LaSalle Environmental Audit
Response to Request for Additional Information

Index #: 001 **RAI #:** MA-01 **Category:** Meteorology, Air Quality & Noise

Statement of Question:
Provide the following meteorological information from the data recorded at the LaSalle County Station, Units 1 and 2 (LSCS) meteorological facility for the most recent 5 years for which data is available:

a. mean monthly and annual temperatures;
b. mean monthly precipitation and annual precipitation; and
c. seasonal and annual summary wind statistics in the form of wind direction, wind roses, annual average wind speed and peak wind gust.

Response:

a. Mean monthly temperature data are presented in Section 7 of the LSCS Meteorological Monitoring Program monthly monitoring reports. These monthly reports provide the basis for the LSCS Meteorological Monitoring Program annual reports. The average of the monthly mean temperatures and the average annual temperatures (based upon the monthly mean temperatures) for the years 2010 through 2014 are presented in Table 1 below.

Table 1
LaSalle County Station Mean Monthly Temperatures at 33 feet (°F)
2010 - 2014

	2010	2011	2012	2013	2014	AVERAGE Mean (for month)
January	19.1	20.5	30.2	26.8	16.0	22.5
February	25.0	26.8	33.0	27.0	15.4	25.4
March	42.9	38.3	53.2	32.2	31.7	39.7
April	57.2	49.9	52.4	47.7	49.8	51.4
May	62.7	61.2	66.5	63.6	62.5	63.3
June	72.1	71.7	72.8	69.8	71.3	71.5
July	75.9	79.0	80.1	72.5	69.3	75.4
August	75.3	73.3	72.3	72.1	71.7	72.9
September	65.7	61.6	63.6	66.7	63.2	64.2
October	56.3	54.6	50.6	53.7	52.5	53.5
November	41.9	43.9	39.8	37.2	33.6	39.3
December	20.8	35.0	35.4	23.9	31.5	29.3
AVERAGE Mean (for year)	51.2	51.3	54.2	49.4	47.4	

SOURCE: Monthly Reports on Meteorological Monitoring Program at the LaSalle County Nuclear Station (2010 to 2014)

b. Monthly and annual total precipitation data are presented each year in the LSCS Meteorological Monitoring Program annual report, Table 12. The mean monthly and annual total precipitation amounts during 2010 through 2014 are summarized in Table 2 below. Copies of the annual reports are being provided.

Table 2
LaSalle County Station Monthly and Annual Precipitation Totals and Averages (inches)*
2010 - 2014

	2010	2011	2012	2013	2014	Average (for month)
January	0.40	0.10	0.37	2.40	1.36	0.93
February	0.05	0.96	0.87	1.08	1.34	0.86
March	1.70	1.55	1.83	0.86	0.85	1.36
April	2.06	4.15	1.15	6.29	3.08	3.35
May	4.08	4.40	5.92	6.56	3.75	4.94
June	7.85	5.88	2.23	5.44	8.04	5.89
July	1.95	0.90	0.58	1.15	2.21	1.36
August	1.31	1.69	4.14	3.43	8.25	3.76
September	2.84	3.20	2.88	0.57	3.54	2.61
October	1.33	0.91	3.72	3.67	2.40	2.41
November	1.37	3.40	0.86	2.00	1.38	1.80
December	1.45	2.04	0.75	0.61	1.03	1.18
Annual Total	26.39	29.18	25.3	34.06	37.23	

* Some data were missing – actual precipitation may be underreported.
SOURCE: Table 12, LSCS Meteorological Monitoring Program annual reports (2010 to 2014)

c. Seasonal and annual summary wind statistics in the form of wind direction and speed frequency distribution tables and wind roses are provided by season and for the year in each LSCS Meteorological Monitoring Program annual report, Tables 7 through 11. Copies of the annual reports for the years 2010 through 2014 are attached.

Table 3 below presents the predominant quarterly and annual wind speeds and directions at the 375-foot level for years 2010 through 2014. The predominant wind direction at the LSCS site was west-northwest (WNW) during three of the five years from 2010 through 2014 and south-southwest (SSW) during the remaining two years. Wind speed at the 375-foot level was between 7.6 and 24.5 mph approximately 73 % of the time during 2010 through 2014, and was greater than 12.5 mph approximately 70% of the time.

Each LSCS Meteorological Monitoring Program monthly report contains the mean and maximum recorded wind speeds for the month. Table 4 (below) summarizes these data

at the meteorological tower 33-ft elevation and indicates the average of the monthly mean wind speeds at that elevation for each year from 2010 through 2014. Table 4 also shows the maximum wind speed recorded at the meteorological tower 33-ft elevation during each year from 2010 through 2014. At that elevation, the highest recorded wind speed during that period occurred in February 2011 and was 37.2 mph.

Table 3
LaSalle County Station Quarterly and Annual
Wind Speed and Direction at 375 feet
2010 - 2014

	2010			
	Speed (mph)	**%**	**Direction**	**%**
1st Qtr	12.6 to 18.5	33.6	NW	14.00
2nd Qtr	12.6 to 18.5	28.48	SSW	8.76
3rd Qtr	12.6 to 18.5	32.07	SSW	14.23
4th Qtr	12.6 to 18.5	28.48	WNW	11.15
Annual	12.6 to 18.5	30.61	WNW	9.40

	2011				2012			
	Speed (mph)	**%**		**%**	**Speed (mph)**	**%**	**Direction**	**%**
1st Qtr	12.6 to 18.5	30.1	NW	12.58	> 24.5	28.07	WNW	13.16
2nd Qtr	12.6 to 18.5	28.17	SSW	8.99	12.6 to 18.5	33.27	SSW	11.69
3rd Qtr	7.6 to 12.5	31.2	SW	8.07	12.6 to 18.5	34.99	SSW	9.32
4th Qtr	12.6 to 18.5	29.95	SSW	16.22	12.6 to 18.5	30.49	SSW	13.98
Annual	12.6 to 18.5	29.27	SSW	9.63	12.6 to 18.5	31.01	SSW	11.26

	2013				2014			
	Speed (mph)	**%**	**Direction**	**%**	**Speed (mph)**	**%**	**Direction**	**%**
1st Qtr	12.6 to 18.5	27.21	WNW	16.64	12.6 to 18.5	27.91	WNW	14.09
2nd Qtr	12.6 to 18.5	31.99	SSW	10.34	12.6 to 18.5	32.37	S	9.80
3rd Qtr	12.6 to 18.5	35.85	SW	13.49	12.6 to 18.5	31.60	SSW	9.73
4th Qtr	12.6 to 18.5	35.58	WNW	12.18	12.6 to 18.5	29.63	WNW	15.66
Annual	12.6 to 18.5	32.72	WNW	9.84	12.6 to 18.5	30.39	WNW	11.06

SOURCE: LSCS Meteorological Monitoring Program annual reports (2010 to 2014)

Table 4
LaSalle County Station
Monthly Maximum and Mean Wind Speeds (mph) at 33 feet
2010 - 2014

	2010		2011		2012		2013		2014	
	Max	Mean	Max	Mean	Max	Mean	Max	Mean	Max	Mean
January	25.9	11.4	25.0	10.8	34.0	12.7	30.9	12.9	35.1	14.9
February	24.4	9.9	37.2	12.4	29.8	11.5	30.5	12.8	35.4	15.4
March	21.9	9.4	26.4	11.3	33.2	13.0	29.8	11.6	31.7	11.9
April	32.4	12.1	34.5	13.8	32.5	12.6	29.6	12.7	30.1	12.9
May	29.9	10.6	28.6	10.7	32.4	10.7	26.2	10.5	28.2	11.0
June	24.3	8.5	23.6	10.0	20.3	9.4	21.5	8.8	28.9	9.6
July	22.8	7.5	21.8	7.3	18.0	7.9	17.0	7.4	24.0	8.1
August	17.6	7.0	20.4	7.0	17.2	7.1	17.0	6.9	17.2	7.2
September	26.6	9.9	26.2	8.7	22.1	8.7	17.9	8.1	20.7	7.5
October	35.4	10.6	26.3	9.4	35.2	11.6	20.7	9.3	28.6	9.7
November	29.6	11.8	33.1	13.1	31.2	9.1	33.0	12.2	29.0	13.0
December	30.2	11.2	28.7	10.6	35.5	11.3	22.9	11.1	22.9	10.0
Average Mean Wind Speed (mph) (for year)		10.0		10.4		10.5		10.4		10.9
Max Recorded Wind Speed (mph) (for year)	35.4		37.2		35.5		33.0		35.4	

Source: Monthly Reports on Meteorological Monitoring Program at the LaSalle County Nuclear Station (2010 to 2014)

List of Attachments:

1. 2010 Annual Report on the Meteorological Monitoring Program at the LaSalle County Nuclear Power Station
2. 2011 Annual Report on the Meteorological Monitoring Program at the LaSalle County Nuclear Power Station
3. 2012 Annual Report on the Meteorological Monitoring Program at the LaSalle County Nuclear Power Station
4. 2013 Annual Report on the Meteorological Monitoring Program at the LaSalle County Nuclear Power Station
5. 2014 Annual Report on the Meteorological Monitoring Program at the LaSalle County Nuclear Power Station

RAI # MA-01

ATTACHMENT 1

Annual Report

on the

Meteorological Monitoring Program

at the

LaSalle County Nuclear Power Station

2010

prepared for

Exelon Nuclear
Warrenville, IL 60555

by

Murray and Trettel, Incorporated
600 First Bank Drive, Suite A
Palatine, IL 60067
(847) 963-9000
e-mail: mt@weathercommand.com

For Exelon Use Only

Reviewed By: _____

Date: 5-5-2011

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List of Tables

1. Introduction

The purpose of the meteorological program being conducted at the LaSalle County Station site is to provide information sufficient to assess the local weather conditions and to determine the degree of atmospheric dispersion of airborne radioactive effluent from the station.

The meteorological tower is 400 ft. high and is instrumented at three levels. Wind speed and direction are measured at 33 ft., 200 ft., and 375 ft. Ambient temperature is measured at 33 ft. Differential temperatures, referenced to 33 ft., are measured at 200 ft. and 375 ft. Precipitation is measured at approximately 10 ft.

Joint frequency stability wind rose tables of wind direction, wind speed, and stability are routinely tabulated from hourly measurements. The quarterly and annual tables are included in this report.

Descriptions of the instruments and digital recorder are given in Section 3 (Data Acquisition) of this report. Data reduction and processing are described in Section 4 (Data Analysis). The results given in Section 5 of this report include modeled maximum whole body doses, skin doses, organ doses based upon airborne releases, and site meteorology.

2. Summary

The LaSalle Station meteorological monitoring program produced 78,407 hours of valid data out of a possible 78,840 parameter hours during 2010 (365 days x 24 hours/day x 9 measured priority parameters), which represents an overall data recovery rate of 99.5%. Priority parameters are all parameters except precipitation.

The stability wind rose tables included in this report have been generated using the 375 ft. wind data with the 375-33 ft. differential temperature data.

The maximum annual calculated cumulative doses resulting from airborne releases were as follows.

LaSalle County Generating Station:

gamma air dose	-	3.660×10^{-3} mrad
beta air dose	-	1.340×10^{-3} mrad
whole body dose	-	1.169×10^{-2} mrem
skin dose	-	3.910×10^{-3} mrem
organ (infant thyroid)	-	6.567×10^{-1} mrem

3. Data Acquisition

Wind speed and direction are measured with Climatronics F460 wind sensors. The wind speed sensors have a starting speed of 0.5 mph (0.22 mps), a range of 0 to 100 mph (0 to 44.7 mps), and a system accuracy of ±1.0 mph at 100 mph (±0.45 mps at 44.7 mps). The wind direction sensors have a threshold speed of 0.5 mph (0.22 mps), a range of 0 to 540°, and a system accuracy of ±5°.

Ambient and differential temperature are measured with the Climatronics 100093 system. Ambient temperature is measured within the range of -22 to 122°F (-30 to 50°C) with an accuracy of ±0.5°F (±0.3°C). Differential temperature is measured within the range of -10 to 10°F (-5.6 to 5.6°C) with an accuracy of ±0.18°F (±0.10°C).

Precipitation is measured with a Climatronics 100097 tipping bucket rain gauge and is measured in increments of one one-hundredth of an inch with a system accuracy of ±1% for rain rates of 1-3"/hr and ±3% for rain rates of 3-6"/hr.

Instrument types and locations are summarized in Table 1.

The meteorological data are collected and stored by a Microtel 4.0 data acquisition system. The Microtel measures the analog voltages of the instruments and records the digital equivalent within the range of 0 to +5 volts. The Microtel has the capability of storing 24 hours of minute data and one week of hourly data. Data are obtained from the Microtel by a direct dial telephone hookup to an in-house computer system. Data are sampled every second.

As a backup to the Microtel, data are also recorded with a Johnson Yokogawa Corp. digital recorder (JYC DA100 data acquisition unit and Contec IPC-PT/M300(PC)WOU PC). Data are sampled every 10 seconds.

Data loggers are summarized in Table 2.

Table 1

Instrument Locations

Measurement	Sensor Type	Location	Elevation
Wind Speed	Climatronics 100075 F460	Tower	375 ft.
Wind Direction	Climatronics 100076 F460	Tower	375 ft.
Differential Temperature	Climatronics 100093	Tower	375 ft.
Wind Speed	Climatronics 100075 F460	Tower	200 ft.
Wind Direction	Climatronics 100076 F460	Tower	200 ft.
Differential Temperature	Climatronics 100093	Tower	200 ft.
Wind Speed	Climatronics 100075 F460	Tower	33 ft.
Wind Direction	Climatronics 100076 F460	Tower	33 ft.
Ambient Temperature	Climatronics 100093	Tower	33 ft.
Precipitation	Climatronics 100097-1 Tipping Bucket Rain Gage	Meteorological shelter roof	10 ft.

Table 2

Data Loggers

Measurement	Logger Type	Sampling Frequency
Winds, Temperatures, and Precipitation	Microtel 4.0 data acquisition system	1 sec.
Winds, Temperatures, and Precipitation	Johnson Yokogawa Corp. Digital Recorder (JYC DA100 and Contec IPC-PT/M300(PC)WOU) digital recorder	10 sec.

4. Data Analysis

The LaSalle Microtel is routinely interrogated to obtain hourly average data. The data are then stored in the meteorological data base and listings of the data are generated. The data listings are examined by qualified personnel and any apparent problems are brought to the attention of the Project Manager or Meteorological Technician and the Instrument Maintenance staff.

Hourly values of wind speed, wind direction, ambient temperature, differential temperature, and precipitation are obtained through measurements taken at the site. The standard deviation of wind direction (sigma) is derived. The wind direction variation is described in terms of the standard deviation of the direction about the mean direction. The Microtel computes an hourly value of wind sigma by taking the Root-Mean-Square (RMS) of the four quarter-hour wind sigma values. The Microtel quarter-hour wind sigma values are calculated directly from the one second wind direction samples during the 15 minute period.

The data base files are edited approximately once a week. Missing Microtel values are replaced with digital recorder values, when available. Invalid data are deleted from the data base.

When an hourly value is missing or invalid, the numeral 999 is entered into the computer data file in the appropriate location. When the wind direction changes substantially relative to its short term fluctuations, the numeral 888 can be entered into the wind sigma location to indicate shifting winds. When the wind blows with velocities near the sensing threshold of the instrument, the numeral 777 can be entered into the wind direction, wind speed, and wind sigma locations to indicate light and variable winds.

A professional meteorologist reviews the data, calibration findings, equipment maintenance reports, and other information and determines which data are valid. Only the valid data are retained in the data base.

As a quality control measure, a monthly comparison is made of Microtel and digital recorder data. An investigation is made into the reasons for any significant differences between the sets of values.

Joint frequency stability wind rose tables of hourly data measured at the site are generated. These tables indicate the prevailing wind direction, wind speed, and stability classes measured during the period of observation as well as the joint frequencies of occurrence of the wind direction, wind speed, and stability classes. The values are also used as input to the atmospheric transport and diffusion models. Wind direction, wind speed, and stability classes are given in Tables 3, 4, and 5.

Table 3

Wind Direction Classes

IF	348.75°	<	WD	≤	11.25°	THEN	Class is	N
IF	11.25°	<	WD	≤	33.75°	THEN	Class is	NNE
IF	33.75°	<	WD	≤	56.25°	THEN	Class is	NE
IF	56.25°	<	WD	≤	78.75°	THEN	Class is	ENE
IF	78.75°	<	WD	≤	101.25°	THEN	Class is	E
IF	101.25°	<	WD	≤	123.75°	THEN	Class is	ESE
IF	123.75°	<	WD	≤	146.25°	THEN	Class is	SE
IF	146.25°	<	WD	≤	168.75°	THEN	Class is	SSE
IF	168.75°	<	WD	≤	191.25°	THEN	Class is	S
IF	191.25°	<	WD	≤	213.75°	THEN	Class is	SSW
IF	213.75°	<	WD	≤	236.25°	THEN	Class is	SW
IF	236.25°	<	WD	≤	258.75°	THEN	Class is	WSW
IF	258.75°	<	WD	≤	281.25°	THEN	Class is	W
IF	281.25°	<	WD	≤	303.75°	THEN	Class is	WNW
IF	303.75°	<	WD	≤	326.25°	THEN	Class is	NW
IF	326.25°	<	WD	≤	348.75°	THEN	Class is	NNW

Table 4

Wind Speed Classes

IF	0.0 mph	<	WS	≤	0.5 mph	THEN	Class is	1
IF	0.5 mph	<	WS	≤	3.5 mph	THEN	Class is	2
IF	3.5 mph	<	WS	≤	7.5 mph	THEN	Class is	3
IF	7.5 mph	<	WS	≤	12.5 mph	THEN	Class is	4
IF	12.5 mph	<	WS	≤	18.5 mph	THEN	Class is	5
IF	18.5 mph	<	WS	≤	24.5 mph	THEN	Class is	6
IF	24.5 mph	<	WS			THEN	Class is	7

Table 5

Atmospheric Stability Classes

Class	Differential Temperature Interval (in °C/100m) [1]	Differential Temperature Interval (in °F over the 200-33ft. range) [2]	Differential Temperature Interval (in °F over the 375-33ft. range) [2]
Extremely Unstable	$\Delta T \leq -1.9$	$\Delta T \leq -1.8$	$\Delta T \leq -3.6$
Moderately Unstable	$-1.9 < \Delta T \leq -1.7$	$-1.8 < \Delta T \leq -1.6$	$-3.6 < \Delta T \leq -3.2$
Slightly Unstable	$-1.7 < \Delta T \leq -1.5$	$-1.6 < \Delta T \leq -1.4$	$-3.2 < \Delta T \leq -2.9$
Neutral	$-1.5 < \Delta T \leq -0.5$	$-1.4 < \Delta T \leq -0.5$	$-2.9 < \Delta T \leq -1.0$
Slightly Stable	$-0.5 < \Delta T \leq 1.5$	$-0.5 < \Delta T \leq 1.3$	$-1.0 < \Delta T \leq 2.8$
Moderately Stable	$1.5 < \Delta T \leq 4.0$	$1.3 < \Delta T \leq 3.6$	$2.8 < \Delta T \leq 7.5$
Extremely Stable	$4.0 < \Delta T$	$3.6 < \Delta T$	$7.5 < \Delta T$

[1] from ANSI/ANS 2.5
[2] ANSI/ANS 2.5 intervals scaled for instrument heights on the LaSalle meteorological tower

The following two programs were used to calculate doses resulting from radioactive releases:

1. XOQDOQ: Computer Program for the Meteorological Evaluation of Routine Effluent Releases at Nuclear Power Stations (NUREG/CR-2919).

The program is based on the theory that material released to the atmosphere will be normally distributed (Gaussian) about the plume centerline. A straight-line trajectory is assumed between the point of release and all receptors.

The program implements the assumptions outlined in Section C of NRC Regulatory Guide 1.111. In evaluating routine releases from nuclear power plants, it primarily is designed to calculate annual relative effluent concentrations, X/Q values and annual average relative deposition, D/Q values.

Output from the XOQDOQ program is used as input to the GASPAR program.

2. GASPAR II: A Code System for Evaluation of Radiological Impacts Due to the Release of Radioactive Material to the Atmosphere During Normal Operation of Light Water Reactors (NUREG-0597).

GASPAR is a program written for the evaluation of radiological impacts due to the release of radioactive material to the atmosphere during normal operation of reactors. The GASPAR code implements the radiological impact models of NRC Regulatory Guide 1.109, Revision 1, for atmospheric releases. The program is used to estimate the maximum individual doses at selected locations in the vicinity of the plant.

5. Results

5.1 Instrument Maintenance

The maintenance program followed during 2010 was composed of routinely scheduled visits, preventative maintenance procedures, and equipment repairs. Routine monthly visits were made to inspect the sensing and recording systems for proper operation. In addition, routine maintenance and calibration checks of all tower-mounted and ground level equipment were performed every four months. A description of the calibration and field procedures is found in the Murray and Trettel, Inc. "P1009 Procedures Manual" (July 2010).

In January, there was some 200 ft. and 375 ft. wind speed data loss due to icing. Falling ice damaged the 200 ft. wind speed cups. The cups and sensor were replaced.

In February, 2 bad current cards found during the calibration were repaired and replaced.

In April, the annual tower inspection was performed.

In October, the 375 ft. heat lamp assembly was replaced.

In November, a failed 33 ft. temperature aspirator motor was replaced. The failure led to some data loss, including delta-T data.

No other significant problems were encountered with the equipment, and at the end of the annual period, no problems were evident at the site.

5.2 Data Recovery

The record of data recovery for the year is summarized in Table 6.

Table 6

LaSalle Site

Data Recovery Summary

2010

Measurement	Elevation	Recovered Hours	Recovered Percent	Lost Hours	Percent Changed
Wind Speed	33 ft.	8745	99.8	15	0.2
Wind Speed	200 ft.	8613	98.3	147	1.6
Wind Speed	375 ft.	8621	98.4	139	1.5
Wind Direction	33 ft.	8753	99.9	7	0.8
Wind Direction	200 ft.	8753	99.9	7	0.4
Wind Direction	375 ft.	8753	99.9	7	2.4
Ambient Temperature	33 ft.	8723	99.6	37	0.4
Differential Temperature	200-33 ft.	8723	99.6	37	0.7
Differential Temperature	375-33 ft.	8723	99.6	37	1.8
Precipitation	10 ft.	8626	98.5	134	1.6
AVERAGE*			99.6		

* average of priority parameters (all except precipitation)

	Valid Hours	Recovered Percent	Lost Hours
Lower Level Joint Frequency %	8715	99.5	45
Middle Level Joint Frequency %	8583	98.0	177
Upper Level Joint Frequency %	8591	98.1	169

5.3 Summary of Billings for Equipment Repairs, Replacement Parts, and Other Work not Included in Fixed-Cost Maintenance Agreement - **2010**

Description - LaSalle

	Cost
January	
Meteorological equipment maintenance	$ 2,824.35
Meteorological parts, materials, and contractor services	786.82
February	
Meteorological equipment maintenance	976.65
Meteorological parts, materials, and contractor services	342.77
March	
Meteorological equipment maintenance	0.00
Meteorological parts, materials, and contractor services	37.76
Special Request	120.00
April	
Meteorological parts, materials, and contractor services	398.56
May	
Special Request	600.00
June	
Meteorological equipment maintenance	302.50
Meteorological parts, materials, and contractor services	0.00
July	
Meteorological parts, materials, and contractor services	32.34
August	
-none-	0.00
September	
Meteorological parts, materials, and contractor services	158.16
Special Request	80.00
October	
Meteorological equipment maintenance	536.25
November	
Meteorological equipment maintenance	800.25
December	
-none-	0.00

Annual Total: $ 7,996.41

5.4 Stability Wind Rose Data

The quarterly and annual stability wind roses are given in Tables 7 through 11. Wind speed classes have been altered to reflect the sensor threshold.

For the year, winds measured at 375 ft. most frequently came from the West-Northwest (9.41%) and fell into the 12.6-18.5 mph wind speed class (30.61%). Calms (wind speeds at or below the sensor threshold) were measured 0.00% of the time and speeds greater than 24.5 mph were measured 13.69% of the time.

Stability based on the 375-33 ft. differential temperature most frequently fell into the neutral classification (47.79%).

TABLE 7

LaSalle County Generating Statio
375 ft. Wind Speed and Direction

January-March. 2010
375Ft-33Ft Delta-T (F)

Number of Observations = 2036
Values are Percent Occurrence

SPEED	WIND DIRECTION CLASSES																	STABILITY CLASSES							
CLASS	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL	EU	MU	SU	N	SS	MS	ES	TOTAL
EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00						
C SU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00					
A N	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				0.00				
L SS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00					0.00			
M MS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00		
ES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00	
																									0.00
EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00						
1 SU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05			0.05					
- N	0.00	0.00	0.00	0.05	0.10	0.05	0.00	0.05	0.15	0.15	0.20	0.10	0.00	0.00	0.00	0.00	0.83				0.83				
3 SS	0.05	0.00	0.00	0.00	0.05	0.00	0.00	0.05	0.00	0.05	0.15	0.05	0.05	0.05	0.05	0.00	0.54					0.54			
MS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.05						0.05		
ES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05							0.05	
																									1.52
EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00						
SU	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05			0.05					
- N	0.29	0.69	0.15	0.34	0.49	0.34	0.15	0.05	0.44	0.10	0.29	0.25	0.39	0.29	0.25	0.25	4.76				4.76				
7 SS	0.10	0.20	0.15	0.05	0.10	0.15	0.05	0.15	0.25	0.15	0.25	0.15	0.15	0.10	0.44	0.10	2.50					2.50			
MS	0.00	0.00	0.15	0.05	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.05	0.05	0.05	0.10	0.49						0.49		
ES	0.05	0.05	0.00	0.05	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20							0.20	
																									8.01
EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00						
8 SU	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05			0.05					
- N	1.96	2.26	0.25	0.25	0.69	0.74	0.98	0.59	0.25	0.25	0.64	0.39	0.69	1.47	1.33	0.64	13.36				13.36				
1 SS	0.29	0.69	0.20	0.20	0.69	0.25	0.15	0.44	0.10	0.15	0.10	0.00	0.29	0.49	0.54	0.05	4.62					4.62			
2 MS	0.00	0.05	0.00	0.00	0.00	0.00	0.05	0.00	0.05	0.00	0.05	0.00	0.05	0.29	0.44	0.15	1 13						1.13		
ES	0.34	0.05	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.15	0.69							0.69	
																									19.84
EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
1 MU	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05		0.05						
3 SU	0.15	0.10	0.25	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.54			0.54					
- N	1.72	2.55	1.28	0.83	0.74	0.83	0.93	0.29	0.29	0.25	0.10	1.08	1.38	3.63	1.96	1.57	19.45				19.45				
1 SS	0.88	0.44	0.44	0.10	0.49	0.05	0.39	0.25	0.20	0.00	0.20	0.15	0.34	1.96	1.33	1.08	8.30					8.30			
8 MS	0.25	0.00	0.00	0.00	0.15	0.10	0.29	0.10	0.15	0.00	0.10	0.00	0.10	0.54	0.93	0.39	3.09						3.09		
ES	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.20	0.00	0.00	0.00	0.20	0.10	0.64	0.83	2.16							2.16	
																									33 60

TABLE 7
continued

LaSalle County Generating Statio — January-March, 2010
375 ft. Wind Speed and Direction — 375Ft-33Ft Delta-T (F)

SPEED	WIND DIRECTION CLASSES																	STABILITY CLASSES							
CLASS	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL	EU	MU	SU	N	SS	MS	ES	TOTAL
EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
1 MU	0.00	0.00	0.05	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10		0.10						
9 SU	0.00	0.10	0.15	0.00	0.00	0.00	0.00	0.00	0.15	0.15	0.00	0.10	0.25	0.00	0.00	0.00	0.88			0.88					
- N	0.10	3.00	1.62	1.03	0.49	0.54	0.44	0.00	0.25	0.10	0.15	0.49	1.23	1.08	2.70	0.34	13.56				13.56				
2 SS	0.29	0.05	0.15	0.00	0.59	0.00	0.29	0.05	0.10	0.15	0.39	0.20	0.34	0.83	1.52	1.08	6.04					6.04			
4 MS	0.34	0.00	0.05	0.00	0.20	0.20	0.44	0.00	0.05	0.05	0.10	0.39	0.15	0.15	0.69	0.49	3.29						3.29		
ES	0.34	0.00	0.00	0.00	0.00	0.05	0.05	0.10	0.29	0.05	0.00	0.10	0.15	0.00	0.10	0.05	1.28							1.28	
																									25.15
EU	0.00	0.00	0.00	0.00	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.10							
G MU	0.00	0.00	0.05	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10		0.10						
T SU	0.00	0.00	0.15	0.00	0.05	0.00	0.00	0.00	0.00	0.10	0.00	0.05	0.00	0.00	0.00	0.00	0.34			0.34					
N	0.20	0.59	0.49	0.15	0.10	0.00	0.15	0.00	0.00	0.20	0.20	0.10	0.64	0.39	0.54	0.74	4.47				4.47				
2 SS	0.00	0.15	0.15	0.00	0.20	0.10	0.88	0.34	0.59	0.54	0.64	0.00	0.49	0.25	0.39	0.20	4.91					4.91			
4 MS	0.10	0.00	0.00	0.00	0.00	0.00	0.25	0.25	0.00	0.29	0.83	0.05	0.05	0.00	0.00	0.00	1.82						1.82		
ES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.15							0.15	
																									11.89
TOT	7.61	10.95	5.80	3.09	5.35	3.39	5.70	2.90	3.54	2.70	4.37	3.63	6.97	11.69	14.00	8.30	100.00	0.10	0.25	1.92	56.43	26.92	9.87	4.52	100.00

Wind Direction by Stability

N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL	-STABILITY CLASSES-
0.00	0.00	0.00	0.00	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	Extremely Unstable
0.05	0.00	0.10	0.00	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25	Moderately Unstable
0.15	0.20	0.54	0.00	0.05	0.00	0.15	0.00	0.20	0.25	0.00	0.15	0.25	0.00	0.00	0.00	1.92	Slightly Unstable
4.27	9.09	3.78	2.65	2.60	2.50	2.65	0.98	1.38	1.03	1.57	2.41	4.32	6.88	6.78	3.54	56.43	Neutral
1.62	1.52	1.08	0.34	2.11	0.54	1.77	1.28	1.23	1.03	1.72	0.54	1.67	3.68	4.27	2.50	26.92	Slightly Stable
0.69	0.05	0.20	0.05	0.34	0.29	1.08	0.34	0.25	0.34	1.08	0.44	0.39	1.03	2.16	1.13	9.87	Moderately Stable
0.83	0.10	0.10	0.05	0.05	0.05	0.05	0.29	0.49	0.05	0.00	0.10	0.34	0.10	0.79	1.13	4.52	Extremely Stable

Wind Direction by Wind Speed

N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL	-WIND SPEED CLASSES-
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	C A L M
0.05	0.00	0.00	0.05	0.15	0.05	0.00	0.10	0.20	0.20	0.34	0.15	0.05	0.05	0.10	0.05	1.52	< 3.5 mph
0.44	0.93	0.44	0.49	0.64	0.49	0.29	0.20	0.69	0.25	0.54	0.39	0.59	0.44	0.74	0.44	8.01	3.6 - 7.5 mph
2.60	3.05	0.54	0.44	1.38	0.98	1.23	1.03	0.39	0.39	0.79	0.39	1.03	2.26	2.36	0.98	19.84	7.6 - 12.5 mph
3.14	3.09	1.96	0.93	1.38	0.98	1.67	0.74	0.83	0.25	0.39	1.23	2.01	6.24	4.86	3.88	33.60	12.6 - 18.5 mph
1.08	3.14	2.01	1.03	1.33	0.79	1.23	0.15	0.83	0.49	0.64	1.28	2.11	2.06	5.01	1.96	25.15	18.6 - 24.5 mph
0.29	0.74	0.83	0.15	0.49	0.10	1.28	0.69	0.59	1.13	1.67	0.20	1.18	0.64	0.93	0.98	11.89	> 24.5 mph

TABLE 8

LaSalle County Generating Statio
375 ft. Wind Speed and Direction

April-June, 2010
375Ft-33Ft Delta-T (F)

Number of Observations = 2184
Values are Percent Occurrence

SPEED CLASS	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL	STABILITY CLASSES EU	MU	SU	N	SS	MS	ES	TOTAL
	EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
	MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
C	SU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00					
A	N	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00				
L	SS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				0.00			
M	MS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00					0.00		
	ES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00	
																									0.00
	EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
	MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
1	SU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00					
-	N	0.00	0.09	0.00	0.00	0.00	0.05	0.05	0.14	0.05	0.00	0.00	0.05	0.00	0.00	0.09	0.05	0.55			0.55				
3	SS	0.05	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.05	0.05	0.05	0.00	0.09	0.05	0.00	0.09	0.46				0.46			
	MS	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.05	0.09	0.05	0.00	0.05	0.00	0.00	0.14	0.41					0.41		
	ES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00	
																									1.42
	EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
	MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
	SU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00					
-	N	0.64	0.60	0.69	0.55	0.41	0.78	0.27	0.09	0.32	0.32	0.32	0.46	0.41	0.23	0.32	0.55	6.96			6.96				
7	SS	0.14	0.18	0.37	0.46	0.18	0.09	0.09	0.00	0.14	0.00	0.09	0.09	0.18	0.09	0.14	0.32	2.56				2.56			
	MS	0.14	0.05	0.05	0.00	0.05	0.05	0.00	0.09	0.09	0.05	0.09	0.05	0.23	0.00	0.00	0.00	0.92					0.92		
	ES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.00	0.00	0.09						0.09	
																									10.53
	EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
	MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
8	SU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00					
-	N	0.69	1.60	1.05	0.96	0.92	0.50	0.23	0.87	0.87	0.92	1.37	0.55	0.87	1.01	0.50	0.78	13.69			13.69				
1	SS	0.09	0.14	0.78	0.87	0.73	0.27	0.14	0.14	0.14	0.18	0.50	0.50	0.41	0.23	0.55	0.05	5.72				5.72			
2	MS	0.32	0.18	0.09	0.00	0.09	0.18	0.14	0.09	0.09	0.05	0.14	0.14	0.37	0.09	0.00	0.05	2.01					2.01		
	ES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05	0.05	0.00	0.09	0.00	0.00	0.00	0.23						0.23	
																									21.66
	EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
1	MU	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05						
3	SU	0.00	0.05	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05	0.00	0.00	0.05	0.00	0.00	0.23		0.23					
-	N	0.41	0.69	1.60	1.37	0.60	0.46	0.64	0.46	0.78	0.73	0.78	0.96	1.05	1.01	0.82	0.50	12.87			12.87				
1	SS	0.50	0.82	0.73	1.01	1.01	0.69	0.41	0.23	0.60	0.60	0.64	1.10	0.96	0.55	0.55	0.50	10.90				10.90			
8	MS	0.00	0.09	0.09	0.05	0.05	0.18	0.32	0.32	0.69	0.41	0.32	0.14	0.50	0.32	0.18	0.23	3.89					3.89		
	ES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.14	0.00	0.05	0.18	0.00	0.05	0.00	0.00	0.55						0.55	
																									28.48

TABLE 8
continued

LaSalle County Generating Statio — April-June. 2010
375 ft. Wind Speed and Direction — 375Ft-33Ft Delta-T (F)

SPEED	WIND DIRECTION CLASSES																STABILITY CLASSES							
CLASS	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL	EU	MU	SU	N	SS	MS	ES	TOTAL
EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
1 MU	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.09		0.09						
9 SU	0.00	0.00	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.09	0.00	0.00	0.00	0.00	0.00	0.32			0.32					
- N	0.64	0.37	0.87	1.28	0.87	0.82	0.60	0.05	0.23	0.46	0.92	0.78	0.73	1.37	1.05	0.92	11.95				11.95				
2 SS	0.05	0.27	0.05	0.46	0.46	0.64	0.37	0.05	0.37	0.46	1.33	0.37	1.10	0.64	0.73	0.14	7.46					7.46			
4 MS	0.00	0.09	0.00	0.00	0.09	0.37	0.37	0.23	0.46	0.32	0.05	0.23	0.14	0.09	0.09	0.00	2.52						2.52		
ES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.18	0.14	0.00	0.00	0.00	0.00	0.00	0.00	0.41							0.41	
																									22.76
EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05							
G MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.14	0.05	0.00	0.00	0.00	0.00	0.00	0.37		0.37						
T SU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.27	0.23	0.09	0.00	0.00	0.00	0.00	0.78			0.78					
N	0.05	0.00	0.27	0.46	0.32	1.14	0.64	0.09	0.46	1.05	0.41	0.18	0.32	0.14	0.60	0.09	6.23				6.23				
2 SS	0.05	0.00	0.00	0.00	0.37	0.50	0.32	0.27	1.01	1.79	0.50	0.09	0.18	1.01	0.00	0.05	6.14					6.14			
4 MS	0.00	0.00	0.00	0.00	0.05	0.05	0.27	0.18	0.00	0.14	0.27	0.09	0.00	0.00	0.00	0.00	1.05						1.05		
ES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.32	0.18	0.00	0.00	0.00	0.00	0.00	0.55							0.55	
																									15.16
TOT	3.75	5.22	6.91	7.46	6.23	6.78	4.85	3.53	7.19	8.75	8.61	6.04	7.69	6.91	5.63	4.44	100.00	0.05	0.50	1.33	52.24	33.24	10.81	1.83	100.00

Wind Direction by Stability

N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL	-STABILITY CLASSES-
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	Extremely Unstable
0.00	0.00	0.09	0.00	0.00	0.00	0.00	0.00	0.18	0.18	0.05	0.00	0.00	0.00	0.00	0.00	0.50	Moderately Unstable
0.00	0.05	0.14	0.00	0.00	0.00	0.00	0.00	0.18	0.46	0.37	0.09	0.00	0.05	0.00	0.00	1.33	Slightly Unstable
2.43	3.34	4.49	4.62	3.11	3.75	2.43	1.69	2.70	3.48	3.80	2.98	3.39	3.75	3.39	2.88	52.24	Neutral
0.87	1.42	1.92	2.79	2.79	2.20	1.33	0.69	2.29	3.07	3.11	2.15	2.93	2.56	1.97	1.14	33.24	Slightly Stable
0.46	0.41	0.27	0.05	0.32	0.82	1.10	0.92	1.37	1.05	0.92	0.64	1.28	0.50	0.27	0.41	10.81	Moderately Stable
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.41	0.50	0.37	0.18	0.09	0.05	0.00	0.00	1.83	Extremely Stable

Wind Direction by Wind Speed

N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL	-WIND SPEED CLASSES-
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	C A L M
0.05	0.09	0.05	0.00	0.05	0.05	0.05	0.14	0.14	0.14	0.09	0.05	0.14	0.05	0.09	0.27	1.42	< 3.5 mph
0.92	0.82	1.10	1.01	0.64	0.92	0.37	0.18	0.55	0.37	0.60	0.60	0.82	0.32	0.46	0.87	10.53	3.6 - 7.5 mph
1.10	1.92	1.92	1.83	1.74	0.96	0.50	1.10	1.14	1.19	2.06	1.19	1.74	1.33	1.05	0.87	21.66	7.6 - 12.5 mph
0.92	1.65	2.52	2.43	1.65	1.33	1.37	1.14	2.20	1.79	1.83	2.38	2.52	1.97	1.56	1.24	28.48	12.6 - 18.5 mph
0.69	0.73	1.05	1.74	1.42	1.83	1.33	0.41	1.24	1.56	2.38	1.37	1.97	2.11	1.88	1.05	22.76	18.6 - 24.5 mph
0.09	0.00	0.27	0.46	0.73	1.69	1.24	0.55	1.92	3.71	1.65	0.46	0.50	1.14	0.60	0.14	15.16	> 24.5 mph

TABLE 9

LaSalle County Generating Statio
375 ft. Wind Speed and Direction

July-September, 2010
375Ft-33Ft Delta-T (F)

Number of Observations = 2208
Values are Percent Occurrence

SPEED	WIND DIRECTION CLASSES																	STABILITY CLASSES							
CLASS	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL	EU	MU	SU	N	SS	MS	ES	TOTAL
EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00						
C SU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00					
A N	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				0.00				
L SS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00					0.00			
M MS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00		
ES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00	
																									0.00
EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00						
1 SU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00					
- N	0.00	0.09	0.00	0.00	0.05	0.05	0.18	0.09	0.09	0.14	0.00	0.23	0.09	0.00	0.05	0.00	1.04				1.04				
3 SS	0.00	0.00	0.00	0.00	0.05	0.00	0.09	0.14	0.00	0.05	0.05	0.00	0.00	0.09	0.05	0.14	0.63					0.63			
MS	0.05	0.05	0.00	0.05	0.00	0.00	0.00	0.05	0.05	0.14	0.05	0.00	0.00	0.00	0.00	0.00	0.41						0.41		
ES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.05							0.05	
																									2.13
EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00						
4 SU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00					
- N	0.45	0.77	0.18	0.41	0.45	0.54	0.45	0.32	0.50	0.54	0.54	0.45	0.68	0.82	0.50	0.59	8.20				8.20				
7 SS	0.27	0.09	0.14	0.36	0.14	0.32	0.54	0.23	0.09	0.23	0.32	0.18	0.23	0.45	0.32	0.09	3.99					3.99			
MS	0.05	0.00	0.00	0.00	0.05	0.05	0.05	0.23	0.05	0.09	0.18	0.05	0.09	0.09	0.09	0.05	1.09						1.09		
ES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05	0.00	0.05	0.00	0.00	0.00	0.14							0.14	
																									13.41
EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00						
8 SU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05	0.05	0.18	0.09	0.00	0.00	0.41			0.41					
- N	0.91	1.09	1.36	0.50	0.72	0.41	0.41	0.41	1.54	1.54	1.86	0.59	0.82	1.49	1.59	1.18	16.39				16.39				
1 SS	0.27	0.54	0.68	0.63	0.59	0.32	0.50	0.63	0.54	0.45	0.63	0.50	0.23	0.45	0.77	0.18	7.93					7.93			
2 MS	0.05	0.09	0.14	0.00	0.09	0.05	0.36	0.32	0.41	0.36	0.41	0.45	0.27	0.09	0.27	0.18	3.53						3.53		
ES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.23	0.23	0.00	0.05	0.00	0.05	0.00	0.68							0.68	
																									28.94
EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
1 MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.05		0.05						
3 SU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.09	0.14	0.09	0.18	0.09	0.09	0.86			0.86					
- N	0.59	0.32	0.63	0.59	0.27	0.54	0.23	0.14	1.59	1.45	0.91	0.54	0.45	0.91	1.18	0.95	11.28				11.28				
1 SS	0.68	0.68	0.86	0.72	0.59	0.09	0.41	0.36	0.77	1.09	0.95	0.63	0.23	0.54	0.36	0.68	9.65					9.65			
8 MS	0.09	0.18	0.36	0.00	0.27	0.68	0.63	0.91	0.86	0.91	0.95	0.59	0.23	0.32	0.95	0.59	8.51						8.51		
ES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.27	0.50	0.27	0.05	0.14	0.00	0.23	0.27	0.00	1.72							1.72	
																									32.07

TABLE 9
continued

LaSalle County Generating Statio — July-September, 2010
375 ft. Wind Speed and Direction — 375Ft-33Ft Delta-T (F)

SPEED	WIND DIRECTION CLASSES																	STABILITY CLASSES							
CLASS	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL	EU	MU	SU	N	SS	MS	ES	TOTAL
EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
1 MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.05		0.05						
9 SU	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.18	0.00	0.00	0.00	0.00	0.00	0.00	0.27			0.27					
- N	0.18	0.00	0.00	0.09	0.05	0.00	0.00	0.00	0.63	0.77	0.82	0.50	0.36	0.68	0.59	0.41	5.07				5.07				
2 SS	0.41	0.00	0.00	0.18	0.36	0.14	0.14	0.14	1.00	2.04	0.82	0.32	0.50	0.95	0.63	0.14	7.74					7.74			
4 MS	0.00	0.00	0.00	0.00	0.18	0.23	0.18	0.05	0.54	1.04	0.18	0.05	0.45	0.09	0.27	0.14	3.40						3.40		
ES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.36							0.36	
																									16.89
EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
G MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.05		0.05						
T SU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.18	0.00	0.00	0.00	0.00	0.23			0.23					
N	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.45	0.45	0.09	0.18	0.18	0.09	0.00	1.63				1.63				
2 SS	0.09	0.00	0.00	0.00	0.14	0.00	0.00	0.00	0.23	1.63	0.36	0.27	0.59	0.41	0.09	0.09	3.89					3.89			
4 MS	0.09	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.32	0.18	0.05	0.05	0.00	0.00	0.00	0.72						0.72		
ES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05							0.05	
																									6.57
TOT	4.21	3.89	4.35	3.53	4.03	3.40	4.17	4.26	10.14	14.22	10.14	6.11	5.80	8.06	8.20	5.48	100.00	0.00	0.14	1.77	43.61	33.83	17.66	2.99	100.00

Wind Direction by Stability

N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL	-STABILITY CLASSES-
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Extremely Unstable
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.09	0.00	0.00	0.00	0.00	0.14	Moderately Unstable
0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.41	0.18	0.36	0.27	0.27	0.09	0.09	1.77	Slightly Unstable
2.13	2.26	2.17	1.59	1.54	1.54	1.27	0.95	4.53	4.89	4.57	2.40	2.58	4.08	3.99	3.12	43.61	Neutral
1.72	1.31	1.68	1.90	1.86	0.86	1.68	1.49	2.63	5.48	3.12	1.90	1.77	2.90	2.22	1.31	33.83	Slightly Stable
0.32	0.32	0.50	0.05	0.63	1.00	1.22	1.54	1.90	2.85	1.95	1.18	1.09	0.59	1.59	0.95	17.66	Moderately Stable
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.27	1.04	0.54	0.32	0.18	0.09	0.23	0.32	0.00	2.99	Extremely Stable

Wind Direction by Wind Speed

N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL	-WIND SPEED CLASSES-
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	C A L M
0.05	0.14	0.00	0.05	0.09	0.05	0.27	0.27	0.14	0.32	0.09	0.27	0.09	0.09	0.09	0.14	2.13	< 3.5 mph
0.77	0.86	0.32	0.77	0.63	0.91	1.04	0.77	0.63	0.91	1.09	0.68	1.04	1.36	0.91	0.72	13.41	3.6 - 7.5 mph
1.22	1.72	2.17	1.13	1.40	0.77	1.27	1.36	2.63	2.63	3.17	1.59	1.54	2.13	2.67	1.54	28.94	7.6 - 12.5 mph
1.36	1.18	1.86	1.31	1.13	1.31	1.27	1.68	3.71	3.89	2.94	2.08	1.00	2.17	2.85	2.31	32.07	12.6 - 18.5 mph
0.63	0.00	0.00	0.27	0.59	0.36	0.32	0.18	2.58	4.08	1.81	0.86	1.31	1.72	1.49	0.68	16.89	18.6 - 24.5 mph
0.18	0.00	0.00	0.00	0.18	0.00	0.00	0.00	0.45	2.40	1.04	0.63	0.82	0.59	0.18	0.09	6.57	> 24.5 mph

TABLE 10

LaSalle County Generating Statio
375 ft. Wind Speed and Direction

October-December, 2010
375Ft-33Ft Delta-T (F)

Number of Observations = 2163
Values are Percent Occurrence

SPEED	WIND DIRECTION CLASSES																	STABILITY CLASSES							
CLASS	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL	EU	MU	SU	N	SS	MS	ES	TOTAL
	EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00								
	MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
C	SU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00						
A	N	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00					
L	SS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				0.00				
M	MS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00					0.00			
	ES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00		
																									0.00	
	EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
	MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
1	SU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00						
-	N	0.00	0.00	0.00	0.05	0.00	0.05	0.00	0.00	0.00	0.05	0.05	0.00	0.05	0.00	0.05	0.00	0.28			0.28					
3	SS	0.00	0.00	0.05	0.05	0.00	0.00	0.05	0.00	0.00	0.00	0.05	0.05	0.00	0.00	0.00	0.00	0.23				0.23				
	MS	0.00	0.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05	0.09	0.00	0.37					0.37			
	ES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00		
																									0.88	
	EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
	MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
7	SU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00						
-	N	0.51	0.56	0.00	0.14	0.05	0.14	0.09	0.05	0.05	0.00	0.09	0.18	0.23	0.14	0.23	0.28	2.73			2.73					
7	SS	0.32	0.42	0.23	0.05	0.18	0.00	0.18	0.18	0.09	0.05	0.05	0.05	0.05	0.14	0.09	0.05	2.13				2.13				
	MS	0.14	0.14	0.09	0.18	0.18	0.09	0.09	0.05	0.05	0.05	0.09	0.09	0.05	0.09	0.14	0.05	1.57					1.57			
	ES	0.00	0.09	0.00	0.00	0.05	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.09	0.00	0.00	0.05	0.32						0.32		
																									6.75	
	EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
	MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
8	SU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00						
-	N	0.32	0.46	0.23	0.37	0.32	0.32	0.14	0.05	0.14	0.23	0.69	0.23	0.97	0.92	1.34	0.32	7.07			7.07					
1	SS	0.14	0.46	0.23	0.51	0.37	0.23	0.09	0.05	0.23	0.09	0.28	0.51	0.37	0.32	0.23	0.51	4.62				4.62				
2	MS	0.14	0.05	0.05	0.09	0.09	0.09	0.18	0.32	0.23	0.14	0.14	0.28	0.14	0.51	0.32	0.23	3.01					3.01			
	ES	0.14	0.09	0.00	0.00	0.00	0.09	0.18	0.09	0.05	0.05	0.05	0.09	0.14	0.05	0.18	0.00	1.20						1.20		
																									15.90	
	EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
1	MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
3	SU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00						
-	N	1.25	0.79	0.65	0.51	0.60	0.42	0.05	0.23	0.60	0.60	0.51	1.02	1.06	1.76	0.97	0.60	11.60			11.60					
1	SS	0.32	0.60	0.83	0.51	0.79	0.46	0.23	0.14	0.05	0.42	0.55	0.51	0.65	0.97	0.69	0.46	8.18				8.18				
8	MS	0.09	0.23	0.14	0.00	0.09	0.28	0.18	0.28	0.69	0.42	0.55	0.46	0.42	0.46	0.60	0.32	5.22					5.22			
	ES	0.09	0.14	0.00	0.00	0.05	0.00	0.05	0.14	0.60	0.23	0.65	0.18	0.23	0.65	0.32	0.14	3.47						3.47		
																									28.48	

TABLE 10
continued

LaSalle County Generating Statio — October-December. 2010
375 ft. Wind Speed and Direction — 375Ft-33Ft Delta-T (F)

SPEED	WIND DIRECTION CLASSES																STABILITY CLASSES							
CLASS	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL	EU	MU	SU	N	SS	MS	ES	TOTAL
EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
1 MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00						
9 SU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.09	0.00	0.00	0.00	0.00	0.00	0.14			0.14					
- N	1.25	0.05	0.00	0.28	0.28	0.18	0.23	0.32	0.55	0.18	0.55	0.88	1.20	1.66	1.48	1.85	10.96				10.96				
2 SS	0.65	0.42	0.05	0.42	0.18	0.23	0.18	0.51	0.55	0.28	0.51	0.32	1.11	0.74	0.79	0.69	7.63					7.63			
4 MS	0.55	0.05	0.00	0.00	0.09	0.14	0.18	0.23	0.60	0.92	0.28	0.55	1.06	0.42	0.37	0.46	5.92						5.92		
ES	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.42	0.37	0.32	0.32	0.42	0.14	0.09	0.05	2.17							2.17	
																									26.81
EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
G MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00						
T SU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00					
N	0.23	0.00	0.00	0.00	0.05	0.23	0.18	0.05	0.42	0.74	0.51	1.62	1.11	0.65	0.28	0.74	6.80				6.80				
2 SS	0.05	0.00	0.00	0.00	0.00	0.18	0.42	1.66	1.62	1.06	0.97	0.23	1.11	1.43	0.51	0.60	9.85					9.85			
4 MS	0.09	0.00	0.00	0.00	0.05	0.00	0.14	0.09	1.16	1.53	0.42	0.51	0.32	0.05	0.00	0.00	4.35						4.35		
ES	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.09	0.00	0.00	0.00	0.00	0.18							0.18	
																									21.17
TOT	6.38	4.72	2.54	3.14	3.42	3.14	2.87	4.48	8.14	7.44	7.40	8.18	10.82	11.14	8.78	7.40	100.00	0.00	0.00	0.14	39.44	32.64	20.43	7.35	100.00

Wind Direction by Stability

N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL	-STABILITY CLASSES-
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Extremely Unstable
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Moderately Unstable
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.09	0.00	0.00	0.00	0.00	0.00	0.14	Slightly Unstable
3.56	1.85	0.88	1.34	1.29	1.34	0.69	0.69	1.76	1.80	2.40	3.93	4.62	5.13	4.35	3.79	39.44	Neutral
1.48	1.90	1.39	1.53	1.53	1.11	1.16	2.54	2.54	1.90	2.40	1.66	3.28	3.61	2.31	2.31	32.64	Slightly Stable
1.02	0.65	0.28	0.28	0.51	0.60	0.79	0.97	2.73	3.05	1.48	1.90	2.03	1.57	1.53	1.06	20.43	Moderately Stable
0.32	0.32	0.00	0.00	0.09	0.09	0.23	0.28	1.11	0.65	1.02	0.69	0.88	0.83	0.60	0.23	7.35	Extremely Stable

Wind Direction by Wind Speed

N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL	-WIND SPEED CLASSES-
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	C A L M
0.00	0.18	0.05	0.09	0.00	0.05	0.05	0.00	0.00	0.05	0.09	0.05	0.09	0.05	0.14	0.00	0.88	< 3 5 mph
0.97	1.20	0.32	0.37	0.46	0.23	0.37	0.32	0.18	0.09	0 23	0.32	0.42	0.37	0.46	0.42	6.75	3.6 - 7.5 mph
0.74	1.06	0.51	0.97	0.79	0.74	0.60	0.51	0.65	0.51	1.16	1.11	1.62	1.80	2.08	1.06	15.90	7.6 - 12.5 mph
1.76	1.76	1.62	1.02	1.53	1.16	0.51	0.79	1.94	1.66	2.27	2.17	2.36	3.84	2.59	1.53	28.48	12.6 - 18.5 mph
2.50	0.51	0.05	0.69	0.55	0.55	0.60	1.06	2.13	1.80	1.76	2.08	3.79	2.96	2.73	3.05	26.81	18.6 - 24.5 mph
0 42	0.00	0.00	0.00	0.09	0.42	0.74	1.80	3.24	3.33	1.90	2.45	2.54	2.13	0.79	1.34	21.17	> 24 5 mph

TABLE 11

LaSalle County Generating Statio
375 ft. Wind Speed and Direction

January-December, 2010
375Ft-33Ft Delta-T (F)

Number of Observations = 8591
Values are Percent Occurrence

SPEED	WIND DIRECTION CLASSES																STABILITY CLASSES							
CLASS	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL	EU	MU	SU	N	SS	MS	ES	TOTAL
EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00						
C SU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00					
A N	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				0.00				
L SS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00					0.00			
M MS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00		
ES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00	
																									0.00
EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00						
1 SU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01			0.01					
- N	0.00	0.05	0.00	0.02	0.03	0.05	0.06	0.07	0.07	0.08	0.06	0.09	0.03	0.00	0.05	0.01	0.68				0.68				
3 SS	0.02	0.00	0.01	0.01	0.03	0.00	0.03	0.05	0.01	0.03	0.07	0.02	0.03	0.05	0.02	0.06	0.47					0.47			
MS	0.01	0.06	0.01	0.01	0.00	0.00	0.00	0.01	0.02	0.06	0.02	0.00	0.02	0.01	0.03	0.03	0.31						0.31		
ES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.01	0.02							0.02	
																									1.49
EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00						
SU	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01			0.01					
- N	0.48	0.65	0.26	0.36	0.35	0.45	0.24	0.13	0.33	0.24	0.31	0.34	0.43	0.37	0.33	0.42	5.69				5.69				
7 SS	0.21	0.22	0.22	0.23	0.15	0.14	0.22	0.14	0.14	0.10	0.17	0.12	0.15	0.20	0.24	0.14	2.81					2.81			
MS	0.08	0.05	0.07	0.06	0.07	0.05	0.05	0.09	0.05	0.05	0.09	0.05	0.10	0.06	0.07	0.05	1.02						1.02		
ES	0.01	0.03	0.00	0.01	0.02	0.00	0.00	0.01	0.00	0.01	0.03	0.00	0.03	0.00	0.00	0.01	0.19							0.19	
																									9.72
EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00						
8 SU	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.01	0.01	0.01	0.05	0.02	0.00	0.00	0.12			0.12					
- N	0.95	1.34	0.73	0.52	0.66	0.49	0.43	0.48	0.71	0.74	1.15	0.44	0.84	1.22	1.19	0.73	12.64				12.64				
1 SS	0.20	0.45	0.48	0.56	0.59	0.27	0.22	0.31	0.26	0.22	0.38	0.38	0.33	0.37	0.52	0.20	5.75					5.75			
2 MS	0.13	0.09	0.07	0.02	0.07	0.08	0.19	0.19	0.20	0.14	0.19	0.22	0.21	0.24	0.26	0.15	2.44						2.44		
ES	0.12	0.03	0.02	0.00	0.00	0.02	0.05	0.02	0.06	0.08	0.08	0.02	0.07	0.01	0.07	0.03	0.70							0.70	
																									21.65
EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
1 MU	0.01	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.03		0.03						
3 SU	0.03	0.03	0.07	0.00	0.00	0.00	0.01	0.00	0.00	0.06	0.03	0.03	0.02	0.06	0.02	0.02	0.41			0.41					
- N	0.98	1.06	1.04	0.83	0.55	0.56	0.45	0.28	0.83	0.77	0.58	0.90	0.98	1.79	1.22	0.90	13.70				13.70				
1 SS	0.59	0.64	0.72	0.59	0.72	0.33	0.36	0.24	0.41	0.54	0.59	0.61	0.55	0.99	0.72	0.68	9.28					9.28			
8 MS	0.10	0.13	0.15	0.01	0.14	0.31	0.36	0.41	0.61	0.44	0.49	0.30	0.31	0.41	0.66	0.38	5.23						5.23		
ES	0.05	0.03	0.00	0.00	0.01	0.00	0.01	0.16	0.36	0.13	0.19	0.13	0.10	0.26	0.30	0.23	1.97							1.97	
																									30.61

TABLE 11
continued

LaSalle County Generating Statio
375 ft. Wind Speed and Direction

January-December, 2010
375Ft-33Ft Delta-T (F)

SPEED	WIND DIRECTION CLASSES																	STABILITY CLASSES							
CLASS	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL	EU	MU	SU	N	SS	MS	ES	TOTAL
EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
1 MU	0.00	0.00	0.02	0.00	0.01	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.06		0.06						
9 SU	0.01	0.02	0.06	0.00	0.00	0.00	0.00	0.00	0.05	0.13	0.05	0.02	0.06	0.00	0.00	0.00	0.40			0.40					
- N	0.55	0.81	0.61	0.66	0.42	0.38	0.31	0.09	0.42	0.38	0.62	0.66	0.87	1.20	1.43	0.88	10.31				10.31				
2 SS	0.35	0.19	0.06	0.27	0.40	0.26	0.24	0.19	0.51	0.74	0.77	0.30	0.77	0.79	0.91	0.50	7.24					7.24			
4 MS	0.22	0.03	0.01	0.00	0.14	0.23	0.29	0.13	0.42	0.59	0.15	0.30	0.45	0.19	0.35	0.27	3.78						3.78		
ES	0.09	0.00	0.00	0.00	0.00	0.01	0.01	0.05	0.31	0.14	0.08	0.10	0.14	0.03	0.05	0.02	1.05							1.05	
																									22.84
EU	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.03							
6 MU	0.00	0.00	0.01	0.00	0.01	0.00	0.00	0.00	0.05	0.03	0.01	0.01	0.00	0.00	0.00	0.00	0.13		0.13						
T SU	0.00	0.00	0.03	0.00	0.01	0.00	0.00	0.00	0.05	0.09	0.07	0.08	0.00	0.00	0.00	0.00	0.34			0.34					
N	0.12	0.14	0.19	0.15	0.12	0.35	0.24	0.03	0.27	0.62	0.40	0.50	0.56	0.34	0.37	0.38	4.77				4.77				
2 SS	0.05	0.03	0.03	0.00	0.17	0.20	0.40	0.57	0.86	1.27	0.62	0.15	0.59	0.78	0.24	0.23	6.20					6.20			
4 MS	0.07	0.00	0.00	0.00	0.03	0.01	0.16	0.13	0.29	0.57	0.42	0.17	0.10	0.01	0.00	0.00	1.98						1.98		
ES	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.03	0.08	0.05	0.02	0.00	0.00	0.00	0.01	0.23							0.23	
																									13.69
TOT	5.45	6.11	4.89	4.33	4.75	4.19	4.38	3.81	7.32	8.39	7.69	6.03	7.82	9.41	9.07	6.37	100.00	0.03	0.22	1.28	47.79	31.74	14.77	4.16	100.00

Wind Direction by Stability

N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL	-STABILITY CLASSES-
0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	Extremely Unstable
0.01	0.00	0.05	0.00	0.02	0.00	0.00	0.00	0.05	0.06	0.01	0.02	0.00	0.00	0.00	0.00	0.22	Moderately Unstable
0.05	0.06	0.16	0.00	0.01	0.00	0.03	0.00	0.10	0.29	0.16	0.15	0.13	0.08	0.02	0.02	1.28	Slightly Unstable
3.07	4.05	2.82	2.55	2.13	2.28	1.75	1.08	2.62	2.84	3.12	2.93	3.71	4.92	4.59	3.33	47.79	Neutral
1.42	1.54	1.52	1.66	2.07	1.19	1.48	1.50	2.19	2.91	2.61	1.58	2.42	3.18	2.67	1.80	31.74	Slightly Stable
0.62	0.36	0.31	0.10	0.45	0.69	1.05	0.95	1.58	1.85	1.36	1.05	1.21	0.92	1.37	0.88	14.77	Moderately Stable
0.28	0.10	0.02	0.01	0.03	0.03	0.07	0.27	0.77	0.44	0.43	0.29	0.35	0.30	0.42	0.33	4.16	Extremely Stable

Wind Direction by Wind Speed

N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL	-WIND SPEED CLASSES-
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	C A L M
0.03	0.10	0.02	0.05	0.07	0.05	0.09	0.13	0.12	0.17	0.15	0.13	0.09	0.06	0.10	0.12	1.49	< 3.5 mph
0.78	0.95	0.55	0.66	0.59	0.64	0.52	0.37	0.51	0.41	0.62	0.50	0.72	0.63	0.64	0.62	9.72	3.6 - 7.5 mph
1.40	1.92	1.30	1.11	1.33	0.86	0.90	1.00	1.22	1.20	1.82	1.08	1.49	1.87	2.04	1.12	21.65	7.6 - 12.5 mph
1.77	1.90	1.99	1.43	1.42	1.20	1.20	1.09	2.20	1.93	1.89	1.98	1.97	3.50	2.93	2.21	30.61	12.6 - 18.5 mph
1.22	1.06	0.76	0.93	0.97	0.88	0.86	0.45	1.71	2.01	1.66	1.40	2.29	2.21	2.74	1.68	22.84	18.6 - 24.5 mph
0.24	0.17	0.27	0.15	0.37	0.56	0.80	0.76	1.56	2.67	1.56	0.94	1.26	1.13	0.62	0.63	13.69	> 24.5 mph

5.5 Precipitation

Monthly totals and the maximum 24-hour and maximum 1-hour precipitation amounts are summarized below. The month with the most measured precipitation was June*. The month with the least measured precipitation was February*. The maximum 24-hour total was 1.73" (June*) and the maximum 1-hour total was 1.30" (June*).

