

Table 3.2-1

LASALLE COUNTY NUCLEAR POWER STATION  
EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT (2014)  
RADIOLOGICAL IMPACT ON MAN  
MAXIMUM DOSES RESULTING FROM LIQUID RELEASES AND COMPLIANCE STATUS

Infant Receptor	Quarterly Limit	Units	1st Quarter	% of Limit	2nd Quarter	% of Limit	3rd Quarter	% of Limit	4th Quarter	% of Limit	Annual Limit	% of Limit
10CFR50 Appendix I compliance												
Total Body	1.50E+00	mRem	0.00E+00	0.00	0.00E+00	0.00	0.00E+00	0.00	0.00E+00	0.00	3.00E+00	0.00
Organ	5.00E+00	mRem	0.00E+00	0.00	0.00E+00	0.00	0.00E+00	0.00	0.00E+00	0.00	1.00E+01	0.00
40CFR141 compliance (nearest public drinking water)												
Total Body		mRem	0.00E+00		0.00E+00		0.00E+00		0.00E+00		4.00E+00	0.00
Organ		mRem	0.00E+00		0.00E+00		0.00E+00		0.00E+00		4.00E+00	0.00
Child Receptor												
10CFR50 Appendix I compliance												
Total Body	1.50E+00	mRem	0.00E+00	0.00	0.00E+00	0.00	0.00E+00	0.00	0.00E+00	0.00	3.00E+00	0.00
Organ	5.00E+00	mRem	0.00E+00	0.00	0.00E+00	0.00	0.00E+00	0.00	0.00E+00	0.00	1.00E+01	0.00
40CFR141 compliance (nearest public drinking water)												
Total Body		mRem	0.00E+00		0.00E+00		0.00E+00		0.00E+00		4.00E+00	0.00
Organ		mRem	0.00E+00		0.00E+00		0.00E+00		0.00E+00		4.00E+00	0.00
Teenager Receptor												
10CFR50 Appendix I compliance												
Total Body	1.50E+00	mRem	0.00E+00	0.00	0.00E+00	0.00	0.00E+00	0.00	0.00E+00	0.00	3.00E+00	0.00
Organ	5.00E+00	mRem	0.00E+00	0.00	0.00E+00	0.00	0.00E+00	0.00	0.00E+00	0.00	1.00E+01	0.00
40CFR141 compliance (nearest public drinking water)												
Total Body		mRem	0.00E+00		0.00E+00		0.00E+00		0.00E+00		4.00E+00	0.00
Organ		mRem	0.00E+00		0.00E+00		0.00E+00		0.00E+00		4.00E+00	0.00
Adult Receptor												
10CFR50 Appendix I compliance												
Total Body	1.50E+00	mRem	0.00E+00	0.00	0.00E+00	0.00	0.00E+00	0.00	0.00E+00	0.00	3.00E+00	0.00
Organ	5.00E+00	mRem	0.00E+00	0.00	0.00E+00	0.00	0.00E+00	0.00	0.00E+00	0.00	1.00E+01	0.00
40CFR141 compliance (nearest public drinking water)												
Total Body		mRem	0.00E+00		0.00E+00		0.00E+00		0.00E+00		4.00E+00	0.00
Organ		mRem	0.00E+00		0.00E+00		0.00E+00		0.00E+00		4.00E+00	0.00

Table 3.3-1

**LASALLE COUNTY NUCLEAR POWER STATION  
EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT (2014)  
MAXIMUM DOSES RESULTING FROM RELEASES AND COMPLIANCE STATUS**

**10CFR20 / 40CFR190 Compliance**

	1 <sup>st</sup> Quarter Dose (mRem)	2 <sup>nd</sup> Quarter Dose (mRem)	3 <sup>rd</sup> Quarter Dose (mRem)	4 <sup>th</sup> Quarter Dose (mRem)	Annual Dose (mRem)	Annual Limit (mRem/yr)	% Annual Limit
<b>Unit 1</b>							
40CFR190 Compliance							
U1 D <sup>Ex</sup>	8.25E-02	1.04E-01	1.06E-01	9.71E-02	3.90E-01	25	1.56
10CFR20 Compliance							
U1 D <sup>Tot</sup>	3.96E-01	3.47E-01	2.68E-01	2.92E-01	1.30E+00	100	1.30
40CFR190 Compliance							
Bone	7.67E-03	7.46E-03	7.28E-03	7.38E-03	2.98E-02	25	0.12
Liver	2.46E-03	2.22E-03	1.99E-03	2.16E-03	8.83E-03	25	0.04
Thyroid	3.13E-01	2.43E-01	1.61E-01	1.95E-01	9.12E-01	75	1.22
Kidney	2.62E-03	2.35E-03	2.07E-03	2.25E-03	9.29E-03	25	0.04
Lung	1.48E-03	1.48E-03	1.49E-03	1.54E-03	6.00E-03	25	0.02
GI-LLI	1.53E-03	1.51E-03	1.52E-03	1.58E-03	6.13E-03	25	0.02
<b>Unit 2</b>							
40CFR190 Compliance							
U2 D <sup>Ex</sup>	9.71E-02	8.60E-02	8.43E-02	9.90E-02	3.66E-01	25	1.47
10CFR20 Compliance							
U2 D <sup>Tot</sup>	9.71E-02	8.60E-02	8.43E-02	9.90E-02	3.66E-01	100	0.37
40CFR190 Compliance							
Bone	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	25	0.00
Liver	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	25	0.00
Thyroid	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	75	0.00
Kidney	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	25	0.00
Lung	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	25	0.00
GI-LLI	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	25	0.00

Table 3.4-1

LASALLE COUNTY NUCLEAR POWER STATION  
EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT (2014)  
RADIOLOGICAL IMPACT ON MAN  
MAXIMUM GAMMA AIR DOSE

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:**

<u>Dose</u>	<u>Maximum Value</u>	<u>Sector Affected</u>
gamma air <sup>(1)</sup>	5.380 x 10 <sup>-3</sup> mrad	East-Southeast
beta air <sup>(2)</sup>	1.930 x 10 <sup>-3</sup> mrad	East-Southeast
whole body <sup>(3)</sup>	2.220 x 10 <sup>-2</sup> mrem	East-Southeast
skin <sup>(4)</sup>	5.570 x 10 <sup>-3</sup> mrem	East-Southeast
organ <sup>(5)</sup> (infant-thyroid)	4.170 x 10 <sup>+0</sup> mrem	East-Southeast

Compliance Status

<b>10 CFR 50 Appendix I</b>	<b>Yearly Objective</b>		<b>% of Appendix I</b>
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

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

## **APPENDIX F**

### **METEOROLOGICAL DATA**

# LaSalle County Generating Station

Period of Record: January - March 2014

Stability Class - Extremely Unstable - 200Ft-33Ft Delta-T (F)

Winds Measured at 33 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	0	0	8	3	0	0	11
NNE	0	2	5	1	0	0	8
NE	0	0	5	1	0	0	6
ENE	0	0	0	2	0	0	2
E	0	0	0	0	0	0	0
ESE	0	0	0	0	0	0	0
SE	0	0	0	0	0	0	0
SSE	0	0	0	0	0	0	0
S	0	0	2	0	8	0	10
SSW	0	0	0	0	0	0	0
SW	0	0	0	0	0	0	0
WSW	0	0	0	0	0	0	0
W	0	0	0	6	0	1	7
WNW	0	0	0	1	3	0	4
NW	0	0	0	0	1	0	1
NNW	0	0	1	2	0	0	3
Variable	0	0	0	0	0	0	0
Total	0	2	21	16	12	1	52

Hours of calm in this stability class: 0

Hours of missing wind measurements in this stability class: 0

Hours of missing stability measurements in all stability classes: 3

LaSalle County Generating Station

Period of Record: January - March 2014  
 Stability Class - Moderately Unstable - 200Ft-33Ft Delta-T (F)  
 Winds Measured at 33 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	0	0	4	2	0	0	6
NNE	0	0	2	1	0	0	3
NE	0	0	1	2	0	0	3
ENE	0	0	1	0	0	0	1
E	0	0	0	0	0	0	0
ESE	0	0	0	2	0	0	2
SE	0	0	1	2	1	0	4
SSE	0	0	0	1	0	0	1
S	0	0	6	3	0	0	9
SSW	0	0	0	0	0	0	0
SW	0	0	0	0	0	0	0
WSW	0	0	1	0	0	2	3
W	0	0	0	1	1	1	3
WNW	0	0	0	0	1	0	1
NW	0	0	0	0	0	0	0
NNW	0	2	4	2	0	0	8
Variable	0	0	0	0	0	0	0
Total	0	2	20	16	3	3	44

Hours of calm in this stability class: 0  
 Hours of missing wind measurements in this stability class: 0  
 Hours of missing stability measurements in all stability classes: 3

# LaSalle County Generating Station

Period of Record: January - March 2014

Stability Class - Slightly Unstable - 200Ft-33Ft Delta-T (F)

Winds Measured at 33 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	0	0	3	5	0	0	8
NNE	0	0	10	7	0	0	17
NE	0	0	3	2	3	0	8
ENE	0	1	6	1	0	0	8
E	0	1	0	0	0	0	1
ESE	0	1	4	1	0	0	6
SE	0	0	5	0	2	0	7
SSE	0	0	2	5	0	0	7
S	0	3	1	1	1	1	7
SSW	0	1	6	0	0	0	7
SW	0	0	1	1	0	2	4
WSW	0	0	1	2	0	4	7
W	0	0	1	3	0	0	4
WNW	0	1	3	0	1	1	6
NW	0	0	2	0	1	0	3
NNW	0	0	4	2	0	0	6
Variable	0	0	0	0	0	0	0
Total	0	8	52	30	8	8	106

Hours of calm in this stability class: 0

Hours of missing wind measurements in this stability class: 0

Hours of missing stability measurements in all stability classes: 3

LaSalle County Generating Station

Period of Record: January - March 2014  
 Stability Class - Neutral - 200Ft-33Ft Delta-T (F)  
 Winds Measured at 33 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	0	8	26	18	9	0	61
NNE	0	7	7	0	0	0	14
NE	0	4	9	15	11	0	39
ENE	0	2	3	39	3	0	47
E	0	2	5	7	0	0	14
ESE	0	4	6	7	5	3	25
SE	1	3	13	13	3	0	33
SSE	1	5	18	4	4	1	33
S	0	4	18	15	17	0	54
SSW	1	4	13	10	7	0	35
SW	0	5	13	14	16	2	50
WSW	0	6	15	9	8	9	47
W	1	8	31	28	6	7	81
WNW	0	17	47	47	19	3	133
NW	0	7	52	25	10	1	95
NNW	0	8	20	59	5	5	97
Variable	0	0	0	0	0	0	0
Total	4	94	296	310	123	31	858

Hours of calm in this stability class: 0  
 Hours of missing wind measurements in this stability class: 0  
 Hours of missing stability measurements in all stability classes: 3



# LaSalle County Generating Station

Period of Record: January - March 2014

Stability Class - Slightly Stable - 200Ft-33Ft Delta-T (F)

Winds Measured at 33 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	1	16	4	3	0	0	24
NNE	0	8	3	0	0	0	11
NE	0	2	0	2	0	0	4
ENE	0	1	17	1	0	0	19
E	0	0	18	3	0	0	21
ESE	1	3	4	2	1	0	11
SE	3	8	7	0	0	0	18
SSE	1	3	7	9	6	3	29
S	1	9	11	13	17	5	56
SSW	2	10	13	5	13	3	46
SW	1	7	10	7	11	8	44
WSW	1	6	23	19	1	0	50
W	1	7	44	13	13	3	81
WNW	0	13	40	61	43	21	178
NW	0	9	19	9	0	1	38
NNW	1	10	16	7	0	0	34
Variable	0	0	0	0	0	0	0
Total	13	112	236	154	105	44	664

Hours of calm in this stability class: 0  
 Hours of missing wind measurements in this stability class: 0  
 Hours of missing stability measurements in all stability classes: 3

LaSalle County Generating Station

Period of Record: January - March 2014

Stability Class - Moderately Stable - 200Ft-33Ft Delta-T (F)

Winds Measured at 33 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	2	3	0	0	0	0	5
NNE	0	1	0	0	0	0	1
NE	1	1	0	0	0	0	2
ENE	0	0	0	0	0	0	0
E	1	4	3	1	0	0	9
ESE	0	13	5	0	0	0	18
SE	0	4	6	0	0	0	10
SSE	3	8	7	0	1	0	19
S	1	8	8	12	0	0	29
SSW	0	6	12	19	3	0	40
SW	2	5	7	13	10	0	37
WSW	1	4	20	13	3	0	41
W	1	6	11	8	5	0	31
WNW	3	8	28	2	6	0	47
NW	1	3	8	0	0	0	12
NNW	0	1	1	0	0	0	2
Variable	0	0	0	0	0	0	0
Total	16	75	116	68	28	0	303

Hours of calm in this stability class: 0

Hours of missing wind measurements in this stability class: 0

Hours of missing stability measurements in all stability classes: 3

LaSalle County Generating Station

Period of Record: January - March 2014

Stability Class - Extremely Stable - 200Ft-33Ft Delta-T (F)

Winds Measured at 33 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	0	1	0	0	0	0	1
NNE	0	0	0	0	0	0	0
NE	0	0	0	0	0	0	0
ENE	0	0	0	0	0	0	0
E	0	2	0	0	0	0	2
ESE	0	2	1	1	0	0	4
SE	0	7	2	0	0	0	9
SSE	0	10	14	2	0	0	26
S	0	6	9	0	0	0	15
SSW	0	2	10	1	0	0	13
SW	0	5	4	1	0	0	10
WSW	1	4	9	5	0	0	19
W	0	6	4	0	0	0	10
WNW	1	4	5	0	0	0	10
NW	2	5	2	0	0	0	9
NNW	1	1	0	0	0	0	2
Variable	0	0	0	0	0	0	0
Total	5	55	60	10	0	0	130

