
W-NW	10	8	32	37	43	38
NW	7	11	27	37	53	48
N-NW	16	11	46	41	62	68

NOTES:

1. Period of record at GGNS site, 2001 – 2003. Data from Site Meteorological Tower (Reference 2).
2. Period of record at Vicksburg, 1997 – 2001. Data from NCDC (Reference 3).

TABLE 2.3-56

DELETED

TABLE 2.3-74

ESTIMATED MAXIMUM POINT PRECIPITATION AMOUNTS (INCHES)
FOR SELECTED DURATIONS AND RECURRENCE INTERVALS
GRAND GULF, MISSISSIPPI
COMPARED TO RECENT EXPERIENCE AT VICKSBURG, MISSISSIPPI

Recurrence Intervals (Yr.)

Duration	1	2	5*	5	10	25	50	100
30 minutes	1.4	1.6		1.9	2.2	2.5	2.8	3.1
1 hour	1.8	2.2	1.63	2.6	3.0	3.5	3.9	4.3
2 hours	2.2	2.6	2.66	3.2	3.5	4.0	4.5	4.9
3 hours	2.4	2.8	2.71	3.5	4.0	4.5	5.1	5.5
6 hours	2.8	3.3	2.82	4.3	4.9	5.7	6.3	6.9
12 hours	3.4	4.0	3.70	5.1	5.8	6.8	7.7	8.5
24 hours	3.9	4.6	4.52	6.0	6.9	8.0	8.8	9.9
2 days		5.4		6.8	7.9	9.2	11.0	11.8
4 days		6.4		8.1	9.3	11.2	13.1	14.2
7 days		7.5		9.6	11.2	13.1	14.7	15.9
10 days		8.3		10.5	12.5	14.3	16.0	17.6

NOTES:

* Recent 5 year experience, 1997-2001, Vicksburg Meteorology Station, data from the NCDC (Reference 3) added to the table for comparison purposes.

SOURCES:

Data for 2 hours to 10 days duration (from UFSAR Table 2.3-74)

1. Hershfield, D.M., Rainfall Frequency Atlas of the United States for Durations from 30 minutes to 24 hours and Return Periods from 1 to 100 years, US Weather Bureau Technical Paper 40, Washington, D.C., 1961 (Reference 26).

2. Miller, J/F., Two to Ten Day Precipitation for Return Periods of 2 to 100 years in the Contiguous United States, US Weather Bureau Technical Paper 49, Washington, D.C., 1964 (Reference 27).

For data for 30 minutes and 1 hour duration

3. NOAA Technical Memorandum NWS HYDRO-35, Five- to 60-Minute Precipitation Frequency for the Eastern and Central United States (Reference 52)

TABLE 2.3-77

PERCENT OF TOTAL OBSERVATIONS (BY MONTH) OF INDICATED WIND DIRECTIONS AND PRECIPITATION, GRAND GULF SITE, 2001 - 2003

Sector	J	F	M	A	M	J	J	A	S	O	N	D	Sum
N	2.0	1.3	2.7	0.6	0.8	0.0	0.6	0.7	1.3	1.1	0.9	1.1	13.0
N-NE	0.7	0.8	1.1	0.6	0.4	0.4	0.2	0.1	1.3	1.2	0.3	0.5	7.6
NE	1.1	1.0	1.4	0.5	0.1	0.2	0.4	0.8	0.8	1.9	0.7	0.8	9.8
E-NE	0.7	0.8	0.9	0.1	0.0	0.4	0.7	0.4	0.4	0.8	0.3	0.5	6.0
E	0.8	0.9	1.1	0.2	0.4	0.8	0.5	0.5	0.6	0.5	0.4	0.4	7.0
E-SE	0.1	0.1	0.8	0.4	0.3	0.7	0.6	0.8	0.6	0.5	0.2	0.4	5.4
SE	0.4	0.2	1.3	0.3	0.2	0.8	1.2	0.2	0.6	0.8	0.4	1.1	7.6
S-SE	0.8	0.3	0.5	0.3	0.2	0.8	1.0	0.4	0.3	0.4	0.8	0.6	6.4
S	1.3	0.5	0.5	0.2	0.5	0.6	1.3	0.1	0.5	0.4	0.4	0.5	6.9
S-SW	1.0	0.3	0.0	0.1	0.2	1.1	1.8	0.4	0.1	0.1	0.4	0.4	6.0
SW	0.6	0.1	0.1	0.2	0.3	0.5	0.6	0.6	0.1	0.4	0.7	0.6	4.9
W-SW	0.2	0.4	0.5	0.1	0.1	0.3	0.1	0.0	0.1	0.3	0.5	0.6	3.2
W	0.8	0.1	0.5	0.3	0.1	0.4	0.4	0.1	0.1	0.0	0.1	1.3	4.2
W-NW	0.4	0.4	0.3	0.0	0.1	0.2	0.1	0.0	0.1	0.1	0.1	0.6	2.3
NW	0.5	0.3	0.9	0.1	0.0	0.1	0.2	0.1	0.4	0.1	0.2	0.5	3.3
N-NW	1.6	0.7	1.1	0.2	0.4	0.1	0.4	0.0	0.4	0.4	0.5	0.6	6.5
Total	13.0	8.1	13.8	4.1	4.0	7.3	10.1	5.4	7.5	9.0	7.0	10.4	100.0

TABLE 2.3-79

PASQUILL STABILITY CLASS ANNUAL FREQUENCY

STABILITY CLASS FREQUENCY TABLE [1,3]

GRAND GULF [2]

STABILITY CLASS	N	N-NE	NE	E-NE	E	E-SE	SE	S-SE	S	S-SW	SW	W-SW	W	W-NW	NW	N-NW	
	WIND FROM																
	S	S-SW	SW	W-SW	W	W-NW	NW	N-NW	N	N-NE	NE	E-NE	E	E-SE	SE	S-SE	SUM
	WIND HEADED																
A	.001	.001	.001	.002	.002	.001	.001	.001	.002	.001	.002	.003	.006	.003	.002	.002	.031
B	.007	.005	.007	.004	.004	.004	.007	.007	.007	.006	.008	.007	.011	.005	.005	.007	.102
C	.014	.008	.011	.004	.005	.006	.010	.010	.013	.010	.008	.010	.010	.005	.004	.010	.138
D	.029	.015	.015	.010	.013	.009	.017	.021	.031	.014	.011	.011	.014	.006	.005	.014	.234
E	.014	.012	.012	.010	.011	.008	.011	.014	.017	.007	.003	.004	.004	.003	.003	.006	.140
F	.009	.019	.020	.016	.021	.015	.016	.012	.018	.007	.002	.002	.003	.002	.003	.004	.169
G	.004	.009	.023	.030	.050	.024	.014	.007	.009	.004	.001	.002	.002	.001	.001	.002	.186

AVERAGE	4.60171	VARIANCE	2.95292	STD DEV	1.71841
STD ERR	0.01093	SKEWNESS	1.15920	KURTOSIS	1.41902

NOTES:

1. Data from Calculation ENTO002-CALC-003, Plume Characteristics Of Proposed New Cooling Towers At Grand Gulf, Rev. 2 (Reference 32).
2. Values are fraction of the year with both wind and stability class as identified. The average, variance and standard deviation are based on replacing Stability Classes A through G with number values 1 through 7.
3. The plume model uses wind speeds from the Grand Gulf site, but uses sky cover measured at Vicksburg, Mississippi, since the site data didn't include that data.

TABLE 2.3-80

PASQUILL STABILITY CLASS WINTER FREQUENCY

STABILITY CLASS BY WIND DIRECTION [1,2]

GRAND GULF
SEASON = WINTER

STABILITY CLASS	WIND FROM N	N-NE	NE	E-NE	E	E-SE	SE	S-SE	S	S-SW	SW	W-SW	W	W-NW	NW	N-NW
	WIND HEADED S	S-SW	SW	W-SW	W	W-NW	NW	N-NW	N	N-NE	NE	E-NE	E	E-SE	SE	S-SE	STAG
A	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
B	.02	.02	.02	.03	.01	.03	.03	.04	.03	.05	.02	.07	.06	.08	.10	.05	.00
C	.12	.10	.12	.04	.05	.07	.14	.11	.10	.11	.19	.23	.23	.19	.19	.19	.09
D	.41	.15	.14	.13	.16	.16	.25	.42	.46	.35	.43	.33	.40	.35	.23	.37	.47
E	.22	.19	.19	.18	.11	.12	.22	.25	.20	.26	.21	.18	.14	.19	.24	.21	.24
F	.15	.34	.24	.22	.16	.28	.20	.14	.14	.17	.06	.10	.10	.09	.16	.10	.14
G	.08	.20	.29	.41	.50	.33	.16	.05	.05	.06	.08	.10	.07	.10	.09	.08	.06

NOTES:

1. Data from Calculation ENTO002-CALC-003, Plume Characteristics Of Proposed New Cooling Towers At Grand Gulf, Rev. 2 (Reference 32).
2. Values are fraction of times with described stability class when the wind is in the indicated direction.