Table 12

Precipitation Totals (Inches) - 2010
LaSalle Site

Month	Total	Maximum 24-hour	Maximum 1-hour
January	0.40*	0.29*	0.08*
February	0.05*	0.03*	0.02*
March	1.70*	0.57*	0.21*
April	2.06*	0.46*	0.34*
May	4.08	1.13	0.39
June	7.85*	1.73*	1.30*
July	1.95*	1.05*	0.59*
August	1.31	0.46	0.24
September	2.84	1.04	0.41
October	1.33*	0.55*	0.31*
November	1.37	0.57	0.23
December	1.45*	0.65*	0.15*
TOTAL:	26.39*		

* some data are missing - actual precipitation may be under-reported

5.6 Doses Resulting from Airborne Releases

The following are the maximum annual calculated cumulative offsite doses resulting from LaSalle County Station airborne releases.

LaSalle County Generating Station:

Dose	*Maximum Value*	*Sector Affected*
gamma air [1]	3.660×10^{-3} mrad	East-Southeast
beta air [2]	1.340×10^{-3} mrad	East-Southeast
whole body [3]	1.169×10^{-2} mrem	East-Southeast
skin [4]	3.910×10^{-3} mrem	East-Southeast
organ [5] (infant-thyroid)	6.567×10^{-1} mrem	East-Southeast

Compliance Status

10 CFR 50 Appendix I	**Yearly Objective**		**% of Appendix I**
gamma air	10.0	mrad	0.04
beta air	20.0	mrad	0.01
whole body	5.0	mrem	0.23
skin	15.0	mrem	0.03
organ	15.0	mrem	4.38

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(1) Gamma Air Dose - GASPAR II, NUREG-0597
(2) Beta Air Dose - GASPAR II, NUREG-0597
(3) Whole Body Dose - GASPAR II, NUREG-0597
(4) Skin Dose - GASPAR II, NUREG-0597
(5) Inhalation and Food Pathways Dose - GASPAR II, NUREG-0597

APPENDIX

LaSalle Meteorological Calibration

Date: 2-4-10

POWER SUPPLIES

+12.000V ± 0.120V	-12.000V ± 0.120V
A: +12.050 V	A: -12.063 V
B: +12.054 V	B: -12.042 V

Signal conditioners and Digital Recorder:

	Signal Conditioner Voltage Out			Digital recorder		Specifications	
	AF	AL	AL EQUIV	AF	AL	Signal Cond.	Recorder
			10 ft.				
PRCP LO	.000 V	– V	0.00 "	0.00 "	-- "	0.000V ± 0.050V	AL EQUIV ± 0.01"
PRCP HI	5.000 V	– V	1.00 "	1.00 "	– "	5.000V ± 0.050V	AL EQUIV ± 0.01"
			35 ft.				
WS ZERO	.025 V	– V	0.50 mph	0.5 mph	– mph	0.025V ± 0.025V	AL EQUIV + .1mph
WS SPAN	2.503 V	– V	50.06 mph	50.0 mph	– mph	2.500V ± 0.025V	AL EQUIV + .1mph
WD ZERO	.000 V	– V	0 °	0 °	– °	0.000V ± 0.100V	AL EQUIV + 1°
WD SPAN	3.334 V	– V	360.07 °	360 °	– °	3.333V ± 0.100V	AL EQUIV + 1°
ERO	.000 V	– V	-22.00 °	-21.99 °	– °	0.000V ± 0.050V	AL EQUIV + .1°F
T SPAN	4.999 V	– V	121.97 °	121.92 °	– °	5.000V ± 0.050V	AL EQUIV + .1°F
			200 ft.				
WS ZERO	.028 V	– V	0.56 mph	0.6 mph	– mph	0.025V ± 0.025V	AL EQUIV + .1mph
WS SPAN	2.504 V	– V	50.06 mph	50.1 mph	– mph	2.500V ± 0.025V	AL EQUIV + .1mph
WD ZERO	.002 V	– V	.21 °	0 °	– °	0.000V ± 0.100V	AL EQUIV + 1°
WD SPAN	3.333 V	– V	360 °	360 °	– °	3.333V ± 0.100V	AL EQUIV + 1°
ΔT_1 ZERO	.000 V	– V	-10.00 °	-9.99 °	– °	0.000V ± 0.050V	AL EQUIV + .1°F
ΔT_1 SPAN	4.997 V	– V	9.98 °	9.98 °	– °	5.000V ± 0.050V	AL EQUIV + .1°F
ΔT_2 ZERO	0.000 V	– V				0.000V ± 0.050V	
ΔT_2 SPAN	4.998 V	– V				5.000V ± 0.050V	
			375 ft.				
WS ZERO	.025 V	– V	0.50 mph	0.5 mph	– mph	0.025V ± 0.025V	AL EQUIV + .1mph
WS SPAN	2.504 V	– V	50.08 mph	50.1 mph	– mph	2.500V ± 0.025V	AL EQUIV + .1mph
WD ZERO	.000 V	– V	0 °	0 °	– °	0.000V ± 0.100V	AL EQUIV + 1°
WD SPAN	3.334 V	– V	360.07 °	360 °	– °	3.333V ± 0.100V	AL EQUIV + 1°
ΔT_1 ZERO	.001 V	– V	-9.99 °	-9.99 °	– °	0.000V ± 0.050V	AL EQUIV + .1°F
ΔT_1 SPAN	4.998 V	– V	9.98 °	9.99 °	– °	5.000V ± 0.050V	AL EQUIV + .1°F
ΔT_2 ZERO	.000 V	– V				0.000V ± 0.050V	
ΔT_2 SPAN	4.998 V	– V				5.000V ± 0.050V	

ASL 3-11-10

LaSalle Meteorological Calibration

Date: 2-4-10

TOWER MEASUREMENTS

☒ Ambient ☐ Ice Bath

Temperatures

	33 ft. Amb.		200 ft. ΔT_1		375 ft. ΔT_1	
	AF	AL	AF	AL	AF	AL
Measured	30.00 °F	— °F	-1.30 °F	— °F	-2.25 °F	— °F
Recorded	30.05 °F	— °F	-1.30 °F	— °F	-2.33 °F	— °F
Difference	.05 °F	— °F	0.00 °F	°F	0.08 °F	— °F
Specification	±0.5°F		±0.18°F		±0.18°F	

Winds

	33 ft.		200 ft.		375 ft.		
	AF	AL	AF	AL	AF	AL	*Specification*
WS stall	0.5 mph	0.5 mph	0.6 mph	— mph	0.6 mph	— mph	0.5mph ± 0.45mph
Forw. WD	359 °	— °	362 °	°	361 °	— °	0°/360° ± 5°
Revr. WD	179 °	— °	182 °	°	181 °	— °	180°/540° ± 5°
Tracking/wear	OK		OK		OK		

Comments:

AJL 3-1-10

LaSalle Meteorological Calibration

Date: 2-4-10

Dates of Last Wind Sensor Bearing Replacements:

	33 ft.	200 ft.	375 ft.
(6 mos.) Wind Speed:	2-4-10	1-22-10	12-29-09
(12 mos.) Wind Direction:	6-4-09	9-29-09	10-7-09

	33 ft.	200 ft.	375 ft.
Aspirators:	OK	OK	OK

Operation of De-ice Heat Lamp System (Aug-Mar): *

Operation of Rain Gauge: OK

Debris screen: In (Out) Installed Removed

Tower Lighting	Good	Fair	Poor	Tower Condition	Good	Fair	Poor
Beacon	☒	☐	☐	Paint	☒	☐	☐
Side lights	☒	☐	☐	Guy wire tension	☒	☐	☐
Wiring	☒	☐	☐				
Flasher	☒	☐	☐	Shelter condition	☒	☐	☐

Note:
AF = As Found
AL = As Left
— = no change (AF=AL)

FS = Full Scale

Calibration Instruments:
Psychrometer - S/N - MT104 DUE 4-10
Digital multimeter - S/N - 93120203 DUE 4-10
Digital multimeter - S/N - ___

Technicians: Mike Mowdin Mike Mink

Comments:
33F: MT 0105 Removed; MT 0164 Installed
220AT: 1 BAD HEAT LAMP; REPAIRED
375': 2 BAD HEAT LAMPS; REPAIRED

Replaced 2 Current Cards A850, A853

LO, MID OK S: MJM 2-4-10 Hi Scale Check Low

TO MUCH TO ADJUST OUT. 33WD, 200WS

Signature: [signature]

AS 3-4-10

System Response Check

Date: 2-4-10

Site: LaSalle
System: Microtel

Low Scale Check	33' WS	200' WS	375' WS	33' WD	200' WD	375' WD	33' T	200' ΔT	375' ΔT
Expected Response	20.0 ±0.4	20.0 ±0.4	20.0 ±0.4	108 ±2	108 ±2	108 ±2	6.80 ±0.7	-6.00 ±0.18	-6.00 ±0.18
As Found Response	20.0	20.0	20.0	108	108	108	6.8	-6.0	-6.0
As Left Response	-	-	-	-	-	-	-	-	-

Mid Scale Check	33' WS	200' WS	375' WS	33' WD	200' WD	375' WD	33' T	200' ΔT	375' ΔT
Expected Response	60.0 ±0.4	60.0 ±0.4	60.0 ±0.4	324 ±2	324 ±2	324 ±2	64.40 ±0.7	2.00 ±0.18	2.00 ±0.18
As Found Response	60.0	59.9	59.9	324	324	324	64.3	2.0	2.0
As Left Response	-	-	-	-	-	-	-	-	-

Full Scale Check	33' WS	200' WS	375' WS	33' WD	200' WD	375' WD	33' T	200' ΔT	375' ΔT
Expected Response	80.0 ±0.4	80.0 ±0.4	80.0 ±0.4	432 ±2	432 ±2	432 ±2	93.20 ±0.7	6.00 ±0.18	6.00 ±0.18
As Found Response	80.0	79.9	79.9	432	431	431	93.1	6.0	6.0
As Left Response	-	-	-	-	-	-	-	-	-

ASZ 3-11-10

System Response Check

Date: 2-4-10

Site: LaSalle
System: Process Computer

Low Scale Check	A847 375' WD	A848 200' WD	A849 375' WS	A850 200' WS	A851 375' ΔT	A852 33' WS	A853 33' WD	A854 33' T	A855 200' ΔT	A856 Precipitation
Expected Response	108 ±2	108 ±2	20.0 ±0.4	20.0 ±0.4	-4.00±0.18	20.0±0.4	108 ±2	6.80 ±0.7	-4.00±0.18	0.20 ±0.01
As Found Response	107.5	108.1	20.0	20.0	-4.0	20.0	108.4	6.8	-4.0	0.20
As Left Response	—	—	—	—	—	—	—	—	—	—

Mid Scale Check	A847 375' WD	A848 200' WD	A849 375' WS	A850 200' WS	A851 375' ΔT	A852 33' WS	A853 33' WD	A854 33' T	A855 200' ΔT	A856 Precipitation
Expected Response	324 ±2	324 ±2	60.0 ±0.4	60.0 ±0.4	8.00 ±0.18	60.0 ±0.4	324 ±2	64.40 ±0.7	8.00±0.18	0.60 ±0.01
As Found Response	324.3	323.9	59.9	59.9	8.0	60.0	324.9	64.3	8.0	0.6
As Left Response	—	—	—	—	—	—	—	—	—	—

Full Scale Check	A847 375' WD	A848 200' WD	A849 375' WS	A850 200' WS	A851 375' ΔT	A852 33' WS	A853 33' WD	A854 33' T	A855 200' ΔT	A856 Precipitation
Expected Response	432 ±2	432 ±2	80.0 ±0.4	80.0±0.4	14.00±0.18	80.0 ±0.4	432 ±2	93.20±0.7	14.00±0.18	0.80 ±0.01
As Found Response	432.3	432.2	79.8	77.3	14.0	80.0	419.9	93.1	14.0	0.80
As Left Response	—	—	—	79.9	—	—	431.3	—	—	—

ADZ 3-11-10

System Response Check

Date: 2-4-10

Site: LaSalle
System: Control Room Indicators

Low Scale Check	200' WS	375' WS	200' WD	375' WD	375' ΔT
Expected Response	20.0 ±1.0	20.0 ±1.0	108 ±5.4	108 ±5.4	-4.00 ±0.3
As Found Response	21.0	21.0	110	110	-4.1
As Left Response	—	—	—	—	—

Mid Scale Check	200' WS	375' WS	200' WD	375' WD	375' ΔT
Expected Response	60.0 ±1.0	60.0 ±1.0	324 ±5.4	324 ±5.4	8.00 ±0.3
As Found Response	60.	60	325	325	8.0
As Left Response	—	—	—	—	—

Full Scale Check	200' WS	375' WS	200' WD	375' WD	375' ΔT
Expected Response	80.0 ±1.0	80.0 ±1.0	432 ±5.4	432 ±5.4	14.00 ±0.3
As Found Response	80	80	430	430	14.0
As Left Response	—	—	—	—	—

ASL 3-11-10

LaSalle Meteorological Calibration

Date: 6-4-10

POWER SUPPLIES

+12.000V ± 0.120V	-12.000V ± 0.120V
A: +12.027 V	A: -12.035 V
B: +12.032 V	B: -12.021 V

Signal conditioners and Digital Recorder:

	Signal Conditioner Voltage Out			Digital recorder		Specifications	
	AF	AL	AL EQUIV	AF	AL	Signal Cond.	Recorder
			10 ft.				
PRCP LO	.000 V	- V	0.00 "	0.00 "	- "	0.000V ± 0.050V	AL EQUIV ± 0.01"
PRCP HI	5.000 V	- V	1.00 "	1.00 "	- "	5.000V ± 0.050V	AL EQUIV ± 0.01"
			35 ft.				
WS ZERO	0.023 V	- V	.46 mph	0.5 mph	- mph	0.025V ± 0.025V	AL EQUIV + .1mph
WS SPAN	~~2.333~~ 2.500 V MJM 6.4.10	- V	50.0 mph	50.0 mph	- mph	2.500V ± 0.025V	AL EQUIV + .1mph
WD ZERO	.002 V	- V	.216 °	0 °	- °	0.000V ± 0.100V	AL EQUIV + 1°
WD SPAN	3.333 V	- V	360 °	360 °	- °	3.333V ± 0.100V	AL EQUIV + 1°
T ZERO	0.000 V	- V	-22.00 °	-21.98 °	- °	0.000V ± 0.050V	AL EQUIV + .1°F
T SPAN	5.000 V	- V	122.00 °	121.98 °	- °	5.000V ± 0.050V	AL EQUIV + .1°F
			200 ft.				
WS ZERO	.024 V	- V	.48 mph	0.50 mph	- mph	0.025V ± 0.025V	AL EQUIV + .1mph
WS SPAN	2.494 V	2.500 V	50.0 mph	50.0 mph	- mph	2.500V ± 0.025V	AL EQUIV + .1mph
WD ZERO	.001 V	- V	.108 °	0 °	- °	0.000V ± 0.100V	AL EQUIV + 1°
WD SPAN	3.331 V	- V	359.7 °	360 °	- °	3.333V ± 0.100V	AL EQUIV + 1°
ΔT_1 ZERO	.000 V	- V	-10.00 °	-10.00 °	- °	0.000V ± 0.050V	AL EQUIV + .1°F
ΔT_1 SPAN	5.000 V	- V	10.00 °	10.00 °	°	5.000V ± 0.050V	AL EQUIV + .1°F
ΔT_2 ZERO	.001 V	- V				0.000V ± 0.050V	
ΔT_2 SPAN	5.001 V	- V				5.000V ± 0.050V	
			375 ft.				
WS ZERO	.024 V	- V	.48 mph	0.5 mph	- mph	0.025V ± 0.025V	AL EQUIV + .1mph
WS SPAN	2.493 V	2.500 V	50.0 mph	50.0 mph	- mph	2.500V ± 0.025V	AL EQUIV + .1mph
WD ZERO	.000 V	- V	0 °	0 °	- °	0.000V ± 0.100V	AL EQUIV + 1°
WD SPAN	3.331 V	- V	359.7 °	360 °	- °	3.333V ± 0.100V	AL EQUIV + 1°
ΔT_1 ZERO	.002 V	.000 V	10.00 °	-10.00 °	- °	0.000V ± 0.050V	AL EQUIV + .1°F
ΔT_1 SPAN	4.998 V	5.000 V	10.00 °	10.00 °	- °	5.000V ± 0.050V	AL EQUIV + .1°F
ΔT_2 ZERO	.000 V	- V				0.000V ± 0.050V	
ΔT_2 SPAN	5.000 V	- V				5.000V ± 0.050V	

MJC 8/4/10

LaSalle Meteorological Calibration

Date: 6-4-10

TOWER MEASUREMENTS

☑ Ambient ☐ Ice Bath

Temperatures

	33 ft. Amb.		200 ft. ΔT,		375 ft. ΔT,	
	AF	AL	AF	AL	AF	AL
Measured	72.5 °F	— °F	-1.15 °F	— °F	-2.7 °F	— °F
Recorded	72.35 °F	— °F	-1.13 °F	— °F	-2.61 °F	— °F
Difference	0.15 °F	— °F	0.02 °F	— °F	0.09 °F	— °F
Specification	±0.5°F		±0.18°F		±0.18°F	

Winds

	33 ft.		200 ft.		375 ft.		
	AF	AL	AF	AL	AF	AL	*Specification*
WS stall	0.5 mph	0.5 mph	0.5 mph	0.5 mph	0.5 mph	0.5 mph	0.5mph ± 0.45mph
Forw. WD	358 °	358 °	359 °	— °	361 °	— °	0°/360° ± 5°
Revr. WD	178 °	178 °	182 °	— °	180 °	— °	180°/540° ± 5°
Tracking/wear	OK		OK		OK		

Comments:

33' WD MT0122 removed MT0181 installed	200' WS MT0188 removed MT0105 installed	375' WS MT0101 removed MT0187 installed
33' WS MT0164 removed MT0190 installed		
		Need to repair 375' ~~WS~~ AZ 6.4.10 Heat Lamp Assembly

MAC 8/4/10

LaSalle Meteorological Calibration

Date: 6·4·10

Dates of Last Wind Sensor Bearing Replacements:

	33 ft.	200 ft.	375 ft.
(6 mos.) Wind Speed:	6-4-10	6-4-10	6-4-10
(12 mos.) Wind Direction:	6-4-10	9-29-09	10-7-09

	33 ft.	200 ft.	375 ft.
Aspirators:	OK	OK	OK

Operation of De-ice Heat Lamp System (Aug-Mar): NA

Operation of Rain Gauge: OK

Debris screen: (In) Out Installed Removed

Tower Lighting	Good	Fair	Poor
Beacon	☒	☐	☐
Side lights	☒	☐	☐
Wiring	☒	☐	☐
Flasher	☒	☐	☐

Tower Condition	Good	Fair	Poor
Paint	☒	☐	☐
Guy wire tension	☒	☐	☐
Shelter condition	☒	☐	☐

Note:
AF = As Found
AL = As Left
— = no change (AF=AL)

FS = Full Scale

Calibration Instruments:
Psychrometer - S/N - #1 DUE OCT 2010
Digital multimeter - S/N - 93120208 DUE
Digital multimeter - S/N - APRIL 2011

Technicians: ANDY LOTZ, MIKE MARX

Comments:

Signature: [signature]

MC 8/4/10

System Response Check

Date: 6-4-10

Site: LaSalle
System: Microtel

Low Scale Check	33' WS	200' WS	375' WS	33' WD	200' WD	375' WD	33' T	200' ΔT	375' ΔT
Expected Response	20.0 ±0.4	20.0 ±0.4	20.0 ±0.4	108 ±2	108 ±2	108 ±2	6.80 ±0.7	-6.00 ±0.18	-6.00 ±0.18
As Found Response	19.9	19.9	19.9	108	107	108	6.6	-6.0	-6.0
As Left Response	-	-	-	-	-	-	-	-	-

Mid Scale Check	33' WS	200' WS	375' WS	33' WD	200' WD	375' WD	33' T	200' ΔT	375' ΔT
Expected Response	60.0 ±0.4	60.0 ±0.4	60.0 ±0.4	324 ±2	324 ±2	324 ±2	64.40 ±0.7	2.00 ±0.18	2.00 ±0.18
As Found Response	59.9	60.0	59.9	324	323	324	64.3	2.0	2.0
As Left Response	-	-	-	-	-	-	-	-	-

Full Scale Check	33' WS	200' WS	375' WS	33' WD	200' WD	375' WD	33' T	200' ΔT	375' ΔT
Expected Response	80.0 ±0.4	80.0 ±0.4	80.0 ±0.4	432 ±2	432 ±2	432 ±2	93.20 ±0.7	6.00 ±0.18	6.00 ±0.18
As Found Response	79.9	80.0	79.9	431	432	431	93.10	6.0	6.0
As Left Response	-	-	-	-	-	-	-	-	-

MC 8/4/10

System Response Check

Date: 6-4-10

Site: LaSalle
System: Process Computer

Low Scale Check	A847 375' WD	A848 200' WD	A849 375' WS	A850 200' WS	A851 375' ΔT	A852 33' WS	A853 33' WD	A854 33' T	A855 200' ΔT	A856 Precipitation
Expected Response	108 ±2	108 ±2	20.0 ±0.4	20.0 ±0.4	-4.00±0.18	20.0±0.4	108 ±2	6.80 ±0.7	-4.00±0.18	0.20 ±0.01
As Found Response	107.8	108.2	20.0	20.0	-3.9	19.9	108.1	6.8	-4.0	0.20
As Left Response	—	—	—	—	—	—	—	—	—	—

Mid Scale Check	A847 375' WD	A848 200' WD	A849 375' WS	A850 200' WS	A851 375' ΔT	A852 33' WS	A853 33' WD	A854 33' T	A855 200' ΔT	A856 Precipitation
Expected Response	324 ±2	324 ±2	60.0 ±0.4	60.0 ±0.4	8.00 ±0.18	60.0 ±0.4	324 ±2	64.40 ±0.7	8.00±0.18	0.60 ±0.01
As Found Response	325	324.3	59.9	60.1	8.0	59.9	323.5	64.4	8.0	0.598
As Left Response	—	—	—	—	—	—	—	—	—	—

Full Scale Check	A847 375' WD	A848 200' WD	A849 375' WS	A850 200' WS	A851 375' ΔT	A852 33' WS	A853 33' WD	A854 33' T	A855 200' ΔT	A856 Precipitation
Expected Response	432 ±2	432 ±2	80.0 ±0.4	80.0±0.4	14.00±0.18	80.0 ±0.4	432 ±2	93.20±0.7	14.00±0.18	0.80 ±0.01
As Found Response	432.5	432.2	79.8	80.1	13.9	79.9	431.3	93.0	13.97	0.798
As Left Response	—	—	—	—	—	—	—	—	—	—

MTC 8/4/10

System Response Check

Date: 6-4-10

Site: LaSalle
System: Control Room Indicators

Low Scale Check	200' WS	375' WS	200' WD	375' WD	375' ΔT
Expected Response	20.0 ±1.0	20.0 ±1.0	108 ±5.4	108 ±5.4	-4.00 ±0.3
As Found Response	20	20	110	110	-4.0
As Left Response	–	–	–	–	–

Mid Scale Check	200' WS	375' WS	200' WD	375' WD	375' ΔT
Expected Response	60.0 ±1.0	60.0 ±1.0	324 ±5.4	324 ±5.4	8.00 ±0.3
As Found Response	60	60	325	325	8.0
As Left Response		–		–	–

Full Scale Check	200' WS	375' WS	200' WD	375' WD	375' ΔT
Expected Response	80.0 ±1.0	80.0 ±1.0	432 ±5.4	432 ±5.4	14.00 ±0.3
As Found Response	80	80	430	430	14.0
As Left Response	–	–	–	–	–

MTC 8/4/10

LaSalle Meteorological Calibration

Date: 10-1-10

POWER SUPPLIES

+12.000V ± 0.120V	-12.000V ± 0.120V
A: +12.043 V	A: -12.059 V
B: +12.046 V	B: -12.039 V

Signal conditioners and Digital Recorder:

	Signal Conditioner Voltage Out			Digital recorder		Specifications	
	AF	AL	AL EQUIV	AF	AL	Signal Cond.	Recorder
			10 ft.				
PRCP LO	.000 V	– V	0.00 "	0.00 "	– "	0.000V ± 0.050V	AL EQUIV ± 0.01"
PRCP HI	5.000 V	– V	1.00 "	1.00 "	– "	5.000V ± 0.050V	AL EQUIV ± 0.01"
			35 ft.				
WS ZERO	.025 V	– V	0.5 mph	0.5 mph	– mph	0.025V ± 0.025V	AL EQUIV + .1mph
WS SPAN	2.510 V	2.500 V	50.0 mph	50.0 mph	– mph	2.500V ± 0.025V	AL EQUIV + .1mph
WD ZERO	.000 V	– V	0 °	0 °	– °	0.000V ± 0.100V	AL EQUIV + 1°
SPAN	3.333 V	– V	360 °	360 °	– °	3.333V ± 0.100V	AL EQUIV + 1°
. ZERO	.000 V	– V	-22.00 °	-21.99 °	– °	0.000V ± 0.050V	AL EQUIV + .1°F
T SPAN	5.000 V	– V	122.00 °	121.95 °	– °	5.000V ± 0.050V	AL EQUIV + .1°F
			200 ft.				
WS ZERO	.025 V	– V	0.5 mph	0.5 mph	– mph	0.025V ± 0.025V	AL EQUIV + .1mph
WS SPAN	2.507 V	2.500 V	50.0 mph	50.0 mph	– mph	2.500V ± 0.025V	AL EQUIV + .1mph
WD ZERO	.000 V	– V	0 °	0 °	– °	0.000V ± 0.100V	AL EQUIV + 1°
WD SPAN	3.333 V	– V	360 °	360 °	– °	3.333V ± 0.100V	AL EQUIV + 1°
ΔT_1 ZERO	.000 V	– V	-10.00 °	-10.00 °	– °	0.000V ± 0.050V	AL EQUIV + .1°F
ΔT_1 SPAN	5.004 V	5.000 V	10.00 °	10.00 °	– °	5.000V ± 0.050V	AL EQUIV + .1°F
ΔT_2 ZERO	.000 V	– V				0.000V ± 0.050V	
ΔT_2 SPAN	5.001 V	5.000 V				5.000V ± 0.050V	
			375 ft.				
WS ZERO	.025 V	– V	0.5 mph	0.5 mph	– mph	0.025V ± 0.025V	AL EQUIV + .1mph
WS SPAN	2.509 V	2.500 V	50.0 mph	50.0 mph	– mph	2.500V ± 0.025V	AL EQUIV + .1mph
WD ZERO	.000 V	– V	0 °	0 °	– °	0.000V ± 0.100V	AL EQUIV + 1°
WD SPAN	~~7.569~~ V → 3.333	3.333 V	360 °	360 °	– °	3.333V ± 0.100V	AL EQUIV + 1°
ΔT_1 ZERO	.001 V	– V	-9.96 °	-9.99 °	– °	0.000V ± 0.050V	AL EQUIV + .1°F
ΔT_1 SPAN	5.006 V	5.000 V	~~-9.96~~ -10.00 °	-10.00 °	– °	5.000V ± 0.050V	AL EQUIV + .1°F
ΔT_2 ZERO	-.001 V	– V				0.000V ± 0.050V	
ΔT_2 SPAN	5.006 V	5.000 V				5.000V ± 0.050V	

NSM 10-8-10

ADL 11-18-10

LaSalle Meteorological Calibration

Date: 12-1-10

TOWER MEASUREMENTS

☒ Ambient ☐ Ice Bath

Temperatures

	33 ft. Amb. AF	33 ft. Amb. AL	200 ft. ΔT1 AF	200 ft. ΔT1 AL	375 ft. ΔT1 AF	375 ft. ΔT1 AL
Measured	62.75 °F	— °F	-1.3 °F	— °F	-2.1 °F	— °F
Recorded	62.6 °F	— °F	-1.3 °F	— °F	-2.2 °F	— °F
Difference	0.15 °F	— °F	0.0 °F	— °F	-0.1 °F	— °F
Specification	±0.5°F		±0.18°F		±0.18°F	

Winds

	33 ft. AF	33 ft. AL	200 ft. AF	200 ft. AL	375 ft. AF	375 ft. AL	*Specification*
WS stall	0.8 mph	0.8 mph	0.7 mph	0.7 mph	0.8 mph	0.7 mph	0.5mph ± 0.45mph
Forw. WD	359 °	— °	358 °	360 °	359 °	360 °	0°/360° ± 5°
Revr. WD	178 °	— °	182 °	179 °	182 °	181 °	180°/540° ± 5°
Tracking/wear	OK		OK		OK		

Comments: 33 ft 200 375

WS INSTALLED MT166 WS INSTALLED MT165 WS INSTALLED MT038

WS REMOVED MT140 WS REMOVED MT105 WS REMOVED MT187

WD INSTALLED MT183 WD INSTALLED MT142

WD REMOVED MT083 WD REMOVED MT130

ASL 11-18-10

LaSalle Meteorological Calibration

Date: 10-1-10

Dates of Last Wind Sensor Bearing Replacements:

	33 ft.	200 ft.	375 ft.
(6 mos.) Wind Speed:	10-1-10	10-1-10	10-1-10
(12 mos.) Wind Direction:	6-4-10	10-1-10	10-1-10

	33 ft.	200 ft.	375 ft.
Aspirators:	OK	OK	OK

Operation of De-ice Heat Lamp System (Aug-Mar): OK

Operation of Rain Gauge: OK Tips Poured .05 Tips Recorded .05

UPS CHECK: OK

Debris screen: (In) Out Installed Removed

Tower Lighting	Good	Fair	Poor
Beacon	☒	☐	☐
Side lights	☒	☐	☐
Wiring	☒	☐	☐
Flasher	☒	☐	☐

Tower Condition	Good	Fair	Poor
Paint	☒	☐	☐
Shelter condition	☒	☐	☐

Note:
AF = As Found
AL = As Left
— = no change (AF=AL)

FS = Full Scale

Calibration Instruments:

	Next Cal Due
Psychrometer - S/N -	#1 Due OCT 2010
Digital multimeter - S/N -	87930008 Due Oct 2010
Digital multimeter - S/N -	

Technicians: HEATHER CRAMOND, MIKE MARX

Comments:

Signature:

ADL 11-18-10

System Response Check

Date: 10-1-10

Site: LaSalle
System: Microtel

Low Scale Check	33' WS	200' WS	375' WS	33' WD	200' WD	375' WD	33' T	200' ΔT	375' ΔT
Expected Response	20.0 ±0.4	20.0 ±0.4	20.0 ±0.4	108 ±2	108 ±2	108 ±2	6.80 ±0.7	-6.00 ±0.18	-6.00 ±0.18
As Found Response	19.8	19.8	19.8	107	107	108	6.60	-6.00	-6.00
As Left Response	–	–	–	–	–	–	–	–	–

Mid Scale Check	33' WS	200' WS	375' WS	33' WD	200' WD	375' WD	33' T	200' ΔT	375' ΔT
Expected Response	60.0 ±0.4	60.0 ±0.4	60.0 ±0.4	324 ±2	324 ±2	324 ±2	64.40 ±0.7	2.00 ±0.18	2.00 ±0.18
As Found Response	59.9	59.9	59.9	324	323	323	64.30	2.00	2.00
As Left Response	–	–	–	–	–	–	–	–	–

Full Scale Check	33' WS	200' WS	375' WS	33' WD	200' WD	375' WD	33' T	200' ΔT	375' ΔT
Expected Response	80.0 ±0.4	80.0 ±0.4	80.0 ±0.4	432 ±2	432 ±2	432 ±2	93.20 ±0.7	6.00 ±0.18	6.00 ±0.18
As Found Response	NSM 10-1-10 ~~89.9~~	80.0	79.9	431	431	431	93.00	6.00	6.00
As Left Response	80.0	–	–	–	–	–	–	–	–

AJZ 11-18-10

System Response Check

Date: 10-1-10

Site: LaSalle
System: Process Computer

Low Scale Check	A847 375' WD	A848 200' WD	A849 375' WS	A850 200' WS	A851 375' ΔT	A852 33' WS	A853 33' WD	A854 33' T	A855 200' ΔT	A856 Precipitation
Expected Response	108 ±2	108 ±2	20.0 ±0.4	20.0 ±0.4	-4.00±0.18	20.0±0.4	108 ±2	6.80 ±0.7	-4.00±0.18	0.20 ±0.01
As Found Response	107.9	108.0	20.0	20.0	-3.99	19.9	108.0	6.70	-4.00	0.19
As Left Response	—	—	—	—	—	—	—	—	—	—

Mid Scale Check	A847 375' WD	A848 200' WD	A849 375' WS	A850 200' WS	A851 375' ΔT	A852 33' WS	A853 33' WD	A854 33' T	A855 200' ΔT	A856 Precipitation
Expected Response	324 ±2	324 ±2	60.0 ±0.4	60.0 ±0.4	8.00 ±0.18	60.0 ±0.4	324 ±2	64.40 ±0.7	8.00±0.18	0.60 ±0.01
As Found Response	325.0	324.0	59.87	60.0	7.98	59.9	324.1	64.30	7.97	0.59
As Left Response	—	—	—	—	—	—	—	—	—	—

Full Scale Check	A847 375' WD	A848 200' WD	A849 375' WS	A850 200' WS	A851 375' ΔT	A852 33' WS	A853 33' WD	A854 33' T	A855 200' ΔT	A856 Precipitation
Expected Response	432 ±2	432 ±2	80.0 ±0.4	80.0±0.4	14.00±0.18	80.0 ±0.4	432 ±2	93.20±0.7	14.00±0.18	0.80 ±0.01
As Found Response	432.7	432.4	79.8	80.0	13.98	79.8	432	93.00	13.97	0.79
As Left Response	—	—	—	—	—	—	—	—	—	—

ASL 11-8-10

2307

System Response Check

Date: 10-1-10

Site: LaSalle
System: Control Room Indicators

Low Scale Check	200' WS	375' WS	200' WD	375' WD	375' ΔT
Expected Response	20.0 ±1.0	20.0 ±1.0	108 ±5.4	108 ±5.4	-4.00 ±0.3
As Found Response	20.0	20	110	110	-4.00
As Left Response	–	–	–	–	–

Mid Scale Check	200' WS	375' WS	200' WD	375' WD	375' ΔT
Expected Response	60.0 ±1.0	60.0 ±1.0	324 ±5.4	324 ±5.4	8.00 ±0.3
As Found Response	60.0	60	325	325	8.00
As Left Response	–	–	–	–	–

Full Scale Check	200' WS	375' WS	200' WD	375' WD	375' ΔT
Expected Response	80.0 ±1.0	80.0 ±1.0	432 ±5.4	432 ±5.4	14.00 ±0.3
As Found Response	80.0	80	435	435	14.00
As Left Response	—		–		–

MSL 11-18-10

RAI # MA-01

ATTACHMENT 2

Annual Report
on the
Meteorological Monitoring Program
at the
LaSalle County Nuclear Power Station
2011

prepared for

Exelon Nuclear
Warrenville, IL 60555

by

Murray and Trettel, Incorporated
600 First Bank Drive, Suite A
Palatine, IL 60067
(847) 963-9000
e-mail: mt@weathercommand.com

For Exelon Use Only

Reviewed By: _____

Date: 4.16.2012

Table of Contents

List of Tables

1. Introduction

The purpose of the meteorological program being conducted at the LaSalle County Station site is to provide information sufficient to assess the local weather conditions and to determine the degree of atmospheric dispersion of airborne radioactive effluent from the station.

The meteorological tower is 400 ft. high and is instrumented at three levels. Wind speed and direction are measured at 33 ft., 200 ft., and 375 ft. Ambient temperature is measured at 33 ft. Differential temperatures, referenced to 33 ft., are measured at 200 ft. and 375 ft. Precipitation is measured at approximately 10 ft.

Joint frequency stability wind rose tables of wind direction, wind speed, and stability are routinely tabulated from hourly measurements. The quarterly and annual tables are included in this report.

Descriptions of the instruments and digital recorder are given in Section 3 (Data Acquisition) of this report. Data reduction and processing are described in Section 4 (Data Analysis). The results given in Section 5 of this report include modeled maximum whole body doses, skin doses, organ doses based upon airborne releases, and site meteorology.

2. Summary

The LaSalle Station meteorological monitoring program produced 78,690 hours of valid data out of a possible 78,840 parameter hours during 2011 (365 days x 24 hours/day x 9 measured priority parameters), which represents an overall data recovery rate of 99.8%. Priority parameters are all parameters except precipitation.

The stability wind rose tables included in this report have been generated using the 375 ft. wind data with the 375-33 ft. differential temperature data.

The maximum annual calculated cumulative doses resulting from airborne releases were as follows.

LaSalle County Generating Station:

gamma air dose	-	4.160×10^{-3} mrad
beta air dose	-	1.380×10^{-3} mrad
whole body dose	-	1.816×10^{-2} mrem
skin dose	-	4.240×10^{-3} mrem
organ (infant thyroid)	-	7.473×10^{-1} mrem

3. Data Acquisition

Wind speed and direction are measured with Climatronics F460 wind sensors. The wind speed sensors have a starting speed of 0.5 mph (0.22 mps), a range of 0 to 100 mph (0 to 44.7 mps), and a system accuracy of ±1.0 mph at 100 mph (±0.45 mps at 44.7 mps). The wind direction sensors have a threshold speed of 0.5 mph (0.22 mps), a range of 0 to 540°, and a system accuracy of ±5°.

Ambient and differential temperature are measured with the Climatronics 100093 system. Ambient temperature is measured within the range of -22 to 122°F (-30 to 50°C) with an accuracy of ±0.5°F (±0.3°C). Differential temperature is measured within the range of -10 to 10°F (-5.6 to 5.6°C) with an accuracy of ±0.18°F (±0.10°C).

Precipitation is measured with a Climatronics 100097 tipping bucket rain gauge and is measured in increments of one one-hundredth of an inch with a system accuracy of ±1% for rain rates of 1-3"/hr and ±3% for rain rates of 3-6"/hr.

Instrument types and locations are summarized in Table 1.

The meteorological data are collected and stored by a Microtel 4.0 data acquisition system. The Microtel measures the analog voltages of the instruments and records the digital equivalent within the range of 0 to +5 volts. The Microtel has the capability of storing 24 hours of minute data and one week of hourly data. Data are obtained from the Microtel by a direct dial telephone hookup to an in-house computer system. Data are sampled every second.

As a backup to the Microtel, data are also recorded with a Johnson Yokogawa Corp. digital recorder (JYC DA100 data acquisition unit and Contec IPC-PT/M300(PC)WOU PC). Data are sampled every 10 seconds.

Data loggers are summarized in Table 2.

Table 1

Instrument Locations

Measurement	Sensor Type	Location	Elevation
Wind Speed	Climatronics 100075 F460	Tower	375 ft.
Wind Direction	Climatronics 100076 F460	Tower	375 ft.
Differential Temperature	Climatronics 100093	Tower	375 ft.
Wind Speed	Climatronics 100075 F460	Tower	200 ft.
Wind Direction	Climatronics 100076 F460	Tower	200 ft.
Differential Temperature	Climatronics 100093	Tower	200 ft.
Wind Speed	Climatronics 100075 F460	Tower	33 ft.
Wind Direction	Climatronics 100076 F460	Tower	33 ft.
Ambient Temperature	Climatronics 100093	Tower	33 ft.
Precipitation	Climatronics 100097-1 Tipping Bucket Rain Gage	Meteorological shelter roof	10 ft.

Table 2

Data Loggers

Measurement	Logger Type	Sampling Frequency
Winds, Temperatures, and Precipitation	Microtel 4.0 data acquisition system	1 sec.
Winds, Temperatures, and Precipitation	Johnson Yokogawa Corp. Digital Recorder (JYC DA100 and Contec IPC-PT/M300(PC)WOU) digital recorder	10 sec.

4. Data Analysis

The LaSalle Microtel is routinely interrogated to obtain hourly average data. The data are then stored in the meteorological data base and listings of the data are generated. The data listings are examined by qualified personnel and any apparent problems are brought to the attention of the Project Manager or Meteorological Technician and the Instrument Maintenance staff.

Hourly values of wind speed, wind direction, ambient temperature, differential temperature, and precipitation are obtained through measurements taken at the site. The standard deviation of wind direction (sigma) is derived. The wind direction variation is described in terms of the standard deviation of the direction about the mean direction. The Microtel computes an hourly value of wind sigma by taking the Root-Mean-Square (RMS) of the four quarter-hour wind sigma values. The Microtel quarter-hour wind sigma values are calculated directly from the one second wind direction samples during the 15 minute period.

The data base files are edited approximately once a week. Missing Microtel values are replaced with digital recorder values, when available. Invalid data are deleted from the data base.

When an hourly value is missing or invalid, the numeral 999 is entered into the computer data file in the appropriate location. When the wind direction changes substantially relative to its short term fluctuations, the numeral 888 can be entered into the wind sigma location to indicate shifting winds. When the wind blows with velocities near the sensing threshold of the instrument, the numeral 777 can be entered into the wind direction, wind speed, and wind sigma locations to indicate light and variable winds.

A professional meteorologist reviews the data, calibration findings, equipment maintenance reports, and other information and determines which data are valid. Only the valid data are retained in the data base.

As a quality control measure, a monthly comparison is made of Microtel and digital recorder data. An investigation is made into the reasons for any significant differences between the sets of values.

Joint frequency stability wind rose tables of hourly data measured at the site are generated. These tables indicate the prevailing wind direction, wind speed, and stability classes measured during the period of observation as well as the joint frequencies of occurrence of the wind direction, wind speed, and stability classes. The values are also used as input to the atmospheric transport and diffusion models. Wind direction, wind speed, and stability classes are given in Tables 3, 4, and 5.

Table 3

Wind Direction Classes

IF	348.75°	<	WD	≤	11.25°	THEN	Class is	N
IF	11.25°	<	WD	≤	33.75°	THEN	Class is	NNE
IF	33.75°	<	WD	≤	56.25°	THEN	Class is	NE
IF	56.25°	<	WD	≤	78.75°	THEN	Class is	ENE
IF	78.75°	<	WD	≤	101.25°	THEN	Class is	E
IF	101.25°	<	WD	≤	123.75°	THEN	Class is	ESE
IF	123.75°	<	WD	≤	146.25°	THEN	Class is	SE
IF	146.25°	<	WD	≤	168.75°	THEN	Class is	SSE
IF	168.75°	<	WD	≤	191.25°	THEN	Class is	S
IF	191.25°	<	WD	≤	213.75°	THEN	Class is	SSW
IF	213.75°	<	WD	≤	236.25°	THEN	Class is	SW
IF	236.25°	<	WD	≤	258.75°	THEN	Class is	WSW
IF	258.75°	<	WD	≤	281.25°	THEN	Class is	W
IF	281.25°	<	WD	≤	303.75°	THEN	Class is	WNW
IF	303.75°	<	WD	≤	326.25°	THEN	Class is	NW
IF	326.25°	<	WD	≤	348.75°	THEN	Class is	NNW

Table 4

Wind Speed Classes

IF	0.0 mph	<	WS	≤	0.5 mph	THEN	Class is	1
IF	0.5 mph	<	WS	≤	3.5 mph	THEN	Class is	2
IF	3.5 mph	<	WS	≤	7.5 mph	THEN	Class is	3
IF	7.5 mph	<	WS	≤	12.5 mph	THEN	Class is	4
IF	12.5 mph	<	WS	≤	18.5 mph	THEN	Class is	5
IF	18.5 mph	<	WS	≤	24.5 mph	THEN	Class is	6
IF	24.5 mph	<	WS			THEN	Class is	7

Table 5

Atmospheric Stability Classes

Class	Differential Temperature Interval (in °C/100m) [1]	Differential Temperature Interval (in °F over the 200-33ft. range) [2]	Differential Temperature Interval (in °F over the 375-33ft. range) [2]
Extremely Unstable	$\Delta T \leq -1.9$	$\Delta T \leq -1.8$	$\Delta T \leq -3.6$
Moderately Unstable	$-1.9 < \Delta T \leq -1.7$	$-1.8 < \Delta T \leq -1.6$	$-3.6 < \Delta T \leq -3.2$
Slightly Unstable	$-1.7 < \Delta T \leq -1.5$	$-1.6 < \Delta T \leq -1.4$	$-3.2 < \Delta T \leq -2.9$
Neutral	$-1.5 < \Delta T \leq -0.5$	$-1.4 < \Delta T \leq -0.5$	$-2.9 < \Delta T \leq -1.0$
Slightly Stable	$-0.5 < \Delta T \leq 1.5$	$-0.5 < \Delta T \leq 1.3$	$-1.0 < \Delta T \leq 2.8$
Moderately Stable	$1.5 < \Delta T \leq 4.0$	$1.3 < \Delta T \leq 3.6$	$2.8 < \Delta T \leq 7.5$
Extremely Stable	$4.0 < \Delta T$	$3.6 < \Delta T$	$7.5 < \Delta T$

[1] from ANSI/ANS 2.5
[2] ANSI/ANS 2.5 intervals scaled for instrument heights on the LaSalle meteorological tower

The following two programs were used to calculate doses resulting from radioactive releases:

1. XOQDOQ: Computer Program for the Meteorological Evaluation of Routine Effluent Releases at Nuclear Power Stations (NUREG/CR-2919).

The program is based on the theory that material released to the atmosphere will be normally distributed (Gaussian) about the plume centerline. A straight-line trajectory is assumed between the point of release and all receptors.

The program implements the assumptions outlined in Section C of NRC Regulatory Guide 1.111. In evaluating routine releases from nuclear power plants, it primarily is designed to calculate annual relative effluent concentrations, X/Q values and annual average relative deposition, D/Q values.

Output from the XOQDOQ program is used as input to the GASPAR program.

2. GASPAR II: A Code System for Evaluation of Radiological Impacts Due to the Release of Radioactive Material to the Atmosphere During Normal Operation of Light Water Reactors (NUREG-0597).

GASPAR is a program written for the evaluation of radiological impacts due to the release of radioactive material to the atmosphere during normal operation of reactors. The GASPAR code implements the radiological impact models of NRC Regulatory Guide 1.109, Revision 1, for atmospheric releases. The program is used to estimate the maximum individual doses at selected locations in the vicinity of the plant.

5. Results

5.1 Instrument Maintenance

The maintenance program followed during 2011 was composed of routinely scheduled visits, preventative maintenance procedures, and equipment repairs. Routine monthly visits were made to inspect the sensing and recording systems for proper operation. In addition, routine maintenance and calibration checks of all tower-mounted and ground level equipment were performed every four months. A description of the calibration and field procedures is found in the Murray and Trettel, Inc. "P1009 Procedures Manual" (July 2010).

In January, the 375 ft. wind speed sensor was replaced due to ice build-up on the cups.

In May, the annual tower inspection was performed.

In August, a problem with the digital recorder phone line was repaired.

In October, 2 bad heat lamps were replaced during a calibration.

In November, 6 side lights were replaced. Also in November, the 33' wind direction sensor was replaced due to spiking.

In December, the digital recorder was unreachable by modem. The unit was rebooted to restore proper operation. On that same day, the UPS was replaced.

No other significant problems were encountered with the equipment, and at the end of the annual period, no problems were evident at the site.

5.2 Data Recovery

The record of data recovery for the year is summarized in Table 6.

Table 6

LaSalle Site

Data Recovery Summary

2011

Measurement	Elevation	Recovered Hours	Recovered Percent	Lost Hours	Percent Changed
Wind Speed	33 ft.	8754	99.9	6	0.1
Wind Speed	200 ft.	8757	100.0	3	0.1
Wind Speed	375 ft.	8648	98.7	112	1.3
Wind Direction	33 ft.	8746	99.8	14	0.9
Wind Direction	200 ft.	8757	100.0	3	0.4
Wind Direction	375 ft.	8757	100.0	3	0.4
Ambient Temperature	33 ft.	8757	100.0	3	0.1
Differential Temperature	200-33 ft.	8757	100.0	3	0.3
Differential Temperature	375-33 ft.	8757	100.0	3	0.8
Precipitation	10 ft.	8638	98.6	122	1.6
AVERAGE*			99.8		

* average of priority parameters (all except precipitation)

	Valid Hours	Recovered Percent	Lost Hours
Lower Level Joint Frequency %	8743	99.8	17
Middle Level Joint Frequency %	8757	100.0	3
Upper Level Joint Frequency %	8648	98.7	112

5.3 Summary of Billings for Equipment Repairs, Replacement Parts, and Other Work not Included in Fixed-Cost Maintenance Agreement - **2011**

Description - LaSalle	Cost
January	
Meteorological equipment maintenance	$ 2,264.12
Meteorological parts, materials, and contractor services	122.40
February	
Meteorological equipment maintenance	210.00
Special Request	170.00
March	
Meteorological equipment maintenance	0.00
Meteorological parts, materials, and contractor services	287.61
April	
Meteorological equipment maintenance	460.20
Special Request	127.50
May	
Meteorological parts, materials, and contractor services	228.28
June	
Meteorological equipment maintenance	240.00
Meteorological parts, materials, and contractor services	0.00
July	
-none-	0.00
August	
Meteorological equipment maintenance	334.40
September	
Meteorological parts, materials, and contractor services	196.36
October	
Meteorological equipment maintenance	480.00
Meteorological parts, materials, and contractor services	491.69
November	
Meteorological equipment maintenance	1,420.14
Meteorological parts, materials, and contractor services	848.84
December	
Meteorological equipment maintenance	425.20

Annual Total: $ 8,306.74

5.4 Stability Wind Rose Data

The quarterly and annual stability wind roses are given in Tables 7 through 11. Wind speed classes have been altered to reflect the sensor threshold.

For the year, winds measured at 375 ft. most frequently came from the South-Southwest (9.63%) and fell into the 12.6-18.5 mph wind speed class (29.27%). Calms (wind speeds at or below the sensor threshold) were measured 0.00% of the time and speeds greater than 24.5 mph were measured 15.48% of the time.

Stability based on the 375-33 ft. differential temperature most frequently fell into the neutral classification (53.61%).