Hours of calm in this stability class: 0

Hours of missing wind measurements in this stability class: 0

Hours of missing stability measurements in all stability classes: 3

LaSalle County Generating Station

Period of Record: January - March 2014

Stability Class - Extremely Unstable - 375Ft-33Ft Delta-T (F)

Winds Measured at 375 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	0	0	0	0	0	0	0
NNE	0	0	0	0	0	0	0
NE	0	0	0	0	0	0	0
ENE	0	0	0	0	0	0	0
E	0	0	0	0	0	0	0
ESE	0	0	0	0	0	0	0
SE	0	0	0	0	0	0	0
SSE	0	0	0	0	0	0	0
S	0	0	0	0	0	0	0
SSW	0	0	0	0	0	0	0
SW	0	0	0	0	0	0	0
WSW	0	0	0	0	0	0	0
W	0	0	0	0	0	0	0
WNW	0	0	0	0	0	0	0
NW	0	0	0	0	0	0	0
NNW	0	0	0	0	0	0	0
Variable	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0

Hours of calm in this stability class: 0

Hours of missing wind measurements in this stability class: 0

Hours of missing stability measurements in all stability classes: 3

LaSalle County Generating Station

Period of Record: January - March 2014  
 Stability Class - Moderately Unstable - 375Ft-33Ft Delta-T (F)  
 Winds Measured at 375 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	0	0	0	0	0	0	0
NNE	0	0	0	0	3	0	3
NE	0	0	0	0	1	0	1
ENE	0	0	0	0	0	0	0
E	0	0	0	0	0	0	0
ESE	0	0	0	0	0	0	0
SE	0	0	0	0	0	0	0
SSE	0	0	0	0	0	0	0
S	0	0	0	0	0	0	0
SSW	0	0	0	0	0	0	0
SW	0	0	0	0	0	0	0
WSW	0	0	0	0	0	0	0
W	0	0	0	0	0	0	0
WNW	0	0	0	0	0	0	0
NW	0	0	0	0	0	0	0
NNW	0	0	0	0	0	0	0
Variable	0	0	0	0	0	0	0
Total	0	0	0	0	4	0	4

Hours of calm in this stability class: 0  
 Hours of missing wind measurements in this stability class: 0  
 Hours of missing stability measurements in all stability classes: 3

LaSalle County Generating Station

Period of Record: January - March 2014

Stability Class - Slightly Unstable - 375Ft-33Ft Delta-T (F)

Winds Measured at 375 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	0	0	0	0	0	0	0
NNE	0	0	0	1	1	0	2
NE	0	0	0	1	1	1	3
ENE	0	0	0	0	2	0	2
E	0	0	0	0	0	0	0
ESE	0	0	0	0	0	0	0
SE	0	0	0	1	0	0	1
SSE	0	0	0	0	0	0	0
S	0	0	2	3	0	1	6
SSW	0	0	1	2	0	0	3
SW	0	0	0	0	0	0	0
WSW	0	0	0	0	0	0	0
W	0	0	0	0	1	0	1
WNW	0	0	0	0	1	0	1
NW	0	0	0	0	0	2	2
NNW	0	0	0	0	0	0	0
Variable	0	0	0	0	0	0	0
Total	0	0	3	8	6	4	21

Hours of calm in this stability class: 0

Hours of missing wind measurements in this stability class: 0

Hours of missing stability measurements in all stability classes: 3

LaSalle County Generating Station

Period of Record: January - March 2014  
 Stability Class - Neutral - 375Ft-33Ft Delta-T (F)  
 Winds Measured at 375 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	1	5	9	34	35	18	102
NNE	0	4	12	12	13	4	45
NE	0	3	5	15	19	22	64
ENE	0	3	8	26	21	2	60
E	0	1	1	7	6	0	15
ESE	0	3	4	11	4	4	26
SE	1	1	5	5	10	9	31
SSE	0	0	13	12	11	6	42
S	0	1	17	23	11	29	81
SSW	0	1	8	16	7	19	51
SW	1	3	8	17	6	28	63
WSW	0	4	6	11	11	20	52
W	1	2	6	41	21	22	93
WNW	0	6	12	39	40	33	130
NW	0	10	31	70	26	28	165
NNW	1	5	16	26	38	8	94
Variable	0	0	0	0	0	0	0
Total	5	52	161	365	279	252	1114

Hours of calm in this stability class: 0  
 Hours of missing wind measurements in this stability class: 0  
 Hours of missing stability measurements in all stability classes: 3

LaSalle County Generating Station

Period of Record: January - March 2014

Stability Class - Slightly Stable - 375Ft-33Ft Delta-T (F)

Winds Measured at 375 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	0	4	3	5	8	0	20
NNE	0	6	5	2	2	0	15
NE	0	1	9	4	0	0	14
ENE	1	3	8	7	1	0	20
E	0	2	7	4	2	1	16
ESE	0	2	4	3	6	5	20
SE	0	2	5	5	4	4	20
SSE	2	2	4	0	11	7	26
S	1	3	8	5	12	54	83
SSW	2	3	3	10	7	31	56
SW	1	2	9	10	9	30	61
WSW	0	3	6	14	9	20	52
W	0	0	12	28	12	30	82
WNW	0	0	7	22	48	85	162
NW	0	2	9	23	18	15	67
NNW	0	3	10	7	4	0	24
Variable	0	0	0	0	0	0	0
Total	7	38	109	149	153	282	738

Hours of calm in this stability class: 0

Hours of missing wind measurements in this stability class: 0

Hours of missing stability measurements in all stability classes: 3



LaSalle County Generating Station

Period of Record: January - March 2014

Stability Class - Moderately Stable - 375Ft-33Ft Delta-T (F)

Winds Measured at 375 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	1	2	3	2	1	0	9
NNE	2	0	3	1	1	0	7
NE	0	1	1	1	0	0	3
ENE	1	2	0	0	0	0	3
E	1	1	1	3	1	0	7
ESE	0	1	1	1	2	1	6
SE	0	1	2	4	2	0	9
SSE	1	2	0	1	2	1	7
S	0	3	2	12	3	8	28
SSW	0	2	2	1	2	19	26
SW	2	1	0	7	3	11	24
WSW	1	0	1	2	7	10	21
W	0	1	0	4	14	5	24
WNW	2	0	1	4	2	2	11
NW	1	1	1	3	14	0	20
NNW	0	1	3	3	6	0	13
Variable	0	0	0	0	0	0	0
Total	12	19	21	49	60	57	218

Hours of calm in this stability class: 0

Hours of missing wind measurements in this stability class: 0

Hours of missing stability measurements in all stability classes: 3

# LaSalle County Generating Station

Period of Record: January - March 2014

Stability Class - Extremely Stable - 375Ft-33Ft Delta-T (F)

Winds Measured at 375 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	0	1	1	2	2	0	6
NNE	0	0	0	2	0	0	2
NE	0	0	1	0	0	0	1
ENE	0	0	0	0	0	0	0
E	0	1	0	0	0	0	1
ESE	0	1	0	0	0	0	1
SE	0	1	3	0	0	0	4
SSE	0	0	3	7	1	0	11
S	0	1	1	9	3	2	16
SSW	0	0	2	3	3	0	8
SW	0	0	0	4	2	0	6
WSW	0	0	0	0	0	0	0
W	0	0	0	1	0	0	1
WNW	0	0	0	0	0	0	0
NW	0	0	0	1	0	0	1
NNW	0	0	2	2	0	0	4
Variable	0	0	0	0	0	0	0
Total	0	5	13	31	11	2	62

Hours of calm in this stability class: 0

Hours of missing wind measurements in this stability class: 0

Hours of missing stability measurements in all stability classes: 3

LaSalle County Generating Station

Period of Record: April - June 2014

Stability Class - Extremely Unstable - 200Ft-33Ft Delta-T (F)

Winds Measured at 33 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	0	0	0	1	0	0	1
NNE	0	0	0	0	0	0	0
NE	0	0	1	3	0	0	4
ENE	0	0	0	8	5	0	13
E	0	0	0	4	1	0	5
ESE	0	0	2	0	0	0	2
SE	0	0	1	0	0	0	1
SSE	0	0	0	0	0	0	0
S	0	0	0	1	0	0	1
SSW	0	0	0	0	5	0	5
SW	0	0	0	1	0	0	1
WSW	0	0	0	3	3	1	7
W	0	0	1	0	3	0	4
WNW	0	0	0	0	0	0	0
NW	0	0	0	0	0	0	0
NNW	0	0	0	0	0	0	0
Variable	0	0	0	0	0	0	0
Total	0	0	5	21	17	1	44

Hours of calm in this stability class: 0

Hours of missing wind measurements in this stability class: 0

Hours of missing stability measurements in all stability classes: 1

LaSalle County Generating Station

Period of Record: April - June 2014

Stability Class - Moderately Unstable - 200Ft-33Ft Delta-T (F)  
Winds Measured at 33 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	0	0	0	1	0	0	1
NNE	0	0	0	0	0	0	0
NE	0	0	0	1	0	0	1
ENE	0	0	0	2	0	0	2
E	0	1	0	0	0	0	1
ESE	0	0	0	0	0	0	0
SE	0	1	2	0	0	0	3
SSE	0	0	0	2	2	4	8
S	0	0	1	5	0	1	7
SSW	0	0	2	2	1	0	5
SW	0	0	2	0	0	0	2
WSW	0	0	5	4	2	0	11
W	0	0	0	2	2	1	5
WNW	0	0	2	2	0	0	4
NW	0	0	0	0	0	0	0
NNW	0	0	0	7	0	0	7
Variable	0	0	0	0	0	0	0
Total	0	2	14	28	7	6	57

Hours of calm in this stability class: 0

Hours of missing wind measurements in this stability class: 0

Hours of missing stability measurements in all stability classes: 1

LaSalle County Generating Station

Period of Record: April - June 2014

Stability Class - Slightly Unstable - 200Ft-33Ft Delta-T (F)  
Winds Measured at 33 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	0	1	5	0	0	0	6
NNE	0	0	2	0	0	0	2
NE	0	0	3	2	0	0	5
ENE	0	0	2	5	2	0	9
E	0	2	0	0	4	1	7
ESE	0	0	1	0	0	1	2
SE	0	2	2	1	0	1	6
SSE	0	1	2	1	4	2	10
S	0	2	4	4	1	1	12
SSW	0	0	13	5	1	0	19
SW	0	1	13	3	1	0	18
WSW	0	0	9	10	2	0	21
W	0	0	10	8	0	4	22
WNW	0	1	14	8	2	0	25
NW	0	0	2	5	0	0	7
NNW	0	1	7	12	0	0	20
Variable	0	0	0	0	0	0	0
Total	0	11	89	64	17	10	191

Hours of calm in this stability class: 0

Hours of missing wind measurements in this stability class: 0

Hours of missing stability measurements in all stability classes: 1

LaSalle County Generating Station

Period of Record: April - June 2014  
 Stability Class - Neutral - 200Ft-33Ft Delta-T (F)  
 Winds Measured at 33 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	1	10	21	3	0	0	35
NNE	0	17	24	2	0	0	43
NE	0	17	27	23	0	0	67
ENE	1	26	31	33	12	0	103
E	0	17	28	8	20	6	79
ESE	0	5	8	3	5	1	22
SE	0	9	14	7	5	1	36
SSE	1	6	23	24	3	5	62
S	1	13	26	10	8	1	59
SSW	0	2	35	13	8	0	58
SW	1	15	20	21	5	2	64
WSW	1	12	27	26	4	0	70
W	1	10	17	17	5	3	53
WNW	0	16	31	17	2	0	66
NW	1	4	27	4	0	0	36
NNW	1	14	36	22	2	0	75
Variable	1	0	0	0	0	0	1
Total	10	193	395	233	79	19	929

Hours of calm in this stability class: 0  
 Hours of missing wind measurements in this stability class: 1  
 Hours of missing stability measurements in all stability classes: 1

LaSalle County Generating Station

Period of Record: April - June 2014

Stability Class - Slightly Stable - 200Ft-33Ft Delta-T (F)

Winds Measured at 33 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	2	7	9	0	0	0	18
NNE	0	11	3	0	0	0	14
NE	1	8	25	8	0	0	42
ENE	0	4	23	25	0	0	52
E	0	13	33	26	7	1	80
ESE	0	7	3	5	0	0	15
SE	0	9	17	2	0	0	28
SSE	1	8	12	13	2	1	37
S	1	7	32	33	4	0	77
SSW	2	8	36	12	4	0	62
SW	2	3	17	7	3	0	32
WSW	2	9	16	6	0	0	33
W	1	9	14	4	5	3	36
WNW	1	8	10	1	3	3	26
NW	0	6	15	2	0	0	23
NNW	1	5	12	3	0	0	21
Variable	0	0	0	0	0	0	0
Total	14	122	277	147	28	8	596

Hours of calm in this stability class: 0

Hours of missing wind measurements in this stability class: 0

Hours of missing stability measurements in all stability classes: 1

LaSalle County Generating Station

Period of Record: April - June 2014

Stability Class - Moderately Stable - 200Ft-33Ft Delta-T (F)

Winds Measured at 33 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	0	1	1	0	0	0	2
NNE	0	2	0	0	0	0	2
NE	0	2	0	0	0	0	2
ENE	2	0	2	0	0	0	4
E	1	20	15	2	0	0	38
ESE	0	9	1	1	0	0	11
SE	1	8	15	4	0	0	28
SSE	0	7	11	1	0	0	19
S	2	9	5	3	0	0	19
SSW	0	8	11	6	1	0	26
SW	2	6	3	0	0	0	11
WSW	1	5	7	7	0	0	20
W	3	8	7	0	0	0	18
WNW	0	16	6	0	0	0	22
NW	1	7	3	0	0	0	11
NNW	0	3	0	0	0	0	3
Variable	0	0	0	0	0	0	0
Total	13	111	87	24	1	0	236

Hours of calm in this stability class: 0

Hours of missing wind measurements in this stability class: 0

Hours of missing stability measurements in all stability classes: 1



# LaSalle County Generating Station

Period of Record: April - June 2014

Stability Class - Extremely Stable - 200Ft-33Ft Delta-T (F)