TABLE 2.3-81

PASQUILL STABILITY CLASS SPRING FREQUENCY

STABILITY CLASS BY WIND DIRECTION[1,2]

GRAND GULF
SEASON = SPRING

STABILITY CLASS	WIND FROM N	N-NE	NE	E-NE	E	E-SE	SE	S-SE	S	S-SW	SW	W-SW	W	W-NW	NW	N-NW
	WIND HEADED S	S-SW	SW	W-SW	W	W-NW	NW	N-NW	N	N-NE	NE	E-NE	E	E-SE	SE	S-SE	STAG
A	.00	.01	.01	.02	.01	.00	.02	.02	.02	.02	.05	.05	.14	.09	.07	.03	.00
B	.09	.09	.09	.05	.05	.06	.10	.09	.08	.12	.25	.22	.30	.28	.15	.19	.09
C	.21	.09	.10	.04	.05	.09	.13	.16	.16	.26	.23	.28	.17	.21	.11	.26	.10
D	.40	.25	.19	.15	.14	.12	.23	.29	.29	.27	.30	.30	.23	.19	.29	.30	.35
E	.17	.22	.15	.14	.12	.13	.16	.19	.21	.15	.07	.08	.09	.08	.13	.10	.18
F	.10	.27	.23	.25	.21	.22	.22	.18	.21	.14	.08	.03	.05	.10	.17	.10	.20
G	.03	.08	.23	.35	.41	.38	.15	.06	.04	.04	.02	.03	.03	.06	.07	.03	.08

NOTES:

1. Data from Calculation ENTO002-CALC-003, Plume Characteristics Of Proposed New Cooling Towers At Grand Gulf, Rev. 2 (Reference 32).
2. Values are fraction of times with described stability class when the wind is in the indicated direction.

TABLE 2.3-82

PASQUILL STABILITY CLASS SUMMER FREQUENCY

STABILITY CLASS BY WIND DIRECTION[1,2]

GRAND GULF
SEASON = SUMMER

STABILITY CLASS	WIND FROM N	N-NE	NE	E-NE	E	E-SE	SE	S-SE	S	S-SW	SW	W-SW	W	W-NW	NW	N-NW
	WIND HEADED S	S-SW	SW	W-SW	W	W-NW	NW	N-NW	N	N-NE	NE	E-NE	E	E-SE	SE	S-SE	STAG
A	.11	.05	.04	.05	.04	.04	.04	.05	.05	.07	.12	.19	.32	.34	.24	.21	.08
B	.24	.14	.10	.06	.05	.05	.08	.11	.10	.14	.29	.25	.33	.27	.36	.31	.16
C	.26	.15	.14	.08	.05	.09	.13	.13	.10	.19	.24	.25	.14	.18	.18	.21	.14
D	.23	.24	.17	.13	.10	.13	.19	.14	.18	.21	.24	.22	.17	.15	.16	.17	.15
E	.05	.13	.13	.11	.10	.11	.09	.14	.12	.10	.03	.03	.02	.01	.02	.03	.08
F	.07	.17	.18	.19	.23	.20	.19	.21	.23	.14	.05	.02	.01	.03	.03	.04	.18
G	.04	.12	.23	.38	.43	.37	.28	.23	.22	.15	.03	.04	.02	.02	.01	.03	.21

NOTES:

1. Data from Calculation ENTO002-CALC-003, Plume Characteristics Of Proposed New Cooling Towers At Grand Gulf, Rev. 2 (Reference 32).
2. Values are fraction of times with described stability class when the wind is in the indicated direction.

TABLE 2.3-83

PASQUILL STABILITY CLASS FALL FREQUENCY

STABILITY CLASS BY WIND DIRECTION[1,2]

GRAND GULF
SEASON = FALL

STABILITY CLASS	WIND FROM N	N-NE	NE	E-NE	E	E-SE	SE	S-SE	S	S-SW	SW	W-SW	W	W-NW	NW	N-NW
	WIND HEADED S	S-SW	SW	W-SW	W	W-NW	NW	N-NW	N	N-NE	NE	E-NE	E	E-SE	SE	S-SE	STAG
A	.00	.00	.00	.01	.00	.01	.00	.00	.00	.01	.01	.02	.02	.04	.01	.01	.01
B	.12	.07	.07	.08	.05	.07	.13	.16	.11	.12	.25	.16	.28	.33	.32	.20	.06
C	.19	.13	.12	.06	.04	.07	.13	.16	.15	.23	.15	.27	.24	.22	.33	.28	.14
D	.33	.24	.18	.11	.09	.15	.22	.27	.36	.36	.30	.32	.24	.22	.15	.28	.31
E	.19	.16	.11	.12	.09	.12	.14	.18	.14	.14	.15	.11	.11	.08	.08	.11	.25
F	.11	.28	.23	.20	.19	.21	.23	.15	.16	.09	.09	.06	.06	.07	.08	.08	.17
G	.05	.12	.28	.43	.55	.38	.15	.08	.08	.05	.05	.06	.04	.03	.03	.04	.07

NOTES:

1. Data from Calculation ENTO002-CALC-003, Plume Characteristics Of Proposed New Cooling Towers At Grand Gulf, Rev. 2 (Reference 32).
2. Values are fraction of times with described stability class when the wind is in the indicated direction.

TABLE 2.3-126

AVERAGE PLUME LENGTHS IN MILES DURING 4 NDCT OPERATION

Direction[1]	Winter	Spring	Summer	Fall
S	2.11	1.66	0.59	1.63
S-SW	1.70	1.17	0.73	1.64
SW	1.76	1.10	0.86	1.47
W-SW	2.00	1.23	1.17	1.19
W	1.93	1.16	1.39	1.70
W-NW	1.98	1.14	1.21	1.89
NW	1.55	1.29	1.35	1.74
N-NW	0.97	0.63	0.88	1.03
N	0.93	0.48	0.89	1.07
N-NE	1.12	0.52	0.69	1.13
NE	1.35	0.55	0.46	1.53
E-NE	1.67	0.70	0.30	1.52
E	2.08	0.84	0.35	1.48
E-SE	2.15	1.47	0.24	1.29
SE	1.79	1.33	0.30	1.33
S-SE	1.93	1.26	0.52	1.21
All	1.70	0.98	0.89	1.48

NOTES:

1. Plume from 4 NDCTs moving in the indicated direction.
2. Data from Calculation ENTO002-CALC-003, Plume Characteristics Of Proposed New Cooling Towers At Grand Gulf, Rev. 2 (Reference 32).

TABLE 2.3-127

AVERAGE PLUME LENGTHS IN MILES DURING 4 LMDCT UNIT OPERATION

Direction[1]	Winter	Spring	Summer	Fall
S	2.19	1.64	0.49	1.58
S-SW	1.73	1.26	0.69	1.58
SW	1.73	1.02	0.74	1.35
W-SW	1.87	1.14	1.01	1.03
W	1.84	1.10	1.19	1.50
W-NW	1.88	1.13	1.06	1.71
NW	1.64	1.36	1.28	1.62
N-NW	1.22	0.78	0.88	1.10
N	1.15	0.57	0.93	1.06
N-NE	1.21	0.55	0.73	1.09
NE	1.45	0.57	0.44	1.44
E-NE	1.61	0.69	0.24	1.43
E	2.14	0.84	0.27	1.40
E-SE	2.10	1.28	0.14	1.16
SE	1.86	1.41	0.21	1.16
S-SE	1.99	1.25	0.43	1.22
All	1.75	1.00	0.81	1.39

NOTES:

1. Plume from 4 LMDCTs moving in the indicated direction.
2. Data from Calculation ENTO002-CALC-003, Plume Characteristics Of Proposed New Cooling Towers At Grand Gulf, Rev. 2 (Reference 32).

TABLE 2.3-128

VISIBLE PLUME LENGTH SUMMARY

	Winter		Spring		Summer		Fall	
Most Frequent Plume Heading Directions	S, N, N-NW		N, W, N-NW		W, SW, W-SW		SW, W, S-SW	
	NDCT	LMDCT	NDCT	LMDCT	NDCT	LMDCT	NDCT	LMDCT
Percent of Plumes < 0.25 miles	45.9	39.2	64.5	63.3	69.6	71.4	56.3	56.1
Percent of Plumes > 0.25 to 0.75 mile	16.5	6.2	15.6	4.8	13.7	4.7	14.8	5.0
Percent of Plumes > 0.75 to 2 miles	30.0	52.2	15.0	31.4	9.1	23.7	16.5	38.0
Percent of Plumes > 2 Miles	7.6	2.3	4.9	0.5	7.6	0.1	12.4	1.0

NOTES:

1. Data from Calculation ENTO002-CALC-003, Plume Characteristics Of Proposed New Cooling Towers At Grand Gulf, Rev. 2 (Reference 32).