TABLE 7

LaSalle County Generating Statio
375 ft. Wind Speed and Direction

January-March, 2011
375Ft-33Ft Delta-T (F)

Number of Observations = 2050
Values are Percent Occurrence

SPEED	WIND DIRECTION CLASSES																	STABILITY CLASSES							
CLASS	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL	EU	MU	SU	N	SS	MS	ES	TOTAL
EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00						
C SU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00					
A N	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				0.00				
L SS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00					0.00			
M MS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00		
ES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00	
																									0.00
EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00						
1 SU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00					
- N	0.05	0.05	0.05	0.10	0.00	0.10	0.10	0.00	0.00	0.00	0.05	0.05	0.00	0.10	0.00	0.00	0.63				0.63				
3 SS	0.10	0.00	0.00	0.00	0.05	0.00	0.00	0.10	0.00	0.05	0.00	0.00	0.10	0.00	0.10	0.00	0.49					0.49			
MS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00		
ES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00	
																									1.12
EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00						
4 SU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00					
- N	0.49	0.83	0.54	0.78	0.24	0.10	0.15	0.00	0.15	0.20	0.39	0.00	0.29	0.49	0.49	0.20	5.32				5.32				
7 SS	0.10	0.00	0.10	0.05	0.15	0.10	0.20	0.05	0.00	0.00	0.00	0.20	0.05	0.15	0.15	0.10	1.37					1.37			
MS	0.00	0.00	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.15						0.15		
ES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00	
																									6.83
EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00						
8 SU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.05			0.05					
- N	1.02	0.73	1.32	0.78	0.73	0.78	0.34	0.59	0.68	0.73	0.73	0.54	0.63	0.93	1.85	1.02	13.41				13.41				
1 SS	0.00	0.15	0.34	0.10	0.39	0.24	0.20	0.20	0.15	0.10	0.54	0.05	0.15	0.34	0.59	0.10	3.61					3.61			
2 MS	0.10	0.00	0.15	0.00	0.00	0.05	0.00	0.10	0.10	0.05	0.00	0.00	0.15	0.00	0.00	0.15	0.83						0.83		
ES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05	0.00	0.00	0.00	0.10							0.10	
																									18.00
EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
1 MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00						
3 SU	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.10			0.10					
- N	1.61	0.44	2.10	2.29	1.32	0.83	0.44	0.54	1.02	0.59	1.27	0.93	0.83	1.07	2.34	0.98	18.59				18.59				
1 SS	0.29	0.59	0.49	0.44	0.54	0.39	0.24	0.34	0.24	0.59	0.93	0.63	0.44	0.98	1.37	0.39	8.88					8.88			
8 MS	0.05	0.15	0.00	0.00	0.10	0.10	0.10	0.05	0.29	0.05	0.24	0.24	0.29	0.39	0.15	0.05	2.24						2.24		
ES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.05	0.10	0.10	0.00	0.29							0.29	
																									30.10

TABLE 7
continued

LaSalle County Generating Statio
375 ft. Wind Speed and Direction

January-March, 2011
375Ft-33Ft Delta-T (F)

SPEED	WIND DIRECTION CLASSES																STABILITY CLASSES							
CLASS	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL	EU	MU	SU	N	SS	MS	ES	TOTAL
EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
1 MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00						
9 SU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00					
- N	1.71	0.44	1.32	3.12	1.32	0.20	0.73	0.34	0.20	0.39	0.24	0.10	0.83	1.56	3.12	0.59	16.20				16.20				
2 SS	0.20	0.15	0.10	0.20	0.49	0.63	0.73	0.24	0.44	0.59	1.22	0.24	0.29	1.90	1.56	0.29	9.27					9.27			
4 MS	0.00	0.10	0.00	0.00	0.00	0.05	0.10	0.15	0.15	0.05	0.54	0.39	0.15	0.15	0.10	0.00	1.90						1.90		
ES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.15	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.24							0.24	
																									27.61
EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
G MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00						
T SU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05	0.00	0.00	0.00	0.00	0.00	0.10			0.10					
N	0.15	0.34	0.68	0.68	0.49	0.15	0.15	0.29	0.29	0.24	0.15	0.44	0.44	0.63	0.39	0.63	6.15				6.15				
2 SS	0.00	0.00	0.00	0.00	0.05	0.29	0.59	0.15	0.73	1.12	1.32	0.83	0.78	1.37	0.24	0.00	7.46					7.46			
4 MS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.20	0.39	0.88	0.73	0.29	0.10	0.00	0.00	2.63						2.63		
ES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00	
																									16.34
TOT	5.85	3.95	7.32	8.54	5.85	4.00	4.05	3.27	4.78	5.27	8.54	5.41	5.80	10.24	12.59	4.54	100.00	0.00	0.00	0.24	60.29	31.07	7.76	0.63	100.00

Wind Direction by Stability

N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL	-STABILITY CLASSES-
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Extremely Unstable
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Moderately Unstable
0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.05	0.00	0.00	0.00	0.00	0.05	0.24	Slightly Unstable
5.02	2.83	6.00	7.76	4.10	2.15	1.90	1.76	2.34	2.15	2.83	2.05	3.02	4.78	8.20	3.41	60.29	Neutral
0.68	0.88	1.02	0.78	1.66	1.66	1.95	1.07	1.56	2.44	4.00	1.95	1.80	4.73	4.00	0.88	31.07	Slightly Stable
0.15	0.24	0.24	0.00	0.10	0.20	0.20	0.34	0.73	0.59	1.66	1.37	0.88	0.63	0.24	0.20	7.76	Moderately Stable
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.15	0.00	0.00	0.05	0.10	0.10	0.15	0.00	0.63	Extremely Stable

Wind Direction by Wind Speed

N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL	-WIND SPEED CLASSES-
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	C A L M
0.15	0.05	0.05	0.10	0.05	0.10	0.10	0.10	0.00	0.05	0.05	0.05	0.10	0.10	0.10	0.00	1.12	< 3.5 mph
0.59	0.83	0.73	0.83	0.39	0.20	0.34	0.05	0.15	0.24	0.39	0.20	0.34	0.63	0.63	0.29	6.83	3.6 - 7.5 mph
1.12	0.88	1.80	0.88	1.12	1.07	0.54	0.88	0.93	0.93	1.27	0.63	0.98	1.27	2.44	1.27	18.00	7.6 - 12.5 mph
1.95	1.17	2.63	2.73	1.95	1.32	0.78	0.98	1.56	1.22	2.44	1.80	1.61	2.54	3.95	1.46	30.10	12.6 - 18.5 mph
1.90	0.68	1.41	3.32	1.80	0.88	1.56	0.78	0.93	1.02	2.00	0.73	1.27	3.61	4.83	0.88	27.61	18.6 - 24.5 mph
0.15	0.34	0.68	0.68	0.54	0.44	0.73	0.49	1.22	1.80	2.39	2.00	1.51	2.10	0.63	0.63	16.34	> 24.5 mph

TABLE 8

LaSalle County Generating Statio
375 ft. Wind Speed and Direction

April-June, 2011
375Ft-33Ft Delta-T (F)

Number of Observations = 2183
Values are Percent Occurrence

SPEED	WIND DIRECTION CLASSES																	STABILITY CLASSES							
CLASS	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL	EU	MU	SU	N	SS	MS	ES	TOTAL
EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00						
C SU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00					
A N	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				0.00				
L SS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00					0.00			
M MS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00		
ES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00	
																									0.00
EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00						
1 SU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00					
- N	0.00	0.05	0.00	0.00	0.00	0.00	0.05	0.05	0.05	0.05	0.05	0.14	0.09	0.00	0.05	0.00	0.55				0.55				
3 SS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00					0.00			
MS	0.05	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05	0.00	0.00	0.18						0.18		
ES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00	
																									0.73
EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00						
4 SU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.05			0.05					
- N	0.18	0.46	0.32	0.55	0.32	0.18	0.37	0.37	0.37	0.27	0.37	0.41	0.27	0.09	0.32	0.23	5.08				5.08				
7 SS	0.18	0.27	0.05	0.23	0.14	0.09	0.18	0.05	0.05	0.14	0.05	0.05	0.14	0.05	0.14	0.05	1.83					1.83			
MS	0.14	0.09	0.05	0.05	0.05	0.09	0.05	0.00	0.00	0.05	0.09	0.05	0.05	0.00	0.00	0.05	0.78						0.78		
ES	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05							0.05	
																									7.79
EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
MU	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05		0.05						
8 SU	0.05	0.14	0.05	0.00	0.09	0.05	0.00	0.00	0.00	0.05	0.09	0.00	0.00	0.00	0.09	0.14	0.73			0.73					
- N	0.87	0.78	0.78	1.37	0.69	0.69	0.41	1.15	0.55	0.55	0.32	0.41	0.32	0.78	0.64	0.50	10.81				10.81				
1 SS	0.09	0.23	0.18	0.18	0.23	0.27	0.14	0.23	0.14	0.55	0.18	0.05	0.27	0.41	0.41	0.14	3.71					3.71			
2 MS	0.05	0.09	0.09	0.05	0.14	0.18	0.14	0.32	0.05	0.18	0.23	0.32	0.32	0.32	0.23	0.05	2.75						2.75		
ES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09							0.09	
																									18.14
EU	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.09							
1 MU	0.05	0.14	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.32		0.32						
3 SU	0.46	0.27	0.00	0.14	0.27	0.09	0.05	0.00	0.09	0.05	0.09	0.00	0.05	0.00	0.05	0.05	1.65			1.65					
- N	0.37	0.96	1.79	1.33	0.82	1.33	0.41	0.55	1.19	1.15	0.50	0.78	1.88	1.69	1.10	0.69	16.54				16.54				
1 SS	0.23	0.82	0.27	0.37	0.41	0.60	0.41	0.37	0.41	0.32	0.46	0.64	0.41	0.69	0.05	0.23	6.69					6.69			
8 MS	0.00	0.09	0.09	0.14	0.27	0.00	0.27	0.37	0.27	0.55	0.23	0.14	0.14	0.14	0.05	0.00	2.75						2.75		
ES	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14							0.14	
																									28.17

TABLE 8
continued

LaSalle County Generating Statio — April-June, 2011
375 ft. Wind Speed and Direction — 375Ft-33Ft Delta-T (F)

SPEED	WIND DIRECTION CLASSES																	STABILITY CLASSES							
CLASS	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL	EU	MU	SU	N	SS	MS	ES	TOTAL
EU	0.00	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.09							
1 MU	0.05	0.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.50		0.50						
9 SU	0.18	0.41	0.18	0.18	0.00	0.00	0.00	0.00	0.05	0.00	0.14	0.00	0.05	0.00	0.00	0.00	1.19			1.19					
- N	0.14	1.05	2.02	1.74	0.73	0.78	0.55	0.41	0.64	1.19	1.37	1.37	1.74	1.69	1.05	0.32	16.81				16.81				
2 SS	0.00	0.32	0.09	0.18	0.27	0.46	0.87	0.37	0.32	0.55	0.96	0.92	0.78	1.42	0.32	0.05	7.88					7.88			
4 MS	0.00	0.00	0.00	0.00	0.00	0.23	0.09	0.14	0.09	0.37	0.14	0.00	0.09	0.14	0.05	0.00	1.33						1.33		
ES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00	
																									27.81
EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
G MU	0.00	0.05	0.09	0.00	0.00	0.00	0.00	0.00	0.09	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.32		0.32						
T SU	0.00	0.00	0.05	0.00	0.05	0.00	0.00	0.00	0.00	0.09	0.09	0.05	0.00	0.00	0.00	0.00	0.32			0.32					
N	0.00	0.32	0.73	1.65	1.24	0.73	1.05	0.27	0.64	1.05	0.96	0.41	0.87	0.60	0.37	0.00	10.90				10.90				
2 SS	0.00	0.00	0.00	0.00	0.18	0.32	0.87	0.32	0.69	1.60	0.60	0.09	0.23	0.41	0.14	0.00	5.45					5.45			
4 MS	0.00	0.00	0.00	0.00	0.00	0.05	0.05	0.00	0.18	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.37						0.37		
ES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00	
																									17.36
TOT	3.11	7.19	6.83	8.15	5.91	6.18	6.00	5.13	5.91	8.98	6.92	5.82	7.83	8.47	5.08	2.47	100.00	0.18	1.19	3.94	60.70	25.56	8.15	0.27	100.00

Wind Direction by Stability

N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL	-STABILITY CLASSES-
0.00	0.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.18	Extremely Unstable
0.09	0.64	0.09	0.00	0.00	0.05	0.00	0.05	0.09	0.18	0.00	0.00	0.00	0.00	0.00	0.00	1.19	Moderately Unstable
0.69	0.82	0.27	0.32	0.41	0.14	0.05	0.00	0.14	0.18	0.41	0.05	0.09	0.00	0.18	0.18	3.94	Slightly Unstable
1.56	3.62	5.63	6.64	3.80	3.71	2.84	2.79	3.44	4.26	3.57	3.53	5.18	4.86	3.53	1.74	60.70	Neutral
0.50	1.65	0.60	0.96	1.24	1.74	2.47	1.33	1.60	3.16	2.24	1.74	1.83	2.98	1.05	0.46	25.56	Slightly Stable
0.23	0.32	0.23	0.23	0.46	0.55	0.60	0.82	0.60	1.15	0.69	0.50	0.73	0.64	0.32	0.09	8.15	Moderately Stable
0.05	0.00	0.00	0.00	0.00	0.00	0.05	0.14	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.27	Extremely Stable

Wind Direction by Wind Speed

N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL	-WIND SPEED CLASSES-
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	C A L M
0.05	0.09	0.00	0.00	0.00	0.00	0.05	0.05	0.05	0.05	0.05	0.14	0.14	0.05	0.05	0.00	0.73	< 3.5 mph
0.55	0.82	0.41	0.82	0.50	0.37	0.60	0.41	0.41	0.46	0.50	0.50	0.46	0.14	0.50	0.32	7.79	3.6 - 7.5 mph
1.05	1.24	1.10	1.60	1.15	1.24	0.69	1.74	0.78	1.33	0.82	0.78	0.92	1.51	1.37	0.82	18.14	7.6 - 12.5 mph
1.10	2.34	2.15	1.97	1.79	2.02	1.19	1.42	1.97	2.20	1.28	1.56	2.47	2.52	1.24	0.96	28.17	12.6 - 18.5 mph
0.37	2.34	2.29	2.11	1.01	1.47	1.51	0.92	1.10	2.11	2.61	2.29	2.66	3.25	1.42	0.37	27.81	18.6 - 24.5 mph
0.00	0.37	0.87	1.65	1.47	1.10	1.97	0.60	1.60	2.84	1.65	0.55	1.19	1.01	0.50	0.00	17.36	> 24.5 mph

TABLE 9

LaSalle County Generating Statio
375 ft. Wind Speed and Direction

July-September, 2011
375Ft-33Ft Delta-T (F)

Number of Observations = 2208
Values are Percent Occurrence

SPEED	WIND DIRECTION CLASSES																	STABILITY CLASSES							
CLASS	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL	EU	MU	SU	N	SS	MS	ES	TOTAL
	EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00								
	MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00							
C	SU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00						
A	N	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				0.00					
L	SS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00					0.00				
M	MS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00			
	ES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00		
																										0.00
	EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00								
	MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00							
1	SU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00						
-	N	0.05	0.05	0.09	0.09	0.05	0.00	0.05	0.00	0.09	0.14	0.09	0.05	0.05	0.05	0.00	0.05	0.86			0.86					
3	SS	0.05	0.00	0.00	0.09	0.00	0.14	0.00	0.00	0.05	0.09	0.05	0.14	0.00	0.09	0.00	0.05	0.72				0.72				
	MS	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.05	0.00	0.05	0.00	0.18					0.18			
	ES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00		
																										1.77
	EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00								
	MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00							
4	SU	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05	0.05	0.05	0.00	0.00	0.00	0.00	0.23			0.23					
-	N	1.00	0.72	0.91	0.91	0.86	0.54	0.45	0.95	0.36	0.63	0.77	0.72	0.50	0.50	0.50	0.72	11.05				11.05				
7	SS	0.27	0.59	0.18	0.72	0.32	0.27	0.14	0.09	0.32	0.27	0.09	0.32	0.23	0.45	0.27	0.14	4.66					4.66			
	MS	0.14	0.18	0.09	0.23	0.14	0.05	0.00	0.27	0.41	0.27	0.09	0.27	0.14	0.09	0.09	0.00	2.45						2.45		
	ES	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05							0.05	
																										18.43
	EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
	MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.05		0.05						
8	SU	0.09	0.14	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.27	0.27	0.18	0.14	0.00	0.23	1.49			1.49					
-	N	1.49	0.91	0.95	0.50	0.72	0.86	0.59	0.45	0.82	0.72	0.82	0.95	1.00	0.82	1.59	1.95	15.13				15.13				
1	SS	0.50	0.72	1.18	0.91	1.13	0.82	0.36	0.14	0.32	0.23	0.45	0.23	0.23	0.45	0.32	0.32	8.29					8.29			
2	MS	0.09	0.23	0.27	0.14	0.14	0.27	0.45	0.50	0.72	0.50	0.54	0.50	0.50	0.23	0.59	0.23	5.89						5.89		
	ES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.05	0.09	0.00	0.00	0.05	0.05	0.05	0.00	0.36							0.36	
																										31.20
	EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
1	MU	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.09	0.18	0.05	0.05	0.00	0.05	0.45		0.45						
3	SU	0.09	0.32	0.23	0.09	0.00	0.05	0.09	0.00	0.05	0.14	0.09	0.32	0.18	0.00	0.05	0.00	1.68			1.68					
-	N	1.40	1.09	0.95	0.82	0.27	0.14	0.63	0.18	0.68	0.59	0.91	0.59	0.68	0.50	0.86	1.36	11.64				11.64				
1	SS	0.68	1.36	0.45	0.68	1.13	0.50	0.27	0.14	0.41	0.59	0.82	0.18	0.41	0.68	0.82	0.45	9.56					9.56			
8	MS	0.14	0.36	0.18	0.05	0.27	0.68	0.36	0.23	0.63	0.77	0.41	0.32	0.18	0.27	0.00	0.14	4.98						4.98		
	ES	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.14	0.14	0.18	0.00	0.09	0.00	0.00	0.00	0.00	0.59							0.59	
																										28.89

TABLE 9
continued

LaSalle County Generating Statio
375 ft. Wind Speed and Direction

July-September, 2011
375Ft-33Ft Delta-T (F)

SPEED	WIND DIRECTION CLASSES																	STABILITY CLASSES							
CLASS	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL	EU	MU	SU	N	SS	MS	ES	TOTAL
EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
1 MU	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.09		0.09						
9 SU	0.09	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.14	0.00	0.00	0.00	0.00	0.32			0.32					
- N	0.63	0.14	0.14	0.23	0.00	0.05	0.27	0.14	0.32	0.63	0.27	0.45	0.32	0.41	0.09	0.68	4.76				4.76				
2 SS	0.59	0.54	0.41	0.27	0.18	0.45	0.32	0.14	0.41	0.50	0.82	1.27	0.32	0.27	0.23	0.59	7.29					7.29			
4 MS	0.05	0.05	0.00	0.00	0.23	0.27	0.18	0.09	0.05	0.54	0.50	0.18	0.27	0.05	0.18	0.00	2.63						2.63		
ES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.00	0.09	0.00	0.00	0.09	0.00	0.00	0.00	0.32							0.32	
																									15.40
EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
G MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00						
T SU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05			0.05					
N	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.09	0.41	0.09	0.00	0.00	0.05	0.14	0.36	0.50	1.68				1.68				
2 SS	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.32	0.45	0.59	0.18	0.05	0.23	0.18	0.00	2.08					2.08			
4 MS	0.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.32	0.05	0.00	0.00	0.00	0.00	0.50						0.50		
ES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00	
																									4.30
TOT	7.61	7.47	6.16	5.71	5.43	5.16	4.17	3.80	6.61	7.74	8.06	7.47	5.48	5.43	6.20	7.47	100.00	0.00	0.59	3.76	45.11	32.61	16.62	1.31	100.00

Wind Direction by Stability

N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL	-STABILITY CLASSES-
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Extremely Unstable
0.05	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.09	0.23	0.05	0.05	0.00	0.09	0.59	Moderately Unstable
0.27	0.54	0.27	0.09	0.00	0.05	0.09	0.00	0.14	0.36	0.41	0.77	0.36	0.14	0.05	0.23	3.76	Slightly Unstable
4.57	2.90	3.08	2.54	1.90	1.59	1.99	1.81	2.67	2.81	2.85	2.76	2.58	2.40	3.40	5.25	45.11	Neutral
2.13	3.22	2.22	2.67	2.76	2.17	1.09	0.54	1.81	2.13	2.81	2.31	1.22	2.17	1.81	1.54	32.61	Slightly Stable
0.59	0.82	0.54	0.41	0.77	1.27	1.00	1.09	1.81	2.08	1.90	1.31	1.13	0.63	0.91	0.36	16.62	Moderately Stable
0.00	0.00	0.05	0.00	0.00	0.05	0.00	0.36	0.18	0.36	0.00	0.09	0.14	0.05	0.05	0.00	1.31	Extremely Stable

Wind Direction by Wind Speed

N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL	-WIND SPEED CLASSES-
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	C A L M
0.14	0.05	0.09	0.18	0.05	0.14	0.05	0.00	0.14	0.23	0.18	0.18	0.09	0.14	0.05	0.09	1.77	< 3.5 mph
1.40	1.54	1.22	1.86	1.31	0.86	0.59	1.31	1.13	1.22	1.00	1.36	0.86	1.04	0.86	0.86	18.43	3.6 - 7.5 mph
2.17	1.99	2.45	1.54	1.99	1.95	1.40	1.18	1.90	1.68	2.08	1.99	1.95	1.68	2.54	2.72	31.20	7.6 - 12.5 mph
2.31	3.12	1.81	1.63	1.68	1.45	1.36	0.68	1.90	2.26	2.31	1.68	1.49	1.49	1.72	1.99	28.89	12.6 - 18.5 mph
1.40	0.77	0.54	0.50	0.41	0.77	0.77	0.50	0.77	1.81	1.59	2.04	1.00	0.72	0.50	1.31	15.40	18.6 - 24.5 mph
0.18	0.00	0.05	0.00	0.00	0.00	0.00	0.14	0.77	0.54	0.91	0.23	0.09	0.36	0.54	0.50	4.30	> 24.5 mph

TABLE 10

LaSalle County Generating Statio
375 ft. Wind Speed and Direction

October-December, 2011
375Ft-33Ft Delta-T (F)

Number of Observations = 2207
Values are Percent Occurrence

SPEED	WIND DIRECTION CLASSES																	STABILITY CLASSES							
CLASS	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL	EU	MU	SU	N	SS	MS	ES	TOTAL
EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00						
C SU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00					
A N	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				0.00				
L SS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00					0.00			
M MS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00		
ES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00	
																									0.00
EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00						
1 SU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00					
- N	0.09	0.09	0.09	0.05	0.18	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.59				0.59				
3 SS	0.00	0.00	0.00	0.00	0.05	0.14	0.05	0.05	0.05	0.00	0.00	0.09	0.00	0.00	0.05	0.00	0.45					0.45			
MS	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05						0.05		
ES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.05	0.09							0.09	
																									1.18
EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00						
4 SU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.05			0.05					
- N	0.18	0.05	0.00	0.18	0.00	0.05	0.14	0.18	0.23	0.18	0.18	0.36	0.36	0.41	0.23	0.32	3.04				3.04				
7 SS	0.09	0.05	0.09	0.09	0.00	0.05	0.09	0.00	0.14	0.09	0.05	0.05	0.09	0.09	0.05	0.09	1.09					1.09			
MS	0.00	0.05	0.00	0.00	0.14	0.05	0.14	0.14	0.00	0.00	0.00	0.14	0.09	0.05	0.00	0.00	0.77						0.77		
ES	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.14							0.14	
																									5.07
EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00						
8 SU	0.14	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05	0.00	0.00	0.00	0.00	0.00	0.05	0.32			0.32					
- N	1.09	0.86	0.00	0.32	0.18	0.00	0.23	0.68	0.82	0.91	0.54	0.68	1.04	1.22	1.18	1.00	10.74				10.74				
1 SS	0.14	0.23	0.14	0.09	0.14	0.00	0.00	0.14	0.32	0.27	0.72	0.54	0.72	0.54	0.23	0.27	4.49					4.49			
2 MS	0.18	0.14	0.00	0.05	0.09	0.18	0.14	0.05	0.14	0.14	0.09	0.14	0.14	0.14	0.09	0.05	1.72						1.72		
ES	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.05	0.05	0.32	0.05	0.32	0.09	0.00	0.00	0.00	1.04							1.04	
																									18.31
EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
1 MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.09	0.05	0.00	0.00	0.00	0.18		0.18						
3 SU	0.05	0.00	0.00	0.00	0.00	0.00	0.09	0.00	0.05	0.00	0.05	0.18	0.09	0.00	0.05	0.00	0.54			0.54					
- N	2.85	1.00	0.68	1.72	0.54	0.00	0.32	0.54	0.91	1.45	1.31	0.54	0.32	1.09	1.18	1.86	16.31				16.31				
1 SS	0.05	0.05	0.18	0.23	0.09	0.09	0.09	0.23	0.36	0.36	0.91	0.50	0.86	1.09	0.77	0.27	6.12					6.12			
8 MS	0.00	0.00	0.05	0.18	0.05	0.23	0.27	0.09	0.18	0.82	1.04	0.14	0.05	0.54	0.63	0.27	4.53						4.53		
ES	0.09	0.00	0.00	0.00	0.00	0.00	0.09	0.36	0.41	0.63	0.09	0.41	0.00	0.05	0.00	0.14	2.27							2.27	
																									29.95

TABLE 10
continued

LaSalle County Generating Statio — October-December. 2011
375 ft. Wind Speed and Direction — 375Ft-33Ft Delta-T (F)

SPEED	WIND DIRECTION CLASSES																STABILITY CLASSES							
CLASS	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL	EU	MU	SU	N	SS	MS	ES	TOTAL
EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.05	0.05							
1 MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.09	0.14		0.14						
9 SU	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.09	0.00	0.00	0.05	0.05	0.05	0.14	0.05	0.63			0.63					
- N	0.77	0.27	0.82	0.50	0.09	0.00	0.05	0.23	0.82	1.00	0.45	0.41	0.77	1.13	1.27	0.91	9.47				9.47				
2 SS	0.18	0.36	0.05	0.09	0.14	0.00	0.23	0.14	0.59	1.36	0.77	0.27	1.68	0.68	0.32	0.27	7.11					7.11			
4 MS	0.00	0.00	0.00	0.00	0.05	0.00	0.09	0.27	0.54	0.59	0.18	0.36	0.50	0.09	0.05	0.00	2.72						2.72		
ES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.27	0.32	0.50	0.05	0.00	0.00	0.00	0.00	0.23	1.36							1.36	
																									21.48
EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
G MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05		0.05						
T SU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00					
N	1.00	0.32	0.36	0.00	0.00	0.00	0.09	0.32	1.09	2.04	0.50	0.18	0.41	0.59	0.95	0.91	8.74				8.74				
2 SS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.27	1.72	3.85	0.77	0.50	1.54	1.45	0.14	0.00	10.24					10.24			
4 MS	0.00	0.00	0.00	0.00	0.09	0.05	0.32	0.45	0.91	1.18	0.27	0.09	0.50	0.18	0.00	0.00	4.03						4.03		
ES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.27	0.45	0.00	0.05	0.00	0.00	0.00	0.00	0.95							0.95	
																									24.01
TOT	6.98	3.49	2.49	3.49	1.81	0.82	2.72	4.80	10.01	16.22	8.02	6.16	9.38	9.42	7.34	6.84	100.00	0.05	0.36	1.54	48.89	29.50	13.82	5.85	100.00

Wind Direction by Stability

N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL	-STABILITY CLASSES-
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.05	Extremely Unstable
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.09	0.09	0.00	0.00	0.14	0.36	Moderately Unstable
0.27	0.05	0.00	0.00	0.00	0.00	0.09	0.14	0.18	0.09	0.05	0.23	0.14	0.05	0.18	0.09	1.54	Slightly Unstable
5.98	2.58	1.95	2.76	1.00	0.05	0.86	1.95	3.85	5.57	2.99	2.17	2.90	4.49	4.80	4.98	48.89	Neutral
0.45	0.68	0.45	0.50	0.41	0.27	0.45	0.82	3.17	5.94	3.22	1.95	4.89	3.85	1.54	0.91	29.50	Slightly Stable
0.18	0.18	0.09	0.23	0.41	0.50	0.95	1.00	1.77	2.72	1.59	0.86	1.27	1.00	0.77	0.32	13.82	Moderately Stable
0.09	0.00	0.00	0.00	0.00	0.00	0.36	0.86	1.04	1.90	0.18	0.86	0.09	0.05	0.00	0.41	5.85	Extremely Stable

Wind Direction by Wind Speed

N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL	-WIND SPEED CLASSES-
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	C A L M
0.09	0.09	0.14	0.05	0.23	0.14	0.09	0.05	0.05	0.00	0.00	0.14	0.00	0.05	0.05	0.05	1.18	< 3.5 mph
0.27	0.14	0.09	0.27	0.14	0.14	0.45	0.32	0.36	0.32	0.23	0.59	0.54	0.54	0.27	0.41	5.07	3.6 - 7.5 mph
1.54	1.27	0.14	0.45	0.41	0.18	0.54	0.91	1.36	1.68	1.40	1.68	1.99	1.90	1.50	1.36	18.31	7.6 - 12.5 mph
3.04	1.04	0.91	2.13	0.68	0.32	0.86	1.27	1.90	3.26	3.40	1.86	1.36	2.76	2.63	2.54	29.95	12.6 - 18.5 mph
1.04	0.63	0.86	0.59	0.27	0.00	0.36	1.04	2.36	3.44	1.45	1.09	3.04	1.95	1.81	1.54	21.48	18.6 - 24.5 mph
1.00	0.32	0.36	0.00	0.09	0.05	0.41	1.22	3.99	7.52	1.54	0.82	2.45	2.22	1.09	0.95	24.01	> 24.5 mph

TABLE 11

LaSalle County Generating Statio
375 ft. Wind Speed and Direction

January-December, 2011
375Ft-33Ft Delta-T (F)

Number of Observations = 8648
Values are Percent Occurrence

SPEED	WIND DIRECTION CLASSES																	STABILITY CLASSES							
CLASS	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL	EU	MU	SU	N	SS	MS	ES	TOTAL
EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00						
C SU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00					
A N	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				0.00				
L SS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00					0.00			
M MS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00		
ES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00	
																									0.00
EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00						
1 SU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00					
- N	0.05	0.06	0.06	0.06	0.06	0.02	0.06	0.01	0.03	0.05	0.05	0.06	0.03	0.05	0.01	0.01	0.66				0.66				
3 SS	0.03	0.00	0.00	0.02	0.02	0.07	0.01	0.03	0.02	0.03	0.01	0.06	0.02	0.02	0.03	0.01	0.42					0.42			
MS	0.02	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.02	0.01	0.01	0.00	0.10						0.10		
ES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.01	0.02							0.02	
																									1.20
EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00						
4 SU	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.02	0.01	0.01	0.00	0.00	0.01	0.00	0.08			0.08					
- N	0.46	0.51	0.44	0.60	0.36	0.22	0.28	0.38	0.28	0.32	0.43	0.38	0.36	0.37	0.38	0.37	6.14				6.14				
7 SS	0.16	0.23	0.10	0.28	0.15	0.13	0.15	0.05	0.13	0.13	0.05	0.15	0.13	0.19	0.15	0.09	2.25					2.25			
MS	0.07	0.08	0.06	0.07	0.08	0.05	0.05	0.10	0.10	0.09	0.05	0.12	0.07	0.03	0.02	0.01	1.05						1.05		
ES	0.01	0.00	0.01	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.06							0.06	
																									9.59
EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
MU	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.02		0.02						
8 SU	0.07	0.08	0.02	0.00	0.02	0.01	0.00	0.00	0.01	0.07	0.09	0.07	0.05	0.03	0.02	0.10	0.66			0.66					
- N	1.12	0.82	0.75	0.74	0.58	0.58	0.39	0.72	0.72	0.73	0.60	0.65	0.75	0.94	1.31	1.12	12.51				12.51				
1 SS	0.19	0.34	0.46	0.32	0.47	0.34	0.17	0.17	0.23	0.29	0.47	0.22	0.35	0.44	0.38	0.21	5.05					5.05			
2 MS	0.10	0.12	0.13	0.06	0.09	0.17	0.19	0.24	0.25	0.22	0.22	0.24	0.28	0.17	0.23	0.12	2.83						2.83		
ES	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05	0.03	0.10	0.01	0.09	0.05	0.01	0.01	0.00	0.40							0.40	
																									21.48
EU	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.02							
1 MU	0.01	0.03	0.00	0.00	0.00	0.01	0.00	0.02	0.00	0.02	0.02	0.07	0.02	0.01	0.00	0.01	0.24		0.24						
3 SU	0.15	0.15	0.07	0.06	0.07	0.03	0.06	0.00	0.05	0.05	0.06	0.13	0.08	0.00	0.03	0.02	1.01			1.01					
- N	1.56	0.88	1.36	1.53	0.73	0.57	0.45	0.45	0.95	0.95	0.99	0.71	0.93	1.09	1.35	1.23	15.71				15.71				
1 SS	0.31	0.71	0.35	0.43	0.54	0.39	0.25	0.27	0.36	0.46	0.77	0.49	0.53	0.86	0.74	0.34	7.79					7.79			
8 MS	0.05	0.15	0.08	0.09	0.17	0.25	0.25	0.19	0.35	0.56	0.49	0.21	0.16	0.34	0.21	0.12	3.65						3.65		
ES	0.02	0.00	0.00	0.00	0.00	0.01	0.03	0.16	0.14	0.21	0.02	0.13	0.01	0.03	0.02	0.03	0.83							0.83	
																									29.27

TABLE 11
continued

LaSalle County Generating Statio
375 ft. Wind Speed and Direction

January-December, 2011
375Ft-33Ft Delta-T (F)

SPEED CLASS	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL	EU	MU	SU	N	SS	MS	ES	TOTAL
EU	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.03	0.03							
1 MU	0.02	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.03	0.19		0.19						
9 SU	0.09	0.12	0.05	0.05	0.00	0.00	0.00	0.03	0.03	0.01	0.03	0.05	0.02	0.01	0.03	0.01	0.54			0.54					
- N	0.80	0.47	1.06	1.36	0.52	0.25	0.39	0.28	0.50	0.81	0.59	0.59	0.91	1.19	1.35	0.62	11.71				11.71				
2 SS	0.24	0.35	0.16	0.19	0.27	0.38	0.53	0.22	0.44	0.75	0.94	0.68	0.77	1.05	0.59	0.30	7.86					7.86			
4 MS	0.01	0.03	0.00	0.00	0.07	0.14	0.12	0.16	0.21	0.39	0.34	0.23	0.25	0.10	0.09	0.00	2.15						2.15		
ES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.12	0.15	0.01	0.00	0.02	0.00	0.01	0.06	0.49							0.49	
																									22.98
EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
G MU	0.00	0.01	0.02	0.00	0.00	0.00	0.00	0.00	0.02	0.02	0.00	0.00	0.00	0.00	0.00	0.01	0.09		0.09						
T SU	0.00	0.00	0.01	0.00	0.01	0.00	0.00	0.00	0.01	0.03	0.03	0.01	0.00	0.00	0.00	0.00	0.12			0.12					
N	0.29	0.24	0.45	0.58	0.43	0.22	0.32	0.24	0.61	0.87	0.40	0.25	0.44	0.49	0.52	0.51	6.87				6.87				
2 SS	0.01	0.00	0.00	0.00	0.06	0.15	0.36	0.20	0.87	1.77	0.81	0.39	0.65	0.86	0.17	0.00	6.29					6.29			
4 MS	0.03	0.00	0.00	0.00	0.02	0.02	0.09	0.13	0.32	0.39	0.36	0.21	0.22	0.07	0.00	0.00	1.87						1.87		
ES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.07	0.12	0.00	0.01	0.00	0.00	0.00	0.00	0.24							0.24	
																									15.48
TOT	5.90	5.55	5.67	6.43	4.73	4.04	4.23	4.27	6.87	9.63	7.87	6.23	7.15	8.36	7.72	5.35	100.00	0.06	0.54	2.41	53.61	29.67	11.67	2.05	100.00

Wind Direction by Stability

N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL	-STABILITY CLASSES-
0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.01	0.00	0.06	Extremely Unstable
0.03	0.16	0.02	0.00	0.00	0.02	0.00	0.02	0.02	0.05	0.02	0.08	0.03	0.01	0.00	0.06	0.54	Moderately Unstable
0.31	0.36	0.15	0.10	0.10	0.05	0.06	0.03	0.12	0.19	0.23	0.27	0.15	0.05	0.10	0.14	2.41	Slightly Unstable
4.28	2.98	4.13	4.87	2.67	1.86	1.90	2.08	3.09	3.72	3.06	2.64	3.42	4.12	4.93	3.86	53.61	Neutral
0.95	1.62	1.08	1.24	1.51	1.46	1.48	0.94	2.05	3.43	3.05	1.99	2.45	3.41	2.07	0.95	29.67	Slightly Stable
0.29	0.39	0.28	0.22	0.44	0.64	0.69	0.82	1.24	1.65	1.46	1.01	1.01	0.73	0.57	0.24	11.67	Moderately Stable
0.03	0.00	0.01	0.00	0.00	0.01	0.10	0.37	0.36	0.58	0.05	0.25	0.08	0.05	0.05	0.10	2.05	Extremely Stable

Wind Direction by Wind Speed

N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL	-WIND SPEED CLASSES-
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	C A L M
0.10	0.07	0.07	0.08	0.08	0.09	0.07	0.05	0.06	0.08	0.07	0.13	0.08	0.08	0.06	0.03	1.20	< 3.5 mph
0.71	0.83	0.61	0.95	0.59	0.39	0.50	0.53	0.52	0.57	0.53	0.67	0.56	0.59	0.57	0.47	9.59	3.6 - 7.5 mph
1.48	1.35	1.36	1.12	1.17	1.11	0.80	1.18	1.25	1.41	1.40	1.28	1.47	1.60	1.95	1.55	21.48	7.6 - 12.5 mph
2.10	1.93	1.86	2.10	1.51	1.27	1.05	1.09	1.84	2.25	2.36	1.72	1.73	2.32	2.36	1.75	29.27	12.6 - 18.5 mph
1.17	1.11	1.27	1.60	0.86	0.77	1.04	0.81	1.30	2.12	1.91	1.55	2.00	2.36	2.09	1.03	22.98	18.6 - 24.5 mph
0.34	0.25	0.49	0.58	0.52	0.39	0.77	0.61	1.91	3.20	1.61	0.88	1.31	1.41	0.69	0.52	15.48	> 24.5 mph

5.5 Precipitation

Monthly totals and the maximum 24-hour and maximum 1-hour precipitation amounts are summarized below. The month with the most measured precipitation was June*. The month with the least measured precipitation was January*. The maximum 24-hour total was 1.86" (September) and the maximum 1-hour total was 0.80" (May*).

Table 12

Precipitation Totals (Inches) - 2011
LaSalle Site

Month	Total	Maximum 24-hour	Maximum 1-hour
January	0.10*	0.07*	0.02*
February	0.96*	0.55*	0.19*
March	1.55*	1.03*	0.45*
April	4.15	0.93	0.31
May	4.40*	1.85*	0.80*
June	5.88*	1.64*	0.72*
July	0.90*	0.42*	0.13*
August	1.69	0.90	0.35
September	3.20	1.86	0.27
October	0.91*	0.47*	0.19*
November	3.40	1.18	0.41
December	2.04*	1.37*	0.31*
TOTAL:	29.18*		

* some data are missing - actual precipitation may be under-reported

5.6 Doses Resulting from Airborne Releases

The following are the maximum annual calculated cumulative offsite doses resulting from LaSalle County Station airborne releases.

LaSalle County Generating Station:

Dose	*Maximum Value*	*Sector Affected*
gamma air [1]	4.160×10^{-3} mrad	South
beta air [2]	1.380×10^{-3} mrad	South
whole body [3]	1.816×10^{-2} mrem	South
skin [4]	4.240×10^{-3} mrem	South
organ [5] (infant-thyroid)	7.473×10^{-1} mrem	South

Compliance Status

10 CFR 50 Appendix I	Yearly Objective		% of Appendix I
gamma air	10.0	mrad	0.04
beta air	20.0	mrad	0.01
whole body	5.0	mrem	0.36
skin	15.0	mrem	0.03
organ	15.0	mrem	4.98

(1) Gamma Air Dose - GASPAR II, NUREG-0597
(2) Beta Air Dose - GASPAR II, NUREG-0597
(3) Whole Body Dose - GASPAR II, NUREG-0597
(4) Skin Dose - GASPAR II, NUREG-0597
(5) Inhalation and Food Pathways Dose - GASPAR II, NUREG-0597

APPENDIX

LaSalle Meteorological Calibration

Date: 2-5-11

POWER SUPPLIES

+12.000V ± 0.120V	-12.000V ± 0.120V
A: +12.058 V	A: -12.078 V
B: +12.065 V	B: -12.057 V

Signal conditioners and Digital Recorder:

	Signal Conditioner Voltage Out			Digital recorder		Specifications	
	AF	AL	AL EQUIV	AF	AL	Signal Cond.	Recorder
			10 ft.				
PRCP LO	.000 V	— V	0.00 "	0.00 "	— "	0.000V ± 0.050V	AL EQUIV ± 0.01"
PRCP HI	5.001 V	— V	1.00 "	1.00 "	— "	5.000V ± 0.050V	AL EQUIV ± 0.01"
			35 ft.				
WS ZERO	.124 V	— V	.48 mph	0.5 mph	— mph	0.025V ± 0.025V	AL EQUIV + .1mph
WS SPAN	2.500 V	— V	50.0 mph	50.0 mph	— mph	2.500V ± 0.025V	AL EQUIV + .1mph
WD ZERO	.000 V	— V	0 °	0 °	— °	0.000V ± 0.100V	AL EQUIV + 1°
SPAN	3.335 V	— V	360.18 °	360 °	— °	3.333V ± 0.100V	AL EQUIV + 1°
ΔT ZERO	0.000 V	— V	-22.0 °	-22.01 °	— °	0.000V ± 0.050V	AL EQUIV + .1°F
T SPAN	5.001 V	— V	122.02 °	121.94 °	— °	5.000V ± 0.050V	AL EQUIV + .1°F
			200 ft.				
WS ZERO	.025 V	— V	0.50 mph	0.5 mph	— mph	0.025V ± 0.025V	AL EQUIV + .1mph
WS SPAN	2.500 V	— V	50.0 mph	50.0 mph	— mph	2.500V ± 0.025V	AL EQUIV + .1mph
WD ZERO	.000 V	— V	0 °	0 °	— °	0.000V ± 0.100V	AL EQUIV + 1°
WD SPAN	3.334 V	— V	360.01 °	360 °	— °	3.333V ± 0.100V	AL EQUIV + 1°
ΔT_1 ZERO	.001 V	— V	-9.99 °	-10.00 °	— °	0.000V ± 0.050V	AL EQUIV + .1°F
ΔT_1 SPAN	5.000 V	— V	10.00 °	9.99 °	— °	5.000V ± 0.050V	AL EQUIV + .1°F
ΔT_2 ZERO	.002 V	— V				0.000V ± 0.050V	
ΔT_2 SPAN	5.000 V	— V				5.000V ± 0.050V	
			375 ft.				
WS ZERO	.026 V	MSM 2-5-11 .5 V	.52 mph	0.5 mph	— mph	0.025V ± 0.025V	AL EQUIV + .1mph
WS SPAN	2.500 V	— V	50.0 mph	50.0 mph	— mph	2.500V ± 0.025V	AL EQUIV + .1mph
WD ZERO	.003 V	.000 V	0 °	0 °	— °	0.000V ± 0.100V	AL EQUIV + 1°
WD SPAN	3.333 V	— V	359.96 °	360 °	— °	3.333V ± 0.100V	AL EQUIV + 1°
ΔT_1 ZERO	.004 V	— V	-9.98 °	-9.99 °	— °	0.000V ± 0.050V	AL EQUIV + .1°F
ΔT_1 SPAN	4.997 V	— V	9.988 °	9.98 °	— °	5.000V ± 0.050V	AL EQUIV + .1°F
ΔT_2 ZERO	.001 V	— V				0.000V ± 0.050V	
ΔT_2 SPAN	5.000 V	— V				5.000V ± 0.050V	

ASZ 3-24-11

LaSalle Meteorological Calibration

Date: 2-5-11

TOWER MEASUREMENTS

☒ Ambient ☐ Ice Bath

Temperatures

	33 ft. Amb. AF	33 ft. Amb. AL	200 ft. ΔT AF	200 ft. ΔT AL	375 ft. ΔT AF	375 ft. ΔT AL
Measured	21.00 °F	— °F	-0.95 °F	— °F	-1.63 °F	— °F
Recorded	20.99 °F	— °F	-0.9 °F	— °F	-1.53 °F	— °F
Difference	0.01 °F	— °F	0.05 °F	— °F	0.10 °F	— °F
Specification	±0.5°F		±0.18°F		±0.18°F	

Winds

	33 ft. AF	33 ft. AL	200 ft. AF	200 ft. AL	375 ft. AF	375 ft. AL	*Specification*
WS stall	0.5 mph	0.5 mph	0.5 mph	0.5 mph	0.5 mph	— mph	0.5mph ± 0.45mph
Forw. WD	359 °	— °	360 °	— °	360 °	— °	0°/360° ± 5°
Revr. WD	179 °	— °	180 °	— °	180 °	— °	180°/540° ± 5°
Tracking/wear	OK		OK		OK		

Comments:	33' WS	200' WS	
	MT0166 removed MT0087 installed	MT0165 removed MT0101 installed	

AR 3-24-11

LaSalle Meteorological Calibration

Date: 2-5-11

Dates of Last Wind Sensor Bearing Replacements:

	33 ft.	200 ft.	375 ft.
(6 mos.) Wind Speed:	2-5-11	2-5-11	1-29-11
(12 mos.) Wind Direction:	10-1-10	10-1-10	10-1-10

	33 ft.	200 ft.	375 ft.
Aspirators:	OK	OK	OK

Operation of De-Ice Heat Lamp System (Aug-Mar): OK

Operation of Rain Gauge: OK Tips Poured 5 Tips Recorded 5

UPS CHECK: OK

Debris screen: In Out Installed Removed

Tower Lighting	Good	Fair	Poor
Beacon	☑	☐	☐
Side lights	☑	☐	☐
Wiring	☑	☐	☐
Flasher	☑	☐	☐

Tower Condition	Good	Fair	Poor
Paint	☑	☐	☐
Shelter condition	☑	☐	☐

Note:
AF = As Found
AL = As Left
— = no change (AF=AL)

FS = Full Scale

Calibration Instruments:

	Next Cal Due
Psychrometer - S/N - #1	APRIL 2011
Digital multimeter - S/N - 87430088	DEC 2011
Digital multimeter - S/N -	

Technicians: ANDREW LOTZ, Michael MARX,

Comments: Replaced 2 heat lamps @ 33'

Signature:

AD 3-24-11

System Response Check

Date: 2-5-11

Site: LaSalle
System: Microtel

Low Scale Check	33' WS	200' WS	375' WS	33' WD	200' WD	375' WD	33' T	200' ΔT	375' ΔT
Expected Response	20.0 ±0.4	20.0 ±0.4	20.0 ±0.4	108 ±2	108 ±2	108 ±2	6.80 ±0.7	-6.00 ±0.18	-6.00 ±0.18
As Found Response	19.9	20.0	20.0	108	108	108	6.8	-6.00	-6.00
As Left Response	—	—	—	—	—	—	—	—	—

Mid Scale Check	33' WS	200' WS	375' WS	33' WD	200' WD	375' WD	33' T	200' ΔT	375' ΔT
Expected Response	60.0 ±0.4	60.0 ±0.4	60.0 ±0.4	324 ±2	324 ±2	324 ±2	64.40 ±0.7	2.00 ±0.18	2.00 ±0.18
As Found Response	59.9	59.9	59.9	324	324	324	64.4	2.00	2.00
As Left Response	-	-	-	-	-	-	-	-	-

Full Scale Check	33' WS	200' WS	375' WS	33' WD	200' WD	375' WD	33' T	200' ΔT	375' ΔT
Expected Response	80.0 ±0.4	80.0 ±0.4	80.0 ±0.4	432 ±2	432 ±2	432 ±2	93.20 ±0.7	6.00 ±0.18	6.00 ±0.18
As Found Response	79.9	79.9	79.9	431	431	432	93.1	6.00	6.00
As Left Response	—	—	—	—	—	—	—	—	-

ASL 3-24-11

System Response Check

Date: 2-5-11

Site: LaSalle
System: Process Computer

Low Scale Check	A847 375' WD	A848 200' WD	A849 375' WS	A850 200' WS	A851 375' ΔT	A852 33' WS	A853 33' WD	A854 33' T	A855 200' ΔT	A856 Precipitation
Expected Response	108 ±2	108 ±2	20.0 ±0.4	20.0 ±0.4	-4.00±0.18	20.0±0.4	108 ±2	6.80 ±0.7	-4.00±0.18	0.20 ±0.01
As Found Response	108	108	20.0	20.0	-4.00	19.9	108.0	6.8	-4.00	0.20
As Left Response	—	—	—	—	—	—	—	—	—	—

Mid Scale Check	A847 375' WD	A848 200' WD	A849 375' WS	A850 200' WS	A851 375' ΔT	A852 33' WS	A853 33' WD	A854 33' T	A855 200' ΔT	A856 Precipitation
Expected Response	324 ±2	324 ±2	60.0 ±0.4	60.0 ±0.4	8.00 ±0.18	60.0 ±0.4	324 ±2	64.40 ±0.7	8.00±0.18	0.60 ±0.01
As Found Response	324.5	323.8	59.9	59.9	8.00	59.3	323.7	64.3	8.00	0.60
As Left Response	—	—	—	—	—	60.0	—	—	—	—

Full Scale Check	A847 375' WD	A848 200' WD	A849 375' WS	A850 200' WS	A851 375' ΔT	A852 33' WS	A853 33' WD	A854 33' T	A855 200' ΔT	A856 Precipitation
Expected Response	432 ±2	432 ±2	80.0 ±0.4	80.0±0.4	14.00±0.18	80.0 ±0.4	432 ±2	93.20±0.7	14.00±0.18	0.80 ±0.01
As Found Response	432.7	432.0	79.8	80.0	14.00	78.7	432.0	93.1	14.00	0.80
As Left Response	—	—	—	—	—	80.2	—	—	—	—

AR 5-24-11

System Response Check

Date: 2-5-11

Site: LaSalle
System: Control Room Indicators

Low Scale Check	200' WS	375' WS	200' WD	375' WD	375' ΔT
Expected Response	20.0 ±1.0	20.0 ±1.0	108 ±5.4	108 ±5.4	-4.00 ±0.3
As Found Response	20	20	110	110	-4.00
As Left Response	-	-	-	-	-

Mid Scale Check	200' WS	375' WS	200' WD	375' WD	375' ΔT
Expected Response	60.0 ±1.0	60.0 ±1.0	324 ±5.4	324 ±5.4	8.00 ±0.3
As Found Response	60	60	325	320	8.00
As Left Response	-	-	-	-	-

Full Scale Check	200' WS	375' WS	200' WD	375' WD	375' ΔT
Expected Response	80.0 ±1.0	80.0 ±1.0	432 ±5.4	432 ±5.4	14.00 ±0.3
As Found Response	80	80	435	430	14.00
As Left Response	-	-	-	-	-

ASL 3-24-11

LaSalle Meteorological Calibration

Date: 6-6-11

POWER SUPPLIES

+12.000V ± 0.120V	-12.000V ± 0.120V
A: + 12.020 V	A: - 12.032 V
B: + 12.028 V	B: - 12.018 V

Signal conditioners and Digital Recorder:

	Signal Conditioner Voltage Out			Digital recorder		Specifications	
	AF	AL	AL EQUIV	AF	AL	Signal Cond.	Recorder
			10 ft.				
PRCP LO	.000 V	— V	0.00 "	0.00 "	— "	0.000V ± 0.050V	AL EQUIV ± 0.01"
PRCP HI	5.002 V	5.000 V	1.00 "	1.00 "	— "	5.000V ± 0.050V	AL EQUIV ± 0.01"
			35 ft.				
WS ZERO	.025 V	— V	0.5 mph	0.5 mph	— mph	0.025V ± 0.025V	AL EQUIV + .1mph
WS SPAN	2.486 V	2.500 V	50.0 mph	50.0 mph	— mph	2.500V ± 0.025V	AL EQUIV + .1mph
WD ZERO	0.000 V	— V	0 °	0 °	— °	0.000V ± 0.100V	AL EQUIV + 1°
SPAN	3.333 V	— V	360 °	360 °	— °	3.333V ± 0.100V	AL EQUIV + 1°
ZERO	.000 V	— V	-22.00 °	-21.99 °	— °	0.000V ± 0.050V	AL EQUIV + .1°F
T SPAN	5.060 V	— V	122.0 °	121.92 °	— °	5.000V ± 0.050V	AL EQUIV + .1°F
			200 ft.				
WS ZERO	.025 V	— V	0.5 mph	0.5 mph	— mph	0.025V ± 0.025V	AL EQUIV + .1mph
WS SPAN	2.489 V	2.500 V	50.0 mph	50.0 mph	— mph	2.500V ± 0.025V	AL EQUIV + .1mph
WD ZERO	0.000 V	— V	0 °	0 °	— °	0.000V ± 0.100V	AL EQUIV + 1°
WD SPAN	3.333 V	— V	360 °	360 °	— °	3.333V ± 0.100V	AL EQUIV + 1°
ΔT_1 ZERO	5.000 V	— V	-10.00 °	-10.00 °	— °	0.000V ± 0.050V	AL EQUIV + .1°F
ΔT_1 SPAN	4.998 V	— V	9.992 °	9.98 °	— °	5.000V ± 0.050V	AL EQUIV + .1°F
ΔT_2 ZERO	.002 V	— V				0.000V ± 0.050V	
ΔT_2 SPAN	5.000 V	— V				5.000V ± 0.050V	
			375 ft.				
WS ZERO	.025 V	— V	0.5 mph	0.5 mph	— mph	0.025V ± 0.025V	AL EQUIV + .1mph
WS SPAN	2.488 V	2.500 V	50.0 mph	50.0 mph	— mph	2.500V ± 0.025V	AL EQUIV + .1mph
WD ZERO	.003 V	— V	.324 °	0 °	— °	0.000V ± 0.100V	AL EQUIV + 1°
WD SPAN	3.333 V	— V	360 °	360 °	— °	3.333V ± 0.100V	AL EQUIV + 1°
ΔT_1 ZERO	.000 V	— V	-10.00 °	-10.00 °	— °	0.000V ± 0.050V	AL EQUIV + .1°F
ΔT_1 SPAN	4.995 V	5.000 V	10.00 °	9.99 °	— °	5.000V ± 0.050V	AL EQUIV + .1°F
ΔT_2 ZERO	.001 V	— V				0.000V ± 0.050V	
ΔT_2 SPAN	5.000 V	— V				5.000V ± 0.050V	

AR 7-18-11

LaSalle Meteorological Calibration

Date: 6-6-11

TOWER MEASUREMENTS

☒ Ambient ☐ Ice Bath

Temperatures

	33 ft. Amb. AF	33 ft. Amb. AL	200 ft. ΔT1 AF	200 ft. ΔT1 AL	375 ft. ΔT1 AF	375 ft. ΔT1 AL
Measured	79.0 °F	— °F	-1.65 °F	— °F	-2.50 °F	— °F
Recorded	78.85 °F	— °F	-1.15 °F	— °F	-2.58 °F	— °F
Difference	0.15 °F	— °F	0.10 °F	— °F	0.08 °F	— °F
Specification	±0.5°F		±0.18°F		±0.18°F	

Winds

	33 ft. AF	33 ft. AL	200 ft. AF	200 ft. AL	375 ft. AF	375 ft. AL	*Specification*
WS stall	0.5 mph	0.5 mph	0.5 mph	0.5 mph	0.5 mph	0.5 mph	0.5mph ± 0.45mph
Forw. WD	358 °	— °	359 °	— °	360 °	— °	0°/360° ± 5°
Revr. WD	179 °	— °	181 °	— °	181 °	— °	180°/540° ± 5°
Tracking/wear	OK		OK		OK		

Comments:

33' WS	200' WS	375' WS
MT 0087 removed MT 0105 installed	MT 0101 removed MT 0060 installed	MT 0164 removed MT 0009 installed

ASL 7/18/11

LaSalle Meteorological Calibration

Date: 6-6-11

Dates of Last Wind Sensor Bearing Replacements:

	33 ft.	200 ft.	375 ft.
(6 mos.) Wind Speed:	6-6-11	6-6-11	6-6-11
(12 mos.) Wind Direction:	10-1-10	10-1-10	10-1-10

	33 ft.	200 ft.	375 ft.
Aspirators:	OK	OK	OK

Operation of De-Ice Heat Lamp System (Aug-Mar): NA

Operation of Rain Gauge: * Tips Poured 5 Tips Recorded 5

UPS CHECK: OK

Debris screen: (In) Out Installed Removed

Tower Lighting	Good	Fair	Poor
Beacon	☑	☐	☐
Side lights	☑	☐	☐
Wiring	☑	☐	☐
Flasher	☑	☐	☐

Tower Condition	Good	Fair	Poor
Paint	☑	☐	☐
Shelter condition	☑	☐	☐

Note:
AF = As Found
AL = As Left
— = no change (AF=AL)

FS = Full Scale

Calibration Instruments: Next Cal Due
Psychrometer - S/N - #1 Due 10-2011
Digital multimeter - S/N - 89880269 10-2011
Digital multimeter - S/N - _____

