Progress Energy

Serial: NPD-NRC-2009-153
July 22, 2009

10 CFR 52.79

U.S. Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, D.C. 20555-0001

LEVY NUCLEAR PLANT, UNITS 1 AND 2
DOCKET NOS. 52-029 AND 52-030
SUPPLEMENTAL RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION LETTER NO. 017 RELATED TO ONSITE METEORLOGICAL MEASUREMENTS PROGRAMS

Reference:
1. Letter from Brian C. Anderson (NRC) to Garry Miller (PEF), dated May 19, 2009, "Request for Additional Information Letter No. 017 Related to SRP Section 2.3.3 for the Levy Nuclear Plant Units 1 and 2 Combined License Application"
2. Letter from Garry D. Miller (PEF) to U.S. Nuclear Regulatory Commission, dated April 6, 2009, "Response to Request for Additional Information Letter No. 035 Related to Surface Faulting," Serial: NPD-NRC-2009-058

Ladies and Gentlemen:

Progress Energy Florida, Inc. (PEF) hereby submits our response to the Nuclear Regulatory Commission's (NRC) request for additional information provided in the referenced letter.

A supplemental response to the NRC request is addressed in the enclosure. The enclosure also identifies changes that will be made in a future revision of the Levy Nuclear Plant Units 1 and 2 application.

If you have any further questions, or need additional information, please contact Bob Kitchen at (919) 546-6992, or me at (919) 546-6107.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on July 22, 2009.

Sincerely,

Garry D. Miller
General Manager
Nuclear Plant Development

Enclosure

cc: U.S. NRC Region II, Regional Administrator
Mr. Brian Anderson, U.S. NRC Project Manager

Progress Energy Carolinas, Inc.
P.O. Box 1551
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NRO

Levy Nuclear Plant Units 1 and 2
Response to NRC Request for Additional Information Letter No. 017 Related to SRP Section 2.3.3 for the Combined License Application, dated May 19, 2009

NRC RAI #	Progress Energy RAI #	Progress Energy Response
02.03.03-01	L-0031	NPD-NRC-2009-058
02.03.03-02	L-0032	NPD-NRC-2009-058
02.03.03-03	L-0033	NPD-NRC-2009-058
02.03.03-04	L-0034	NPD-NRC-2009-058
02.03.03-04	L-0189	Supplemental Response enclosed – see following pages

NRC Letter No.: LNP-RAI-LTR-017

NRC Letter Date: May 19, 2009

NRC Review of Final Safety Analysis Report

NRC RAI NUMBER: 02.03.03-04

Text of NRC RAI:

Submit an electronic copy of the complete 2-year onsite hourly meteorological database. Also submit an appendix to the FSAR containing the following derived from the second year of onsite hourly meteorological data:

(1) joint frequency distributions of wind speed, wind direction, and atmospheric stability for both the lower and upper levels

(2) atmospheric dispersion and deposition factors presented in FSAR Sections 2.3.4 and 2.3.5.

This appendix should also demonstrate how representative the first year of data is of long-term conditions at the site. If the appendix cannot show that the two years of meteorological data are compatible (e.g., there are substantial differences in atmospheric dispersion and deposition factors between the two years of data) and the first year of data is shown to be non-conservative, revise the atmospheric dispersion and deposition factors presented in FSAR Sections 2.3.4 and 2.3.5 using the second year of meteorological data.

PGN RAI ID #: L-0189

PGN Response to NRC RAI:

PEF submitted the first year of meteorological data collected at the LNP site (February 1, 2007 – January 31, 2008) on July 28, 2008 (Letter Serial No. NPD-NRC-2008-021). The second year of meteorological data collected at the LNP site (February 1, 2008 – January 31, 2009) was submitted to the NRC on March 17, 2009 (Letter Serial No. NPD-NRC-2009-036).

This supplemental RAI response provides the additional requested information including:

1. Joint frequency distributions of wind speed, wind direction, and atmospheric stability for both the upper and lower levels for the combined 2-year onsite hourly meteorological database.
2. Atmospheric dispersion and deposition factors presented in FSAR Sections 2.3.4 and 2.3.5 using the combined 2-year onsite hourly meteorological database.

A comparison of the joint frequency distributions for year 1 and year 2 found similar frequency distributions of wind speeds between the lower and upper levels for each period. Temporal variations within the individual stability categories are relatively small. Almost 50 percent of all hours fall into either neutral (D) or slightly stable (E) stability categories for both years of data.

Atmospheric and deposition factors for the LNP Site calculated using the 2-year onsite hourly meteorological database are generally higher that when using the 1-year database. For

example, the 0- to 2-hour 50-percent values at the EAB and LPZ without building wake increased when using the 2-year data from 3.72E-05 seconds per cubic meter (sec/m^3) to 7.81E-05 sec/m^3 and 7.61E-06 sec/m^3 to 1.96E-05 sec/m^3, respectively. In addition, the established site characteristic value for the maximum average annual dispersion factor at the EAB decreased when from a value of 2.0E-05 sec/m^3 to 1.9E-05 sec/m^3, as a result of the 2-year combined data.

The joint frequency distributions and atmospheric dispersion and deposition factors presented in FSAR Sections 2.3.4 and 2.3.5 will be revised in a future amendment to reflect the use of the 2-year database.

References:

None

Associated LNP COL Application Revisions:

The following revisions will be made to a future version of FSAR Subsection 2.3.2 "Local Meteorology."

The second paragraph of the introduction to FSAR Rev. 0 Subsection 2.3.2, will be revised from:

> The POR of on-site meteorological measurements is the 1-year period from February 1, 2007, to January 31, 2008.

to:

> The POR of on-site meteorological measurements is the 2-year period from February 1, 2007, to January 31, 2009.

The last sentence of the first paragraph of FSAR Rev. 0 Subsection 2.3.2.1.7 "Atmospheric Stability," will be revised from:

> As previously noted, joint frequency distributions of wind speed, wind direction, and atmospheric stability measured at the LNP site for the period from February 1, 2007, to January 31, 2008, are provided in a series of 40 tables, beginning with Table 2.3.2-201 and ending with Table 2.3.2-240.

to:

> As previously noted, joint frequency distributions of wind speed, wind direction, and atmospheric stability measured at the LNP site for the period from February 1, 2007, to January 31, 2009, are provided in a series of 40 tables, beginning with Table 2.3.2-201 and ending with Table 2.3.2-240.

The first sentence of the second paragraph of FSAR Rev. 0 Subsection 2.3.2.1.7 "Atmospheric Stability," will be revised from:

> Based on the 1 year of meteorological data collected on the LNP site, temporal variations within the individual stability categories are relatively small. Almost 50 percent of all hours fall into either neutral (D) or slightly stable (E) stability categories.

to:

> Based on the two years of meteorological data collected on the LNP site, temporal variations within the individual stability categories are relatively small. Almost 50 percent of all hours fall into either neutral (D) or slightly stable (E) stability categories.

The following revisions will be made to a future version of FSAR Section 2.3.3 "On-Site Meteorological Measurements Program":

The first sentence of the second paragraph of the introduction to FSAR Rev. 0 Subsection 2.3.3 will be revised from:

> One year of continuous and consecutive meteorological data from the on-site tower for the period from February 1, 2007, through January 31, 2008, are submitted with this COLA in the electronic format recommended in Appendix A of Regulatory Guide 1.23, Revision 1.

to:

> Two years of continuous and consecutive meteorological data from the on-site tower for the period from February 1, 2007, through January 31, 2009, are submitted with this COLA in the electronic format recommended in Appendix A of Regulatory Guide 1.23, Revision 1.

The following revisions will be made to a future version of FSAR Section 2.3.4 "Short-Term Diffusion Estimates":

The first sentence of FSAR Rev. 0 Subsection 2.3.4.1, "Objective" will be revised from:

> Conservative estimates of the local atmospheric dilution factors (Chi/Q) for LNP 1 and LNP 2 were made using an atmospheric dispersion model and on-site meteorological data for the period from February 1, 2007, through January 31, 2008.

to:

> Conservative estimates of the local atmospheric dilution factors (Chi/Q) for LNP 1 and LNP 2 were made using an atmospheric dispersion model and on-site meteorological data for the period from February 1, 2007, through January 31, 2009.

The first sentence of FSAR Rev. 0 Subsection 2.3.4.2, "Chi/Q Estimates Using the PAVAN Computer Code and On Site Data" will be revised from:

The PAVAN computer code was used to calculate short-term accident Chi/Q values for the LNP 1 and LNP 2 EAB and minimum calculated low population zone (LPZ) distances of 1340 m (4396 ft.) and 4830 m (3 mi.), respectively.

to:

The PAVAN computer code was used to calculate short-term accident Chi/Q values for the LNP 1 and LNP 2 EAB and low population zone (LPZ) distances of 1340 m (4396 ft.) and 4830 m (3 mi.), respectively.

The first bullet of the second paragraph in FSAR Rev. 0 Subsection 2.3.4.2, "Chi/Q Estimates Using the PAVAN Computer Code and On Site Data" will be revised from:

- Meteorological Data: Joint frequency distribution of wind speed, wind direction, and atmospheric stability for 16 standard azimuthal sectors. Period of record February 1, 2007, to January 31, 2008 (Table 2.3.4-202).

to:

- Meteorological Data: Joint frequency distribution of wind speed, wind direction, and atmospheric stability for 16 standard azimuthal sectors. Period of record February 1, 2007, to January 31, 2009 (Table 2.3.4-202).

The second paragraph of FSAR Rev. 0 Subsection 2.3.4.3, "Chi/Q Estimates for Short Term Diffusion Calculations" will be revised from:

The 50-percent EAB and LPZ Chi/Q values were determined from the PAVAN output and by logarithmic interpolation. The conservative reported 0- to 2-hour 50-percent values at the EAB and LPZ without building wake are 3.72E-05 seconds per cubic meter (sec/m^3) and 7.61E-06 sec/m^3, respectively. The remaining values for the longer time periods for the LPZ are determined using the 0- to 2-hour 50-percent LPZ value and the LPZ average annual value of 1.52E-06 sec/m^3 from the PAVAN output by logarithmic interpolation at the intermediate time periods of 8 hours, 16 hours, 72 hours, and 624 hours. The values are shown in Table 2.3.4-205.

to:

The 50-percent EAB and LPZ Chi/Q values were determined from the PAVAN output and by logarithmic interpolation. The conservative reported 0- to 2-hour 50-percent values at the EAB and LPZ without building wake are 7.81E-05 seconds per cubic meter (sec/m^3) and 1.96E-05 sec/m^3, respectively. The remaining values for the longer time periods for the LPZ are determined using the 0- to 2-hour 50-percent LPZ value and the LPZ average annual value of 4.79E-07 sec/m^3 from the PAVAN output by logarithmic interpolation at the intermediate time periods of 8 hours, 16 hours, 72 hours, and 624 hours. The values are shown in Table 2.3.4-205.

The second sentence of FSAR Rev. 0 Subsection 2.3.4.4, "Control Room Diffusion Estimates" will be revised from:

> The meteorological data consists of hourly data, covering the period from February 1, 2007, through January 31, 2008.

to:

> The meteorological data consists of hourly data, covering the period from February 1, 2007, through January 31, 2009.

The following revisions will be made to a future version of FSAR Section 2.3.5.

The second bullet of the second paragraph in FSAR Rev. 0 Subsection 2.3.5.2, "Calculations" will be revised from:

- Period of Record – February 1, 2007, to September 14, 2007.

to:

- Period of Record – February 1, 2007, to January 31, 2009.

The fifth paragraph of FSAR Rev. 0 Subsection 2.3.5.2, "Calculations" will be revised from:

> Based on these analyses, the established site characteristic value for the maximum average annual dispersion factor at the EAB is a value of 2.0E-05 sec/m^3 for any given sector (based on west-southwest sector; refer to Table 2.3.5-201).

to:

> Based on these analyses, the established site characteristic value for the maximum average annual dispersion factor at the EAB is a value of 1.9E-05 sec/m^3 for any given sector (based on west-southwest sector; refer to Table 2.3.5-201).

The following table revisions will be made to a future version of the FSAR:

1. Joint Frequency Distributions: FSAR Tables 2.3.2-201 to FSAR Table 2.3.2-240 will be replaced in their entirety with the FSAR tables provided in this RAI response. The necessary revisions will also be made to the Table titles in the document's "List of Tables."

2. FSAR Tables 2.3.4-201 to FSAR Table 2.3.4-207 will be replaced in their entirety with the FSAR tables provided in this RAI response. The necessary revisions will also be made to the Table titles in the document's "List of Tables."

3. FSAR Tables 2.3.5-201 to FSAR Table 2.3.5-204 will be replaced in their entirety with the FSAR tables provided in this RAI response. The necessary revisions will also be made to the Table titles in the document's "List of Tables."

LNP COL 2.3-2

Table 2.3.2-201
Joint Frequency Distribution of Wind Speed, Wind Direction, and Atmospheric Stability (Hours of Occurrence)
Period of Record: February 1, 2007, to January 31, 2009
Lower Wind Level, Category A

Speed (m/s)	Wind Direction (Blowing From) [a]																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
<0.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.5-1.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1.1-1.5	0	1	0	2	1	0	1	1	0	1	0	3	2	4	1	0	17
1.6-2.0	4	2	2	4	4	0	3	2	3	1	1	5	2	5	6	0	44
2.1-3.0	8	22	16	15	18	9	3	4	2	5	20	21	30	12	11	17	213
3.1-4.0	8	11	30	34	28	11	3	8	7	6	43	106	98	11	13	19	436
4.1-5.0	3	9	11	35	42	13	0	1	3	18	38	77	53	4	6	14	327
5.1-6.0	0	0	7	18	19	1	0	0	3	6	11	19	32	2	0	0	118
6.1-8.0	0	0	0	4	6	0	0	0	0	1	1	1	10	2	0	0	25
8.1-10.0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	3
>10.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	23	45	66	112	118	34	10	16	18	38	114	232	230	40	37	50	1183

Notes:

Data represent the number of hours a condition occurred.

Number of Calm Hours: 0

a) Wind direction: E = east; N = north; S = south; W = west

m/s = meters per second

LNP COL 2.3-2

Table 2.3.2-202
Joint Frequency Distribution of Wind Speed, Wind Direction, and Atmospheric Stability (Hours of Occurrence)
Period of Record: February 1, 2007, to January 31, 2009
Lower Wind Level, Category B

Speed (m/s)	Wind Direction (Blowing From) [a]																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
<0.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.5-1.0	0	0	2	0	1	0	0	0	0	0	0	1	0	0	0	0	4
1.1-1.5	4	4	5	5	2	0	1	2	4	1	0	2	3	1	3	4	41
1.6-2.0	3	11	9	12	8	4	2	8	5	2	3	5	5	6	5	8	96
2.1-3.0	20	21	41	25	34	16	16	16	2	9	33	39	54	15	24	23	388
3.1-4.0	18	21	34	49	59	34	14	6	7	7	34	70	72	5	9	12	451
4.1-5.0	6	8	23	25	29	6	2	0	1	10	8	19	32	4	1	5	179
5.1-6.0	0	1	10	11	4	3	0	0	2	6	2	3	4	0	0	0	46
6.1-8.0	0	0	0	2	0	1	0	0	0	5	0	0	4	2	0	0	14
8.1-10.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
>10.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	51	66	124	129	137	64	35	32	21	40	80	139	174	33	42	52	1219

Notes:

Data represent the number of hours a condition occurred.

Number of Calm Hours: 0

a) Wind direction: E = east; N = north; S = south; W = west

m/s = meters per second

LNP COL 2.3-2

Table 2.3.2-203
Joint Frequency Distribution of Wind Speed, Wind Direction, and Atmospheric Stability (Hours of Occurrence)
Period of Record: February 1, 2007, to January 31, 2009
Lower Wind Level, Category C

Speed (m/s)	Wind Direction (Blowing From) [a]																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
<0.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.5-1.0	3	1	0	0	0	0	1	1	0	0	0	1	1	2	3	2	15
1.1-1.5	7	7	6	7	11	3	4	4	6	10	4	6	8	7	7	7	104
1.6-2.0	9	22	10	14	18	15	12	8	10	9	11	14	12	11	6	16	197
2.1-3.0	30	37	39	53	55	24	23	14	18	16	37	53	77	22	13	22	533
3.1-4.0	8	14	43	52	49	24	11	13	10	13	19	53	74	3	3	9	398
4.1-5.0	2	8	21	27	29	11	3	2	2	8	11	14	18	1	0	4	161
5.1-6.0	0	2	6	7	6	1	0	0	3	10	4	0	3	0	0	1	43
6.1-8.0	0	0	0	2	1	0	0	0	0	3	0	1	1	0	0	0	8
8.1-10.0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2
>10.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	59	91	125	162	169	78	54	42	49	69	86	142	196	46	32	61	1461

Notes:

Data represent the number of hours a condition occurred.

Number of Calm Hours: 1

a) Wind direction: E = east; N = north; S = south; W = west

m/s = meters per second

LNP COL 2.3-2

Table 2.3.2-204
Joint Frequency Distribution of Wind Speed, Wind Direction, and Atmospheric Stability (Hours of Occurrence)
Period of Record: February 1, 2007, to January 31, 2009
Lower Wind Level, Category D

Speed (m/s)	Wind Direction (Blowing From) [a]																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
<0.5	0	1	0	0	3	1	0	1	2	1	3	0	1	1	2	1	17
0.5-1.0	23	10	18	16	22	14	13	12	15	17	15	17	10	9	12	8	231
1.1-1.5	40	36	39	26	24	22	31	25	30	20	37	37	27	26	34	27	481
1.6-2.0	50	54	80	60	73	31	31	21	17	28	42	52	61	35	34	35	704
2.1-3.0	102	112	197	196	142	94	51	32	48	59	73	147	198	44	32	54	1581
3.1-4.0	42	73	127	118	113	46	40	18	22	68	39	95	83	11	24	25	944
4.1-5.0	19	30	50	69	52	25	10	8	27	48	27	29	24	12	8	7	445
5.1-6.0	0	1	13	20	22	9	1	1	12	27	12	11	18	2	0	3	152
6.1-8.0	0	0	1	0	4	1	0	0	4	11	8	9	10	1	0	0	49
8.1-10.0	0	0	0	0	0	0	0	0	0	1	1	0	4	0	0	0	6
>10.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	276	317	525	505	455	243	177	118	177	280	257	397	436	141	146	160	4610

Notes:

Data represent the number of hours a condition occurred.