TABLE 2.3-131

MONTHLY DATA RECOVERY RATE – DATA FROM 1996 TO 2003

	1996	1997	1998	1999	2000	2001	2002	2003
Jan	96%	100%	94%	97%	96%	100%	100%	100%
Feb	84%	97%	100%	99%	89%	93%	95%	76%
Mar	100%	98%	96%	100%	98%	99%	100%	90%
Apr	100%	100%	87%	99%	94%	100%	100%	100%
May	100%	99%	100%	100%	99%	100%	99%	95%
Jun	68%	100%	73%	99%	99%	100%	97%	100%
Jul	96%	81%	94%	99%	100%	100%	100%	100%
Aug	96%	100%	95%	100%	72%	100%	100%	92%
Sep	100%	99%	99%	99%	99%	86%	92%	100%
Oct	94%	100%	81%	94%	99%	98%	100%	100%
Nov	94%	99%	98%	99%	95%	98%	100%	100%
Dec	88%	100%	83%	82%	99%	100%	100%	100%
Avg.	93%	98%	92%	97%	95%	98%	99%	96%

TABLE 2.3-132

2002 TO 2003 DATA (AVERAGED IN HOURS)
EXTREMELY UNSTABLE, STABILITY CLASS A

	Wind Speed (m/sec) at 10 meter (33 feet) Level													
	0.5	0.75	1	1.25	1.5	1.75	2	2.5	3	4	5	7	>13	Total
N	0	0	0	1	2	3	2	10	10	21	15	2	0	67
N-NE	0	0	0	0	1	2	2	5	6	5	5	0	0	26
NE	0	0	1	2	3	6	7	16	14	13	3	4	0	69
E-NE	0	0	0	2	3	6	5	9	3	2	0	0	0	31
E	0	0	0	2	2	3	4	5	3	0	0	0	0	17
E-SE	0	1	0	1	2	4	4	3	1	1	0	0	0	16
SE	0	0	1	1	2	8	7	17	9	4	1	0	0	48
S-SE	0	0	1	3	3	4	4	8	7	9	8	3	0	50
S	0	1	1	1	1	3	3	5	6	11	9	2	0	42
S-SW	0	0	1	2	3	5	4	10	8	16	8	2	0	58
SW	0	0	1	1	8	7	12	14	7	13	1	2	0	65
W-SW	0	0	1	6	5	13	14	11	7	9	2	0	0	68
W	0	0	2	4	9	15	12	12	6	6	2	0	0	68
W-NW	0	0	1	6	7	8	5	8	3	6	0	0	0	45
NW	0	0	0	2	2	8	5	9	5	4	0	0	0	35
N-NW	0	0	0	3	4	7	5	19	18	28	8	2	0	95
Total	0	1	7	33	56	103	95	163	115	149	62	16	0	801

TABLE 2.3-133

2002 TO 2003 DATA (AVERAGED IN HOURS)
MODERATELY UNSTABLE, STABILITY CLASS B

	Wind Speed (m/sec) at 10 meter (33 feet) Level													
	0.5	0.75	1	1.25	1.5	1.75	2	2.5	3	4	5	7	>13	Total
N	0	0	0	1	1	1	3	4	4	16	5	4	0	37
N-NE	0	0	0	1	1	1	0	3	5	3	3	0	0	15
NE	0	0	0	1	4	3	3	2	5	3	1	0	0	20
E-NE	0	0	1	1	4	2	1	4	0	1	0	0	0	12
E	0	0	1	0	1	1	1	2	1	0	0	0	0	6
E-SE	0	0	1	3	2	2	1	1	1	0	0	0	0	8
SE	0	0	1	2	2	5	6	6	5	2	0	0	0	28
S-SE	0	0	0	2	1	2	2	3	2	4	4	1	0	19
S	0	0	1	1	1	2	2	2	6	8	4	0	0	25
S-SW	0	0	1	0	1	2	1	3	3	5	5	0	0	21
SW	0	0	0	1	2	4	1	7	6	5	3	0	0	28
W-SW	0	0	1	2	2	4	4	5	6	4	1	0	0	27
W	0	0	0	2	3	4	2	5	2	2	0	1	0	20
W-NW	0	0	0	2	1	3	4	4	0	3	1	0	0	17
NW	0	0	1	1	1	3	3	5	2	1	0	0	0	17
N-NW	0	0	1	1	0	3	4	4	11	16	3	0	0	43
Total	0	0	7	18	23	38	35	58	58	72	28	5	0	343

TABLE 2.3-134

2002 TO 2003 DATA (AVERAGED IN HOURS)
SLIGHTLY UNSTABLE, STABILITY CLASS C

	Wind Speed (m/sec) at 10 meter (33 feet) Level													
	0.5	0.75	1	1.25	1.5	1.75	2	2.5	3	4	5	7	>13	Total
N	0	1	0	0	3	3	4	8	9	14	7	2	0	50
N-NE	0	0	0	1	1	2	1	8	9	11	3	1	0	36
NE	0	1	1	1	1	2	3	6	5	8	3	0	0	31
E-NE	0	0	1	1	1	2	3	5	1	0	0	0	0	13
E	0	1	2	1	3	2	1	2	2	0	0	0	0	13
E-SE	0	1	2	3	1	2	3	1	1	0	0	0	0	12
SE	0	0	1	1	3	3	4	7	4	4	0	0	0	27
S-SE	0	0	1	1	2	3	3	5	3	4	3	1	0	25
S	0	0	1	2	1	3	3	3	6	11	4	0	0	33
S-SW	0	0	0	2	0	1	1	2	3	7	4	1	0	21
SW	0	0	0	2	1	1	0	11	4	8	3	1	0	30
W-SW	0	0	1	1	3	3	3	4	7	4	1	1	0	27
W	0	0	1	1	6	5	2	4	4	5	1	2	0	30
W-NW	0	1	1	1	3	8	6	9	2	4	0	0	0	33
NW	0	0	1	1	1	4	5	7	3	1	0	0	0	23
N-NW	0	0	0	2	3	4	5	12	20	15	4	1	0	65
Total	0	3	9	17	31	47	46	93	85	96	33	8	0	468

TABLE 2.3-135

2002 TO 2003 DATA (AVERAGED IN HOURS)
NEUTRAL, STABILITY CLASS D

	Wind Speed (m/sec) at 10 meter (33 feet) Level													
	0.5	0.75	1	1.25	1.5	1.75	2	2.5	3	4	5	7	>13	Total
N	0	1	9	14	19	32	29	73	61	78	33	11	0	360
N-NE	1	1	11	11	18	27	28	58	49	44	24	6	0	276
NE	0	3	12	21	24	33	32	52	34	26	4	2	0	241
E-NE	1	3	11	26	18	17	19	17	9	4	0	0	0	126
E	1	4	13	22	16	18	14	20	10	1	0	0	0	117
E-SE	1	3	11	28	21	24	14	16	4	2	1	0	0	125
SE	0	1	9	27	33	34	34	29	21	31	9	3	0	231
S-SE	0	1	8	16	21	19	19	35	27	50	27	9	2	233
S	0	4	7	12	17	11	16	35	41	68	29	4	1	246
S-SW	0	1	7	11	13	13	18	29	27	42	18	11	0	190
SW	0	3	1	14	16	16	16	24	22	20	10	6	1	147
W-SW	0	2	11	14	21	22	19	23	14	19	6	2	1	153
W	0	2	5	15	22	17	11	17	12	16	9	7	0	134
W-NW	0	4	6	7	19	17	7	21	12	13	1	0	0	107
NW	0	4	8	13	14	21	12	18	13	13	1	1	0	117
N-NW	1	3	6	13	17	26	25	53	31	53	13	1	0	242
Total	3	38	133	264	309	347	314	520	387	480	186	62	4	3047