Technicians: MIKE MARX, ANDY LOTZ

Comments: * INLET Blocked Cleaned Now OK

Signature: Andrew J. Sl

AS 7-18-11

System Response Check

Date: 6-6-11

Site: LaSalle
System: Microtel

Low Scale Check	33' WS	200' WS	375' WS	33' WD	200' WD	375' WD	33' T	200' ΔT	375' ΔT
Expected Response	20.0 ±0.4	20.0 ±0.4	20.0 ±0.4	108 ±2	108 ±2	108 ±2	6.80 ±0.7	-6.00 ±0.18	-6.00 ±0.18
As Found Response	19.9	19.9	19.9	107	107	107	6.7	-6.0	-6.0
As Left Response	-	-	-	-	-	-	-	-	-

Mid Scale Check	33' WS	200' WS	375' WS	33' WD	200' WD	375' WD	33' T	200' ΔT	375' ΔT
Expected Response	60.0 ±0.4	60.0 ±0.4	60.0 ±0.4	324 ±2	324 ±2	324 ±2	64.40 ±0.7	2.00 ±0.18	2.00 ±0.18
As Found Response	59.9	59.9	59.9	324	323	323	64.3	2.0	2.0
As Left Response	-	-	-	-	-	-	-	-	-

Full Scale Check	33' WS	200' WS	375' WS	33' WD	200' WD	375' WD	33' T	200' ΔT	375' ΔT
Expected Response	80.0 ±0.4	80.0 ±0.4	80.0 ±0.4	432 ±2	432 ±2	432 ±2	93.20 ±0.7	6.00 ±0.18	6.00 ±0.18
As Found Response	79.9	79.9	79.9	432	431	431	93.1	6.0	6.0
As Left Response	-	-	-	-	-	-	-	-	-

DS 7-18-11

System Response Check

Date: 6-6-11

Site: LaSalle
System: Process Computer

Low Scale Check	A847 375' WD	A848 200' WD	A849 375' WS	A850 200' WS	A851 375' ΔT	A852 33' WS	A853 33' WD	A854 33' T	A855 200' ΔT	A856 Precipitation
Expected Response	108 ±2	108 ±2	20.0 ±0.4	20.0 ±0.4	-4.00±0.18	20.0±0.4	108 ±2	6.80 ±0.7	-4.00±0.18	0.20 ±0.01
As Found Response	108	108.3	20.1	20.1	-3.98	19.8	108	6.9	-4.0	0.199
As Left Response	—	—	—	—	—	20.1	—	—	—	—

Mid Scale Check	A847 375' WD	A848 200' WD	A849 375' WS	A850 200' WS	A851 375' ΔT	A852 33' WS	A853 33' WD	A854 33' T	A855 200' ΔT	A856 Precipitation
Expected Response	324 ±2	324 ±2	60.0 ±0.4	60.0 ±0.4	8.00 ±0.18	60.0 ±0.4	324 ±2	64.40 ±0.7	8.00±0.18	0.60 ±0.01
As Found Response	324.8	324.2	59.9	60.1	8.0	59.6	323.3	64.4	7.98	0.60
As Left Response	—	—	—	—	—	60.1	—	—	—	—

Full Scale Check	A847 375' WD	A848 200' WD	A849 375' WS	A850 200' WS	A851 375' ΔT	A852 33' WS	A853 33' WD	A854 33' T	A855 200' ΔT	A856 Precipitation
Expected Response	432 ±2	432 ±2	80.0 ±0.4	80.0±0.4	14.00±0.18	80.0 ±0.4	432 ±2	93.20±0.7	14.00±0.18	0.80 ±0.01
As Found Response	432.6	432.5	79.8	80.1	14.0	~~79.8~~ 79.5	431	93.2	14.0	0.80
As Left Response	—	—	—	—	—	79.8	—	—	—	—

ASL 7-18-11

System Response Check

Date: 6-6-11

Site: LaSalle
System: Control Room Indicators

Low Scale Check	200' WS	375' WS	200' WD	375' WD	375' ΔT
Expected Response	20.0 ±1.0	20.0 ±1.0	108 ±5.4	108 ±5.4	-4.00 ±0.3
As Found Response	21	21.	110	110	-4.0
As Left Response	—	—	—	—	—

Mid Scale Check	200' WS	375' WS	200' WD	375' WD	375' ΔT
Expected Response	60.0 ±1.0	60.0 ±1.0	324 ±5.4	324 ±5.4	8.00 ±0.3
As Found Response	60	60	325	325	8.0
As Left Response	—	—	—	—	—

Full Scale Check	200' WS	375' WS	200' WD	375' WD	375' ΔT
Expected Response	80.0 ±1.0	80.0 ±1.0	432 ±5.4	432 ±5.4	14.00 ±0.3
As Found Response	80	80	430	430	14.0
As Left Response	—	—	—	—	—

ASL 7-18-11

LaSalle Meteorological Calibration

Date: 10-5-11

POWER SUPPLIES

+12.000V ± 0.120V	-12.000V ± 0.120V
A: + 12.029 V	A: - 12.045 V
B: + 12.034 V	B: - 12.027 V

Signal conditioners and Digital Recorder:

	Signal Conditioner Voltage Out			Digital recorder		Specifications	
	AF	AL	AL EQUIV	AF	AL	Signal Cond.	Recorder
			10 ft.				
PRCP LO	.000 V	— V	0.00 "	0.00 "	— "	0.000V ± 0.050V	AL EQUIV ± 0.01"
PRCP HI	5.002 V	5.000 V	1.00 "	1.00 "	— "	5.000V ± 0.050V	AL EQUIV ± 0.01"
			35 ft.				
WS ZERO	.023 V	— V	.46 mph	0.5 mph	— mph	0.025V ± 0.025V	AL EQUIV + .1mph
WS SPAN	2.503 V	2.500 V	50.0 mph	50.0 mph	— mph	2.500V ± 0.025V	AL EQUIV + .1mph
WD ZERO	.000 V	— V	0 °	0 °	— °	0.000V ± 0.100V	AL EQUIV + 1°
SPAN	3.333 V	— V	360 °	360 °	— °	3.333V ± 0.100V	AL EQUIV + 1°
ZERO	.000 V	— V	-22.00 °	-21.98 °	— °	0.000V ± 0.050V	AL EQUIV + .1°F
T SPAN	5.000 V	— V	122.00 °	121.98 °	— °	5.000V ± 0.050V	AL EQUIV + .1°F
			200 ft.				
WS ZERO	.024 V	— V	.48 mph	0.5 mph	— mph	0.025V ± 0.025V	AL EQUIV + .1mph
WS SPAN	2.502 V	2.500 V	50.0 mph	50.0 mph	— mph	2.500V ± 0.025V	AL EQUIV + .1mph
WD ZERO	.000 V	— V	0 °	0 °	— °	0.000V ± 0.100V	AL EQUIV + 1°
WD SPAN	3.333 V	— V	360 °	360 °	— °	3.333V ± 0.100V	AL EQUIV + 1°
ΔT_1 ZERO	-.002 V	.000 V	-10.00 °	-10.00 °	— °	0.000V ± 0.050V	AL EQUIV + .1°F
ΔT_1 SPAN	5.010 V	5.000 V	10.00 °	9.99 °	— °	5.000V ± 0.050V	AL EQUIV + .1°F
ΔT_2 ZERO	-.001 V	.000 V				0.000V ± 0.050V	
ΔT_2 SPAN	5.003 V	5.000 V				5.000V ± 0.050V	
			375 ft.				
WS ZERO	.025 V	— V	.50 mph	0.5 mph	— mph	0.025V ± 0.025V	AL EQUIV + .1mph
WS SPAN	2.504 V	2.500 V	50.0 mph	50.0 mph	— mph	2.500V ± 0.025V	AL EQUIV + .1mph
WD ZERO	.003 V	.000 V	0 °	0 °	— °	0.000V ± 0.100V	AL EQUIV + 1°
WD SPAN	3.333 V	— V	360 °	360 °	— °	3.333V ± 0.100V	AL EQUIV + 1°
ΔT_1 ZERO	.000 V	— V	-10.00 °	-9.99 °	— °	0.000V ± 0.050V	AL EQUIV + .1°F
ΔT_1 SPAN	5.007 V	5.000 V	10.00 °	10.01 °	— °	5.000V ± 0.050V	AL EQUIV + .1°F
ΔT_2 ZERO	-.002 V	.000 V				0.000V ± 0.050V	
ΔT_2 SPAN	5.003 V	5.000 V				5.000V ± 0.050V	

LaSalle Meteorological Calibration

Date: 10-5-11

TOWER MEASUREMENTS

☒ Ambient ☐ Ice Bath

Temperatures

	33 ft. Amb. AF	33 ft. Amb. AL	200 ft. ΔT, AF	200 ft. ΔT, AL	375 ft. ΔT, AF	375 ft. ΔT, AL
Measured	74.25 °F	— °F	-1.71 °F	— °F	-2.30 °F	— °F
Recorded	74.22 °F	— °F	-1.66 °F	— °F	-2.27 °F	— °F
Difference	.03 °F	— °F	.05 °F	— °F	.03 °F	— °F
Specification	±0.5°F		±0.18°F		±0.18°F	

Winds

	33 ft. AF	33 ft. AL	200 ft. AF	200 ft. AL	375 ft. AF	375 ft. AL	*Specification*
WS stall	0.5 mph	0.5 mph	0.5 mph	0.5 mph	0.5 mph	0.5 mph	0.5mph ± 0.45mph
Forw. WD	360 °	361 °	360 °	360 °	362 °	359 °	0°/360° ± 5°
Revr. WD	181 °	183 °	181 °	180 °	183 °	178 °	180°/540° ± 5°
Tracking/wear	OK		OK		OK		

Comments:

33'	200'	375'
WS IN - MT 0165	WS IN MT 0169	WS IN MT 0190
WS OUT - MT 0105	WS OUT MT 0060	WS OUT MT 0009
WD IN - ~~MT 0182~~ MT 0181	WD IN MT 0161	WD IN MT 0162
WD OUT MT 0181	WD OUT MT 0183	WD OUT MT 0142

ASZ 11-22-11

LaSalle Meteorological Calibration

Date: 10-5-11

Dates of Last Wind Sensor Bearing Replacements:

	33 ft.	200 ft.	375 ft.
(6 mos.) Wind Speed:	10-5-11	10-5-11	10-5-11
(12 mos.) Wind Direction:	10-5-11	10-5-11	10-5-11

	33 ft.	200 ft.	375 ft.
Aspirators:	OK	OK	OK

Operation of De-Ice Heat Lamp System (Aug-Mar): OK, Replaced 2 at 375' (WS)

Operation of Rain Gauge: OK Tips Poured 6 Tips Recorded 6

UPS CHECK: OK

Debris screen: (In) Out Installed Removed

Tower Lighting	Good	Fair	Poor
Beacon	☒	☐	☐
Side lights	☒	☐	☐
Wiring	☒	☐	☐
Flasher	☒	☐	☐

Tower Condition	Good	Fair	Poor
Paint	☒	☐	☐
Shelter condition	☒	☐	☐

Note:
AF = As Found
AL = As Left
— = no change (AF=AL)

FS = Full Scale

Calibration Instruments:

	Next Cal Due
Psychrometer - S/N - MT0104	OCT 2011
Digital multimeter - S/N - 89880264	OCT 2011
Digital multimeter - S/N -	

Technicians: MIKE MONDIA, MIKE MARX

Comments:

Signature:

System Response Check

Date: 10-5-11

Site: LaSalle
System: Microtel

Low Scale Check	33' WS	200' WS	375' WS	33' WD	200' WD	375' WD	33' T	200' ΔT	375' ΔT
Expected Response	20.0 ±0.4	20.0 ±0.4	20.0 ±0.4	108 ±2	108 ±2	108 ±2	6.80 ±0.7	-6.00 ±0.18	-6.00 ±0.18
As Found Response	20.0	19.9	20.0	108	109	108	6.8	-6.0	-6.0
As Left Response	–	–	–	–	–	–	–	–	–

Mid Scale Check	33' WS	200' WS	375' WS	33' WD	200' WD	375' WD	33' T	200' ΔT	375' ΔT
Expected Response	60.0 ±0.4	60.0 ±0.4	60.0 ±0.4	324 ±2	324 ±2	324 ±2	64.40 ±0.7	2.00 ±0.18	2.00 ±0.18
As Found Response	60.0	59.9	60.0	324	324	324	64.2	2.0	2.0
As Left Response	–	–	–	–	–	–	–	–	–

Full Scale Check	33' WS	200' WS	375' WS	33' WD	200' WD	375' WD	33' T	200' ΔT	375' ΔT
Expected Response	80.0 ±0.4	80.0 ±0.4	80.0 ±0.4	432 ±2	432 ±2	432 ±2	93.20 ±0.7	6.00 ±0.18	6.00 ±0.18
As Found Response	79.9	79.9	79:9	431	432	432	93.0	6.0	6.0
As Left Response	–	–	–	–	–	–	–	–	–

ASL 11-22-11

System Response Check

Date: 10-5-11

Site: LaSalle
System: Process Computer

Low Scale Check	A847 375' WD	A848 200' WD	A849 375' WS	A850 200' WS	A851 375' ΔT	A852 33' WS	A853 33' WD	A854 33' T	A855 200' ΔT	A856 Precipitation
Expected Response	108 ±2	108 ±2	20.0 ±0.4	20.0 ±0.4	-4.00±0.18	20.0±0.4	108 ±2	6.80 ±0.7	-4.00±0.18	0.20 ±0.01
As Found Response	108.0	108.2	20.0	20.1	-3.99	20.2	108.6	6.8	-4.01	0.199
As Left Response	—	—	—	—	—	—	—	—	—	—

Mid Scale Check	A847 375' WD	A848 200' WD	A849 375' WS	A850 200' WS	A851 375' ΔT	A852 33' WS	A853 33' WD	A854 33' T	A855 200' ΔT	A856 Precipitation
Expected Response	324 ±2	324 ±2	60.0 ±0.4	60.0 ±0.4	8.00 ±0.18	60.0 ±0.4	324 ±2	64.40 ±0.7	8.00±0.18	0.60 ±0.01
As Found Response	324.7	323.8	59.8	60.0	7.98	60.0	323.7	64.28	7.96	0.598
As Left Response	—	—	—	—	—	—	—	—	—	—

Full Scale Check	A847 375' WD	A848 200' WD	A849 375' WS	A850 200' WS	A851 375' ΔT	A852 33' WS	A853 33' WD	A854 33' T	A855 200' ΔT	A856 Precipitation
Expected Response	432 ±2	432 ±2	80.0 ±0.4	80.0±0.4	14.00±0.18	80.0 ±0.4	432 ±2	93.20±0.7	14.00±0.18	0.80 ±0.01
As Found Response	432.6	432.0	79.8	80.0	13.98	79.9	431.4	93.0	13.96	0.798
As Left Response	—	—	—	—	—	—	—	—	—	—

ASL 11-22-11

System Response Check

Date: 10-5-11

Site: LaSalle
System: Control Room Indicators

Low Scale Check	200' WS	375' WS	200' WD	375' WD	375' ΔT
Expected Response	20.0 ±1.0	20.0 ±1.0	108 ±5.4	108 ±5.4	-4.00 ±0.3
As Found Response	20	20.5	110	110	-4.0
As Left Response		-	-	-	-

Mid Scale Check	200' WS	375' WS	200' WD	375' WD	375' ΔT
Expected Response	60.0 ±1.0	60.0 ±1.0	324 ±5.4	324 ±5.4	8.00 ±0.3
As Found Response	60	60	325	325	8.0
As Left Response	-	-	-	-	-

Full Scale Check	200' WS	375' WS	200' WD	375' WD	375' ΔT
Expected Response	80.0 ±1.0	80.0 ±1.0	432 ±5.4	432 ±5.4	14.00 ±0.3
As Found Response	80.5	80.5	430	430	14.0
As Left Response	-	-	-	-	-

ADZ 11-22-11

RAI # MA-01

ATTACHMENT 3

Annual Report
on the
Meteorological Monitoring Program
at the
LaSalle County Nuclear Power Station
2012

prepared for

Exelon Nuclear
Warrenville, IL 60555

by

Murray and Trettel, Incorporated
600 First Bank Drive, Suite A
Palatine, IL 60067
(847) 963-9000
e-mail: mt@weathercommand.com

For Exelon Use Only

Reviewed By: [signature] 5/2/14

Date: 5/2/15 ~ 5/2/14

Table of Contents

List of Tables

1. Introduction

The purpose of the meteorological program being conducted at the LaSalle County Station site is to provide information sufficient to assess the local weather conditions and to determine the degree of atmospheric dispersion of airborne radioactive effluent from the station.

The meteorological tower is 400 ft. high and is instrumented at three levels. Wind speed and direction are measured at 33 ft., 200 ft., and 375 ft. Ambient temperature is measured at 33 ft. Differential temperatures, referenced to 33 ft., are measured at 200 ft. and 375 ft. Precipitation is measured at approximately 10 ft.

Joint frequency stability wind rose tables of wind direction, wind speed, and stability are routinely tabulated from hourly measurements. The quarterly and annual tables are included in this report.

Descriptions of the instruments and digital recorder are given in Section 3 (Data Acquisition) of this report. Data reduction and processing are described in Section 4 (Data Analysis). The results given in Section 5 of this report include modeled maximum whole body doses, skin doses, organ doses based upon airborne releases, and site meteorology.

2. Summary

The LaSalle Station meteorological monitoring program produced 78,907 hours of valid data out of a possible 79,056 parameter hours during 2012 (366 days x 24 hours/day x 9 measured priority parameters), which represents an overall data recovery rate of 99.8%. Priority parameters are all parameters except precipitation.

The stability wind rose tables included in this report have been generated using the 375 ft. wind data with the 375-33 ft. differential temperature data.

The maximum annual calculated cumulative doses resulting from airborne releases were as follows.

LaSalle County Generating Station:

gamma air dose	-	4.970×10^{-3} mrad
beta air dose	-	1.780×10^{-3} mrad
whole body dose	-	1.857×10^{-2} mrem
skin dose	-	5.090×10^{-3} mrem
organ (infant thyroid)	-	$1.356 \times 10^{+0}$ mrem

3. Data Acquisition

Wind speed and direction are measured with Climatronics F460 wind sensors. The wind speed sensors have a starting speed of 0.5 mph (0.22 mps), a range of 0 to 100 mph (0 to 44.7 mps), and a system accuracy of ±1.0 mph at 100 mph (±0.45 mps at 44.7 mps). The wind direction sensors have a threshold speed of 0.5 mph (0.22 mps), a range of 0 to 540°, and a system accuracy of ±5°.

Ambient and differential temperature are measured with the Climatronics 100093 system. Ambient temperature is measured within the range of -22 to 122°F (-30 to 50°C) with an accuracy of ±0.5°F (±0.3°C). Differential temperature is measured within the range of -10 to 10°F (-5.6 to 5.6°C) with an accuracy of ±0.18°F (±0.10°C).

Precipitation is measured with a Climatronics 100097 tipping bucket rain gauge and is measured in increments of one one-hundredth of an inch with a system accuracy of ±1% for rain rates of 1-3"/hr and ±3% for rain rates of 3-6"/hr.

Instrument types and locations are summarized in Table 1.

The meteorological data are collected and stored by a Microtel 4.0 data acquisition system. The Microtel measures the analog voltages of the instruments and records the digital equivalent within the range of 0 to +5 volts. The Microtel has the capability of storing 24 hours of minute data and one week of hourly data. Data are obtained from the Microtel by a direct dial telephone hookup to an in-house computer system. Data are sampled every second.

As a backup to the Microtel, data are also recorded with a Johnson Yokogawa Corp. digital recorder (JYC DA100 data acquisition unit and Contec IPC-PT/M300(PC)WOU PC). Data are sampled every 10 seconds.

Data loggers are summarized in Table 2.

Table 1

Instrument Locations

Measurement	Sensor Type	Location	Elevation
Wind Speed	Climatronics 100075 F460	Tower	375 ft.
Wind Direction	Climatronics 100076 F460	Tower	375 ft.
Differential Temperature	Climatronics 100093	Tower	375 ft.
Wind Speed	Climatronics 100075 F460	Tower	200 ft.
Wind Direction	Climatronics 100076 F460	Tower	200 ft.
Differential Temperature	Climatronics 100093	Tower	200 ft.
Wind Speed	Climatronics 100075 F460	Tower	33 ft.
Wind Direction	Climatronics 100076 F460	Tower	33 ft.
Ambient Temperature	Climatronics 100093	Tower	33 ft.
Precipitation	Climatronics 100097-1 Tipping Bucket Rain Gage	Meteorological shelter roof	10 ft.

Table 2

Data Loggers

Measurement	Logger Type	Sampling Frequency
Winds, Temperatures, and Precipitation	Microtel 4.0 data acquisition system	1 sec.
Winds, Temperatures, and Precipitation	Johnson Yokogawa Corp. Digital Recorder (JYC DA100 and Contec IPC-PT/M300(PC)WOU) digital recorder	10 sec.

4. Data Analysis

The LaSalle Microtel is routinely interrogated to obtain hourly average data. The data are then stored in the meteorological data base and listings of the data are generated. The data listings are examined by qualified personnel and any apparent problems are brought to the attention of the Project Manager or Meteorological Technician and the Instrument Maintenance staff.

Hourly values of wind speed, wind direction, ambient temperature, differential temperature, and precipitation are obtained through measurements taken at the site. The standard deviation of wind direction (sigma) is derived. The wind direction variation is described in terms of the standard deviation of the direction about the mean direction. The Microtel computes an hourly value of wind sigma by taking the Root-Mean-Square (RMS) of the four quarter-hour wind sigma values. The Microtel quarter-hour wind sigma values are calculated directly from the one second wind direction samples during the 15 minute period.

The data base files are edited approximately once a week. Missing Microtel values are replaced with digital recorder values, when available. Invalid data are deleted from the data base.

When an hourly value is missing or invalid, the numeral 999 is entered into the computer data file in the appropriate location. When the wind direction changes substantially relative to its short term fluctuations, the numeral 888 can be entered into the wind sigma location to indicate shifting winds. When the wind blows with velocities near the sensing threshold of the instrument, the numeral 777 can be entered into the wind direction, wind speed, and wind sigma locations to indicate light and variable winds.

A professional meteorologist reviews the data, calibration findings, equipment maintenance reports, and other information and determines which data are valid. Only the valid data are retained in the data base.

As a quality control measure, a monthly comparison is made of Microtel and digital recorder data. An investigation is made into the reasons for any significant differences between the sets of values.

Joint frequency stability wind rose tables of hourly data measured at the site are generated. These tables indicate the prevailing wind direction, wind speed, and stability classes measured during the period of observation as well as the joint frequencies of occurrence of the wind direction, wind speed, and stability classes. The values are also used as input to the atmospheric transport and diffusion models. Wind direction, wind speed, and stability classes are given in Tables 3, 4, and 5.

Table 3

Wind Direction Classes

IF	348.75°	<	WD	≤	11.25°	THEN	Class is	N
IF	11.25°	<	WD	≤	33.75°	THEN	Class is	NNE
IF	33.75°	<	WD	≤	56.25°	THEN	Class is	NE
IF	56.25°	<	WD	≤	78.75°	THEN	Class is	ENE
IF	78.75°	<	WD	≤	101.25°	THEN	Class is	E
IF	101.25°	<	WD	≤	123.75°	THEN	Class is	ESE
IF	123.75°	<	WD	≤	146.25°	THEN	Class is	SE
IF	146.25°	<	WD	≤	168.75°	THEN	Class is	SSE
IF	168.75°	<	WD	≤	191.25°	THEN	Class is	S
IF	191.25°	<	WD	≤	213.75°	THEN	Class is	SSW
IF	213.75°	<	WD	≤	236.25°	THEN	Class is	SW
IF	236.25°	<	WD	≤	258.75°	THEN	Class is	WSW
IF	258.75°	<	WD	≤	281.25°	THEN	Class is	W
IF	281.25°	<	WD	≤	303.75°	THEN	Class is	WNW
IF	303.75°	<	WD	≤	326.25°	THEN	Class is	NW
IF	326.25°	<	WD	≤	348.75°	THEN	Class is	NNW

Table 4

Wind Speed Classes

IF	0.0 mph	<	WS	≤	0.5 mph	THEN	Class is	1
IF	0.5 mph	<	WS	≤	3.5 mph	THEN	Class is	2
IF	3.5 mph	<	WS	≤	7.5 mph	THEN	Class is	3
IF	7.5 mph	<	WS	≤	12.5 mph	THEN	Class is	4
IF	12.5 mph	<	WS	≤	18.5 mph	THEN	Class is	5
IF	18.5 mph	<	WS	≤	24.5 mph	THEN	Class is	6
IF	24.5 mph	<	WS			THEN	Class is	7

Table 5

Atmospheric Stability Classes

Class	Differential Temperature Interval (in °C/100m) [1]	Differential Temperature Interval (in °F over the 200-33ft. range) [2]	Differential Temperature Interval (in °F over the 375-33ft. range) [2]
Extremely Unstable	$\Delta T \leq -1.9$	$\Delta T \leq -1.8$	$\Delta T \leq -3.6$
Moderately Unstable	$-1.9 < \Delta T \leq -1.7$	$-1.8 < \Delta T \leq -1.6$	$-3.6 < \Delta T \leq -3.2$
Slightly Unstable	$-1.7 < \Delta T \leq -1.5$	$-1.6 < \Delta T \leq -1.4$	$-3.2 < \Delta T \leq -2.9$
Neutral	$-1.5 < \Delta T \leq -0.5$	$-1.4 < \Delta T \leq -0.5$	$-2.9 < \Delta T \leq -1.0$
Slightly Stable	$-0.5 < \Delta T \leq 1.5$	$-0.5 < \Delta T \leq 1.3$	$-1.0 < \Delta T \leq 2.8$
Moderately Stable	$1.5 < \Delta T \leq 4.0$	$1.3 < \Delta T \leq 3.6$	$2.8 < \Delta T \leq 7.5$
Extremely Stable	$4.0 < \Delta T$	$3.6 < \Delta T$	$7.5 < \Delta T$

[1] from ANSI/ANS 2.5
[2] ANSI/ANS 2.5 intervals scaled for instrument heights on the LaSalle meteorological tower

The following two programs were used to calculate doses resulting from radioactive releases:

1. XOQDOQ: Computer Program for the Meteorological Evaluation of Routine Effluent Releases at Nuclear Power Stations (NUREG/CR-2919).

The program is based on the theory that material released to the atmosphere will be normally distributed (Gaussian) about the plume centerline. A straight-line trajectory is assumed between the point of release and all receptors.

The program implements the assumptions outlined in Section C of NRC Regulatory Guide 1.111. In evaluating routine releases from nuclear power plants, it primarily is designed to calculate annual relative effluent concentrations, X/Q values and annual average relative deposition, D/Q values.

Output from the XOQDOQ program is used as input to the GASPAR program.

2. GASPAR II: A Code System for Evaluation of Radiological Impacts Due to the Release of Radioactive Material to the Atmosphere During Normal Operation of Light Water Reactors (NUREG-0597).

GASPAR is a program written for the evaluation of radiological impacts due to the release of radioactive material to the atmosphere during normal operation of reactors. The GASPAR code implements the radiological impact models of NRC Regulatory Guide 1.109, Revision 1, for atmospheric releases. The program is used to estimate the maximum individual doses at selected locations in the vicinity of the plant.

5. Results

5.1 Instrument Maintenance

The maintenance program followed during 2012 was composed of routinely scheduled visits, preventative maintenance procedures, and equipment repairs. Routine monthly visits were made to inspect the sensing and recording systems for proper operation. In addition, routine maintenance and calibration checks of all tower-mounted and ground level equipment were performed every four months. A description of the calibration and field procedures is found in the Murray and Trettel, Inc. "P1009 Procedures Manual" (July 2010).

In April, the annual tower inspection was performed.

In June, the digital recorder failed. A replacement unit was programmed and bench tested. It was installed in July. Also in June, the 33 ft. wind speed sensor was replaced due to low readings.

In July, the bi-weekly generator test was causing the digital recorder to trip off. The recorder was plugged into a UPS to resolve the problem.

In October, the 375 ft. wind speed sensor was replaced due to broken cups and low readings.

In December, the digital recorder was unreachable by modem. The unit was found powered off. The unit was powered up to restore communication.

No other significant problems were encountered with the equipment, and at the end of the annual period, no problems were evident at the site.

5.2 Data Recovery

The record of data recovery for the year is summarized in Table 6.

Table 6

LaSalle Site

Data Recovery Summary

2012

Measurement	Elevation	Recovered Hours	Recovered Percent	Lost Hours	Percent Changed
Wind Speed	33 ft.	8752	99.6	32	0.3
Wind Speed	200 ft.	8772	99.9	12	0.1
Wind Speed	375 ft.	8851	99.6	33	0.3
Wind Direction	33 ft.	8772	99.9	12	0.6
Wind Direction	200 ft.	8772	99.9	12	0.4
Wind Direction	375 ft.	8772	99.9	12	0.2
Ambient Temperature	33 ft.	8772	99.9	12	0.1
Differential Temperature	200-33 ft.	8772	99.9	12	0.3
Differential Temperature	375-33 ft.	8772	99.9	12	0.9
Precipitation	10 ft.	8722	99.3	62	0.9
AVERAGE*			99.8		

* average of priority parameters (all except precipitation)

	Valid Hours	Recovered Percent	Lost Hours
Lower Level Joint Frequency %	8752	99.6	32
Middle Level Joint Frequency %	8772	99.9	12
Upper Level Joint Frequency %	8751	99.6	33

5.3 Summary of Billings for Equipment Repairs, Replacement Parts, and Other Work not Included in Fixed-Cost Maintenance Agreement - **2012**

Description - LaSalle

	Cost
January	
Meteorological equipment maintenance	$ 155.20
Meteorological parts, materials, and contractor services	807.41
February	
Meteorological equipment maintenance	1,162.20
Meteorological parts, materials, and contractor services	681.63
Special Request	170.00
March	
Meteorological parts, materials, and contractor services	35.59
April	
Meteorological parts, materials, and contractor services	194.04
May	
Meteorological equipment maintenance	139.80
June	
Meteorological equipment maintenance	1,529.30
Meteorological parts, materials, and contractor services	3,161.87
July	
Meteorological equipment maintenance	424.10
Meteorological parts, materials, and contractor services	4,003.07
August	
-none-	0.00
September	
Special Request	297.50
October	
Meteorological equipment maintenance	360.00
Meteorological parts, materials, and contractor services	253.22
November	
Meteorological equipment maintenance (from 10/27/12)	1,870.70
Meteorological parts, materials, and contractor services	345.52
December	
Meteorological equipment maintenance	401.10

Annual Total: $ 15,992.25

5.4 Stability Wind Rose Data

The quarterly and annual stability wind roses are given in Tables 7 through 11. Wind speed classes have been altered to reflect the sensor threshold.

For the year, winds measured at 375 ft. most frequently came from the South-Southwest (11.25%) and fell into the 12.6-18.5 mph wind speed class (31.01%). Calms (wind speeds at or below the sensor threshold) were measured 0.01% of the time and speeds greater than 24.5 mph were measured 15.90% of the time.

Stability based on the 375-33 ft. differential temperature most frequently fell into the neutral classification (48.40%).

TABLE 7

LaSalle County Generating Statio
375 ft. Wind Speed and Direction

January-March. 2012
375Ft-33Ft Delta-T (F)

Number of Observations = 2180
Values are Percent Occurrence

SPEED		WIND DIRECTION CLASSES																	STABILITY CLASSES							
CLASS		N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL	EU	MU	SU	N	SS	MS	ES	TOTAL
	EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
	MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00						
C	SU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00					
A	N	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				0.00				
L	SS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00					0.00			
M	MS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00		
	ES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00	
																										0.00
	EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
	MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.05		0.05						
1	SU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00					
-	N	0.00	0.09	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.00	0.00	0.23				0.23				
3	SS	0.00	0.00	0.05	0.00	0.00	0.00	0.05	0.09	0.05	0.05	0.05	0.05	0.05	0.00	0.05	0.05	0.50					0.50			
	MS	0.05	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.14						0.14		
	ES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00	
																										0.92
	EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
	MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00						
4	SU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.09	0.00	0.00	0.00	0.00	0.09	0.23			0.23					
-	N	0.37	0.28	0.14	0.05	0.00	0.14	0.14	0.14	0.32	0.09	0.32	0.28	0.18	0.18	0.41	0.09	3.12				3.12				
7	SS	0.00	0.18	0.18	0.00	0.23	0.14	0.00	0.18	0.05	0.00	0.14	0.05	0.37	0.23	0.18	0.09	2.02					2.02			
	MS	0.05	0.05	0.09	0.00	0.00	0.00	0.05	0.05	0.09	0.05	0.09	0.09	0.05	0.00	0.00	0.00	0.64						0.64		
	ES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00	
																										6.01
	EU	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05							
	MU	0.00	0.09	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.18		0.18						
8	SU	0.14	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.18	0.05	0.00	0.00	0.00	0.46			0.46					
-	N	1.01	0.78	0.64	0.87	0.55	0.50	0.23	0.14	0.32	0.46	0.32	0.55	0.69	0.50	1.15	0.60	9.31				9.31				
1	SS	0.32	0.32	0.18	0.23	0.37	0.14	0.18	0.14	0.18	0.37	0.37	0.37	0.46	0.46	0.46	0.18	4.72					4.72			
2	MS	0.18	0.05	0.05	0.09	0.05	0.14	0.05	0.05	0.09	0.14	0.37	0.14	0.14	0.05	0.05	0.05	1.65						1.65		
	ES	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05	0.00	0.00	0.05	0.00	0.18							0.18	
																										16.56
	EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.05	0.05							
1	MU	0.00	0.05	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.09	0.09	0.00	0.32		0.32						
3	SU	0.00	0.00	0.14	0.18	0.14	0.00	0.00	0.00	0.18	0.05	0.09	0.05	0.14	0.09	0.09	0.00	1.15			1.15					
-	N	0.78	0.73	0.60	1.38	0.41	0.37	0.50	0.60	1.28	1.06	0.78	1.38	1.79	1.83	1.15	1.61	16.24				16.24				
1	SS	0.18	0.09	0.18	0.28	0.55	0.37	0.46	0.18	0.32	0.32	0.28	0.09	0.64	0.46	0.55	0.05	5.00					5.00			
8	MS	0.05	0.00	0.00	0.00	0.05	0.09	0.37	0.05	0.14	0.23	0.50	0.18	0.37	0.05	0.18	0.00	2.25						2.25		
	ES	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.14	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.23							0.23	
																										25.23

TABLE 7
continued

LaSalle County Generating Statio — January-March, 2012
375 ft. Wind Speed and Direction — 375Ft-33Ft Delta-T (F)

SPEED CLASS	WIND DIRECTION CLASSES N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL	STABILITY CLASSES EU	MU	SU	N	SS	MS	ES	TOTAL
EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.05	0.05							
1 MU	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.00	0.00	0.18		0.18						
9 SU	0.00	0.00	0.05	0.46	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.05	0.00	0.09	0.05	0.73			0.73					
- N	0.00	0.05	0.64	1.47	0.18	0.14	0.46	0.41	1.24	0.64	0.78	0.55	0.92	2.29	1.01	0.37	11.15				11.15				
2 SS	0.00	0.00	0.00	0.00	0.28	0.14	0.50	0.46	0.92	0.64	0.78	0.87	0.96	1.51	0.83	0.00	7.89					7.89			
4 MS	0.00	0.00	0.00	0.00	0.00	0.09	0.05	0.32	0.55	0.46	0.09	0.05	0.37	0.50	0.09	0.00	2.57						2.57		
ES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.41	0.14	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.64							0.64	
																									23.21
EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.05	0.18	0.18							
G MU	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.05	0.14	0.09	0.37		0.37						
T SU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.09	0.09	0.05	0.00	0.09	0.18	0.00	0.60			0.60					
N	0.23	0.00	0.37	0.14	0.00	0.18	0.50	0.41	0.92	1.33	0.78	0.28	1.15	1.79	1.19	0.83	10.09				10.09				
2 SS	0.00	0.00	0.00	0.00	0.00	0.28	0.50	1.47	1.88	2.66	1.01	0.46	1.83	2.61	0.18	0.00	12.89					12.89			
4 MS	0.00	0.00	0.00	0.00	0.00	0.14	0.09	0.32	0.60	0.96	0.28	0.37	0.18	0.18	0.00	0.00	3.12						3.12		
ES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.09	0.23	0.00	0.37	0.00	0.00	0.00	0.00	0.83							0.83	
																									28.07
TOT	3.35	2.75	3.44	5.46	2.80	2.84	4.17	5.55	9.59	10.05	7.39	6.51	10.50	13.17	8.26	4.17	100.00	0.32	1.10	3.17	50.14	33.03	10.37	1.88	100.00

Wind Direction by Stability

N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL	-STABILITY CLASSES-
0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.14	0.05	0.32	Extremely Unstable
0.00	0.14	0.05	0.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.14	0.23	0.23	0.09	1.10	Moderately Unstable
0.14	0.00	0.18	0.69	0.14	0.00	0.00	0.00	0.28	0.23	0.32	0.28	0.23	0.18	0.37	0.14	3.17	Slightly Unstable
2.39	1.93	2.43	3.90	1.15	1.33	1.83	1.70	4.08	3.58	3.07	3.03	4.72	6.61	4.91	3.49	50.14	Neutral
0.50	0.60	0.60	0.50	1.42	1.06	1.70	2.52	3.39	4.04	2.61	1.88	4.31	5.28	2.25	0.37	33.03	Slightly Stable
0.32	0.09	0.14	0.14	0.09	0.46	0.60	0.78	1.47	1.83	1.33	0.87	1.10	0.78	0.32	0.05	10.37	Moderately Stable
0.00	0.00	0.05	0.00	0.00	0.00	0.05	0.55	0.37	0.37	0.05	0.41	0.00	0.00	0.05	0.00	1.88	Extremely Stable

Wind Direction by Wind Speed

N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL	-WIND SPEED CLASSES-
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	C A L M
0.05	0.09	0.09	0.05	0.00	0.00	0.05	0.09	0.05	0.05	0.14	0.09	0.09	0.00	0.05	0.05	0.92	< 3.5 mph
0.41	0.50	0.41	0.05	0.23	0.28	0.18	0.37	0.46	0.18	0.64	0.41	0.60	0.41	0.60	0.28	6.01	3.6 - 7.5 mph
1.65	1.24	0.92	1.33	0.96	0.78	0.46	0.32	0.60	0.96	1.15	1.28	1.38	1.01	1.70	0.83	16.56	7.6 - 12.5 mph
1.01	0.87	0.96	1.83	1.15	0.83	1.38	0.83	2.06	1.70	1.65	1.70	2.98	2.57	2.06	1.65	25.23	12.6 - 18.5 mph
0.00	0.05	0.69	2.02	0.46	0.37	1.01	1.61	2.84	1.88	1.65	1.47	2.29	4.45	2.02	0.41	23.21	18.6 - 24.5 mph
0.23	0.00	0.37	0.18	0.00	0.60	1.10	2.34	3.58	5.28	2.16	1.56	3.17	4.72	1.83	0.96	28.07	> 24.5 mph

TABLE 8

LaSalle County Generating Statio
375 ft. Wind Speed and Direction

April-June, 2012
375Ft-33Ft Delta-T (F)

Number of Observations = 2182
Values are Percent Occurrence

SPEED		WIND DIRECTION CLASSES																	STABILITY CLASSES							
CLASS		N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL	EU	MU	SU	N	SS	MS	ES	TOTAL
	EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
	MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00						
C	SU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00					
A	N	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				0.00				
L	SS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00					0.00			
M	MS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00		
	ES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00	
																										0.00
	EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
	MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00						
1	SU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00					
-	N	0.00	0.05	0.14	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.27				0.27				
3	SS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00					0.00			
	MS	0.00	0.09	0.05	0.00	0.05	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.05	0.37						0.37		
	ES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00	
																										0.64
	EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
	MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00						
4	SU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00					
-	N	0.46	0.46	0.32	0.27	0.23	0.14	0.18	0.00	0.09	0.05	0.27	0.27	0.32	0.37	0.32	0.18	3.94				3.94				
7	SS	0.09	0.05	0.05	0.00	0.09	0.14	0.05	0.00	0.00	0.00	0.09	0.00	0.05	0.18	0.00	0.09	0.87					0.87			
	MS	0.00	0.00	0.05	0.05	0.00	0.18	0.00	0.00	0.00	0.18	0.09	0.05	0.05	0.00	0.00	0.05	0.69						0.69		
	ES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00	
																										5.50
	EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
	MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00						
8	SU	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.05	0.00	0.05	0.00	0.00	0.00	0.05	0.00	0.00	0.18			0.18					
-	N	0.55	0.96	0.96	0.87	0.82	0.32	0.23	0.32	0.37	0.23	0.82	0.78	0.78	0.50	0.69	0.82	10.04				10.04				
1	SS	0.23	0.27	0.37	0.46	0.18	0.23	0.32	0.05	0.27	0.23	0.23	0.23	0.37	0.14	0.18	0.32	4.08					4.08			
2	MS	0.00	0.09	0.05	0.00	0.05	0.14	0.09	0.14	0.18	0.18	0.05	0.05	0.37	0.23	0.18	0.05	1.83						1.83		
	ES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.05	0.09	0.00	0.00	0.00	0.23							0.23	
																										16.36
	EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
	MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05	0.05	0.05	0.00	0.18		0.18						
3	SU	0.05	0.00	0.00	0.05	0.00	0.00	0.00	0.27	0.00	0.37	0.18	0.18	0.09	0.05	0.23	0.00	1.47			1.47					
-	N	1.19	0.78	2.20	1.65	0.73	0.69	0.60	0.50	0.87	1.79	0.96	0.78	0.92	1.28	0.96	0.55	16.45				16.45				
4	SS	0.50	0.64	1.01	1.33	0.96	0.55	0.41	0.41	0.27	0.37	0.41	0.32	0.46	0.96	0.37	0.55	9.53					9.53			
8	MS	0.09	0.18	0.05	0.00	0.18	0.64	1.10	0.32	0.46	0.32	0.32	0.27	0.37	0.27	0.09	0.00	4.67						4.67		
	ES	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.69	0.05	0.00	0.14	0.00	0.00	0.00	0.00	0.00	0.96							0.96	
																										33.27

TABLE 8
continued

LaSalle County Generating Statio
375 ft. Wind Speed and Direction

April-June, 2012
375Ft-33Ft Delta-T (F)

SPEED CLASS	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL	EU	MU	SU	N	SS	MS	ES	TOTAL
EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
1 MU	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.09	0.09	0.05	0.05	0.00	0.00	0.00	0.46		0.46						
9 SU	0.14	0.00	0.23	0.00	0.00	0.00	0.00	0.00	0.09	0.41	0.23	0.09	0.23	0.00	0.00	0.14	1.56			1.56					
- N	0.55	0.46	2.84	2.02	0.96	0.55	0.37	0.50	0.41	1.60	1.10	0.41	0.27	0.50	0.64	1.28	14.48				14.48				
2 SS	0.37	0.14	0.32	0.23	0.73	0.41	0.27	0.27	1.01	1.19	1.05	0.14	0.32	0.55	0.82	0.92	8.75					8.75			
4 MS	0.09	0.00	0.00	0.00	0.09	0.14	0.64	0.50	0.64	0.92	0.05	0.09	0.46	0.00	0.32	0.09	4.03						4.03		
ES	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.41	0.27	0.00	0.05	0.27	0.05	0.00	0.00	0.00	1.19							1.19	
																									30.48
EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.18							
G MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.05	0.27	0.00	0.00	0.00	0.00	0.00	0.50		0.50						
T SU	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.18	0.23	0.00	0.00	0.00	0.00	0.00	0.55			0.55					
N	0.00	0.23	1.33	0.46	0.78	0.41	0.09	0.05	0.73	0.96	0.27	0.14	0.18	0.37	0.69	0.05	6.74				6.74				
2 SS	0.18	0.00	0.05	0.05	0.00	0.00	0.18	0.09	0.55	2.06	0.41	0.00	0.18	0.14	0.18	0.05	4.12					4.12			
4 MS	0.09	0.00	0.00	0.00	0.00	0.09	0.09	0.00	0.60	0.46	0.00	0.00	0.14	0.00	0.00	0.00	1.47						1.47		
ES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18							0.18	
																									13.75
TOT	4.63	4.45	9.99	7.42	5.87	4.72	4.90	4.67	7.65	11.69	7.38	4.22	5.77	5.64	5.82	5.18	100.00	0.18	1.15	3.76	51.92	27.36	13.06	2.57	100.00

Wind Direction by Stability

N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL	-STABILITY CLASSES-
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	Extremely Unstable
0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.32	0.14	0.37	0.09	0.09	0.05	0.05	0.00	1.15	Moderately Unstable
0.18	0.05	0.23	0.05	0.00	0.05	0.00	0.32	0.18	1.01	0.64	0.27	0.32	0.09	0.23	0.14	3.76	Slightly Unstable
2.75	2.93	7.79	5.27	3.53	2.15	1.47	1.37	2.47	4.63	3.48	2.38	2.47	3.02	3.30	2.89	51.92	Neutral
1.37	1.10	1.79	2.06	1.97	1.33	1.24	0.82	2.11	3.85	2.20	0.69	1.37	1.97	1.56	1.92	27.36	Slightly Stable
0.27	0.37	0.18	0.05	0.37	1.19	1.97	0.96	1.88	2.06	0.50	0.46	1.37	0.50	0.69	0.23	13.06	Moderately Stable
0.00	0.00	0.00	0.00	0.00	0.00	0.23	1.19	0.50	0.00	0.18	0.32	0.14	0.00	0.00	0.00	2.57	Extremely Stable

Wind Direction by Wind Speed

N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL	-WIND SPEED CLASSES-
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	C A L M
0.00	0.14	0.18	0.00	0.05	0.05	0.05	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.09	0.05	0.64	< 3.5 mph
0.55	0.50	0.41	0.32	0.32	0.46	0.23	0.00	0.09	0.23	0.46	0.32	0.41	0.55	0.32	0.32	5.50	3.6 - 7.5 mph
0.78	1.33	1.37	1.33	1.05	0.73	0.64	0.64	0.82	0.69	1.10	1.10	1.60	0.92	1.05	1.19	16.36	7.6 - 12.5 mph
1.83	1.60	3.25	3.02	1.88	1.88	2.20	2.20	1.65	2.84	2.02	1.60	1.88	2.61	1.70	1.10	33.27	12.6 - 18.5 mph
1.19	0.60	3.39	2.25	1.79	1.10	1.42	1.70	2.57	4.22	2.57	1.05	1.37	1.05	1.79	2.43	30.48	18.6 - 24.5 mph
0.27	0.27	1.37	0.50	0.78	0.50	0.37	0.14	2.52	3.71	1.19	0.14	0.50	0.50	0.87	0.09	13.75	> 24.5 mph

TABLE 9

LaSalle County Generating Statio
375 ft. Wind Speed and Direction

July-September, 2012
375Ft-33Ft Delta-T (F)

Number of Observations = 2209
Values are Percent Occurrence

SPEED CLASS	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL	EU	MU	SU	N	SS	MS	ES	TOTAL
EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00						
C SU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00					
A N	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				0.00				
L SS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00					0.00			
M MS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05						0.05		
ES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00	
																									0.05
EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00						
1 SU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00					
- N	0.00	0.05	0.09	0.00	0.05	0.00	0.00	0.05	0.00	0.00	0.05	0.05	0.05	0.00	0.00	0.09	0.45				0.45				
3 SS	0.05	0.05	0.00	0.00	0.00	0.00	0.00	0.05	0.05	0.00	0.00	0.05	0.00	0.09	0.05	0.00	0.36					0.36			
MS	0.00	0.05	0.00	0.05	0.14	0.23	0.05	0.00	0.05	0.09	0.00	0.09	0.05	0.05	0.14	0.00	0.95						0.95		
ES	0.00	0.00	0.00	0.05	0.00	0.05	0.00	0.00	0.05	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.18							0.18	
																									1.95
EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00						
4 SU	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.05	0.00	0.00	0.05	0.00	0.05	0.00	0.00	0.00	0.18			0.18					
- N	0.45	0.27	0.59	0.77	0.36	0.50	0.50	0.72	0.95	0.77	0.81	0.50	0.91	0.32	0.32	0.27	9.01				9.01				
7 SS	0.23	0.23	0.23	0.00	0.23	0.23	0.14	0.05	0.23	0.09	0.18	0.05	0.18	0.23	0.50	0.05	2.81					2.81			
MS	0.09	0.05	0.09	0.23	0.27	0.05	0.09	0.14	0.23	0.18	0.18	0.05	0.00	0.14	0.14	0.09	1.99						1.99		
ES	0.00	0.05	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.18	0.05	0.05	0.00	0.05	0.00	0.00	0.41							0.41	
																									14.40
EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
MU	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.00	0.00	0.05	0.18	0.00	0.00	0.00	0.05	0.00	0.36		0.36						
8 SU	0.00	0.09	0.00	0.00	0.00	0.00	0.14	0.05	0.14	0.09	0.18	0.27	0.77	0.00	0.00	0.00	1.72			1.72					
- N	0.86	0.45	1.00	0.41	0.18	0.41	0.45	0.54	0.77	0.77	1.09	1.31	1.99	1.09	1.13	0.91	13.35				13.35				
1 SS	0.54	0.23	0.41	0.50	0.41	0.45	0.27	0.18	0.32	0.27	0.27	0.32	0.32	0.45	0.36	0.45	5.75					5.75			
2 MS	0.05	0.14	0.00	0.09	0.18	0.50	0.41	0.45	0.63	0.72	0.68	0.45	0.68	0.50	0.41	0.50	6.38						6.38		
ES	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.05	0.00	0.18	0.36	0.32	0.36	0.09	0.09	0.00	1.54							1.54	
																									29.11
EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05							
1 MU	0.00	0.05	0.05	0.00	0.00	0.05	0.18	0.05	0.00	0.00	0.00	0.14	0.09	0.09	0.05	0.00	0.72		0.72						
3 SU	0.05	0.05	0.14	0.00	0.00	0.00	0.09	0.05	0.14	0.00	0.05	0.32	0.23	0.09	0.09	0.14	1.40			1.40					
- N	1.90	0.68	1.22	1.00	0.23	0.09	0.09	0.18	0.63	0.68	0.91	0.72	0.81	0.77	1.40	1.04	12.36				12.36				
1 SS	0.81	0.72	1.13	0.91	0.86	0.27	0.14	0.05	0.27	0.41	0.41	0.54	0.63	0.36	0.86	0.27	8.65					8.65			
8 MS	0.27	0.09	0.09	0.00	0.41	0.81	0.95	0.63	0.41	1.04	1.04	1.27	0.72	0.81	0.32	0.27	9.14						9.14		
ES	0.00	0.00	0.00	0.00	0.00	0.00	0.32	0.36	0.36	0.00	0.50	0.41	0.41	0.27	0.05	0.00	2.67							2.67	
																									34.99

TABLE 9
continued

LaSalle County Generating Statio
375 ft. Wind Speed and Direction

July-September, 2012
375Ft-33Ft Delta-T (F)

SPEED CLASS	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL	STABILITY CLASSES EU	MU	SU	N	SS	MS	ES	TOTAL
EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
1 MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.05	0.00	0.00	0.09		0.09						
9 SU	0.09	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.09	0.23	0.05	0.00	0.00	0.09	0.05	0.00	0.63			0.63					
- N	1.00	0.09	0.95	0.81	0.18	0.09	0.05	0.00	0.09	0.23	0.23	0.23	0.32	0.09	0.41	0.91	5.66				5.66				
2 SS	0.32	0.00	0.54	0.14	0.36	0.14	0.18	0.05	0.14	0.32	0.54	0.41	0.14	0.09	0.18	0.41	3.94					3.94			
4 MS	0.18	0.09	0.05	0.00	0.14	0.09	0.27	0.18	0.72	0.72	0.54	0.54	0.32	0.05	0.05	0.09	4.03						4.03		
ES	0.05	0.00	0.00	0.00	0.00	0.00	0.05	0.45	0.32	0.59	0.09	0.00	0.00	0.05	0.00	0.00	1.58							1.58	
																									15.93
EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
G MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.00	0.00	0.00	0.00	0.00	0.00	0.14		0.14						
T SU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.09			0.09					
N	0.09	0.00	0.18	0.09	0.00	0.00	0.00	0.00	0.00	0.09	0.05	0.00	0.00	0.00	0.27	0.05	0.81				0.81				
2 SS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.63	0.54	0.05	0.00	0.00	0.00	0.05	1.31					1.31			
4 MS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.50	0.18	0.00	0.00	0.00	0.00	0.00	0.72						0.72		
ES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.27	0.05	0.00	0.00	0.00	0.00	0.00	0.45							0.45	
																									3.53
TOT	7.02	3.40	6.79	5.02	4.03	3.98	4.53	4.35	6.79	9.33	9.23	8.15	9.05	5.79	6.88	5.57	99.95	0.05	1.31	4.03	41.65	22.82	23.27	6.84	99.95

Wind Direction by Stability

N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL	-STABILITY CLASSES-
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	Extremely Unstable
0.00	0.05	0.05	0.00	0.00	0.05	0.27	0.05	0.00	0.18	0.18	0.18	0.09	0.14	0.09	0.00	1.31	Moderately Unstable
0.14	0.14	0.18	0.00	0.00	0.05	0.23	0.14	0.36	0.41	0.32	0.59	1.04	0.18	0.14	0.14	4.03	Slightly Unstable
4.30	1.54	4.03	3.08	1.00	1.09	1.09	1.49	2.44	2.54	3.12	2.81	4.07	2.26	3.53	3.26	41.65	Neutral
1.95	1.22	2.31	1.54	1.86	1.09	0.72	0.36	1.04	1.72	1.95	1.40	1.27	1.22	1.95	1.22	22.82	Slightly Stable
0.59	0.41	0.23	0.36	1.13	1.67	1.77	1.45	2.04	3.26	2.63	2.40	1.77	1.54	1.04	0.95	23.27	Moderately Stable
0.05	0.05	0.00	0.05	0.05	0.05	0.45	0.86	0.86	1.22	1.04	0.77	0.81	0.45	0.14	0.00	6.84	Extremely Stable

Wind Direction by Wind Speed

N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL	-WIND SPEED CLASSES-
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	C A L M
0.05	0.14	0.09	0.09	0.18	0.27	0.05	0.09	0.14	0.09	0.05	0.18	0.14	0.14	0.18	0.09	1.95	< 3.5 mph
0.77	0.59	0.91	1.00	0.91	0.81	0.72	0.95	1.40	1.22	1.27	0.63	1.13	0.72	0.95	0.41	14.40	3.6 - 7.5 mph
1.45	0.91	1.40	1.00	0.77	1.36	1.45	1.27	1.86	2.08	2.76	2.67	4.12	2.13	2.04	1.86	29.11	7.6 - 12.5 mph
3.03	1.58	2.63	1.90	1.49	1.22	1.77	1.31	1.86	2.13	2.90	3.40	2.90	2.40	2.76	1.72	34.99	12.6 - 18.5 mph
1.63	0.18	1.58	0.95	0.68	0.32	0.54	0.68	1.36	2.08	1.45	1.22	0.77	0.41	0.68	1.40	15.93	18.6 - 24.5 mph
0.09	0.00	0.18	0.09	0.00	0.00	0.00	0.05	0.18	1.72	0.81	0.05	0.00	0.00	0.27	0.09	3.53	> 24.5 mph

TABLE 10

LaSalle County Generating Statio
375 ft. Wind Speed and Direction

October-December. 2012
375Ft-33Ft Delta-T (F)

Number of Observations = 2181
Values are Percent Occurrence

SPEED	WIND DIRECTION CLASSES																	STABILITY CLASSES							
CLASS	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL	EU	MU	SU	N	SS	MS	ES	TOTAL
EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00						
C SU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00					
A N	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				0.00				
L SS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00					0.00			
M MS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00		
ES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00	
																									0.00
EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00						
1 SU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00					
- N	0.05	0.00	0.00	0.00	0.00	0.05	0.00	0.05	0.00	0.00	0.00	0.05	0.05	0.00	0.05	0.05	0.32				0.32				
3 SS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.05	0.00	0.00	0.14					0.14			
MS	0.05	0.00	0.00	0.05	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.18						0.18		
ES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.05	0.00	0.09							0.09	
																									0.73
EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00						
4 SU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00					
- N	0.41	0.28	0.05	0.05	0.09	0.09	0.18	0.18	0.32	0.32	0.28	0.28	0.46	0.28	0.46	0.55	4.26				4.26				
7 SS	0.05	0.09	0.05	0.00	0.00	0.05	0.05	0.05	0.05	0.14	0.14	0.05	0.14	0.09	0.28	0.09	1.28					1.28			
MS	0.09	0.05	0.00	0.05	0.09	0.05	0.00	0.00	0.14	0.00	0.05	0.05	0.00	0.05	0.00	0.05	0.64						0.64		
ES	0.00	0.00	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.00	0.14	0.05	0.00	0.00	0.00	0.00	0.28							0.28	
																									6.46
EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00						
8 SU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00					
- N	1.15	1.28	0.87	0.60	0.32	0.50	0.14	1.01	0.73	0.41	0.69	0.83	1.19	1.19	1.38	1.19	13.48				13.48				
1 SS	0.46	0.28	0.41	0.00	0.09	0.23	0.09	0.28	0.14	0.28	0.64	0.37	0.28	0.55	0.46	0.09	4.63					4.63			
2 MS	0.09	0.09	0.00	0.00	0.05	0.14	0.41	0.09	0.23	0.41	0.60	0.14	0.09	0.09	0.00	0.00	2.43						2.43		
ES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.18	0.18	0.32	0.18	0.00	0.00	0.00	0.00	0.92							0.92	
																									21.46
EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
1 MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00						
3 SU	0.00	0.05	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.14			0.14					
- N	1.47	1.33	0.69	0.92	0.28	0.09	0.46	0.55	1.10	1.42	0.28	0.14	1.19	1.56	2.34	1.24	15.04				15.04				
1 SS	0.73	1.01	0.50	0.55	0.41	0.14	0.28	0.37	1.05	0.64	0.83	0.87	0.69	0.87	0.60	0.14	9.67					9.67			
3 MS	0.00	0.00	0.00	0.00	0.14	0.18	0.32	0.92	0.73	0.60	0.23	0.05	0.00	0.23	0.05	0.05	3.48						3.48		
ES	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.64	0.78	0.18	0.32	0.14	0.00	0.00	0.00	0.00	2.15							2.15	
																									30.49