Number of Calm Hours: 49

a) Wind direction: E = east; N = north; S = south; W = west

m/s = meters per second

LNP COL 2.3-2

Table 2.3.2-205
Joint Frequency Distribution of Wind Speed, Wind Direction, and Atmospheric Stability (Hours of Occurrence)
Period of Record: February 1, 2007, to January 31, 2009
Lower Wind Level, Category E

Speed (m/s)	Wind Direction (Blowing From) [a]																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
<0.5	6	5	5	4	3	2	4	4	4	3	3	2	3	3	5	2	58
0.5-1.0	21	60	72	72	62	42	56	53	28	25	34	37	35	52	39	17	705
1.1-1.5	34	82	133	147	133	83	53	35	38	26	47	49	39	32	21	27	979
1.6-2.0	40	51	127	134	126	58	46	14	38	19	19	31	32	15	28	30	808
2.1-3.0	61	82	101	123	131	62	42	17	30	34	9	22	26	12	35	30	817
3.1-4.0	8	15	11	17	23	10	3	1	17	6	3	12	7	2	4	8	147
4.1-5.0	1	0	3	5	1	3	1	2	6	1	0	3	1	5	1	2	35
5.1-6.0	0	0	0	0	0	0	0	0	1	0	0	2	0	0	0	0	3
6.1-8.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8.1-10.0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
>10.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	171	295	452	502	479	260	205	126	162	115	115	158	143	121	133	116	3553

Notes:

Data represent the number of hours a condition occurred.

Number of Calm Hours: 227

a) Wind direction: E = east; N = north; S = south; W = west

m/s = meters per second

LNP COL 2.3-2

Table 2.3.2-206
Joint Frequency Distribution of Wind Speed, Wind Direction, and Atmospheric Stability (Hours of Occurrence)
Period of Record: February 1, 2007, to January 31, 2009
Lower Wind Level, Category F

Speed (m/s)	Wind Direction (Blowing From) [a]																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
<0.5	5	8	6	18	8	7	8	7	8	8	3	1	4	7	7	1	106
0.5-1.0	21	34	74	109	100	40	32	28	16	16	22	14	25	29	20	19	599
1.1-1.5	29	26	39	119	103	43	12	10	8	7	11	9	6	5	13	18	458
1.6-2.0	15	10	5	31	44	14	3	2	2	0	1	2	2	1	2	10	144
2.1-3.0	1	2	0	0	7	1	0	0	1	2	3	1	3	0	1	0	22
3.1-4.0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	1	0	3
4.1-5.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5.1-6.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6.1-8.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8.1-10.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
>10.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	71	80	124	277	262	105	55	47	35	33	41	27	41	42	44	48	1332

Notes:

Data represent the number of hours a condition occurred.

Number of Calm Hours: 643

a) Wind direction: E = east; N = north; S = south; W = west

m/s = meters per second

LNP COL 2.3-2

Table 2.3.2-207
Joint Frequency Distribution of Wind Speed, Wind Direction, and Atmospheric Stability (Hours of Occurrence)
Period of Record: February 1, 2007, to January 31, 2009
Lower Wind Level, Category G

Speed (m/s)	Wind Direction (Blowing From) [a]																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
<0.5	5	1	16	36	34	6	7	7	6	0	3	1	3	5	6	2	138
0.5-1.0	19	15	32	107	97	49	22	14	11	9	2	4	5	8	27	16	437
1.1-1.5	8	2	7	42	32	10	2	3	2	1	1	1	3	2	3	8	127
1.6-2.0	3	0	0	5	3	2	0	0	0	1	0	0	0	0	1	1	16
2.1-3.0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	2
3.1-4.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4.1-5.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5.1-6.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6.1-8.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8.1-10.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
>10.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	35	18	55	190	166	69	31	24	19	11	6	6	11	15	37	27	720

Notes:

Data represent the number of hours a condition occurred.

Number of Calm Hours: 2303

a) Wind direction: E = east; N = north; S = south; W = west

m/s = meters per second

LNP COL 2.3-2

Table 2.3.2-208
Joint Frequency Distribution of Wind Speed, Wind Direction, and Atmospheric Stability (Hours of Occurrence)
Period of Record: February 1, 2007, to January 31, 2009
Lower Wind Level, All Categories

Speed (m/s)	Wind Direction (Blowing From) [a]																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
<0.5	16	15	27	58	48	16	19	19	20	12	12	4	11	16	20	6	319
0.5-1.0	87	120	198	304	282	145	124	108	70	67	73	74	76	100	101	62	1991
1.1-1.5	122	158	229	348	306	161	104	80	88	66	100	107	88	77	82	91	2207
1.6-2.0	124	150	233	260	276	124	97	55	75	60	77	109	114	73	82	100	2009
2.1-3.0	222	276	394	412	387	208	135	83	101	125	175	283	388	105	116	146	3556
3.1-4.0	84	134	245	270	272	125	71	46	63	100	139	336	335	32	54	73	2379
4.1-5.0	31	55	108	161	153	58	16	13	39	85	84	142	128	26	16	32	1147
5.1-6.0	0	4	36	56	51	14	1	1	21	49	29	35	57	4	0	4	362
6.1-8.0	0	0	1	8	11	2	0	0	4	20	9	11	25	5	0	0	96
8.1-10.0	0	0	0	0	0	0	0	0	0	2	1	0	9	0	0	0	12
>10.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	686	912	1471	1877	1786	853	567	405	481	586	699	1101	1231	438	471	514	14078

Notes:

Data represent the number of hours a condition occurred.

Number of Calm Hours: 3223

a) Wind direction: E = east; N = north; S = south; W = west

m/s = meters per second

LNP COL 2.3-2

Table 2.3.2-209
Joint Frequency Distribution of Wind Speed, Wind Direction, and Atmospheric Stability (Hours of Occurrence)
Period of Record: February (2007 and 2008 Combined Hours of Occurrence)
Lower Wind Level, All Categories

Speed (m/s)	Wind Direction (Blowing From) [a]																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
<0.5	2	0	2	6	0	2	1	0	0	0	1	1	2	1	5	2	25
0.5-1.0	8	6	8	21	14	9	8	6	6	0	10	6	6	19	15	8	150
1.1-1.5	12	14	10	22	24	12	1	4	7	4	12	6	6	16	7	7	164
1.6-2.0	11	7	8	12	29	8	9	2	2	4	11	10	10	7	10	9	149
2.1-3.0	23	13	18	16	32	17	13	10	5	16	18	16	35	16	13	16	277
3.1-4.0	4	5	15	3	12	9	6	7	9	27	21	34	27	5	13	5	202
4.1-5.0	0	1	5	2	6	6	1	2	7	14	6	8	16	6	5	2	87
5.1-6.0	0	0	0	0	0	0	0	0	5	12	6	5	17	0	0	0	45
6.1-8.0	0	0	0	0	0	0	0	0	0	5	2	0	3	0	0	0	10
8.1-10.0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
>10.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	60	46	66	82	117	63	39	31	41	83	87	86	122	70	68	49	1110

Notes:

Data represent the number of hours a condition occurred.

Number of Calm Hours: 256

a) Wind direction: E = east; N = north; S = south; W = west
m/s = meters per second

LNP COL 2.3-2

Table 2.3.2-210
Joint Frequency Distribution of Wind Speed, Wind Direction, and Atmospheric Stability (Hours of Occurrence)
Period of Record: March (2007 and 2008 Combined Hours of Occurrence)
Lower Wind Level, All Categories

Speed (m/s)	Wind Direction (Blowing From) [a]																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
<0.5	2	1	2	6	7	0	0	0	0	0	1	0	2	0	1	2	24
0.5-1.0	10	3	20	32	26	12	7	2	3	6	2	3	6	11	8	7	158
1.1-1.5	5	10	16	31	44	13	6	0	3	2	2	3	5	6	5	6	157
1.6-2.0	9	10	13	43	33	16	11	5	2	4	0	4	14	9	4	3	180
2.1-3.0	22	10	19	41	57	24	21	5	16	10	4	14	26	8	7	11	295
3.1-4.0	3	7	27	42	40	16	11	8	2	8	3	16	37	4	3	6	233
4.1-5.0	8	5	11	19	28	17	6	3	8	8	7	8	11	1	0	5	145
5.1-6.0	0	0	4	1	9	3	0	1	9	13	3	0	9	0	0	1	53
6.1-8.0	0	0	0	0	3	0	0	0	1	12	0	0	5	1	0	0	22
8.1-10.0	0	0	0	0	0	0	0	0	0	0	0	0	6	0	0	0	6
>10.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	59	46	112	215	247	101	62	24	44	63	22	48	121	40	28	41	1273

Notes:

Data represent the number of hours a condition occurred.

Number of Calm Hours: 190

a) Wind direction: E = east; N = north; S = south; W = west

m/s = meters per second

LNP COL 2.3-2

Table 2.3.2-211
Joint Frequency Distribution of Wind Speed, Wind Direction, and Atmospheric Stability (Hours of Occurrence)
Period of Record: April (2007 and 2008 Combined Hours of Occurrence)
Lower Wind Level, All Categories

Speed (m/s)	Wind Direction (Blowing From) [a]																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
<0.5	1	0	1	3	2	1	2	3	0	3	0	1	0	3	3	0	23
0.5-1.0	5	14	12	17	33	10	7	7	4	2	2	4	7	15	14	4	157
1.1-1.5	13	9	12	10	11	15	11	4	4	1	4	9	12	9	6	10	140
1.6-2.0	16	6	16	12	11	9	17	6	8	2	3	9	8	3	11	12	149
2.1-3.0	20	10	37	36	39	10	15	14	11	11	12	16	28	15	20	11	305
3.1-4.0	2	8	26	33	27	8	3	5	12	7	9	32	50	4	7	12	245
4.1-5.0	2	3	9	19	2	0	0	0	4	12	29	21	26	2	2	9	140
5.1-6.0	0	0	4	4	1	0	0	0	1	7	7	1	6	1	0	0	32
6.1-8.0	0	0	0	0	0	0	0	0	1	2	2	0	7	3	0	0	15
8.1-10.0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	3
>10.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	59	50	117	134	126	53	55	39	45	47	68	93	147	55	63	58	1209

Notes:

Data represent the number of hours a condition occurred.

Number of Calm Hours: 175

a) Wind direction: E = east; N = north; S = south; W = west

m/s = meters per second

LNP COL 2.3-2

Table 2.3.2-212
Joint Frequency Distribution of Wind Speed, Wind Direction, and Atmospheric Stability (Hours of Occurrence)
Period of Record: May (2007 and 2008 Combined Hours of Occurrence)
Lower Wind Level, All Categories

Speed (m/s)	Wind Direction (Blowing From) [a]																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
<0.5	0	2	3	4	2	2	1	2	0	1	2	0	3	4	2	0	28
0.5-1.0	1	5	6	30	14	7	2	3	3	7	5	8	5	10	9	3	118
1.1-1.5	7	7	17	44	23	16	7	1	6	5	14	7	7	9	7	4	181
1.6-2.0	2	6	9	22	28	9	12	2	5	2	7	10	12	4	3	4	137
2.1-3.0	8	16	22	30	52	20	9	4	4	7	9	36	34	4	7	8	270
3.1-4.0	1	4	14	32	57	24	3	2	1	1	14	57	43	3	2	7	265
4.1-5.0	0	0	7	27	45	10	0	0	1	4	8	23	25	0	0	0	150
5.1-6.0	0	0	4	13	19	1	0	0	0	0	9	7	13	0	0	0	66
6.1-8.0	0	0	0	5	6	0	0	0	0	0	0	8	2	0	0	0	21
8.1-10.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
>10.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	19	40	82	207	246	89	34	14	20	27	68	156	144	34	30	26	1236

Notes:

Data represent the number of hours a condition occurred.

Number of Calm Hours: 227

a) Wind direction: E = east; N = north; S = south; W = west

m/s = meters per second

LNP COL 2.3-2

Table 2.3.2-213
Joint Frequency Distribution of Wind Speed, Wind Direction, and Atmospheric Stability (Hours of Occurrence)
Period of Record: June (2007 and 2008 Combined Hours of Occurrence)
Lower Wind Level, All Categories

Speed (m/s)	Wind Direction (Blowing From) [a]																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
<0.5	1	1	1	4	7	3	2	3	1	1	2	0	0	1	2	0	29
0.5-1.0	6	11	26	39	44	21	23	17	13	11	15	12	3	5	1	3	250
1.1-1.5	17	2	11	24	24	18	15	14	9	6	11	16	18	6	2	9	202
1.6-2.0	5	4	12	23	17	24	9	11	12	7	14	14	8	6	3	6	175
2.1-3.0	7	4	25	27	25	17	5	4	11	2	18	36	56	13	5	6	261
3.1-4.0	2	4	9	11	12	4	3	1	3	2	14	55	50	4	0	1	175
4.1-5.0	0	0	3	4	0	0	0	0	0	0	2	23	16	1	0	0	49
5.1-6.0	0	0	0	0	0	0	0	0	0	0	0	13	1	0	0	0	14
6.1-8.0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	2
8.1-10.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
>10.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	38	26	87	132	129	88	57	50	49	29	76	170	152	36	13	25	1157

Notes:

Data represent the number of hours a condition occurred.

Number of Calm Hours: 281

a) Wind direction: E = east; N = north; S = south; W = west

m/s = meters per second

LNP COL 2.3-2

Table 2.3.2-214
Joint Frequency Distribution of Wind Speed, Wind Direction, and Atmospheric Stability (Hours of Occurrence)
Period of Record: July (2007 and 2008 Combined Hours of Occurrence)
Lower Wind Level, All Categories

Speed (m/s)	Wind Direction (Blowing From) [a]																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
<0.5	1	2	2	6	4	3	4	4	7	3	1	1	0	0	0	0	38
0.5-1.0	5	7	11	16	26	24	32	30	9	16	12	12	13	3	10	5	231
1.1-1.5	2	8	6	8	22	17	15	21	19	12	23	21	8	5	14	6	207
1.6-2.0	9	4	4	13	10	9	7	9	12	13	14	15	11	14	6	7	157
2.1-3.0	6	7	8	13	18	15	7	6	4	9	27	53	53	7	5	7	245
3.1-4.0	0	3	5	2	6	4	3	2	0	3	17	58	36	1	1	2	143
4.1-5.0	0	2	5	0	3	0	0	0	0	0	4	35	5	1	0	0	55
5.1-6.0	0	0	2	0	0	0	0	0	0	0	0	1	0	0	0	0	3
6.1-8.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8.1-10.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
>10.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	23	33	43	58	89	72	68	72	51	56	98	196	126	31	36	27	1079

Notes:

Data represent the number of hours a condition occurred.

Number of Calm Hours: 381

a) Wind direction: E = east; N = north; S = south; W = west

m/s = meters per second

LNP COL 2.3-2

Table 2.3.2-215
Joint Frequency Distribution of Wind Speed, Wind Direction, and Atmospheric Stability (Hours of Occurrence)
Period of Record: August (2007 and 2008 Combined Hours of Occurrence)
Lower Wind Level, All Categories

Speed (m/s)	Wind Direction (Blowing From) [a]																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
<0.5	0	0	2	2	4	3	2	4	6	2	2	0	1	0	0	0	28
0.5-1.0	8	10	8	27	29	21	18	17	12	12	10	8	9	5	4	4	202
1.1-1.5	4	9	11	12	35	18	7	10	9	11	11	16	6	4	10	6	179
1.6-2.0	3	3	5	13	25	15	9	6	4	4	7	15	14	7	3	5	138
2.1-3.0	1	9	10	25	27	31	16	10	7	6	19	38	53	6	2	18	278
3.1-4.0	9	4	3	18	25	11	11	1	1	3	10	47	27	1	9	7	187
4.1-5.0	2	1	0	7	4	0	5	2	0	3	3	12	15	5	5	0	64
5.1-6.0	0	0	0	1	4	0	0	0	2	0	3	2	3	0	0	0	15
6.1-8.0	0	0	0	0	2	0	0	0	0	0	4	1	4	0	0	0	11
8.1-10.0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	2
>10.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	27	36	39	105	155	99	68	50	41	42	70	139	132	28	33	40	1104

Notes:

Data represent the number of hours a condition occurred.