Winds Measured at 33 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	0	0	0	0	0	0	0
NNE	0	0	0	0	0	0	0
NE	0	0	0	0	0	0	0
ENE	0	1	0	0	0	0	1
E	0	4	0	0	0	0	4
ESE	0	8	1	0	0	0	9
SE	0	13	12	1	0	0	26
SSE	0	12	6	1	0	0	19
S	0	9	6	0	0	0	15
SSW	0	9	28	0	0	0	37
SW	0	1	1	0	0	0	2
WSW	1	3	0	0	0	0	4
W	0	4	1	0	0	0	5
WNW	0	5	0	0	0	0	5
NW	0	1	1	0	0	0	2
NNW	0	0	0	0	0	0	0
Variable	0	0	0	0	0	0	0
Total	1	70	56	2	0	0	129

Hours of calm in this stability class: 0

Hours of missing wind measurements in this stability class: 0

Hours of missing stability measurements in all stability classes: 1

LaSalle County Generating Station

Period of Record: April - June 2014

Stability Class - Extremely Unstable - 375Ft-33Ft Delta-T (F)

Winds Measured at 375 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	0	0	0	0	0	0	0
NNE	0	0	0	0	0	0	0
NE	0	0	0	0	0	0	0
ENE	0	0	0	0	1	1	2
E	0	0	0	0	0	2	2
ESE	0	0	0	0	0	0	0
SE	0	0	0	0	0	0	0
SSE	0	0	0	0	0	0	0
S	0	0	0	0	0	0	0
SSW	0	0	0	0	0	0	0
SW	0	0	0	0	0	0	0
WSW	0	0	0	0	0	1	1
W	0	0	0	0	0	2	2
WNW	0	0	0	0	0	0	0
NW	0	0	0	0	0	0	0
NNW	0	0	0	0	0	0	0
Variable	0	0	0	0	0	0	0
Total	0	0	0	0	1	6	7

Hours of calm in this stability class: 0

Hours of missing wind measurements in this stability class: 0

Hours of missing stability measurements in all stability classes: 1

LaSalle County Generating Station

Period of Record: April - June 2014

Stability Class - Moderately Unstable - 375Ft-33Ft Delta-T (F)  
Winds Measured at 375 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	0	0	0	0	0	0	0
NNE	0	0	0	0	0	0	0
NE	0	0	0	0	3	0	3
ENE	0	0	0	2	0	3	5
E	0	1	0	0	0	1	2
ESE	0	0	0	0	0	0	0
SE	0	0	0	0	0	0	0
SSE	0	0	0	0	0	0	0
S	0	0	0	0	0	0	0
SSW	0	0	0	0	1	1	2
SW	0	0	0	0	0	0	0
WSW	0	0	0	0	1	0	1
W	0	0	0	0	0	0	0
WNW	0	0	0	0	0	0	0
NW	0	0	0	0	0	0	0
NNW	0	0	0	0	0	0	0
Variable	0	0	0	0	0	0	0
Total	0	1	0	2	5	5	13

Hours of calm in this stability class: 0

Hours of missing wind measurements in this stability class: 0

Hours of missing stability measurements in all stability classes: 1

LaSalle County Generating Station

Period of Record: April - June 2014

Stability Class - Slightly Unstable - 375Ft-33Ft Delta-T (F)

Winds Measured at 375 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	0	0	0	0	0	0	0
NNE	0	0	0	0	0	0	0
NE	0	0	0	0	0	0	0
ENE	0	0	0	3	2	0	5
E	0	0	0	0	2	1	3
ESE	0	0	0	0	0	0	0
SE	0	0	0	0	0	0	0
SSE	0	0	0	0	0	3	3
S	0	0	0	2	0	1	3
SSW	0	0	0	1	0	3	4
SW	0	0	0	0	1	0	1
WSW	0	0	0	1	3	2	6
W	0	0	0	1	0	6	7
WNW	0	0	0	2	0	0	2
NW	0	0	0	0	0	0	0
NNW	0	0	0	1	0	0	1
Variable	0	0	0	0	0	0	0
Total	0	0	0	11	8	16	35

Hours of calm in this stability class: 0

Hours of missing wind measurements in this stability class: 0

Hours of missing stability measurements in all stability classes: 1

LaSalle County Generating Station

Period of Record: April - June 2014

Stability Class - Neutral - 375Ft-33Ft Delta-T (F)

Winds Measured at 375 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	0	6	19	12	12	0	49
NNE	0	8	14	22	4	2	50
NE	1	9	12	29	18	3	72
ENE	0	13	25	39	51	19	147
E	0	9	25	19	12	21	86
ESE	1	3	8	9	4	14	39
SE	0	7	9	15	1	4	36
SSE	0	0	13	22	10	17	62
S	0	4	21	32	14	18	89
SSW	0	4	12	34	17	23	90
SW	1	9	16	33	21	8	88
WSW	0	6	12	40	24	10	92
W	1	4	15	33	24	14	91
WNW	0	5	26	19	18	9	77
NW	0	6	23	21	14	1	65
NNW	0	3	13	36	27	4	83
Variable	0	1	0	0	0	0	1
Total	4	97	263	415	271	167	1217

Hours of calm in this stability class: 0

Hours of missing wind measurements in this stability class: 0

Hours of missing stability measurements in all stability classes: 1

LaSalle County Generating Station

Period of Record: April - June 2014

Stability Class - Slightly Stable - 375Ft-33Ft Delta-T (F)

Winds Measured at 375 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	0	1	7	6	4	1	19
NNE	0	5	4	2	1	0	12
NE	0	2	11	11	7	0	31
ENE	0	1	16	15	18	1	51
E	0	1	18	18	15	21	73
ESE	0	0	5	13	7	6	31
SE	0	2	4	16	5	3	30
SSE	0	4	4	8	16	13	45
S	0	2	3	11	26	35	77
SSW	0	2	5	14	25	23	69
SW	0	1	3	16	18	9	47
WSW	0	7	4	12	19	1	43
W	0	4	6	6	11	8	35
WNW	1	1	7	18	11	3	41
NW	0	4	6	19	8	0	37
NNW	2	1	3	11	11	2	30
Variable	0	0	0	0	0	0	0
Total	3	38	106	196	202	126	671

Hours of calm in this stability class: 0

Hours of missing wind measurements in this stability class: 0

Hours of missing stability measurements in all stability classes: 1

LaSalle County Generating Station

Period of Record: April - June 2014

Stability Class - Moderately Stable - 375Ft-33Ft Delta-T (F)  
Winds Measured at 375 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	0	0	2	1	2	0	5
NNE	0	2	0	0	0	0	2
NE	0	1	0	1	0	0	2
ENE	0	1	0	0	0	0	1
E	0	1	0	1	4	0	6
ESE	0	0	3	16	2	2	23
SE	0	0	3	10	2	5	20
SSE	0	0	8	4	4	16	32
S	0	2	5	16	11	5	39
SSW	0	0	2	2	6	13	23
SW	0	0	2	5	6	1	14
WSW	0	0	3	0	0	0	3
W	0	1	1	0	1	0	3
WNW	0	0	5	6	1	0	12
NW	0	0	2	10	3	0	15
NNW	2	0	0	4	3	0	9
Variable	0	0	0	0	0	0	0
Total	2	8	36	76	45	42	209

Hours of calm in this stability class: 0

Hours of missing wind measurements in this stability class: 0

Hours of missing stability measurements in all stability classes: 1

LaSalle County Generating Station

Period of Record: April - June 2014

Stability Class - Extremely Stable - 375Ft-33Ft Delta-T (F)  
Winds Measured at 375 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	0	0	0	0	0	0	0
NNE	0	0	2	1	0	0	3
NE	0	0	0	0	0	0	0
ENE	0	0	0	0	0	0	0
E	0	0	0	0	0	0	0
ESE	0	0	0	0	0	0	0
SE	0	0	1	3	0	0	4
SSE	0	0	1	1	1	1	4
S	0	0	4	1	0	1	6
SSW	0	1	0	0	2	3	6
SW	0	1	0	1	1	1	4
WSW	0	0	4	0	0	0	4
W	0	0	0	0	0	0	0
WNW	0	0	0	0	0	0	0
NW	0	0	0	0	0	0	0
NNW	0	0	0	0	0	0	0
Variable	0	0	0	0	0	0	0
Total	0	2	12	7	4	6	31

Hours of calm in this stability class: 0

Hours of missing wind measurements in this stability class: 0

Hours of missing stability measurements in all stability classes: 1



LaSalle County Generating Station

Period of Record: July - September 2014

Stability Class - Extremely Unstable - 200Ft-33Ft Delta-T (F)  
Winds Measured at 33 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	0	0	1	1	0	0	2
NNE	0	0	0	0	0	0	0
NE	0	0	0	0	0	0	0
ENE	0	1	0	0	0	0	1
E	0	0	0	0	0	0	0
ESE	0	0	0	0	0	0	0
SE	0	0	0	0	0	0	0
SSE	0	0	0	0	0	0	0
S	0	0	0	0	0	0	0
SSW	0	0	1	1	0	0	2
SW	0	1	0	1	0	0	2
WSW	0	0	0	0	0	0	0
W	0	1	2	3	0	0	6
WNW	0	0	4	4	0	0	8
NW	0	0	0	1	0	0	1
NNW	0	0	0	1	0	0	1
Variable	0	0	0	0	0	0	0
Total	0	3	8	12	0	0	23

Hours of calm in this stability class: 0

Hours of missing wind measurements in this stability class: 0

Hours of missing stability measurements in all stability classes: 0

LaSalle County Generating Station

Period of Record: July - September 2014

Stability Class - Moderately Unstable - 200Ft-33Ft Delta-T (F)

Winds Measured at 33 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	0	0	1	1	0	0	2
NNE	0	0	1	0	0	0	1
NE	0	0	1	0	0	0	1
ENE	0	0	2	1	0	0	3
E	0	0	0	0	0	0	0
ESE	0	0	0	0	0	0	0
SE	0	0	1	0	0	0	1
SSE	0	0	0	0	0	0	0
S	0	0	1	1	0	0	2
SSW	0	2	2	1	0	0	5
SW	0	1	4	2	0	0	7
WSW	0	0	6	6	0	0	12
W	0	3	10	4	0	0	17
WNW	0	3	6	11	0	0	20
NW	0	0	0	2	0	0	2
NNW	0	0	0	1	0	0	1
Variable	0	0	0	0	0	0	0
Total	0	9	35	30	0	0	74

Hours of calm in this stability class: 0

Hours of missing wind measurements in this stability class: 0

Hours of missing stability measurements in all stability classes: 0

# LaSalle County Generating Station

Period of Record: July - September 2014

Stability Class - Slightly Unstable - 200Ft-33Ft Delta-T (F)

Winds Measured at 33 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	0	0	3	1	0	0	4
NNE	0	1	4	0	0	0	5
NE	0	0	7	0	0	0	7
ENE	0	0	3	0	0	0	3
E	0	0	3	2	0	0	5
ESE	0	0	2	2	0	0	4
SE	0	0	3	0	0	0	3
SSE	0	1	4	3	0	0	8
S	0	6	8	1	0	0	15
SSW	0	12	16	1	0	0	29
SW	0	6	7	3	0	0	16
WSW	0	3	3	8	0	0	14
W	0	12	9	3	0	0	24
WNW	0	4	15	6	0	0	25
NW	0	1	12	3	0	0	16
NNW	0	0	2	0	0	0	2
Variable	0	0	0	0	0	0	0
Total	0	46	101	33	0	0	180

Hours of calm in this stability class: 0

Hours of missing wind measurements in this stability class: 5

Hours of missing stability measurements in all stability classes: 0

LaSalle County Generating Station

Period of Record: July - September 2014  
 Stability Class - Neutral - 200Ft-33Ft Delta-T (F)  
 Winds Measured at 33 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	2	48	36	1	0	0	87
NNE	4	20	13	1	0	0	38
NE	7	16	19	5	0	0	47
ENE	0	16	38	1	0	0	55
E	3	17	18	3	0	0	41
ESE	2	11	9	3	0	0	25
SE	1	13	6	1	0	0	21
SSE	2	16	16	5	0	0	39
S	3	19	16	6	0	0	44
SSW	0	24	17	2	0	0	43
SW	4	24	20	10	2	0	60
WSW	4	18	8	10	0	0	40
W	3	22	16	8	1	0	50
WNW	0	11	39	13	5	0	68
NW	5	15	7	12	2	0	41
NNW	2	19	33	18	2	0	74
Variable	1	0	0	0	0	0	1
Total	43	309	311	99	12	0	774

Hours of calm in this stability class: 0  
 Hours of missing wind measurements in this stability class: 7  
 Hours of missing stability measurements in all stability classes: 0

LaSalle County Generating Station

Period of Record: July - September 2014

Stability Class - Slightly Stable - 200Ft-33Ft Delta-T (F)

Winds Measured at 33 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	2	17	4	0	0	0	23
NNE	4	14	5	0	0	0	23
NE	3	8	14	0	0	0	25
ENE	1	2	21	1	0	0	25
E	1	17	19	0	0	0	37
ESE	3	5	4	0	0	0	12
SE	4	10	4	1	0	0	19
SSE	6	14	17	0	0	0	37
S	1	20	27	3	0	0	51
SSW	3	11	25	0	0	0	39
SW	2	9	18	7	1	0	37
WSW	2	15	19	4	1	0	41
W	2	13	12	2	0	0	29
WNW	4	15	20	3	0	0	42
NW	2	5	6	0	0	0	13
NNW	1	12	3	0	0	0	16
Variable	0	0	0	0	0	0	0
Total	41	187	218	21	2	0	469

Hours of calm in this stability class: 0

Hours of missing wind measurements in this stability class: 6

Hours of missing stability measurements in all stability classes: 0

LaSalle County Generating Station

Period of Record: July - September 2014

Stability Class - Moderately Stable - 200Ft-33Ft Delta-T (F)