TABLE 2.3-136

2002 TO 2003 DATA (AVERAGED IN HOURS)
SLIGHTLY STABLE, STABILITY CLASS E

	Wind Speed (m/sec) at 10 meter (33 feet) Level													
	0.5	0.75	1	1.25	1.5	1.75	2	2.5	3	4	5	7	>13	Total
N	0	6	12	16	15	9	9	17	13	6	3	1	0	107
N-NE	1	15	19	24	30	29	34	38	18	10	1	0	0	219
NE	3	20	48	47	45	28	18	24	7	2	1	0	0	242
E-NE	4	22	42	45	29	10	8	5	1	0	0	0	0	166
E	3	28	40	40	24	14	8	6	2	1	0	0	0	166
E-SE	2	18	28	34	25	17	9	21	6	1	0	0	0	161
SE	1	14	20	34	33	29	25	44	31	24	2	0	0	255
S-SE	2	10	22	24	18	16	12	37	34	42	16	4	0	238
S	3	11	22	26	20	26	26	42	41	57	13	2	0	289
S-SW	2	12	12	14	17	9	15	17	19	18	16	4	0	156
SW	1	6	5	8	9	10	6	7	5	5	6	0	0	67
W-SW	2	6	5	7	5	4	4	9	6	9	4	0	0	62
W	1	4	3	5	6	4	4	4	6	3	3	0	0	40
W-NW	0	4	4	6	2	2	4	6	3	4	0	0	0	35
NW	1	2	3	4	4	5	5	7	3	2	0	0	0	35
N-NW	0	5	11	11	10	4	5	6	4	6	0	1	0	64
Total	25	182	297	344	292	216	192	290	199	190	64	12	0	2303

TABLE 2.3-137

2002 TO 2003 DATA (AVERAGED IN HOURS)
MODERATELY STABLE, STABILITY CLASS F

	Wind Speed (m/sec) at 10 meter (33 feet) Level													
	0.5	0.75	1	1.25	1.5	1.75	2	2.5	3	4	5	7	>13	Total
N	2	4	4	3	2	1	0	0	0	0	0	0	0	16
N-NE	2	15	16	9	12	6	5	6	1	1	0	0	0	72
NE	3	19	36	39	28	7	3	3	1	1	0	0	0	142
E-NE	8	39	33	34	11	4	1	0	0	0	0	0	0	130
E	11	43	41	19	12	3	1	0	0	0	0	0	0	129
E-SE	6	23	23	17	22	5	4	4	2	1	0	0	0	106
SE	3	15	18	17	14	12	7	8	2	1	0	0	0	97
S-SE	4	12	7	8	5	7	2	7	1	1	0	0	0	54
S	2	4	5	3	3	1	2	3	0	0	0	0	0	22
S-SW	3	5	1	2	2	2	2	1	0	0	1	0	0	16
SW	2	1	2	2	0	0	1	1	1	0	0	0	0	8
W-SW	2	4	6	2	1	0	0	0	0	1	0	0	0	15
W	1	3	0	1	0	0	0	0	0	0	0	0	0	5
W-NW	1	3	1	0	1	0	0	0	0	0	0	0	0	5
NW	1	2	1	0	0	0	0	0	0	0	0	0	0	4
N-NW	1	2	2	3	1	0	0	0	0	0	0	0	0	7
Total	52	193	195	159	113	49	27	32	6	5	1	0	0	830

TABLE 2.3-138

2002 TO 2003 DATA (AVERAGED IN HOURS)
EXTREMELY STABLE, STABILITY CLASS G

	Wind Speed (m/sec) at 10 meter (33 feet) Level													
	0.5	0.75	1	1.25	1.5	1.75	2	2.5	3	4	5	7	>13	Total
N	2	4	1	0	0	0	0	0	0	0	0	0	0	6
N-NE	3	6	9	2	2	4	0	1	0	0	0	0	0	26
NE	9	52	61	42	15	5	2	1	0	0	0	0	0	187
E-NE	31	126	69	23	2	1	0	0	0	0	0	0	0	251
E	29	98	72	27	9	1	1	4	0	0	0	0	0	240
E-SE	9	35	38	37	24	21	9	11	0	0	0	0	0	184
SE	4	5	9	8	11	4	2	1	0	0	0	0	0	44
S-SE	2	2	2	1	1	2	0	1	0	0	0	0	0	9
S	3	1	1	0	0	0	0	0	0	0	0	0	0	4
S-SW	0	1	0	0	0	0	0	0	0	0	0	0	0	1
SW	0	1	0	0	0	0	0	0	0	0	0	0	0	1
W-SW	1	1	1	0	0	0	0	0	0	1	0	0	0	3
W	0	1	1	0	0	0	0	0	0	0	0	0	0	2
W-NW	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NW	1	2	0	0	0	0	0	0	0	0	0	0	0	3
N-NW	0	1	1	0	0	0	0	0	0	0	0	0	0	2
Total	98	334	263	140	64	36	14	17	0	1	0	0	0	968

TABLE 2.3-139

EXCLUSION AREA BOUNDARY
CUMULATIVE FREQUENCY OF RELATIVE CONCENTRATION (X/Q)
OF EFFLUENT AT THE MINIMUM SITE BOUNDARY DISTANCE (841 M)
0-2 HOURS

Cumulative Frequency	X/Q
1 %	6.83E-04
3 %	5.39E-04
5 %	4.29E-04
10 %	2.97E-04
15 %	2.14E-04
20 %	1.68E-04
25 %	1.26E-04
30 %	1.02E-04
35 %	8.48E-05
40 %	7.24E-05
45 %	6.27E-05
50 %	6.37E-05
55 %	6.07E-05
60 %	5.16E-05
65 %	4.38E-05
70 %	4.16E-05
75 %	3.77E-05
80 %	3.43E-05
85 %	2.27E-05
90 %	7.84E-06
95 %	2.85E-06

Table 2.3-140

CUMULATIVE FREQUENCY OF RELATIVE CONCENTRATION (X/Q)
OF EFFLUENT AT THE LOW POPULATION ZONE (3219 M)
0-2 HOURS

Cumulative Frequency	X/Q
1 %	2.04E-04
3 %	1.65E-04
5 %	1.30E-04
10 %	8.02E-05
15 %	5.70E-05
20 %	3.98E-05
25 %	2.97E-05
30 %	2.35E-05
35 %	1.78E-05
40 %	1.48E-05
45 %	1.33E-05
50 %	1.16E-05
55 %	9.97E-06
60 %	8.60E-06
65 %	7.52E-06
70 %	6.45E-06
75 %	5.55E-06
80 %	4.40E-06
85 %	1.96E-06
90 %	5.69E-07
95 %	2.68E-07

Table 2.3-141

EXCLUSION AREA BOUNDARY
DIRECTION DEPENDENT SECTOR RELATIVE CONCENTRATION (X/Q)
OF EFFLUENT AT THE MINIMUM SITE BOUNDARY (841 M)

Downwind Sector	0-2 Hours
S	1.21E-04
S-SW	2.50E-04
SW	4.73E-04
W-SW	5.95E-04
W	5.90E-04
W-NW	4.41E-04
NW	2.72E-04
N-NW	1.90E-04
N	1.46E-04
N-NE	1.25E-04
NE	8.75E-05
E-NE	1.12E-04
E	7.94E-05
E-SE	7.39E-05
SE	7.83E-05
S-SE	9.97E-05

Table 2.3-142

LOW POPULATION ZONE
DIRECTION DEPENDENT SECTOR RELATIVE CONCENTRATION (X/Q)
OF EFFLUENT AT THE LPZ (3219 M)

	0-2 Hours	0-8 Hours	8-24 Hours	1-4 Days	4-30 Days
S	2.84E-05	1.41E-05	9.90E-06	4.62E-06	1.55E-06
S-SW	6.79E-05	3.20E-05	2.19E-05	9.70E-06	3.00E-06
SW	1.44E-04	6.94E-05	4.83E-05	2.19E-05	7.07E-06
W-SW	1.82E-04	8.83E-05	6.16E-05	2.82E-05	9.15E-06
W	1.80E-04	8.68E-05	6.04E-05	2.75E-05	8.85E-06
W-NW	1.31E-04	6.20E-05	4.26E-05	1.89E-05	5.88E-06
NW	7.61E-05	3.62E-05	2.50E-05	1.12E-05	3.53E-06
N-NW	4.81E-05	2.30E-05	1.59E-05	7.12E-06	2.25E-06
N	3.40E-05	1.70E-05	1.20E-05	5.63E-06	1.90E-06
N-NE	2.88E-05	1.38E-05	9.50E-06	4.25E-06	1.34E-06
NE	1.93E-05	9.09E-06	6.24E-06	2.76E-06	8.58E-07
E-NE	2.36E-05	1.11E-05	7.66E-06	3.40E-06	1.06E-06
E	1.56E-05	7.49E-06	5.18E-06	2.33E-06	7.41E-07
E-SE	1.54E-05	7.14E-06	4.85E-06	2.10E-06	6.32E-07
SE	1.56E-05	7.38E-06	5.07E-06	2.25E-06	7.02E-07
S-SE	2.18E-05	1.05E-05	7.27E-06	3.29E-06	1.05E-06

TABLE 2.3-143

ANNUAL AVERAGE X/Q AND D/Q
(DATA PERIOD 2002 - 2003)