Number of Calm Hours: 380

a) Wind direction: E = east; N = north; S = south; W = west

m/s = meters per second

LNP COL 2.3-2

Table 2.3.2-216
Joint Frequency Distribution of Wind Speed, Wind Direction, and Atmospheric Stability (Hours of Occurrence)
Period of Record: September (2007 and 2008 Combined Hours of Occurrence)
Lower Wind Level, All Categories

Speed (m/s)	Wind Direction (Blowing From) [a]																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
<0.5	5	5	7	8	3	2	1	1	1	0	1	0	0	0	2	0	36
0.5-1.0	8	26	36	18	18	13	6	5	2	3	1	3	2	5	4	3	153
1.1-1.5	5	22	33	40	26	14	15	6	8	5	2	7	9	5	0	2	199
1.6-2.0	10	22	29	21	19	2	5	3	3	4	1	3	10	5	3	6	146
2.1-3.0	23	51	47	65	31	15	7	4	8	3	7	15	30	9	4	8	327
3.1-4.0	4	9	35	39	47	14	6	1	1	5	3	10	19	0	3	5	201
4.1-5.0	5	1	27	30	26	11	1	0	0	1	0	0	0	0	0	0	102
5.1-6.0	0	0	9	10	9	0	0	0	2	0	0	0	0	0	0	0	30
6.1-8.0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
8.1-10.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
>10.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	60	136	224	231	179	71	41	20	25	21	15	38	70	24	16	24	1195

Notes:

Data represent the number of hours a condition occurred.

Number of Calm Hours: 239

a) Wind direction: E = east; N = north; S = south; W = west

m/s = meters per second

LNP COL 2.3-2

Table 2.3.2-217
Joint Frequency Distribution of Wind Speed, Wind Direction, and Atmospheric Stability (Hours of Occurrence)
Period of Record: October (2007 and 2008 Combined Hours of Occurrence)
Lower Wind Level, All Categories

Speed (m/s)	Wind Direction (Blowing From) [a]																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
<0.5	2	2	2	6	3	0	2	0	0	1	0	0	0	4	3	0	25
0.5-1.0	11	15	30	20	19	6	2	8	2	1	1	5	1	5	10	3	139
1.1-1.5	20	26	43	55	17	7	6	4	7	4	0	4	1	3	7	5	209
1.6-2.0	11	20	48	45	24	5	2	2	6	2	1	4	5	7	10	12	204
2.1-3.0	11	45	92	58	36	18	7	6	3	6	2	4	17	8	13	12	338
3.1-4.0	4	34	51	45	19	8	3	1	2	3	10	4	11	0	3	4	202
4.1-5.0	0	24	28	33	28	4	0	0	0	0	2	1	4	0	1	1	126
5.1-6.0	0	1	6	15	8	1	0	0	0	0	0	0	1	0	0	0	32
6.1-8.0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
8.1-10.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
>10.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	59	167	300	278	154	49	22	21	20	17	16	22	40	27	47	37	1276

Notes:

Data represent the number of hours a condition occurred.

Number of Calm Hours: 193

a) Wind direction: E = east; N = north; S = south; W = west

m/s = meters per second

LNP COL 2.3-2

Table 2.3.2-218
Joint Frequency Distribution of Wind Speed, Wind Direction, and Atmospheric Stability (Hours of Occurrence)
Period of Record: November (2007 and 2008 Combined Hours of Occurrence)
Lower Wind Level, All Categories

Speed (m/s)	Wind Direction (Blowing From) [a]																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
<0.5	0	0	0	4	1	0	0	0	2	0	0	1	2	1	2	1	14
0.5-1.0	11	8	13	28	13	4	3	4	3	3	4	2	7	7	15	8	133
1.1-1.5	17	19	30	26	11	6	7	3	2	2	4	6	5	5	9	16	168
1.6-2.0	24	24	55	21	7	2	3	3	4	7	3	8	5	5	9	13	193
2.1-3.0	48	54	51	38	11	5	9	3	10	15	11	14	24	6	11	19	329
3.1-4.0	10	28	27	21	6	3	2	1	13	12	7	7	14	2	2	6	161
4.1-5.0	7	5	6	12	3	0	0	0	6	4	3	4	0	1	1	8	60
5.1-6.0	0	2	2	4	0	0	0	0	1	3	0	1	1	0	0	0	14
6.1-8.0	0	0	0	0	0	0	0	0	2	0	1	0	0	0	0	0	3
8.1-10.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
>10.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	117	140	184	154	52	20	24	14	43	46	33	43	58	27	49	71	1075

Notes:

Data represent the number of hours a condition occurred.

Number of Calm Hours: 335

a) Wind direction: E = east; N = north; S = south; W = west

m/s = meters per second

LNP COL 2.3-2

Table 2.3.2-219
Joint Frequency Distribution of Wind Speed, Wind Direction, and Atmospheric Stability (Hours of Occurrence)
Period of Record: December (2007 and 2008 Combined Hours of Occurrence)
Lower Wind Level, All Categories

Speed (m/s)	Wind Direction (Blowing From) [a]																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
<0.5	0	2	3	1	7	0	1	2	0	0	1	0	0	1	0	0	18
0.5-1.0	8	5	16	40	27	10	8	7	5	4	7	5	5	7	7	4	165
1.1-1.5	12	16	22	55	58	19	4	3	5	9	10	9	4	6	4	12	248
1.6-2.0	7	23	23	23	48	17	11	3	3	4	8	7	10	3	8	8	206
2.1-3.0	23	20	24	28	39	23	20	7	7	11	23	18	15	2	8	17	285
3.1-4.0	13	10	10	14	15	17	14	13	8	7	14	9	10	6	9	5	174
4.1-5.0	0	7	1	1	1	4	3	4	2	8	7	0	8	3	0	0	49
5.1-6.0	0	0	0	0	0	3	0	0	0	1	1	3	4	1	0	0	13
6.1-8.0	0	0	0	0	0	1	0	0	0	0	0	1	1	0	0	0	3
8.1-10.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
>10.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	63	83	99	162	195	94	61	39	30	44	71	52	57	29	36	46	1161

Notes:

Data represent the number of hours a condition occurred.

Number of Calm Hours: 305

a) Wind direction: E = east; N = north; S = south; W = west

m/s = meters per second

LNP COL 2.3-2

Table 2.3.2-220
Joint Frequency Distribution of Wind Speed, Wind Direction, and Atmospheric Stability (Hours of Occurrence)
Period of Record: January (2008 and 2009 Combined Hours of Occurrence)
Lower Wind Level, All Categories

Speed (m/s)	Wind Direction (Blowing From) [a]																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
<0.5	2	0	2	8	8	0	3	0	3	1	1	0	1	1	0	1	31
0.5-1.0	6	10	12	16	19	8	8	2	8	2	4	6	12	8	4	10	135
1.1-1.5	8	16	18	21	11	6	10	10	9	5	7	3	7	3	11	8	153
1.6-2.0	17	21	11	12	25	8	2	3	14	7	8	10	7	3	12	15	175
2.1-3.0	30	37	41	35	20	13	6	10	15	29	25	23	17	11	21	13	346
3.1-4.0	32	18	23	10	6	7	6	4	11	22	17	7	11	2	2	13	191
4.1-5.0	7	6	6	7	7	6	0	2	11	31	13	7	2	6	2	7	120
5.1-6.0	0	1	5	8	1	6	1	0	1	13	0	2	2	2	0	3	45
6.1-8.0	0	0	0	2	0	0	0	0	0	1	0	0	3	1	0	0	7
8.1-10.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
>10.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	102	109	118	119	97	54	36	31	72	111	75	58	62	37	52	70	1203

Notes:

Data represent the number of hours a condition occurred.

Number of Calm Hours: 261

a) Wind direction: E = east; N = north; S = south; W = west

m/s = meters per second

LNP COL 2.3-2

Table 2.3.2-221
Joint Frequency Distribution of Wind Speed, Wind Direction, and Atmospheric Stability (Hours of Occurrence)
Period of Record: February 1, 2007, to January 31, 2009
Upper Wind Level, Category A

Speed (m/s)	Wind Direction (Blowing From) [a]																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
<0.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.5-1.0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	2
1.1-1.5	1	0	1	0	1	0	1	1	1	1	0	2	2	2	1	1	15
1.6-2.0	1	1	4	2	1	0	2	1	1	0	0	2	0	2	1	0	18
2.1-3.0	5	6	5	5	12	3	2	3	1	2	4	13	6	8	13	6	94
3.1-4.0	8	17	17	19	16	7	2	0	2	2	18	24	23	6	5	4	170
4.1-5.0	3	12	22	17	23	7	2	5	3	4	35	55	70	8	7	15	288
5.1-6.0	5	4	10	21	26	7	1	3	6	7	16	60	65	4	9	9	253
6.1-8.0	3	5	14	35	32	9	0	2	3	14	45	53	46	4	7	10	282
8.1-10.0	0	0	0	5	8	0	0	1	1	6	7	2	16	4	1	0	51
>10.0	0	0	0	0	0	0	0	0	0	0	0	0	6	3	0	0	9
TOTAL	26	45	73	104	120	33	10	16	18	37	125	211	234	41	44	45	1182

Notes:

Data represent the number of hours a condition occurred.

Number of Calm Hours: 0

a) Wind direction: E = east; N = north; S = south; W = west

m/s = meters per second

LNP COL 2.3-2

Table 2.3.2-222
Joint Frequency Distribution of Wind Speed, Wind Direction, and Atmospheric Stability (Hours of Occurrence)
Period of Record: February 1, 2007, to January 31, 2009
Upper Wind Level, Category B

Speed (m/s)	Wind Direction (Blowing From) [a]																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
<0.5	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
0.5-1.0	3	1	0	2	2	0	0	0	1	1	0	0	0	1	0	0	11
1.1-1.5	1	2	4	1	7	1	1	1	5	1	0	1	3	0	1	3	32
1.6-2.0	4	4	4	6	3	4	2	4	3	1	4	4	1	3	4	6	57
2.1-3.0	13	11	25	15	16	11	11	12	2	1	8	12	14	7	11	10	179
3.1-4.0	14	11	26	30	35	18	6	7	2	8	29	32	40	8	17	10	293
4.1-5.0	17	10	26	30	45	13	11	4	3	4	21	37	58	4	10	8	301
5.1-6.0	4	10	14	21	19	10	4	3	3	8	8	27	29	2	2	5	169
6.1-8.0	4	3	23	18	17	4	1	1	2	7	13	14	24	2	2	3	138
8.1-10.0	0	0	3	4	0	1	0	0	1	7	1	1	2	0	0	0	20
>10.0	0	0	0	0	0	0	0	0	0	3	0	0	4	2	0	0	9
TOTAL	60	53	125	127	144	62	36	32	22	41	84	128	175	29	47	45	1210

Notes:

Data represent the number of hours a condition occurred.

Number of Calm Hours: 0

a) Wind direction: E = east; N = north; S = south; W = west

m/s = meters per second

LNP COL 2.3-2

Table 2.3.2-223
Joint Frequency Distribution of Wind Speed, Wind Direction, and Atmospheric Stability (Hours of Occurrence)
Period of Record: February 1, 2007, to January 31, 2009
Upper Wind Level, Category C

Speed (m/s)	Wind Direction (Blowing From) [a]																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
<0.5	0	0	0	0	0	0	0	1	0	1	0	1	0	0	0	0	3
0.5-1.0	1	2	1	1	4	2	2	1	3	4	4	1	1	5	3	2	37
1.1-1.5	4	5	6	4	8	3	5	1	3	5	2	3	5	1	5	5	65
1.6-2.0	7	10	9	14	12	5	7	3	3	7	6	6	7	4	3	4	107
2.1-3.0	13	25	15	26	30	20	12	8	13	11	11	22	18	17	9	21	271
3.1-4.0	18	17	33	36	40	11	14	9	7	13	25	32	51	12	5	13	336
4.1-5.0	4	10	16	34	32	15	12	11	7	9	17	36	58	4	4	3	272
5.1-6.0	3	8	21	22	22	10	2	6	3	6	11	15	32	3	2	6	172
6.1-8.0	2	5	25	23	16	5	2	3	2	9	11	11	15	5	1	4	139
8.1-10.0	0	1	1	2	2	0	0	0	1	11	5	1	1	0	0	1	26
>10.0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	3
TOTAL	52	83	127	162	166	71	56	43	42	76	92	128	191	51	32	59	1431

Notes:

Data represent the number of hours a condition occurred.

Number of Calm Hours: 6

a) Wind direction: E = east; N = north; S = south; W = west

m/s = meters per second

LNP COL 2.3-2

Table 2.3.2-224
Joint Frequency Distribution of Wind Speed, Wind Direction, and Atmospheric Stability (Hours of Occurrence)
Period of Record: February 1, 2007, to January 31, 2009
Upper Wind Level, Category D

Speed (m/s)	Wind Direction (Blowing From) [a]																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
<0.5	1	2	0	0	0	2	0	0	2	1	0	1	0	0	0	1	10
0.5-1.0	6	11	8	7	5	9	6	4	11	11	13	7	5	3	9	5	120
1.1-1.5	11	10	8	10	18	12	11	10	16	11	11	8	8	7	8	5	164
1.6-2.0	15	15	15	13	17	11	14	14	11	14	11	13	17	9	15	9	213
2.1-3.0	40	48	63	68	67	34	28	26	24	17	45	53	52	29	27	38	659
3.1-4.0	60	67	102	98	74	55	39	33	20	20	50	83	121	43	24	25	914
4.1-5.0	40	58	128	108	74	39	33	18	19	33	37	78	121	17	19	17	839
5.1-6.0	38	49	96	98	91	26	29	9	24	49	39	47	60	17	16	24	712
6.1-8.0	22	66	88	87	78	26	18	27	32	78	37	48	28	18	20	25	698
8.1-10.0	1	6	13	12	15	5	5	8	10	39	24	14	16	9	7	2	186
>10.0	0	0	1	0	0	0	0	0	3	8	9	8	16	1	0	0	46
TOTAL	234	332	522	501	439	219	183	149	172	281	276	360	444	153	145	151	4561

Notes:

Data represent the number of hours a condition occurred.

Number of Calm Hours: 53

a) Wind direction: E = east; N = north; S = south; W = west

m/s = meters per second

LNP COL 2.3-2

Table 2.3.2-225
Joint Frequency Distribution of Wind Speed, Wind Direction, and Atmospheric Stability (Hours of Occurrence)
Period of Record: February 1, 2007, to January 31, 2009
Upper Wind Level, Category E

Speed (m/s)	Wind Direction (Blowing From) [a]																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
<0.5	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	2
0.5-1.0	3	3	3	3	2	0	2	4	5	2	5	0	4	0	1	3	40
1.1-1.5	4	2	2	5	5	4	4	1	7	5	2	5	6	2	1	1	56
1.6-2.0	8	3	6	5	2	6	10	3	10	6	2	7	8	4	2	2	84
2.1-3.0	16	23	23	33	34	33	32	24	23	21	31	26	38	21	17	15	410
3.1-4.0	30	57	81	98	79	62	53	66	48	23	33	47	64	39	20	21	821
4.1-5.0	40	76	173	222	147	97	93	65	62	31	32	35	55	39	26	32	1225
5.1-6.0	38	86	136	155	125	59	47	29	33	18	5	15	18	25	33	36	858
6.1-8.0	10	32	21	18	11	10	10	12	25	6	4	15	9	9	19	18	229
8.1-10.0	0	0	0	1	2	0	2	0	1	0	0	4	1	4	2	0	17
>10.0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
TOTAL	149	283	445	540	407	271	253	204	214	113	115	154	203	143	121	128	3743

Notes:

Data represent the number of hours a condition occurred.

Number of Calm Hours: 20

a) Wind direction: E = east; N = north; S = south; W = west

m/s = meters per second

LNP COL 2.3-2

Table 2.3.2-226
Joint Frequency Distribution of Wind Speed, Wind Direction, and Atmospheric Stability (Hours of Occurrence)
Period of Record: February 1, 2007, to January 31, 2009
Upper Wind Level, Category F

Speed (m/s)	Wind Direction (Blowing From) [a]																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
<0.5	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
0.5-1.0	2	0	1	1	5	3	1	2	3	2	3	2	2	4	0	0	31
1.1-1.5	2	0	0	2	2	4	5	6	4	1	0	2	4	3	3	0	38
1.6-2.0	3	2	3	4	2	7	5	8	2	4	7	5	5	4	3	4	68
2.1-3.0	4	11	13	29	16	18	15	25	18	18	24	11	26	14	11	7	260
3.1-4.0	15	9	28	41	30	35	55	28	30	15	15	24	33	33	12	14	417
4.1-5.0	13	21	61	85	62	65	51	29	22	13	13	34	26	30	27	9	561
5.1-6.0	22	29	51	106	74	44	33	5	9	2	5	9	13	23	20	22	467
6.1-8.0	19	12	4	12	20	3	0	5	3	0	1	1	0	4	4	15	103
8.1-10.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
>10.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	80	84	161	280	211	179	165	108	92	55	68	88	109	115	80	71	1946

Notes:

Data represent the number of hours a condition occurred.

Number of Calm Hours: 18

a) Wind direction: E = east; N = north; S = south; W = west

m/s = meters per second

LNP COL 2.3-2

Table 2.3.2-227
Joint Frequency Distribution of Wind Speed, Wind Direction, and Atmospheric Stability (Hours of Occurrence)
Period of Record: February 1, 2007, to January 31, 2009
Upper Wind Level, Category G

Speed (m/s)	Wind Direction (Blowing From) [a]																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
<0.5	0	0	1	1	0	0	0	0	0	0	0	2	0	0	1	0	5
0.5-1.0	3	1	2	2	4	3	7	5	7	4	4	7	3	5	6	8	71
1.1-1.5	6	2	7	4	7	5	5	8	5	9	10	7	8	8	6	8	105
1.6-2.0	10	4	11	10	6	8	15	10	14	10	22	11	16	14	10	7	178
2.1-3.0	28	14	23	39	36	47	40	35	32	33	30	36	37	29	35	22	516
3.1-4.0	26	22	35	55	53	32	53	56	40	27	46	47	42	41	47	36	658
4.1-5.0	42	31	46	72	60	62	37	37	23	15	18	37	48	43	50	44	665
5.1-6.0	50	29	33	64	59	44	15	13	9	9	3	1	18	25	37	48	457
6.1-8.0	59	15	18	36	22	19	3	0	11	5	0	0	5	2	22	60	277
8.1-10.0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
>10.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	224	118	176	283	247	220	176	164	141	112	133	148	177	167	214	233	2933

Notes:

Data represent the number of hours a condition occurred.