Winds Measured at 33 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	0	10	0	0	0	0	10
NNE	1	3	0	0	0	0	4
NE	0	2	0	0	0	0	2
ENE	4	8	3	0	0	0	15
E	1	26	17	0	0	0	44
ESE	1	14	1	0	0	0	16
SE	1	19	1	0	0	0	21
SSE	3	18	2	0	0	0	23
S	1	27	9	0	0	0	37
SSW	3	16	5	0	0	0	24
SW	3	14	10	0	0	0	27
WSW	2	14	9	0	0	0	25
W	9	12	8	0	0	0	29
WNW	5	24	4	0	0	0	33
NW	1	3	0	0	0	0	4
NNW	2	5	0	0	0	0	7
Variable	0	0	0	0	0	0	0
Total	37	215	69	0	0	0	321

Hours of calm in this stability class: 0

Hours of missing wind measurements in this stability class: 2

Hours of missing stability measurements in all stability classes: 0

LaSalle County Generating Station

Period of Record: July - September 2014  
 Stability Class - Extremely Stable - 200Ft-33Ft Delta-T (F)  
 Winds Measured at 33 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	0	0	0	0	0	0	0
NNE	0	0	0	0	0	0	0
NE	0	0	0	0	0	0	0
ENE	1	1	0	0	0	0	2
E	2	15	4	0	0	0	21
ESE	2	35	0	0	0	0	37
SE	8	29	0	0	0	0	37
SSE	2	41	0	0	0	0	43
S	2	54	1	0	0	0	57
SSW	4	26	3	0	0	0	33
SW	2	30	0	0	0	0	32
WSW	4	22	3	0	0	0	29
W	1	29	1	0	0	0	31
WNW	2	11	0	0	0	0	13
NW	0	2	0	0	0	0	2
NNW	1	0	0	0	0	0	1
Variable	0	0	0	0	0	0	0
Total	31	295	12	0	0	0	338

Hours of calm in this stability class: 0  
 Hours of missing wind measurements in this stability class: 9  
 Hours of missing stability measurements in all stability classes: 0

LaSalle County Generating Station

Period of Record: July - September 2014

Stability Class - Extremely Unstable - 375Ft-33Ft Delta-T (F)

Winds Measured at 375 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	0	0	0	0	0	0	0
NNE	0	0	0	0	0	0	0
NE	0	0	0	0	0	0	0
ENE	0	0	0	0	0	0	0
E	0	0	0	0	0	0	0
ESE	0	0	0	0	0	0	0
SE	0	0	0	0	0	0	0
SSE	0	0	0	0	0	0	0
S	0	0	0	0	0	0	0
SSW	0	0	0	0	0	0	0
SW	0	0	0	0	0	0	0
WSW	0	0	0	0	0	0	0
W	0	0	0	0	0	0	0
WNW	0	0	0	0	0	0	0
NW	0	0	0	0	0	0	0
NNW	0	0	0	0	0	0	0
Variable	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0

Hours of calm in this stability class: 0

Hours of missing wind measurements in this stability class: 0

Hours of missing stability measurements in all stability classes: 0



LaSalle County Generating Station

Period of Record: July - September 2014

Stability Class - Moderately Unstable - 375Ft-33Ft Delta-T (F)

Winds Measured at 375 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	0	0	0	0	2	0	2
NNE	0	0	0	0	0	0	0
NE	0	0	0	0	0	0	0
ENE	0	0	0	0	0	0	0
E	0	0	0	0	0	0	0
ESE	0	0	0	0	0	0	0
SE	0	0	0	0	0	0	0
SSE	0	0	0	0	0	0	0
S	0	0	0	0	0	0	0
SSW	0	0	0	0	0	0	0
SW	0	0	0	0	0	0	0
WSW	0	0	0	0	0	0	0
W	0	0	0	0	0	0	0
WNW	0	0	0	1	0	0	1
NW	0	0	0	0	0	0	0
NNW	0	0	0	0	0	0	0
Variable	0	0	0	0	0	0	0
Total	0	0	0	1	2	0	3

Hours of calm in this stability class: 0

Hours of missing wind measurements in this stability class: 0

Hours of missing stability measurements in all stability classes: 0

LaSalle County Generating Station

Period of Record: July - September 2014

Stability Class - Slightly Unstable - 375Ft-33Ft Delta-T (F)

Winds Measured at 375 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	0	0	0	2	2	0	4
NNE	0	0	0	1	0	0	1
NE	0	0	1	1	0	0	2
ENE	0	0	0	3	0	0	3
E	0	0	0	0	0	0	0
ESE	0	0	0	0	0	0	0
SE	0	0	0	1	0	0	1
SSE	0	0	0	0	0	0	0
S	0	0	1	0	1	0	2
SSW	0	1	3	1	1	0	6
SW	0	0	1	1	0	0	2
WSW	0	0	0	0	0	0	0
W	0	0	4	7	1	0	12
WNW	0	0	4	10	2	0	16
NW	0	0	0	1	4	0	5
NNW	0	0	0	0	0	0	0
Variable	0	0	0	0	0	0	0
Total	0	1	14	28	11	0	54

Hours of calm in this stability class: 0

Hours of missing wind measurements in this stability class: 0

Hours of missing stability measurements in all stability classes: 0

LaSalle County Generating Station

Period of Record: July - September 2014  
 Stability Class - Neutral - 375Ft-33Ft Delta-T (F)  
 Winds Measured at 375 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	1	28	28	33	6	0	96
NNE	1	19	14	13	3	0	50
NE	4	12	20	33	6	0	75
ENE	0	12	31	22	0	0	65
E	2	13	18	15	0	0	48
ESE	1	7	12	8	0	0	28
SE	5	11	5	7	0	1	29
SSE	0	11	21	5	1	0	38
S	0	16	21	10	11	4	62
SSW	1	15	24	27	6	2	75
SW	1	14	23	20	17	3	78
WSW	2	13	19	21	9	0	64
W	2	18	21	13	7	3	64
WNW	1	10	37	28	15	7	98
NW	1	12	18	28	27	9	95
NNW	2	11	12	18	17	3	63
Variable	0	1	0	0	0	0	1
Total	24	223	324	301	125	32	1029

Hours of calm in this stability class: 0  
 Hours of missing wind measurements in this stability class: 0  
 Hours of missing stability measurements in all stability classes: 0

LaSalle County Generating Station

Period of Record: July - September 2014

Stability Class - Slightly Stable - 375Ft-33Ft Delta-T (F)

Winds Measured at 375 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	3	5	5	11	1	0	25
NNE	3	2	6	10	3	0	24
NE	1	6	9	12	1	0	29
ENE	1	3	7	19	6	0	36
E	0	5	4	14	16	0	39
ESE	1	0	6	5	5	0	17
SE	1	4	11	9	2	0	27
SSE	0	5	5	14	5	1	30
S	0	3	11	16	19	4	53
SSW	5	2	14	20	22	7	70
SW	0	5	15	11	22	6	59
WSW	1	9	7	14	17	3	51
W	4	4	12	7	5	4	36
WNW	1	8	9	11	8	3	40
NW	1	3	12	14	13	0	43
NNW	1	6	7	7	1	0	22
Variable	0	0	0	0	0	0	0
Total	23	70	140	194	146	28	601

Hours of calm in this stability class: 0

Hours of missing wind measurements in this stability class: 0

Hours of missing stability measurements in all stability classes: 0

LaSalle County Generating Station

Period of Record: July - September 2014

Stability Class - Moderately Stable - 375Ft-33Ft Delta-T (F)  
Winds Measured at 375 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	0	1	2	4	0	0	7
NNE	1	1	3	3	0	0	8
NE	1	0	0	1	0	0	2
ENE	0	1	1	0	0	0	2
E	0	0	1	9	14	3	27
ESE	0	1	11	10	6	0	28
SE	1	3	16	15	0	0	35
SSE	1	6	15	16	5	0	43
S	0	11	26	17	10	3	67
SSW	6	7	15	13	5	6	52
SW	0	8	8	7	14	1	38
WSW	1	5	15	3	1	0	25
W	1	4	11	4	3	0	23
WNW	0	9	8	12	2	0	31
NW	0	0	5	16	4	0	25
NNW	0	2	3	1	3	0	9
Variable	0	0	0	0	0	0	0
Total	12	59	140	131	67	13	422

Hours of calm in this stability class: 0

Hours of missing wind measurements in this stability class: 0

Hours of missing stability measurements in all stability classes: 0

LaSalle County Generating Station

Period of Record: July - September 2014

Stability Class - Extremely Stable - 375Ft-33Ft Delta-T (F)

Winds Measured at 375 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	0	0	0	0	0	0	0
NNE	0	0	0	0	0	0	0
NE	0	0	0	0	0	0	0
ENE	0	0	0	0	0	0	0
E	0	0	0	0	0	0	0
ESE	0	0	0	3	0	0	3
SE	0	0	3	14	2	0	19
SSE	0	0	7	12	0	0	19
S	1	1	3	6	2	0	13
SSW	0	2	4	6	0	0	12
SW	1	5	3	0	0	0	9
WSW	0	3	7	0	0	0	10
W	1	1	3	0	0	0	5
WNW	0	0	1	0	0	0	1
NW	0	2	1	0	0	0	3
NNW	0	0	3	2	0	0	5
Variable	0	0	0	0	0	0	0
Total	3	14	35	43	4	0	99

Hours of calm in this stability class: 0

Hours of missing wind measurements in this stability class: 0

Hours of missing stability measurements in all stability classes: 0

LaSalle County Generating Station

Period of Record: October - December 2014

Stability Class - Extremely Unstable - 200Ft-33Ft Delta-T (F)

Winds Measured at 33 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	0	0	0	0	0	0	0
NNE	0	0	0	0	0	0	0
NE	0	0	0	0	0	0	0
ENE	0	0	0	0	0	0	0
E	0	0	0	0	0	0	0
ESE	0	0	0	0	0	0	0
SE	0	0	0	0	0	0	0
SSE	0	0	0	0	0	0	0
S	0	0	0	0	0	0	0
SSW	0	0	0	1	0	0	1
SW	0	0	0	1	0	0	1
WSW	0	0	0	0	0	0	0
W	0	0	0	0	0	0	0
WNW	0	0	0	0	0	0	0
NW	0	0	0	0	0	0	0
NNW	0	0	0	0	0	0	0
Variable	0	0	0	0	0	0	0
Total	0	0	0	2	0	0	2

Hours of calm in this stability class: 0

Hours of missing wind measurements in this stability class: 0

Hours of missing stability measurements in all stability classes: 5

LaSalle County Generating Station

Period of Record: October - December 2014

Stability Class - Moderately Unstable - 200Ft-33Ft Delta-T (F)

Winds Measured at 33 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	0	0	0	0	0	0	0
NNE	0	0	0	0	0	0	0
NE	0	0	0	0	0	0	0
ENE	0	0	0	0	0	0	0
E	0	0	0	0	0	0	0
ESE	0	0	0	0	0	0	0
SE	0	0	0	0	0	0	0
SSE	0	0	0	0	0	0	0
S	0	0	0	0	0	0	0
SSW	0	0	0	4	0	0	4
SW	0	0	0	5	0	0	5
WSW	0	0	0	0	0	0	0
W	0	0	0	1	1	0	2
WNW	0	0	3	0	0	0	3
NW	0	0	1	0	0	0	1
NNW	0	0	0	0	0	0	0
Variable	0	0	0	0	0	0	0
Total	0	0	4	10	1	0	15

Hours of calm in this stability class: 0

Hours of missing wind measurements in this stability class: 0

Hours of missing stability measurements in all stability classes: 5



LaSalle County Generating Station

Period of Record: October - December 2014

Stability Class - Slightly Unstable - 200Ft-33Ft Delta-T (F)

Winds Measured at 33 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	0	0	0	0	0	0	0
NNE	0	1	0	0	0	0	1
NE	0	0	0	0	0	0	0
ENE	0	0	0	0	0	0	0
E	0	0	0	0	0	0	0
ESE	0	0	0	2	0	0	2
SE	0	0	0	1	0	0	1
SSE	0	0	0	0	0	1	1
S	0	0	2	1	1	1	5
SSW	0	0	2	4	2	0	8
SW	0	0	1	5	0	0	6
WSW	0	0	0	4	0	0	4
W	0	4	0	8	1	0	13
WNW	0	0	1	5	1	0	7
NW	0	0	0	0	0	0	0
NNW	0	0	0	0	0	0	0
Variable	0	0	0	0	0	0	0
Total	0	5	6	30	5	2	48

Hours of calm in this stability class: 0

Hours of missing wind measurements in this stability class: 0

Hours of missing stability measurements in all stability classes: 5

LaSalle County Generating Station

Period of Record: October - December 2014  
 Stability Class - Neutral - 200Ft-33Ft Delta-T (F)  
 Winds Measured at 33 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	0	18	32	18	3	2	73
NNE	2	12	15	0	0	0	29
NE	0	5	4	0	0	0	9
ENE	0	5	5	0	0	0	10
E	0	8	10	0	0	0	18
ESE	0	7	17	18	0	0	42
SE	1	7	10	22	2	0	42
SSE	0	9	19	17	1	0	46
S	0	12	29	13	2	1	57
SSW	1	10	22	16	2	0	51
SW	2	12	31	14	4	0	63
WSW	1	10	25	13	0	3	52
W	2	12	27	48	24	5	118
WNW	2	13	59	94	16	0	184
NW	1	6	26	21	0	0	54
NNW	1	15	68	29	13	8	134
Variable	0	0	0	0	0	0	0
Total	13	161	399	323	67	19	982

Hours of calm in this stability class: 0  
 Hours of missing wind measurements in this stability class: 0  
 Hours of missing stability measurements in all stability classes: 5

# LaSalle County Generating Station

Period of Record: October - December 2014

Stability Class - Slightly Stable - 200Ft-33Ft Delta-T (F)