Location	Direction	Distance (miles)	Distance (meters)	χ/Q (sec/m^3) No Decay Undepleted	χ/Q (sec/m^3) No Decay Depleted	D/Q (per sq. meter)
SITE BOUNDARY	S	0.72	1155	2.2E-06	1.9E-06	7.9E-09
SITE BOUNDARY	S-SW	0.73	1169	3.7E-06	3.3E-06	8.1E-09
SITE BOUNDARY	SW	0.85	1364	6.8E-06	6.0E-06	8.7E-09
SITE BOUNDARY	W-SW	0.85	1364	8.8E-06	7.8E-06	6.8E-09
SITE BOUNDARY	W	0.98	1575	6.7E-06	5.8E-06	5.1E-09
SITE BOUNDARY	W-NW	0.98	1575	4.2E-06	3.7E-06	4.5E-09
SITE BOUNDARY	NW	0.98	1575	2.6E-06	2.3E-06	5.3E-09
SITE BOUNDARY	N-NW	0.67	1076	3.3E-06	2.9E-06	8.7E-09
SITE BOUNDARY	N	0.58	934	3.9E-06	3.5E-06	1.2E-08
SITE BOUNDARY	N-NE	0.52	841	3.0E-06	2.8E-06	9.6E-09
SITE BOUNDARY	NE	0.52	841	1.9E-06	1.8E-06	7.3E-09
SITE BOUNDARY	E-NE	0.52	841	2.4E-06	2.2E-06	7.4E-09
SITE BOUNDARY	E	0.56	904	1.5E-06	1.4E-06	5.6E-09
SITE BOUNDARY	E-SE	0.67	1086	8.8E-07	7.9E-07	3.3E-09
SITE BOUNDARY	SE	0.60	963	1.2E-06	1.1E-06	3.9E-09
SITE BOUNDARY	S-SE	0.60	963	2.0E-06	1.8E-06	8.6E-09
NEAREST HOME	S	3.45	5548	1.8E-07	1.4E-07	5.2E-10
NEAREST HOME	S-SW	1.05	1686	2.0E-06	1.7E-06	4.4E-09
NEAREST HOME	N	0.81	1310	2.2E-06	1.9E-06	6.6E-09
NEAREST HOME	N-NE	0.64	1029	2.1E-06	1.9E-06	7.0E-09
NEAREST HOME	E-NE	0.63	1021	1.7E-06	1.5E-06	5.4E-09
NEAREST HOME	E-SE	1.06	1708	4.1E-07	3.5E-07	1.5E-09

TABLE 2.3-143 (Continued)

Location	Direction	Distance (miles)	Distance (meters)	χ/Q (sec/m^3) No Decay Undepleted	χ/Q (sec/m^3) No Decay Depleted	D/Q (per sq. meter)
NEAREST HOME	SE	2.39	3843	1.3E-07	1.0E-07	3.7E-10
NEAREST HOME	S-SE	1.42	2283	4.5E-07	3.9E-07	2.0E-09
NEAREST GARDEN	S	3.45	5548	1.8E-07	1.4E-07	5.2E-10
NEAREST GARDEN	S-SW	1.05	1686	2.0E-06	1.7E-06	4.4E-09
NEAREST GARDEN	N	1.49	2404	8.0E-07	6.8E-07	2.3E-09
NEAREST GARDEN	E-NE	0.63	1021	1.7E-06	1.5E-06	5.4E-09
NEAREST GARDEN	E-SE	1.06	1701	4.1E-07	3.6E-07	1.6E-09
NEAREST GARDEN	SE	4.17	6704	5.5E-08	4.2E-08	1.4E-10
NEAREST GARDEN	S-SE	4.70	7561	7.0E-08	5.3E-08	2.4E-10
RV AREA	E-NE	0.39	620	4.1E-06	3.8E-06	1.2E-08
ESC	N-NW	0.20	314	2.9E-05	2.7E-05	6.0E-08
GIN LAKE	W-NW	0.46	747	1.6E-05	1.4E-05	1.5E-08
HAMILTON LAKE	W	0.55	884	1.8E-05	1.6E-05	1.3E-08
SITE GARDEN	S-SE	0.69	1107	1.5E-06	1.4E-06	6.8E-09

NOTES:

1. Combined vent – Ground Level Releases Only.

TABLE 2.3-144

ANNUAL AVERAGE RELATIVE CONCENTRATION, X/Q

COMBINED VENT
NO DECAY, UNDEPLETED
ANNUAL AVERAGE CHI/Q (SEC/METER CUBED) DISTANCE IN MILES FROM THE SITE

SECTOR	0.250	0.500	0.750	1.000	1.500	2.000	2.500	3.000	3.500	4.000	4.500
S	1.417E-05	4.102E-06	2.007E-06	1.234E-06	6.388E-07	4.061E-07	2.877E-07	2.179E-07	1.726E-07	1.414E-07	1.186E-07
S-SW	2.419E-05	7.076E-06	3.465E-06	2.136E-06	1.116E-06	7.160E-07	5.113E-07	3.900E-07	3.110E-07	2.561E-07	2.161E-07
SW	5.922E-05	1.720E-05	8.323E-06	5.147E-06	2.719E-06	1.764E-06	1.272E-06	9.786E-07	7.864E-07	6.521E-07	5.536E-07
W-SW	7.748E-05	2.245E-05	1.081E-05	6.698E-06	3.554E-06	2.316E-06	1.677E-06	1.294E-06	1.043E-06	8.674E-07	7.381E-07
W	7.427E-05	2.154E-05	1.038E-05	6.431E-06	3.411E-06	2.221E-06	1.608E-06	1.241E-06	9.997E-07	8.309E-07	7.069E-07
W-NW	4.713E-05	1.369E-05	6.617E-06	4.094E-06	2.165E-06	1.406E-06	1.015E-06	7.816E-07	6.287E-07	5.216E-07	4.431E-07
NW	2.900E-05	8.460E-06	4.131E-06	2.547E-06	1.333E-06	8.575E-07	6.136E-07	4.689E-07	3.746E-07	3.089E-07	2.610E-07
N-NW	1.874E-05	5.479E-06	2.688E-06	1.655E-06	8.627E-07	5.522E-07	3.935E-07	2.996E-07	2.385E-07	1.961E-07	1.652E-07
N	1.719E-05	5.037E-06	2.479E-06	1.525E-06	7.921E-07	5.054E-07	3.592E-07	2.728E-07	2.167E-07	1.778E-07	1.495E-07
N-NE	1.125E-05	3.282E-06	1.615E-06	9.927E-07	5.150E-07	3.281E-07	2.328E-07	1.766E-07	1.401E-07	1.148E-07	9.645E-08
NE	7.284E-06	2.091E-06	1.021E-06	6.259E-07	3.233E-07	2.051E-07	1.450E-07	1.097E-07	8.678E-08	7.097E-08	5.951E-08
E-NE	8.972E-06	2.573E-06	1.254E-06	7.693E-07	3.985E-07	2.536E-07	1.798E-07	1.363E-07	1.081E-07	8.859E-08	7.442E-08
E	6.577E-06	1.868E-06	9.070E-07	5.554E-07	2.870E-07	1.822E-07	1.289E-07	9.753E-08	7.723E-08	6.320E-08	5.302E-08
E-SE	5.282E-06	1.504E-06	7.320E-07	4.473E-07	2.296E-07	1.449E-07	1.020E-07	7.683E-08	6.059E-08	4.940E-08	4.131E-08
SE	5.999E-06	1.721E-06	8.386E-07	5.144E-07	2.657E-07	1.686E-07	1.192E-07	9.015E-08	7.135E-08	5.836E-08	4.894E-08
S-SE	9.471E-06	2.707E-06	1.320E-06	8.080E-07	4.154E-07	2.624E-07	1.849E-07	1.394E-07	1.100E-07	8.970E-08	7.503E-08