Number of Calm Hours: 77

a) Wind direction: E = east; N = north; S = south; W = west

m/s = meters per second

LNP COL 2.3-2

Table 2.3.2-228
Joint Frequency Distribution of Wind Speed, Wind Direction, and Atmospheric Stability (Hours of Occurrence)
Period of Record: February 1, 2007, to January 31, 2009
Upper Wind Level, All Categories

Speed (m/s)	Wind Direction (Blowing From) [a]																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
<0.5	1	4	1	1	0	2	0	1	3	2	1	4	0	0	1	1	22
0.5-1.0	18	18	15	16	23	17	18	16	30	25	29	17	15	18	19	18	312
1.1-1.5	29	21	28	26	48	29	32	28	41	33	25	28	36	23	25	23	475
1.6-2.0	48	39	52	54	43	41	55	43	44	42	52	48	54	40	38	32	725
2.1-3.0	119	138	167	215	211	166	140	133	113	103	153	173	191	125	123	119	2389
3.1-4.0	171	200	322	377	327	220	222	199	149	108	216	289	374	182	130	123	3609
4.1-5.0	159	218	472	568	443	298	239	169	139	109	173	312	436	145	143	128	4151
5.1-6.0	160	215	361	487	416	200	131	68	87	99	87	174	235	99	119	150	3088
6.1-8.0	119	138	193	229	196	76	34	50	78	119	111	142	127	44	75	135	1866
8.1-10.0	1	7	17	24	27	6	8	9	14	63	37	22	36	17	10	3	301
>10.0	0	0	1	0	0	0	0	0	3	12	9	8	29	6	0	0	68
TOTAL	825	998	1629	1997	1734	1055	879	716	701	715	893	1217	1533	699	683	732	17006

Notes:

Data represent the number of hours a condition occurred.

Number of Calm Hours: 174

a) Wind direction: E = east; N = north; S = south; W = west

m/s = meters per second

LNP COL 2.3-2

Table 2.3.2-229
Joint Frequency Distribution of Wind Speed, Wind Direction, and Atmospheric Stability (Hours of Occurrence)
Period of Record: February (2007 and 2008 Combined Hours of Occurrence)
Upper Wind Level, All Categories

Speed (m/s)	Wind Direction (Blowing From) [a]																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
<0.5	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2
0.5-1.0	0	2	1	2	1	3	0	1	1	0	2	0	0	1	0	0	14
1.1-1.5	1	0	3	2	1	2	1	0	2	1	2	6	4	0	2	0	27
1.6-2.0	2	2	3	7	3	4	0	1	1	2	4	2	2	3	2	2	40
2.1-3.0	10	10	8	12	8	6	6	5	3	4	10	7	13	15	17	10	144
3.1-4.0	22	15	13	23	14	5	4	6	6	11	26	23	32	23	15	23	261
4.1-5.0	21	27	24	13	32	24	22	13	5	9	15	33	39	21	19	15	332
5.1-6.0	11	18	11	17	32	28	18	10	8	20	9	11	20	15	27	17	272
6.1-8.0	8	2	4	8	20	9	2	12	15	24	10	11	15	12	17	15	184
8.1-10.0	0	0	0	0	0	0	0	1	3	15	6	5	14	2	1	0	47
>10.0	0	0	0	0	0	0	0	0	0	4	0	0	1	0	0	0	5
TOTAL	75	76	67	84	111	81	53	49	44	90	84	100	140	92	100	82	1328

Notes:

Data represent the number of hours a condition occurred.

Number of Calm Hours: 9

a) Wind direction: E = east; N = north; S = south; W = west

m/s = meters per second

LNP COL 2.3-2

Table 2.3.2-230
Joint Frequency Distribution of Wind Speed, Wind Direction, and Atmospheric Stability (Hours of Occurrence)
Period of Record: March (2007 and 2008 Combined Hours of Occurrence)
Upper Wind Level, All Categories

Speed (m/s)	Wind Direction (Blowing From) [a]																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
<0.5	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	2
0.5-1.0	0	1	1	2	0	1	0	1	1	0	3	1	1	0	4	1	17
1.1-1.5	2	1	2	1	4	1	4	0	3	1	0	1	2	1	2	2	27
1.6-2.0	1	3	3	5	3	6	5	1	3	2	0	0	0	1	3	3	39
2.1-3.0	10	11	19	16	24	15	7	4	3	3	4	8	12	5	5	13	159
3.1-4.0	14	10	19	27	39	24	13	7	3	6	4	11	29	18	8	10	242
4.1-5.0	14	17	41	76	70	29	31	10	5	4	3	9	29	17	11	11	377
5.1-6.0	23	13	26	57	93	30	27	1	14	4	2	6	22	10	7	13	348
6.1-8.0	10	1	14	21	34	15	5	11	9	15	6	4	8	5	4	8	170
8.1-10.0	0	0	1	0	3	1	3	2	8	21	6	2	8	0	0	1	56
>10.0	0	0	0	0	0	0	0	0	1	4	0	0	11	1	0	0	17
TOTAL	74	57	126	205	270	123	95	37	50	60	28	42	122	58	44	63	1454

Notes:

Data represent the number of hours a condition occurred.

Number of Calm Hours: 9

a) Wind direction: E = east; N = north; S = south; W = west

m/s = meters per second

LNP COL 2.3-2

Table 2.3.2-231
Joint Frequency Distribution of Wind Speed, Wind Direction, and Atmospheric Stability (Hours of Occurrence)
Period of Record: April (2007 and 2008 Combined Hours of Occurrence)
Upper Wind Level, All Categories

Speed (m/s)	Wind Direction (Blowing From) [a]																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
<0.5	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
0.5-1.0	1	0	1	1	1	1	1	0	1	0	0	1	0	1	0	0	9
1.1-1.5	0	0	1	0	2	1	0	2	3	0	1	0	1	1	0	1	13
1.6-2.0	6	3	3	1	1	2	3	2	1	1	3	1	1	1	2	3	34
2.1-3.0	8	10	11	20	15	9	15	7	11	3	7	9	10	10	6	3	154
3.1-4.0	20	7	43	30	30	11	16	12	6	9	11	14	17	19	17	14	276
4.1-5.0	18	11	34	28	27	19	26	31	16	8	13	20	62	23	18	19	373
5.1-6.0	14	2	16	32	32	18	21	15	10	10	7	21	43	20	14	16	291
6.1-8.0	11	9	19	21	5	0	2	2	5	15	32	7	29	9	13	14	193
8.1-10.0	0	0	2	0	0	0	0	0	0	5	6	0	4	4	1	0	22
>10.0	0	0	0	0	0	0	0	0	1	2	1	0	7	4	0	0	15
TOTAL	78	44	130	133	113	61	84	71	54	53	81	73	174	92	71	70	1382

Notes:

Data represent the number of hours a condition occurred.

Number of Calm Hours: 2

a) Wind direction: E = east; N = north; S = south; W = west

m/s = meters per second

LNP COL 2.3-2

Table 2.3.2-232
Joint Frequency Distribution of Wind Speed, Wind Direction, and Atmospheric Stability (Hours of Occurrence)
Period of Record: May (2007 and 2008 Combined Hours of Occurrence)
Upper Wind Level, All Categories

Speed (m/s)	Wind Direction (Blowing From) [a]																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
<0.5	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
0.5-1.0	1	0	1	0	3	1	1	0	0	3	1	1	0	0	2	1	15
1.1-1.5	0	1	1	2	4	0	2	3	3	2	2	2	5	0	0	1	28
1.6-2.0	1	2	2	2	3	3	3	3	4	2	1	1	3	3	1	1	35
2.1-3.0	3	10	7	9	20	8	6	10	3	2	6	8	19	11	10	7	139
3.1-4.0	7	16	22	38	33	20	9	6	4	2	21	26	38	12	5	5	264
4.1-5.0	5	11	25	56	71	31	19	10	7	5	17	34	41	12	13	11	368
5.1-6.0	2	2	19	59	91	25	17	7	4	3	20	37	33	13	5	15	352
6.1-8.0	4	2	15	39	50	12	0	0	0	4	19	41	24	3	2	3	218
8.1-10.0	0	0	0	9	11	0	0	0	0	0	7	6	2	0	0	0	35
>10.0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	5
TOTAL	23	44	93	214	286	100	57	39	25	23	94	161	165	54	38	44	1460

Notes:

Data represent the number of hours a condition occurred.

Number of Calm Hours: 3

a) Wind direction: E = east; N = north; S = south; W = west

m/s = meters per second

LNP COL 2.3-2

Table 2.3.2-233
Joint Frequency Distribution of Wind Speed, Wind Direction, and Atmospheric Stability (Hours of Occurrence)
Period of Record: June (2007 and 2008 Combined Hours of Occurrence)
Upper Wind Level, All Categories

Speed (m/s)	Wind Direction (Blowing From) [a]																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
<0.5	0	1	0	1	0	1	0	0	0	0	0	0	0	0	0	0	3
0.5-1.0	4	4	2	0	1	1	3	2	4	3	5	3	5	2	2	0	41
1.1-1.5	5	0	1	6	4	6	3	2	5	10	3	8	7	1	3	2	66
1.6-2.0	5	2	9	6	5	9	14	10	6	12	5	9	7	8	4	4	115
2.1-3.0	12	8	24	16	29	21	16	23	24	22	19	29	22	9	7	5	286
3.1-4.0	14	6	24	27	34	20	35	29	35	14	20	41	45	11	5	9	369
4.1-5.0	2	4	23	50	45	27	32	20	16	6	19	42	56	9	2	2	355
5.1-6.0	1	2	4	13	8	9	6	1	5	1	5	25	33	8	0	0	121
6.1-8.0	0	3	3	2	1	0	1	2	0	1	8	34	15	3	0	0	73
8.1-10.0	0	0	0	1	1	1	0	0	0	0	0	3	0	0	0	0	6
>10.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	43	30	90	122	128	95	110	89	95	69	84	194	190	51	23	22	1435

Notes:

Data represent the number of hours a condition occurred.

Number of Calm Hours: 5

a) Wind direction: E = east; N = north; S = south; W = west

m/s = meters per second

LNP COL 2.3-2

Table 2.3.2-234
Joint Frequency Distribution of Wind Speed, Wind Direction, and Atmospheric Stability (Hours of Occurrence)
Period of Record: July (2007 and 2008 Combined Hours of Occurrence)
Upper Wind Level, All Categories

Speed (m/s)	Wind Direction (Blowing From) [a]																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
<0.5	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	2
0.5-1.0	4	3	2	4	3	2	4	2	9	3	3	6	2	6	3	5	61
1.1-1.5	8	5	4	1	4	4	6	6	7	10	7	2	9	6	6	2	87
1.6-2.0	9	5	5	8	3	5	11	5	10	8	18	13	7	11	10	6	134
2.1-3.0	14	10	6	10	14	19	21	31	19	18	37	38	35	17	22	19	330
3.1-4.0	4	5	6	18	25	19	31	60	36	10	42	59	55	17	11	4	402
4.1-5.0	3	0	7	13	11	10	9	21	30	5	25	71	55	8	9	3	280
5.1-6.0	0	2	3	2	5	0	5	1	3	1	7	34	25	2	3	1	94
6.1-8.0	1	1	11	0	2	1	0	1	0	0	4	16	5	1	1	0	44
8.1-10.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
>10.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	43	31	44	56	67	60	87	127	114	56	143	239	193	68	66	40	1434

Notes:

Data represent the number of hours a condition occurred.

Number of Calm Hours: 30

a) Wind direction: E = east; N = north; S = south; W = west

m/s = meters per second

LNP COL 2.3-2

Table 2.3.2-235
Joint Frequency Distribution of Wind Speed, Wind Direction, and Atmospheric Stability (Hours of Occurrence)
Period of Record: August (2007 and 2008 Combined Hours of Occurrence)
Upper Wind Level, All Categories

Speed (m/s)	Wind Direction (Blowing From) [a]																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
<0.5	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	2
0.5-1.0	2	2	1	1	4	1	4	1	5	1	2	0	1	3	1	1	30
1.1-1.5	2	3	3	2	5	4	4	6	7	3	2	4	1	5	3	3	57
1.6-2.0	3	0	9	7	5	4	4	9	5	5	6	8	5	4	7	1	82
2.1-3.0	6	4	10	32	27	28	19	12	23	17	28	25	23	19	7	13	293
3.1-4.0	4	6	10	27	42	29	40	17	15	13	23	63	63	22	10	4	388
4.1-5.0	1	3	7	19	27	45	22	16	12	7	20	53	43	3	5	3	286
5.1-6.0	6	1	4	21	14	15	8	6	4	2	6	28	12	2	1	8	138
6.1-8.0	3	8	2	4	11	0	9	5	1	1	3	9	10	1	5	7	79
8.1-10.0	0	1	0	1	4	0	1	2	2	1	7	3	1	4	8	0	35
>10.0	0	0	0	0	0	0	0	0	0	1	6	1	6	0	0	0	14
TOTAL	27	28	46	114	139	126	111	74	74	52	103	195	165	63	47	40	1404

Notes:

Data represent the number of hours a condition occurred.

Number of Calm Hours: 31

a) Wind direction: E = east; N = north; S = south; W = west

m/s = meters per second

LNP COL 2.3-2

Table 2.3.2-236
Joint Frequency Distribution of Wind Speed, Wind Direction, and Atmospheric Stability (Hours of Occurrence)
Period of Record: September (2007 and 2008 Combined Hours of Occurrence)
Upper Wind Level, All Categories

Speed (m/s)	Wind Direction (Blowing From) [a]																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
<0.5	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
0.5-1.0	1	1	1	1	5	1	0	2	4	4	1	0	0	2	0	6	29
1.1-1.5	3	2	3	4	7	2	4	2	3	2	0	1	2	2	2	2	41
1.6-2.0	5	4	4	7	1	4	2	3	5	3	3	3	7	3	2	3	59
2.1-3.0	5	19	18	21	17	10	18	13	13	7	5	10	15	7	11	7	196
3.1-4.0	10	41	46	41	18	21	21	14	9	6	7	15	31	13	7	5	305
4.1-5.0	10	41	84	88	41	31	12	7	2	3	3	9	32	10	8	4	385
5.1-6.0	4	33	48	71	49	15	3	1	1	4	1	2	6	1	4	5	248
6.1-8.0	2	14	38	31	31	10	4	1	2	1	0	1	0	0	0	3	138
8.1-10.0	1	0	8	3	2	0	0	0	0	0	0	0	0	0	0	0	14
>10.0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
TOTAL	41	155	251	267	171	94	64	43	40	30	20	41	93	38	34	35	1417

Notes:

Data represent the number of hours a condition occurred.

Number of Calm Hours: 17

a) Wind direction: E = east; N = north; S = south; W = west

m/s = meters per second

LNP COL 2.3-2

Table 2.3.2-237
Joint Frequency Distribution of Wind Speed, Wind Direction, and Atmospheric Stability (Hours of Occurrence)
Period of Record: October (2007 and 2008 Combined Hours of Occurrence)
Upper Wind Level, All Categories

Speed (m/s)	Wind Direction (Blowing From) [a]																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
<0.5	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	2
0.5-1.0	2	0	1	2	0	0	1	1	0	1	3	0	2	0	2	0	15
1.1-1.5	1	1	2	0	1	2	2	1	3	1	0	0	0	2	2	1	19
1.6-2.0	3	5	4	1	6	1	5	1	2	1	0	6	7	1	2	3	48
2.1-3.0	15	12	8	24	16	18	4	5	2	3	0	2	3	7	15	10	144
3.1-4.0	7	19	46	43	39	22	14	17	12	7	2	2	14	11	14	7	276
4.1-5.0	3	25	88	98	39	5	7	4	13	6	9	0	15	12	12	8	344
5.1-6.0	24	44	98	113	35	2	3	2	4	3	6	0	8	3	8	20	373
6.1-8.0	19	44	42	53	23	4	3	0	0	1	3	1	4	0	1	14	212
8.1-10.0	0	5	5	6	6	1	0	0	0	0	0	0	1	0	0	0	24
>10.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	74	155	294	340	165	55	39	31	37	23	23	12	54	36	56	63	1457

Notes:

Data represent the number of hours a condition occurred.

Number of Calm Hours: 12

a) Wind direction: E = east; N = north; S = south; W = west

m/s = meters per second

LNP COL 2.3-2

Table 2.3.2-238
Joint Frequency Distribution of Wind Speed, Wind Direction, and Atmospheric Stability (Hours of Occurrence)
Period of Record: November (2007 and 2008 Combined Hours of Occurrence)
Upper Wind Level, All Categories

Speed (m/s)	Wind Direction (Blowing From) [a]																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
<0.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.5-1.0	2	1	0	1	3	0	1	0	1	1	0	1	0	0	1	2	14
1.1-1.5	2	2	4	2	5	0	1	2	2	1	2	0	2	2	3	4	34
1.6-2.0	8	8	4	4	2	0	1	0	3	2	0	2	5	3	2	5	49
2.1-3.0	20	19	21	17	7	4	5	2	3	2	7	10	9	7	8	23	164
3.1-4.0	19	29	33	40	8	9	10	7	2	9	8	8	20	10	11	23	246
4.1-5.0	33	41	64	50	16	8	16	10	7	14	6	15	26	14	16	23	359
5.1-6.0	34	42	75	48	5	7	0	3	10	17	11	4	12	10	20	21	319
6.1-8.0	24	26	15	29	3	1	0	1	24	14	2	4	3	1	16	34	197
8.1-10.0	0	1	1	0	0	0	0	0	1	3	0	0	0	0	0	0	6
>10.0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	3
TOTAL	142	169	217	191	49	29	34	25	54	64	37	44	77	47	77	135	1391

Notes:

Data represent the number of hours a condition occurred.