Winds Measured at 33 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	1	19	3	1	0	0	24
NNE	0	21	4	0	0	0	25
NE	0	3	14	0	0	0	17
ENE	0	1	6	0	0	0	7
E	0	4	7	0	0	0	11
ESE	2	9	21	0	0	0	32
SE	1	12	19	3	0	0	35
SSE	5	21	18	12	0	0	56
S	2	9	34	34	2	0	81
SSW	3	10	30	47	2	0	92
SW	0	15	27	18	3	0	63
WSW	3	3	32	18	1	0	57
W	1	15	27	33	17	3	96
WNW	3	11	35	21	26	8	104
NW	1	10	16	0	0	0	27
NNW	0	20	7	4	0	0	31
Variable	0	0	0	0	0	0	0
Total	22	183	300	191	51	11	758

Hours of calm in this stability class: 0

Hours of missing wind measurements in this stability class: 0

Hours of missing stability measurements in all stability classes: 5

LaSalle County Generating Station

Period of Record: October - December 2014

Stability Class - Moderately Stable - 200Ft-33Ft Delta-T (F)

Winds Measured at 33 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	0	8	0	0	0	0	8
NNE	4	5	0	0	0	0	9
NE	1	0	0	0	0	0	1
ENE	2	0	0	0	0	0	2
E	3	6	7	0	0	0	16
ESE	0	7	1	0	0	0	8
SE	0	8	2	0	0	0	10
SSE	1	6	8	2	0	0	17
S	0	9	14	6	0	0	29
SSW	0	15	27	4	0	0	46
SW	1	12	8	3	0	0	24
WSW	1	13	30	4	0	0	48
W	1	29	21	0	0	0	51
WNW	1	12	4	0	0	0	17
NW	2	3	6	0	0	0	11
NNW	2	1	2	0	0	0	5
Variable	0	0	0	0	0	0	0
Total	19	134	130	19	0	0	302

Hours of calm in this stability class: 0

Hours of missing wind measurements in this stability class: 0

Hours of missing stability measurements in all stability classes: 5

LaSalle County Generating Station

Period of Record: October - December 2014  
 Stability Class - Extremely Stable - 200Ft-33Ft Delta-T (F)  
 Winds Measured at 33 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	2	5	0	0	0	0	7
NNE	0	0	0	0	0	0	0
NE	0	0	0	0	0	0	0
ENE	0	0	0	0	0	0	0
E	0	5	3	0	0	0	8
ESE	0	11	3	0	0	0	14
SE	0	16	1	0	0	0	17
SSE	0	3	1	0	0	0	4
S	0	4	4	0	0	0	8
SSW	0	9	3	0	0	0	12
SW	0	7	1	0	0	0	8
WSW	0	3	7	0	0	0	10
W	0	1	5	0	0	0	6
WNW	0	0	1	0	0	0	1
NW	0	0	0	0	0	0	0
NNW	1	0	0	0	0	0	1
Variable	0	0	0	0	0	0	0
Total	3	64	29	0	0	0	96

Hours of calm in this stability class: 0  
 Hours of missing wind measurements in this stability class: 0  
 Hours of missing stability measurements in all stability classes: 5

LaSalle County Generating Station

Period of Record: October - December 2014

Stability Class - Extremely Unstable - 375Ft-33Ft Delta-T (F)

Winds Measured at 375 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	0	0	0	0	0	0	0
NNE	0	0	0	0	0	0	0
NE	0	0	0	0	0	0	0
ENE	0	0	0	0	0	0	0
E	0	0	0	0	0	0	0
ESE	0	0	0	0	0	0	0
SE	0	0	0	0	0	0	0
SSE	0	0	0	0	0	0	0
S	0	0	0	0	0	0	0
SSW	0	0	0	0	0	0	0
SW	0	0	0	0	0	0	0
WSW	0	0	0	0	0	0	0
W	0	0	0	0	0	0	0
WNW	0	0	0	0	0	0	0
NW	0	0	0	0	0	0	0
NNW	0	0	0	0	0	0	0
Variable	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0

Hours of calm in this stability class: 0

Hours of missing wind measurements in this stability class: 0

Hours of missing stability measurements in all stability classes: 5

LaSalle County Generating Station

Period of Record: October - December 2014

Stability Class - Moderately Unstable - 375Ft-33Ft Delta-T (F)  
Winds Measured at 375 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	0	0	0	0	0	0	0
NNE	0	0	0	0	0	0	0
NE	0	0	0	0	0	0	0
ENE	0	0	0	0	0	0	0
E	0	0	0	0	0	0	0
ESE	0	0	0	0	0	0	0
SE	0	0	0	0	0	0	0
SSE	0	0	0	0	0	0	0
S	0	0	0	0	0	0	0
SSW	0	0	0	0	0	0	0
SW	0	0	0	0	0	0	0
WSW	0	0	0	0	0	0	0
W	0	0	0	0	0	0	0
WNW	0	0	0	0	0	0	0
NW	0	0	0	0	0	0	0
NNW	0	0	0	0	0	0	0
Variable	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0

Hours of calm in this stability class: 0

Hours of missing wind measurements in this stability class: 0

Hours of missing stability measurements in all stability classes: 5

LaSalle County Generating Station

Period of Record: October - December 2014

Stability Class - Slightly Unstable - 375Ft-33Ft Delta-T (F)

Winds Measured at 375 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	0	0	0	0	0	0	0
NNE	0	0	0	0	0	0	0
NE	0	0	0	0	0	0	0
ENE	0	0	0	0	0	0	0
E	0	0	0	0	0	0	0
ESE	0	0	0	0	0	0	0
SE	0	0	0	0	0	0	0
SSE	0	0	0	0	0	0	0
S	0	0	0	0	0	0	0
SSW	0	0	0	0	0	0	0
SW	0	0	0	0	0	0	0
WSW	0	0	0	0	0	0	0
W	0	0	0	0	0	0	0
WNW	0	0	0	0	0	0	0
NW	0	0	0	0	0	0	0
NNW	0	0	0	0	0	0	0
Variable	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0

Hours of calm in this stability class: 0

Hours of missing wind measurements in this stability class: 0

Hours of missing stability measurements in all stability classes: 5



# LaSalle County Generating Station

Period of Record: October - December 2014  
 Stability Class - Neutral - 375Ft-33Ft Delta-T (F)  
 Winds Measured at 375 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	0	4	23	34	16	12	89
NNE	1	2	27	14	1	0	45
NE	1	2	8	14	0	0	25
ENE	1	3	12	3	0	0	19
E	0	4	9	1	0	0	14
ESE	0	4	7	21	5	1	38
SE	0	7	2	14	18	6	47
SSE	0	4	6	15	14	5	44
S	0	4	19	34	21	12	90
SSW	1	2	15	17	17	18	70
SW	0	9	30	21	19	9	88
WSW	1	6	7	26	12	2	54
W	1	8	19	24	42	50	144
WNW	2	4	17	76	82	56	237
NW	3	7	22	39	42	8	121
NNW	0	2	27	40	15	17	101
Variable	0	0	0	0	0	0	0
Total	11	72	250	393	304	196	1226

Hours of calm in this stability class: 0  
 Hours of missing wind measurements in this stability class: 6  
 Hours of missing stability measurements in all stability classes: 5

LaSalle County Generating Station

Period of Record: October - December 2014  
 Stability Class - Slightly Stable - 375Ft-33Ft Delta-T (F)  
 Winds Measured at 375 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	0	5	12	3	1	0	21
NNE	0	2	6	13	0	0	21
NE	1	2	9	10	4	0	26
ENE	0	3	12	5	0	0	20
E	0	0	2	6	3	0	11
ESE	0	4	8	15	5	0	32
SE	0	1	5	9	9	3	27
SSE	0	1	10	10	18	4	43
S	0	3	5	18	28	37	91
SSW	2	3	10	22	35	63	135
SW	1	5	8	22	36	14	86
WSW	0	7	5	19	28	9	68
W	0	3	7	13	22	12	57
WNW	1	4	14	20	28	21	88
NW	2	2	11	8	6	0	29
NNW	1	5	7	6	5	1	25
Variable	0	0	0	0	0	0	0
Total	8	50	131	199	228	164	780

Hours of calm in this stability class: 0  
 Hours of missing wind measurements in this stability class: 0  
 Hours of missing stability measurements in all stability classes: 5

LaSalle County Generating Station

Period of Record: October - December 2014

Stability Class - Moderately Stable - 375Ft-33Ft Delta-T (F)

Winds Measured at 375 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	0	2	0	0	2	1	5
NNE	1	0	0	1	1	0	3
NE	0	1	1	4	0	0	6
ENE	0	1	3	0	0	0	4
E	0	1	2	0	1	2	6
ESE	0	1	1	5	7	0	14
SE	1	0	3	6	2	0	12
SSE	0	1	1	6	0	0	8
S	0	1	0	2	3	4	10
SSW	0	2	4	2	3	0	11
SW	1	0	3	5	3	6	18
WSW	0	0	1	6	7	1	15
W	0	0	1	14	5	4	24
WNW	0	0	6	1	9	3	19
NW	0	0	1	0	3	1	5
NNW	0	0	1	0	3	2	6
Variable	0	0	0	0	0	0	0
Total	3	10	28	52	49	24	166

Hours of calm in this stability class: 0

Hours of missing wind measurements in this stability class: 0

Hours of missing stability measurements in all stability classes: 5

# LaSalle County Generating Station

Period of Record: October - December 2014

Stability Class - Extremely Stable - 375Ft-33Ft Delta-T (F)

Winds Measured at 375 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	0	0	0	0	0	0	0
NNE	0	0	0	0	0	0	0
NE	0	0	0	0	0	0	0
ENE	0	0	0	0	0	0	0
E	0	0	0	0	0	0	0
ESE	0	0	0	0	0	0	0
SE	0	0	0	3	5	0	8
SSE	0	0	0	2	3	3	8
S	0	0	0	1	2	0	3
SSW	0	0	1	0	1	0	2
SW	0	0	1	1	2	0	4
WSW	0	0	0	0	0	0	0
W	0	0	0	0	0	0	0
WNW	0	0	0	0	0	0	0
NW	0	0	0	0	0	0	0
NNW	0	0	0	0	0	0	0
Variable	0	0	0	0	0	0	0
Total	0	0	2	7	13	3	25

Hours of calm in this stability class: 0

Hours of missing wind measurements in this stability class: 0

Hours of missing stability measurements in all stability classes: 5

## **APPENDIX G**

### **ERRATA DATA**

There is no errata data for 2014.

## **APPENDIX H**

### **ANNUAL RADIOLOGICAL GROUNDWATER PROTECTION PROGRAM REPORT (ARGPPR)**

Docket No: 50-373  
50-374

# **LASALLE COUNTY STATION UNITS 1 and 2**

## **Annual Radiological Groundwater Protection Program Report**

**1 January Through 31 December 2014**

### **Prepared By**

**Teledyne Brown Engineering  
Environmental Services**



**LaSalle County Station  
Marseilles, IL 61341**

**May 2015**



## Table Of Contents

I. Summary and Conclusions .....	1
II. Introduction .....	3
A. Objectives of the RGPP .....	3
B. Implementation of the Objectives.....	3
C. Program Description .....	4
D. Characteristics of Tritium (H-3) .....	4
III. Program Description .....	5
A. Sample Analysis.....	5
B. Data Interpretation.....	6
C. Background Analysis.....	7
1. Background Concentrations of Tritium.....	7
IV. Results and Discussion .....	9
A. Groundwater Results.....	9
B. Surface Water Results .....	11
C. Drinking Water Well Survey .....	11
D. Summary of Results – Inter-laboratory Comparison Program.....	12
E. Leaks, Spills, and Releases .....	12
F. Trends.....	12
G. Investigations .....	12
H. Actions Taken .....	12

## Appendices

### Appendix A Location Designation

#### Tables

Table A-1 LaSalle County Station Groundwater Monitoring Sample Point List, 2014

#### Figures

Figure A-1 LaSalle County Station Map of Groundwater Monitoring Sampling Locations, 2014.

### Appendix B Data Tables

#### Tables

Table B-I.1 Concentrations of Tritium, Strontium, Gross Alpha and Gross Beta in Groundwater Samples Collected in the Vicinity of LaSalle County Station, 2014.

Table B-I.2 Concentrations of Gamma Emitters in Groundwater Samples Collected in the Vicinity of LaSalle County Station, 2014.

Table B-I.3 Concentrations of Hard-to-Detects in Groundwater Samples Collected as Part of the Radiological Groundwater Protection Program, LaSalle County Station, 2014.

Table B-II.1 Concentrations of Tritium in Surface Water Samples Collected in the Vicinity of LaSalle County Station, 2014.

Table B-II.2 Concentrations of Gamma Emitters in Surface Water Samples Collected in the Vicinity of LaSalle County Station, 2014.

## I. Summary and Conclusions

In 2006, Exelon instituted a comprehensive program to evaluate the impact of station operations on groundwater and surface water in the vicinity of LaSalle County Station. This evaluation involved numerous station personnel and contractor support personnel. Following baseline sampling and subsequent recommendations, LaSalle's Radiological Groundwater Protection Program (RGPP) program now consists of the four surface water and twenty groundwater well sampling locations. The results for LaSalle's RGPP sampling efforts in 2014 are included in this report.

This is the ninth in a series of annual reports on the status of the RGPP conducted at LaSalle County Station. This report covers groundwater and surface water samples, collected from the environment, both on and off station property in 2014. During that time period, 355 analyses were performed on 93 samples from 24 locations (4 surface water and 20 groundwater monitoring locations). The monitoring was conducted by Station personnel.

In assessing all the data gathered for this report, it was concluded that the operation of LaSalle County Station had no adverse radiological impact on the environment, and there are no known active releases into the groundwater at LaSalle County Station.

Strontium-89 and Strontium-90 were not detected in any groundwater samples during 2014.

All gamma-emitting radionuclides attributable to licensed plant operations were not detected in any of the groundwater or surface water samples.

In the case of tritium, Exelon specified that its laboratories achieve a lower limit of detection 10 times lower than that required by federal regulation.