ANNUAL AVERAGE CHI/Q (SEC/METER CUBED) DISTANCE IN MILES FROM THE SITE

SECTOR	5.000	7.500	10.000	15.000	20.000	25.000	30.000	35.000	40.000	45.000	50.000
S	1.015E-07	5.623E-08	3.720E-08	2.096E-08	1.405E-08	1.033E-08	8.046E-09	6.521E-09	5.441E-09	4.640E-09	4.027E-09
S-SW	1.858E-07	1.047E-07	7.014E-08	4.023E-08	2.727E-08	2.022E-08	1.587E-08	1.294E-08	1.085E-08	9.295E-09	8.097E-09
SW	4.787E-07	2.760E-07	1.881E-07	1.106E-07	7.626E-08	5.733E-08	4.549E-08	3.745E-08	3.166E-08	2.733E-08	2.396E-08
W-SW	6.396E-07	3.719E-07	2.550E-07	1.512E-07	1.049E-07	7.922E-08	6.309E-08	5.209E-08	4.417E-08	3.820E-08	3.357E-08
W	6.125E-07	3.558E-07	2.438E-07	1.444E-07	1.001E-07	7.555E-08	6.013E-08	4.964E-08	4.207E-08	3.638E-08	3.196E-08
W-NW	3.834E-07	2.215E-07	1.512E-07	8.909E-08	6.155E-08	4.633E-08	3.679E-08	3.031E-08	2.565E-08	2.215E-08	1.943E-08
NW	2.247E-07	1.273E-07	8.565E-08	4.942E-08	3.364E-08	2.503E-08	1.969E-08	1.610E-08	1.352E-08	1.161E-08	1.013E-08
N-NW	1.418E-07	7.952E-08	5.308E-08	3.027E-08	2.043E-08	1.510E-08	1.182E-08	9.611E-09	8.043E-09	6.876E-09	5.980E-09
N	1.282E-07	7.142E-08	4.745E-08	2.688E-08	1.806E-08	1.330E-08	1.037E-08	8.411E-09	7.021E-09	5.991E-09	5.200E-09
N-NE	8.261E-08	4.585E-08	3.037E-08	1.712E-08	1.146E-08	8.416E-09	6.548E-09	5.301E-09	4.417E-09	3.763E-09	3.261E-09
NE	5.089E-08	2.812E-08	1.857E-08	1.044E-08	6.982E-09	5.126E-09	3.988E-09	3.229E-09	2.692E-09	2.294E-09	1.989E-09
E-NE	6.375E-08	3.546E-08	2.354E-08	1.333E-08	8.968E-09	6.612E-09	5.164E-09	4.194E-09	3.506E-09	2.995E-09	2.603E-09
E	4.538E-08	2.514E-08	1.665E-08	9.404E-09	6.323E-09	4.661E-09	3.640E-09	2.957E-09	2.472E-09	2.112E-09	1.836E-09
E-SE	3.524E-08	1.929E-08	1.266E-08	7.060E-09	4.712E-09	3.452E-09	2.682E-09	2.169E-09	1.807E-09	1.538E-09	1.333E-09
SE	4.186E-08	2.314E-08	1.530E-08	8.616E-09	5.778E-09	4.251E-09	3.313E-09	2.687E-09	2.244E-09	1.915E-09	1.662E-09
S-SE	6.404E-08	3.510E-08	2.304E-08	1.286E-08	8.573E-09	6.277E-09	4.874E-09	3.940E-09	3.279E-09	2.791E-09	2.417E-09

TABLE 2.3-144 (Continued)

COMBINED VENT
NO DECAY, UNDEPLETED

CHI/Q (SEC/METER CUBED) FOR EACH SEGMENT
SEGMENT BOUNDARIES IN MILES FROM THE SITE

DIRECTION FROM SITE	.5-1	1-2	2-3	3-4	4-5	5-10	10-20	20-30	30-40	40-50
S	2.129E-06	6.676E-07	2.913E-07	1.736E-07	1.190E-07	5.784E-08	2.150E-08	1.041E-08	6.545E-09	4.650E-09
S-SW	3.677E-06	1.165E-06	5.174E-07	3.127E-07	2.167E-07	1.073E-07	4.112E-08	2.036E-08	1.298E-08	9.312E-09
SW	8.883E-06	2.834E-06	1.286E-06	7.902E-07	5.551E-07	2.820E-07	1.125E-07	5.764E-08	3.754E-08	2.736E-08
W-SW	1.157E-05	3.702E-06	1.694E-06	1.048E-06	7.400E-07	3.795E-07	1.537E-07	7.961E-08	5.221E-08	3.825E-08
W	1.111E-05	3.553E-06	1.624E-06	1.004E-06	7.087E-07	3.630E-07	1.468E-07	7.593E-08	4.975E-08	3.643E-08
W-NW	7.067E-06	2.256E-06	1.026E-06	6.316E-07	4.443E-07	2.263E-07	9.066E-08	4.657E-08	3.039E-08	2.218E-08
NW	4.389E-06	1.392E-06	6.208E-07	3.765E-07	2.617E-07	1.304E-07	5.046E-08	2.519E-08	1.614E-08	1.163E-08
N-NW	2.849E-06	9.009E-07	3.982E-07	2.398E-07	1.657E-07	8.162E-08	3.097E-08	1.521E-08	9.644E-09	6.890E-09
N	2.623E-06	8.275E-07	3.636E-07	2.179E-07	1.500E-07	7.338E-08	2.753E-08	1.339E-08	8.441E-09	6.003E-09
N-NE	1.709E-06	5.381E-07	2.357E-07	1.409E-07	9.677E-08	4.714E-08	1.755E-08	8.481E-09	5.320E-09	3.771E-09
NE	1.083E-06	3.380E-07	1.469E-07	8.730E-08	5.971E-08	2.893E-08	1.071E-08	5.166E-09	3.241E-09	2.299E-09
E-NE	1.332E-06	4.165E-07	1.821E-07	1.087E-07	7.467E-08	3.645E-08	1.366E-08	6.661E-09	4.209E-09	3.001E-09
E	9.644E-07	3.001E-07	1.306E-07	7.769E-08	5.321E-08	2.586E-08	9.644E-09	4.696E-09	2.968E-09	2.117E-09
E-SE	7.770E-07	2.404E-07	1.034E-07	6.097E-08	4.146E-08	1.989E-08	7.260E-09	3.480E-09	2.178E-09	1.542E-09
SE	8.906E-07	2.778E-07	1.207E-07	7.177E-08	4.911E-08	2.382E-08	8.839E-09	4.283E-09	2.697E-09	1.919E-09
S-SE	1.401E-06	4.347E-07	1.874E-07	1.106E-07	7.531E-08	3.617E-08	1.322E-08	6.328E-09	3.955E-09	2.797E-09

TABLE 2.3-145

ANNUAL AVERAGE RELATIVE CONCENTRATION, X/Q

COMBINED VENT
NO DECAY, DEPLETED
ANNUAL AVERAGE CHI/Q (SEC/METER CUBED) DISTANCE IN MILES FROM THE SITE

SECTOR	0.250	0.500	0.750	1.000	1.500	2.000	2.500	3.000	3.500	4.000	4.500
S	1.318E-05	3.731E-06	1.789E-06	1.080E-06	5.425E-07	3.363E-07	2.330E-07	1.731E-07	1.347E-07	1.085E-07	8.970E-08
S-SW	2.251E-05	6.436E-06	3.087E-06	1.870E-06	9.477E-07	5.929E-07	4.142E-07	3.098E-07	2.427E-07	1.966E-07	1.634E-07
SW	5.511E-05	1.564E-05	7.417E-06	4.505E-06	2.309E-06	1.460E-06	1.030E-06	7.773E-07	6.137E-07	5.006E-07	4.186E-07
W-SW	7.211E-05	2.042E-05	9.637E-06	5.863E-06	3.018E-06	1.917E-06	1.358E-06	1.028E-06	8.141E-07	6.658E-07	5.581E-07
W	6.912E-05	1.959E-05	9.254E-06	5.629E-06	2.897E-06	1.839E-06	1.302E-06	9.855E-07	7.801E-07	6.379E-07	5.345E-07
W-NW	4.386E-05	1.245E-05	5.897E-06	3.584E-06	1.839E-06	1.164E-06	8.222E-07	6.209E-07	4.905E-07	4.004E-07	3.350E-07
NW	2.699E-05	7.695E-06	3.681E-06	2.230E-06	1.132E-06	7.100E-07	4.971E-07	3.725E-07	2.923E-07	2.371E-07	1.973E-07
N-NW	1.744E-05	4.983E-06	2.396E-06	1.449E-06	7.327E-07	4.572E-07	3.187E-07	2.380E-07	1.861E-07	1.505E-07	1.249E-07
N	1.600E-05	4.581E-06	2.209E-06	1.335E-06	6.727E-07	4.185E-07	2.909E-07	2.167E-07	1.691E-07	1.365E-07	1.130E-07
N-NE	1.047E-05	2.985E-06	1.439E-06	8.690E-07	4.374E-07	2.717E-07	1.886E-07	1.403E-07	1.093E-07	8.814E-08	7.292E-08
NE	6.779E-06	1.902E-06	9.102E-07	5.479E-07	2.745E-07	1.698E-07	1.175E-07	8.711E-08	6.772E-08	5.448E-08	4.499E-08
E-NE	8.350E-06	2.341E-06	1.117E-06	6.734E-07	3.384E-07	2.100E-07	1.457E-07	1.083E-07	8.436E-08	6.801E-08	5.626E-08
E	6.121E-06	1.699E-06	8.083E-07	4.862E-07	2.437E-07	1.508E-07	1.044E-07	7.747E-08	6.026E-08	4.852E-08	4.009E-08
E-SE	4.916E-06	1.368E-06	6.523E-07	3.916E-07	1.950E-07	1.200E-07	8.263E-08	6.102E-08	4.728E-08	3.792E-08	3.123E-08
SE	5.583E-06	1.565E-06	7.473E-07	4.503E-07	2.256E-07	1.396E-07	9.656E-08	7.161E-08	5.568E-08	4.480E-08	3.700E-08
S-SE	8.814E-06	2.463E-06	1.177E-06	7.073E-07	3.528E-07	2.173E-07	1.498E-07	1.107E-07	8.580E-08	6.886E-08	5.673E-08