TABLE 10
continued

LaSalle County Generating Statio
375 ft. Wind Speed and Direction

October-December, 2012
375Ft-33Ft Delta-T (F)

SPEED CLASS	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL	EU	MU	SU	N	SS	MS	ES	TOTAL
EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
1 MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00						
9 SU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05	0.00	0.00	0.05	0.00	0.00	0.14			0.14					
- N	0.64	0.46	0.14	0.18	0.55	0.05	0.00	0.14	0.37	0.87	0.69	0.41	0.96	1.51	1.24	0.41	8.62				8.62				
2 SS	1.05	0.28	0.14	0.00	0.23	0.00	0.18	0.60	1.15	1.47	0.83	0.55	0.46	1.19	0.60	0.41	9.12					9.12			
4 MS	0.00	0.00	0.00	0.00	0.00	0.14	0.14	0.41	0.78	0.60	0.87	0.05	0.00	0.18	0.46	0.00	3.62						3.62		
ES	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.09	0.41	0.18	0.05	0.00	0.00	0.00	0.05	0.00	0.92							0.92	
																									22.42
EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
G MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00						
T SU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05	0.00	0.00	0.00	0.00	0.00	0.09			0.09					
N	0.00	0.00	0.00	0.00	0.32	0.09	0.14	0.28	0.96	1.88	0.50	0.18	0.46	1.70	1.05	0.69	8.25				8.25				
2 SS	0.09	0.00	0.00	0.00	0.05	0.09	0.23	0.00	2.06	2.52	0.60	0.37	0.32	0.55	0.05	0.23	7.15					7.15			
4 MS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.37	1.05	0.37	0.05	0.00	0.00	0.09	0.00	2.06						2.06		
ES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.55	0.05	0.00	0.00	0.00	0.05	0.00	0.87							0.87	
																									18.43
TOT	6.33	5.18	2.89	2.38	2.61	2.02	2.84	5.82	11.78	13.98	8.53	4.81	6.28	10.13	9.22	5.18	100.00	0.00	0.00	0.37	49.98	32.00	12.43	5.23	100.00

Wind Direction by Stability

N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL	-STABILITY CLASSES-
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Extremely Unstable
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Moderately Unstable
0.00	0.05	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.09	0.00	0.00	0.05	0.00	0.00	0.37	Slightly Unstable
3.71	3.35	1.74	1.74	1.56	0.87	0.92	2.20	3.48	4.91	2.43	1.88	4.31	6.24	6.51	4.13	49.98	Neutral
2.38	1.65	1.10	0.55	0.78	0.50	0.83	1.28	4.45	5.14	3.03	2.20	1.88	3.30	1.97	0.96	32.00	Slightly Stable
0.23	0.14	0.00	0.09	0.28	0.55	0.87	1.56	2.25	2.66	2.11	0.37	0.09	0.55	0.60	0.09	12.43	Moderately Stable
0.00	0.00	0.00	0.00	0.00	0.09	0.23	0.78	1.60	1.15	0.87	0.37	0.00	0.00	0.14	0.00	5.23	Extremely Stable

Wind Direction by Wind Speed

N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL	-WIND SPEED CLASSES-
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	C A L M
0.09	0.00	0.00	0.05	0.00	0.09	0.00	0.05	0.00	0.14	0.00	0.09	0.05	0.05	0.09	0.05	0.73	< 3.5 mph
0.55	0.41	0.09	0.09	0.18	0.28	0.23	0.23	0.50	0.46	0.60	0.41	0.60	0.41	0.73	0.69	6.46	3.6 - 7.5 mph
1.70	1.65	1.28	0.60	0.46	0.87	0.64	1.42	1.28	1.28	2.25	1.51	1.56	1.83	1.83	1.28	21.46	7.6 - 12.5 mph
2.20	2.38	1.24	1.47	0.83	0.41	1.15	2.48	3.67	2.89	1.65	1.19	1.88	2.66	2.98	1.42	30.49	12.6 - 18.5 mph
1.70	0.73	0.28	0.18	0.78	0.18	0.46	1.24	2.71	3.16	2.48	1.01	1.42	2.93	2.34	0.83	22.42	18.6 - 24.5 mph
0.09	0.00	0.00	0.00	0.37	0.18	0.37	0.41	3.62	6.05	1.56	0.60	0.78	2.25	1.24	0.92	18.43	> 24.5 mph

TABLE 11

LaSalle County Generating Statio
375 ft. Wind Speed and Direction

January-December, 2012
375Ft-33Ft Delta-T (F)

Number of Observations = 8752
Values are Percent Occurrence

SPEED	WIND DIRECTION CLASSES																	STABILITY CLASSES							
CLASS	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL	EU	MU	SU	N	SS	MS	ES	TOTAL
EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00						
C SU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00					
A N	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				0.00				
L SS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00					0.00			
M MS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01						0.01		
ES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00	
																									0.01
EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.01		0.01						
1 SU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00					
- N	0.01	0.05	0.07	0.00	0.01	0.02	0.00	0.02	0.00	0.00	0.05	0.02	0.02	0.00	0.01	0.03	0.32				0.32				
3 SS	0.01	0.01	0.01	0.00	0.00	0.00	0.01	0.03	0.02	0.03	0.01	0.02	0.01	0.03	0.02	0.01	0.25					0.25			
MS	0.02	0.03	0.01	0.03	0.05	0.07	0.02	0.00	0.01	0.02	0.00	0.05	0.01	0.01	0.06	0.01	0.41						0.41		
ES	0.00	0.00	0.00	0.01	0.00	0.01	0.00	0.00	0.01	0.01	0.00	0.00	0.01	0.00	0.01	0.00	0.07							0.07	
																									1.06
EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00						
4 SU	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.01	0.00	0.01	0.03	0.00	0.01	0.00	0.00	0.02	0.10			0.10					
- N	0.42	0.32	0.27	0.29	0.17	0.22	0.25	0.26	0.42	0.31	0.42	0.33	0.47	0.29	0.38	0.27	5.10				5.10				
7 SS	0.09	0.14	0.13	0.00	0.14	0.14	0.06	0.07	0.08	0.06	0.14	0.03	0.18	0.18	0.24	0.08	1.75					1.75			
MS	0.06	0.03	0.06	0.08	0.09	0.07	0.03	0.05	0.11	0.10	0.10	0.06	0.02	0.05	0.03	0.05	0.99						0.99		
ES	0.00	0.01	0.00	0.00	0.01	0.02	0.00	0.00	0.00	0.05	0.05	0.02	0.00	0.01	0.00	0.00	0.17							0.17	
																									8.11
EU	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01							
MU	0.00	0.02	0.00	0.01	0.00	0.00	0.02	0.00	0.00	0.01	0.05	0.00	0.01	0.00	0.01	0.00	0.14		0.14						
8 SU	0.03	0.02	0.00	0.01	0.00	0.01	0.03	0.02	0.03	0.03	0.06	0.11	0.21	0.01	0.00	0.00	0.59			0.59					
- N	0.89	0.87	0.87	0.69	0.47	0.43	0.26	0.50	0.55	0.47	0.73	0.87	1.17	0.82	1.09	0.88	11.55				11.55				
1 SS	0.39	0.27	0.34	0.30	0.26	0.26	0.22	0.16	0.23	0.29	0.38	0.32	0.35	0.40	0.37	0.26	4.80					4.80			
2 MS	0.08	0.09	0.02	0.05	0.08	0.23	0.24	0.18	0.29	0.37	0.42	0.19	0.32	0.22	0.16	0.15	3.09						3.09		
ES	0.00	0.00	0.01	0.00	0.00	0.00	0.02	0.05	0.05	0.09	0.18	0.15	0.11	0.02	0.03	0.00	0.72							0.72	
																									20.90
EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.02	0.02							
1 MU	0.00	0.02	0.02	0.00	0.00	0.01	0.05	0.01	0.00	0.00	0.00	0.05	0.05	0.06	0.05	0.00	0.31		0.31						
3 SU	0.02	0.02	0.08	0.06	0.03	0.00	0.02	0.08	0.08	0.11	0.08	0.14	0.11	0.06	0.10	0.03	1.04			1.04					
- N	1.34	0.88	1.18	1.23	0.41	0.31	0.41	0.46	0.97	1.23	0.73	0.75	1.18	1.36	1.46	1.11	15.01				15.01				
1 SS	0.56	0.62	0.71	0.77	0.70	0.33	0.32	0.25	0.48	0.43	0.48	0.46	0.61	0.66	0.59	0.25	8.22					8.22			
3 MS	0.10	0.07	0.03	0.00	0.19	0.43	0.69	0.48	0.43	0.55	0.53	0.45	0.37	0.34	0.16	0.08	4.90						4.90		
ES	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.42	0.33	0.06	0.24	0.14	0.10	0.07	0.01	0.00	1.51							1.51	
																									31.01

TABLE 11
continued

LaSalle County Generating Statio — January-December, 2012
375 ft. Wind Speed and Direction — 375Ft-33Ft Delta-T (F)

SPEED	WIND DIRECTION CLASSES																	STABILITY CLASSES							
CLASS	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL	EU	MU	SU	N	SS	MS	ES	TOTAL
EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.01	0.01							
1 MU	0.01	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.03	0.02	0.02	0.02	0.01	0.03	0.00	0.00	0.18		0.18						
9 SU	0.06	0.00	0.08	0.11	0.00	0.00	0.00	0.00	0.05	0.18	0.08	0.02	0.07	0.03	0.03	0.05	0.77			0.77					
- N	0.55	0.26	1.14	1.12	0.47	0.21	0.22	0.26	0.53	0.83	0.70	0.40	0.62	1.10	0.82	0.74	9.96				9.96				
2 SS	0.43	0.10	0.25	0.09	0.40	0.17	0.29	0.34	0.80	0.90	0.80	0.49	0.47	0.83	0.61	0.43	7.42					7.42			
4 MS	0.07	0.02	0.01	0.00	0.06	0.11	0.27	0.35	0.67	0.67	0.39	0.18	0.29	0.18	0.23	0.05	3.56						3.56		
ES	0.01	0.00	0.00	0.00	0.00	0.00	0.08	0.34	0.29	0.22	0.05	0.07	0.01	0.01	0.01	0.00	1.09							1.09	
																									22.99
EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.03	0.01	0.09	0.09							
G MU	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.05	0.05	0.07	0.01	0.00	0.01	0.03	0.02	0.25		0.25						
T SU	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.10	0.09	0.01	0.00	0.02	0.05	0.00	0.33			0.33					
N	0.08	0.06	0.47	0.17	0.27	0.17	0.18	0.18	0.65	1.06	0.40	0.15	0.45	0.96	0.80	0.40	6.46				6.46				
2 SS	0.07	0.00	0.01	0.01	0.01	0.09	0.23	0.39	1.13	1.97	0.64	0.22	0.58	0.82	0.10	0.08	6.35					6.35			
4 MS	0.02	0.00	0.00	0.00	0.00	0.06	0.05	0.13	0.39	0.74	0.21	0.10	0.08	0.05	0.02	0.00	1.84						1.84		
ES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.16	0.26	0.02	0.09	0.00	0.00	0.01	0.00	0.58							0.58	
																									15.90
TOT	5.34	3.94	5.78	5.07	3.83	3.39	4.11	5.10	8.95	11.25	8.14	5.93	7.91	8.67	7.54	5.03	99.99	0.14	0.89	2.83	48.40	28.78	14.81	4.14	99.99

Wind Direction by Stability

N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL	-STABILITY CLASSES-
0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.06	0.00	0.00	0.00	0.00	0.02	0.03	0.01	0.14	Extremely Unstable
0.01	0.05	0.02	0.05	0.00	0.01	0.07	0.01	0.08	0.08	0.14	0.08	0.08	0.10	0.09	0.02	0.89	Moderately Unstable
0.11	0.06	0.16	0.18	0.03	0.02	0.06	0.11	0.21	0.45	0.34	0.29	0.40	0.13	0.18	0.10	2.83	Slightly Unstable
3.29	2.43	4.00	3.50	1.81	1.36	1.33	1.69	3.12	3.91	3.03	2.53	3.90	4.52	4.56	3.44	48.40	Neutral
1.55	1.14	1.45	1.17	1.51	0.99	1.12	1.25	2.74	3.68	2.45	1.54	2.21	2.94	1.93	1.12	28.78	Slightly Stable
0.35	0.25	0.14	0.16	0.47	0.97	1.30	1.19	1.91	2.46	1.65	1.03	1.09	0.85	0.66	0.33	14.81	Moderately Stable
0.01	0.01	0.01	0.01	0.01	0.03	0.24	0.85	0.83	0.69	0.54	0.47	0.24	0.11	0.08	0.00	4.14	Extremely Stable

Wind Direction by Wind Speed

N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL	-WIND SPEED CLASSES-
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	C A L M
0.05	0.09	0.09	0.05	0.06	0.10	0.03	0.06	0.05	0.07	0.06	0.09	0.07	0.05	0.10	0.06	1.06	< 3.5 mph
0.57	0.50	0.46	0.37	0.41	0.46	0.34	0.39	0.62	0.53	0.74	0.45	0.69	0.53	0.65	0.42	8.11	3.6 - 7.5 mph
1.39	1.28	1.25	1.06	0.81	0.94	0.80	0.91	1.14	1.26	1.82	1.65	2.17	1.47	1.66	1.29	20.90	7.6 - 12.5 mph
2.02	1.61	2.02	2.06	1.34	1.09	1.62	1.70	2.31	2.39	2.06	1.98	2.41	2.56	2.38	1.47	31.01	12.6 - 18.5 mph
1.13	0.39	1.49	1.35	0.93	0.49	0.86	1.30	2.37	2.83	2.03	1.19	1.46	2.21	1.70	1.27	22.99	18.6 - 24.5 mph
0.17	0.07	0.48	0.19	0.29	0.32	0.46	0.73	2.47	4.18	1.43	0.58	1.11	1.86	1.05	0.51	15.90	> 24.5 mph

5.5 Precipitation

Monthly totals and the maximum 24-hour and maximum 1-hour precipitation amounts are summarized below. The month with the most measured precipitation was May. The month with the least measured precipitation was January*. The maximum 24-hour total was 1.76" (May) and the maximum 1-hour total was 1.56" (May).

Table 12

Precipitation Totals (Inches) - 2012
LaSalle Site

Month	Total	Maximum 24-hour	Maximum 1-hour
January	0.37*	0.14*	0.12*
February	0.87*	0.23*	0.10*
March	1.83	0.79	0.52
April	1.15	0.34	0.14
May	5.92	1.76	1.56
June	2.23*	1.06*	0.51*
July	0.58*	0.38*	0.15*
August	4.14	1.49	1.04
September	2.88	1.26	0.54
October	3.72	0.94	0.61
November	0.86	0.72	0.23
December	0.75*	0.36*	0.12*
TOTAL:	25.30*		

* some data are missing - actual precipitation may be under-reported

5.6 Doses Resulting from Airborne Releases

The following are the maximum annual calculated cumulative offsite doses resulting from LaSalle County Station airborne releases.

LaSalle County Generating Station:

Dose	*Maximum Value*	*Sector Affected*
gamma air [1]	4.970×10^{-3} mrad	North-Northeast
beta air [2]	1.780×10^{-3} mrad	North-Northeast
whole body [3]	1.857×10^{-2} mrem	North-Northeast
skin [4]	5.090×10^{-3} mrem	North-Northeast
organ [5] (infant-thyroid)	$1.356 \times 10^{+0}$ mrem	North-Northeast

Compliance Status

10 CFR 50 Appendix I	**Yearly Objective**		**% of Appendix I**
gamma air	10.0	mrad	0.05
beta air	20.0	mrad	0.01
whole body	5.0	mrem	0.37
skin	15.0	mrem	0.03
organ	15.0	mrem	9.04

(1) Gamma Air Dose - GASPAR II, NUREG-0597
(2) Beta Air Dose - GASPAR II, NUREG-0597
(3) Whole Body Dose - GASPAR II, NUREG-0597
(4) Skin Dose - GASPAR II, NUREG-0597
(5) Inhalation and Food Pathways Dose - GASPAR II, NUREG-0597

APPENDIX

LaSalle Meteorological Calibration

Date: 2-7-12
2-9-12

POWER SUPPLIES

+12.000V ± 0.120V	-12.000V ± 0.120V
A: +12.043 V	A: -12.058 V
B: +12.049 V	B: -12.037 V

Signal conditioners and Digital Recorder:

	Signal Conditioner Voltage Out			Digital recorder		Specifications	
	AF	AL	AL EQUIV	AF	AL	Signal Cond.	Recorder
			10 ft.				
PRCP LO	.000 V	— V	0.00 "	0.00 "	— "	0.000V ± 0.050V	AL EQUIV ± 0.01"
PRCP HI	5.000 V	— V	1.00 "	1.00 "	— "	5.000V ± 0.050V	AL EQUIV ± 0.01"
			35 ft.				
WS ZERO	.023 V	.025 V	0.5 mph	0.5 mph	— mph	0.025V ± 0.025V	AL EQUIV + .1mph
WS SPAN	2.503 V	2.500 V	50.0 mph	50.0 mph	— mph	2.500V ± 0.025V	AL EQUIV + .1mph
WD ZERO	.002 V	.000 V	0 °	0 °	— °	0.000V ± 0.100V	AL EQUIV + 1°
WD SPAN	3.333 V	— V	360 °	360 °	— °	3.333V ± 0.100V	AL EQUIV + 1°
T ZERO	.000 V	— V	-22.00 °	-21.99 °	— °	0.000V ± 0.050V	AL EQUIV + .1°F
T SPAN	5.000 V	— V	122.00 °	121.92 °	— °	5.000V ± 0.050V	AL EQUIV + .1°F
			200 ft.				
WS ZERO	.025 V	— V	0.5 mph	0.5 mph	— mph	0.025V ± 0.025V	AL EQUIV + .1mph
WS SPAN	2.500 V	— V	50.0 mph	50.0 mph	— mph	2.500V ± 0.025V	AL EQUIV + .1mph
WD ZERO	.003 V	.000 V	0 °	0 °	— °	0.000V ± 0.100V	AL EQUIV + 1°
WD SPAN	3.333 V	— V	360 °	360 °	— °	3.333V ± 0.100V	AL EQUIV + 1°
T_1 ZERO	.000 V	— V	-10.00 °	-10.00 °	— °	0.000V ± 0.050V	AL EQUIV + .1°F
T_1 SPAN	4.999 V	5.000 V	10.00 °	10.00 °	— °	5.000V ± 0.050V	AL EQUIV + .1°F
T_2 ZERO	.000 V	— V				0.000V ± 0.050V	
T_2 SPAN	5.000 V	— V				5.000V ± 0.050V	
			375 ft.				
WS ZERO	.025 V	— V	0.5 mph	0.5 mph	— mph	0.025V ± 0.025V	AL EQUIV + .1mph
WS SPAN	2.495 V	2.500 V	50.0 mph	50.0 mph	— mph	2.500V ± 0.025V	AL EQUIV + .1mph
WD ZERO	.001 V	.000 V	0 °	0 °	— °	0.000V ± 0.100V	AL EQUIV + 1°
WD SPAN	3.333 V	— V	360 °	360 °	— °	3.333V ± 0.100V	AL EQUIV + 1°
T ZERO	.000 V	— V	-10.00 °	-10.00 °	— °	0.000V ± 0.050V	AL EQUIV + .1°F
T SPAN	5.000 V	— V	10.00 °	9.99 °	— °	5.000V ± 0.050V	AL EQUIV + .1°F
T_2 ZERO	-.002 V	.000 V				0.000V ± 0.050V	
T_2 SPAN	5.003 V	5.000 V				5.000V ± 0.050V	

ASZ 3-13-12

LaSalle Meteorological Calibration

Date: 2-9-12

TOWER MEASUREMENTS

☒ Ambient ☐ Ice Bath

Temperatures

	33 ft. Amb.		200 ft. ΔT		375 ft. ΔT	
	AF	AL	AF	AL	AF	AL
Measured	28.4 °F	– °F	-1.70 °F	– °F	-2.51 °F	– °F
Recorded	28.6 °F	– °F	-1.66 °F	– °F	-2.42 °F	– °F
Difference	.2 °F	– °F	.04 °F	– °F	.09 °F	– °F
Specification	±0.5°F		±0.18°F		±0.18°F	

Winds

	33 ft.		200 ft.		375 ft.		
	AF	AL	AF	AL	AF	AL	*Specification*
WS stall	0.5 mph	0.5 mph	0.5 mph	0.5 mph	0.6 mph	0.6 mph	0.5mph ± 0.45mph
Forw. WD	358 °	– °	358 °	– °	358 °	– °	0°/360° ± 5°
Revr. WD	179 °	– °	178 °	– °	179 °	– °	180°/540° ± 5°
Tracking/wear	OK		OK		OK		

Comments: TOWER frozen on 2-7-12 came back 2-9-12 FOR TOWER Checks.

ASZ 3-13-12

LaSalle Meteorological Calibration

Date: 2-7-12
2-9-12

Dates of Last Wind Sensor Bearing Replacements:

	33 ft.	200 ft.	375 ft.
(6 mos.) Wind Speed:	2-7-12	2-9-12	2-9-12
(12 mos.) Wind Direction:	11-2011	10-5-11	10-5-11

	33 ft.	200 ft.	375 ft.
Aspirators:	OK	OK	OK

Operation of De-ice Heat Lamp System (Aug-Mar): OK * 2 BAD LAMPS 33' *

Operation of Rain Gauge: OK Tips Poured 5 Tips Recorded 5

UPS CHECK: OK

Debris screen: In (Out) Installed Removed

Tower Lighting	Good	Fair	Poor
Beacon	☒	☐	☐
Side lights	☒	☐	☐
Wiring	☒	☐	☐
Flasher	☒	☐	☐

Tower Condition	Good	Fair	Poor
Paint	☒	☐	☐
Shelter condition	☒	☐	☐

Note:
AF = As Found
AL = As Left
— = no change (AF=AL)

FS = Full Scale

Calibration Instruments:

	Next Cal Due
Psychrometer - S/N - #1	APRIL 2012
Digital multimeter - S/N - 89880269	OCT 2012
Digital multimeter - S/N -	
DIGITAL THERMOMETER MT0236	OCT 2012

Technicians: Mike MONDIA, Mike MARX,

Comments:

33FT
WS INSTALLED MT 0164
WS Removed MT 0165

375'
WS INSTALLED MT0101
WS Removed MT 0190

200FT
WS INSTALLED MT0143
WS Removed MT 0169

UNSAFE TO CLIMB ON 2-7-12
GROUND WORK 2-7-12
TOWER WORK 2-9-12

Signature:

AS2 3-13-12

System Response Check

Date: 2-7-12

Site: LaSalle
System: Microtel

Low Scale Check	33' WS	200' WS	375' WS	33' WD	200' WD	375' WD	33' T	200' ΔT	375' ΔT
Expected Response	20.0 ±0.4	20.0 ±0.4	20.0 ±0.4	108 ±2	108 ±2	108 ±2	6.80 ±0.7	-6.00 ±0.18	-6.00 ±0.18
As Found Response	19.9	19.9	19.9	108	108	107	6.7	-6.0	-6.0
As Left Response	-	-	-	-	-	-	-	-	-

Mid Scale Check	33' WS	200' WS	375' WS	33' WD	200' WD	375' WD	33' T	200' ΔT	375' ΔT
Expected Response	60.0 ±0.4	60.0 ±0.4	60.0 ±0.4	324 ±2	324 ±2	324 ±2	64.40 ±0.7	2.00 ±0.18	2.00 ±0.18
[redacted]ound [redacted]onse	59.9	59.9	59.9	323	324	323	64.3	2.0	2.0
As Left Response	-	-	-	-	-	-	-	-	-

Full Scale Check	33' WS	200' WS	375' WS	33' WD	200' WD	375' WD	33' T	200' ΔT	375' ΔT
Expected Response	80.0 ±0.4	80.0 ±0.4	80.0 ±0.4	432 ±2	432 ±2	432 ±2	93.20 ±0.7	6.00 ±0.18	6.00 ±0.18
As Found Response	79.9	79.9	79.9	432	431	431	93.1	6.0	6.0
As Left Response	-	-	-	-	-	-	-	-	-

AQ 3/13/12

System Response Check

Date: 2-7-12

Site: LaSalle
System: Process Computer

Low Scale Check	A847 375' WD	A848 200' WD	A849 375' WS	A850 200' WS	A851 375' ΔT	A852 33' WS	A853 33' WD	A854 33' T	A855 200' ΔT	A856 Precipitation
Expected Response	108 ±2	108 ±2	20.0 ±0.4	20.0 ±0.4	-4.00±0.18	20.0±0.4	108 ±2	6.80 ±0.7	-4.00±0.18	0.20 ±0.01
As Found Response	107.8	108.2	20.0	20.0	-4.0	20.2	108.3	6.8	-4.0	0.20
As Left Response	–	–	–	–	–	–	–	–	–	–

Mid Scale Check	A847 375' WD	A848 200' WD	A849 375' WS	A850 200' WS	A851 375' ΔT	A852 33' WS	A853 33' WD	A854 33' T	A855 200' ΔT	A856 Precipitation
Expected Response	324 ±2	324 ±2	60.0 ±0.4	60.0 ±0.4	8.00 ±0.18	60.0 ±0.4	324 ±2	64.40 ±0.7	8.00±0.18	0.60 ±0.01
As Found Response	325.0	323.9	59.9	60.0	8.0	60.1	324.1	64.3	8.0	0.60
As Left Response	–	–	–	–	–	–	–	–	–	–

Full Scale Check	A847 375' WD	A848 200' WD	A849 375' WS	A850 200' WS	A851 375' ΔT	A852 33' WS	A853 33' WD	A854 33' T	A855 200' ΔT	A856 Precipitation
Expected Response	432 ±2	432 ±2	80.0 ±0.4	80.0±0.4	14.00±0.18	80.0 ±0.4	432 ±2	93.20±0.7	14.00±0.18	0.80 ±0.01
As Found Response	432.5	432.0	79.8	80.0	14.0	80.1	432.1	93.0	14.0	0.80
As Left Response	–	–	–	–	–	–	–	–	–	–

ASZ 3-13-12

System Response Check

Date: 2-7-12

Site: LaSalle
System: Control Room Indicators

Low Scale Check	200' WS	375' WS	200' WD	375' WD	375' ΔT
Expected Response	20.0 ±1.0	20.0 ±1.0	108 ±5.4	108 ±5.4	-4.00 ±0.3
As Found Response	21	21	110	110	-4
As Left Response	–	–	–	–	–

Mid Scale Check	200' WS	375' WS	200' WD	375' WD	375' ΔT
Expected Response	60.0 ±1.0	60.0 ±1.0	324 ±5.4	324 ±5.4	8.00 ±0.3
As Found Response	60	60	325	320	8
As Left Response	–	–	–	–	–

Full Scale Check	200' WS	375' WS	200' WD	375' WD	375' ΔT
Expected Response	80.0 ±1.0	80.0 ±1.0	432 ±5.4	432 ±5.4	14.00 ±0.3
As Found Response	80	80	430	430	14
As Left Response	–	–	–	–	–

ASZ 3-13-12

LaSalle Meteorological Calibration

Date: 6-5-12

POWER SUPPLIES

+12.000V ± 0.120V	-12.000V ± 0.120V
A: +12.032 V	A: -12.044 V
B: +12.040 V	B: -12.027 V

Signal conditioners and Digital Recorder:

	Signal Conditioner Voltage Out			Digital recorder		Specifications	
	AF	AL	AL EQUIV	AF	AL	Signal Cond.	Recorder
			10 ft.				
PRCP LO	.002 V	.000 V	0.00 "	0.00 "	— "	0.000V ± 0.050V	AL EQUIV ± 0.01"
PRCP HI	5.002 V	5.000 V	1.00 "	1.00 "	— "	5.000V ± 0.050V	AL EQUIV ± 0.01"
			35 ft.				
WS ZERO	.025 V	— V	0.50 mph	0.5 mph	— mph	0.025V ± 0.025V	AL EQUIV + .1mph
S SPAN	2.504 V	2.500 V	50.00 mph	50.0 mph	— mph	2.500V ± 0.025V	AL EQUIV + .1mph
WD ZERO	.000 V	— V	0 °	0 °	— °	0.000V ± 0.100V	AL EQUIV + 1°
SPAN	3.333 V	— V	360 °	360 °	— °	3.333V ± 0.100V	AL EQUIV + 1°
T ZERO	.000 V	— V	-22.00 °	-22.02 °	— °	0.000V ± 0.050V	AL EQUIV + .1°F
SPAN	5.000 V	— V	122.00 °	121.95 °	— °	5.000V ± 0.050V	AL EQUIV + .1°F
			200 ft.				
WS ZERO	.026 V	— V	0.52 mph	0.5 mph	— mph	0.025V ± 0.025V	AL EQUIV + .1mph
S SPAN	2.500 V	— V	50.00 mph	50.0 mph	— mph	2.500V ± 0.025V	AL EQUIV + .1mph
WD ZERO	.000 V	.000 V	0 °	0 °	— °	0.000V ± 0.100V	AL EQUIV + 1°
D SPAN	3.333 V	— V	360 °	360 °	— °	3.333V ± 0.100V	AL EQUIV + 1°
T_1 ZERO	.002 V	.000 V	-10.00 °	-10.01 °	— °	0.000V ± 0.050V	AL EQUIV + .1°F
T_1 SPAN	4.995 V	5.000 V	10.00 °	9.98 °	— °	5.000V ± 0.050V	AL EQUIV + .1°F
T_2 ZERO	.001 V	— V				0.000V ± 0.050V	
T_2 SPAN	5.000 V	— V				5.000V ± 0.050V	
			375 ft.				
WS ZERO	.025 V	— V	0.50 mph	0.5 mph	— mph	0.025V ± 0.025V	AL EQUIV + .1mph
WS SPAN	2.500 V	— V	50.00 mph	50.0 mph	— mph	2.500V ± 0.025V	AL EQUIV + .1mph
D ZERO	.001 V	.000 V	0 °	0 °	— °	0.000V ± 0.100V	AL EQUIV + 1°
WD SPAN	3.335 V	3.333 V	360 °	360 °	— °	3.333V ± 0.100V	AL EQUIV + 1°
T ZERO	.000 V	— V	-10.00 °	-10.01 °	— °	0.000V ± 0.050V	AL EQUIV + .1°F
T SPAN	4.997 V	5.000 V	~~10.00~~ 10.00	10.00 °	— °	5.000V ± 0.050V	AL EQUIV + .1°F
T_2 ZERO	.000 V	— V				0.000V ± 0.050V	
T_2 SPAN	5.000 V	— V				5.000V ± 0.050V	

ASZ 7-11-12

LaSalle Meteorological Calibration

Date: 6·5·12

TOWER MEASUREMENTS

☑ Ambient ☐ Ice Bath

Temperatures

	33 ft. Amb. AF	33 ft. Amb. AL	200 ft. ΔT, AF	200 ft. ΔT, AL	375 ft. ΔT, AF	375 ft. ΔT, AL
Measured	63.32 °F	— °F	-.86 °F	— °F	-2.38 °F	— °F
Recorded	63.00 °F	— °F	-.81 °F	— °F	-2.30 °F	— °F
Difference	.32 °F	— °F	.05 °F	— °F	.08 °F	— °F
Specification	±0.5°F		±0.18°F		±0.18°F	

Winds

	33 ft. AF	33 ft. AL	200 ft. AF	200 ft. AL	375 ft. AF	375 ft. AL	*Specification*
WS stall	0.5 mph	0.5 mph	0.6 mph	0.6 mph	0.6 mph	0.6 mph	0.5mph ± 0.45mph
Forw. WD	359 °	— °	358 °	— °	359 °	— °	0°/360° ± 5°
Revr. WD	179 °	— °	179 °	— °	179 °	— °	180°/540° ± 5°
Tracking/wear	OK		OK		OK		

Comments: 33' WS 200' WS 375 ws

INSTALLED MT 0186 INSTALLED MT 0165 INSTALLED MT 0000

Removed MT 0164 Removed MT 0143 Removed MT 0101

ASZ 7-11-12

LaSalle Meteorological Calibration

Date: 6-5-12

Dates of Last Wind Sensor Bearing Replacements:

	33 ft.	200 ft.	375 ft.
(6 mos.) Wind Speed:	6-5-12	6-5-12	6-5-12
(12 mos.) Wind Direction:	11-20-11	10-5-11	10-5-11

	33 ft.	200 ft.	375 ft.
Aspirators:	OK	OK	OK

Operation of De-ice Heat Lamp System (Aug-Mar): NA

Operation of Rain Gauge: OK Tips Poured 5 Tips Recorded 5

UPS CHECK: OK

Debris screen: (In) Out Installed Removed

Tower Lighting	Good	Fair	Poor
Beacon	☑	☐	☐
Side lights	☑	☐	☐
Wiring	☑	☐	☐
Flasher	☑	☐	☐

Tower Condition	Good	Fair	Poor
Paint	☑	☐	☐
Shelter condition	☑	☐	☐

Note:
AF = As Found
AL = As Left
— = no change (AF=AL)

FS = Full Scale

Calibration Instruments:

		Next Cal Due
Psychrometer - S/N -	#1	Oct 2012
Digital multimeter - S/N -	86860269	Oct 2012
Digital ~~multimeter~~ Thermometer - S/N -	MT 0236	

Technicians: MIKE MENSIA, M.KE MARX,

Comments:

Signature:

AR 7-11-12

[redacted] Exelon Contract Number 455485

System Response Check

Site: LaSalle
System: Microtel

Date: 6-5-12

Low Scale Check	33' WS	200' WS	375' WS	33' WD	200' WD	375' WD	33' T	200' ΔT	375' ΔT
Expected Response	20.0 ±0.4	20.0 ±0.4	20.0 ±0.4	108 ±2	108 ±2	108 ±2	6.80 ±0.7	-6.00 ±0.18	-6.00 ±0.18
As Found Response	20.0	20.0	19.9	108	108	108	6.8	-6.0	-6.0
As Left Response	—	—	—	—	—	—	—	—	—

Mid Scale Check	33' WS	200' WS	375' WS	33' WD	200' WD	375' WD	33' T	200' ΔT	375' ΔT
Expected Response	60.0 ±0.4	60.0 ±0.4	60.0 ±0.4	324 ±2	324 ±2	324 ±2	64.40 ±0.7	2.00 ±0.18	2.00 ±0.18
Found Response	59.9	59.9	59.9	324	324	324	64.4	2.0	2.0
As Left Response	—	—	—	—	—	—	—	—	—

Full Scale Check	33' WS	200' WS	375' WS	33' WD	200' WD	375' WD	33' T	200' ΔT	375' ΔT
Expected Response	80.0 ±0.4	80.0 ±0.4	80.0 ±0.4	432 ±2	432 ±2	432 ±2	93.20 ±0.7	6.00 ±0.18	6.00 ±0.18
As Found Response	80.0	80.0	80.0	432	432	432	93.2	6.0	6.0
As Left Response	—	—	—	—	—	—	—	—	—

AJZ 7-11-12

System Response Check

Date: 6-5-12

Site: LaSalle
System: Process Computer

Low Scale Check	A847 375' WD	A848 200' WD	A849 375' WS	A850 200' WS	A851 375' ΔT	A852 33' WS	A853 33' WD	A854 33' T	A855 200' ΔT	A856 Precipitation
Expected Response	108 ±2	108 ±2	20.0 ±0.4	20.0 ±0.4	-4.00±0.18	20.0±0.4	108 ±2	6.80 ±0.7	-4.00±0.18	0.20 ±0.01
As Found Response	107.2	107.9	19.99	20.03	-4.0	20.2	108.3	6.8	-4.0	0.20
As Left Response	-	-	-	-	-	-	-	-	-	-

Mid Scale Check	A847 375' WD	A848 200' WD	A849 375' WS	A850 200' WS	A851 375' ΔT	A852 33' WS	A853 33' WD	A854 33' T	A855 200' ΔT	A856 Precipitation
Expected Response	324 ±2	324 ±2	60.0 ±0.4	60.0 ±0.4	8.00 ±0.18	60.0 ±0.4	324 ±2	64.40 ±0.7	8.00±0.18	0.60 ±0.01
As Found Response	324.3	323.7	59.8	60.0	7.97	59.9	323.5	64.2	7.95	0.60
As Left Response	-	-	-	-	-	-	-	-	-	-

Full Scale Check	A847 375' WD	A848 200' WD	A849 375' WS	A850 200' WS	A851 375' ΔT	A852 33' WS	A853 33' WD	A854 33' T	A855 200' ΔT	A856 Precipitation
Expected Response	432 ±2	432 ±2	80.0 ±0.4	80.0±0.4	14.00±0.18	80.0 ±0.4	432 ±2	93.20±0.7	14.00±0.18	0.80 ±0.01
As Found Response	431.7	431.8	79.7	80.0	13.96	79.88	431.41	93.0	13.96	0.80
As Left Response	-	-	-	-	-	-	-	-	-	-

ADL 7-11-12

System Response Check

Date: 6-5-12

Site: LaSalle
System: Control Room Indicators

Low Scale Check	200' WS	375' WS	200' WD	375' WD	375' ΔT
Expected Response	20.0 ±1.0	20.0 ±1.0	108 ±5.4	108 ±5.4	-4.00 ±0.3
As Found Response	21	21	110	110	-4.2
As Left Response	—	—	—	—	—

Mid Scale Check	200' WS	375' WS	200' WD	375' WD	375' ΔT
Expected Response	60.0 ±1.0	60.0 ±1.0	324 ±5.4	324 ±5.4	8.00 ±0.3
As Found Response	60	60	325	325	8.0
As Left Response	—	—	—	—	—

Full Scale Check	200' WS	375' WS	200' WD	375' WD	375' ΔT
Expected Response	80.0 ±1.0	80.0 ±1.0	432 ±5.4	432 ±5.4	14.00 ±0.3
As Found Response	81	81	435	435	14.0
As Left Response	-	-	-	-	-

AJ2 7-11-12

LaSalle Meteorological Calibration

Date: 10-16-12

POWER SUPPLIES

+12.000V ± 0.120V	-12.000V ± 0.120V
A: + 12.038 V	A: - 12.062 V
B: + 12.046 V	B: - 12.043 V

Signal conditioners and Digital Recorder:

	Signal Conditioner Voltage Out			Digital recorder		Specifications	
	AF	AL	AL EQUIV	AF	AL	Signal Cond.	Recorder
			10 ft.				
PRCP LO	.001 V	.000 V	0.00 "	0.00 "	— "	0.000V ± 0.050V	AL EQUIV ± 0.01"
PRCP HI	5.001 V	5.000 V	1.00 "	1.00 "	— "	5.000V ± 0.050V	AL EQUIV ± 0.01"
			35 ft.				
WS ZERO	.030 V	— V	0.6 mph	0.6 mph	— mph	0.025V ± 0.025V	AL EQUIV + .1mph
WS SPAN	2.495 V	2.500 V	50.0 mph	50.0 mph	— mph	2.500V ± 0.025V	AL EQUIV + .1mph
WD ZERO	.004 V	— V	.43 °	0 °	— °	0.000V ± 0.100V	AL EQUIV + 1°
WD SPAN	3.333 V	— V	360 °	360 °	— °	3.333V ± 0.100V	AL EQUIV + 1°
T_1 ZERO	.000 V	— V	-22.20 °	-22.03 °	— °	0.000V ± 0.050V	AL EQUIV + .1°F
T_1 SPAN	5.000 V	— V	122.00 °	121.95 °	— °	5.000V ± 0.050V	AL EQUIV + .1°F
			200 ft.				
WS ZERO	.025 V	.030 V	0.6 mph	0.6 mph	— mph	0.025V ± 0.025V	AL EQUIV + .1mph
WS SPAN	2.495 V	2.500 V	50.0 mph	50.0 mph	— mph	2.500V ± 0.025V	AL EQUIV + .1mph
WD ZERO	.004 V	— V	.43 °	0 °	— °	0.000V ± 0.100V	AL EQUIV + 1°
WD SPAN	3.333 V	— V	360 °	360 °	— °	3.333V ± 0.100V	AL EQUIV + 1°
T_1 ZERO	.007 V	.000 V	-10.00 °	-10.00 °	— °	0.000V ± 0.050V	AL EQUIV + .1°F
T_1 SPAN	4.995 V	5.000 V	10.00 °	9.99 °	— °	5.000V ± 0.050V	AL EQUIV + .1°F
T_2 ZERO	.003 V	.000 V				0.000V ± 0.050V	
T_2 SPAN	5.004 V	5.000 V				5.000V ± 0.050V	
			375 ft.				
WS ZERO	.032 V	.030 V	0.6 mph	0.6 mph	— mph	0.025V ± 0.025V	AL EQUIV + .1mph
WS SPAN	2.503 V	2.500 V	50.0 mph	50.0 mph	— mph	2.500V ± 0.025V	AL EQUIV + .1mph
WD ZERO	.002 V	— V	.216 °	0 °	— °	0.000V ± 0.100V	AL EQUIV + 1°
WD SPAN	3.333 V	— V	360 °	360 °	— °	3.333V ± 0.100V	AL EQUIV + 1°
T_1 ZERO	.010 V	.000 V	-10.00 °	-10.00 °	— °	0.000V ± 0.050V	AL EQUIV + .1°F
T_1 SPAN	4.993 V	5.000 V	10.00 °	9.99 °	— °	5.000V ± 0.050V	AL EQUIV + .1°F
T_2 ZERO	.005 V	.000 V				0.000V ± 0.050V	
T_2 SPAN	5.005 V	5.000 V				5.000V ± 0.050V	

ASL 11-12-12

LaSalle Meteorological Calibration

Date: 10-16-12

TOWER MEASUREMENTS

☒ Ambient ☐ Ice Bath

Temperatures

	33 ft. Amb.		200 ft. ΔT₁		375 ft. ΔT₁	
	AF	AL	AF	AL	AF	AL
Measured	58.0 °F	– °F	-1.34 °F	– °F	-2.58 °F	– °F
Recorded	57.70 °F	– °F	-1.39 °F	– °F	-2.70 °F	– °F
Difference	.30 °F	– °F	.05 °F	– °F	.12 °F	– °F
Specification	±0.5°F		±0.18°F		±0.18°F	

Winds

	33 ft.		200 ft.		375 ft.		
	AF	AL	AF	AL	AF	AL	*Specification*
WS stall	0.5 mph	0.5 mph	0.5 mph	0.5 mph	0.5 mph	0.5 mph	0.5mph ± 0.45mph
Forw. WD	357 °	360 °	358 °	360 °	358 °	359 °	0°/360° ± 5°
Revr. WD	181 °	179 °	178 °	181 °	182 °	181 °	180°/540° ± 5°

Tracking/wear: OK | OK | OK

Comments: 33FT | 200FT | 375FT

WS INSTALLED MT 0101 | WS INSTALLED MT 0166 | WS INSTALLED MT 0190
WS REMOVED MT 0143 | WS REMOVED MT 0165 | WS REMOVED MT 0000

WD INSTALLED MT 0160 | WD INSTALLED MT 0083 | WD INSTALLED MT 0180
WD REMOVED MT 0181 | WD REMOVED MT 0161 | WD REMOVED MT 0162

AL 11-12-12

LaSalle Meteorological Calibration

Date: 10-16-12

Dates of Last Wind Sensor Bearing Replacements:

	33 ft.	200 ft.	375 ft.
(6 mos.) Wind Speed:	10-16-12	10-16-12	10-16-12
(12 mos.) Wind Direction:	10-16-12	10-16-12	10-16-12

	33 ft.	200 ft.	375 ft.
Aspirators:	OK	OK	OK

Operation of De-ice Heat Lamp System (Aug-Mar): OK * 1040 HEAT LAMP 33' WS

Operation of Rain Gauge: OK Tips Poured 5 Tips Recorded 5

UPS CHECK: OK

Debris screen: (In) Out Installed Removed

Tower Lighting	Good	Fair	Poor
Beacon	☒	☐	☐
Side lights	☒	☐	☐
Wiring	☒	☐	☐
Flasher	☒	☐	☐

Tower Condition	Good	Fair	Poor
Paint	☒	☐	☐
Shelter condition	☒	☐	☐

Note:
AF = As Found
AL = As Left
— = no change (AF=AL)

FS = Full Scale

Calibration Instruments: Next Cal Due

Psychrometer - S/N -
Digital multimeter - S/N - 93120208 OCT 2012
Digital multimeter - S/N -
DIGITAL THERMOMETER SN 0114220232 OCT 2013

Technicians: MIKE MONDIA, MIKE MARX,

Comments:

Signature:

ASL 11-12-12

[redacted] Shelon Contract Number [redacted]

System Response Check

Date: 10-16-12

Site: LaSalle
System: Microtel

Low Scale Check	33' WS	200' WS	375' WS	33' WD	200' WD	375' WD	33' T	200' ΔT	375' ΔT
Expected Response	20.0 ±0.4	20.0 ±0.4	20.0 ±0.4	108 ±2	108 ±2	108 ±2	6.80 ±0.7	-6.00 ±0.18	-6.00 ±0.18
As Found Response	19.9	19.9	19.9	107	107	107	6.6	-6.0	-6.0
As Left Response	–	–	–	–	–	–	–	–	–

Mid Scale Check	33' WS	200' WS	375' WS	33' WD	200' WD	375' WD	33' T	200' ΔT	375' ΔT
Expected Response	60.0 ±0.4	60.0 ±0.4	60.0 ±0.4	324 ±2	324 ±2	324 ±2	64.40 ±0.7	2.00 ±0.18	2.00 ±0.18
[redacted]ound [redacted]onse	59.9	59.8	59.9	323	324	323	64.2	2.0	2.0
As Left Response	–	–	–	–	–	–	–	–	–

Full Scale Check	33' WS	200' WS	375' WS	33' WD	200' WD	375' WD	33' T	200' ΔT	375' ΔT
Expected Response	80.0 ±0.4	80.0 ±0.4	80.0 ±0.4	432 ±2	432 ±2	432 ±2	93.20 ±0.7	6.00 ±0.18	6.00 ±0.18
As Found Response	80.0	79.9	79.9	432	432	432	93.1	6.0	6.0
As Left Response	–	–	–	–	–	–	–	–	–

AJZ 11-12-12

System Response Check

Date: 10-16-12

Site: LaSalle
System: Process Computer

Low Scale Check	A847 375' WD	A848 200' WD	A849 375' WS	* A850 200' WS	A851 375' ΔT	A852 33' WS	A853 33' WD	A854 33' T	A855 200' ΔT	A856 Precipitation
Expected Response	108 ±2	108 ±2	20.0 ±0.4	20.0 ±0.4	-4.00±0.18	20.0±0.4	108 ±2	6.80 ±0.7	-4.00±0.18	0.20 ±0.01
As Found Response	107.3	107.9	20.0	20.2	-4.00	20.2	108.0	6.80	-4.00	0.19
As Left Response	—	—	—	20.0	—	—	—	—	—	—

Mid Scale Check	A847 375' WD	A848 200' WD	A849 375' WS	A850 200' WS	A851 375' ΔT	A852 33' WS	A853 33' WD	A854 33' T	A855 200' ΔT	A856 Precipitation
Expected Response	324 ±2	324 ±2	60.0 ±0.4	* 60.0 ±0.4	8.00 ±0.18	60.0 ±0.4	324 ±2	64.40 ±0.7	8.00±0.18	0.60 ±0.01
As Found Response	324.2	323.5	59.8	60.9	7.97	60.1	323.8	64.2	7.96	0.59
As Left Response	—	—	—	59.9	—	—	—	—	—	—

Full Scale Check	A847 375' WD	A848 200' WD	A849 375' WS	A850 200' WS	A851 375' ΔT	A852 33' WS	A853 33' WD	A854 33' T	A855 200' ΔT	A856 Precipitation
Expected Response	432 ±2	432 ±2	80.0 ±0.4	* 80.0±0.4	14.00±0.18	80.0 ±0.4	432 ±2	93.20±0.7	14.00±0.18	0.80 ±0.01
As Found Response	431.6	431.9	79.8	81.0	13.98	80.10	431.9	93.0	13.96	0.79
As Left Response	—	—	—	79.8	—	—	—	—	—	—

A 850 : MADE ADJUSTMENTS TO THE CURRENT CALO.

AJL 11-12-12

[redacted] Exelon Contract Number 455465

System Response Check

Date: 10-16-12

Site: LaSalle
System: Control Room Indicators

Low Scale Check	200' WS	375' WS	200' WD	375' WD	375' ΔT
Expected Response	20.0 ±1.0	20.0 ±1.0	108 ±5.4	108 ±5.4	-4.00 ±0.3
As Found Response	20	20	110	110	-4
As Left Response	~	~	~	~	~

Mid Scale Check	200' WS	375' WS	200' WD	375' WD	375' ΔT
Expected Response	60.0 ±1.0	60.0 ±1.0	324 ±5.4	324 ±5.4	8.00 ±0.3
As Found Response	60	60	320	320	8
As Left Response	~	~	~	~	~

Full Scale Check	200' WS	375' WS	200' WD	375' WD	375' ΔT
Expected Response	80.0 ±1.0	80.0 ±1.0	432 ±5.4	432 ±5.4	14.00 ±0.3
As Found Response	80	80	430	430	14
As Left Response	~	~	~	~	~

AD 11-12-12

RAI # MA-01

ATTACHMENT 4

Annual Report
on the
Meteorological Monitoring Program
at the
LaSalle County Nuclear Power Station
2013

prepared for

Exelon Nuclear
Warrenville, IL 60555

by

Murray and Trettel, Incorporated
600 First Bank Drive, Suite A
Palatine, IL 60067
(847) 963-9000
e-mail: mt@weathercommand.com

For Exelon Use Only

Reviewed By: William A. Binicles

Date: 5·6·14

Table of Contents

List of Tables

1. Introduction

The purpose of the meteorological program being conducted at the LaSalle County Station site is to provide information sufficient to assess the local weather conditions and to determine the degree of atmospheric dispersion of airborne radioactive effluent from the station.

The meteorological tower is 400 ft. high and is instrumented at three levels. Wind speed and direction are measured at 33 ft., 200 ft., and 375 ft. Ambient temperature is measured at 33 ft. Differential temperatures, referenced to 33 ft., are measured at 200 ft. and 375 ft. Precipitation is measured at approximately 10 ft.

Joint frequency stability wind rose tables of wind direction, wind speed, and stability are routinely tabulated from hourly measurements. The quarterly and annual tables are included in this report.

Descriptions of the instruments and digital recorder are given in Section 3 (Data Acquisition) of this report. Data reduction and processing are described in Section 4 (Data Analysis). The results given in Section 5 of this report include modeled maximum whole body doses, skin doses, organ doses based upon airborne releases, and site meteorology.

2. Summary

The LaSalle Station meteorological monitoring program produced 78,612 hours of valid data out of a possible 78,840 parameter hours during 2013 (365 days x 24 hours/day x 9 measured priority parameters), which represents an overall data recovery rate of 99.7%. Priority parameters are all parameters except precipitation.

The stability wind rose tables included in this report have been generated using the 375 ft. wind data with the 375-33 ft. differential temperature data.

The maximum annual calculated cumulative doses resulting from airborne releases were as follows.

LaSalle County Generating Station:

gamma air dose	-	2.470×10^{-3} mrad
beta air dose	-	6.960×10^{-4} mrad
whole body dose	-	1.696×10^{-2} mrem
skin dose	-	2.420×10^{-3} mrem
organ (infant thyroid)	-	$1.462 \times 10^{+0}$ mrem

3. Data Acquisition

Wind speed and direction are measured with Climatronics F460 wind sensors. The wind speed sensors have a starting speed of 0.5 mph (0.22 mps), a range of 0 to 100 mph (0 to 44.7 mps), and a system accuracy of ±1.0 mph at 100 mph (±0.45 mps at 44.7 mps). The wind direction sensors have a threshold speed of 0.5 mph (0.22 mps), a range of 0 to 540°, and a system accuracy of ±5°.

Ambient and differential temperature are measured with the Climatronics 100093 system. Ambient temperature is measured within the range of -22 to 122°F (-30 to 50°C) with an accuracy of ±0.5°F (±0.3°C). Differential temperature is measured within the range of -10 to 10°F (-5.6 to 5.6°C) with an accuracy of ±0.18°F (±0.10°C).

Precipitation is measured with a Climatronics 100097 tipping bucket rain gauge and is measured in increments of one one-hundredth of an inch with a system accuracy of ±1% for rain rates of 1-3"/hr and ±3% for rain rates of 3-6"/hr.

Instrument types and locations are summarized in Table 1.

The meteorological data are collected and stored by a Microtel 4.0 data acquisition system. The Microtel measures the analog voltages of the instruments and records the digital equivalent within the range of 0 to +5 volts. The Microtel has the capability of storing 24 hours of minute data and one week of hourly data. Data are obtained from the Microtel by a direct dial telephone hookup to an in-house computer system. Data are sampled every second.

As a backup to the Microtel, data are also recorded with a Johnson Yokogawa Corp. digital recorder (JYC DA100 data acquisition unit and Contec IPC-PT/M300(PC)WOU PC). Data are sampled every 10 seconds.

Data loggers are summarized in Table 2.

Table 1

Instrument Locations

Measurement	Sensor Type	Location	Elevation
Wind Speed	Climatronics 100075 F460	Tower	375 ft.
Wind Direction	Climatronics 100076 F460	Tower	375 ft.
Differential Temperature	Climatronics 100093	Tower	375 ft.
Wind Speed	Climatronics 100075 F460	Tower	200 ft.
Wind Direction	Climatronics 100076 F460	Tower	200 ft.
Differential Temperature	Climatronics 100093	Tower	200 ft.
Wind Speed	Climatronics 100075 F460	Tower	33 ft.
Wind Direction	Climatronics 100076 F460	Tower	33 ft.
Ambient Temperature	Climatronics 100093	Tower	33 ft.
Precipitation	Climatronics 100097-1 Tipping Bucket Rain Gage	Meteorological shelter roof	10 ft.

Table 2

Data Loggers

Measurement	Logger Type	Sampling Frequency
Winds, Temperatures, and Precipitation	Microtel 4.0 data acquisition system	1 sec.
Winds, Temperatures, and Precipitation	Johnson Yokogawa Corp. Digital Recorder (JYC DA100 and Contec IPC-PT/M300(PC)WOU) digital recorder	10 sec.

4. Data Analysis

The LaSalle Microtel is routinely interrogated to obtain hourly average data. The data are then stored in the meteorological data base and listings of the data are generated. The data listings are examined by qualified personnel and any apparent problems are brought to the attention of the Project Manager or Meteorological Technician and the Instrument Maintenance staff.

Hourly values of wind speed, wind direction, ambient temperature, differential temperature, and precipitation are obtained through measurements taken at the site. The standard deviation of wind direction (sigma) is derived. The wind direction variation is described in terms of the standard deviation of the direction about the mean direction. The Microtel computes an hourly value of wind sigma by taking the Root-Mean-Square (RMS) of the four quarter-hour wind sigma values. The Microtel quarter-hour wind sigma values are calculated directly from the one second wind direction samples during the 15 minute period.

The data base files are edited approximately once a week. Missing Microtel values are replaced with digital recorder values, when available. Invalid data are deleted from the data base.

When an hourly value is missing or invalid, the numeral 999 is entered into the computer data file in the appropriate location. When the wind direction changes substantially relative to its short term fluctuations, the numeral 888 can be entered into the wind sigma location to indicate shifting winds. When the wind blows with velocities near the sensing threshold of the instrument, the numeral 777 can be entered into the wind direction, wind speed, and wind sigma locations to indicate light and variable winds.

A professional meteorologist reviews the data, calibration findings, equipment maintenance reports, and other information and determines which data are valid. Only the valid data are retained in the data base.

As a quality control measure, a monthly comparison is made of Microtel and digital recorder data. An investigation is made into the reasons for any significant differences between the sets of values.

Joint frequency stability wind rose tables of hourly data measured at the site are generated. These tables indicate the prevailing wind direction, wind speed, and stability classes measured during the period of observation as well as the joint frequencies of occurrence of the wind direction, wind speed, and stability classes. The values are also used as input to the atmospheric transport and diffusion models. Wind direction, wind speed, and stability classes are given in Tables 3, 4, and 5.