Tritium was not detected in surface water samples at concentrations greater than the United States Environmental Protection Agency (USEPA) drinking water standard (and the Nuclear Regulatory Commission Reporting Limit) of 20,000 pCi/L. Levels of tritium were detected at concentrations greater than the LLD of 200 pCi/L in 10 of 16 surface water samples analyzed. The tritium concentrations ranged from <LLD to  $2,960 \pm 340$  pCi/L. Levels of tritium were detected at concentrations greater than the LLD of 200 pCi/L in 33 of 82 groundwater samples analyzed. The tritium concentrations ranged from <LLD to  $99,200 \pm 9,920$  pCi/L. Elevated tritium levels (>200 pCi/L) observed are associated with the U1 CY tank leak, which occurred in June - July, 2010, and historic elevated tritium believed to be associated with the 2001 CY tank leak, as documented in the Station's 10CFR50.75(g) report.

Gross Alpha and Gross Beta analyses in the dissolved and suspended fractions were performed on groundwater samples throughout the year in 2014. Gross Alpha (dissolved) was not detected at any groundwater locations. Gross Alpha (suspended) was detected in 2 of 20 samples affecting 2 of 13 groundwater locations analyzed. The concentrations ranged from 4.5 to 7.6 pCi/L. Gross Beta (dissolved) was detected in 11 of 20 samples affecting 7 of 13 groundwater locations analyzed. The concentrations ranged from 3.8 to 22.2 pCi/L. Gross Beta (suspended) was detected in 8 of 20 samples affecting 7 of 13 groundwater locations analyzed. The concentrations ranged from 2.1 to 19.6 pCi/L.

Hard-To-Detect analyses were performed on 13 of the groundwater sampling locations in accordance with the LaSalle RGPP and to aid in establishing background levels. The analyses included Fe-55, Ni-63, Am-241, Cm-242, Cm-243/244, Pu-238, Pu-239/240, U-234, U-235, and U-238. The isotopes of U-234, and U-238 were detected in six samples affecting 3 of 4 groundwater locations. The U-234 concentrations ranged from 0.26 to 22.1 pCi/L. The U-238 concentrations ranged from 0.19 to 13.9 pCi/L. U-234 and U-238 are commonly found in groundwater at low concentrations due to the naturally occurring Radium (Uranium) Decay Series. The isotope U-235 was detected in one groundwater sample at a concentration of 0.63 pCi/L. U-235 can be found in groundwater at low concentrations due to the naturally occurring Actinium Decay Series.

## Introduction

The LaSalle County Station (LSCS), consisting of two boiling water reactors, each rated for 3,546 MWt, owned and operated by Exelon Corporation, is located in LaSalle County, Illinois. Unit No. 1 went critical on 16 March 1982. Unit No. 2 went critical on 02 December 1983. The site is located in northern Illinois, approximately 75 miles southwest of Chicago, Illinois.

This report covers those analyses performed by Teledyne Brown Engineering (TBE) on samples collected in 2014.

### A. Objectives of the RGPP

The long-term objectives of the RGPP are as follows:

1. Identify suitable locations to monitor and evaluate potential impacts from station operations before significant radiological impact to the environment and potential drinking water sources.
2. Understand the local hydrogeologic regime in the vicinity of the station and maintain up-to-date knowledge of flow patterns on the surface and shallow subsurface.
3. Perform routine water sampling and radiological analysis of water from selected locations.
4. Report new leaks, spills, or other detections with potential radiological significance to stakeholders in a timely manner.
5. Regularly assess analytical results to identify adverse trends.
6. Take necessary corrective actions to protect groundwater resources.

### B. Implementation of the Objectives

The objectives identified have been implemented at LaSalle County Station as discussed below:

Exelon and its consultant identified locations as described in the 2006 Phase 1 study. Phase 1 studies were conducted by Conestoga Rovers and Associates (CRA) and the results and conclusions were made available to state and federal regulators.

1. The LaSalle County Station reports describe the local hydrogeologic regime. Periodically, the flow patterns on the

surface and shallow subsurface are updated based on ongoing measurements.

2. LaSalle County Station will continue to perform routine sampling and radiological analysis of water from selected locations.
3. LaSalle County Station has implemented procedures to identify and report new leaks, spills, or other detections with potential radiological significance in a timely manner.
4. LaSalle County Station staff and consulting hydrogeologist assess analytical results on an ongoing basis to identify adverse trends.

C. Program Description

1. Sample Collection

Sample locations can be found in Table A–1, Appendix A.

Groundwater and Surface Water

Samples of water are collected, managed, transported and analyzed in accordance with approved procedures following EPA methods. Both groundwater and surface samples water are collected. Sample locations, sample collection frequencies and analytical frequencies are controlled in accordance with approved station procedures. Contractor and/or station personnel are trained in the collection, preservation management, and shipment of samples, as well as in documentation of sampling events. Analytical laboratories are subject to internal quality assurance programs, industry cross-check programs, as well as nuclear industry audits. Station personnel review and evaluate all analytical data deliverables as data are received.

Analytical data results are reviewed by both station personnel and an independent hydrogeologist for adverse trends or changes to hydrogeologic conditions.

D. Characteristics of Tritium (H-3)

Tritium (chemical symbol H-3) is a radioactive isotope of hydrogen. The most common form of tritium is tritium oxide, which is also called "tritiated water." The chemical properties of tritium are essentially those of ordinary hydrogen.

Tritiated water behaves the same as ordinary water in both the

environment and the body. Tritium can be taken into the body by drinking water, breathing air, eating food, or absorption through skin. Once tritium enters the body, it disperses quickly and is uniformly distributed throughout the body. Tritium is excreted primarily through urine with a clearance rate characterized by an effective biological half-life of about 14 days. Within one month or so after ingestion, essentially all tritium is cleared. Organically bound tritium (tritium that is incorporated in organic compounds) can remain in the body for a longer period.

Tritium is produced naturally in the upper atmosphere when cosmic rays strike air molecules. Tritium is also produced during nuclear weapons explosions, as a by-product in reactors producing electricity, and in special production reactors, where the isotopes lithium-7 and/or boron-10 are activated to produce tritium. Like normal water, tritiated water is colorless and odorless. Tritiated water behaves chemically and physically like non-tritiated water in the subsurface, and therefore tritiated water will travel at the same velocity as the average groundwater velocity.

Tritium has a half-life of approximately 12.3 years. It decays spontaneously to helium-3 ( $^3\text{He}$ ). This radioactive decay releases a beta particle (low-energy electron). The radioactive decay of tritium is the source of the health risk from exposure to tritium. Tritium is one of the least dangerous radionuclides because it emits very weak radiation and leaves the body relatively quickly. Since tritium is almost always found as water, it goes directly into soft tissues and organs. The associated dose to these tissues is generally uniform and is dependent on the water content of the specific tissue.

### III. Program Description

#### A. Sample Analysis

This section describes the general analytical methodologies used by TBE to analyze the environmental samples for radioactivity for the LaSalle County Station RGPP in 2014. Sample and analysis and frequency is based upon well location, assessed risk and site hydrogeology as described in the RGPP.

In order to achieve the stated objectives, the current program includes the following analyses:

1. Concentrations of gamma emitters in groundwater and surface water.
2. Concentrations of strontium in groundwater.

3. Concentrations of tritium in groundwater and surface water.
4. Concentrations of Gross Alpha, Dissolved and Suspended and Gross Beta, Dissolved and Suspended in groundwater.
5. Concentrations of Am-241 in groundwater.
6. Concentrations of Cm-242 and Cm-243/244 in groundwater.
7. Concentrations of Pu-238 and PU-239/240 in groundwater.
8. Concentrations of U-234, U-235 and U-238 in groundwater.
9. Concentrations of Fe-55 in groundwater.
10. Concentrations of Ni-63 in groundwater.

**B. Data Interpretation**

The radiological data collected prior to LaSalle County Station becoming operational were used as a baseline with which these operational data were compared. For the purpose of this report, LaSalle County Station was considered operational at initial criticality. Several factors were important in the interpretation of the data:

**1. Lower Limit of Detection and Minimum Detectable Concentration**

The lower limit of detection (LLD) is specified by federal regulation as a minimum sensitivity value that must be achieved routinely by the analytical parameter.

**2. Laboratory Measurements Uncertainty**

The estimated uncertainty in measurement of tritium in environmental samples is frequently on the order of 50% of the measurement value.

Statistically, the exact value of a measurement is expressed as a range with a stated level of confidence. The convention is to report results with a 95% level of confidence. The uncertainty comes from calibration standards, sample volume or weight measurements, sampling uncertainty and other factors. Exelon reports the uncertainty of a measurement created by statistical process (counting error) as well as all sources of error (Total Propagated Uncertainty or TPU). Each result has two values calculated. Exelon reports the TPU by following the result with plus



or minus  $\pm$  the estimated sample standard deviation, as TPU, that is obtained by propagating all sources of analytical uncertainty in measurements.

Analytical uncertainties are reported at the 95% confidence level in this report for reporting consistency with the AREOR.

### C. Background Analysis

A pre-operational radiological environmental monitoring program (pre-operational REMP) was conducted to establish background radioactivity levels prior to operation of the Station. The environmental media sampled and analyzed during the pre-operational REMP were atmospheric radiation, fall-out, domestic water, surface water, precipitation, marine life, and foodstuffs. The results of the monitoring were detailed in the report entitled, Environmental Radiological Monitoring for LaSalle County Nuclear Power Station, Commonwealth Edison Company, Annual Reports for the years 1979 and 1981. The pre-operational REMP contained analytical results from samples collected from the surface water and groundwater.

#### 1. Background Concentrations of Tritium

The purpose of the following discussion is to summarize background measurements of tritium in various media performed by others. Additional detail may be found by consulting references (CRA 2006).

##### a. Tritium Production

Tritium is created in the environment from naturally occurring processes both cosmic and subterranean, as well as from anthropogenic (i.e., man-made) sources. In the upper atmosphere, "Cosmogenic" tritium is produced from the bombardment of stable nuclides and combines with oxygen to form tritiated water, which will then enter the hydrologic cycle. Below ground, "lithogenic" tritium is produced by the bombardment of natural lithium present in crystalline rocks by neutrons produced by the radioactive decay of naturally abundant uranium and thorium. Lithogenic production of tritium is usually negligible compared to other sources due to the limited abundance of lithium in rock. The lithogenic tritium is introduced directly to groundwater.

A major anthropogenic source of tritium and strontium-90 comes from the former atmospheric testing of thermonuclear

weapons. Levels of tritium in precipitation increased significantly during the 1950s and early 1960s, and later with additional testing, resulting in the release of significant amounts of tritium to the atmosphere. The Canadian heavy water nuclear power reactors, other commercial power reactors, nuclear research and weapons production continue to influence tritium concentrations in the environment.

b. Precipitation Data

Precipitation samples are routinely collected at stations around the world for the analysis of tritium and other radionuclides. Two publicly available databases that provide tritium concentrations in precipitation are Global Network of Isotopes in Precipitation (GNIP) and USEPA's RadNet database. GNIP provides tritium precipitation concentration data for samples collected world wide from 1960 to 2006. RadNet provides tritium precipitation concentration data for samples collected at stations throughout the U.S. from 1960 up to and including 2006. Based on GNIP data for sample stations located in the U.S. Midwest, tritium concentrations peaked around 1963. This peak, which approached 10,000 pCi/L for some stations, coincided with the atmospheric testing of thermonuclear weapons. Tritium concentrations in surface water showed a sharp decline up until 1975 followed by a gradual decline since that time. Tritium concentrations in Midwest precipitation have typically been below 100 pCi/L since around 1980. LaSalle's 1979 or 1981 pre-operational REMP showed precipitation tritium concentrations >300 pCi/L. Tritium concentrations in wells may still be above the 200 pCi/L detection limit from the external causes described above. Water from previous years and decades is naturally captured in groundwater, so some well water sources today are affected by the surface water from the 1960s that was elevated in tritium.

Surface Water Data

Tritium concentrations are routinely measured in large surface water bodies, including Lake Michigan and the Mississippi River. Illinois surface water data were typically less than 100 pCi/L. Illinois River H-3 results have shown >200 pCi/L, as evidenced in LaSalle's REMP program sample results. This could be attributable to releases from Braidwood and Dresden upstream. The USEPA RadNet surface water data typically has a

reported 'Combined Standard Uncertainty' of 35 to 50 pCi/L. According to USEPA, this corresponds to a  $\pm 70$  to 100 pCi/L 95% confidence bound on each given measurement. Therefore, the typical background data provided may be subject to measurement uncertainty of approximately  $\pm 70$  to 100 pCi/L.

The radio-analytical laboratory is counting tritium results to an Exelon specified LLD of 200 pCi/L. Typically, the lowest positive measurement will be reported within a range of 40 – 240 pCi/L or  $140 \pm 100$  pCi/L. Clearly, these sample results cannot be distinguished as different from background at this concentration.

#### IV. Results and Discussion

##### A. Groundwater Results

###### Groundwater

Samples were collected from onsite wells throughout the year in accordance with the station radiological groundwater protection program. Analytical results and anomalies are discussed below.

###### Tritium

Samples from 20 locations were analyzed for tritium activity. Tritium values ranged from <LLD to 99,200 pCi/L at well MW-LS-104S. Based on the hydrogeological study conducted at LaSalle, there is no feasible pathway into a drinking water supply. Based on established aquifer flow paths the location most representative of potential offsite release into groundwater was also less than the detection limit (Table B-I.1, Appendix B).

###### Strontium

Twenty samples from 13 groundwater locations were analyzed for Strontium-89 and Strontium-90. The results were less than the required detection limit of 10 pCi/liter for Strontium-89 and less than the required detection limit of 1.0 pCi/liter for Strontium-90 (Table B-I.1, Appendix B).