ANNUAL AVERAGE CHI/Q (SEC/METER CUBED) DISTANCE IN MILES FROM THE SITE

SECTOR	5.000	7.500	10.000	15.000	20.000	25.000	30.000	35.000	40.000	45.000	50.000
S	7.569E-08	3.964E-08	2.499E-08	1.304E-08	8.205E-09	5.715E-09	4.243E-09	3.293E-09	2.639E-09	2.167E-09	1.815E-09
S-SW	1.385E-07	7.379E-08	4.712E-08	2.502E-08	1.593E-08	1.119E-08	8.369E-09	6.533E-09	5.262E-09	4.341E-09	3.649E-09
SW	3.568E-07	1.946E-07	1.264E-07	6.875E-08	4.454E-08	3.173E-08	2.399E-08	1.891E-08	1.536E-08	1.276E-08	1.080E-08
W-SW	4.768E-07	2.622E-07	1.713E-07	9.400E-08	6.126E-08	4.384E-08	3.327E-08	2.630E-08	2.142E-08	1.784E-08	1.513E-08
W	4.565E-07	2.508E-07	1.638E-07	8.976E-08	5.845E-08	4.180E-08	3.172E-08	2.506E-08	2.040E-08	1.699E-08	1.440E-08
W-NW	2.858E-07	1.562E-07	1.016E-07	5.540E-08	3.595E-08	2.564E-08	1.941E-08	1.531E-08	1.244E-08	1.034E-08	8.757E-09
NW	1.675E-07	8.974E-08	5.754E-08	3.073E-08	1.965E-08	1.385E-08	1.039E-08	8.127E-09	6.559E-09	5.420E-09	4.564E-09
N-NW	1.057E-07	5.606E-08	3.566E-08	1.882E-08	1.193E-08	8.358E-09	6.232E-09	4.853E-09	3.900E-09	3.211E-09	2.695E-09
N	9.555E-08	5.035E-08	3.188E-08	1.671E-08	1.055E-08	7.357E-09	5.469E-09	4.247E-09	3.405E-09	2.798E-09	2.343E-09
N-NE	6.158E-08	3.232E-08	2.040E-08	1.065E-08	6.694E-09	4.657E-09	3.453E-09	2.676E-09	2.142E-09	1.757E-09	1.470E-09
NE	3.794E-08	1.982E-08	1.247E-08	6.489E-09	4.078E-09	2.836E-09	2.104E-09	1.631E-09	1.305E-09	1.071E-09	8.963E-10
E-NE	4.752E-08	2.500E-08	1.581E-08	8.289E-09	5.237E-09	3.659E-09	2.723E-09	2.118E-09	1.700E-09	1.399E-09	1.173E-09
E	3.383E-08	1.772E-08	1.118E-08	5.847E-09	3.693E-09	2.579E-09	1.920E-09	1.493E-09	1.199E-09	9.865E-10	8.274E-10
E-SE	2.627E-08	1.360E-08	8.503E-09	4.390E-09	2.752E-09	1.910E-09	1.415E-09	1.095E-09	8.761E-10	7.184E-10	6.007E-10
SE	3.121E-08	1.632E-08	1.028E-08	5.358E-09	3.375E-09	2.352E-09	1.748E-09	1.357E-09	1.088E-09	8.942E-10	7.492E-10
S-SE	4.774E-08	2.474E-08	1.548E-08	7.996E-09	5.007E-09	3.473E-09	2.571E-09	1.989E-09	1.590E-09	1.303E-09	1.089E-09

TABLE 2.3-145 (Continued)

COMBINED VENT
NO DECAY, DEPLETED

CHI/Q (SEC/METER CUBED) FOR EACH SEGMENT

DIRECTION FROM SITE	SEGMENT BOUNDARIES IN MILES FROM THE SITE .5-1	1-2	2-3	3-4	4-5	5-10	10-20	20-30	30-40	40-50
S	1.906E-06	5.703E-07	2.366E-07	1.357E-07	9.008E-08	4.114E-08	1.355E-08	5.791E-09	3.315E-09	2.176E-09
S-SW	3.290E-06	9.949E-07	4.201E-07	2.443E-07	1.640E-07	7.631E-08	2.589E-08	1.133E-08	6.573E-09	4.357E-09
SW	7.950E-06	2.420E-06	1.044E-06	6.173E-07	4.200E-07	2.003E-07	7.080E-08	3.205E-08	1.901E-08	1.280E-08
W-SW	1.036E-05	3.161E-06	1.375E-06	8.188E-07	5.599E-07	2.695E-07	9.664E-08	4.426E-08	2.643E-08	1.790E-08
W	9.940E-06	3.034E-06	1.319E-06	7.846E-07	5.363E-07	2.578E-07	9.229E-08	4.221E-08	2.519E-08	1.704E-08
W-NW	6.325E-06	1.927E-06	8.329E-07	4.935E-07	3.362E-07	1.607E-07	5.702E-08	2.589E-08	1.539E-08	1.038E-08
NW	3.928E-06	1.189E-06	5.040E-07	2.942E-07	1.981E-07	9.271E-08	3.176E-08	1.401E-08	8.175E-09	5.441E-09
N-NW	2.550E-06	7.695E-07	3.234E-07	1.874E-07	1.254E-07	5.803E-08	1.950E-08	8.461E-09	4.884E-09	3.224E-09
N	2.348E-06	7.069E-07	2.952E-07	1.703E-07	1.135E-07	5.219E-08	1.734E-08	7.452E-09	4.275E-09	2.809E-09
N-NE	1.529E-06	4.597E-07	1.914E-07	1.101E-07	7.323E-08	3.353E-08	1.106E-08	4.719E-09	2.695E-09	1.765E-09
NE	9.695E-07	2.887E-07	1.193E-07	6.822E-08	4.519E-08	2.058E-08	6.747E-09	2.874E-09	1.642E-09	1.076E-09
E-NE	1.192E-06	3.558E-07	1.479E-07	8.496E-08	5.651E-08	2.592E-08	8.605E-09	3.706E-09	2.132E-09	1.404E-09
E	8.631E-07	2.563E-07	1.060E-07	6.071E-08	4.027E-08	1.840E-08	6.076E-09	2.613E-09	1.503E-09	9.905E-10
E-SE	6.954E-07	2.054E-07	8.395E-08	4.764E-08	3.138E-08	1.415E-08	4.576E-09	1.936E-09	1.103E-09	7.215E-10
SE	7.971E-07	2.373E-07	9.805E-08	5.609E-08	3.717E-08	1.694E-08	5.569E-09	2.383E-09	1.366E-09	8.979E-10
S-SE	1.254E-06	3.714E-07	1.521E-07	8.646E-08	5.699E-08	2.574E-08	8.331E-09	3.521E-09	2.003E-09	1.309E-09