Table 3

Wind Direction Classes

IF	348.75°	<	WD	≤	11.25°	THEN	Class is	N
IF	11.25°	<	WD	≤	33.75°	THEN	Class is	NNE
IF	33.75°	<	WD	≤	56.25°	THEN	Class is	NE
IF	56.25°	<	WD	≤	78.75°	THEN	Class is	ENE
IF	78.75°	<	WD	≤	101.25°	THEN	Class is	E
IF	101.25°	<	WD	≤	123.75°	THEN	Class is	ESE
IF	123.75°	<	WD	≤	146.25°	THEN	Class is	SE
IF	146.25°	<	WD	≤	168.75°	THEN	Class is	SSE
IF	168.75°	<	WD	≤	191.25°	THEN	Class is	S
IF	191.25°	<	WD	≤	213.75°	THEN	Class is	SSW
IF	213.75°	<	WD	≤	236.25°	THEN	Class is	SW
IF	236.25°	<	WD	≤	258.75°	THEN	Class is	WSW
IF	258.75°	<	WD	≤	281.25°	THEN	Class is	W
IF	281.25°	<	WD	≤	303.75°	THEN	Class is	WNW
IF	303.75°	<	WD	≤	326.25°	THEN	Class is	NW
IF	326.25°	<	WD	≤	348.75°	THEN	Class is	NNW

Table 4

Wind Speed Classes

IF	0.0 mph	<	WS	≤	0.5 mph	THEN	Class is	1
IF	0.5 mph	<	WS	≤	3.5 mph	THEN	Class is	2
IF	3.5 mph	<	WS	≤	7.5 mph	THEN	Class is	3
IF	7.5 mph	<	WS	≤	12.5 mph	THEN	Class is	4
IF	12.5 mph	<	WS	≤	18.5 mph	THEN	Class is	5
IF	18.5 mph	<	WS	≤	24.5 mph	THEN	Class is	6
IF	24.5 mph	<	WS			THEN	Class is	7

Table 5

Atmospheric Stability Classes

Class	Differential Temperature Interval (in °C/100m) [1]	Differential Temperature Interval (in °F over the 200-33ft. range) [2]	Differential Temperature Interval (in °F over the 375-33ft. range) [2]
Extremely Unstable	$\Delta T \leq -1.9$	$\Delta T \leq -1.8$	$\Delta T \leq -3.6$
Moderately Unstable	$-1.9 < \Delta T \leq -1.7$	$-1.8 < \Delta T \leq -1.6$	$-3.6 < \Delta T \leq -3.2$
Slightly Unstable	$-1.7 < \Delta T \leq -1.5$	$-1.6 < \Delta T \leq -1.4$	$-3.2 < \Delta T \leq -2.9$
Neutral	$-1.5 < \Delta T \leq -0.5$	$-1.4 < \Delta T \leq -0.5$	$-2.9 < \Delta T \leq -1.0$
Slightly Stable	$-0.5 < \Delta T \leq 1.5$	$-0.5 < \Delta T \leq 1.3$	$-1.0 < \Delta T \leq 2.8$
Moderately Stable	$1.5 < \Delta T \leq 4.0$	$1.3 < \Delta T \leq 3.6$	$2.8 < \Delta T \leq 7.5$
Extremely Stable	$4.0 < \Delta T$	$3.6 < \Delta T$	$7.5 < \Delta T$

[1] from ANSI/ANS 2.5
[2] ANSI/ANS 2.5 intervals scaled for instrument heights on the LaSalle meteorological tower

The following two programs were used to calculate doses resulting from radioactive releases:

1. XOQDOQ: Computer Program for the Meteorological Evaluation of Routine Effluent Releases at Nuclear Power Stations (NUREG/CR-2919).

The program is based on the theory that material released to the atmosphere will be normally distributed (Gaussian) about the plume centerline. A straight-line trajectory is assumed between the point of release and all receptors.

The program implements the assumptions outlined in Section C of NRC Regulatory Guide 1.111. In evaluating routine releases from nuclear power plants, it primarily is designed to calculate annual relative effluent concentrations, X/Q values and annual average relative deposition, D/Q values.

Output from the XOQDOQ program is used as input to the GASPAR program.

2. GASPAR II: A Code System for Evaluation of Radiological Impacts Due to the Release of Radioactive Material to the Atmosphere During Normal Operation of Light Water Reactors (NUREG-0597).

GASPAR is a program written for the evaluation of radiological impacts due to the release of radioactive material to the atmosphere during normal operation of reactors. The GASPAR code implements the radiological impact models of NRC Regulatory Guide 1.109, Revision 1, for atmospheric releases. The program is used to estimate the maximum individual doses at selected locations in the vicinity of the plant.

5. Results

5.1 Instrument Maintenance

The maintenance program followed during 2013 was composed of routinely scheduled visits, preventative maintenance procedures, and equipment repairs. Routine monthly visits were made to inspect the sensing and recording systems for proper operation. In addition, routine maintenance and calibration checks of all tower-mounted and ground level equipment were performed every four months. A description of the calibration and field procedures is found in the Murray and Trettel, Inc. "P1009 Procedures Manual" (October 2013).

In February, there was some 375 ft. wind speed data loss due to sensor icing.

In March, the 375 ft. wind direction sensor was replaced due to bad readings. This caused some data loss.

In April, the modem for the Microtel was found to be damaged. The unit was replaced.

In May, the annual tower inspection was performed.

In November, a damaged 375 ft. wind direction sensor was replaced. Later in the month, damage to the 375 ft. temperature assembly was discovered. A broken mounting bracket was replaced.

In December, a rain gauge with a new heating system was installed due to heating issues with the previous gauge. Later in the month, questionable temperature readings were investigated. They were verified to be correct.

No other significant problems were encountered with the equipment, and at the end of the annual period, no problems were evident at the site.

5.2 Data Recovery

The record of data recovery for the year is summarized in Table 6.

Table 6

LaSalle Site

Data Recovery Summary

2013

Measurement	Elevation	Recovered Hours	Recovered Percent	Lost Hours	Percent Changed
Wind Speed	33 ft.	8753	99.9	7	0.1
Wind Speed	200 ft.	8747	99.9	13	0.1
Wind Speed	375 ft.	8716	99.5	44	0.5
Wind Direction	33 ft.	8742	99.8	18	0.7
Wind Direction	200 ft.	8753	99.9	7	0.4
Wind Direction	375 ft.	8642	98.7	118	1.6
Ambient Temperature	33 ft.	8753	99.9	7	0.0
Differential Temperature	200-33 ft.	8753	99.9	7	0.2
Differential Temperature	375-33 ft.	8753	99.9	7	0.6
Precipitation	10 ft.	8633	98.6	127	1.6
AVERAGE*			99.7		

* average of priority parameters (all except precipitation)

	Valid Hours	Recovered Percent	Lost Hours
Lower Level Joint Frequency %	8742	99.8	18
Middle Level Joint Frequency %	8747	99.9	13
Upper Level Joint Frequency %	8605	98.2	155

5.3 Summary of Billings for Equipment Repairs, Replacement Parts, and Other Work not Included in Fixed-Cost Maintenance Agreement - **2013**

Description - LaSalle

	Cost
January	
Meteorological parts, materials, and contractor services	22.18
February	
Meteorological parts, materials, and contractor services	55.49
March	
Meteorological equipment maintenance	1,176.90
Meteorological parts, materials, and contractor services	359.21
April	
Meteorological parts, materials, and contractor services	210.01
Microtel equipment maintenance	245.84
May	
Meteorological equipment maintenance	289.80
Meteorological parts, materials, and contractor services	33.14
June	
Meteorological equipment maintenance	210.00
Meteorological parts, materials, and contractor services	33.79
Special Requests	552.50
July	
Special Requests	450.00
August	
Special Requests	85.00
September	
-none-	0.00
October	
Meteorological equipment maintenance	300.00
Meteorological parts, materials, and contractor services	437.91
November	
Meteorological equipment maintenance	2,901.14
Meteorological parts, materials, and contractor services	417.60
December	
Meteorological equipment maintenance	1,321.54
Meteorological parts, materials, and contractor services	494.40

Annual Total: $ 9,596.45

5.4 Stability Wind Rose Data

The quarterly and annual stability wind roses are given in Tables 7 through 11. Wind speed classes have been altered to reflect the sensor threshold.

For the year, winds measured at 375 ft. most frequently came from the West-Northwest (9.84%) and fell into the 12.6-18.5 mph wind speed class (32.72%). Calms (wind speeds at or below the sensor threshold) were measured 0.06% of the time and speeds greater than 24.5 mph were measured 13.90% of the time.

Stability based on the 375-33 ft. differential temperature most frequently fell into the neutral classification (53.51%).

TABLE 7

LaSalle County Generating Statio
375 ft. Wind Speed and Direction

January-March, 2013
375Ft-33Ft Delta-T (F)

Number of Observations = 2080
Values are Percent Occurrence

SPEED	WIND DIRECTION CLASSES																	STABILITY CLASSES							
CLASS	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL	EU	MU	SU	N	SS	MS	ES	TOTAL
EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00						
C SU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00					
A N	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05				0.05				
L SS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00					0.00			
M MS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00		
ES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00	
																									0.05
EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00						
1 SU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00					
- N	0.00	0.10	0.00	0.05	0.14	0.10	0.00	0.05	0.05	0.00	0.00	0.05	0.00	0.05	0.10	0.00	0.67				0.67				
3 SS	0.00	0.00	0.00	0.00	0.05	0.00	0.10	0.00	0.00	0.10	0.00	0.05	0.38	0.05	0.00	0.10	0.82					0.82			
MS	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.10						0.10		
ES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.05							0.05	
																									1.63
EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00						
4 SU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00					
- N	0.19	0.19	0.14	0.05	0.10	0.29	0.19	0.24	0.29	0.29	0.24	0.24	0.24	0.43	0.58	0.58	4.28				4.28				
7 SS	0.24	0.53	0.24	0.24	0.05	0.24	0.19	0.24	0.10	0.24	0.14	0.34	0.10	0.24	0.24	0.05	3.41					3.41			
MS	0.00	0.00	0.05	0.05	0.05	0.10	0.00	0.05	0.05	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.38						0.38		
ES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.05							0.05	
																									8.12
EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00						
8 SU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00					
- N	0.34	0.34	0.29	0.48	0.53	0.10	0.10	0.38	0.34	0.58	0.43	0.34	0.82	1.44	1.88	1.15	9.52				9.52				
1 SS	0.34	0.19	0.48	0.43	0.29	0.10	0.10	0.14	0.24	0.19	0.10	0.19	0.29	0.38	0.29	0.29	4.04					4.04			
2 MS	0.10	0.05	0.05	0.00	0.14	0.34	0.10	0.05	0.00	0.00	0.14	0.24	0.29	0.05	0.14	0.24	1.92						1.92		
ES	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.00	0.19							0.19	
																									15.67
EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
1 MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00						
3 SU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00					
- N	2.45	0.29	0.43	0.58	0.29	0.34	0.77	0.62	0.24	0.67	0.77	1.20	1.30	3.61	2.55	1.88	17.98				17.98				
1 SS	0.10	0.14	0.05	0.19	0.14	0.72	0.62	0.29	0.05	0.24	0.58	0.53	0.48	1.44	0.96	0.24	6.78					6.78			
8 MS	0.05	0.00	0.00	0.00	0.00	0.24	0.24	0.10	0.05	0.10	0.19	0.43	0.10	0.24	0.14	0.00	1.88						1.88		
ES	0.00	0.00	0.00	0.00	0.00	0.14	0.10	0.10	0.00	0.05	0.10	0.05	0.00	0.00	0.05	0.00	0.58							0.58	
																									27.21

TABLE 7
continued

LaSalle County Generating Statio — January-March, 2013
375 ft. Wind Speed and Direction — 375Ft-33Ft Delta-T (F)

SPEED	WIND DIRECTION CLASSES																	STABILITY CLASSES							
CLASS	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL	EU	MU	SU	N	SS	MS	ES	TOTAL
EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.05	0.05							
1 MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.05		0.05						
9 SU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.05	0.05	0.00	0.10	0.00	0.24			0.24					
N	1.15	0.14	0.34	1.01	0.87	0.67	0.19	0.29	0.19	0.38	0.48	1.06	1.73	2.74	2.88	1.39	15.53				15.53				
2 SS	0.05	0.00	0.05	0.19	0.00	0.29	0.67	1.20	0.24	0.58	0.19	0.67	1.01	0.24	0.24	0.34	5.96					5.96			
4 MS	0.00	0.00	0.00	0.00	0.00	0.10	0.10	0.14	0.10	0.14	0.43	0.05	0.24	0.10	0.00	0.00	1.39						1.39		
ES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.14	0.00	0.00	0.00	0.00	0.19							0.19	
																									23.41
EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
G MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.05		0.05						
T SU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00					
N	0.10	0.05	0.14	0.77	0.72	0.10	0.05	0.00	0.05	1.15	0.43	0.67	1.49	3.41	0.72	0.72	10.58				10.58				
2 SS	0.00	0.00	0.00	0.05	0.00	0.24	0.48	1.06	1.20	2.26	1.54	1.11	1.68	2.12	0.05	0.00	11.78					11.78			
4 MS	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.24	0.34	0.05	0.29	0.29	0.10	0.00	0.00	0.00	1.39						1.39		
ES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.05							0.05	
																									23.85
TOT	5.10	2.02	2.26	4.09	3.41	4.13	4.09	5.24	3.56	7.02	6.15	7.74	10.38	16.63	11.11	6.97	99.95	0.05	0.10	0.24	58.61	32.79	7.07	1.11	99.95

Wind Direction by Stability

N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL	-STABILITY CLASSES-
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.05	Extremely Unstable
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05	0.00	0.10	Moderately Unstable
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.05	0.05	0.00	0.10	0.00	0.24	Slightly Unstable
4.23	1.11	1.35	2.93	2.64	1.59	1.30	1.59	1.15	3.08	2.36	3.56	5.58	11.68	8.70	5.72	58.61	Neutral
0.72	0.87	0.82	1.11	0.53	1.59	2.16	2.93	1.83	3.61	2.55	2.88	3.94	4.47	1.78	1.01	32.79	Slightly Stable
0.14	0.05	0.10	0.05	0.24	0.77	0.53	0.58	0.53	0.29	1.06	1.06	0.77	0.38	0.29	0.24	7.07	Moderately Stable
0.00	0.00	0.00	0.00	0.00	0.19	0.10	0.14	0.00	0.05	0.19	0.19	0.05	0.00	0.19	0.00	1.11	Extremely Stable

Wind Direction by Wind Speed

N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL	-WIND SPEED CLASSES-
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	C A L M
0.00	0.10	0.00	0.05	0.24	0.10	0.10	0.05	0.05	0.10	0.00	0.14	0.38	0.10	0.14	0.10	1.63	< 3.5 mph
0.43	0.72	0.43	0.34	0.19	0.62	0.38	0.53	0.43	0.53	0.38	0.58	0.43	0.67	0.82	0.62	8.12	3.6 - 7.5 mph
0.77	0.58	0.82	0.91	0.96	0.58	0.29	0.62	0.58	0.77	0.67	0.77	1.39	1.88	2.40	1.68	15.67	7.6 - 12.5 mph
2.60	0.43	0.48	0.77	0.43	1.44	1.73	1.11	0.34	1.06	1.63	2.21	1.87	5.29	3.70	2.12	27.21	12.6 - 18.5 mph
1.20	0.14	0.38	1.20	0.87	1.06	0.96	1.63	0.58	1.11	1.15	1.97	3.03	3.17	3.22	1.73	23.41	18.6 - 24.5 mph
0.10	0.05	0.14	0.82	0.72	0.34	0.62	1.30	1.59	3.46	2.31	2.07	3.27	5.53	0.82	0.72	23.85	> 24.5 mph

TABLE 8

LaSalle County Generating Statio
375 ft. Wind Speed and Direction

April-June, 2013
375Ft-33Ft Delta-T (F)

Number of Observations = 2185
Values are Percent Occurrence

SPEED CLASS	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL	STABILITY CLASSES EU	MU	SU	N	SS	MS	ES	TOTAL
EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00						
C SU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00					
A N	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09				0.09				
L SS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05					0.05			
M MS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00		
ES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00	
																									0.14
EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00						
1 SU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00					
- N	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.09	0.05	0.00	0.05	0.05	0.00	0.00	0.00	0.27				0.27				
3 SS	0.14	0.05	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23					0.23			
MS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00		
ES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00	
																									0.50
EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00						
4 SU	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05			0.05					
- N	0.27	0.37	0.50	0.59	0.32	0.27	0.37	0.14	0.27	0.18	0.27	0.23	0.37	0.46	0.32	0.00	4.94				4.94				
7 SS	0.00	0.09	0.05	0.05	0.23	0.05	0.18	0.32	0.05	0.14	0.05	0.18	0.05	0.14	0.09	0.05	1.69					1.69			
MS	0.05	0.00	0.05	0.05	0.09	0.00	0.00	0.00	0.00	0.05	0.00	0.05	0.00	0.00	0.05	0.00	0.37						0.37		
ES	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05	0.00	0.14							0.14	
																									7.19
EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00						
8 SU	0.05	0.14	0.00	0.00	0.00	0.05	0.05	0.00	0.00	0.05	0.09	0.00	0.00	0.00	0.00	0.05	0.46			0.46					
- N	1.05	1.56	1.56	0.78	0.82	0.87	0.41	0.64	0.92	0.69	0.37	0.64	1.01	1.10	0.55	0.59	13.55				13.55				
1 SS	0.27	0.41	0.14	0.27	0.32	0.41	0.09	0.09	0.18	0.50	0.37	0.18	0.27	0.37	0.09	0.14	4.12					4.12			
2 MS	0.05	0.00	0.05	0.18	0.05	0.14	0.23	0.14	0.14	0.27	0.14	0.05	0.05	0.27	0.23	0.00	1.97						1.97		
ES	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.05	0.05	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.23							0.23	
																									20.32
EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
1 MU	0.05	0.00	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14		0.14						
3 SU	0.14	0.14	0.23	0.05	0.05	0.09	0.23	0.00	0.09	0.09	0.14	0.05	0.00	0.18	0.00	0.00	1.46			1.46					
- N	1.01	1.24	2.11	0.96	0.64	0.69	0.78	0.82	0.73	0.82	1.05	1.24	1.65	1.24	1.19	1.37	17.53				17.53				
1 SS	0.27	0.73	0.69	0.55	0.82	0.50	0.41	0.27	0.59	0.78	0.92	0.55	0.37	0.41	0.87	0.14	8.88					8.88			
8 MS	0.00	0.09	0.09	0.05	0.14	0.46	0.46	0.37	0.59	0.50	0.32	0.09	0.00	0.41	0.05	0.05	3.66						3.66		
ES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.14	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.32							0.32	
																									31.99

TABLE 8
continued

LaSalle County Generating Statio — April-June, 2013
375 ft. Wind Speed and Direction — 375Ft-33Ft Delta-T (F)

SPEED	WIND DIRECTION CLASSES																	STABILITY CLASSES							
CLASS	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL	EU	MU	SU	N	SS	MS	ES	TOTAL
EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
1 MU	0.00	0.00	0.05	0.00	0.00	0.05	0.05	0.00	0.00	0.05	0.05	0.00	0.00	0.00	0.00	0.00	0.23		0.23						
9 SU	0.05	0.05	0.09	0.00	0.00	0.05	0.23	0.05	0.14	0.50	0.05	0.00	0.05	0.14	0.18	0.00	1.56			1.56					
N	0.46	0.37	1.97	1.42	0.73	0.37	0.69	0.27	1.01	1.42	1.42	1.05	1.33	0.50	0.96	0.37	14.32				14.32				
2 SS	0.37	0.18	0.09	0.27	1.10	0.41	0.41	0.18	0.82	0.96	0.46	0.37	0.32	0.27	0.59	0.14	6.96					6.96			
4 MS	0.09	0.05	0.09	0.00	0.27	0.18	0.32	0.46	0.32	0.18	0.18	0.00	0.00	0.00	0.14	0.00	2.29						2.29		
ES	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14							0.14	
																									25.49
EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
G MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.05	0.00	0.00	0.00	0.00	0.00	0.14		0.14						
T SU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05	0.18	0.09	0.09	0.05	0.00	0.00	0.00	0.50			0.50					
N	0.05	0.14	0.14	0.37	0.41	0.05	0.00	0.14	1.56	1.33	0.50	0.55	1.24	0.14	0.32	0.00	6.91				6.91				
2 SS	0.00	0.00	0.05	0.09	0.14	0.09	0.27	0.46	1.51	1.28	0.37	0.32	0.55	0.59	0.23	0.00	5.95					5.95			
4 MS	0.00	0.00	0.00	0.00	0.05	0.14	0.18	0.05	0.14	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.64						0.64		
ES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09							0.09	
																									14.23
TOT	4.35	5.68	8.01	5.72	6.22	4.90	5.40	4.67	9.52	10.34	6.86	5.68	7.32	6.27	5.90	2.88	99.86	0.00	0.50	4.03	57.62	27.87	8.92	0.92	99.86

Wind Direction by Stability

N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL	-STABILITY CLASSES-
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Extremely Unstable
0.05	0.00	0.14	0.00	0.00	0.05	0.05	0.00	0.00	0.14	0.09	0.00	0.00	0.00	0.00	0.00	0.50	Moderately Unstable
0.23	0.37	0.32	0.05	0.05	0.18	0.50	0.09	0.27	0.82	0.37	0.14	0.09	0.32	0.18	0.05	4.03	Slightly Unstable
2.84	3.66	6.27	4.12	2.93	2.29	2.24	2.01	4.58	4.49	3.62	3.75	5.63	3.43	3.34	2.33	57.62	Neutral
1.05	1.46	1.01	1.24	2.65	1.46	1.37	1.33	3.16	3.66	2.15	1.60	1.56	1.78	1.88	0.46	27.87	Slightly Stable
0.18	0.14	0.27	0.27	0.59	0.92	1.19	1.01	1.19	1.10	0.64	0.18	0.05	0.69	0.46	0.05	8.92	Moderately Stable
0.00	0.05	0.00	0.05	0.00	0.00	0.05	0.23	0.32	0.14	0.00	0.00	0.00	0.05	0.05	0.00	0.92	Extremely Stable

Wind Direction by Wind Speed

N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL	-WIND SPEED CLASSES-
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	C A L M
0.14	0.05	0.00	0.00	0.05	0.05	0.00	0.00	0.09	0.05	0.00	0.05	0.05	0.00	0.00	0.00	0.50	< 3.5 mph
0.32	0.55	0.59	0.69	0.64	0.32	0.55	0.46	0.32	0.37	0.32	0.46	0.41	0.64	0.50	0.05	7.19	3.6 - 7.5 mph
1.42	2.11	1.74	1.28	1.19	1.46	0.78	0.92	1.28	1.60	0.96	0.87	1.33	1.74	0.87	0.78	20.32	7.6 - 12.5 mph
1.46	2.20	3.20	1.60	1.65	1.74	1.88	1.60	2.15	2.24	2.43	1.92	2.01	2.24	2.11	1.56	31.99	12.6 - 18.5 mph
0.96	0.64	2.29	1.69	2.11	1.05	1.74	1.01	2.33	3.11	2.15	1.42	1.69	0.92	1.88	0.50	25.49	18.6 - 24.5 mph
0.05	0.14	0.18	0.46	0.59	0.27	0.46	0.69	3.34	2.97	1.01	0.96	1.83	0.73	0.55	0.00	14.23	> 24.5 mph

TABLE 9

LaSalle County Generating Statio
375 ft. Wind Speed and Direction

July-September, 2013
375Ft-33Ft Delta-T (F)

Number of Observations = 2209
Values are Percent Occurrence

SPEED	WIND DIRECTION CLASSES																	STABILITY CLASSES							
CLASS	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL	EU	MU	SU	N	SS	MS	ES	TOTAL
	EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00								
	MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
C	SU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00						
A	N	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05			0.05					
L	SS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				0.00				
H	MS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00					0.00			
	ES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00		
																										0.05
	EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
	MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
1	SU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00						
-	N	0.05	0.00	0.05	0.00	0.05	0.00	0.00	0.09	0.05	0.05	0.05	0.05	0.00	0.00	0.00	0.09	0.50			0.50					
3	SS	0.00	0.05	0.05	0.05	0.00	0.00	0.05	0.23	0.14	0.05	0.05	0.00	0.14	0.05	0.00	0.09	0.91				0.91				
	MS	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.05	0.00	0.05	0.00	0.23	0.09	0.05	0.05	0.05	0.63					0.63			
	ES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00		
																										2.04
	EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
	MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
4	SU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05	0.14	0.09	0.00	0.00	0.00	0.32		0.32						
-	N	0.45	0.77	0.54	0.81	0.45	0.63	0.72	0.32	0.50	0.59	0.68	0.86	0.50	0.59	0.36	0.54	9.33			9.33					
7	SS	0.05	0.18	0.18	0.27	0.18	0.09	0.36	0.05	0.00	0.14	0.14	0.09	0.09	0.27	0.14	0.05	2.26				2.26				
	MS	0.00	0.00	0.14	0.18	0.00	0.05	0.05	0.09	0.23	0.23	0.05	0.09	0.09	0.05	0.05	0.05	1.31					1.31			
	ES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.05						0.05		
																										13.26
	EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
	MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.05	0.00	0.00	0.00	0.00	0.00	0.14	0.14							
8	SU	0.05	0.09	0.05	0.05	0.05	0.05	0.00	0.00	0.05	0.63	0.59	0.23	0.18	0.09	0.05	0.05	2.17		2.17						
-	N	1.36	1.27	1.13	0.59	1.77	1.58	0.54	0.95	0.81	1.27	1.13	1.22	1.00	0.45	0.91	0.54	16.52			16.52					
1	SS	0.14	0.32	0.68	0.86	0.54	0.50	0.59	0.45	0.50	0.36	0.59	0.59	0.32	0.45	0.41	0.23	7.51				7.51				
2	MS	0.14	0.18	0.18	0.18	0.14	0.36	0.50	0.36	0.32	0.54	0.63	0.23	0.09	0.18	0.05	0.32	4.39					4.39			
	ES	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.23	0.00	0.14	0.00	0.05	0.00	0.00	0.05	0.00	0.50						0.50		
																										31.24
	EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
1	MU	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.09	0.09	0.09	0.00	0.09	0.00	0.00	0.41	0.41							
3	SU	0.00	0.05	0.05	0.05	0.00	0.00	0.00	0.05	0.09	0.05	0.27	0.23	0.09	0.09	0.18	0.14	1.31		1.31						
-	N	0.68	0.86	1.36	1.58	0.45	0.50	0.41	0.45	0.45	0.54	1.72	1.31	0.63	0.45	0.72	1.18	13.31			13.31					
1	SS	0.91	0.86	1.00	1.09	1.31	0.77	0.36	0.18	0.45	0.68	1.72	1.00	0.63	0.63	0.41	0.45	12.45				12.45				
8	MS	0.05	0.09	0.05	0.00	0.36	0.59	0.54	0.54	0.63	1.22	1.54	0.36	0.18	0.41	0.09	0.09	6.75					6.75			
	ES	0.00	0.00	0.00	0.00	0.00	0.00	0.41	0.18	0.00	0.18	0.54	0.00	0.18	0.09	0.05	0.00	1.63						1.63		
																										35.85

TABLE 9
continued

LaSalle County Generating Statio — July-September. 2013
375 ft. Wind Speed and Direction — 375Ft-33Ft Delta-T (F)

SPEED	WIND DIRECTION CLASSES																	STABILITY CLASSES							
CLASS	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL	EU	MU	SU	N	SS	MS	ES	TOTAL
EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
1 MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.05	0.00	0.00	0.09	0.14	0.00	0.32		0.32						
9 SU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05	0.09	0.00	0.18	0.05	0.05	0.45			0.45					
- N	0.09	0.32	0.18	0.27	0.00	0.00	0.00	0.00	0.05	0.23	0.45	0.54	0.09	0.27	0.18	0.50	3.17				3.17				
2 SS	0.27	0.36	0.45	0.14	0.68	0.14	0.05	0.00	0.23	0.91	1.58	1.00	0.36	0.18	0.45	0.18	6.97					6.97			
4 MS	0.00	0.00	0.00	0.05	0.32	0.41	0.36	0.05	0.36	0.72	0.77	0.14	0.00	0.00	0.00	0.00	3.17						3.17		
ES	0.00	0.00	0.00	0.00	0.00	0.09	0.14	0.18	0.45	0.14	0.23	0.00	0.00	0.00	0.00	0.00	1.22							1.22	
																									15.30
EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
G MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.09		0.09						
T SU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.05			0.05					
N	0.05	0.14	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.05	0.05	0.05	0.00	0.00	0.00	0.50				0.50				
2 SS	0.00	0.05	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.23	0.18	0.23	0.00	0.00	0.00	0.81					0.81			
4 MS	0.00	0.00	0.00	0.00	0.00	0.05	0.14	0.00	0.00	0.14	0.18	0.23	0.00	0.05	0.00	0.00	0.77						0.77		
ES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00	
																									2.22
TOT	4.26	5.57	6.25	6.16	6.34	5.79	5.34	4.44	5.34	9.37	13.49	8.96	5.02	4.71	4.30	4.57	99.95	0.00	0.95	4.30	43.37	30.92	17.02	3.40	99.95

Wind Direction by Stability

N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL	-STABILITY CLASSES-
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Extremely Unstable
0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.05	0.27	0.18	0.09	0.00	0.18	0.14	0.00	0.95	Moderately Unstable
0.05	0.14	0.09	0.09	0.05	0.05	0.00	0.05	0.14	0.81	0.95	0.68	0.36	0.36	0.27	0.23	4.30	Slightly Unstable
2.67	3.35	3.35	3.26	2.72	2.72	1.67	1.81	1.86	2.76	4.07	4.03	2.26	1.77	2.17	2.85	43.37	Neutral
1.36	1.81	2.44	2.40	2.72	1.49	1.40	0.91	1.31	2.17	4.30	2.85	1.77	1.58	1.40	1.00	30.92	Slightly Stable
0.18	0.27	0.36	0.41	0.81	1.45	1.67	1.09	1.54	2.90	3.17	1.27	0.45	0.72	0.23	0.50	17.02	Moderately Stable
0.00	0.00	0.00	0.00	0.00	0.09	0.59	0.59	0.45	0.45	0.81	0.05	0.18	0.09	0.09	0.00	3.40	Extremely Stable

Wind Direction by Wind Speed

N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL	-WIND SPEED CLASSES-
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	C A L M
0.05	0.05	0.09	0.05	0.05	0.00	0.14	0.36	0.18	0.14	0.09	0.27	0.23	0.09	0.05	0.23	2.04	< 3.5 mph
0.50	0.95	0.86	1.27	0.63	0.77	1.13	0.45	0.72	1.00	0.95	1.18	0.77	0.91	0.54	0.63	13.26	3.6 - 7.5 mph
1.67	1.86	2.04	1.67	2.49	2.49	1.67	1.99	1.67	3.03	2.99	2.31	1.58	1.18	1.45	1.13	31.24	7.6 - 12.5 mph
1.63	1.86	2.44	2.72	2.17	1.86	1.72	1.40	1.63	2.76	5.89	2.99	1.72	1.77	1.45	1.86	35.85	12.6 - 18.5 mph
0.36	0.68	0.63	0.45	1.00	0.63	0.54	0.23	1.13	2.04	3.12	1.77	0.45	0.72	0.81	0.72	15.30	18.6 - 24.5 mph
0.05	0.18	0.18	0.00	0.00	0.05	0.14	0.00	0.00	0.41	0.45	0.45	0.27	0.05	0.00	0.00	2.22	> 24.5 mph

TABLE 10

LaSalle County Generating Statio
375 ft. Wind Speed and Direction

October-December, 2013
375Ft-33Ft Delta-T (F)

Number of Observations = 2136
Values are Percent Occurrence

SPEED	WIND DIRECTION CLASSES																	STABILITY CLASSES							
CLASS	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL	EU	MU	SU	N	SS	MS	ES	TOTAL
	EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00								
	MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00							
C	SU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00						
A	N	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				0.00					
L	SS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00					0.00				
M	MS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00			
	ES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00		
																									0.00	
	EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00								
	MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00							
1	SU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00						
-	N	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.05	0.00	0.05	0.05	0.00	0.00	0.05	0.23			0.23					
3	SS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				0.00				
	MS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.05					0.05			
	ES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00		
																									0.28	
	EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00								
	MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00							
4	SU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00						
-	N	0.28	0.23	0.05	0.00	0.05	0.05	0.23	0.23	0.05	0.28	0.09	0.42	0.51	0.33	0.23	0.14	3.18			3.18					
7	SS	0.05	0.00	0.00	0.14	0.09	0.09	0.09	0.00	0.05	0.00	0.19	0.14	0.00	0.09	0.00	0.00	0.94				0.94				
	MS	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.14	0.00	0.00	0.05	0.05	0.00	0.33					0.33			
	ES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00		
																									4.45	
	EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00								
	MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00							
8	SU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05			0.05						
-	N	0.28	0.47	0.28	0.61	0.42	0.80	0.66	0.47	0.84	0.84	0.75	0.56	0.98	0.80	1.22	0.75	10.72			10.72					
1	SS	0.33	0.51	0.19	0.19	0.23	0.14	0.14	0.33	0.23	0.19	0.42	0.33	0.33	0.23	0.56	0.05	4.40				4.40				
2	MS	0.14	0.05	0.09	0.19	0.05	0.00	0.09	0.05	0.05	0.09	0.28	0.28	0.14	0.19	0.19	0.05	1.92					1.92			
	ES	0.05	0.00	0.00	0.00	0.00	0.00	0.05	0.09	0.23	0.09	0.09	0.19	0.14	0.09	0.05	0.00	1.08						1.08		
																									18.16	
	EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
1	MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.05		0.05						
3	SU	0.09	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.00	0.09	0.05	0.00	0.05	0.47			0.47					
-	N	0.23	0.42	0.98	0.75	0.75	0.56	0.47	0.80	0.94	1.08	1.50	2.20	2.81	2.76	2.81	1.50	20.55				20.55				
1	SS	0.19	0.00	0.05	0.09	0.47	0.42	0.56	0.89	0.61	1.17	1.03	1.26	0.98	1.03	0.98	0.56	10.30					10.30			
8	MS	0.05	0.14	0.09	0.05	0.05	0.14	0.19	0.00	0.09	0.14	0.51	0.28	0.33	0.61	0.23	0.19	3.09						3.09		
	ES	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.09	0.05	0.00	0.05	0.51	0.09	0.14	0.05	0.00	1.12							1.12	
																										35.58

TABLE 10
continued

LaSalle County Generating Statio — October-December. 2013
375 ft. Wind Speed and Direction — 375Ft-33Ft Delta-T (F)

SPEED	WIND DIRECTION CLASSES																	STABILITY CLASSES							
CLASS	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL	EU	MU	SU	N	SS	MS	ES	TOTAL
EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
1 MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00						
9 SU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.09	0.00	0.19	0.00	0.00	0.00	0.33			0.33					
- N	0.14	0.14	0.47	0.42	0.42	0.33	0.23	0.89	0.75	0.98	1.36	1.12	2.20	1.50	1.64	1.45	14.04				14.04				
-2 SS	0.00	0.00	0.00	0.00	0.14	0.09	0.14	0.33	0.70	1.69	1.08	0.70	0.66	1.26	0.75	0.05	7.58					7.58			
4 MS	0.05	0.00	0.00	0.00	0.00	0.05	0.66	0.33	0.37	0.33	0.28	0.28	0.19	0.33	0.00	0.05	2.90						2.90		
ES	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05	0.42	0.00	0.00	0.09	0.09	0.00	0.00	0.00	0.70							0.70	
																									25.56
EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
G MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.05		0.05						
T SU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.09	0.00	0.33			0.33					
N	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.19	1.08	1.12	0.23	0.42	1.31	1.08	0.28	0.33	6.09				6.09				
2 SS	0.00	0.00	0.00	0.05	0.05	0.00	0.37	0.47	0.80	1.12	2.29	0.42	0.66	1.31	0.14	0.00	7.68					7.68			
4 MS	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.19	0.33	0.47	0.28	0.05	0.05	0.09	0.00	0.00	1.59						1.59		
ES	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.00	0.09	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.23							0.23	
																									15.96
TOT	1.87	2.06	2.25	2.48	2.72	2.67	4.35	5.43	7.72	9.69	10.77	9.32	11.99	12.17	9.27	5.24	100.00	0.00	0.09	1.17	54.82	30.90	9.88	3.14	100.00

Wind Direction by Stability

N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL	-STABILITY CLASSES-
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Extremely Unstable
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.09	Moderately Unstable
0.09	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.19	0.00	0.28	0.28	0.09	0.09	1.17	Slightly Unstable
0.94	1.26	1.78	1.78	1.64	1.73	1.64	2.62	3.65	4.35	3.93	4.78	7.87	6.46	6.18	4.21	54.82	Neutral
0.56	0.51	0.23	0.47	0.98	0.75	1.31	2.01	2.39	4.17	5.01	2.86	2.62	3.93	2.43	0.66	30.90	Slightly Stable
0.23	0.19	0.23	0.23	0.09	0.19	1.08	0.56	0.89	1.03	1.50	0.89	0.75	1.26	0.47	0.28	9.88	Moderately Stable
0.05	0.00	0.00	0.00	0.00	0.00	0.33	0.23	0.80	0.09	0.14	0.80	0.37	0.23	0.09	0.00	3.14	Extremely Stable

Wind Direction by Wind Speed

N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL	-WIND SPEED CLASSES-
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	C A L M
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.05	0.00	0.05	0.09	0.00	0.00	0.05	0.28	< 3.5 mph
0.33	0.23	0.09	0.14	0.14	0.14	0.33	0.23	0.14	0.28	0.42	0.56	0.51	0.47	0.28	0.14	4.45	3.6 - 7.5 mph
0.80	1.03	0.56	0.98	0.70	0.94	0.94	0.94	1.36	1.22	1.54	1.36	1.59	1.31	2.01	0.89	18.16	7.6 - 12.5 mph
0.56	0.66	1.12	0.89	1.26	1.12	1.36	1.78	1.69	2.39	3.18	4.26	4.35	4.59	4.07	2.29	35.58	12.6 - 18.5 mph
0.19	0.14	0.47	0.42	0.56	0.47	1.08	1.59	2.25	3.04	2.81	2.20	3.32	3.09	2.39	1.54	25.56	18.6 - 24.5 mph
0.00	0.00	0.00	0.05	0.05	0.00	0.66	0.84	2.29	2.72	2.81	0.89	2.11	2.72	0.51	0.33	15.96	> 24.5 mph

TABLE 11

LaSalle County Generating Statio
375 ft. Wind Speed and Direction

January-December, 2013
375Ft-33Ft Delta-T (F)

Number of Observations = 8610
Values are Percent Occurrence

SPEED	WIND DIRECTION CLASSES																	STABILITY CLASSES							
CLASS	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL	EU	MU	SU	N	SS	MS	ES	TOTAL
	EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00								
	MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00							
C	SU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00						
A	N	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05				0.05					
L	SS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01					0.01				
M	MS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00			
	ES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00		
																									0.06	
	EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00								
	MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00							
1	SU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00						
-	N	0.01	0.02	0.01	0.01	0.05	0.03	0.00	0.05	0.05	0.03	0.01	0.05	0.02	0.01	0.02	0.03	0.42			0.42					
3	SS	0.03	0.02	0.01	0.01	0.02	0.00	0.03	0.06	0.03	0.03	0.01	0.01	0.13	0.02	0.00	0.05	0.49				0.49				
	MS	0.00	0.00	0.00	0.00	0.01	0.00	0.02	0.01	0.00	0.01	0.00	0.07	0.03	0.01	0.01	0.01	0.20					0.20			
	ES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.01						0.01		
																									1.11	
	EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00								
	MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00							
4	SU	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.03	0.02	0.00	0.00	0.00	0.09			0.09					
-	N	0.30	0.39	0.31	0.37	0.23	0.31	0.38	0.23	0.28	0.34	0.33	0.44	0.41	0.45	0.37	0.31	5.47				5.47				
7	SS	0.08	0.20	0.12	0.17	0.14	0.12	0.21	0.15	0.05	0.13	0.13	0.19	0.06	0.19	0.12	0.03	2.07					2.07			
	MS	0.01	0.00	0.07	0.07	0.03	0.03	0.01	0.03	0.08	0.07	0.05	0.03	0.03	0.02	0.03	0.01	0.60						0.60		
	ES	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.01	0.01	0.01	0.00	0.06							0.06	
																										8.29
	EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00								
	MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.01	0.00	0.00	0.00	0.00	0.00	0.03		0.03						
8	SU	0.02	0.06	0.01	0.01	0.01	0.02	0.01	0.00	0.01	0.17	0.17	0.06	0.05	0.02	0.01	0.03	0.69			0.69					
-	N	0.77	0.92	0.82	0.62	0.89	0.85	0.43	0.62	0.73	0.85	0.67	0.70	0.95	0.94	1.13	0.75	12.64				12.64				
1	SS	0.27	0.36	0.37	0.44	0.35	0.29	0.23	0.26	0.29	0.31	0.37	0.33	0.30	0.36	0.34	0.17	5.04					5.04			
2	MS	0.10	0.07	0.09	0.14	0.09	0.21	0.23	0.15	0.13	0.23	0.30	0.20	0.14	0.17	0.15	0.15	2.57						2.57		
	ES	0.01	0.00	0.00	0.01	0.00	0.01	0.02	0.10	0.07	0.08	0.02	0.06	0.03	0.02	0.05	0.00	0.50							0.50	
																										21.46
	EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
1	MU	0.01	0.00	0.02	0.00	0.01	0.00	0.00	0.00	0.00	0.02	0.02	0.02	0.01	0.02	0.00	0.00	0.15		0.15						
3	SU	0.06	0.07	0.07	0.02	0.01	0.02	0.06	0.01	0.05	0.03	0.13	0.07	0.05	0.08	0.05	0.05	0.82			0.82					
-	N	1.08	0.71	1.23	0.98	0.53	0.52	0.60	0.67	0.59	0.78	1.27	1.49	1.59	1.99	1.80	1.48	17.31				17.31				
1	SS	0.37	0.44	0.45	0.49	0.70	0.60	0.49	0.41	0.43	0.72	1.07	0.84	0.62	0.87	0.80	0.35	9.64					9.64			
8	MS	0.03	0.08	0.06	0.02	0.14	0.36	0.36	0.26	0.35	0.50	0.65	0.29	0.15	0.42	0.13	0.08	3.88						3.88		
	ES	0.00	0.00	0.00	0.00	0.00	0.03	0.16	0.13	0.05	0.07	0.17	0.14	0.07	0.06	0.03	0.00	0.92							0.92	
																										32.72

TABLE 11
continued

LaSalle County Generating Statio — January-December, 2013
375 ft. Wind Speed and Direction — 375Ft-33Ft Delta-T (F)

SPEED	WIND DIRECTION CLASSES																STABILITY CLASSES							
CLASS	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL	EU	MU	SU	N	SS	MS	ES	TOTAL
EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.01	0.01							
1 MU	0.00	0.00	0.01	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.02	0.00	0.00	0.03	0.03	0.00	0.15		0.15						
9 SU	0.01	0.01	0.02	0.00	0.00	0.01	0.06	0.01	0.05	0.15	0.05	0.03	0.07	0.08	0.08	0.01	0.65			0.65					
- N	0.45	0.24	0.74	0.78	0.50	0.34	0.28	0.36	0.50	0.75	0.93	0.94	1.32	1.23	1.39	0.92	11.68				11.68				
2 SS	0.17	0.14	0.15	0.15	0.49	0.23	0.31	0.42	0.50	1.03	0.84	0.69	0.58	0.49	0.51	0.17	6.88					6.88			
4 MS	0.03	0.01	0.02	0.01	0.16	0.19	0.36	0.24	0.29	0.35	0.42	0.12	0.10	0.10	0.03	0.01	2.45						2.45		
ES	0.00	0.00	0.00	0.00	0.00	0.02	0.06	0.07	0.23	0.03	0.07	0.06	0.02	0.00	0.00	0.00	0.57							0.57	
																									22.39
EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
G MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.01	0.00	0.01	0.00	0.01	0.00	0.08		0.08						
T SU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.06	0.02	0.02	0.01	0.06	0.02	0.00	0.22			0.22					
N	0.05	0.08	0.09	0.28	0.28	0.03	0.02	0.08	0.67	0.92	0.30	0.42	1.01	1.13	0.33	0.26	5.95				5.95				
2 SS	0.00	0.01	0.03	0.05	0.05	0.08	0.28	0.49	0.87	1.16	1.09	0.50	0.77	0.99	0.10	0.00	6.47					6.47			
4 MS	0.00	0.00	0.00	0.00	0.01	0.05	0.14	0.12	0.20	0.19	0.19	0.14	0.03	0.03	0.00	0.00	1.09						1.09		
ES	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.05	0.00	0.01	0.00	0.01	0.00	0.00	0.00	0.09							0.09	
																									13.90
TOT	3.89	3.87	4.74	4.63	4.70	4.39	4.81	4.94	6.56	9.13	9.36	7.92	8.63	9.84	7.58	4.89	99.94	0.01	0.42	2.47	53.51	30.59	10.79	2.15	99.94

Wind Direction by Stability

N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL	STABILITY CLASSES
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.01	Extremely Unstable
0.01	0.00	0.03	0.00	0.01	0.01	0.01	0.00	0.01	0.10	0.07	0.02	0.02	0.06	0.05	0.00	0.42	Moderately Unstable
0.09	0.15	0.10	0.03	0.02	0.06	0.13	0.03	0.12	0.43	0.38	0.22	0.20	0.24	0.16	0.09	2.47	Slightly Unstable
2.66	2.37	3.22	3.03	2.49	2.09	1.72	2.01	2.82	3.67	3.51	4.03	5.31	5.75	5.04	3.75	53.51	Neutral
0.93	1.17	1.14	1.31	1.74	1.32	1.56	1.78	2.17	3.39	3.51	2.54	2.45	2.92	1.87	0.78	30.59	Slightly Stable
0.19	0.16	0.24	0.24	0.44	0.84	1.13	0.81	1.05	1.35	1.60	0.85	0.50	0.77	0.36	0.27	10.79	Moderately Stable
0.01	0.01	0.00	0.01	0.00	0.07	0.27	0.30	0.39	0.19	0.29	0.26	0.15	0.09	0.10	0.00	2.15	Extremely Stable

Wind Direction by Wind Speed

N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL	WIND SPEED CLASSES
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	C A L M
0.05	0.05	0.02	0.02	0.08	0.03	0.06	0.12	0.08	0.08	0.02	0.13	0.19	0.05	0.05	0.09	1.11	< 3.5 mph
0.39	0.62	0.50	0.62	0.41	0.46	0.60	0.42	0.41	0.55	0.52	0.70	0.53	0.67	0.53	0.36	8.29	3.6 - 7.5 mph
1.17	1.41	1.30	1.22	1.35	1.38	0.93	1.13	1.23	1.67	1.56	1.34	1.48	1.52	1.67	1.11	21.46	7.6 - 12.5 mph
1.56	1.30	1.84	1.51	1.39	1.54	1.67	1.48	1.46	2.13	3.31	2.85	2.49	3.44	2.81	1.95	32.72	12.6 - 18.5 mph
0.67	0.41	0.95	0.94	1.14	0.80	1.08	1.10	1.58	2.33	2.32	1.84	2.10	1.95	2.06	1.11	22.39	18.6 - 24.5 mph
0.05	0.09	0.13	0.33	0.34	0.16	0.46	0.70	1.80	2.37	1.63	1.08	1.85	2.21	0.46	0.26	13.90	> 24.5 mph

5.5 Precipitation

Monthly totals and the maximum 24-hour and maximum 1-hour precipitation amounts are summarized below. The month with the most measured precipitation was May. The month with the least measured precipitation was September*. The maximum 24-hour total was 2.50" (April) and the maximum 1-hour total was 1.17" (June).

Table 12

Precipitation Totals (Inches) - 2013
LaSalle Site

Month	Total	Maximum 24-hour	Maximum 1-hour
January	2.40*	1.21*	0.29*
February	1.08*	0.69*	0.13*
March	0.86*	0.66*	0.13*
April	6.29	2.50	1.04
May	6.56	1.31	0.62
June	5.44	1.33	1.17
July	1.15*	0.41*	0.25*
August	3.43	1.42	1.08
September	0.57*	0.33*	0.23*
October	3.67	1.27	0.54
November	2.00*	0.72*	0.38*
December	0.61*	0.27*	0.08*
TOTAL:	34.06*		

* some data are missing - actual precipitation may be under-reported

5.6 Doses Resulting from Airborne Releases

The following are the maximum annual calculated cumulative offsite doses resulting from LaSalle County Station airborne releases.

LaSalle County Generating Station:-

Dose	*Maximum Value*	*Sector Affected*
gamma air [1]	2.470×10^{-3} mrad	East
beta air [2]	6.960×10^{-4} mrad	East
whole body [3]	1.696×10^{-2} mrem	East
skin [4]	2.420×10^{-3} mrem	East
organ [5] (infant-thyroid)	$1.462 \times 10^{+0}$ mrem	Southeast

Compliance Status

10 CFR 50 Appendix I	Yearly Objective		% of Appendix I
gamma air	10.0	mrad	0.02
beta air	20.0	mrad	0.00
whole body	5.0	mrem	0.34
skin	15.0	mrem	0.02
organ	15.0	mrem	9.75

---

(1) Gamma Air Dose - GASPAR II, NUREG-0597
(2) Beta Air Dose - GASPAR II, NUREG-0597
(3) Whole Body Dose - GASPAR II, NUREG-0597
(4) Skin Dose - GASPAR II, NUREG-0597
(5) Inhalation and Food Pathways Dose - GASPAR II, NUREG-0597

APPENDIX

LaSalle Meteorological Calibration

Date: 2-6-13

POWER SUPPLIES

+12.000V ± 0.120V	-12.000V ± 0.120V
A: + 12.034 V	A: - 12.045 V
B: + 12.042 V	B: - 12.030 V

Signal conditioners and Digital Recorder:

	Signal Conditioner Voltage Out			Digital recorder		Specifications	
	AF	AL	AL EQUIV	AF	AL	Signal Cond.	Recorder
			10 ft.				
PRCP LO	0.060 V	— V	0.00 "	0.00 "	— "	0.000V ± 0.050V	AL EQUIV ± 0.01"
PRCP HI	5.000 V	— V	1.00 "	1.00 "	— "	5.000V ± 0.050V	AL EQUIV ± 0.01"
			35 ft.				
WS ZERO	.030 V	.025 V	0.5 mph	0.5 mph	— mph	0.025V ± 0.025V	AL EQUIV + .1mph
WS SPAN	2.491 V	2.500 V	50.0 mph	50.0 mph	— mph	2.500V ± 0.025V	AL EQUIV + .1mph
WD ZERO	.000 V	— V	0 °	0 °	— °	0.000V ± 0.100V	AL EQUIV + 1°
SPAN	3.333 V	~~3.500~~ V	360 °	360 °	— °	3.333V ± 0.100V	AL EQUIV + 1°
T ZERO	0.000 V	~~-22.00~~ V	-22.00 °	-22.02 °	— °	0.000V ± 0.050V	AL EQUIV + .1°F
T SPAN	5.000 V	— V	122 °	121.95 °	— °	5.000V ± 0.050V	AL EQUIV + .1°F
			200 ft.				
WS ZERO	~~.030~~ 0.030 V	0.025 V	0.5 mph	0.5 mph	— mph	0.025V ± 0.025V	AL EQUIV + .1mph
WS SPAN	2.492 V	2.500 V	50.0 mph	50.0 mph	— mph	2.500V ± 0.025V	AL EQUIV + .1mph
WD ZERO	0.000 V	— V	0 °	0 °	— °	0.000V ± 0.100V	AL EQUIV + 1°
WD SPAN	3.333 V	— V	360 °	360 °	— °	3.333V ± 0.100V	AL EQUIV + 1°
ΔT_1 ZERO	.003 V	0.000 V	-10.00 °	-10.00 °	— °	0.000V ± 0.050V	AL EQUIV + .1°F
ΔT_1 SPAN	4.999 V	5.000 V	10.00 °	9.98 °	— °	5.000V ± 0.050V	AL EQUIV + .1°F
ΔT_2 ZERO	.001 V	.000 V				0.000V ± 0.050V	
ΔT_2 SPAN	5.000 V	— V				5.000V ± 0.050V	
			375 ft.				
WS ZERO	.028 V	.025 V	0.5 mph	0.5 mph	— mph	0.025V ± 0.025V	AL EQUIV + .1mph
WS SPAN	2.503 V	2.500 V	50.0 mph	50.0 mph	— mph	2.500V ± 0.025V	AL EQUIV + .1mph
WD ZERO	0.000 V	— V	0 °	0 °	— °	0.000V ± 0.100V	AL EQUIV + 1°
WD SPAN	3.333 V	— V	360 °	360 °	— °	3.333V ± 0.100V	AL EQUIV + 1°
ΔT_1 ZERO	.003 V	0.000 V	-10.00 °	-10.01 °	— °	0.000V ± 0.050V	AL EQUIV + .1°F
ΔT_1 SPAN	4.998 V	5.000 V	10.00 °	9.98 °	— °	5.000V ± 0.050V	AL EQUIV + .1°F
ΔT_2 ZERO	.003 V	0.000 V				0.000V ± 0.050V	
ΔT_2 SPAN	4.997 V	5.000 V				5.000V ± 0.050V	

ASL 3-18-13

LaSalle Meteorological Calibration

Date: 2-6-13

TOWER MEASUREMENTS

☑ Ambient ☐ Ice Bath

Temperatures

	33 ft. Amb.		200 ft. ΔT,		375 ft. ΔT,	
	AF	AL	AF	AL	AF	AL
Measured	33.83 °F	— °F	-1.28 °F	— °F	-2.01 °F	— °F
Recorded	33.80 °F	— °F	-1.31 °F	— °F	-2.10 °F	— °F
Difference	.05 °F	— °F	.03 °F	— °F	.09 °F	— °F
Specification	±0.5°F		±0.18°F		±0.18°F	

Winds

	33 ft.		200 ft.		375 ft.		
	AF	AL	AF	AL	AF	AL	*Specification*
WS stall	0.5 mph	0.5 mph	0.5 mph	0.5 mph	0.5 mph	0.5 mph	0.5mph ± 0.45mph
Forw. WD	360 °	— °	359 °	— °	360 °	— °	0°/360° ± 5°
Revr. WD	180 °	— °	182 °	— °	178 °	— °	180°/540° ± 5°
Tracking/wear	OK		OK		OK		

Comments: WS Removed MT 0101 WS Removed MT 0166 WS Removed MT 0164
WS INSTALLED MT 204 33FT WS INSTALLED MT 060 200FT WS INSTALLED MT 0188

AJL 3-18-13

LaSalle Meteorological Calibration

Date: 2-6-13

Dates of Last Wind Sensor Bearing Replacements:

	33 ft.	200 ft.	375 ft.
(6 mos.) Wind Speed:	2-6-13	2-6-13	2-6-13
(12 mos.) Wind Direction:	10-16-12	10-16-12	10-16-12

	33 ft.	200 ft.	375 ft.
Aspirators:	OK	OK	OK

Operation of De-ice Heat Lamp System (Aug-Mar): OK *

Operation of Rain Gauge: OK Tips Poured 5 Tips Recorded 5

UPS CHECK: OK

Debris screen: In (Out) Installed Removed

Tower Lighting	Good	Fair	Poor
Beacon	☒	☐	☐
Side lights	☒	☐	☐
Wiring	☒	☐	☐
Flasher	☒	☐	☐

Tower Condition	Good	Fair	Poor
Paint	☒	☐	☐
Shelter condition	☒	☐	☐

Note:
AF = As Found
AL = As Left
— = no change (AF=AL)
FS = Full Scale

Calibration Instruments: Next Cal Due
Psychrometer - S/N -
Digital multimeter - S/N - 92120208 APRIL 2013
Digital multimeter - S/N -
Digital Thermometer S/N MT0237 OCT 2013

Technicians: MIKE MONDIA, MIKE MARX,

Comments: * 2 HEAT LAMPS OUT WS 200FT Replaced

Signature: [signature]
ASL 3-18-13

System Response Check

Date: 2-6-13

Site: LaSalle
System: Microtel

Low Scale Check	33' WS	200' WS	375' WS	33' WD	200' WD	375' WD	33' T	200' ΔT	375' ΔT
Expected Response	20.0 ±0.4	20.0 ±0.4	20.0 ±0.4	108 ±2	108 ±2	108 ±2	6.80 ±0.7	-6.00 ±0.18	-6.00 ±0.18
As Found Response	19.8	19.8	19.9	108	108	107	6.7	-6.0	-6.0
As Left Response	-	-	-	-	-	-	-	-	-

Mid Scale Check	33' WS	200' WS	375' WS	33' WD	200' WD	375' WD	33' T	200' ΔT	375' ΔT
Expected Response	60.0 ±0.4	60.0 ±0.4	60.0 ±0.4	324 ±2	324 ±2	324 ±2	64.40 ±0.7	2.00 ±0.18	2.00 ±0.18
As Found Response	59.8	59.8	59.9	323	323	323	64.1	2.0	2.0
As Left Response	-	-	-	-	-	-	-	-	-

Full Scale Check	33' WS	200' WS	375' WS	33' WD	200' WD	375' WD	33' T	200' ΔT	375' ΔT
Expected Response	80.0 ±0.4	80.0 ±0.4	80.0 ±0.4	432 ±2	432 ±2	432 ±2	93.20 ±0.7	6.00 ±0.18	6.00 ±0.18
As Found Response	79.9	79.9	79.8	431	431	431	93.0	6.0	6.0
As Left Response	-	-	-	-	-	-	-	-	-