### Gross Alpha and Gross Beta (dissolved and suspended)

Gross Alpha and Gross Beta analyses in the dissolved and suspended fractions were performed on groundwater samples throughout the year in 2014. Gross Alpha (dissolved) was not detected at any groundwater locations. Gross Alpha (suspended) was detected in 2 of 20 samples affecting 2 of 13 groundwater locations analyzed. The concentrations ranged from 4.5 to 7.6 pCi/L. Gross Beta (dissolved) was detected in 11 of 20 samples affecting 7 of 13 groundwater locations analyzed. The concentrations ranged from 3.8 to 22.2 pCi/L. Gross Beta (suspended) was detected in 8 of 20 samples affecting 7 of 13 groundwater locations analyzed. The concentrations ranged from 2.1 to 19.6 pCi/L. These concentrations of Gross Alpha and Gross Beta, which are slightly above detectable levels, are considered to be background and are not the result of plant effluents (Table B-I.1, Appendix B).

### Gamma Emitters

Naturally occurring K-40 was detected in one of 20 samples analyzed at a concentration of 65 pCi/L. No other gamma emitting nuclides were detected in any of the samples analyzed (Table B-I.2, Appendix B).

### Hard-To-Detect

Hard-To-Detect analyses were performed on 13 of the groundwater sampling locations in accordance with the LaSalle RGPP and to aid in establishing background levels. The analyses included Fe-55, Ni-63, Am-241, Cm-242, Cm-243/244, Pu-238, Pu-239/240, U-234, U-235, and U-238. The isotopes of U-234, and U-238 were detected in six samples affecting 3 of 4 groundwater locations. The U-234 concentrations ranged from 0.26 to 22.1 pCi/L. The U-238 concentrations ranged from 0.19 to 13.9 pCi/L. U-234 and U-238 are commonly found in groundwater at low concentrations due to the naturally occurring Radium (Uranium) Decay Series. The isotope U-235 was detected in one groundwater sample at a concentration of 0.63 pCi/L. U-235 can be found in groundwater at low concentrations due to the naturally occurring Actinium Decay Series. The concentrations of U-234, U-235, and U-238 discussed above are considered to be background and are not the result of plant effluents (Table B-1.3, Appendix B).

All other hard-to-detect nuclides were not detected at concentrations greater than their respective MDCs.

## B. Surface Water Results

### Surface Water

Samples were collected from on and off-site surface water locations throughout the year in accordance with the station radiological groundwater protection program. Analytical results and anomalies are discussed below.

#### Tritium

Samples from four locations were analyzed for tritium activity. Ten of 16 samples from 4 surface water locations did show activity above 200 pCi/L. The concentrations ranged from 234 to 2,960 pCi/L. Based on the hydrogeological study conducted at LaSalle, there is no feasible pathway into a drinking water supply. Based on established aquifer flow paths the location most representative of potential offsite release into groundwater was also less than the detection limit. (Table B-II.1, Appendix B).

#### Strontium

Strontium-89 and strontium-90 analyses were not performed in 2014 on surface water samples.

#### Gross Alpha and Gross Beta (dissolved and suspended)

Gross Alpha and Gross Beta analyses in the dissolved and suspended fractions were not performed in 2014 on surface water samples.

#### Gamma Emitters

No gamma emitting nuclides were detected in any of the samples analyzed. (Table B-II.2, Appendix B).

## C. Drinking Water Well Survey

A drinking water well survey was conducted during the summer 2006 by CRA (CRA 2006) around the LaSalle County Station. This survey concluded that no residents in the vicinity of the plant utilize the shallow water aquifer as a drinking water supply. Site hydrological studies of aquifer flow and permeation rates from the shallow aquifer to the deep aquifer concluded that there is no feasible dose receptor via a ground water pathway at LaSalle.

D. Summary of Results – Inter-Laboratory Comparison Program

Inter-Laboratory Comparison Program results for TBE and Environmental Inc. (Midwest Labs) are presented in the AREOR.

E. Leaks, Spills, and Releases

There were no new leaks identified at LaSalle Station during the reporting period.

F. Trends

Analysis results from samples continue to be trended in order to assess impact to groundwater at LaSalle Station. There were no new leaks identified in the reporting period. Sample data from the plume arising from the 2010 U1 CY tank leak is being trended per the LaSalle RGPP. The plume had been dispersing with groundwater flow, and extraction wells have been installed to provide additional control of the plume migration (see Section H.3). Currently, no tritium has migrated offsite, and tritium migration offsite is not expected.

G. Investigations

No new investigations were carried out during the reporting period.

H. Actions Taken

1. Compensatory Actions

No compensatory actions were taken during the reporting period.

2. Installation of Monitoring Wells

No new monitoring wells have been installed during the reporting period.

3. Actions to Recover/Reverse Plumes

Two (2) extraction wells (RW-LS-100S and RW-LS-101S) have been installed to control the migration of the tritium plume near U1 CY tank. RW-LS-100S became operational in October 2012. RW-LS-101S became operational in April 2014.

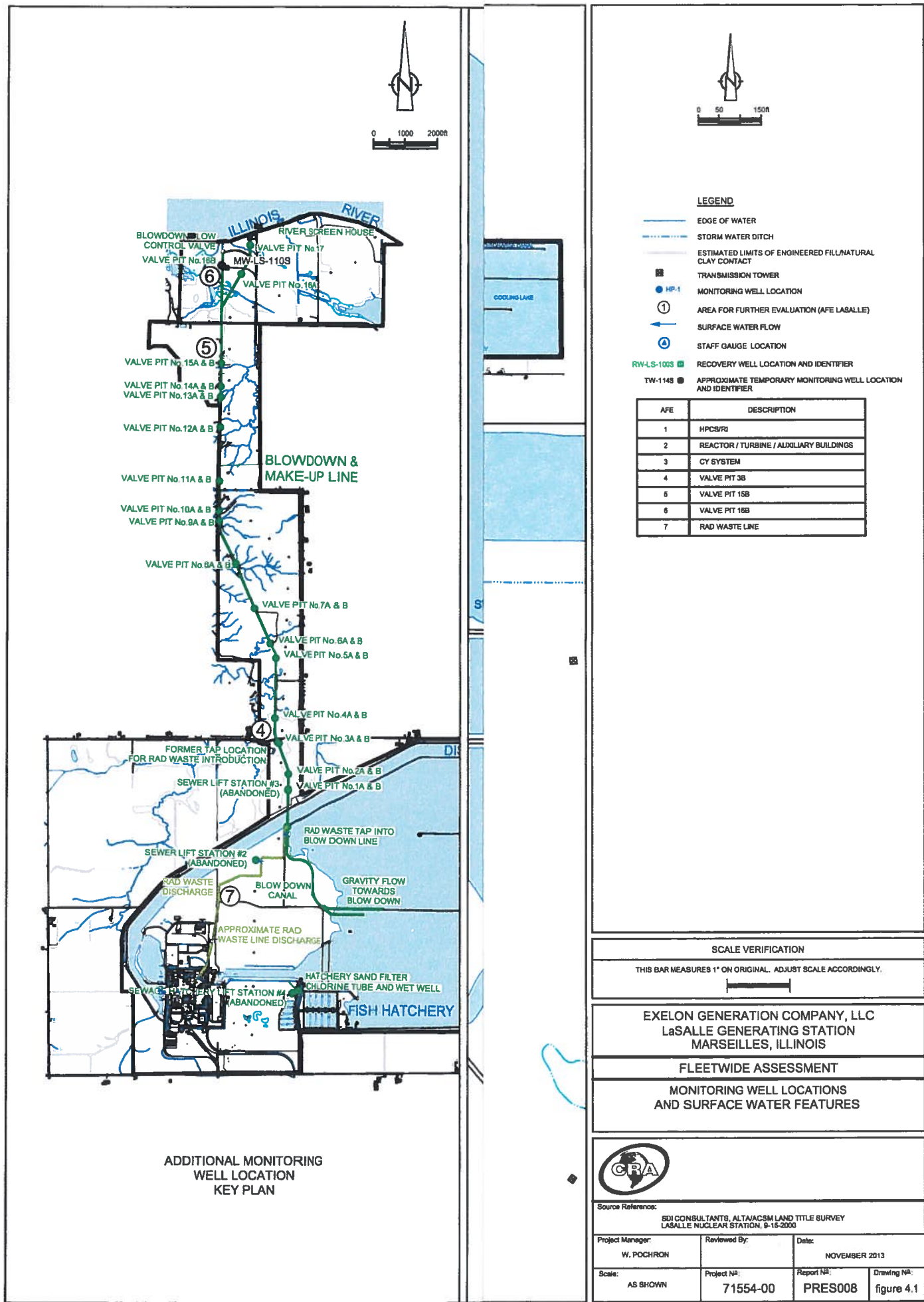
# **APPENDIX A**

## **LOCATION DESIGNATION**

**TABLE A-1****LaSalle County Station Groundwater Monitoring Sample Point List, 2014**

<b>Site</b>	<b>Site Type</b>
SW-LS-101	Surface Water
SW-LS-102	Surface Water
SW-LS-103	Surface Water
SW-LS-104	Surface Water
SW-LS-105	Surface Water
SW-LS-106	Surface Water
MW-LS-101S	Monitoring Well
MW-LS-102S	Monitoring Well
MW-LS-103S	Monitoring Well
MW-LS-104S	Monitoring Well
MW-LS-105S	Monitoring Well
MW-LS-106S	Monitoring Well
MW-LS-107S	Monitoring Well
MW-LS-108S	Monitoring Well
MW-LS-109S	Monitoring Well
MW-LS-110S	Monitoring Well
MW-LS-111S	Monitoring Well
MW-LS-112S	Monitoring Well
MW-LS-113S	Monitoring Well
HP-2	Monitoring Well
HP-5	Monitoring Well
HP-7	Monitoring Well
HP-10	Monitoring Well
RW-LS-100S	Extraction Well
RW-LS-101S	Extraction Well
TW-LS-114S	Monitoring Well
TW-LS-115S	Monitoring Well
TW-LS-116S	Monitoring Well
TW-LS-117S	Monitoring Well
TW-LS-118S	Monitoring Well
TW-LS-119S	Monitoring Well
TW-LS-120S	Monitoring Well
TW-LS-121S	Monitoring Well





## **APPENDIX B**

### **DATA TABLES**

TABLE B-I.1

**CONCENTRATIONS OF TRITIUM, STRONTIUM, GROSS ALPHA, AND GROSS BETA IN GROUNDWATER SAMPLES COLLECTED IN THE VICINITY OF LASALLE COUNTY STATION, 2014**

RESULTS IN UNITS OF PCI/LITER  $\pm$  2 SIGMA

SITE	COLLECTION DATE		H-3	Sr-89	Sr-90	Gr-A (Dis)	Gr-A (Sus)	Gr-B (Dis)	Gr-B (Sus)
HP-10	03/26/14		< 169						
HP-10	06/17/14		< 195	< 3.8	< 0.6	< 0.9	< 1.7	< 1.8	< 2.8
HP-10	09/25/14		< 192						
HP-10	11/10/14		< 182						
HP-2	03/26/14		< 191						
HP-2	06/17/14		< 194	< 4.0	< 0.6	< 1.0	< 2.2	4.5 $\pm$ 1.3	8.2 $\pm$ 2.5
HP-2	09/25/14		< 187						
HP-2	11/10/14		< 180						
HP-5	03/26/14		< 162						
HP-5	06/17/14		< 196	< 4.9	< 0.7	< 1.3	4.5 $\pm$ 1.9	< 2.3	< 2.8
HP-5	09/25/14		< 187						
HP-5	11/10/14		< 183						
HP-7	03/26/14		< 171						
HP-7	06/17/14		< 196	< 4.6	< 0.6	< 1.2	< 1.7	8.0 $\pm$ 1.8	< 2.8
HP-7	09/25/14		< 187						
HP-7	11/10/14		< 184						
MW-LS-104S	03/25/14	Original	85400 $\pm$ 8570						
MW-LS-104S	03/25/14	Recount	99200 $\pm$ 9920						
MW-LS-104S	06/17/14		57600 $\pm$ 4860	< 5.5	< 0.6	< 1.5	< 5.6	< 2.1	7.3 $\pm$ 2.1
MW-LS-104S	09/24/14		38600 $\pm$ 3910	< 2.7	< 0.5	< 0.7	< 3.5	< 2.6	6.0 $\pm$ 1.6
MW-LS-104S	11/11/14		35100 $\pm$ 3560	< 4.0	< 0.7	< 0.8	< 1.0	< 1.5	< 1.5
MW-LS-105S	03/25/14		412 $\pm$ 142						
MW-LS-105S	06/17/14		< 196	< 3.9	< 0.5	< 1.3	< 2.3	3.8 $\pm$ 1.3	19.6 $\pm$ 3.0
MW-LS-105S	09/25/14		< 185						
MW-LS-105S	11/10/14		< 158						
MW-LS-106S	03/26/14		< 192						
MW-LS-106S	06/18/14		< 193						
MW-LS-107S	03/25/14		< 189						
MW-LS-107S	06/18/14		< 193	< 4.1	< 0.7	< 8.3	7.6 $\pm$ 3.4	< 8.5	17.4 $\pm$ 3.2
MW-LS-107S	09/25/14		< 190						
MW-LS-107S	11/10/14		< 159						
MW-LS-111S	03/26/14		< 185	< 5.8	< 1.0	< 3.1	< 1.9	22.2 $\pm$ 7.0	9.7 $\pm$ 2.7
MW-LS-111S	06/18/14		< 198	< 3.7	< 0.5	< 5.4	< 1.8	< 8.2	< 2.5
MW-LS-111S	09/25/14		< 187						
MW-LS-111S	11/10/14		< 161						
OIL SEPARATOR	03/25/14	Original	3210 $\pm$ 389						
OIL SEPARATOR	03/25/14	Recount	3690 $\pm$ 414						
OIL SEPARATOR	06/17/14		3230 $\pm$ 372						
OIL SEPARATOR	09/24/14		1770 $\pm$ 234						
OIL SEPARATOR	11/10/14		681 $\pm$ 140						
RW-LS-100S	03/21/14		39400 $\pm$ 3980						
RW-LS-100S	06/17/14	Original	88700 $\pm$ 6020	< 4.7	< 0.6	< 0.9	< 1.1	6.4 $\pm$ 1.4	< 2.9
RW-LS-100S	06/17/14	Reanalysis	78800 $\pm$ 6330						
RW-LS-100S	09/24/14		93600 $\pm$ 9350	< 3.3	< 0.7	< 0.6	< 0.3	4.7 $\pm$ 0.9	< 1.7
RW-LS-100S	11/11/14		62800 $\pm$ 4800	< 2.6	< 0.8	< 0.8	< 1.0	6.3 $\pm$ 1.0	< 1.5
RW-LS-101S	06/17/14	Original	25200 $\pm$ 2550	< 3.5	< 0.6	< 0.7	< 1.1	4.8 $\pm$ 1.3	< 2.9
RW-LS-101S	06/17/14	Reanalysis	25100 $\pm$ 2550						
RW-LS-101S	09/24/14		19800 $\pm$ 2030	< 4.7	< 0.8	< 0.8	< 0.4	6.9 $\pm$ 1.2	< 1.7
RW-LS-101S	11/11/14		13300 $\pm$ 1380	< 2.9	< 0.5	< 1.0	< 1.0	6.8 $\pm$ 1.2	< 1.5
TW-LS-114S	03/25/14		< 170						
TW-LS-114S	06/17/14		< 193						
TW-LS-114S	09/25/14		< 191						
TW-LS-114S	11/10/14		< 184						
TW-LS-115S	03/25/14		< 163						
TW-LS-115S	06/17/14		< 195						
TW-LS-115S	09/24/14		< 189						
TW-LS-115S	11/10/14		< 189						
TW-LS-116S	03/25/14		12800 $\pm$ 1340						
TW-LS-116S	06/17/14		10800 $\pm$ 1130						
TW-LS-116S	09/24/14		9990 $\pm$ 1050						
TW-LS-116S	11/11/14		9390 $\pm$ 987	< 4.0	< 0.5	< 2.4	< 1.1	< 2.9	2.1 $\pm$ 1.1