Number of Calm Hours: 19

a) Wind direction: E = east; N = north; S = south; W = west

m/s = meters per second

LNP COL 2.3-2

Table 2.3.2-239
Joint Frequency Distribution of Wind Speed, Wind Direction, and Atmospheric Stability (Hours of Occurrence)
Period of Record: December (2007 and 2008 Combined Hours of Occurrence)
Upper Wind Level, All Categories

Speed (m/s)	Wind Direction (Blowing From) [a]																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
<0.5	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	2
0.5-1.0	1	2	1	2	1	5	2	4	2	5	6	3	2	0	2	2	40
1.1-1.5	1	3	3	4	8	4	1	0	3	1	4	0	2	2	1	3	40
1.6-2.0	1	2	5	5	9	2	4	2	0	2	6	3	8	1	1	0	51
2.1-3.0	9	10	17	22	27	16	12	7	3	9	14	15	14	9	8	6	198
3.1-4.0	23	22	39	46	31	25	18	13	8	9	20	11	13	12	15	10	315
4.1-5.0	22	23	33	59	35	50	32	14	10	13	21	9	17	8	11	14	371
5.1-6.0	13	11	20	31	40	35	22	15	9	13	4	4	13	7	11	14	262
6.1-8.0	6	8	5	8	5	6	6	8	3	7	7	2	10	4	4	6	95
8.1-10.0	0	0	0	0	0	1	0	3	0	2	4	1	2	1	0	0	14
>10.0	0	0	0	0	0	0	0	0	0	0	1	2	1	0	0	0	4
TOTAL	76	82	123	177	156	144	97	67	38	61	87	50	82	44	53	55	1392

Notes:

Data represent the number of hours a condition occurred.

Number of Calm Hours: 24

a) Wind direction: E = east; N = north; S = south; W = west

m/s = meters per second

LNP COL 2.3-2

Table 2.3.2-240
Joint Frequency Distribution of Wind Speed, Wind Direction, and Atmospheric Stability (Hours of Occurrence)
Period of Record: January (2008 and 2009 Combined Hours of Occurrence)
Upper Wind Level, All Categories

Speed (m/s)	Wind Direction (Blowing From) [a]																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
<0.5	1	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	3
0.5-1.0	0	2	3	0	1	1	1	2	2	4	3	1	2	3	2	0	27
1.1-1.5	4	3	1	2	3	3	4	4	0	1	2	4	1	1	1	2	36
1.6-2.0	4	3	1	1	2	1	3	6	4	2	6	0	2	1	2	1	39
2.1-3.0	7	15	18	16	7	12	11	14	6	13	16	12	16	9	7	3	182
3.1-4.0	27	24	21	17	14	15	11	11	13	12	32	16	17	14	12	9	265
4.1-5.0	27	15	42	18	29	19	11	13	16	29	22	17	21	8	19	15	321
5.1-6.0	28	45	37	23	12	16	1	6	15	21	9	2	8	8	19	20	270
6.1-8.0	31	20	25	13	11	18	2	7	19	36	17	12	4	5	12	31	263
8.1-10.0	0	0	0	4	0	2	4	1	0	16	1	2	4	6	0	2	42
>10.0	0	0	0	0	0	0	0	0	0	0	0	0	3	1	0	0	4
TOTAL	129	127	148	94	79	87	48	64	76	134	109	66	78	56	74	83	1452

Notes:

Data represent the number of hours a condition occurred.

Number of Calm Hours: 13

a) Wind direction: E = east; N = north; S = south; W = west

m/s = meters per second

LNP COL 2.3-4

Table 2.3.4-201
Predicted LNP 1 and LNP 2 Chi/Q Values

Location and Averaging Period	AP1000 DCD Acceptance Criteria Chi/Q	LNP 1 and LNP 2 Maximum Predicted Chi/Q[a]
Exclusion Area Boundary		
0 – 2 hr.	$\leq 5.1 \times 10^{-4}$ sec/m^3	2.56×10^{-4} sec/m^3
Low Population Zone		
0 – 8 hr.	$\leq 2.2 \times 10^{-4}$ sec/m^3	4.44×10^{-5} sec/m^3
8 – 24 hr.	$\leq 1.6 \times 10^{-4}$ sec/m^3	3.18×10^{-5} sec/m^3
24 – 96 hr.	$\leq 1.0 \times 10^{-4}$ sec/m^3	1.54×10^{-5} sec/m^3
96 – 720 hr.	$\leq 8.0 \times 10^{-5}$ sec/m^3	5.44×10^{-6} sec/m^3

Notes:

a) Maximum predicted Chi/Q values occurred in the SW sector for EAB and .W sector for LPZ.

Chi/Q = atmospheric dilution factor

sec/m^3 = second per cubic meter

hr. = hour

LNP COL 2.3-4

Table 2.3.4-202 (Sheet 1 of 7)
Meteorological Input Data for PAVAN Model
Levy Nuclear Plant Meteorological Monitoring Station
Period of Record: February 1, 2007, to January 31, 2009 (Lower Elevation)

Wind Speed (m/s)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW
Class A																
≤1.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
≤1.05	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
≤1.55	0	1	0	2	1	0	1	1	0	1	0	3	2	4	1	0
≤2.05	4	2	2	4	4	0	3	2	3	1	1	5	2	5	6	0
≤3.05	8	22	16	15	18	9	3	4	2	5	20	21	30	12	11	17
≤4.05	8	11	30	34	28	11	3	8	7	6	43	106	98	11	13	19
≤5.05	3	9	11	35	42	13	0	1	3	18	38	77	53	4	6	14
≤6.05	0	0	7	18	19	1	0	0	3	6	11	19	32	2	0	0
≤8.05	0	0	0	4	6	0	0	0	0	1	1	1	10	2	0	0
≤10.05	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0
≤15.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

LNP COL 2.3-4

Table 2.3.4-202 (Sheet 2 of 7)
Meteorological Input Data for PAVAN Model
Levy Nuclear Plant Meteorological Monitoring Station
Period of Record: February 1, 2007 to January 31, 2009 (Lower Elevation)

Wind Speed (m/s)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW
Class B																
≤1.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
≤1.05	0	0	2	0	1	0	0	0	0	0	0	1	0	0	0	0
≤1.55	4	4	5	5	2	0	1	2	4	1	0	2	3	1	3	4
≤2.05	3	11	9	12	8	4	2	8	5	2	3	5	5	6	5	8
≤3.05	20	21	41	25	34	16	16	16	2	9	33	39	54	15	24	23
≤4.05	18	21	34	49	59	34	14	6	7	7	34	70	72	5	9	12
≤5.05	6	8	23	25	29	6	2	0	1	10	8	19	32	4	1	5
≤6.05	0	1	10	11	4	3	0	0	2	6	2	3	4	0	0	0
≤8.05	0	0	0	2	0	1	0	0	0	5	0	0	4	2	0	0
≤10.05	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
≤15.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

LNP COL 2.3-4

Table 2.3.4-202 (Sheet 3 of 7)
Meteorological Input Data for PAVAN Model
Levy Nuclear Plant Meteorological Monitoring Station
Period of Record: February 1, 2007 to January 31, 2009 (Lower Elevation)

Wind Speed (m/s)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW
Class C																
≤1.0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
≤1.05	3	1	0	0	0	0	1	1	0	0	0	1	1	2	3	2
≤1.55	7	7	6	7	11	3	4	4	6	10	4	6	8	7	7	7
≤2.05	9	22	10	14	18	15	12	8	10	9	11	14	12	11	6	16
≤3.05	30	37	39	53	55	24	23	14	18	16	37	53	77	22	13	22
≤4.05	8	14	43	52	49	24	11	13	10	13	19	53	74	3	3	9
≤5.05	2	8	21	27	29	11	3	2	2	8	11	14	18	1	0	4
≤6.05	0	2	6	7	6	1	0	0	3	10	4	0	3	0	0	1
≤8.05	0	0	0	2	1	0	0	0	0	3	0	1	1	0	0	0
≤10.05	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0
≤15.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

LNP COL 2.3-4

Table 2.3.4-202 (Sheet 4 of 7)
Meteorological Input Data for PAVAN Model
Levy Nuclear Plant Meteorological Monitoring Station
Period of Record: February 1, 2007 to January 31, 2009 (Lower Elevation)

Wind Speed (m/s)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW
Class D																
≤1.0	4	3	5	8	8	5	3	3	2	1	1	1	1	2	2	2
≤1.05	23	11	18	16	25	15	13	13	17	18	18	17	11	10	14	9
≤1.55	40	36	39	26	24	22	31	25	30	20	37	37	27	26	34	27
≤2.05	50	54	80	60	73	31	31	21	17	28	42	52	61	35	34	35
≤3.05	102	112	197	196	142	94	51	32	48	59	73	147	198	44	32	54
≤4.05	42	73	127	118	113	46	40	18	22	68	39	95	83	11	24	25
≤5.05	19	30	50	69	52	25	10	8	27	48	27	29	24	12	8	7
≤6.05	0	1	13	20	22	9	1	1	12	27	12	11	18	2	0	3
≤8.05	0	0	1	0	4	1	0	0	4	11	8	9	10	1	0	0
≤10.05	0	0	0	0	0	0	0	0	0	1	1	0	4	0	0	0
≤15.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

LNP COL 2.3-4

Table 2.3.4-202 (Sheet 5 of 7)
Meteorological Input Data for PAVAN Model
Levy Nuclear Plant Meteorological Monitoring Station
Period of Record: February 1, 2007 to January 31, 2009 (Lower Elevation)

Wind Speed (m/s)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW
Class E																
≤1.0	17	12	21	35	35	21	14	12	9	6	6	4	7	9	10	8
≤1.05	27	65	77	76	65	44	60	57	32	28	37	39	38	55	44	19
≤1.55	34	82	133	147	133	83	53	35	38	26	47	49	39	32	21	27
≤2.05	40	51	127	134	126	58	46	14	38	19	19	31	32	15	28	30
≤3.05	61	82	101	123	131	62	42	17	30	34	9	22	26	12	35	30
≤4.05	8	15	11	17	23	10	3	1	17	6	3	12	7	2	4	8
≤5.05	1	0	3	5	1	3	1	2	6	1	0	3	1	5	1	2
≤6.05	0	0	0	0	0	0	0	0	1	0	0	2	0	0	0	0
≤8.05	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
≤10.05	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
≤15.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

LNP COL 2.3-4

Table 2.3.4-202 (Sheet 6 of 7)
Meteorological Input Data for PAVAN Model
Levy Nuclear Plant Meteorological Monitoring Station
Period of Record: February 1, 2007 to January 31, 2009 (Lower Elevation)

Wind Speed (m/s)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW
Class F																
≤1.0	45	33	61	100	101	61	40	36	26	17	15	13	19	26	27	23
≤1.05	26	42	80	127	108	47	40	35	24	24	25	15	29	36	27	20
≤1.55	29	26	39	119	103	43	12	10	8	7	11	9	6	5	13	18
≤2.05	15	10	5	31	44	14	3	2	2	0	1	2	2	1	2	10
≤3.05	1	2	0	0	7	1	0	0	1	2	3	1	3	0	1	0
≤4.05	0	0	0	0	0	0	0	0	0	0	1	0	1	0	1	0
≤5.05	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
≤6.05	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
≤8.05	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
≤10.05	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
≤15.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

LNP COL 2.3-4

Table 2.3.4-202 (Sheet 7 of 7)
Meteorological Input Data for PAVAN Model
Levy Nuclear Plant Meteorological Monitoring Station
Period of Record: February 1, 2007 to January 31, 2009 (Lower Elevation)

Wind Speed (m/s)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW
Class G																
≤1.0	147	117	229	364	367	223	142	131	94	64	52	45	69	93	95	79
≤1.05	24	16	48	143	131	55	29	21	17	9	5	5	8	13	33	18
≤1.55	8	2	7	42	32	10	2	3	2	1	1	1	3	2	3	8
≤2.05	3	0	0	5	3	2	0	0	0	1	0	0	0	0	1	1
≤3.05	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0
≤4.05	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
≤5.05	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
≤6.05	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
≤8.05	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
≤10.05	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
≤15.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Notes:

a) Data representative of hours of occurrence by direction and wind speed category.

Wind direction: E = east; N = north; S = south; W = west

m/s = meters per second

LNP COL 2.3-4

Table 2.3.4-203
0- to 2-Hour 5th Percentile Exclusion Area Boundary Chi/Q Values for LNP 1 and LNP 2

Downwind Sector [(a)]	Distance (m)	Distance (ft.)	0-2 hr. Chi/Q with Wake (sec/m^3)	0-2 hr. Chi/Q without Wake sec/m^3)
S	1340	4396	2.40E-04	2.40E-04
SSW	1340	4396	2.27E-04	2.27E-04
SW	1340	4396	2.56E-04	2.56E-04
WSW	1340	4396	2.45E-04	2.45E-04
W	1340	4396	2.49E-04	2.49E-04
WNW	1340	4396	2.47E-04	2.47E-04
NW	1340	4396	2.30E-04	2.30E-04
NNW	1340	4396	2.32E-04	2.32E-04
N	1340	4396	2.08E-04	2.08E-04
NNE	1340	4396	1.65E-04	1.65E-04
NE	1340	4396	1.39E-04	1.39E-04
ENE	1340	4396	1.15E-04	1.15E-04
E	1340	4396	1.76E-04	1.76E-04
ESE	1340	4396	2.09E-04	2.09E-04
SE	1340	4396	2.06E-04	2.06E-04
SSE	1340	4396	1.99E-04	1.99E-04
MAX Chi/Q			2.56E-04	2.56E-04

Notes:

Predictions based on PAVAN model as described in FSAR Subsection 2.3.4.2.

a) Downwind Sector: E = east; N = north; S = south; W = west

Chi/Q = atmospheric dilution factor
ft. = foot
m = meter
sec/m^3 = second per cubic meter

LNP COL 2.3-4

Table 2.3.4-204
0- to 30-Day 5th Percentile Low Population Zone Chi/Q Values for LNP 1 and LNP 2

Downwind Sector	Distance (m)	Distance (mi.)	0-8 hr. Chi/Q with Wake (sec/m^3)	8-24 hr. Chi/Q with Wake (sec/m^3)	1-4 days Chi/Q with Wake (sec/m^3)	4-30 days Chi/Q with Wake (sec/m^3)	0-8 hr. Chi/Q without Wake (sec/m^3)	8-24 hr. Chi/Q without Wake (sec/m^3)	1-4 days Chi/Q without Wake (sec/m^3)	4-30 days Chi/Q without Wake (sec/m^3)
S	4830	3	3.54E-05	2.31E-05	9.16E-06	2.43E-06	3.65E-05	2.42E-05	9.92E-06	2.76E-06
SSW	4830	3	3.35E-05	2.18E-05	8.58E-06	2.25E-06	3.44E-05	2.27E-05	9.22E-06	2.53E-06
SW	4830	3	4.09E-05	2.77E-05	1.19E-05	3.54E-06	4.21E-05	2.89E-05	1.28E-05	3.99E-06
WSW	4830	3	4.26E-05	3.01E-05	1.42E-05	4.83E-06	4.40E-05	3.16E-05	1.54E-05	5.51E-06
W	4830	3	4.30E-05	3.03E-05	1.42E-05	4.77E-06	4.44E-05	3.18E-05	1.54E-05	5.44E-06
WNW	4830	3	3.87E-05	2.60E-05	1.10E-05	3.19E-06	4.00E-05	2.73E-05	1.19E-05	3.64E-06
NW	4830	3	3.40E-05	2.22E-05	8.79E-06	2.32E-06	3.51E-05	2.33E-05	9.53E-06	2.64E-06
NNW	4830	3	3.34E-05	2.15E-05	8.29E-06	2.11E-06	3.45E-05	2.26E-05	9.01E-06	2.41E-06
N	4830	3	2.93E-05	1.87E-05	7.02E-06	1.72E-06	3.02E-05	1.95E-05	7.59E-06	1.95E-06
NNE	4830	3	2.17E-05	1.38E-05	5.21E-06	1.28E-06	2.23E-05	1.44E-05	5.60E-06	1.44E-06
NE	4830	3	1.75E-05	1.13E-05	4.40E-06	1.13E-06	1.79E-05	1.17E-05	4.70E-06	1.26E-06
ENE	4830	3	1.45E-05	9.58E-06	3.88E-06	1.06E-06	1.49E-05	9.90E-06	4.11E-06	1.16E-06
E	4830	3	2.42E-05	1.56E-05	5.98E-06	1.51E-06	2.48E-05	1.62E-05	6.38E-06	1.68E-06
ESE	4830	3	2.93E-05	1.86E-05	6.98E-06	1.70E-06	3.02E-05	1.95E-05	7.55E-06	1.93E-06
SE	4830	3	2.94E-05	1.88E-05	7.16E-06	1.79E-06	3.03E-05	1.97E-05	7.75E-06	2.03E-06
SSE	4830	3	2.77E-05	1.76E-05	6.52E-06	1.57E-06	2.86E-05	1.84E-05	7.05E-06	1.78E-06

Notes:

Predictions based on PAVAN model as described in FSAR Subsection 2.3.4.2; Period of Record of meteorological data is from February 1, 2007, to January 31, 2009.

a) Downwind sector: E = east; N = north; S = south; W = west

Chi/Q = atmospheric dilution factor
hr. = hour
m = meter
mi. = mile
sec/m^3 = seconds per cubic meter