AJL 3-18-13

System Response Check

Date: 2-6-13

Site: LaSalle
System: Process Computer

Low Scale Check	A847 375' WD	A848 200' WD	A849 375' WS	A850 200' WS	A851 375' ΔT	A852 33' WS	A853 33' WD	A854 33' T	A855 200' ΔT	A856 Precipitation
Expected Response	108 ±2	108 ±2	20.0 ±0.4	20.0 ±0.4	-4.00±0.18	20.0±0.4	108 ±2	6.80 ±0.7	-4.00±0.18	0.20 ±0.01
As Found Response	107.5	108.1	20.04	20.26	-4.00	20.21	108.12	6.8	-4.02	0.198
As Left Response	—	—	—	19.8	—	—	—	—	—	—

Mid Scale Check	A847 375' WD	A848 200' WD	A849 375' WS	A850 200' WS	A851 375' ΔT	A852 33' WS	A853 33' WD	A854 33' T	A855 200' ΔT	A856 Precipitation
Expected Response	324 ±2	324 ±2	60.0 ±0.4	60.0 ±0.4	8.00 ±0.18	60.0 ±0.4	324 ±2	64.40 ±0.7	8.00±0.18	0.60 ±0.01
As Found Response	324.5	324.1	59.88	60.9	7.99	60.17	324.25	64.34	7.97	0.598
As Left Response	—	—	—	59.78	—	—		—	—	—

Full Scale Check	A847 375' WD	A848 200' WD	A849 375' WS	A850 200' WS	A851 375' ΔT	A852 33' WS	A853 33' WD	A854 33' T	A855 200' ΔT	A856 Precipitation
Expected Response	432 ±2	432 ±2	80.0 ±0.4	80.0±0.4	14.00±0.18	80.0 ±0.4	432 ±2	93.20±0.7	14.00±0.18	0.80 ±0.01
As Found Response	431.95	432.15	79.80	80.99	13.98	80.12	432.11	93.8	13.96	0.798
As Left Response	—	—	—	79.88	—	—	—	—	—	—

ADJUSTED current card

ADZ 3-18-13

System Response Check

Date: 2-6-13

Site: LaSalle
System: Control Room Indicators

Low Scale Check	200' WS	375' WS	200' WD	375' WD	375' ΔT
Expected Response	20.0 ±1.0	20.0 ±1.0	108 ±5.4	108 ±5.4	-4.00 ±0.3
As Found Response	21	21	110	110	-4.
As Left Response	20	20	—	—	—

Mid Scale Check	200' WS	375' WS	200' WD	375' WD	375' ΔT
Expected Response	60.0 ±1.0	60.0 ±1.0	324 ±5.4	324 ±5.4	8.00 ±0.3
As Found Response	60	60	325	321	8
As Left Response	—	—	—	—	—

Full Scale Check	200' WS	375' WS	200' WD	375' WD	375' ΔT
Expected Response	80.0 ±1.0	80.0 ±1.0	432 ±5.4	432 ±5.4	14.00 ±0.3
As Found Response	82	82	432	431	14
As Left Response	81	81	—	—	-
	ADJUSTED CURRENT CARD	ADJUSTED CURRENT CARD			

ABL 3-18-13

LaSalle Meteorological Calibration

Date: 6-4-13

POWER SUPPLIES

+12.000V ± 0.120V	-12.000V ± 0.120V
A: + 12.021 V	A: - 12.038 V
B: + 12.028 V	B: - 12.016 V

Signal conditioners and Digital Recorder:

	Signal Conditioner Voltage Out			Digital recorder		Specifications	
	AF	AL	AL EQUIV	AF	AL	Signal Cond.	Recorder
			10 ft.				
PRCP LO	0.000 V	— V	0.00 "	0.00 "	— "	0.000V ± 0.050V	AL EQUIV ± 0.01"
PRCP HI	5.000 V	— V	1.00 "	1.00 "	— "	5.000V ± 0.050V	AL EQUIV ± 0.01"
			35 ft.				
WS ZERO	.025 V	— V	0.5 mph	0.5 mph	— mph	0.025V ± 0.025V	AL EQUIV + .1mph
WS SPAN	2.503 V	2.500 V	50.0 mph	50.0 mph	— mph	2.500V ± 0.025V	AL EQUIV + .1mph
WD ZERO	.000 V	— V	0 °	0 °	— °	0.000V ± 0.100V	AL EQUIV + 1°
SPAN	3.333 V	— V	360 °	360 °	— °	3.333V ± 0.100V	AL EQUIV + 1°
ZERO	.000 V	— V	-22.0 °	-22.00 °	— °	0.000V ± 0.050V	AL EQUIV + .1°F
T SPAN	5.000 V	— V	122.0 °	121.96 °	— °	5.000V ± 0.050V	AL EQUIV + .1°F
			200 ft.				
WS ZERO	.025 V	— V	0.5 mph	0.5 mph	— mph	0.025V ± 0.025V	AL EQUIV + .1mph
WS SPAN	2.510 V	2.500 V	50.0 mph	50.0 mph	— mph	2.500V ± 0.025V	AL EQUIV + .1mph
WD ZERO	.001 V	.000 V	0 °	0 °	— °	0.000V ± 0.100V	AL EQUIV + 1°
WD SPAN	3.333 V	— V	360 °	360 °	— °	3.333V ± 0.100V	AL EQUIV + 1°
ΔT_1 ZERO	-.004 V	.000 V	-10.00 °	-10.00 °	— °	0.000V ± 0.050V	AL EQUIV + .1°F
ΔT_1 SPAN	5.003 V	5.000 V	10.00 °	10.00 °	— °	5.000V ± 0.050V	AL EQUIV + .1°F
ΔT_2 ZERO	-.004 V	.000 V				0.000V ± 0.050V	
ΔT_2 SPAN	5.003 V	5.000 V				5.000V ± 0.050V	
			375 ft.				
WS ZERO	.027 V	— V	0.54 mph	0.5 mph	— mph	0.025V ± 0.025V	AL EQUIV + .1mph
WS SPAN	2.508 V	2.500 V	50.0 mph	50.0 mph	— mph	2.500V ± 0.025V	AL EQUIV + .1mph
WD ZERO	.003 V	.000 V	0 °	0 °	— °	0.000V ± 0.100V	AL EQUIV + 1°
WD SPAN	3.333 V	— V	360 °	360 °	— °	3.333V ± 0.100V	AL EQUIV + 1°
ΔT_1 ZERO	.003 V	.000 V	-10.00 °	-10.01 °	— °	0.000V ± 0.050V	AL EQUIV + .1°F
ΔT_1 SPAN	5.008 V	5.000 V	10.00 °	10.00 °	— °	5.000V ± 0.050V	AL EQUIV + .1°F
ΔT_2 ZERO	.004 V	.000 V				0.000V ± 0.050V	
ΔT_2 SPAN	5.004 V	5.000 V				5.000V ± 0.050V	

AR 7-10-13

LaSalle Meteorological Calibration

Date: 6-4-13

TOWER MEASUREMENTS

☑ Ambient ☐ Ice Bath

Temperatures

	33 ft. Amb. AF	33 ft. Amb. AL	200 ft. ΔT AF	200 ft. ΔT AL	375 ft. ΔT AF	375 ft. ΔT AL
Measured	61.50 °F	— °F	-1.00 °F	— °F	-2.50 °F	— °F
Recorded	61.30 °F	— °F	-1.00 °F	— °F	-2.50 °F	— °F
Difference	0.20 °F	— °F	0.00 °F	— °F	0.00 °F	— °F
Specification	±0.5°F		±0.18°F		±0.18°F	

Winds

	33 ft. AF	33 ft. AL	200 ft. AF	200 ft. AL	375 ft. AF	375 ft. AL	Specification
WS stall	0.5 mph	0.5 mph	0.5 mph	0.5 mph	0.5 mph	0.5 mph	0.5mph ± 0.45mph
Forw. WD	361 °	— °	360 °	— °	359 °	— °	0°/360° ± 5°
Revr. WD	181 °	— °	181 °	— °	539 °	— °	180°/540° ± 5°
Tracking/wear	OK		OK		OK		

Comments:

33WS 200WS 375WS

MT0204 Removed MT0060 Removed MT0188 Removed

MT0053 Installed K2480C Installed MT0167 Installed

ASL 2-10-13

LaSalle Meteorological Calibration

Date: 6/4/13

Dates of Last Wind Sensor Bearing Replacements:

	33 ft.	200 ft.	375 ft.
(6 mos.) Wind Speed:	6/4/13	6/4/13	6/4/13
(12 mos.) Wind Direction:	10-16-12	10-16-12	3-26-13

	33 ft.	200 ft.	375 ft.
Aspirators:	OK	OK	OK

Operation of De-Ice Heat Lamp System (Aug-Mar): NA

Operation of Rain Gauge: OK Tips Poured 5 Tips Recorded 5

UPS CHECK: OK

Debris screen: (In) Out Installed Removed

Tower Lighting	Good	Fair	Poor
Beacon	☑	☐	☐
Side lights	☑	☐	☐
Wiring	☑	☐	☐
Flasher	☑	☐	☐

Tower Condition	Good	Fair	Poor
Paint	☑	☐	☐
Shelter condition	☑	☐	☐

Note:
AF = As Found
AL = As Left
— = no change (AF=AL)

FS = Full Scale

Calibration Instruments:

	Next Cal Due
Psychrometer - S/N - #1	OCT 2013
Digital multimeter - S/N - 93120208	
Digital multimeter - S/N -	

Technicians: Mark Marx, Heather Diamond

Comments:

Signature: AD 7-10-13

System Response Check

Date: 6.4.13

Site: LaSalle
System: Microtel

Low Scale Check	33' WS	200' WS	375' WS	33' WD	200' WD	375' WD	33' T	200' ΔT	375' ΔT
Expected Response	20.0 ±0.4	20.0 ±0.4	20.0 ±0.4	108 ±2	108 ±2	108 ±2	6.80 ±0.7	-6.00 ±0.18	-6.00 ±0.18
As Found Response	19.9	19.9	19.9	108	108	108	6.7	-6.0	-6.0
As Left Response	—	—	—	—	—	—	—	—	—

Mid Scale Check	33' WS	200' WS	375' WS	33' WD	200' WD	375' WD	33' T	200' ΔT	375' ΔT
Expected Response	60.0 ±0.4	60.0 ±0.4	60.0 ±0.4	324 ±2	324 ±2	324 ±2	64.40 ±0.7	2.00 ±0.18	2.00 ±0.18
As Found Response	60.0	60.0	60.0	323	323	323	64.3	2.0	2.0
As Left Response	—	—	—	—	—	—	—	—	—

Full Scale Check	33' WS	200' WS	375' WS	33' WD	200' WD	375' WD	33' T	200' ΔT	375' ΔT
Expected Response	80.0 ±0.4	80.0 ±0.4	80.0 ±0.4	432 ±2	432 ±2	432 ±2	93.20 ±0.7	6.00 ±0.18	6.00 ±0.18
As Found Response	79.9	79.9	79.9	432	432	432	93.2	6.0	6.0
As Left Response	—	—	—	—	—	—	—	—	—

ASZ 7-10-13

System Response Check

Date: 6-4-13

Site: LaSalle
System: Process Computer

Low Scale Check	A847 375' WD	A848 200' WD	A849 375' WS	A850 200' WS	A851 375' ΔT	A852 33' WS	A853 33' WD	A854 33' T	A855 200' ΔT	A856 Precipitation
Expected Response	108 ±2	108 ±2	20.0 ±0.4	20.0 ±0.4	-4.00±0.18	20.0±0.4	108 ±2	6.80 ±0.7	-4.00±0.18	0.20 ±0.01
As Found Response	107.3	107.1	20.0	19.7	-4.0	20.2	107.8	6.8	-4.0	0.20
As Left Response	—	—	—	—	—	—	—	—	—	—

Mid Scale Check	A847 375' WD	A848 200' WD	A849 375' WS	A850 200' WS	A851 375' ΔT	A852 33' WS	A853 33' WD	A854 33' T	A855 200' ΔT	A856 Precipitation
Expected Response	324 ±2	324 ±2	60.0 ±0.4	60.0 ±0.4	8.00 ±0.18	60.0 ±0.4	324 ±2	64.40 ±0.7	8.00±0.18	0.60 ±0.01
As Found Response	324.3	323.0	59.9	59.7	7.9	60.1	323.7	64.2	7.9	0.60
As Left Response	—	—	—	—	—	—	—	—	—	—

Full Scale Check	A847 375' WD	A848 200' WD	A849 375' WS	A850 200' WS	A851 375' ΔT	A852 33' WS	A853 33' WD	A854 33' T	A855 200' ΔT	A856 Precipitation
Expected Response	432 ±2	432 ±2	80.0 ±0.4	80.0±0.4	14.00±0.18	80.0 ±0.4	432 ±2	93.20±0.7	14.00±0.18	0.80 ±0.01
As Found Response	432.2	431.2	79.8	79.8	13.9	80.1	431.9	93.0	13.9	0.80
As Left Response	—	—	—	—	—	—	—	—	—	—

ASL 7.10.13

System Response Check

Date: 6-4-13

Site: LaSalle
System: Control Room Indicators

Low Scale Check	200' WS	375' WS	200' WD	375' WD	375' ΔT
Expected Response	20.0 ±1.0	20.0 ±1.0	108 ±5.4	108 ±5.4	-4.00 ±0.3
As Found Response	20	20	110	110	-4.25
As Left Response	-	-	-	-	-

Mid Scale Check	200' WS	375' WS	200' WD	375' WD	375' ΔT
Expected Response	60.0 ±1.0	60.0 ±1.0	324 ±5.4	324 ±5.4	8.00 ±0.3
As Found Response	60	60	325	325	8.0
As Left Response	-	-	-	-	-

Full Scale Check	200' WS	375' WS	200' WD	375' WD	375' ΔT
Expected Response	80.0 ±1.0	80.0 ±1.0	432 ±5.4	432 ±5.4	14.00 ±0.3
As Found Response	81	81	435	435	14.0
As Left Response	-	-	-	-	-

AJL 7-10-13

LaSalle Meteorological Calibration

Date: 10-4-13

POWER SUPPLIES

+12.000V ± 0.120V	-12.000V ± 0.120V
A: +12.016 V	A: -12.026 V
B: +12.026 V	B: -12.012 V

Signal conditioners and Digital Recorder:

	Signal Conditioner Voltage Out			Digital recorder		Specifications	
	AF	AL	AL EQUIV	AF	AL	Signal Cond.	Recorder
			10 ft.				
PRCP LO	0.000 V	— V	0.000 "	0.00 "	— "	0.000V ± 0.050V	AL EQUIV ± 0.01"
PRCP HI	5.000 V	— V	1.060 "	1.00 "	— "	5.000V ± 0.050V	AL EQUIV ± 0.01"
			35 ft.				
WS ZERO	0.025 V	— V	0.5 mph	0.5 mph	— mph	0.025V ± 0.025V	AL EQUIV + .1mph
WS SPAN	2.490 V	2.500 V	50.0 mph	50.0 mph	— mph	2.500V ± 0.025V	AL EQUIV + .1mph
WD ZERO	0.000 V	— V	0.0 °	0 °	— °	0.000V ± 0.100V	AL EQUIV + 1°
WD SPAN	3.333 V	— V	360 °	360 °	— °	3.333V ± 0.100V	AL EQUIV + 1°
T ZERO	0.000 V	— V	-22.0 °	-22.01 °	— °	0.000V ± 0.050V	AL EQUIV + .1°F
T SPAN	5.000 V	— V	122.0 °	122.0 °	— °	5.000V ± 0.050V	AL EQUIV + .1°F
			200 ft.				
WS ZERO	0.025 V	— V	0.5 mph	0.5 mph	— mph	0.025V ± 0.025V	AL EQUIV + .1mph
WS SPAN	2.490 V	2.500 V	50.0 mph	50.0 mph	— mph	2.500V ± 0.025V	AL EQUIV + .1mph
WD ZERO	0.000 V	— V	0.0 °	0 °	— °	0.000V ± 0.100V	AL EQUIV + 1°
WD SPAN	3.333 V	— V	360 °	360 °	— °	3.333V ± 0.100V	AL EQUIV + 1°
ΔT_1 ZERO	0.000 V	— V	-10.0 °	-10.0 °	— °	0.000V ± 0.050V	AL EQUIV + .1°F
ΔT_1 SPAN	5.000 V	— V	10.0 °	10.0 °	— °	5.000V ± 0.050V	AL EQUIV + .1°F
ΔT_2 ZERO	0.000 V	— V				0.000V ± 0.050V	
ΔT_2 SPAN	5.000 V	— V				5.000V ± 0.050V	
			375 ft.				
WS ZERO	0.025 V	— V	0.5 mph	0.5 mph	— mph	0.025V ± 0.025V	AL EQUIV + .1mph
WS SPAN	2.490 V	2.500 V	50.0 mph	50.0 mph	— mph	2.500V ± 0.025V	AL EQUIV + .1mph
WD ZERO	0.000 V	— V	0.0 °	0 °	— °	0.000V ± 0.100V	AL EQUIV + 1°
WD SPAN	3.333 V	— V	360 °	360 °	— °	3.333V ± 0.100V	AL EQUIV + 1°
ΔT_1 ZERO	0.000 V	— V	-10.0 °	-10.0 °	— °	0.000V ± 0.050V	AL EQUIV + .1°F
ΔT_1 SPAN	4.995 V	5.000 V	10.0 °	10.0 °	— °	5.000V ± 0.050V	AL EQUIV + .1°F
ΔT_2 ZERO	0.000 V	— V				0.000V ± 0.050V	
ΔT_2 SPAN	5.000 V	— V				5.000V ± 0.050V	

ASL 11-2-13

LaSalle Meteorological Calibration

Date: 10-4-13

TOWER MEASUREMENTS

☒ Ambient ☐ Ice Bath

Temperatures

	33 ft. Amb. AF	33 ft. Amb. AL	200 ft. ΔT, AF	200 ft. ΔT, AL	375 ft. ΔT, AF	375 ft. ΔT, AL
Measured	69.75 °F	— °F	-1.70 °F	— °F	-2.71 °F	— °F
Recorded	69.80 °F	— °F	-1.70 °F	— °F	-2.70 °F	— °F
Difference	0.05 °F	— °F	0.0 °F	— °F	0.01 °F	— °F
Specification	±0.5°F		±0.18°F		±0.18°F	

Winds

	33 ft. AF	33 ft. AL	200 ft. AF	200 ft. AL	375 ft. AF	375 ft. AL	*Specification*
WS stall	0.5 mph	0.5 mph	0.5 mph	0.5 mph	0.5 mph	0.5 mph	0.5mph ± 0.45mph
Forw. WD	360 °	358 °	359 °	357 °	361 °	— °	0°/360° ± 5°
Revr. WD	181 °	178 °	180 °	178 °	179 °	— °	180°/540° ± 5°
Tracking/wear	OK		OK		OK		

Comments:

33ft.

Removed WS MT0053
Installed WS MT0166
Removed WD MT0160
Installed WD MT0181

200ft.

Removed WS K2480C
Installed WS MT0087
Removed WD MT0083
Installed WD MT0161

375ft.

Removed WS MT0167
Installed WS MT0164

ADL 11-12-13

LaSalle Meteorological Calibration

Date: 10-4-13

Dates of Last Wind Sensor Bearing Replacements:

	33 ft.	200 ft.	375 ft.
(6 mos.) Wind Speed:	10-4-13	10-4-13	10-4-13
(12 mos.) Wind Direction:	10-4-13	10-4-13	3-26-13

	33 ft.	200 ft.	375 ft.
Aspirators:	OK	OK	OK

Operation of De-Ice Heat Lamp System (Aug-Mar): OK

Operation of Rain Gauge: * OK AL. Tips Poured 5 Tips Recorded 5

UPS CHECK: OK

Debris screen: (In) Out Installed Removed

Tower Lighting	Good	Fair	Poor
Beacon	☒	☐	☐
Side lights	☒	☐	☐
Wiring	☒	☐	☐
Flasher	☒	☐	☐

Tower Condition	Good	Fair	Poor	
Paint	☒	☐	☐	
Shelter condition	☐	☐	☒	**

Note:
AF = As Found
AL = As Left
— = no change (AF=AL)

FS = Full Scale

Calibration Instruments:

	Next Cal Due
Psychrometer - S/N - #1	OCT 2013
Digital multimeter - S/N - 90150039	NOV 2013
Digital multimeter - S/N -	

Technicians: Mike Mark, Heather Cramond

Comments: * DRAIN SLOW- CLEANED NOW OK

** DEAD MICE IN SHELTER SMELLS REAL BAD

** Notified site contact

Signature: [signature]

ASL 11-12-13

System Response Check

Date: 10-4-13

Site: LaSalle
System: Microtel

Low Scale Check	33' WS	200' WS	375' WS	33' WD	200' WD	375' WD	33' T	200' ΔT	375' ΔT
Expected Response	20.0 ±0.4	20.0 ±0.4	20.0 ±0.4	108 ±2	108 ±2	108 ±2	6.80 ±0.7	-6.00 ±0.18	-6.00 ±0.18
As Found Response	19.8	19.8	19.8	107	107	107	6.6	-6.0	-6.0
As Left Response	—	—	—	—	—	—	—	—	—

Mid Scale Check	33' WS	200' WS	375' WS	33' WD	200' WD	375' WD	33' T	200' ΔT	375' ΔT
Expected Response	60.0 ±0.4	60.0 ±0.4	60.0 ±0.4	324 ±2	324 ±2	324 ±2	64.40 ±0.7	2.00 ±0.18	2.00 ±0.18
As Found Response	59.9	59.9	59.9	324	324	324	64.3	2.0	2.0
As Left Response	—	—	—	—	—	—	—	—	—

Full Scale Check	33' WS	200' WS	375' WS	33' WD	200' WD	375' WD	33' T	200' ΔT	375' ΔT
Expected Response	80.0 ±0.4	80.0 ±0.4	80.0 ±0.4	432 ±2	432 ±2	432 ±2	93.20 ±0.7	6.00 ±0.18	6.00 ±0.18
As Found Response	79.9	79.9	79.9	432	433	431	93.0	6.0	6.0
As Left Response	—	—	—	—	—	—	—	—	—

BSZ 11-12-13

System Response Check

Date: 10-4-13

Site: LaSalle
System: Process Computer

Low Scale Check	A847 375' WD	A848 200' WD	A849 375' WS	A850 200' WS	A851 375' ΔT	A852 33' WS	A853 33' WD	A854 33' T	A855 200' ΔT	A856 Precipitation
Expected Response	108 ±2	108 ±2	20.0 ±0.4	20.0 ±0.4	-4.00±0.18	20.0±0.4	108 ±2	6.80 ±0.7	-4.00±0.18	0.20 ±0.01
As Found Response	108.0	107.3	20.0	19.9	-4.0	20.2	108.0	6.8	-4.0	0.20
As Left Response	—	—	—	—	—	—	—	—	—	—

Mid Scale Check	A847 375' WD	A848 200' WD	A849 375' WS	A850 200' WS	A851 375' ΔT	A852 33' WS	A853 33' WD	A854 33' T	A855 200' ΔT	A856 Precipitation
Expected Response	324 ±2	324 ±2	60.0 ±0.4	60.0 ±0.4	8.00 ±0.18	60.0 ±0.4	324 ±2	64.40 ±0.7	8.00±0.18	0.60 ±0.01
As Found Response	323.6	322.7	59.8	60.2	8.0	60.1	323.8	64.2	8.0	0.60
As Left Response										

Full Scale Check	A847 375' WD	A848 200' WD	A849 375' WS	A850 200' WS	A851 375' ΔT	A852 33' WS	A853 33' WD	A854 33' T	A855 200' ΔT	A856 Precipitation
Expected Response	432 ±2	432 ±2	80.0 ±0.4	80.0±0.4	14.00±0.18	80.0 ±0.4	432 ±2	93.20±0.7	14.00±0.18	0.80 ±0.01
As Found Response	433.0	431.8	79.9	80.5	14.0	80.1	432.5	93.2	14.0	0.80
As Left Response	—	—	—	80.2	—	—	—	—	—	.

MJT 11-12-13

System Response Check

Date: 10-4-13

Site: LaSalle
System: Control Room Indicators

Low Scale Check	200' WS	375' WS	200' WD	375' WD	375' ΔT
Expected Response	20.0 ±1.0	20.0 ±1.0	108 ±5.4	108 ±5.4	-4.00 ±0.3
As Found Response	21	20	110	110	-4.0
As Left Response	~	~	~	~	~

Mid Scale Check	200' WS	375' WS	200' WD	375' WD	375' ΔT
Expected Response	60.0 ±1.0	60.0 ±1.0	324 ±5.4	324 ±5.4	8.00 ±0.3
As Found Response	60	60	325	325	8.0
As Left Response	~	~	~	~	~

Full Scale Check	200' WS	375' WS	200' WD	375' WD	375' ΔT
Expected Response	80.0 ±1.0	80.0 ±1.0	432 ±5.4	432 ±5.4	14.00 ±0.3
As Found Response	81	81	435	430	14.0
As Left Response	~	~	~	~	~

ASL 11-12-13

RAI # MA-01

ATTACHMENT 5

Annual Report
on the
Meteorological Monitoring Program
at the
LaSalle County Nuclear Power Station
2014

prepared for

Exelon Nuclear
Warrenville, IL 60555

by

Murray and Trettel, Incorporated
600 First Bank Drive, Suite A
Palatine, IL 60067
(847) 963-9000
e-mail: mt@weathercommand.com

For Exelon Use Only

Reviewed By: _____

Date: 6/22/15

Table of Contents

List of Tables

1. Introduction

The purpose of the meteorological program being conducted at the LaSalle County Station site is to provide information sufficient to assess the local weather conditions and to determine the degree of atmospheric dispersion of airborne radioactive effluent from the station.

The meteorological tower is 400 ft. high and is instrumented at three levels. Wind speed and direction are measured at 33 ft., 200 ft., and 375 ft. Ambient temperature is measured at 33 ft. Differential temperatures, referenced to 33 ft., are measured at 200 ft. and 375 ft. Precipitation is measured at approximately 10 ft.

Joint frequency stability wind rose tables of wind direction, wind speed, and stability are routinely tabulated from hourly measurements. The quarterly and annual tables are included in this report.

Descriptions of the instruments and digital recorder are given in Section 3 (Data Acquisition) of this report. Data reduction and processing are described in Section 4 (Data Analysis). The results given in Section 5 of this report include modeled maximum whole body doses, skin doses, organ doses based upon airborne releases, and site meteorology.

2. Summary

The LaSalle Station meteorological monitoring program produced 78,722 hours of valid data out of a possible 78,840 parameter hours during 2014 (365 days x 24 hours/day x 9 measured priority parameters), which represents an overall data recovery rate of 99.9%. Priority parameters are all parameters except precipitation.

The stability wind rose tables included in this report have been generated using the 375 ft. wind data with the 375-33 ft. differential temperature data.

The maximum annual calculated cumulative doses resulting from airborne releases were as follows.

LaSalle County Generating Station:

gamma air dose	-	5.380×10^{-3} mrad
beta air dose	-	1.930×10^{-3} mrad
whole body dose	-	2.220×10^{-2} mrem
skin dose	-	5.570×10^{-3} mrem
organ (infant thyroid)	-	$4.170 \times 10^{+0}$ mrem

3. Data Acquisition

Wind speed and direction are measured with Climatronics F460 wind sensors. The wind speed sensors have a starting speed of 0.5 mph (0.22 mps), a range of 0 to 100 mph (0 to 44.7 mps), and a system accuracy of ±1.0 mph at 100 mph (±0.45 mps at 44.7 mps). The wind direction sensors have a threshold speed of 0.5 mph (0.22 mps), a range of 0 to 540°, and a system accuracy of ±5°.

Ambient and differential temperature are measured with the Climatronics 100093 system. Ambient temperature is measured within the range of -22 to 122°F (-30 to 50°C) with an accuracy of ±0.5°F (±0.3°C). Differential temperature is measured within the range of -10 to 10°F (-5.6 to 5.6°C) with an accuracy of ±0.18°F (±0.10°C).

Precipitation is measured with a Climatronics 100097 tipping bucket rain gauge and is measured in increments of one one-hundredth of an inch with a system accuracy of ±1% for rain rates of 1-3"/hr and ±3% for rain rates of 3-6"/hr.

Instrument types and locations are summarized in Table 1.

The meteorological data are collected and stored by a Microtel 4.0 data acquisition system. The Microtel measures the analog voltages of the instruments and records the digital equivalent within the range of 0 to +5 volts. The Microtel has the capability of storing 24 hours of minute data and one week of hourly data. Data are obtained from the Microtel by a direct dial telephone hookup to an in-house computer system. Data are sampled every second.

As a backup to the Microtel, data are also recorded with a Johnson Yokogawa Corp. digital recorder (JYC DA100 data acquisition unit and Contec IPC-PT/M300(PC)WOU PC). Data are sampled every 10 seconds.

Data loggers are summarized in Table 2.

Table 1

Instrument Locations

Measurement	Sensor Type	Location	Elevation
Wind Speed	Climatronics 100075 F460	Tower	375 ft.
Wind Direction	Climatronics 100076 F460	Tower	375 ft.
Differential Temperature	Climatronics 100093	Tower	375 ft.
Wind Speed	Climatronics 100075 F460	Tower	200 ft.
Wind Direction	Climatronics 100076 F460	Tower	200 ft.
Differential Temperature	Climatronics 100093	Tower	200 ft.
Wind Speed	Climatronics 100075 F460	Tower	33 ft.
Wind Direction	Climatronics 100076 F460	Tower	33 ft.
Ambient Temperature	Climatronics 100093	Tower	33 ft.
Precipitation	Climatronics 100097-1 Tipping Bucket Rain Gage	Meteorological shelter roof	10 ft.

Table 2

Data Loggers

Measurement	Logger Type	Sampling Frequency
Winds, Temperatures, and Precipitation	Microtel 4.0 data acquisition system	1 sec.
Winds, Temperatures, and Precipitation	Johnson Yokogawa Corp. Digital Recorder (JYC DA100 and Contec IPC-PT/M300(PC)WOU) digital recorder	10 sec.

4. Data Analysis

The LaSalle Microtel is routinely interrogated to obtain hourly average data. The data are then stored in the meteorological data base and listings of the data are generated. The data listings are examined by qualified personnel and any apparent problems are brought to the attention of the Project Manager or Meteorological Technician and the Instrument Maintenance staff.

Hourly values of wind speed, wind direction, ambient temperature, differential temperature, and precipitation are obtained through measurements taken at the site. The standard deviation of wind direction (sigma) is derived. The wind direction variation is described in terms of the standard deviation of the direction about the mean direction. The Microtel computes an hourly value of wind sigma by taking the Root-Mean-Square (RMS) of the four quarter-hour wind sigma values. The Microtel quarter-hour wind sigma values are calculated directly from the one second wind direction samples during the 15 minute period.

The data base files are edited approximately once a week. Missing Microtel values are replaced with digital recorder values, when available. Invalid data are deleted from the data base.

When an hourly value is missing or invalid, the numeral 999 is entered into the computer data file in the appropriate location. When the wind direction changes substantially relative to its short term fluctuations, the numeral 888 can be entered into the wind sigma location to indicate shifting winds. When the wind blows with velocities near the sensing threshold of the instrument, the numeral 777 can be entered into the wind direction, wind speed, and wind sigma locations to indicate light and variable winds.

A professional meteorologist reviews the data, calibration findings, equipment maintenance reports, and other information and determines which data are valid. Only the valid data are retained in the data base.

As a quality control measure, a monthly comparison is made of Microtel and digital recorder data. An investigation is made into the reasons for any significant differences between the sets of values.

Joint frequency stability wind rose tables of hourly data measured at the site are generated. These tables indicate the prevailing wind direction, wind speed, and stability classes measured during the period of observation as well as the joint frequencies of occurrence of the wind direction, wind speed, and stability classes. The values are also used as input to the atmospheric transport and diffusion models. Wind direction, wind speed, and stability classes are given in Tables 3, 4, and 5.

Table 3

Wind Direction Classes

IF	348.75°	<	WD	≤	11.25°	THEN	Class is	N
IF	11.25°	<	WD	≤	33.75°	THEN	Class is	NNE
IF	33.75°	<	WD	≤	56.25°	THEN	Class is	NE
IF	56.25°	<	WD	≤	78.75°	THEN	Class is	ENE
IF	78.75°	<	WD	≤	101.25°	THEN	Class is	E
IF	101.25°	<	WD	≤	123.75°	THEN	Class is	ESE
IF	123.75°	<	WD	≤	146.25°	THEN	Class is	SE
IF	146.25°	<	WD	≤	168.75°	THEN	Class is	SSE
IF	168.75°	<	WD	≤	191.25°	THEN	Class is	S
IF	191.25°	<	WD	≤	213.75°	THEN	Class is	SSW
IF	213.75°	<	WD	≤	236.25°	THEN	Class is	SW
IF	236.25°	<	WD	≤	258.75°	THEN	Class is	WSW
IF	258.75°	<	WD	≤	281.25°	THEN	Class is	W
IF	281.25°	<	WD	≤	303.75°	THEN	Class is	WNW
IF	303.75°	<	WD	≤	326.25°	THEN	Class is	NW
IF	326.25°	<	WD	≤	348.75°	THEN	Class is	NNW

Table 4

Wind Speed Classes

IF	0.0 mph	<	WS	≤	0.5 mph	THEN	Class is	1
IF	0.5 mph	<	WS	≤	3.5 mph	THEN	Class is	2
IF	3.5 mph	<	WS	≤	7.5 mph	THEN	Class is	3
IF	7.5 mph	<	WS	≤	12.5 mph	THEN	Class is	4
IF	12.5 mph	<	WS	≤	18.5 mph	THEN	Class is	5
IF	18.5 mph	<	WS	≤	24.5 mph	THEN	Class is	6
IF	24.5 mph	<	WS			THEN	Class is	7

Table 5

Atmospheric Stability Classes

Class	Differential Temperature Interval (in °C/100m) [1]	Differential Temperature Interval (in °F over the 200-33ft. range) [2]	Differential Temperature Interval (in °F over the 375-33ft. range) [2]
Extremely Unstable	$\Delta T \leq -1.9$	$\Delta T \leq -1.8$	$\Delta T \leq -3.6$
Moderately Unstable	$-1.9 < \Delta T \leq -1.7$	$-1.8 < \Delta T \leq -1.6$	$-3.6 < \Delta T \leq -3.2$
Slightly Unstable	$-1.7 < \Delta T \leq -1.5$	$-1.6 < \Delta T \leq -1.4$	$-3.2 < \Delta T \leq -2.9$
Neutral	$-1.5 < \Delta T \leq -0.5$	$-1.4 < \Delta T \leq -0.5$	$-2.9 < \Delta T \leq -1.0$
Slightly Stable	$-0.5 < \Delta T \leq 1.5$	$-0.5 < \Delta T \leq 1.3$	$-1.0 < \Delta T \leq 2.8$
Moderately Stable	$1.5 < \Delta T \leq 4.0$	$1.3 < \Delta T \leq 3.6$	$2.8 < \Delta T \leq 7.5$
Extremely Stable	$4.0 < \Delta T$	$3.6 < \Delta T$	$7.5 < \Delta T$

[1] from ANSI/ANS 2.5
[2] ANSI/ANS 2.5 intervals scaled for instrument heights on the LaSalle meteorological tower

The following two programs were used to calculate doses resulting from radioactive releases:

1. XOQDOQ: Computer Program for the Meteorological Evaluation of Routine Effluent Releases at Nuclear Power Stations (NUREG/CR-2919).

The program is based on the theory that material released to the atmosphere will be normally distributed (Gaussian) about the plume centerline. A straight-line trajectory is assumed between the point of release and all receptors.

The program implements the assumptions outlined in Section C of NRC Regulatory Guide 1.111. In evaluating routine releases from nuclear power plants, it primarily is designed to calculate annual relative effluent concentrations, X/Q values and annual average relative deposition, D/Q values.

Output from the XOQDOQ program is used as input to the GASPAR program.

2. GASPAR II: A Code System for Evaluation of Radiological Impacts Due to the Release of Radioactive Material to the Atmosphere During Normal Operation of Light Water Reactors (NUREG-0597).

GASPAR is a program written for the evaluation of radiological impacts due to the release of radioactive material to the atmosphere during normal operation of reactors. The GASPAR code implements the radiological impact models of NRC Regulatory Guide 1.109, Revision 1, for atmospheric releases. The program is used to estimate the maximum individual doses at selected locations in the vicinity of the plant.

5. Results

5.1 Instrument Maintenance

The maintenance program followed during 2014 was composed of routinely scheduled visits, preventative maintenance procedures, and equipment repairs. Routine monthly visits were made to inspect the sensing and recording systems for proper operation. In addition, routine maintenance and calibration checks of all tower-mounted and ground level equipment were performed every four months. A description of the calibration and field procedures is found in the Murray and Trettel, Inc. "P1009 Procedures Manual" (October 2013).

In May, the annual tower inspection was performed.

In June, the rain gauge was inspected due to lower than expected readings. The gauge was found to be in proper working order.

In July, the 33 ft. wind direction was replaced due to bad readings.

In October, M&T technicians were on-site in support of an audit by the NRC

In November, the uninterruptible power supply failed. A new unit was installed. Also in November, the digital recorder was unreachable by modem. The unit was rebooted to restore communication.

In December, the digital recorder was found with a frozen screen. The unit was rebooted to restore operation.

No other significant problems were encountered with the equipment, and at the end of the annual period, no problems were evident at the site.

5.2 Data Recovery

The record of data recovery for the year is summarized in Table 6.

Table 6

LaSalle Site

Data Recovery Summary

2014

Measurement	Elevation	Recovered Hours	Recovered Percent	Lost Hours	Percent Changed
Wind Speed	33 ft.	8750	99.9	10	0.0
Wind Speed	200 ft.	8750	99.9	10	0.0
Wind Speed	375 ft.	8745	99.8	15	0.1
Wind Direction	33 ft.	8722	99.6	38	0.9
Wind Direction	200 ft.	8751	99.9	9	0.4
Wind Direction	375 ft.	8751	99.9	9	0.2
Ambient Temperature	33 ft.	8751	99.9	9	0.0
Differential Temperature	200-33 ft.	8751	99.9	9	0.3
Differential Temperature	375-33 ft.	8751	99.9	9	0.7
Precipitation	10 ft.	8687	99.2	73	1.0
AVERAGE*			99.9		

* average of priority parameters (all except precipitation)

	Valid Hours	Recovered Percent	Lost Hours
Lower Level Joint Frequency %	8721	99.6	39
Middle Level Joint Frequency %	8750	99.9	10
Upper Level Joint Frequency %	8745	99.8	15

5.3 Summary of Billings for Equipment Repairs, Replacement Parts, and Other Work not Included in Fixed-Cost Maintenance Agreement - **2014**
Description - LaSalle

	Cost
January	
-none-	0.00
February	
Meteorological equipment maintenance	60.00
Meteorological parts, materials, and contractor services	40.59
March	
Meteorological parts, materials, and contractor services	95.38
April	
Meteorological parts, materials, and contractor services	358.49
2013-2014 Heat Lamp Activation	118.80
May	
Meteorological equipment maintenance	150.00
June	
Meteorological equipment maintenance	309.44
Meteorological parts, materials, and contractor services	54.62
July	
Meteorological equipment maintenance	955.70
Meteorological parts, materials, and contractor services	61.09
August	
Meteorological parts, materials, and contractor services	38.96
September	
Meteorological parts, materials, and contractor services	936.16
October	
Meteorological equipment maintenance	330.00
Meteorological parts, materials, and contractor services	34.03
Special Request	2,185.06
November	
Meteorological equipment maintenance	528.20
Meteorological parts, materials, and contractor services	194.82
December	
-none-	0.00

Annual Total: $ 6,451.34

5.4 Stability Wind Rose Data

The quarterly and annual stability wind roses are given in Tables 7 through 11. Wind speed classes have been altered to reflect the sensor threshold.

For the year, winds measured at 375 ft. most frequently came from the West-Northwest (11.06%) and fell into the 12.6-18.5 mph wind speed class (30.39%). Calms (wind speeds at or below the sensor threshold) were measured 0.02% of the time and speeds greater than 24.5 mph were measured 16.29% of the time.

Stability based on the 375-33 ft. differential temperature most frequently fell into the neutral classification (52.43%).

TABLE 7

LaSalle County Generating Statio
375 ft. Wind Speed and Direction

January-March, 2014
375Ft-33Ft Delta-T (F)

Number of Observations = 2157
Values are Percent Occurrence

SPEED	WIND DIRECTION CLASSES																	STABILITY CLASSES							
CLASS	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL	EU	MU	SU	N	SS	MS	ES	TOTAL
	EU 0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
	MU 0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00						
C	SU 0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00					
A	N 0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				0.00				
L	SS 0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00					0.00			
M	MS 0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00		
	ES 0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00	
																									0.00
	EU 0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
	MU 0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00						
1	SU 0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00					
	N 0.05	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.05	0.00	0.05	0.00	0.00	0.05	0.23				0.23				
2	SS 0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.03	0.05	0.09	0.05	0.00	0.00	0.00	0.00	0.00	0.32					0.32			
	MS 0.05	0.09	0.00	0.05	0.05	0.00	0.00	0.05	0.00	0.00	0.09	0.05	0.00	0.09	0.05	0.00	0.56						0.56		
	ES 0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00	
																									1.11
	EU 0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
	MU 0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00						
4	SU 0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00					
-	N 0.23	0.19	0.14	0.14	0.05	0.14	0.05	0.00	0.05	0.05	0.14	0.19	0.09	0.28	0.46	0.23	2.41				2.41				
7	SS 0.19	0.28	0.05	0.14	0.09	0.09	0.09	0.09	0.14	0.14	0.09	0.14	0.00	0.00	0.09	0.14	1.76					1.76			
	MS 0.09	0.00	0.05	0.09	0.05	0.05	0.05	0.09	0.14	0.09	0.05	0.00	0.05	0.00	0.05	0.05	0.28						0.68		
	ES 0.05	0.00	0.00	0.00	0.05	0.05	0.05	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23							0.23	
																									5.29
	EU 0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
	MU 0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00						
8	SU 0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.14			0.14					
-	N 0.42	0.56	0.23	0.37	0.05	0.19	0.23	0.60	0.79	0.37	0.37	0.28	0.28	0.56	1.44	0.74	7.46				7.46				
1	SS 0.14	0.23	0.42	0.37	0.32	0.19	0.23	0.19	0.37	0.14	0.42	0.28	0.56	0.32	0.42	0.46	5.05					5.05			
2	MS 0.14	0.14	0.05	0.00	0.05	0.05	0.09	0.00	0.09	0.09	0.00	0.05	0.00	0.05	0.05	0.14	0.97						0.97		
	ES 0.05	0.00	0.05	0.00	0.00	0.00	0.14	0.14	0.05	0.09	0.00	0.00	0.00	0.00	0.00	0.09	0.60							0.60	
																									14.23
	EU 0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
1	MU 0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00						
3	SU 0.00	0.05	0.05	0.00	0.00	0.00	0.05	0.00	0.14	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.37			0.37					
-	N 1.58	0.56	0.70	1.21	0.32	0.51	0.23	0.56	1.07	0.74	0.79	0.51	1.90	1.81	3.25	1.21	16.92				16.92				
1	SS 0.23	0.09	0.19	0.32	0.19	0.14	0.23	0.00	0.23	0.46	0.46	0.65	1.10	1.02	1.07	0.32	6.91					6.91			
8	MS 0.09	0.05	0.05	0.00	0.14	0.05	0.19	0.05	0.56	0.05	0.32	0.09	0.19	0.19	0.14	0.14	2.27						2.27		
	ES 0.09	0.09	0.00	0.00	0.00	0.00	0.00	0.32	0.42	0.14	0.19	0.00	0.05	0.00	0.05	0.09	1.44							1.44	
																									27.91

TABLE 7
continued

LaSalle County Generating Statio
375 ft. Wind Speed and Direction

January-March. 2014
375Ft-33Ft Delta-T (F)

SPEED	WIND DIRECTION CLASSES																STABILITY CLASSES							
CLASS	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL	EU	MU	SU	N	SS	MS	ES	TOTAL
EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
1 MU	0.00	0.14	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19		0.19						
9 SU	0.00	0.05	0.05	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05	0.00	0.00	0.28			0.28					
- N	1.62	0.60	0.88	0.97	0.28	0.19	0.46	0.51	0.51	0.32	0.28	0.51	0.97	1.85	1.21	1.76	12.93				12.93				
2 SS	0.37	0.09	0.00	0.05	0.09	0.28	0.19	0.51	0.56	0.32	0.47	0.42	0.56	2.23	0.83	0.19	7.09					7.09			
4 MS	0.05	0.05	0.00	0.00	0.05	0.09	0.09	0.09	0.14	0.09	0.14	0.32	0.65	0.09	0.65	0.28	2.78						2.78		
ES	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.14	0.14	0.09	0.00	0.00	0.00	0.00	0.00	0.51							0.51	
																									23.78
EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
G MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00						
T SU	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.09	0.00	0.19			0.19					
N	0.83	0.10	1.02	0.09	0.00	0.19	0.42	0.26	1.34	0.88	1.30	0.93	1.02	1.53	1.30	0.37	11.68				11.68				
2 SS	0.00	0.00	0.00	0.00	0.05	0.23	0.19	0.32	2.50	1.44	1.39	0.93	1.39	3.94	0.70	0.00	13.07					13.07			
4 MS	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.05	0.37	0.88	0.51	0.46	0.23	0.09	0.00	0.00	2.61						2.61		
ES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09							0.09	
																									27.60
TOT	6.35	3.43	3.99	3.94	1.81	2.46	3.01	3.99	9.92	6.68	7.14	5.80	9.32	14.09	11.02	6.26	100.00	0.00	0.19	0.47	51.65	34.21	10.11	2.87	100.00

Wind Direction by Stability

N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL	-STABILITY CLASSES-
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Extremely Unstable
0.00	0.14	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19	Moderately Unstable
0.00	0.09	0.14	0.09	0.00	0.00	0.05	0.00	0.28	0.14	0.00	0.00	0.05	0.05	0.09	0.00	0.97	Slightly Unstable
4.73	2.09	2.97	2.78	0.70	1.21	1.44	1.95	3.76	2.36	2.92	2.41	4.31	6.03	7.65	4.36	51.65	Neutral
0.93	0.70	0.65	0.93	0.74	0.93	0.93	1.21	3.85	2.60	2.83	2.41	3.80	7.51	3.11	1.11	34.21	Slightly Stable
0.42	0.32	0.14	0.14	0.12	0.28	0.42	0.32	1.30	1.21	1.11	0.97	1.11	0.51	0.93	0.60	10.11	Moderately Stable
0.28	0.09	0.05	0.00	0.05	0.05	0.19	0.51	0.74	0.37	0.28	0.00	0.05	0.00	0.05	0.19	2.87	Extremely Stable

Wind Direction by Wind Speed

N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL	-WIND SPEED CLASSES-
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CALM
0.09	0.09	0.00	0.09	0.05	0.00	0.05	0.14	0.05	0.09	0.19	0.05	0.05	0.09	0.05	0.05	1.11	< 3.5 mph
0.56	0.46	0.23	0.37	0.23	0.32	0.23	0.19	0.37	0.20	0.28	0.32	0.14	0.28	0.60	0.42	5.29	3.6 - 7.5 mph
0.74	0.92	0.74	0.74	0.42	0.42	0.70	0.93	1.39	0.74	0.79	0.60	0.83	0.93	1.90	1.44	14.23	7.6 - 12.5 mph
1.99	0.83	0.97	1.53	0.65	0.70	0.70	0.93	2.41	1.48	1.76	1.25	3.43	3.01	4.50	1.76	27.91	12.6 - 18.5 mph
2.13	0.93	0.97	1.11	0.42	0.56	0.74	1.16	1.34	0.88	0.93	1.25	2.23	4.22	2.09	2.23	23.78	18.6 - 24.5 mph
0.83	0.19	1.02	0.09	0.05	0.46	0.60	0.65	4.36	3.20	3.20	2.32	2.64	5.56	2.09	0.37	27.68	> 24.5 mph

TABLE 8

LaSalle County Generating Statio
375 ft. Wind Speed and Direction

April-June, 2014
375Ft-33Ft Delta-T (F)

Number of Observations = 2184
Values are Percent Occurrence

SPEED	WIND DIRECTION CLASSES																	STABILITY CLASSES							
CLASS	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL	EU	MU	SU	N	SS	MS	ES	TOTAL
	EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
	MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00						
C	SU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00					
A	N	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05				0.05				
L	SS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00					0.00			
M	MS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00		
	ES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00	
																										0.05
	EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
	MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00						
1	SU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00					
	N	0.00	0.00	0.05	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.05	0.00	0.05	0.00	0.00	0.00	0.18				0.18				
3	SS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.09	0.14					0.14			
	MS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.09						0.09		
	ES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00	
																										0.41
	EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
	MU	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05		0.05						
4	SU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00					
-	N	0.27	0.37	0.41	0.60	0.41	0.14	0.32	0.00	0.18	0.18	0.41	0.27	0.18	0.23	0.27	0.14	4.40				4.40				
7	SS	0.05	0.23	0.09	0.05	0.05	0.00	0.09	0.18	0.09	0.09	0.05	0.32	0.18	0.05	0.18	0.05	1.74					1.74			
	MS	0.00	0.09	0.05	0.05	0.05	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.37						0.37		
	ES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05	0.00	0.00	0.00	0.00	0.00	0.09							0.09	
																										6.64
	EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
	MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00						
8	SU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00					
-	N	0.87	0.64	0.55	1.14	1.14	0.37	0.41	0.60	0.96	0.55	0.73	0.55	0.69	1.19	1.05	0.60	12.04				12.04				
1	SS	0.32	0.18	0.50	0.73	0.82	0.23	0.18	0.18	0.14	0.23	0.14	0.18	0.27	0.32	0.27	0.14	4.85					4.85			
2	MS	0.09	0.00	0.00	0.00	0.00	0.14	0.14	0.37	0.23	0.09	0.09	0.14	0.05	0.23	0.09	0.00	1.65						1.65		
	ES	0.00	0.09	0.00	0.00	0.00	0.00	0.05	0.05	0.18	0.00	0.00	0.18	0.00	0.00	0.00	0.00	0.55							0.55	
																										19.09
	EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
1	MU	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09		0.09						
3	SU	0.00	0.00	0.00	0.14	0.00	0.00	0.00	0.00	0.09	0.05	0.00	0.05	0.05	0.09	0.00	0.05	0.50			0.50					
-	N	0.55	1.01	1.33	1.79	0.87	0.41	0.69	1.01	1.47	1.56	1.51	1.83	1.51	0.87	0.96	1.65	19.00				19.00				
1	SS	0.27	0.09	0.50	0.69	0.82	0.60	0.73	0.37	0.50	0.64	0.73	0.55	0.27	0.82	0.87	0.50	8.97					8.97			
8	MS	0.05	0.00	0.05	0.00	0.05	0.73	0.46	0.18	0.73	0.09	0.23	0.00	0.00	0.27	0.46	0.18	3.48						3.48		
	ES	0.00	0.05	0.00	0.00	0.00	0.00	0.14	0.05	0.05	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.32							0.32	
																										32.37

TABLE 8
continued

LaSalle County Generating Statio
375 ft. Wind Speed and Direction

April-June, 2014
375Ft-33Ft Delta-T (F)

SPEED	WIND DIRECTION CLASSES																	STABILITY CLASSES							
CLASS	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL	EU	MU	SU	N	SS	MS	ES	TOTAL
EU	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05							
1 MU	0.00	0.00	0.14	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.05	0.00	0.00	0.00	0.00	0.23		0.23						
9 SU	0.00	0.00	0.00	0.09	0.09	0.00	0.00	0.00	0.00	0.00	0.05	0.14	0.00	0.00	0.00	0.00	0.37			0.37					
- N	0.55	0.18	0.82	2.34	0.55	0.18	0.05	0.46	0.64	0.78	0.96	1.10	1.10	0.82	0.64	1.24	12.41				12.41				
2 SS	0.18	0.05	0.32	0.82	0.69	0.32	0.23	0.73	1.19	1.14	0.82	0.87	0.50	0.50	0.37	0.50	9.25					9.25			
4 MS	0.09	0.00	0.00	0.00	0.18	0.09	0.09	0.18	0.50	0.27	0.27	0.00	0.05	0.05	0.14	0.14	2.06						2.06		
ES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.09	0.05	0.00	0.00	0.00	0.00	0.00	0.18							0.18	
																									24.54
EU	0.00	0.00	0.00	0.05	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.09	0.00	0.00	0.00	0.27	0.27							
G MU	0.00	0.00	0.00	0.14	0.05	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.23		0.23						
T SU	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.14	0.05	0.14	0.00	0.09	0.27	0.00	0.00	0.00	0.73			0.73					
N	0.00	0.09	0.14	0.87	0.96	0.64	0.18	0.78	0.82	1.05	0.37	0.46	0.64	0.41	0.05	0.18	7.65				7.65				
2 SS	0.05	0.00	0.00	0.05	0.96	0.27	0.14	0.60	1.60	1.05	0.41	0.05	0.37	0.14	0.00	0.09	5.77					5.77			
4 MS	0.00	0.00	0.00	0.00	0.00	0.09	0.23	0.73	0.23	0.60	0.05	0.00	0.00	0.00	0.00	0.00	1.92						1.92		
ES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05	0.14	0.05	0.00	0.00	0.00	0.00	0.00	0.27							0.27	
																									16.05
TOT	3.34	3.07	4.95	9.66	7.88	4.26	4.12	6.68	9.80	8.88	7.05	6.87	6.32	6.04	5.36	5.63	99.95	0.32	0.60	1.60	55.72	30.72	9.57	1.42	99.95

Wind Direction by Stability

N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL	-STABILITY CLASSES-
0.00	0.00	0.00	0.09	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.09	0.00	0.00	0.00	0.32	Extremely Unstable
0.00	0.00	0.14	0.23	0.09	0.00	0.00	0.00	0.00	0.09	0.00	0.05	0.00	0.00	0.00	0.00	0.60	Moderately Unstable
0.00	0.00	0.00	0.23	0.14	0.00	0.00	0.14	0.14	0.18	0.05	0.27	0.32	0.09	0.00	0.05	1.60	Slightly Unstable
2.24	2.29	3.30	6.73	3.94	1.79	1.65	2.84	4.08	4.12	4.03	4.21	4.17	3.53	2.98	3.80	55.72	Neutral
0.87	0.55	1.42	2.24	3.34	1.42	1.37	2.06	3.53	3.16	2.15	1.97	1.60	1.60	1.69	1.37	30.72	Slightly Stable
0.23	0.09	0.09	0.05	0.27	1.05	0.92	1.47	1.79	1.05	0.64	0.14	0.14	0.55	0.69	0.41	9.57	Moderately Stable
0.00	0.14	0.00	0.00	0.00	0.00	0.18	0.18	0.27	0.27	0.18	0.18	0.00	0.00	0.00	0.00	1.42	Extremely Stable

Wind Direction by Wind Speed

N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL	-WIND SPEED CLASSES-
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	C A L M
0.00	0.00	0.05	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.05	0.00	0.05	0.05	0.00	0.18	0.41	< 3.5 mph
0.32	0.69	0.55	0.69	0.55	0.14	0.41	0.18	0.37	0.32	0.50	0.60	0.41	0.27	0.46	0.18	6.84	3.6 - 7.5 mph
1.28	0.92	1.05	1.88	1.97	0.73	0.78	1.19	1.51	0.37	0.96	1.05	1.01	1.74	1.42	0.73	19.09	7.6 - 12.5 mph
0.87	1.14	1.88	2.70	1.74	1.74	2.01	1.60	2.84	2.31	2.52	2.43	1.83	2.06	2.29	2.38	32.37	12.6 - 18.5 mph
0.82	0.23	1.28	3.30	1.51	0.60	0.37	1.42	2.34	2.34	2.15	2.15	1.65	1.37	1.14	1.88	24.54	18.6 - 24.5 mph
0.05	0.09	0.14	1.10	2.11	1.01	0.55	2.29	2.75	3.02	0.87	0.64	1.37	0.55	0.05	0.27	16.85	> 24.5 mph

TABLE 9

LaSalle County Generating Statio
375 ft. Wind Speed and Direction

July-September, 2014
375Ft-33Ft Delta-T (F)