TABLE B-I.1

**CONCENTRATIONS OF TRITIUM, STRONTIUM, GROSS ALPHA, AND GROSS BETA IN GROUNDWATER SAMPLES COLLECTED IN THE VICINITY OF LASALLE COUNTY STATION, 2014**

RESULTS IN UNITS OF PCI/LITER  $\pm$  2 SIGMA

SITE	COLLECTION DATE	H-3	Sr-89	Sr-90	Gr-A (Dis)	Gr-A (Sus)	Gr-B (Dis)	Gr-B (Sus)
TW-LS-117S	03/25/14	< 160						
TW-LS-117S	06/17/14	< 192						
TW-LS-117S	09/25/14	< 189						
TW-LS-117S	11/10/14	< 188						
TW-LS-118S	03/25/14	35900 $\pm$ 3650						
TW-LS-118S	06/17/14	39800 $\pm$ 4010						
TW-LS-118S	09/24/14	33400 $\pm$ 3370						
TW-LS-118S	11/11/14	18000 $\pm$ 1840	< 2.9	< 0.5	< 2.1	< 1.0	< 2.5	< 1.5
TW-LS-119S	03/25/14	286 $\pm$ 118						
TW-LS-119S	03/25/14	404 $\pm$ 139						
TW-LS-119S	06/17/14	585 $\pm$ 154						
TW-LS-119S	09/24/14	1280 $\pm$ 189						
TW-LS-119S	11/11/14	987 $\pm$ 162	< 3.0	< 0.9	< 2.4	< 8.5	7.1 $\pm$ 2.2	5.5 $\pm$ 2.1
TW-LS-120S	03/25/14	< 171						
TW-LS-120S	06/17/14	< 195						
TW-LS-120S	09/24/14	< 190						
TW-LS-120S	11/10/14	< 188						
TW-LS-121S	03/25/14	< 170						
TW-LS-121S	06/17/14	< 199						
TW-LS-121S	09/24/14	< 191						
TW-LS-121S	11/10/14	< 186						

TABLE B-I.2

**CONCENTRATIONS OF GAMMA EMITTERS IN GROUNDWATER  
SAMPLES COLLECTED IN THE VICINITY OF LASALLE COUNTY STATION, 2014**

RESULTS IN UNITS OF PC/LITER  $\pm 2$  SIGMA

SITE	COLLECTION DATE	Be-7	K-40	Mn-54	Co-58	Fe-59	Co-60	Zn-65	Nb-95	Zr-95	I-131	Cs-134	Cs-137	Ba-140	La-140
HP-10	06/17/14	< 12	< 9	< 1	< 1	< 3	< 1	< 2	< 1	< 2	< 11	< 1	< 1	< 18	< 5
HP-2	06/17/14	< 15	< 42	< 1	< 1	< 4	< 1	< 2	< 2	< 3	< 15	< 1	< 1	< 21	< 6
HP-5	06/17/14	< 10	< 26	< 1	< 1	< 2	< 1	< 2	< 1	< 2	< 11	< 1	< 1	< 15	< 4
HP-7	06/17/14	< 14	< 12	< 1	< 2	< 4	< 1	< 3	< 2	< 3	< 13	< 1	< 1	< 19	< 6
MW-LS-104S	06/17/14	< 10	< 25	< 1	< 1	< 2	< 1	< 2	< 1	< 2	< 9	< 1	< 1	< 13	< 4
MW-LS-104S	09/24/14	< 9	< 6	< 1	< 1	< 2	< 1	< 1	< 1	< 2	< 26	< 1	< 1	< 25	< 7
MW-LS-104S	11/11/14	< 15	< 41	< 1	< 1	< 3	< 1	< 2	< 2	< 2	< 14	< 1	< 1	< 20	< 5
MW-LS-105S	06/17/14	< 13	< 10	< 1	< 1	< 4	< 1	< 3	< 2	< 3	< 12	< 1	< 1	< 19	< 5
MW-LS-106S	06/18/14	< 9	< 8	< 1	< 1	< 2	< 1	< 2	< 1	< 2	< 8	< 1	< 1	< 12	< 3
MW-LS-107S	06/18/14	< 12	< 24	< 1	< 1	< 3	< 1	< 2	< 1	< 2	< 10	< 1	< 1	< 15	< 6
MW-LS-111S	03/26/14	< 9	< 5	< 1	< 1	< 2	< 1	< 1	< 1	< 1	< 12	< 1	< 1	< 14	< 4
MW-LS-111S	06/18/14	< 14	< 11	< 1	< 2	< 3	< 1	< 3	< 2	< 3	< 14	< 1	< 1	< 19	< 6
RW-LS-100S	06/17/14	< 14	< 11	< 1	< 2	< 3	< 1	< 3	< 2	< 3	< 15	< 1	< 1	< 21	< 5
RW-LS-100S	09/24/14	< 11	< 18	< 1	< 1	< 2	< 1	< 2	< 1	< 2	< 32	< 1	< 1	< 24	< 10
RW-LS-100S	11/11/14	< 10	< 20	< 1	< 1	< 2	< 1	< 2	< 1	< 2	< 9	< 1	< 1	< 12	< 4
RW-LS-101S	06/17/14	< 13	< 9	< 1	< 1	< 3	< 1	< 2	< 1	< 2	< 12	< 1	< 1	< 19	< 4
RW-LS-101S	09/24/14	< 13	< 7	< 1	< 1	< 3	< 1	< 2	< 1	< 2	< 40	< 1	< 1	< 34	< 8
RW-LS-101S	11/11/14	< 11	65 $\pm$ 27	< 1	< 1	< 3	< 1	< 2	< 1	< 2	< 12	< 1	< 1	< 16	< 5
TW-LS-116S	11/11/14	< 12	< 9	< 1	< 1	< 3	< 1	< 2	< 1	< 2	< 11	< 1	< 1	< 18	< 6
TW-LS-118S	11/11/14	< 8	< 7	< 1	< 1	< 2	< 1	< 1	< 1	< 2	< 8	< 1	< 1	< 12	< 3
TW-LS-119S	11/11/14	< 8	< 22	< 1	< 1	< 2	< 1	< 2	< 1	< 2	< 7	< 1	< 1	< 10	< 4

BOLDED VALUES INDICATE LLD COULD NOT BE MET DUE TO AGE OF SAMPLE AT TIME OF RECEIPT AT THE LABORATORY

TABLE B-I.3

**CONCENTRATIONS OF HARD-TO-DETECTS IN GROUNDWATER SAMPLES  
COLLECTED AS PART OF THE RADIOLOGICAL GROUNDWATER  
PROTECTION PROGRAM, LASALLE COUNTY STATION, 2014**

RESULTS IN UNITS OF PCI/LITER  $\pm$  2 SIGMA

SITE	COLLECTION DATE	Am-241	Cm-242	Cm-243/244	Pu-238	Pu-239/240	U-234	U-235	U-238	Fe-55	Ni-63
HP-10	06/17/14	-	-	-	-	-	-	-	-	< 85	< 4.7
HP-2	06/17/14	-	-	-	-	-	-	-	-	< 166	< 4.8
HP-5	06/17/14	-	-	-	-	-	-	-	-	< 89	< 4.5
HP-7	06/17/14	-	-	-	-	-	-	-	-	< 152	< 4.8
MW-LS-104S	06/17/14	< 0.02	< 0.06	< 0.04	< 0.08	< 0.03	0.93 $\pm$ 0.26	< 0.06	0.93 $\pm$ 0.26	< 135	< 4.8
MW-LS-104S	09/24/14	< 0.05	< 0.07	< 0.07	< 0.09	< 0.09	0.78 $\pm$ 0.27	< 0.09	0.98 $\pm$ 0.31	< 185	< 4.1
MW-LS-104S	11/11/14	< 0.13	< 0.03	< 0.03	< 0.06	< 0.12	1.07 $\pm$ 0.28	< 0.02	0.95 $\pm$ 0.26	< 179	< 3.9
MW-LS-105S	06/17/14	-	-	-	-	-	-	-	-	< 112	< 4.6
MW-LS-107S	06/18/14	-	-	-	-	-	-	-	-	< 190	< 5.0
MW-LS-111S	03/26/14	< 0.12	< 0.04	< 0.10	< 0.17	< 0.07	22.1 $\pm$ 2.48	0.63 $\pm$ 0.27	13.9 $\pm$ 1.70	< 187	< 3.6
MW-LS-111S	06/18/14	-	-	-	-	-	-	-	-	< 189	< 4.8
RW-LS-100S	06/17/14	-	-	-	-	-	-	-	-	< 157	< 4.8
RW-LS-100S	09/24/14	< 0.08	< 0.04	< 0.02	< 0.08	< 0.10	< 0.08	< 0.04	< 0.03	< 165	< 4.0
RW-LS-100S	11/11/14	< 0.20	< 0.08	< 0.08	< 0.05	< 0.05	< 0.05	< 0.02	< 0.02	< 175	< 4.7
RW-LS-101S	06/17/14	< 0.08	< 0.02	< 0.10	< 0.02	< 0.07	0.31 $\pm$ 0.16	< 0.06	0.35 $\pm$ 0.17	< 70	< 5.0
RW-LS-101S	09/24/14	< 0.04	< 0.07	< 0.07	< 0.10	< 0.04	0.26 $\pm$ 0.14	< 0.08	0.19 $\pm$ 0.11	< 167	< 4.0
RW-LS-101S	11/11/14	< 0.09	< 0.02	< 0.02	< 0.14	< 0.05	< 0.02	< 0.08	< 0.02	< 120	< 3.7
TW-LS-116S	11/11/14	-	-	-	-	-	-	-	-	< 177	< 4.0
TW-LS-118S	11/11/14	-	-	-	-	-	-	-	-	< 173	< 4.6
TW-LS-119S	11/11/14	-	-	-	-	-	-	-	-	< 146	< 4.0

TABLE B-II.1

**CONCENTRATIONS OF TRITIUM IN SURFACE WATER SAMPLES  
COLLECTED IN THE VICINITY OF LASALLE COUNTY STATION, 2014**

RESULTS IN UNITS OF PCI/LITER  $\pm$  2 SIGMA

SITE	COLLECTION	
	DATE	H-3
SW-LS-101	03/20/14	< 192
SW-LS-101	06/17/14	502 $\pm$ 149
SW-LS-101	09/25/14	< 189
SW-LS-101	11/10/14	< 158
SW-LS-102	03/20/14	< 193
SW-LS-102	06/18/14	299 $\pm$ 137
SW-LS-102	09/25/14	2960 $\pm$ 340
SW-LS-102	11/10/14	950 $\pm$ 159
SW-LS-103	03/20/14	638 $\pm$ 156
SW-LS-103	06/18/14	600 $\pm$ 155
SW-LS-103	09/25/14	465 $\pm$ 144
SW-LS-103	11/10/14	234 $\pm$ 113
SW-LS-106	03/21/14	645 $\pm$ 154
SW-LS-106	06/18/14	< 196
SW-LS-106	09/25/14	< 188
SW-LS-106	11/12/14	263 $\pm$ 115

TABLE B-II.2

**CONCENTRATIONS OF GAMMA EMITTERS IN SURFACE WATER  
SAMPLES COLLECTED IN THE VICINITY OF LASALLE COUNTY STATION, 2014**

RESULTS IN UNITS OF PC/LITER  $\pm$  2 SIGMA

SITE	COLLECTION DATE	Be-7	K-40	Mn-54	Co-58	Fe-59	Co-60	Zn-65	Nb-95	Zr-95	I-131	Cs-134	Cs-137	Ba-140	La-140
SW-LS-101	06/17/14	< 8	< 6	< 1	< 1	< 2	< 1	< 1	< 1	< 1	< 7	< 1	< 1	< 10	< 3
SW-LS-102	06/18/14	< 11	< 25	< 1	< 1	< 2	< 1	< 2	< 1	< 2	< 9	< 1	< 1	< 13	< 4
SW-LS-103	06/18/14	< 14	< 29	< 1	< 1	< 3	< 1	< 2	< 1	< 3	< 13	< 1	< 1	< 18	< 4
SW-LS-106	06/18/14	< 12	< 33	< 1	< 1	< 3	< 1	< 2	< 1	< 2	< 10	< 1	< 1	< 17	< 6