LNP COL 2.3-4

Table 2.3.4-205
0- to 2-Hour 50th Percentile Exclusion Area Boundary Chi/Q Values for LNP 1 and LNP 2

Time Period	Chi/Q (sec/m^3)	Source
0 - 2 hr.	7.81 E -05	PAVAN Model
0- to 30-day 50th Percentile LPZ Chi/Q Values for LNP 1 and LNP 2		
Time Period	**Chi/Q (sec/m^3)**	**Source**
0 - 2 hr.	1.96E-05	PAVAN Model
0 - 8 hr.	1.06E-05	Interpolation
8 - 24 hr.	7.81E-06	Interpolation
1 - 4 days	4.01E-06	Interpolation
4 - 30 days	1.54E-06	Interpolation
Annual Average	4.79E-07	PAVAN Model

Notes:

Chi/Q = atmospheric dilution factor
hr. = hour
sec/m^3 = second per cubic meter

LNP COL 2.3-4

Table 2.3.4-206 (Sheet 1 of 2)
Comparison of Control Room Atmospheric Dispersion Factors for Accident Analysis for AP1000 DCD and LNP Units 1 and 2

Chi/Q (sec/m^3) at HVAC Intake for the Identified Release Points[a]

	Plant Vent or PCS Air Diffuser[b]	Plant Vent	PCS Air Diffuser	Ground Level Contain-ment Release Points[c,h]	Ground Level Contain-ment Release Points	PORV and Safety Valve Releases[d]	PORV and Safety Valve Releases	Condenser Air Removal Stack[g]	Condenser Air Removal Stack	Steam Line Break Releases	Steam Vent	Fuel Handling Area[e]	Fuel Handling Area Blowout Panel	Radwa Build Tru Stagi Area D
Release Time	**DCD**	LNP	LNP	**DCD**	LNP	**DCD**	LNP	**DCD**	LNP	**DCD**	LNP	**DCD**	LNP	LNP
0 - 2 hours	**3.0E-03**	1.7E-03	1.5E-03	**6.0E-03**	4.3E-03	**2.0E-02**	1.0E-02	**6.0E-03**	1.7E-03	**2.4E-02**	1.1E-02	**6.0E-03**	1.3E-03	1.0E-0
2 - 8 hours	**2.5E-03**	1.0E-03	8.4E-04	**3.6E-03**	3.5E-03	**1.8E-02**	5.7E-03	**4.0E-03**	1.4E-03	**2.0E-02**	6.1E-03	**4.0E-03**	8.3E-04	6.4E-0
8 - 24 hours	**1.0E-03**	4.5E-04	3.7E-04	**1.4E-03**	1.2E-03	**7.0E-03**	2.7E-03	**2.0E-03**	6.4E-04	**7.5E-03**	3.0E-03	**2.0E-03**	3.7E-04	3.0E-0
1 - 4 days	**8.0E-04**	4.5E-04	3.8E-04	**1.8E-03**	1.2E-03	**5.0E-03**	2.1E-03	**1.5E-03**	5.9E-04	**5.5E-03**	2.3E-03	**1.5E-03**	3.4E-04	2.6E-0
4 - 30 days	**6.0E-04**	3.6E-04	3.0E-04	**1.5E-03**	9.9E-04	**4.5E-03**	1.3E-03	**1.0E-03**	4.7E-04	**5.0E-03**	1.5E-03	**1.0E-03**	2.7E-04	2.0E-0
0 - 2 hours	**1.0E-03**	3.7E-04	3.8E-04	**1.0E-03**	3.4E-04	**4.0E-03**	8.3E-04	**2.0E-02**	3.2E-03	**4.0E-03**	8.0E-04	**6.0E-03**	3.3E-04	3.2E-0
2 - 8 hours	**7.5E-04**	2.4E-04	2.5E-04	**7.5E-04**	2.8E-04	**3.2E-03**	4.8E-04	**1.8E-02**	1.8E-03	**3.2E-03**	4.7E-04	**4.0E-03**	2.2E-04	2.1E-0
8 - 24 hours	**3.5E-04**	1.1E-04	1.1E-04	**3.5E-04**	1.3E-04	**1.2E-03**	2.3E-04	**7.0E-03**	7.8E-04	**1.2E-03**	2.2E-04	**2.0E-03**	1.0E-04	1.0E-0
1 - 4 days	**2.8E-04**	1.1E-04	1.1E-04	**2.8E-04**	1.2E-04	**1.0E-03**	2.2E-04	**5.0E-03**	6.9E-04	**1.0E-03**	2.1E-04	**1.5E-03**	9.8E-05	9.4E-0
4 - 30 days	**2.5E-04**	8.9E-05	9.1E-05	**2.5E-04**	1.0E-04	**8.0E-04**	1.8E-04	**4.5E-03**	5.3E-04	**8.0E-04**	1.8E-04	**1.0E-03**	7.8E-05	7.5E-0

LNP COL 2.3-4

Table 2.3.4-206 (Sheet 2 of 2)
Comparison of Control Room Atmospheric Dispersion Factors for Accident Analysis for AP1000 DCD and LNP Units 1 and 2

Notes:

a) These dispersion factors are to be used 1) for the time period preceding the isolation of the main control room and actuation of the emergency habitability system, 2) for the time after 72 hours when the compressed air supply in the emergency habitability system would be exhausted and outside air would be drawn into the main control room, and 3) for the determination of control room doses when the non-safety ventilation system is assumed to remain operable such that the emergency habitability system is not actuated.

b) These dispersion factors are used for analysis of the doses due to a postulated small line break outside of containment. The plant vent and PCS air diffuser are potential release paths for other postulated events (loss-of-coolant accident, rod ejection accident, and fuel handling accident inside the containment); however, the values are bounded by the dispersion factors for ground level releases.

c) The listed values represent modeling the containment shell as a diffuse area source and are used for evaluating the doses in the main control room for a loss-of coolant accident, for the containment leakage of activity following a rod ejection accident, and for a fuel handling accident occurring inside the containment.

d) The listed values bound the dispersion factors for releases from the steam line safety and power-operated relief valves. These dispersion factors would be used for evaluating the doses in the main control room for a steam generator tube rupture, a main steam line break, a locked reactor coolant pump rotor, and for the secondary side release from a rod ejection accident.

e) This release point is included for information only as a potential activity release point. None of the design basis accident radiological consequences analyses model release from this point.

f) The listed values bound the dispersion factors for releases from the fuel storage and handling area. The listed values also bound the dispersion factors for releases from the fuel storage area in the event that spent fuel boiling occurs and the fuel handling area relief panel opens on high temperature. These dispersion factors are used for the fuel handling accident occurring outside containment and for evaluating the impact of releases associated with spent fuel pool boiling.

g) These dispersion factors are to be used when the emergency habitability system is in operation and the only path for outside air to enter the main control room is that due to ingress/egress.

h) The LOCA dose analysis models the ground level containment release point HVAC intake atmospheric dispersion factors. Other analyses model more conservative values.

Chi/Q = atmospheric dilution factor
sec/m^3 = second per cubic meter

LNP COL 2.3-4

Table 2.3.4-207
Control Room Release/Receptor Azimuthal Angles for Input to ARCON96

	Receptor Location	
Release Location	**Control Room HVAC Intake (degrees)**	**Annex Building Access (degrees)**
Plant Vent	238	240
PCS Air Diffuser	270	251
Fuel Building Blowout Panel	223	232
Radwaste Building Truck Staging Area Door	214	227
Steam Vent	313	255
PORV/Safety Valves	322	258
Condenser Air Removal Stack	52	290
Containment Shell (Diffuse Area Source)	261	245

LNP COL 2.3-5

Table 2.3.5-201 (Sheet 1 of 4)
Long-Term X/Q Calculations for Routine Releases for LNP 1 and LNP 2

	Exclusion Area Boundary		Low Population Zone [a]		Nearest Milk Cow		Nearest Milk Goat		Nearest Garden		Nearest Meat Animal	
Downwind Sector [b]	Distance (m)	X/Q (sec/m^3)	Distance (m)	X/Q (sec/m^3)	Distance (m)	X/Q (sec/m^3)	Distance (m)	X/Q (sec/m^3)	Distance (m)	X/Q (sec/m^3)	Distance (m)	X/Q (sec/m^3)
N	1340	2.90E-06	4829	5.20E-07	8049	2.70E-07	8049	2.70E-07	2898	1.00E-06	4990	5.00E-07
NNE	1340	2.10E-06	4829	3.60E-07	8049	1.80E-07	8049	1.80E-07	6600	2.40E-07	8049	1.80E-07
NE	1340	1.90E-06	4829	3.10E-07	8049	1.50E-07	8049	1.50E-07	6600	2.00E-07	8049	1.50E-07
ENE	1340	1.80E-06	4829	3.00E-07	8049	1.50E-07	8049	1.50E-07	8049	1.50E-07	7244	1.70E-07
E	1340	2.40E-06	4829	4.00E-07	8049	2.00E-07	8049	2.00E-07	7727	2.10E-07	6922	2.50E-07
ESE	1340	2.80E-06	4829	5.00E-07	8049	2.50E-07	8049	2.50E-07	8049	2.50E-07	5795	3.90E-07
SE	1340	4.50E-06	4829	8.40E-07	8049	4.40E-07	8049	4.40E-07	5956	6.40E-07	6600	5.60E-07
SSE	1340	2.80E-06	4829	5.10E-07	8049	2.60E-07	8049	2.60E-07	8049	2.60E-07	4185	6.10E-07
S	1340	3.80E-06	4829	6.90E-07	8049	3.60E-07	8049	3.60E-07	6761	4.50E-07	8049	3.60E-07
SSW	1340	3.80E-06	4829	6.60E-07	8049	3.40E-07	8049	3.40E-07	4829	6.60E-07	4507	7.20E-07
SW	1340	8.20E-06	4829	1.50E-06	8049	7.70E-07	8049	7.70E-07	4024	1.90E-06	8049	7.70E-07
WSW	1340	1.90E-05	4829	3.50E-06	8049	1.90E-06	8049	1.90E-06	2737	7.30E-06	8049	1.90E-06
W	1340	1.70E-05	4829	3.20E-06	8049	1.70E-06	8049	1.70E-06	8049	1.70E-06	8049	1.70E-06
WNW	1340	7.50E-06	4829	1.40E-06	8049	7.30E-07	8049	7.30E-07	8049	7.30E-07	8049	7.30E-07
NW	1340	4.60E-06	4829	8.50E-07	8049	4.40E-07	8049	4.40E-07	2576	1.90E-06	3541	1.30E-06
NNW	1340	3.60E-06	4829	6.50E-07	8049	3.40E-07	3863	8.70E-07	3380	1.00E-06	4668	6.80E-07

LNP COL 2.3-5

Table 2.3.5-201 (Sheet 2 of 4)
Long-Term X/Q Calculations for Routine Releases for LNP 1 and LNP 2

	Nearest Residence		Downwind Distance (mi.) (X/Q in sec/m^3)										
Downwind Sector [b]	Distance (m)	X/Q (sec/m^3)	0.25	0.5	0.75	1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5
N	2898	1.00E-06	2.20E-05	6.68E-06	3.39E-06	2.19E-06	1.28E-06	8.79E-07	6.57E-07	5.18E-07	4.24E-07	3.57E-07	3.07E-07
NNE	6600	2.40E-07	1.52E-05	4.70E-06	2.44E-06	1.58E-06	9.12E-07	6.19E-07	4.59E-07	3.60E-07	2.93E-07	2.46E-07	2.10E-07
NE	8049	1.50E-07	1.30E-05	4.10E-06	2.17E-06	1.41E-06	8.02E-07	5.38E-07	3.96E-07	3.08E-07	2.50E-07	2.08E-07	1.78E-07
ENE	8049	1.50E-07	1.29E-05	4.12E-06	2.16E-06	1.39E-06	7.82E-07	5.21E-07	3.81E-07	2.96E-07	2.39E-07	1.99E-07	1.69E-07
E	7727	2.10E-07	1.75E-05	5.44E-06	2.84E-06	1.84E-06	1.05E-06	7.03E-07	5.17E-07	4.03E-07	3.27E-07	2.73E-07	2.33E-07
ESE	5956	3.80E-07	2.08E-05	6.35E-06	3.30E-06	2.14E-06	1.25E-06	8.49E-07	6.32E-07	4.97E-07	4.06E-07	3.40E-07	2.92E-07
SE	4185	1.00E-06	3.61E-05	1.07E-05	5.34E-06	3.43E-06	2.04E-06	1.41E-06	1.06E-06	8.39E-07	6.89E-07	5.82E-07	5.01E-07
SSE	4668	5.30E-07	2.19E-05	6.56E-06	3.29E-06	2.12E-06	1.25E-06	8.60E-07	6.44E-07	5.09E-07	4.17E-07	3.52E-07	3.03E-07
S	6761	4.50E-07	2.98E-05	8.97E-06	4.52E-06	2.91E-06	1.71E-06	1.18E-06	8.79E-07	6.94E-07	5.69E-07	4.79E-07	4.12E-07
SSW	4507	7.20E-07	2.76E-05	8.56E-06	4.46E-06	2.90E-06	1.68E-06	1.14E-06	8.43E-07	6.61E-07	5.39E-07	4.52E-07	3.87E-07
SW	3220	2.50E-06	6.33E-05	1.91E-05	9.73E-06	6.29E-06	3.69E-06	2.53E-06	1.89E-06	1.49E-06	1.22E-06	1.03E-06	8.85E-07
WSW	2737	7.30E-06	1.52E-04	4.48E-05	2.22E-05	1.43E-05	8.53E-06	5.92E-06	4.46E-06	3.54E-06	2.92E-06	2.47E-06	2.13E-06
W	8049	1.70E-06	1.39E-04	4.07E-05	2.02E-05	1.30E-05	7.75E-06	5.38E-06	4.05E-06	3.22E-06	2.65E-06	2.24E-06	1.93E-06
WNW	8049	7.30E-07	5.99E-05	1.77E-05	8.83E-06	5.68E-06	3.38E-06	2.34E-06	1.76E-06	1.40E-06	1.15E-06	9.69E-07	8.36E-07
NW	2576	1.90E-06	3.59E-05	1.08E-05	5.48E-06	3.54E-06	2.09E-06	1.43E-06	1.07E-06	8.48E-07	6.95E-07	5.85E-07	5.04E-07
NNW	3380	1.00E-06	2.74E-05	8.27E-06	4.21E-06	2.72E-06	1.60E-06	1.10E-06	8.22E-07	6.49E-07	5.31E-07	4.47E-07	3.85E-07

LNP COL 2.3-5

Table 2.3.5-201 (Sheet 3 of 4)
Long-Term X/Q Calculations for Routine Releases for LNP 1 and LNP 2

Downwind Sector [b]	Downwind Distance (Mi.) (X/Q in sec/m^3)										
	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0	45.0	50.0
N	2.68E-07	1.60E-07	1.11E-07	6.68E-08	4.68E-08	3.56E-08	2.84E-08	2.36E-08	2.00E-08	1.74E-08	1.53E-08
NNE	1.83E-07	1.08E-07	7.45E-08	4.44E-08	3.09E-08	2.33E-08	1.86E-08	1.54E-08	1.30E-08	1.13E-08	9.89E-09
NE	1.54E-07	8.98E-08	6.14E-08	3.62E-08	2.50E-08	1.88E-08	1.49E-08	1.22E-08	1.03E-08	8.91E-09	7.81E-09
ENE	1.47E-07	8.50E-08	5.79E-08	3.40E-08	2.34E-08	1.76E-08	1.39E-08	1.14E-08	9.65E-09	8.32E-09	7.29E-09
E	2.03E-07	1.18E-07	8.12E-08	4.81E-08	3.33E-08	2.51E-08	2.00E-08	1.65E-08	1.39E-08	1.20E-08	1.06E-08
ESE	2.55E-07	1.51E-07	1.04E-07	6.25E-08	4.36E-08	3.30E-08	2.63E-08	2.18E-08	1.85E-08	1.60E-08	1.41E-08
SE	4.39E-07	2.64E-07	1.85E-07	1.12E-07	7.89E-08	6.02E-08	4.83E-08	4.01E-08	3.41E-08	2.97E-08	2.62E-08
SSE	2.65E-07	1.58E-07	1.10E-07	6.68E-08	4.69E-08	3.57E-08	2.86E-08	2.37E-08	2.02E-08	1.75E-08	1.54E-08
S	3.60E-07	2.15E-07	1.50E-07	9.03E-08	6.34E-08	4.82E-08	3.86E-08	3.20E-08	2.72E-08	2.36E-08	2.08E-08
SSW	3.37E-07	1.99E-07	1.37E-07	8.18E-08	5.69E-08	4.30E-08	3.43E-08	2.83E-08	2.40E-08	2.07E-08	1.82E-08
SW	7.73E-07	4.61E-07	3.21E-07	1.93E-07	1.35E-07	1.03E-07	8.23E-08	6.82E-08	5.79E-08	5.02E-08	4.42E-08
WSW	1.86E-06	1.13E-06	7.88E-07	4.80E-07	3.38E-07	2.58E-07	2.07E-07	1.72E-07	1.47E-07	1.28E-07	1.13E-07
W	1.69E-06	1.02E-06	7.16E-07	4.36E-07	3.07E-07	2.35E-07	1.88E-07	1.57E-07	1.34E-07	1.16E-07	1.02E-07
WNW	7.32E-07	4.41E-07	3.08E-07	1.87E-07	1.32E-07	1.01E-07	8.08E-08	6.71E-08	5.72E-08	4.97E-08	4.38E-08
NW	4.40E-07	2.63E-07	1.83E-07	1.11E-07	7.76E-08	5.90E-08	4.73E-08	3.92E-08	3.33E-08	2.89E-08	2.55E-08
NNW	3.36E-07	2.01E-07	1.40E-07	8.41E-08	5.89E-08	4.48E-08	3.58E-08	2.97E-08	2.52E-08	2.19E-08	1.93E-08