TABLE 2.3-146

ANNUAL AVERAGE RELATIVE DEPOSITION, D/Q

COMBINED VENT

********** RELATIVE DEPOSITION PER UNIT AREA (M**-2) AT FIXED POINTS BY DOWNWIND SECTORS **********

DIRECTION FROM SITE	DISTANCES IN MILES 0.25	0.50	0.75	1.00	1.50	2.00	2.50	3.00	3.50	4.00	4.50
S	4.242E-08	1.435E-08	7.366E-09	4.523E-09	2.255E-09	1.368E-09	9.247E-10	6.700E-10	5.095E-10	4.014E-10	3.249E-10
S-SW	4.441E-08	1.502E-08	7.710E-09	4.734E-09	2.360E-09	1.431E-09	9.678E-10	7.013E-10	5.333E-10	4.201E-10	3.401E-10
SW	6.138E-08	2.076E-08	1.066E-08	6.544E-09	3.262E-09	1.979E-09	1.338E-09	9.694E-10	7.371E-10	5.807E-10	4.701E-10
W-SW	4.797E-08	1.622E-08	8.329E-09	5.114E-09	2.550E-09	1.546E-09	1.046E-09	7.577E-10	5.761E-10	4.539E-10	3.674E-10
W	4.581E-08	1.549E-08	7.954E-09	4.884E-09	2.435E-09	1.477E-09	9.985E-10	7.235E-10	5.502E-10	4.334E-10	3.509E-10
W-NW	4.061E-08	1.373E-08	7.051E-09	4.330E-09	2.159E-09	1.309E-09	8.851E-10	6.414E-10	4.877E-10	3.842E-10	3.111E-10
NW	4.826E-08	1.632E-08	8.380E-09	5.146E-09	2.565E-09	1.556E-09	1.052E-09	7.623E-10	5.796E-10	4.566E-10	3.697E-10
N-NW	4.151E-08	1.404E-08	7.207E-09	4.425E-09	2.206E-09	1.338E-09	9.047E-10	6.556E-10	4.985E-10	3.927E-10	3.179E-10
N	4.367E-08	1.477E-08	7.582E-09	4.656E-09	2.321E-09	1.408E-09	9.518E-10	6.897E-10	5.245E-10	4.132E-10	3.345E-10
N-NE	3.062E-08	1.036E-08	5.317E-09	3.265E-09	1.628E-09	9.872E-10	6.674E-10	4.836E-10	3.678E-10	2.897E-10	2.346E-10
NE	2.321E-08	7.850E-09	4.030E-09	2.475E-09	1.234E-09	7.483E-10	5.059E-10	3.666E-10	2.788E-10	2.196E-10	1.778E-10
E-NE	2.361E-08	7.983E-09	4.099E-09	2.517E-09	1.255E-09	7.610E-10	5.145E-10	3.728E-10	2.835E-10	2.233E-10	1.808E-10
E	1.993E-08	6.741E-09	3.461E-09	2.125E-09	1.060E-09	6.426E-10	4.345E-10	3.148E-10	2.394E-10	1.886E-10	1.527E-10
E-SE	1.606E-08	5.432E-09	2.789E-09	1.713E-09	8.539E-10	5.179E-10	3.501E-10	2.537E-10	1.929E-10	1.520E-10	1.230E-10
SE	1.548E-08	5.233E-09	2.687E-09	1.650E-09	8.225E-10	4.989E-10	3.373E-10	2.444E-10	1.858E-10	1.464E-10	1.185E-10
S-SE	3.404E-08	1.151E-08	5.911E-09	3.629E-09	1.809E-09	1.097E-09	7.420E-10	5.377E-10	4.088E-10	3.221E-10	2.607E-10

DIRECTION FROM SITE	DISTANCES IN MILES 5.00	7.50	10.00	15.00	20.00	25.00	30.00	35.00	40.00	45.00	50.00
S	2.688E-10	1.317E-10	8.265E-11	4.178E-11	2.528E-11	1.695E-11	1.215E-11	9.121E-12	7.092E-12	5.665E-12	4.624E-12
S-SW	2.813E-10	1.379E-10	8.651E-11	4.373E-11	2.647E-11	1.774E-11	1.271E-11	9.547E-12	7.423E-12	5.930E-12	4.840E-12
SW	3.889E-10	1.906E-10	1.196E-10	6.044E-11	3.658E-11	2.453E-11	1.757E-11	1.320E-11	1.026E-11	8.196E-12	6.690E-12
W-SW	3.039E-10	1.489E-10	9.346E-11	4.724E-11	2.859E-11	1.917E-11	1.374E-11	1.031E-11	8.020E-12	6.406E-12	5.229E-12
W	2.903E-10	1.422E-10	8.925E-11	4.511E-11	2.730E-11	1.831E-11	1.312E-11	9.850E-12	7.658E-12	6.118E-12	4.993E-12
W-NW	2.573E-10	1.261E-10	7.912E-11	3.999E-11	2.420E-11	1.623E-11	1.163E-11	8.732E-12	6.789E-12	5.423E-12	4.427E-12
NW	3.058E-10	1.499E-10	9.402E-11	4.752E-11	2.876E-11	1.929E-11	1.382E-11	1.038E-11	8.068E-12	6.445E-12	5.260E-12
N-NW	2.630E-10	1.289E-10	8.087E-11	4.087E-11	2.474E-11	1.659E-11	1.189E-11	8.925E-12	6.939E-12	5.543E-12	4.524E-12
N	2.767E-10	1.356E-10	8.508E-11	4.300E-11	2.603E-11	1.745E-11	1.250E-11	9.389E-12	7.301E-12	5.832E-12	4.760E-12
N-NE	1.940E-10	9.508E-11	5.966E-11	3.015E-11	1.825E-11	1.224E-11	8.768E-12	6.584E-12	5.119E-12	4.089E-12	3.338E-12
NE	1.471E-10	7.207E-11	4.522E-11	2.286E-11	1.383E-11	9.276E-12	6.646E-12	4.991E-12	3.880E-12	3.100E-12	2.530E-12
E-NE	1.496E-10	7.330E-11	4.599E-11	2.325E-11	1.407E-11	9.433E-12	6.759E-12	5.076E-12	3.946E-12	3.152E-12	2.573E-12
E	1.263E-10	6.189E-11	3.883E-11	1.963E-11	1.188E-11	7.965E-12	5.708E-12	4.286E-12	3.332E-12	2.662E-12	2.173E-12
E-SE	1.018E-10	4.988E-11	3.130E-11	1.582E-11	9.574E-12	6.419E-12	4.600E-12	3.454E-12	2.686E-12	2.145E-12	1.751E-12
SE	9.805E-11	4.805E-11	3.015E-11	1.524E-11	9.223E-12	6.184E-12	4.431E-12	3.327E-12	2.587E-12	2.067E-12	1.687E-12
S-SE	2.157E-10	1.057E-10	6.632E-11	3.352E-11	2.029E-11	1.360E-11	9.747E-12	7.319E-12	5.691E-12	4.546E-12	3.711E-12

TABLE 2.3-146 (Continued)

COMBINED VENT

********** RELATIVE DEPOSITION PER UNIT AREA (M**-2) BY DOWNWIND SECTORS **********

SEGMENT BOUNDARIES IN MILES

DIRECTION FROM SITE	.5-1	1-2	2-3	3-4	4-5	5-10	10-20	20-30	30-40	40-50
S	7.654E-09	2.365E-09	9.409E-10	5.142E-10	3.268E-10	1.404E-10	4.353E-11	1.725E-11	9.213E-12	5.702E-12
S-SW	8.011E-09	2.475E-09	9.849E-10	5.382E-10	3.421E-10	1.469E-10	4.556E-11	1.806E-11	9.643E-12	5.969E-12
SW	1.107E-08	3.421E-09	1.361E-09	7.439E-10	4.728E-10	2.031E-10	6.298E-11	2.496E-11	1.333E-11	8.250E-12
W-SW	8.654E-09	2.674E-09	1.064E-09	5.814E-10	3.695E-10	1.587E-10	4.922E-11	1.951E-11	1.042E-11	6.448E-12
W	8.265E-09	2.553E-09	1.016E-09	5.552E-10	3.529E-10	1.516E-10	4.701E-11	1.863E-11	9.949E-12	6.158E-12
W-NW	7.327E-09	2.264E-09	9.007E-10	4.922E-10	3.128E-10	1.344E-10	4.167E-11	1.652E-11	8.819E-12	5.459E-12
NW	8.707E-09	2.690E-09	1.070E-09	5.849E-10	3.718E-10	1.597E-10	4.952E-11	1.963E-11	1.048E-11	6.487E-12
N-NW	7.488E-09	2.314E-09	9.206E-10	5.031E-10	3.197E-10	1.373E-10	4.259E-11	1.688E-11	9.014E-12	5.579E-12
N	7.878E-09	2.434E-09	9.686E-10	5.293E-10	3.364E-10	1.445E-10	4.481E-11	1.776E-11	9.484E-12	5.870E-12
N-NE	5.525E-09	1.707E-09	6.792E-10	3.711E-10	2.359E-10	1.013E-10	3.142E-11	1.245E-11	6.650E-12	4.116E-12
NE	4.188E-09	1.294E-09	5.148E-10	2.813E-10	1.788E-10	7.681E-11	2.382E-11	9.440E-12	5.041E-12	3.120E-12
E-NE	4.259E-09	1.316E-09	5.236E-10	2.861E-10	1.818E-10	7.811E-11	2.422E-11	9.600E-12	5.126E-12	3.173E-12
E	3.596E-09	1.111E-09	4.421E-10	2.416E-10	1.536E-10	6.596E-11	2.045E-11	8.106E-12	4.329E-12	2.679E-12
E-SE	2.898E-09	8.954E-10	3.563E-10	1.947E-10	1.237E-10	5.315E-11	1.648E-11	6.533E-12	3.489E-12	2.159E-12
SE	2.792E-09	8.625E-10	3.432E-10	1.876E-10	1.192E-10	5.120E-11	1.588E-11	6.293E-12	3.361E-12	2.080E-12
S-SE	6.142E-09	1.897E-09	7.550E-10	4.126E-10	2.622E-10	1.126E-10	3.493E-11	1.384E-11	7.393E-12	4.576E-12