Number of Observations = 2202
Values are Percent Occurrence

SPEED	WIND DIRECTION CLASSES																	STABILITY CLASSES							
CLASS	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL	EU	MU	SU	N	SS	MS	ES	TOTAL
	EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
	MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00						
G	SU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00					
A	N	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05				0.05				
L	SS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00					0.00			
M	MS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00		
	ES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00	
																										0.05
	EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
	MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00						
1	SU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00					
-	N	0.05	0.05	0.18	0.00	0.09	0.05	0.23	0.00	0.00	0.05	0.05	0.09	0.09	0.05	0.05	0.09	1.09				1.09				
3	SS	0.14	0.14	0.05	0.05	0.00	0.05	0.05	0.00	0.00	0.23	0.00	0.05	0.18	0.05	0.05	0.05	1.04					1.04			
	MS	0.00	0.05	0.05	0.00	0.00	0.00	0.05	0.05	0.00	0.27	0.00	0.05	0.05	0.00	0.00	0.00	0.54						0.54		
	ES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.05	0.00	0.05	0.00	0.00	0.00	0.14							0.14	
																										2.81
	EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
	MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00						
4	SU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.05			0.05					
-	N	1.27	0.86	0.54	0.54	0.59	0.32	0.50	0.50	0.72	0.68	0.63	0.59	0.81	0.45	0.54	0.50	10.05				10.05				
7	SS	0.23	0.09	0.27	0.14	0.23	0.00	0.18	0.23	0.14	0.09	0.23	0.41	0.18	0.36	0.14	0.27	3.17					3.17			
	MS	0.05	0.05	0.00	0.05	0.00	0.05	0.14	0.27	0.50	0.32	0.36	0.23	0.18	0.41	0.00	0.09	2.67						2.67		
	ES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.09	0.23	0.14	0.05	0.00	0.09	0.00	0.63							0.63	
																										16.57
	EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
	MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00						
8	SU	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.05	0.14	0.05	0.00	0.18	0.18	0.00	0.00	0.63			0.63					
-	N	1.27	0.63	0.91	1.40	0.81	0.54	0.23	0.95	0.95	1.09	1.04	0.86	0.95	1.67	0.81	0.54	14.67				14.67				
1	SS	0.23	0.27	0.41	0.32	0.18	0.27	0.50	0.23	0.50	0.63	0.68	0.32	0.64	0.41	0.64	0.32	6.34					6.34			
2	MS	0.09	0.14	0.00	0.05	0.05	0.50	0.72	0.68	1.18	0.68	0.36	0.68	0.50	0.36	0.23	0.14	6.34						6.34		
	ES	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.32	0.14	0.18	0.14	0.32	0.14	0.05	0.05	0.14	1.58							1.58	
																										29.56
	EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
1	MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.05		0.05						
3	SU	0.09	0.05	0.05	0.14	0.00	0.00	0.05	0.00	0.00	0.05	0.05	0.00	0.32	0.45	0.05	0.00	1.27			1.27					
-	N	1.49	0.59	1.49	1.00	0.68	0.36	0.32	0.23	0.45	1.22	0.91	0.95	0.59	1.27	1.27	0.81	13.63				13.63				
1	SS	0.50	0.45	0.54	0.86	0.63	0.23	0.41	0.63	0.72	0.91	0.50	0.63	0.72	0.50	0.63	0.32	8.78					8.78			
8	MS	0.18	0.14	0.05	0.00	0.41	0.45	0.68	0.72	0.77	0.59	0.32	0.14	0.18	0.54	0.72	0.05	5.93						5.93		
	ES	0.00	0.00	0.00	0.00	0.00	0.14	0.63	0.54	0.27	0.27	0.00	0.00	0.00	0.00	0.00	0.09	1.95							1.95	
																										31.60

TABLE 9
continued

LaSalle County Generating Statio
375 ft. Wind Speed and Direction

July-September, 2014
376Ft-33Ft Delta-T (F)

SPEED CLASS	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL	EU	MU	SU	N	SS	MS	ES	TOTAL
EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
1 MU	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09		0.09						
9 SU	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05	0.00	0.00	0.05	0.09	0.18	0.00	0.50			0.50					
N	0.27	0.14	0.27	0.00	0.00	0.00	0.00	0.05	0.50	0.27	0.77	0.41	0.32	0.68	1.22	0.77	5.66				5.63				
2 SS	0.05	0.14	0.05	0.27	0.72	0.23	0.09	0.23	0.86	1.00	1.00	0.77	0.23	0.36	0.59	0.05	6.61					6.61			
4 MS	0.00	0.00	0.00	0.00	0.63	0.27	0.00	0.23	0.45	0.23	0.63	0.05	0.14	0.09	0.18	0.14	3.03						3.03		
ES	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.00	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18							0.18	
																									16.07
EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
6 MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00						
7 SU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00					
N	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.18	0.09	0.14	0.00	0.14	0.32	0.41	0.14	1.45				1.45				
2 SS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.18	0.32	0.27	0.14	0.18	0.14	0.00	0.00	1.27					1.27			
4 MS	0.00	0.00	0.00	0.00	0.14	0.00	0.00	0.00	0.14	0.27	0.05	0.00	0.00	0.00	0.00	0.00	0.59						0.59		
ES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00	
																									3.30
TOT	6.07	3.76	4.89	4.80	5.16	3.44	5.02	5.89	8.92	9.73	8.42	6.79	6.34	8.47	7.74	4.48	99.95	0.00	0.14	2.44	46.58	27.21	19.10	4.48	99.95

Wind Direction by Stability

N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL	-STABILITY CLASSES-
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Extremely Unstable
0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.14	Moderately Unstable
0.18	0.05	0.09	0.14	0.00	0.00	0.05	0.00	0.09	0.27	0.09	0.00	0.54	0.72	0.23	0.00	2.44	Slightly Unstable
4.35	2.26	3.40	2.94	2.17	1.27	1.31	1.72	2.81	3.40	3.53	2.90	2.90	4.44	4.30	2.85	46.58	Neutral
1.13	1.09	1.31	1.64	1.77	0.77	1.22	1.36	2.40	3.17	2.67	2.31	1.63	1.81	1.95	1.00	27.21	Slightly Stable
0.32	0.36	0.09	0.09	1.22	1.27	1.58	1.95	3.03	2.35	1.72	1.13	1.04	1.40	1.13	0.41	19.10	Moderately Stable
0.00	0.00	0.00	0.00	0.00	0.14	0.86	0.86	0.59	0.54	0.41	0.45	0.23	0.05	0.14	0.23	4.48	Extremely Stable

Wind Direction by Wind Speed

N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL	-WIND SPEED CLASSES-
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	C A L M
0.18	0.23	0.27	0.05	0.09	0.09	0.32	0.05	0.05	0.54	0.09	0.18	0.36	0.09	0.09	0.14	2.81	< 3.5 mph
1.54	1.00	0.81	0.72	0.81	0.36	0.81	1.00	1.40	1.22	1.45	1.36	1.22	1.22	0.77	0.86	16.57	3.6 - 7.5 mph
1.58	1.04	1.36	1.27	1.04	1.31	1.58	2.17	2.81	2.72	2.26	2.17	2.31	2.67	1.63	1.13	29.56	7.6 - 12.5 mph
2.26	1.22	2.13	1.99	1.72	1.18	2.08	2.13	2.22	3.03	1.77	1.72	1.40	2.81	2.67	1.27	31.60	12.6 - 18.5 mph
0.50	0.27	0.32	0.27	1.36	0.50	0.18	0.50	1.95	1.54	2.40	1.22	0.72	1.22	2.17	0.95	16.07	18.6 - 24.5 mph
0.00	0.00	0.00	0.00	0.14	0.00	0.05	0.05	0.50	0.68	0.45	0.14	0.32	0.45	0.41	0.14	3.30	> 24.5 mph

TABLE 10

LaSalle County Generating Statio
375 ft. Wind Speed and Direction

October-December. 2014
375Ft-33Ft Delta-T (F)

Number of Observations = 2197
Values are Percent Occurrence

SPEED CLASS	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL	STABILITY CLASSES EU	MU	SU	N	SS	MS	ES	TOTAL
EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00						
L SU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00					
A N	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				0.00				
L SS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00					0.00			
M MS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00		
ES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00	
																									0.00
EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00						
1 SU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00					
- N	0.00	0.05	0.05	0.05	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.05	0.05	0.09	0.14	0.00	0.50				0.50				
3 SS	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.05	0.00	0.00	0.05	0.09	0.05	0.36					0.36			
MS	0.00	0.05	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.14						0.14		
ES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00	
																									1.00
EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00						
4 SU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00					
- N	0.18	0.09	0.09	0.14	0.18	0.18	0.32	0.18	0.18	0.09	0.41	0.27	0.36	0.18	0.32	0.09	3.28				3.28				
7 SS	0.23	0.09	0.09	0.14	0.00	0.18	0.05	0.05	0.14	0.14	0.23	0.32	0.14	0.18	0.09	0.23	2.28					2.28			
MS	0.09	0.00	0.05	0.05	0.05	0.05	0.00	0.05	0.05	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.46						0.46		
ES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00	
																									6.01
EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00						
8 SU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00					
- N	1.05	1.23	0.36	0.55	0.41	0.32	0.09	0.27	0.86	0.68	1.37	0.32	0.86	0.77	1.00	1.23	11.38				11.38				
1 SS	0.55	0.27	0.41	0.55	0.09	0.36	0.23	0.46	0.23	0.46	0.36	0.23	0.32	0.64	0.50	0.32	5.96					5.96			
2 MS	0.00	0.00	0.05	0.14	0.09	0.05	0.14	0.05	0.00	0.18	0.14	0.05	0.05	0.27	0.05	0.05	1.27						1.27		
ES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05	0.00	0.00	0.00	0.00	0.00	0.09							0.09	
																									18.71
EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
1 MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00						
3 SU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00					
- N	1.55	0.64	0.64	0.14	0.05	0.96	0.64	0.68	1.55	0.77	0.96	1.18	1.09	3.46	1.78	1.82	17.89				17.89				
1 SS	0.14	0.59	0.46	0.23	0.27	0.68	0.41	0.46	0.82	1.00	1.00	0.86	0.59	0.91	0.36	0.27	9.06					9.06			
9 MS	0.00	0.05	0.18	0.00	0.00	0.23	0.27	0.27	0.09	0.09	0.23	0.27	0.64	0.05	0.00	0.00	2.37						2.37		
ES	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.09	0.05	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.32							0.32	
																									29.63

TABLE 10
continued

LaSalle County Generating Statio
375 ft. Wind Speed and Direction

October-December, 2014
375Ft-33Ft Delta-T (F)

SPEED	WIND DIRECTION CLASSES																STABILITY CLASSES							
CLASS	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL	EU	MU	SU	N	SS	MS	ES	TOTAL
EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
1 MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00						
9 SU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00					
N	0.73	0.05	0.00	0.00	0.00	0.23	0.82	0.64	0.96	0.77	0.86	0.55	1.91	3.73	1.91	0.68	13.84				13.84				
2 SS	0.05	0.00	0.18	0.00	0.14	0.23	0.41	0.82	1.27	1.59	1.64	1.27	1.00	1.27	0.27	0.23	10.38					10.38			
4 MS	0.09	0.05	0.00	0.00	0.05	0.32	0.09	0.00	0.14	0.14	0.14	0.32	0.23	0.41	0.14	0.14	2.23						2.23		
ES	0.00	0.00	0.00	0.00	0.00	0.00	0.27	0.14	0.09	0.05	0.09	0.00	0.00	0.00	0.00	0.00	0.59							0.59	
																									27.04
EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
6 MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00						
7 SU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00					
N	0.55	0.00	0.00	0.00	0.00	0.05	0.27	0.23	0.55	0.82	0.41	0.09	2.23	2.55	0.36	0.77	8.92				8.92				
2 SS	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.18	1.68	2.87	0.64	0.41	0.55	0.96	0.00	0.05	7.46					7.46			
4 MS	0.05	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.18	0.00	0.27	0.05	0.18	0.14	0.05	0.09	1.09						1.09		
ES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14							0.14	
																									17.61
TOT	5.23	3.14	2.59	1.96	1.41	3.82	4.28	4.69	8.83	9.92	8.92	6.24	10.24	15.66	7.06	6.01	100.00	0.00	0.00	0.00	55.80	35.50	7.56	1.14	100.00

Wind Direction by Stability

N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL	-STABILITY CLASSES-
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Extremely Unstable
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Moderately Unstable
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Slightly Unstable
4.05	2.05	1.14	0.86	0.64	1.73	2.14	2.00	4.10	3.19	4.01	2.46	6.55	10.79	5.51	4.60	55.80	Neutral
0.90	0.96	1.18	0.91	0.50	1.46	1.23	1.96	4.14	6.14	3.91	3.10	2.59	4.01	1.32	1.14	35.50	Slightly Stable
0.23	0.14	0.27	0.18	0.27	0.64	0.55	0.36	0.46	0.50	0.82	0.68	1.09	0.86	0.23	0.27	7.56	Moderately Stable
0.00	0.00	0.00	0.00	0.00	0.00	0.36	0.36	0.14	0.09	0.18	0.00	0.00	0.00	0.00	0.00	1.14	Extremely Stable

Wind Direction by Wind Speed

N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL	-WIND SPEED CLASSES-
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	C A L M
0.00	0.09	0.09	0.05	0.00	0.00	0.05	0.00	0.00	0.14	0.09	0.05	0.05	0.14	0.23	0.05	1.00	< 3.5 mph
0.50	0.18	0.23	0.32	0.23	0.41	0.36	0.27	0.36	0.32	0.64	0.59	0.50	0.36	0.41	0.32	6.01	3.6 - 7.5 mph
1.50	1.50	0.82	1.23	0.59	0.73	0.46	0.77	1.09	1.37	1.91	0.59	1.23	1.68	1.55	1.59	18.71	7.6 - 12.5 mph
1.69	1.27	1.27	0.36	0.32	1.87	1.46	1.50	2.50	1.87	2.23	2.32	2.32	4.42	2.14	2.02	29.63	12.6 - 18.5 mph
0.86	0.09	0.18	0.00	0.18	0.73	1.55	1.59	2.46	2.55	2.73	2.14	3.14	5.42	2.32	1.05	27.04	18.6 - 24.5 mph
0.59	0.00	0.00	0.00	0.09	0.05	0.41	0.55	2.41	3.69	1.32	0.55	3.00	3.64	0.41	0.91	17.61	> 24.5 mph

TABLE 11

LaSalle County Generating Statio
375 ft. Wind Speed and Direction

January-December, 2014
375Ft-33Ft Delta-T (F)

Number of Observations = 8747
Values are Percent Occurrence

SPEED	WIND DIRECTION CLASSES																	STABILITY CLASSES							
CLASS	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL	EU	MU	SU	N	SS	MS	ES	TOTAL
EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00						
C SU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00					
A N	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02				0.02				
L SS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00					0.00			
M MS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00		
ES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00	
																									0.02
EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00						
1 SU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00					
N	0.02	0.02	0.07	0.01	0.02	0.02	0.07	0.00	0.00	0.02	0.03	0.03	0.06	0.03	0.05	0.03	0.50				0.50				
3 SS	0.03	0.03	0.02	0.02	0.00	0.01	0.01	0.02	0.01	0.10	0.02	0.01	0.05	0.03	0.03	0.05	0.47					0.47			
MS	0.01	0.05	0.01	0.01	0.01	0.00	0.02	0.02	0.00	0.07	0.03	0.02	0.01	0.02	0.01	0.02	0.33						0.32		
ES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.01	0.00	0.01	0.00	0.00	0.00	0.03							0.03	
																									1.34
EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
MU	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01		0.01						
4 SU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.01			0.01					
- N	0.49	0.38	0.30	0.35	0.31	0.19	0.30	0.17	0.29	0.25	0.40	0.33	0.37	0.29	0.40	0.24	5.05				5.05				
7 SS	0.17	0.17	0.13	0.11	0.09	0.07	0.10	0.14	0.13	0.11	0.15	0.30	0.13	0.15	0.13	0.17	2.24					2.24			
MS	0.06	0.03	0.03	0.06	0.03	0.03	0.05	0.10	0.19	0.13	0.10	0.06	0.07	0.10	0.01	0.03	1.10						1.10		
ES	0.01	0.00	0.00	0.00	0.01	0.01	0.01	0.00	0.02	0.03	0.07	0.03	0.01	0.00	0.02	0.00	0.24							0.24	
																									8.65
EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00						
8 SU	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.03	0.05	0.01	0.00	0.05	0.05	0.00	0.00	0.19			0.19					
- N	0.90	0.77	0.51	0.87	0.61	0.35	0.24	0.61	0.89	0.67	0.88	0.50	0.70	1.05	1.07	0.76	11.41				11.41				
1 SS	0.31	0.24	0.43	0.49	0.35	0.26	0.29	0.26	0.31	0.37	0.40	0.25	0.42	0.42	0.43	0.31	5.56					5.56			
2 MS	0.08	0.07	0.02	0.05	0.05	0.18	0.27	0.27	0.38	0.26	0.15	0.23	0.15	0.23	0.10	0.08	2.57						2.57		
ES	0.01	0.02	0.01	0.00	0.00	0.00	0.08	0.13	0.09	0.08	0.05	0.13	0.03	0.01	0.01	0.06	0.71							0.71	
																									20.44
EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
1 MU	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.03		0.03						
3 SU	0.02	0.02	0.02	0.07	0.00	0.00	0.02	0.00	0.06	0.05	0.01	0.01	0.09	0.14	0.01	0.01	0.54			0.54					
- N	1.29	0.70	1.04	1.03	0.48	0.56	0.47	0.62	1.13	1.07	1.04	1.12	1.27	1.85	1.81	1.37	16.85				16.85				
1 SS	0.29	0.31	0.42	0.53	0.48	0.41	0.45	0.37	0.57	0.75	0.67	0.67	0.62	0.81	0.73	0.35	8.44					8.44			
8 MS	0.08	0.06	0.08	0.00	0.15	0.37	0.40	0.31	0.54	0.21	0.27	0.13	0.25	0.26	0.33	0.09	3.52						3.52		
ES	0.02	0.02	0.00	0.00	0.00	0.03	0.23	0.25	0.19	0.10	0.07	0.00	0.01	0.00	0.01	0.05	1.01							1.01	
																									30.39

TABLE 11
continued

LaSalle County Generating Statio
375 ft. Wind Speed and Direction

January-December, 2014
375Ft-33Ft Delta-T (F)

SPEED	WIND DIRECTION CLASSES																STABILITY CLASSES							
CLASS	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL	EU	MU	SU	N	SS	NS	ES	TOTAL
EU	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01							
1 MU	0.02	0.03	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.01	0.00	0.00	0.00	0.00	0.13		0.13						
9 SU	0.02	0.01	0.01	0.05	0.02	0.00	0.00	0.00	0.01	0.01	0.01	0.03	0.02	0.03	0.05	0.00	0.29			0.29					
- N	0.79	0.24	0.49	0.82	0.21	0.15	0.33	0.41	0.65	0.54	0.72	0.64	1.07	1.77	1.25	1.11	11.19				11.19				
2 SS	0.16	0.07	0.14	0.29	0.41	0.26	0.23	0.57	0.97	1.02	0.97	0.83	0.57	1.09	0.51	0.24	8.33					8.33			
4 NS	0.06	0.02	0.00	0.00	0.23	0.19	0.07	0.13	0.31	0.18	0.30	0.17	0.26	0.16	0.27	0.17	2.53						2.53		
ES	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.00	0.07	0.06	0.00	0.00	0.00	0.00	0.00	0.37							0.37	
																									22.84
EU	0.00	0.00	0.00	0.01	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.02	0.00	0.00	0.00	0.07	0.07							
G MU	0.00	0.00	0.00	0.03	0.01	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.06		0.06						
7 SU	0.00	0.00	0.01	0.00	0.01	0.00	0.00	0.03	0.02	0.03	0.00	0.02	0.07	0.00	0.02	0.00	0.23			0.23					
N	0.24	0.07	0.29	0.24	0.24	0.22	0.23	0.32	0.72	0.71	0.55	0.37	1.02	1.20	0.53	0.37	7.40				7.40				
2 SS	0.01	0.00	0.00	0.01	0.25	0.13	0.11	0.29	1.49	1.42	0.67	0.30	0.62	1.28	0.17	0.03	6.86					6.86			
4 NS	0.01	0.00	0.00	0.00	0.06	0.03	0.06	0.19	0.23	0.43	0.22	0.13	0.10	0.06	0.01	0.02	1.55						1.55		
ES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.03	0.05	0.01	0.00	0.00	0.00	0.00	0.00	0.13							0.13	
																									16.29
TOT	5.25	3.65	4.10	5.09	4.07	3.50	4.12	5.32	9.36	8.81	7.89	6.43	8.05	11.06	7.90	5.59	99.98	0.08	0.23	1.26	52.43	31.90	11.60	2.43	99.98

Wind Direction by Stability

N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL	-STABILITY CLASSES-
0.00	0.00	0.00	0.02	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.02	0.00	0.00	0.00	0.08	Extremely Unstable
0.02	0.03	0.05	0.03	0.02	0.00	0.00	0.00	0.00	0.02	0.00	0.01	0.00	0.01	0.00	0.00	0.23	Moderately Unstable
0.05	0.03	0.06	0.11	0.03	0.00	0.02	0.03	0.13	0.15	0.03	0.07	0.23	0.22	0.08	0.01	1.26	Slightly Unstable
3.84	2.17	2.70	3.33	1.86	1.50	1.63	2.13	3.68	3.27	3.62	3.00	4.48	6.20	5.10	3.90	52.43	Neutral
0.97	0.82	1.14	1.45	1.59	1.14	1.19	1.65	3.48	3.77	2.89	2.45	2.40	3.78	2.01	1.15	31.90	Slightly Stable
0.30	0.23	0.15	0.11	0.53	0.01	0.87	1.03	1.65	1.28	1.07	0.73	0.85	0.83	0.74	0.42	11.60	Moderately Stable
0.07	0.06	0.01	0.00	0.01	0.05	0.40	0.48	0.43	0.32	0.26	0.16	0.07	0.01	0.05	0.10	2.48	Extremely Stable

Wind Direction by Wind Speed

N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL	-WIND SPEED CLASSES-
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	C A L M
0.07	0.10	0.10	0.05	0.09	0.03	0.10	0.05	0.02	0.19	0.10	0.07	0.13	0.09	0.09	0.10	1.34	< 3.5 mph
0.73	0.58	0.46	0.53	0.46	0.31	0.46	0.41	0.63	0.54	0.72	0.72	0.57	0.51	0.56	0.45	8.65	3.6 - 7.5 mph
1.30	1.10	0.99	1.41	1.01	0.80	0.88	1.27	1.70	1.43	1.49	1.11	1.35	1.76	1.62	1.22	20.44	7.6 - 12.6 mph
1.70	1.12	1.57	1.65	1.11	1.37	1.57	1.54	2.49	2.18	2.07	1.93	2.24	3.08	2.89	1.87	30.39	12.6 - 18.5 mph
1.07	0.38	0.69	1.17	0.87	0.61	0.71	1.17	2.02	1.83	2.06	1.69	1.93	3.05	2.03	1.52	22.84	18.6 - 24.5 mph
0.37	0.07	0.30	0.30	0.59	0.38	0.40	0.88	2.49	2.64	1.45	0.90	1.33	2.54	0.73	0.42	16.29	> 24.5 mph

5.5 Precipitation

Monthly totals and the maximum 24-hour and maximum 1-hour precipitation amounts are summarized below. The month with the most measured precipitation was August. The month with the least measured precipitation was March*. The maximum 24-hour total was 4.67" (August) and the maximum 1-hour total was 1.92" (August).

Table 12

Precipitation Totals (Inches) - 2014
LaSalle Site

Month	Total	Maximum 24-hour	Maximum 1-hour
January	1.36*	1.03*	0.23*
February	1.34*	1.11*	0.41*
March	0.85*	0.51*	0.15*
April	3.08	1.31	0.40
May	3.75	0.98	0.93
June	8.04*	2.89*	1.61*
July	2.21*	1.55*	0.99*
August	8.25	4.67	1.92
September	3.54	1.73	0.79
October	2.40*	0.63*	0.23*
November	1.38*	0.75*	0.14*
December	1.03	0.40	0.09
TOTAL	37.23*		

* some data are missing - actual precipitation may be under-reported

5.6 Doses Resulting from Airborne Releases

The following are the maximum annual calculated cumulative offsite doses resulting from LaSalle County Station airborne releases.

LaSalle County Generating Station:

Dose	*Maximum Value*	*Sector Affected*
gamma air [1]	5.380×10^{-3} mrad	East-Southeast
beta air [2]	1.930×10^{-3} mrad	East-Southeast
whole body [3]	2.220×10^{-2} mrem	East-Southeast
skin [4]	5.570×10^{-3} mrem	East-Southeast
organ [5] (infant-thyroid)	$4.170 \times 10^{+0}$ mrem	East-Southeast

Compliance Status

10 CFR 50 Appendix I	Yearly Objective		% of Appendix I
gamma air	10.0	mrad	0.05
beta air	20.0	mrad	0.01
whole body	5.0	mrem	0.44
skin	15.0	mrem	0.04
organ	15.0	mrem	27.8

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(1) Gamma Air Dose - GASPAR II, NUREG-0597
(2) Beta Air Dose - GASPAR II, NUREG-0597
(3) Whole Body Dose - GASPAR II, NUREG-0597
(4) Skin Dose - GASPAR II, NUREG-0597
(5) Inhalation and Food Pathways Dose - GASPAR II, NUREG-0597

APPENDIX

LaSalle Meteorological Calibration

Date: 2/12/14

POWER SUPPLIES

+12.000V ± 0.120V	-12.000V ± 0.120V
A: +12.058 V	A: -12.078 V
B: +12.063 V	B: -12.059 V

Signal conditioners and Digital Recorder:

	Signal Conditioner Voltage Out AF	AL	AL EQUIV	Digital recorder AF	AL	Specifications Signal Cond.	Recorder
			10 ft.				
PRCP LO	.000 V	— V	.00 "	.00 "	— "	0.000V ± 0.050V	AL EQUIV ± 0.01"
PRCP HI	5.000 V	— V	1.00 "	1.00 "	"	5.000V ± 0.050V	AL EQUIV ± 0.01"
			35 ft.				
WS ZERO	.025 V	— V	0.5 mph	0.5 mph	— mph	0.025V ± 0.025V	AL EQUIV ± .1mph
WS SPAN	2.514 V	2.500 V	50.0 mph	50.0 mph	— mph	2.500V ± 0.025V	AL EQUIV ± .1mph
WD ZERO	.004 V	.000 V	0 °	0 °	— °	0.000V ± 0.100V	AL EQUIV ± 1°
WD SPAN	3.333 V	— V	360 °	360 °	— °	3.333V ± 0.100V	AL EQUIV ± 1°
ΔT ZERO	.000 V	— V	-22.00 °	-22.04 °	— °	0.000V ± 0.050V	AL EQUIV ± .1°F
ΔT SPAN	5.001 V	5.000 V	122.00 °	121.95 °	— °	5.000V ± 0.050V	AL EQUIV ± .1°F
			200 ft.				
WS ZERO	.028 V	.025 V	0.5 mph	0.5 mph	— mph	0.025V ± 0.025V	AL EQUIV ± .1mph
WS SPAN	2.514 V	2.500 V	50.0 mph	50.0 mph	— mph	2.500V ± 0.025V	AL EQUIV ± .1mph
WD ZERO	.003 V	.000 V	0 °	0 °	— °	0.000V ± 0.100V	AL EQUIV ± 1°
WD SPAN	3.336 V	3.333 V	360 °	360 °	— °	3.333V ± 0.100V	AL EQUIV ± 1°
ΔT_1 ZERO	.000 V	— V	-10.00 °	-10.00 °	— °	0.000V ± 0.050V	AL EQUIV ± .1°F
ΔT_1 SPAN	5.000 V	— V	10.00 °	9.98 °	— °	5.000V ± 0.050V	AL EQUIV ± .1°F
ΔT_2 ZERO	.000 V	— V				0.000V ± 0.050V	
ΔT_2 SPAN	4.995 V	5.000 V				5.000V ± 0.050V	
			375 ft.				
WS ZERO	.028 V	.025 V	0.5 mph	0.5 mph	— mph	0.025V ± 0.025V	AL EQUIV ± .1mph
WS SPAN	2.506 V	2.500 V	50.0 mph	50.0 mph	— mph	2.500V ± 0.025V	AL EQUIV ± .1mph
WD ZERO	.000 V	— V	0 °	0 °	— °	0.000V ± 0.100V	AL EQUIV ± 1°
WD SPAN	3.335 V	3.333 V	360 °	360 °	— °	3.333V ± 0.100V	AL EQUIV ± 1°
ΔT_1 ZERO	.000 V	— V	-10.00 °	-10.00 °	— °	0.000V ± 0.050V	AL EQUIV ± .1°F
ΔT_1 SPAN	5.000 V	— V	10.00 °	10.00 °	— °	5.000V ± 0.050V	AL EQUIV ± .1°F
ΔT_2 ZERO	.000 V	— V				0.000V ± 0.050V	
ΔT_2 SPAN	5.002 V	— V				5.000V ± 0.050V	

AJZ 3-2014

LaSalle Meteorological Calibration

Date: 2-12-14

TOWER MEASUREMENTS

☑ Ambient ☐ Ice Bath

Temperatures

	33 ft. Amb. AF	33 ft. Amb. AL	200 ft. ΔT1 AF	200 ft. ΔT1 AL	375 ft. ΔT1 AF	375 ft. ΔT1 AL
Measured	13.34 °F	– °F	+.15 °F	– °F	-.20 °F	– °F
Recorded	12.99 °F	– °F	+.25 °F	– °F	-.10 °F	– °F
Difference	.35 °F	– °F	.10 °F	– °F	.10 °F	– °F
Specification	±0.5°F		±0.18°F		±0.18°F	

Winds

	33 ft. AF	33 ft. AL	200 ft. AF	200 ft. AL	375 ft. AF	375 ft. AL	*Specification*
WS stall	0.6 mph	– mph	0.5 mph	– mph	0.6 mph	0.6 mph	0.5mph ± 0.45mph
Forw. WD	362 °	– °	360 °	– °	361 °	– °	0°/360° ± 5°
Revr. WD	180 °	– °	178 °	– °	181 °	– °	180°/540° ± 5°
Tracking/wear	OK		OK		OK		

375'

Comments: WS REMOVED MT 0164 WS INSTALLED K2479C

MJZ 3-20-14

LaSalle Meteorological Calibration

Date: 2-12-14

Dates of Last Wind Sensor Bearing Replacements:

	33 ft.	200 ft.	375 ft.
(6 mos.) Wind Speed:	10-4-13	10-4-13	2-12-14
(12 mos.) Wind Direction:	10-4-13	10-4-13	11-14-13

	33 ft.	200 ft.	375 ft.
Aspirators:	OK	OK	OK

Operation of De-Ice Heat Lamp System (Aug-Mar): 1 BAD 375 (was) Replaced

Operation of Rain Gauge: OK Tips Poured 5 Tips Recorded 5

UPS CHECK: OK

Debris screen: In (Out) Installed Removed

Tower Lighting	Good	Fair	Poor
Beacon	☒	☐	☐
Side lights	☒	☐	☐
Wiring	☒	☐	☐
Flasher	☒	☐	☐

Tower Condition	Good	Fair	Poor
Paint	☒	☐	☐
Shelter condition	☒	☐	☐

Note:
AF = As Found
AL = As Left
— = no change (AF=AL)
FS = Full Scale

Calibration Instruments:

	Next Cal Due
Psychrometer - S/N - MT104	APRIL 2014
Digital multimeter - S/N - 98850269	OCT 2014
Digital multimeter - S/N -	
Digital thermometer - S/N -	

Technicians: MIKE MOODIE, MIKE MARK

Comments:

Signature:

ASL 3-20-14

System Response Check

Date: 2-12-14

Site: LaSalle
System: Microtel

Low Scale Check	33' WS	200' WS	375' WS	33' WD	200' WD	375' WD	33' T	200' ΔT	375' ΔT
Expected Response	20.0 ±0.4	20.0 ±0.4	20.0 ±0.4	108 ±2	108 ±2	108 ±2	6.80 ±0.7	-6.00 ±0.18	-6.00 ±0.18
As Found Response	20.0	20.0	20.0	108	108	108	6.8	-6.0	-6.0
As Left Response	—	—	—	—	—	—	—	—	—

Mid Scale Check	33' WS	200' WS	375' WS	33' WD	200' WD	375' WD	33' T	200' ΔT	375' ΔT
Expected Response	60.0 ±0.4	60.0 ±0.4	60.0 ±0.4	324 ±2	324 ±2	324 ±2	64.40 ±0.7	2.00 ±0.18	2.00 ±0.18
As Found Response	59.9	59.9	59.9	323	323	323	64.3	2.0	2.0
As Left Response	-	-	-	-	-	-	-	-	-

Full Scale Check	33' WS	200' WS	375' WS	33' WD	200' WD	375' WD	33' T	200' ΔT	375' ΔT
Expected Response	80.0 ±0.4	80.0 ±0.4	80.0 ±0.4	432 ±2	432 ±2	432 ±2	93.20 ±0.7	6.00 ±0.18	6.00 ±0.18
As Found Response	79.9	80.0	80.0	431	432	432	93.1	6.0	6.0
As Left Response	—	—	—	—	—	—	—	—	—

AD 3-20-14

System Response Check

Date: 2-12-14

Site: LaSalle
System: Process Computer

Low Scale Check	A847 375' WD	A848 200' WD	A849 375' WS	A850 200' WS	A851 375' ΔT	A852 33' WS	A853 33' WD	A854 33' T	A855 200' ΔT	A856 Precipitation
Expected Response	108 ±2	108 ±2	20.0 ±0.4	20.0 ±0.4	-4.00±0.18	20.0±0.4	108 ±2	6.80 ±0.7	-4.00±0.18	0.20 ±0.01
As Found Response	107.1	107.0	19.9	19.6	-4.0	20.2	107.8	6.7	-4.0	0.20
As Left Response	—	—	—	20.0	—	—	—	—	—	—

Mid Scale Check	A847 375' WD	A848 200' WD	A849 375' WS	A850 200' WS	A851 375' ΔT	A852 33' WS	A853 33' WD	A854 33' T	A855 200' ΔT	A856 Precipitation
Expected Response	324 ±2	324 ±2	60.0 ±0.4	60.0 ±0.4	8.00 ±0.18	60.0 ±0.4	324 ±2	64.40 ±0.7	8.00±0.18	0.60 ±0.01
As Found Response	324.2	322.9	59.8	59.5	7.9	60.2	323.9	64.3	8.0	0.61
As Left Response	—	—	—	59.9	—	—	—	—	—	—

Full Scale Check	A847 375' WD	A848 200' WD	A849 375' WS	A850 200' WS	A851 375' ΔT	A852 33' WS	A853 33' WD	A854 33' T	A855 200' ΔT	A856 Precipitation
Expected Response	432 ±2	432 ±2	80.0 ±0.4	80.0±0.4	14.00±0.18	80.0 ±0.4	432 ±2	93.20±0.7	14.00±0.18	0.80 ±0.01
As Found Response	431.5	430.6	79.7	79.4	14.0	80.1	431.4	92.9	13.9	0.80
As Left Response	—	—	—	80.1	—	—	—	—	—	—

ADJUSTED ZERO/SPAN ON CURRENT CARD FOR A850

ADL 3-20-14

System Response Check

Date: 2-12-14

Site: LaSalle
System: Control Room Indicators

Low Scale Check	200' WS	375' WS	200' WD	375' WD	375' ΔT
Expected Response	20.0 ±1.0	20.0 ±1.0	108 ±5.4	108 ±5.4	-4.00 ±0.3
As Found Response	20	20	110	110	-4.
As Left Response	—	—	—	—	—

Mid Scale Check	200' WS	375' WS	200' WD	375' WD	375' ΔT
Expected Response	60.0 ±1.0	60.0 ±1.0	324 ±5.4	324 ±5.4	8.00 ±0.3
As Found Response	60	60	320	320	8
As Left Response	—	—	—	—	—

Full-Scale Check	200' WS	375' WS	200' WD	375' WD	375' ΔT
Expected Response	80.0 ±1.0	80.0 ±1.0	432 ±5.4	432 ±5.4	14.00 ±0.3
As Found Response	80.5	80.5	433	430	14
As Left Response	—	—	—	—	—

ADL 3-20-14

LaSalle Meteorological Calibration

Date: 6-5-14

POWER SUPPLIES

+12.000V ± 0.120V	-12.000V ± 0.120V
A: + 12.024 V	A: - 12.039 V
B: + 12.031 V	B: - 12.019 V

Signal conditioners and Digital Recorder:

	Signal Conditioner Voltage Out			Digital recorder		Specifications	
	AF	AL	AL EQUIV	AF	AL	Signal Cond.	Recorder
			10 ft.				
PRCP LO	.000 V	— V	0.00 "	0.00 "	— "	0.000V ± 0.050V	AL EQUIV ± 0.01"
PRCP HI	4.995 V	5.000 V	1.00 "	1.00 "	— "	5.000V ± 0.050V	AL EQUIV ± 0.01"
			35 ft.				
WS ZERO	.025 V	— V	0.5 mph	0.5 mph	— mph	0.025V ± 0.025V	AL EQUIV + .1mph
WS SPAN	2.503 V	2.500 V	50.0 mph	50.0 mph	— mph	2.500V ± 0.025V	AL EQUIV + .1mph
WD ZERO	.000 V	— V	0 °	0 °	— °	0.000V ± 0.100V	AL EQUIV + 1°
WD SPAN	3.333 V	— V	360 °	360 °	— °	3.333V ± 0.100V	AL EQUIV + 1°
T ZERO	.000 V	— V	-22.00 °	-22.00 °	— °	0.000V ± 0.050V	AL EQUIV + .1°F
T SPAN	5.003 V	5.000 V	122.00	122.04 °	— °	5.000V ± 0.050V	AL EQUIV + .1°F
			200 ft.				
WS ZERO	.025 V	— V	0.5 mph	0.5 mph	— mph	0.025V ± 0.025V	AL EQUIV + .1mph
WS SPAN	2.503 V	2.500 V	50.0 mph	50.0 mph	— mph	2.500V ± 0.025V	AL EQUIV + .1mph
WD ZERO	.000 V	— V	0 °	0 °	— °	0.000V ± 0.100V	AL EQUIV + 1°
WD SPAN	3.333 V	— V	360 °	360 °	— °	3.333V ± 0.100V	AL EQUIV + 1°
ΔT_1 ZERO	.000 V	— V	-10.00 °	-10.00 °	— °	0.000V ± 0.050V	AL EQUIV + .1°F
ΔT_1 SPAN	5.000 V	— V	10.00 °	10.00 °	— °	5.000V ± 0.050V	AL EQUIV + .1°F
ΔT_2 ZERO	.003 V	.000 V				0.000V ± 0.050V	
ΔT_2 SPAN	4.995 V	5.000 V				5.000V ± 0.050V	
			375 ft.				
WS ZERO	.025 V	— V	0.5 mph	0.5 mph	— mph	0.025V ± 0.025V	AL EQUIV + .1mph
WS SPAN	2.504 V	2.500 V	50.0 mph	50.0 mph	— mph	2.500V ± 0.025V	AL EQUIV + .1mph
WD ZERO	.003 V	.000 V	0 °	0 °	— °	0.000V ± 0.100V	AL EQUIV + 1°
WD SPAN	3.333 V	— V	360 °	360 °	— °	3.333V ± 0.100V	AL EQUIV + 1°
ΔT_1 ZERO	.000 V	— V	-10.00 °	-10.00 °	— °	0.000V ± 0.050V	AL EQUIV + .1°F
ΔT_1 SPAN	5.004 V	5.000 V	10.00 °	9.99 °	— °	5.000V ± 0.050V	AL EQUIV + .1°F
ΔT_2 ZERO	.003 V	.000 V				0.000V ± 0.050V	
ΔT_2 SPAN	5.000 V	— V				5.000V ± 0.050V	

ABZ 6-24-14

LaSalle Meteorological Calibration

Date: 6-5-14

TOWER MEASUREMENTS

☒ Ambient ☐ Ice Bath

Temperatures

	33 ft. Amb. AF	33 ft. Amb. AL	200 ft. ΔT AF	200 ft. ΔT AL	375 ft. ΔT AF	375 ft. ΔT AL
Measured	64.6 °F	— °F	-1.13 °F	— °F	-1.96 °F	— °F
Recorded	64.3 °F	— °F	-1.01 °F	— °F	-2.00 °F	— °F
Difference	-.3 °F	— °F	.12 °F	— °F	.04 °F	— °F
Specification	±0.5°F		±0.18°F		±0.18°F	

Winds

	33 ft. AF	33 ft. AL	200 ft. AF	200 ft. AL	375 ft. AF	375 ft. AL	*Specification*
WS stall	0.5 mph	— mph	0.5 mph	— mph	0.5 mph	0.5 mph	0.5mph ± 0.45mph
Forw. WD	358 °	— °	357 °	— °	361 °	— °	0°/360° ± 5°
Revr. WD	178 °	— °	177 °	— °	181 °	— °	180°/540° ± 5°
Tracking/wear	OK		OK		OK		

Comments:

6-5-14 375'

MM

~~MT~~ K2479C WS REMOVED

MT0074 WS INSTALLED

ABL 6/24/14

LaSalle Meteorological Calibration

Date: 6-5-14

Dates of Last Wind Sensor Bearing Replacements:

	33 ft.	200 ft.	375 ft.
(6 mos.) Wind Speed:	4-24-14	4-24-14	6-5-14
(12 mos.) Wind Direction:	10-4-13	10-4-13	11-14-13

	33 ft.	200 ft.	375 ft.
Aspirators:	OK	OK	OK

Operation of De-ice Heat Lamp System (Aug-Mar): NA

* **Operation of Rain Gauge:** *OK Tips Poured 10 Tips Recorded 10

UPS CHECK: OK

Debris screen: (In) Out Installed Removed

Tower Lighting	Good	Fair	Poor
Beacon	☒	☐	☐
Side lights	☒	☐	☐
Wiring	☒	☐	☐
Flasher	☒	☐	☐

Tower Condition	Good	Fair	Poor
Paint	☒	☐	☐
Shelter condition	☑	☐	☐

Note:
AF = As Found
AL = As Left
— = no change (AF=AL)

FS = Full Scale

Calibration Instruments:

		Next Cal Due
Psychrometer - S/N -	MT0104	OCT 2014
Digital multimeter - S/N -	93120208	MAY 2015
Digital multimeter - S/N -		
Digital thermometer - S/N -		

Technicians: MIKE MONDIA, MIKE MARX,

Comments: * SLOW DRAIN ON RAIN GAUGE - CLEANED, NOW OK

Signature:

AL 6-24-14

System Response Check

Date: 6.5.14

Site: LaSalle
System: Microtel

Low Scale Check	33' WS	200' WS	375' WS	33' WD	200' WD	375' WD	33' T	200' ΔT	375' ΔT
Expected Response	20.0 ±0.4	20.0 ±0.4	20.0 ±0.4	108 ±2	108 ±2	108 ±2	6.80 ±0.7	-6.00 ±0.18	-6.00 ±0.18
As Found Response	19.9	19.9	19.9	108	108	108	6.8	-6.0	-6.0
As Left Response	-	-	-	-	-	-	-	-	-

Mid Scale Check	33' WS	200' WS	375' WS	33' WD	200' WD	375' WD	33' T	200' ΔT	375' ΔT
Expected Response	60.0 ±0.4	60.0 ±0.4	60.0 ±0.4	324 ±2	324 ±2	324 ±2	64.40 ±0.7	2.00 ±0.18	2.00 ±0.18
As Found Response	59.9	59.9	59.9	324	323	324	64.4	2.0	2.0
As Left Response	-	-	-	-	-	-	-	-	-

Full Scale Check	33' WS	200' WS	375' WS	33' WD	200' WD	375' WD	33' T	200' ΔT	375' ΔT
Expected Response	80.0 ±0.4	80.0 ±0.4	80.0 ±0.4	432 ±2	432 ±2	432 ±2	93.20 ±0.7	6.00 ±0.18	6.00 ±0.18
As Found Response	80.0	79.9	80.0	432	432	432	93.2	6.0	6.0
As Left Response	-	-	-	-	-	-	-	-	-

ASL 6-24-14

System Response Check

Date: 6-5-14

Site: LaSalle
System: Process Computer

Low Scale Check	A847 375' WD	A848 200' WD	A849 375' WS	A850 200' WS	A851 375' ΔT	A852 33' WS	A853 33' WD	A854 33' T	A855 200' ΔT	A856 Precipitation
Expected Response	108 ±2	108 ±2	20.0 ±0.4	20.0 ±0.4	-4.00±0.18	20.0±0.4	108 ±2	6.80 ±0.7	-4.00±0.18	0.20 ±0.01
As Found Response	108.18	108.21	20.03	20.06	-3.99	20.21	108.28	6.81	-4.02	0.198
As Left Response	—	—	—	—	—	—	—	—	—	—

Mid Scale Check	A847 375' WD	A848 200' WD	A849 375' WS	A850 200' WS	A851 375' ΔT	A852 33' WS	A853 33' WD	A854 33' T	A855 200' ΔT	A856 Precipitation
Expected Response	324 ±2	324 ±2	60.0 ±0.4	60.0 ±0.4	8.00 ±0.18	60.0 ±0.4	324 ±2	64.40 ±0.7	8.00±0.18	0.60 ±0.01
As Found Response	324.33	323.23	59.85	60.21	7.99	60.15	324.33	64.31	7.97	0.598
As Left Response	—	—	—	—	—	—	—	—	—	—

Full Scale Check	A847 375' WD	A848 200' WD	A849 375' WS	A850 200' WS	A851 375' ΔT	A852 33' WS	A853 33' WD	A854 33' T	A855 200' ΔT	A856 Precipitation
Expected Response	432 ±2	432 ±2	80.0 ±0.4	80.0±0.4	14.00±0.18	80.0 ±0.4	432 ±2	93.20±0.7	14.00±0.18	0.80 ±0.01
As Found Response	432.12	431.46	79.81	80.35	13.98	80.12	432.45	93.11	13.97	0.798
As Left Response	—	—	—	—	—	—	—	—	—	—

AD 6-24-14

System Response Check

Date: 6-5-14

Site: LaSalle
System: Control Room Indicators

Low Scale Check	200' WS	375' WS	200' WD	375' WD	375' ΔT
Expected Response	20.0 ±1.0	20.0 ±1.0	108 ±5.4	108 ±5.4	-4.00 ±0.3
As Found Response	20	20	110	110	-4
As Left Response	—	—	—	—	—

Mid Scale Check	200' WS	375' WS	200' WD	375' WD	375' ΔT
Expected Response	60.0 ±1.0	60.0 ±1.0	324 ±5.4	324 ±5.4	8.00 ±0.3
As Found Response	60	60	325	325	8
As Left Response	—	—	—	—	—

Full Scale Check	200' WS	375' WS	200' WD	375' WD	375' ΔT
Expected Response	80.0 ±1.0	80.0 ±1.0	432 ±5.4	432 ±5.4	14.00 ±0.3
As Found Response	81	81	435	430	14
As Left Response	—	—	—	—	—

* Only whole numbers available from control room

AJZ 6-24-14

LaSalle Meteorological Calibration

Date: 10-8-14

POWER SUPPLIES

+12.000V ± 0.120V	-12.000V ± 0.120V
A: + 12.019 V	A: - 12.030 V
B: + 12.023 V	B: - 12.008 V

Signal conditioners and Digital Recorder:

	Signal Conditioner Voltage Out			Digital recorder		Specifications	
	AF	AL	AL EQUIV	AF	AL	Signal Cond.	Recorder
			10 ft.				
PRCP LO	.000 V	— V	0.00 "	0.00 "	"	0.000V ± 0.050V	AL EQUIV ± 0.01"
PRCP HI	5.000 V	— V	1.00 "	1.00 "	— "	5.000V ± 0.050V	AL EQUIV ± 0.01"
			35 ft.				
WS ZERO	.023 V	.025 V	0.5 mph	0.5 mph	— mph	0.025V ± 0.025V	AL EQUIV + .1mph
WS SPAN	2.495 V	2.500 V	50.0 mph	50.0 mph	— mph	2.500V ± 0.025V	AL EQUIV + .1mph
WD ZERO	.000 V	— V	0 °	0 °	— °	0.000V ± 0.100V	AL EQUIV + 1°
WD SPAN	3.333 V	— V	360 °	360 °	— °	3.333V ± 0.100V	AL EQUIV + 1°
T ZERO	.000 V	— V	-22.00 °	-22.00 °	— °	0.000V ± 0.050V	AL EQUIV + .1°F
T SPAN	5.800 V	— V	122.00 °	121.98 °	— °	5.000V ± 0.050V	AL EQUIV + .1°F
			200 ft.				
WS ZERO	.023 V	.025 V	0.5 mph	0.5 mph	— mph	0.025V ± 0.025V	AL EQUIV + .1mph
WS SPAN	2.492 V	2.500 V	50.0 mph	50.0 mph	— mph	2.500V ± 0.025V	AL EQUIV + .1mph
WD ZERO	-.002 V	.000 V	0 °	0 °	— °	0.000V ± 0.100V	AL EQUIV + 1°
WD SPAN	3.333 V	— V	360 °	360 °	— °	3.333V ± 0.100V	AL EQUIV + 1°
ΔT_1 ZERO	.008 V	.000 V	-10.00 °	-10.00 °	— °	0.000V ± 0.050V	AL EQUIV + .1°F
ΔT_1 SPAN	5.000 V	— V	10.00 °	9.99 °	— °	5.000V ± 0.050V	AL EQUIV + .1°F
ΔT_2 ZERO	.006 V	.000 V				0.000V ± 0.050V	
ΔT_2 SPAN	4.997 V	5.000 V				5.000V ± 0.050V	
			375 ft.				
WS ZERO	.025 V	— V	0.5 mph	0.5 mph	— mph	0.025V ± 0.025V	AL EQUIV + .1mph
WS SPAN	2.500 V	— V	50.0 mph	50.0 mph	— mph	2.500V ± 0.025V	AL EQUIV + .1mph
WD ZERO	.000 V	— V	0 °	0 °	— °	0.000V ± 0.100V	AL EQUIV + 1°
WD SPAN	3.333 V	— V	360 °	— °	— °	3.333V ± 0.100V	AL EQUIV + 1°
ΔT_1 ZERO	.006 V	.000 V	-10.00 °	-10.00 °	— °	0.000V ± 0.050V	AL EQUIV + .1°F
ΔT_1 SPAN	5.000 V	— V	10.00 °	9.99 °	— °	5.000V ± 0.050V	AL EQUIV + .1°F
ΔT_2 ZERO	.005 V	.000 V				0.000V ± 0.050V	
ΔT_2 SPAN	5.006 V	5.000 V				5.000V ± 0.050V	

ASL 11-11-14

LaSalle Meteorological Calibration

Date: 10-8-14

TOWER MEASUREMENTS

☑ Ambient ☐ Ice Bath

Temperatures

	33 ft. Amb.		200 ft. ΔT		375 ft. ΔT	
	AF	AL	AF	AL	AF	AL
Measured	57.74 °F	— °F	-.85 °F	— °F	-2.21 °F	— °F
Recorded	57.43 °F	— °F	-.90 °F	— °F	-2.17 °F	— °F
Difference	.31 °F	— °F	.05 °F	— °F	.04 °F	— °F
Specification	±0.5°F		±0.18°F		±0.18°F	

Winds

	33 ft.		200 ft.		375 ft.		
	AF	AL	AF	AL	AF	AL	*Specification*
WS stall	0.5 mph	0.5 mph	0.5 mph	0.5 mph	0.5 mph	0.5 mph	0.5mph ± 0.45mph
Forw. WD	360 °	— °	358 °	360 °	361 °	~~178~~ ° 361	0°/360° ± 5°
Revr. WD	182 °	— °	178 °	180 °	179 °	~~360~~ ° 178	180°/540° ± 5°
Tracking/wear	OK		OK		OK		

Comments:

AS 11-11-14

LaSalle Meteorological Calibration

Date: 10·8·14

Dates of Last Wind Sensor Bearing Replacements:

	33 ft.	200 ft.	375 ft.
(6 mos.) Wind Speed:	10·8·14	10·8·14	10·8·14
(12 mos.) Wind Direction:	7·25·14	10·8·14	10·8·14

	33 ft.	200 ft.	375 ft.
Aspirators:	OK	OK	OK

Operation of De-ice Heat Lamp System (Aug-Mar): *

Operation of Rain Gauge: OK Tips Poured 5 Tips Recorded 5

UPS CHECK: OK

Debris screen: (In) Out Installed Removed

Tower Lighting	Good	Fair	Poor
Beacon	☑	☐	☐
Side lights	☑	☐	☐
Wiring	☑	☐	☐
Flasher	☑	☐	☐

Tower Condition	Good	Fair	Poor
Paint	☑	☐	☐
Shelter condition	☑	☐	☐

Note:
AF = As Found
AL = As Left
— = no change (AF=AL)
FS = Full Scale

Calibration Instruments: Next Cal Due
Psychrometer - S/N -
Digital multimeter - S/N - 93120208 MAY 2015
Digital multimeter - S/N -
Digital thermometer - S/N - MT 0237 OCT 2015

Technicians: MICK MONDA, MIKE MAEX

Comments:

33 FT
REMOVED MT 0011 WS
INSTALLED MT 0053 WS

200 FT
REMOVED MT 0207 WS
INSTALLED MT 0189 WS
REMOVED MT 0161 WD
INSTALLED K2498C WD

375 FT
REMOVED MT 0074 WS
INSTALLED MT 0169 WS
REMOVED MT 0180 WD
INSTALLED MT 0135 WD

* 2 HEAT LAMPS (WS) 2 HEAT LAMPS 1 HEAT LAMPS AT WD

Signature:

12-1-14

System Response Check

Date: 10.8.14

Site: LaSalle
System: Microtel

Low Scale Check	33' WS	200' WS	375' WS	33' WD	200' WD	375' WD	33' T	200' ΔT	375' ΔT
Expected Response	20.0 ±0.4	20.0 ±0.4	20.0 ±0.4	108 ±2	108 ±2	108 ±2	6.80 ±0.7	-6.00 ±0.18	-6.00 ±0.18
As Found Response	20.0	20.0	19.9	107	107	107	6.5	-6.0	-6.0
As Left Response	—	—	—	—	—	—	—	—	—

Mid Scale Check	33' WS	200' WS	375' WS	33' WD	200' WD	375' WD	33' T	200' ΔT	375' ΔT
Expected Response	60.0 ±0.4	60.0 ±0.4	60.0 ±0.4	324 ±2	324 ±2	324 ±2	64.40 ±0.7	2.00 ±0.18	2.00 ±0.18
As Found Response	59.9	59.9	59.9	325	324	324	64.3	2.0	2.0
As Left Response	—	—	—	—	—	—	—	—	—

Full Scale Check	33' WS	200' WS	375' WS	33' WD	200' WD	375' WD	33' T	200' ΔT	375' ΔT
Expected Response	80.0 ±0.4	80.0 ±0.4	80.0 ±0.4	432 ±2	432 ±2	432 ±2	93.20 ±0.7	6.00 ±0.18	6.00 ±0.18
As Found Response	80.0	80.0	80.0	432	432	432	93.10	6.0	6.0
As Left Response	—	—	—	—	—	—	—	—	—

ASL 11-11-14

System Response Check

Date: 10.8.14

Site: LaSalle
System: Process Computer

Low Scale Check	A847 375' WD	A848 200' WD	A849 375' WS	* A850 200' WS	A851 375' ΔT	A852 33' WS	A853 33' WD	A854 33' T	A855 200' ΔT	A856 Precipitation
Expected Response	108 ±2	108 ±2	20.0 ±0.4	20.0 ±0.4	-4.00±0.18	20.0±0.4	108 ±2	6.80 ±0.7	-4.00±0.18	0.20 ±0.01
As Found Response	107.5	107.0	20.0	20.4	-3.99	20.2	108.2	6.80	-4.00	0.20
As Left Response	—	—	—	19.8	-	—	—	—	—	—

Mid Scale Check	A847 375' WD	A848 200' WD	A849 375' WS	* A850 200' WS	A851 375' ΔT	A852 33' WS	A853 33' WD	A854 33' T	A855 200' ΔT	A856 Precipitation
Expected Response	324 ±2	324 ±2	60.0 ±0.4	60.0 ±0.4	8.00 ±0.18	60.0 ±0.4	324 ±2	64.40 ±0.7	8.00±0.18	0.60 ±0.01
As Found Response	323.8	322.8	59.8	61.2	8.01	60.1	324.1	64.40	8.00	0.60
As Left Response	—	—	—	59.8	—	—	—	-	—	—

Full Scale Check	A847 375' WD	A848 200' WD	A849 375' WS	* A850 200' WS	A851 375' ΔT	A852 33' WS	A853 33' WD	A854 33' T	A855 200' ΔT	A856 Precipitation
Expected Response	432 ±2	432 ±2	80.0 ±0.4	80.0±0.4	14.00±0.18	80.0 ±0.4	432 ±2	93.20±0.7	14.00±0.18	0.80 ±0.01
As Found Response	431.6	431.4	79.8	81.4	14.01	80.1	432.3	93.10	14.01	0.80
As Left Response	—	—	—	79.8	—	—	—	—	—	—

* Replaced the current card for A850 200ft WS

A52 11-11-14

System Response Check

Date: 10-8-14

Site: LaSalle
System: Control Room Indicators

Low Scale Check	200' WS	375' WS	200' WD	375' WD	375' ΔT
Expected Response	20.0 ±1.0	20.0 ±1.0	108 ±5.4	108 ±5.4	-4.00 ±0.3
As Found Response	20	20	110	110	-4.
As Left Response	–	–	–	–	

Mid Scale Check	200' WS	375' WS	200' WD	375' WD	375' ΔT
Expected Response	60.0 ±1.0	60.0 ±1.0	324 ±5.4	324 ±5.4	8.00 ±0.3
As Found Response	60	60	325	325	8
As Left Response	–	–	–	–	–

Full Scale Check	200' WS	375' WS	200' WD	375' WD	375' ΔT
Expected Response	80.0 ±1.0	80.0 ±1.0	432 ±5.4	432 ±5.4	14.00 ±0.3
As Found Response	80	80	435	435	14.
As Left Response	–	–	–	–	–

ADL 11-11-14