Notes:

Wind Reference Level: 10 m
Stability Type: ΔT (60 – 10 m)
Release Type: Ground Level:10 m
Building Height/Cross Section: 43.9 m/2730 m^2
Period of record: February 1, 2007, to January 31, 2008

LNP COL 2.3-5

Table 2.3.5-201 (Sheet 4 of 4)
Long-Term X/Q Calculations for Routine Releases for LNP 1 and LNP 2

Notes (continued):

a) The reported distance of the low population zone (LPZ) is measured from the centerpoint of LNP 1 and LNP 2 to the outermost boundary of the LPZ.

b) Downwind Sector: E = east; N = north, S = south W = west

X/Q = local atmospheric dilution factor
m = meter
m^2 = square meter
mi. = mile
sec/m^3 = seconds per cubic meter

LNP COL 2.3-5

Table 2.3.5-202 (Sheet 1 of 4)
Long-Term Average D/Q Calculations for Routine Releases for LNP 1 and LNP 2

	Exclusion Area Boundary		Low Population Zone [a]		Nearest Milk Cow		Nearest Milk Goat		Nearest Garden		Nearest Meat Animal	
Downwind Sector [b]	Distance (m)	D/Q (m^{-2})	Distance (m)	D/Q (m^{-2})	Distance (m)	D/Q (m^{-2})	Distance (m)	D/Q (m^{-2})	Distance (m)	D/Q (m^{-2})	Distance (m)	D/Q (m^{-2})
N	1340	2.80E-09	4829	3.10E-10	8049	1.20E-10	8049	1.20E-10	2898	7.60E-10	4990	2.90E-10
NNE	1340	3.20E-09	4829	3.50E-10	8049	1.40E-10	8049	1.40E-10	6600	2.00E-10	8049	1.40E-10
NE	1340	3.70E-09	4829	4.00E-10	8049	1.60E-10	8049	1.60E-10	6600	2.30E-10	8049	1.60E-10
ENE	1340	5.60E-09	4829	6.10E-10	8049	2.40E-10	8049	2.40E-10	8049	2.40E-10	7244	2.90E-10
E	1340	6.30E-09	4829	6.90E-10	8049	2.80E-10	8049	2.80E-10	7727	3.00E-10	6922	3.60E-10
ESE	1340	2.60E-09	4829	2.90E-10	8049	1.10E-10	8049	1.10E-10	8049	1.10E-10	5795	2.10E-10
SE	1340	3.10E-09	4829	3.40E-10	8049	1.40E-10	8049	1.40E-10	5956	2.30E-10	6600	1.90E-10
SSE	1340	3.00E-09	4829	3.20E-10	8049	1.30E-10	8049	1.30E-10	8049	1.30E-10	4185	4.20E-10
S	1340	4.00E-09	4829	4.30E-10	8049	1.70E-10	8049	1.70E-10	6761	2.40E-10	8049	1.70E-10
SSW	1340	5.00E-09	4829	5.50E-10	8049	2.20E-10	8049	2.20E-10	4829	5.50E-10	4507	6.20E-10
SW	1340	8.60E-09	4829	9.30E-10	8049	3.70E-10	8049	3.70E-10	4024	1.30E-09	8049	3.70E-10
WSW	1340	1.30E-08	4829	1.40E-09	8049	5.50E-10	8049	5.50E-10	2737	3.70E-09	8049	5.50E-10
W	1340	1.20E-08	4829	1.30E-09	8049	5.20E-10	8049	5.20E-10	8049	5.20E-10	8049	5.20E-10
WNW	1340	5.50E-09	4829	6.00E-10	8049	2.40E-10	8049	2.40E-10	8049	2.40E-10	8049	2.40E-10
NW	1340	3.60E-09	4829	3.90E-10	8049	1.60E-10	8049	1.60E-10	2576	1.20E-09	3541	6.80E-10
NNW	1340	2.60E-09	4829	2.90E-10	8049	1.10E-10	3863	4.20E-10	3380	5.40E-10	4668	3.00E-10

LEVY NUCLEAR PLANT UNITS 1 AND 2
COL APPLICATION
PART 2, FINAL SAFETY ANALYSIS REPORT

LNP COL 2.3-5

Table 2.3.5-202 (Sheet 2 of 4)
Long-Term Average D/Q Calculations for Routine Releases for LNP 1 and LNP 2

	Nearest Residence		Downwind Distance (mi.) (D/Q in m^{-2})										
Downwind Sector [b]	Distance (m)	D/Q (m^{-2})	0.25	0.5	0.75	1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5
N	2898	7.60E-10	1.95E-08	6.61E-09	3.39E-09	2.08E-09	1.04E-09	6.30E-10	4.26E-10	3.09E-10	2.35E-10	1.85E-10	1.50E-10
NNE	6600	2.00E-10	2.20E-08	7.42E-09	3.81E-09	2.34E-09	1.17E-09	7.08E-10	4.78E-10	3.47E-10	2.64E-10	2.08E-10	1.68E-10
NE	8049	1.60E-10	2.53E-08	8.56E-09	4.40E-09	2.70E-09	1.35E-09	8.16E-10	5.52E-10	4.00E-10	3.04E-10	2.40E-10	1.94E-10
ENE	8049	2.40E-10	3.85E-08	1.30E-08	6.68E-09	4.10E-09	2.05E-09	1.24E-09	8.39E-10	6.08E-10	4.62E-10	3.64E-10	2.95E-10
E	7727	3.00E-10	4.36E-08	1.48E-08	7.57E-09	4.65E-09	2.32E-09	1.41E-09	9.51E-10	6.89E-10	5.24E-10	4.13E-10	3.34E-10
ESE	5956	2.00E-10	1.81E-08	6.13E-09	3.15E-09	1.93E-09	9.63E-10	5.84E-10	3.95E-10	2.86E-10	2.18E-10	1.71E-10	1.39E-10
SE	4185	4.40E-10	2.16E-08	7.29E-09	3.74E-09	2.30E-09	1.15E-09	6.95E-10	4.70E-10	3.40E-10	2.59E-10	2.04E-10	1.65E-10
SSE	4668	3.40E-10	2.05E-08	6.93E-09	3.56E-09	2.18E-09	1.09E-09	6.60E-10	4.46E-10	3.23E-10	2.46E-10	1.94E-10	1.57E-10
S	6761	2.40E-10	2.74E-08	9.26E-09	4.76E-09	2.92E-09	1.46E-09	8.83E-10	5.97E-10	4.33E-10	3.29E-10	2.59E-10	2.10E-10
SSW	4507	6.20E-10	3.47E-08	1.17E-08	6.02E-09	3.70E-09	1.84E-09	1.12E-09	7.56E-10	5.48E-10	4.16E-10	3.28E-10	2.66E-10
SW	3220	1.90E-09	5.90E-08	2.00E-08	1.02E-08	6.29E-09	3.14E-09	1.90E-09	1.29E-09	9.32E-10	7.08E-10	5.58E-10	4.52E-10
WSW	2737	3.70E-09	8.67E-08	2.93E-08	1.51E-08	9.25E-09	4.61E-09	2.80E-09	1.89E-09	1.37E-09	1.04E-09	8.21E-10	6.64E-10
W	8049	5.20E-10	8.14E-08	2.75E-08	1.41E-08	8.68E-09	4.33E-09	2.63E-09	1.78E-09	1.29E-09	9.78E-10	7.71E-10	6.24E-10
WNW	8049	2.40E-10	3.79E-08	1.28E-08	6.58E-09	4.04E-09	2.01E-09	1.22E-09	8.26E-10	5.98E-10	4.55E-10	3.59E-10	2.90E-10
NW	2576	1.20E-09	2.48E-08	8.38E-09	4.30E-09	2.64E-09	1.32E-09	7.99E-10	5.40E-10	3.91E-10	2.98E-10	2.34E-10	1.90E-10
NNW	3380	5.40E-10	1.81E-08	6.12E-09	3.14E-09	1.93E-09	9.62E-10	5.83E-10	3.94E-10	2.86E-10	2.17E-10	1.71E-10	1.39E-10

LNP COL 2.3-5

Table 2.3.5-202 (Sheet 3 of 4)
Long-Term Average D/Q Calculations for Routine Releases for LNP 1 and LNP 2

Downwind Sector [b]	Downwind Distance (mi.) (D/Q in m^{-2})										
	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0	45.0	50.0
N	1.24E-10	6.07E-11	3.81E-11	1.92E-11	1.17E-11	7.81E-12	5.60E-12	4.20E-12	3.27E-12	2.61E-12	2.13E-12
NNE	1.39E-10	6.82E-11	4.28E-11	2.16E-11	1.31E-11	8.77E-12	6.28E-12	4.72E-12	3.67E-12	2.93E-12	2.39E-12
NE	1.60E-10	7.86E-11	4.93E-11	2.49E-11	1.51E-11	1.01E-11	7.25E-12	5.44E-12	4.23E-12	3.38E-12	2.76E-12
ENE	2.44E-10	1.20E-10	7.50E-11	3.79E-11	2.29E-11	1.54E-11	1.10E-11	8.27E-12	6.43E-12	5.14E-12	4.19E-12
E	2.76E-10	1.35E-10	8.50E-11	4.29E-11	2.60E-11	1.74E-11	1.25E-11	9.38E-12	7.29E-12	5.82E-12	4.75E-12
ESE	1.15E-10	5.63E-11	3.53E-11	1.78E-11	1.08E-11	7.24E-12	5.19E-12	3.90E-12	3.03E-12	2.42E-12	1.98E-12
SE	1.37E-10	6.69E-11	4.20E-11	2.12E-11	1.28E-11	8.61E-12	6.17E-12	4.63E-12	3.60E-12	2.88E-12	2.35E-12
SSE	1.30E-10	6.36E-11	3.99E-11	2.02E-11	1.22E-11	8.18E-12	5.86E-12	4.40E-12	3.42E-12	2.74E-12	2.23E-12
S	1.74E-10	8.51E-11	5.34E-11	2.70E-11	1.63E-11	1.10E-11	7.84E-12	5.89E-12	4.58E-12	3.66E-12	2.99E-12
SSW	2.20E-10	1.08E-10	6.75E-11	3.41E-11	2.07E-11	1.39E-11	9.93E-12	7.45E-12	5.80E-12	4.63E-12	3.78E-12
SW	3.74E-10	1.83E-10	1.15E-10	5.81E-11	3.52E-11	2.36E-11	1.69E-11	1.27E-11	9.86E-12	7.88E-12	6.43E-12
WSW	5.50E-10	2.69E-10	1.69E-10	8.54E-11	5.17E-11	3.47E-11	2.48E-11	1.87E-11	1.45E-11	1.16E-11	9.45E-12
W	5.16E-10	2.53E-10	1.59E-10	8.02E-11	4.85E-11	3.25E-11	2.33E-11	1.75E-11	1.36E-11	1.09E-11	8.88E-12
WNW	2.40E-10	1.18E-10	7.38E-11	3.73E-11	2.26E-11	1.51E-11	1.09E-11	8.15E-12	6.33E-12	5.06E-12	4.13E-12
NW	1.57E-10	7.69E-11	4.83E-11	2.44E-11	1.48E-11	9.90E-12	7.09E-12	5.33E-12	4.14E-12	3.31E-12	2.70E-12
NNW	1.15E-10	5.62E-11	3.53E-11	1.78E-11	1.08E-11	7.23E-12	5.18E-12	3.89E-12	3.03E-12	2.42E-12	1.97E-12

Notes:

Wind Reference Level: 10 m
Stability Type: ΔT (60 – 10 m)
Release Type: Ground Level: 10 m

LNP COL 2.3-5

Table 2.3.5-202 (Sheet 4 of 4)
Long-Term Average D/Q Calculations for Routine Releases for LNP 1 and LNP 2

Notes (continued):

Building Height/Cross Section: 43.9 m/2730 m^2
POR: February 1, 2007 – January 31, 2008

a) The reported distance of the low population zone (LPZ) is measured from the centerpoint of LNP 1 and LNP 2 to the outermost boundary of the LPZ.

b) Downwind Sector: E = east; N = north; S = south; W = west

D/Q = relative deposition
m = meter
mi. = mile
$m^{-2} = 1/m^2$
m^2 = square meter

LNP COL 2.3-5

Table 2.3.5-203 (Sheet 1 of 4)
Long-Term Average X/Q Calculations (2.26-Day Decay) for Routine Releases for LNP 1 and LNP 2

	Exclusion Area Boundary		Low Population Zone [a]		Nearest Milk Cow		Nearest Milk Goat		Nearest Garden		Nearest Meat Animal	
Downwind Sector [b]	Distance (m)	X/Q (sec/m^3)	Distance (m)	X/Q (sec/m^3)	Distance (m)	X/Q (sec/m^3)	Distance (m)	X/Q (sec/m^3)	Distance (m)	X/Q (sec/m^3)	Distance (m)	X/Q (sec/m^3)
N	1340	2.80E-06	4829	4.80E-07	8049	2.40E-07	8049	2.40E-07	2898	9.70E-07	4990	4.60E-07
NNE	1340	2.00E-06	4829	3.40E-07	8049	1.60E-07	8049	1.60E-07	6600	2.20E-07	8049	1.60E-07
NE	1340	1.80E-06	4829	2.90E-07	8049	1.40E-07	8049	1.40E-07	6600	1.90E-07	8049	1.40E-07
ENE	1340	1.80E-06	4829	2.80E-07	8049	1.30E-07	8049	1.30E-07	8049	1.30E-07	7244	1.60E-07
E	1340	2.40E-06	4829	3.80E-07	8049	1.80E-07	8049	1.80E-07	7727	1.90E-07	6922	2.30E-07
ESE	1340	2.80E-06	4829	4.60E-07	8049	2.30E-07	8049	2.30E-07	8049	2.30E-07	5795	3.60E-07
SE	1340	4.40E-06	4829	7.80E-07	8049	3.90E-07	8049	3.90E-07	5956	5.90E-07	6600	5.10E-07
SSE	1340	2.70E-06	4829	4.70E-07	8049	2.40E-07	8049	2.40E-07	8049	2.40E-07	4185	5.80E-07
S	1340	3.80E-06	4829	6.50E-07	8049	3.20E-07	8049	3.20E-07	6761	4.10E-07	8049	3.20E-07
SSW	1340	3.70E-06	4829	6.20E-07	8049	3.00E-07	8049	3.00E-07	4829	6.20E-07	4507	6.80E-07
SW	1340	8.10E-06	4829	1.40E-06	8049	6.90E-07	8049	6.90E-07	4024	1.80E-06	8049	6.90E-07
WSW	1340	1.80E-05	4829	3.30E-06	8049	1.60E-06	8049	1.60E-06	2737	7.00E-06	8049	1.60E-06
W	1340	1.70E-05	4829	3.00E-06	8049	1.50E-06	8049	1.50E-06	8049	1.50E-06	8049	1.50E-06
WNW	1340	7.30E-06	4829	1.30E-06	8049	6.50E-07	8049	6.50E-07	8049	6.50E-07	8049	6.50E-07
NW	1340	4.60E-06	4829	7.90E-07	8049	3.90E-07	8049	3.90E-07	2576	1.80E-06	3541	1.20E-06
NNW	1340	3.50E-06	4829	6.00E-07	8049	3.00E-07	3863	8.20E-07	3380	9.80E-07	4668	6.30E-07

LEVY NUCLEAR PLANT UNITS 1 AND 2
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LNP COL 2.3-5

Table 2.3.5-203 (Sheet 2 of 4)
Long-Term Average X/Q Calculations (2.26-Day Decay) for Routine Releases for LNP 1 and LNP 2

Nearest Residence			Downwind Distance (mi.) (X/Q in sec/m^3)										
Downwind Sector [b]	Distance (m)	X/Q (sec/m^3)	0.25	0.5	0.75	1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5
N	2898	9.70E-07	2.19E-05	6.60E-06	3.34E-06	2.14E-06	1.24E-06	8.40E-07	6.20E-07	4.84E-07	3.91E-07	3.25E-07	2.76E-07
NNE	6600	2.20E-07	1.51E-05	4.65E-06	2.40E-06	1.55E-06	8.84E-07	5.93E-07	4.35E-07	3.37E-07	2.72E-07	2.25E-07	1.91E-07
NE	8049	1.40E-07	1.29E-05	4.06E-06	2.14E-06	1.39E-06	7.80E-07	5.18E-07	3.77E-07	2.91E-07	2.33E-07	1.93E-07	1.63E-07
ENE	8049	1.30E-07	1.28E-05	4.08E-06	2.13E-06	1.37E-06	7.63E-07	5.04E-07	3.65E-07	2.81E-07	2.25E-07	1.85E-07	1.56E-07
E	7727	1.90E-07	1.74E-05	5.39E-06	2.80E-06	1.80E-06	1.02E-06	6.76E-07	4.93E-07	3.80E-07	3.06E-07	2.53E-07	2.13E-07
ESE	5956	3.50E-07	2.07E-05	6.28E-06	3.24E-06	2.09E-06	1.20E-06	8.12E-07	5.97E-07	4.64E-07	3.74E-07	3.11E-07	2.63E-07
SE	4185	9.40E-07	3.58E-05	1.06E-05	5.24E-06	3.35E-06	1.96E-06	1.34E-06	9.95E-07	7.79E-07	6.32E-07	5.27E-07	4.49E-07
SSE	4668	5.00E-07	2.18E-05	6.48E-06	3.24E-06	2.07E-06	1.21E-06	8.21E-07	6.08E-07	4.75E-07	3.85E-07	3.21E-07	2.73E-07
S	6761	4.10E-07	2.96E-05	8.87E-06	4.45E-06	2.85E-06	1.66E-06	1.12E-06	8.31E-07	6.48E-07	5.25E-07	4.37E-07	3.72E-07
SSW	4507	6.80E-07	2.75E-05	8.48E-06	4.40E-06	2.84E-06	1.63E-06	1.09E-06	8.01E-07	6.21E-07	5.01E-07	4.15E-07	3.52E-07
SW	3220	2.40E-06	6.29E-05	1.89E-05	9.57E-06	6.15E-06	3.57E-06	2.42E-06	1.79E-06	1.40E-06	1.13E-06	9.40E-07	7.98E-07
WSW	2737	7.00E-06	1.51E-04	4.42E-05	2.18E-05	1.39E-05	8.23E-06	5.64E-06	4.20E-06	3.29E-06	2.68E-06	2.23E-06	1.90E-06
W	8049	1.50E-06	1.38E-04	4.02E-05	1.98E-05	1.27E-05	7.48E-06	5.12E-06	3.81E-06	2.99E-06	2.43E-06	2.03E-06	1.73E-06
WNW	8049	6.50E-07	5.95E-05	1.75E-05	8.68E-06	5.54E-06	3.26E-06	2.23E-06	1.66E-06	1.30E-06	1.05E-06	8.80E-07	7.49E-07
NW	2576	1.80E-06	3.57E-05	1.07E-05	5.39E-06	3.46E-06	2.01E-06	1.37E-06	1.01E-06	7.90E-07	6.40E-07	5.32E-07	4.52E-07
NNW	3380	9.80E-07	2.72E-05	8.17E-06	4.14E-06	2.66E-06	1.55E-06	1.05E-06	7.74E-07	6.04E-07	4.89E-07	4.07E-07	3.45E-07

LNP COL 2.3-5

Table 2.3.5-203 (Sheet 3 of 4)
Long-Term Average X/Q Calculations (2.26-Day Decay) for Routine Releases for LNP 1 and LNP 2

Downwind Sector [b]	Downwind Distance (mi.) (X/Q in sec/m^3)										
	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0	45.0	50.0
N	2.39E-07	1.34E-07	8.79E-08	4.71E-08	2.94E-08	1.99E-08	1.43E-08	1.06E-08	8.10E-09	6.33E-09	5.04E-09
NNE	1.64E-07	9.16E-08	5.98E-08	3.19E-08	2.00E-08	1.36E-08	9.75E-09	7.28E-09	5.59E-09	4.40E-09	3.52E-09
NE	1.40E-07	7.73E-08	5.03E-08	2.68E-08	1.68E-08	1.15E-08	8.31E-09	6.25E-09	4.85E-09	3.85E-09	3.11E-09
ENE	1.34E-07	7.41E-08	4.83E-08	2.58E-08	1.63E-08	1.12E-08	8.16E-09	6.19E-09	4.83E-09	3.87E-09	3.15E-09
E	1.83E-07	1.02E-07	6.64E-08	3.55E-08	2.23E-08	1.53E-08	1.11E-08	8.33E-09	6.46E-09	5.13E-09	4.15E-09
ESE	2.27E-07	1.27E-07	8.28E-08	4.42E-08	2.75E-08	1.86E-08	1.33E-08	9.90E-09	7.57E-09	5.91E-09	4.70E-09
SE	3.88E-07	2.19E-07	1.44E-07	7.73E-08	4.82E-08	3.26E-08	2.32E-08	1.72E-08	1.30E-08	1.01E-08	7.98E-09
SSE	2.36E-07	1.33E-07	8.74E-08	4.71E-08	2.95E-08	2.01E-08	1.44E-08	1.07E-08	8.21E-09	6.43E-09	5.13E-09
S	3.21E-07	1.81E-07	1.19E-07	6.39E-08	4.00E-08	2.72E-08	1.96E-08	1.46E-08	1.12E-08	8.76E-09	6.99E-09
SSW	3.03E-07	1.69E-07	1.11E-07	5.94E-08	3.72E-08	2.54E-08	1.83E-08	1.37E-08	1.06E-08	8.34E-09	6.71E-09
SW	6.89E-07	3.88E-07	2.54E-07	1.37E-07	8.53E-08	5.79E-08	4.15E-08	3.09E-08	2.36E-08	1.85E-08	1.47E-08
WSW	1.65E-06	9.34E-07	6.16E-07	3.31E-07	2.07E-07	1.40E-07	1.00E-07	7.41E-08	5.64E-08	4.38E-08	3.47E-08
W	1.50E-06	8.49E-07	5.59E-07	3.01E-07	1.88E-07	1.27E-07	9.09E-08	6.73E-08	5.12E-08	3.98E-08	3.15E-08
WNW	6.48E-07	3.67E-07	2.42E-07	1.30E-07	8.11E-08	5.50E-08	3.93E-08	2.91E-08	2.22E-08	1.73E-08	1.37E-08
NW	3.91E-07	2.20E-07	1.44E-07	7.73E-08	4.81E-08	3.26E-08	2.33E-08	1.72E-08	1.31E-08	1.02E-08	8.11E-09
NNW	2.98E-07	1.68E-07	1.10E-07	5.87E-08	3.65E-08	2.47E-08	1.76E-08	1.31E-08	9.95E-09	7.74E-09	6.14E-09

Notes:

Wind Reference Level: 10 m

LEVY NUCLEAR PLANT UNITS 1 AND 2
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LNP COL 2.3-5

Table 2.3.5-203 (Sheet 4 of 4)
Long-Term Average X/Q Calculations (2.26-Day Decay) for Routine Releases for LNP 1 and LNP 2

Notes (continued):

Stability Type: ΔT (60 – 10 m)
Release Type: Ground Level:10 m
Building Height/Cross Section: 43.9 m/2730 m^2

a) The reported distance of the low population zone (LPZ) is measured from the centerpoint of LNP 1 and LNP 2 to the outermost boundary of the LPZ.

b) Downwind Sector: E = east; N = north; S = south; W = west

X/Q = local atmospheric dilution factor
m = meter
m^2 = square meter
mi. = mile
sec/m^3 = seconds per cubic meter

LEVY NUCLEAR PLANT UNITS 1 AND 2
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LNP COL 2.3-5

Table 2.3.5-204 (Sheet 1 of 4)
Long-Term Average X/Q Calculations (Depleted and 8-Day Decayed) for Routine Releases for LNP 1 and LNP 2

	Exclusion Area Boundary		Low Population Zone [a]		Nearest Milk Cow		Nearest Milk Goat		Nearest Garden		Nearest Meat Animal	
Downwind Sector [b]	Distance (m)	X/Q (sec/m^3)	Distance (m)	X/Q (sec/m^3)	Distance (m)	X/Q (sec/m^3)	Distance (m)	X/Q (sec/m^3)	Distance (m)	X/Q (sec/m^3)	Distance (m)	X/Q (ec/m^3)
N	1340	2.50E-06	4829	4.00E-07	8049	1.90E-07	8049	1.90E-07	2898	8.30E-07	4990	3.80E-07
NNE	1340	1.80E-06	4829	2.80E-07	8049	1.30E-07	8049	1.30E-07	6600	1.80E-07	8049	1.30E-07
NE	1340	1.60E-06	4829	2.40E-07	8049	1.10E-07	8049	1.10E-07	6600	1.50E-07	8049	1.10E-07
ENE	1340	1.60E-06	4829	2.30E-07	8049	1.10E-07	8049	1.10E-07	8049	1.10E-07	7244	1.30E-07
E	1340	2.10E-06	4829	3.10E-07	8049	1.50E-07	8049	1.50E-07	7727	1.60E-07	6922	1.80E-07
ESE	1340	2.50E-06	4829	3.90E-07	8049	1.80E-07	8049	1.80E-07	8049	1.80E-07	5795	3.00E-07
SE	1340	4.00E-06	4829	6.50E-07	8049	3.20E-07	8049	3.20E-07	5956	4.80E-07	6600	4.20E-07
SSE	1340	2.50E-06	4829	4.00E-07	8049	1.90E-07	8049	1.90E-07	8049	1.90E-07	4185	4.90E-07
S	1340	3.40E-06	4829	5.40E-07	8049	2.60E-07	8049	2.60E-07	6761	3.30E-07	8049	2.60E-07
SSW	1340	3.30E-06	4829	5.20E-07	8049	2.40E-07	8049	2.40E-07	4829	5.20E-07	4507	5.70E-07
SW	1340	7.30E-06	4829	1.20E-06	8049	5.60E-07	8049	5.60E-07	4024	1.50E-06	8049	5.60E-07
WSW	1340	1.70E-05	4829	2.80E-06	8049	1.30E-06	8049	1.30E-06	2737	6.00E-06	8049	1.30E-06
W	1340	1.50E-05	4829	2.50E-06	8049	1.20E-06	8049	1.20E-06	8049	1.20E-06	8049	1.20E-06
WNW	1340	6.60E-06	4829	1.10E-06	8049	5.30E-07	8049	5.30E-07	8049	5.30E-07	8049	5.30E-07
NW	1340	4.10E-06	4829	6.60E-07	8049	3.20E-07	8049	3.20E-07	2576	1.60E-06	3541	1.00E-06
NNW	1340	3.10E-06	4829	5.00E-07	8049	2.40E-07	3863	6.90E-07	3380	8.40E-07	4668	5.30E-07

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LNP COL 2.3-5

Table 2.3.5-204 (Sheet 2 of 4)
Long-Term Average X/Q Calculations (Depleted and 8-Day Decayed) for Routine Releases for LNP 1 and LNP 2

	Nearest Residence		Downwind Distance (mi.) (X/Q in sec/m^3)										
Downwind Sector [(b)]	Distance (m)	X/Q (sec/m^3)	0.25	0.5	0.75	1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5
N	2898	8.30E-07	2.08E-05	6.08E-06	3.01E-06	1.90E-06	1.08E-06	7.19E-07	5.24E-07	4.04E-07	3.24E-07	2.67E-07	2.25E-07
NNE	6600	1.80E-07	1.44E-05	4.28E-06	2.16E-06	1.37E-06	7.68E-07	5.06E-07	3.66E-07	2.81E-07	2.24E-07	1.84E-07	1.55E-07
NE	8049	1.10E-07	1.23E-05	3.73E-06	1.93E-06	1.23E-06	6.76E-07	4.41E-07	3.16E-07	2.41E-07	1.91E-07	1.56E-07	1.31E-07
ENE	8049	1.10E-07	1.22E-05	3.75E-06	1.92E-06	1.21E-06	6.59E-07	4.27E-07	3.05E-07	2.32E-07	1.83E-07	1.50E-07	1.25E-07
E	7727	1.60E-07	1.65E-05	4.96E-06	2.52E-06	1.60E-06	8.81E-07	5.75E-07	4.13E-07	3.15E-07	2.50E-07	2.05E-07	1.72E-07
ESE	5956	2.90E-07	1.96E-05	5.78E-06	2.92E-06	1.86E-06	1.05E-06	6.94E-07	5.04E-07	3.87E-07	3.09E-07	2.55E-07	2.14E-07
SE	4185	8.00E-07	3.41E-05	9.76E-06	4.73E-06	2.98E-06	1.71E-06	1.15E-06	8.42E-07	6.52E-07	5.25E-07	4.34E-07	3.67E-07
SSE	4668	4.20E-07	2.07E-05	5.97E-06	2.92E-06	1.84E-06	1.05E-06	7.03E-07	5.13E-07	3.96E-07	3.18E-07	2.63E-07	2.22E-07
S	6761	3.30E-07	2.81E-05	8.17E-06	4.01E-06	2.53E-06	1.44E-06	9.61E-07	7.01E-07	5.41E-07	4.34E-07	3.58E-07	3.02E-07
SSW	4507	5.70E-07	2.61E-05	7.80E-06	3.96E-06	2.52E-06	1.41E-06	9.31E-07	6.73E-07	5.16E-07	4.12E-07	3.39E-07	2.85E-07
SW	3220	2.10E-06	5.98E-05	1.74E-05	8.63E-06	5.47E-06	3.11E-06	2.07E-06	1.51E-06	1.16E-06	9.33E-07	7.70E-07	6.50E-07
WSW	2737	6.00E-06	1.44E-04	4.07E-05	1.97E-05	1.24E-05	7.17E-06	4.84E-06	3.55E-06	2.76E-06	2.22E-06	1.84E-06	1.56E-06
W	8049	1.20E-06	1.31E-04	3.71E-05	1.79E-05	1.13E-05	6.52E-06	4.39E-06	3.23E-06	2.50E-06	2.02E-06	1.67E-06	1.42E-06
WNW	8049	5.30E-07	5.66E-05	1.62E-05	7.83E-06	4.94E-06	2.84E-06	1.91E-06	1.40E-06	1.09E-06	8.74E-07	7.24E-07	6.12E-07
NW	2576	1.60E-06	3.39E-05	9.85E-06	4.86E-06	3.08E-06	1.75E-06	1.17E-06	8.55E-07	6.60E-07	5.30E-07	4.37E-07	3.69E-07
NNW	3380	8.40E-07	2.59E-05	7.53E-06	3.73E-06	2.37E-06	1.35E-06	8.98E-07	6.55E-07	5.05E-07	4.05E-07	3.34E-07	2.82E-07

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Table 2.3.5-204 (Sheet 3 of 4)
Long-Term Average X/Q Calculations (Depleted and 8-Day Decayed) for Routine Releases for LNP 1 and LNP 2

Downwind Sector [b]	Downwind Distance (mi.) (X/Q in sec/m^3)										
	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0	45.0	50.0
N	1.93E-07	1.07E-07	6.98E-08	3.76E-08	2.39E-08	1.66E-08	1.22E-08	9.38E-09	7.41E-09	5.98E-09	4.91E-09
NNE	1.32E-07	7.26E-08	4.70E-08	2.51E-08	1.59E-08	1.10E-08	8.09E-09	6.19E-09	4.88E-09	3.94E-09	3.23E-09
NE	1.12E-07	6.06E-08	3.90E-08	2.06E-08	1.30E-08	8.97E-09	6.58E-09	5.03E-09	3.97E-09	3.20E-09	2.63E-09
ENE	1.07E-07	5.76E-08	3.69E-08	1.95E-08	1.23E-08	8.49E-09	6.23E-09	4.77E-09	3.77E-09	3.04E-09	2.50E-09
E	1.47E-07	7.99E-08	5.15E-08	2.74E-08	1.73E-08	1.20E-08	8.81E-09	6.75E-09	5.32E-09	4.30E-09	3.53E-09
ESE	1.84E-07	1.01E-07	6.56E-08	3.52E-08	2.23E-08	1.55E-08	1.14E-08	8.69E-09	6.85E-09	5.53E-09	4.53E-09
SE	3.16E-07	1.77E-07	1.16E-07	6.27E-08	4.00E-08	2.79E-08	2.06E-08	1.58E-08	1.25E-08	1.01E-08	8.26E-09
SSE	1.91E-07	1.06E-07	6.94E-08	3.75E-08	2.39E-08	1.67E-08	1.23E-08	9.46E-09	7.48E-09	6.04E-09	4.97E-09
S	2.60E-07	1.44E-07	9.42E-08	5.08E-08	3.24E-08	2.26E-08	1.66E-08	1.28E-08	1.01E-08	8.16E-09	6.71E-09
SSW	2.44E-07	1.34E-07	8.67E-08	4.63E-08	2.93E-08	2.04E-08	1.50E-08	1.15E-08	9.05E-09	7.31E-09	6.00E-09
SW	5.58E-07	3.10E-07	2.02E-07	1.09E-07	6.91E-08	4.81E-08	3.55E-08	2.72E-08	2.15E-08	1.73E-08	1.42E-08
WSW	1.34E-06	7.52E-07	4.94E-07	2.68E-07	1.71E-07	1.20E-07	8.84E-08	6.79E-08	5.37E-08	4.34E-08	3.57E-08
W	1.22E-06	6.83E-07	4.48E-07	2.44E-07	1.56E-07	1.09E-07	8.03E-08	6.17E-08	4.88E-08	3.94E-08	3.24E-08
WNW	5.27E-07	2.95E-07	1.93E-07	1.05E-07	6.69E-08	4.67E-08	3.45E-08	2.65E-08	2.09E-08	1.69E-08	1.39E-08
NW	3.17E-07	1.76E-07	1.15E-07	6.21E-08	3.95E-08	2.75E-08	2.03E-08	1.55E-08	1.23E-08	9.89E-09	8.12E-09
NNW	2.42E-07	1.34E-07	8.76E-08	4.72E-08	3.00E-08	2.09E-08	1.54E-08	1.18E-08	9.28E-09	7.49E-09	6.15E-09

Notes:
Wind Reference Level: 10 m

LEVY NUCLEAR PLANT UNITS 1 AND 2
COL APPLICATION
PART 2, FINAL SAFETY ANALYSIS REPORT

LNP COL 2.3-5

Table 2.3.5-204 (Sheet 4 of 4)
Long-Term Average X/Q Calculations (Depleted and 8-Day Decayed) for Routine Releases for LNP 1 and LNP 2

Notes (continued):

Stability Type: ΔT (60 – 10 m)
Release Type: Ground Level: 10 m
Building Height/Cross Section: 43.9 m/2730 m^2

a) The reported distance of the low population zone (LPZ) is measured from the centerpoint of LNP 1 and LNP 2 to the outermost boundary of the LPZ.

b) Downwind Sector: E = east; N = north; S = south; W = west

X/Q = local atmospheric dilution factor
m = meter
m^2 = square meter
mi. = mile
sec/m^3 = seconds per cubic meter

Attachments/Enclosures:

None