

# Lakeland Industry & Community Association

Cold Lake Monitoring Site  
Ambient Air Monitoring  
Data Report  
For  
August 2010

Prepared By:



September 16, 2010

# Lakeland Industry & Community Association

## Cold Lake Monitoring Site

### Ambient Air Monitoring

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# Introduction

The following Ambient Air Monitoring report was prepared for:

Mr. Mike Bisaga  
**Lakeland Industry & Community Association**  
Box 8237  
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T9N 2J5

Monitoring Location: Cold Lake  
Data Period: August 2010

The monthly ambient data report:

- Prepared by Lily Lin
- Reviewed by Craig Snider

The monthly analytical report for passive monitoring:  
Authorized by Levi Manchak

The 6-day analytical report for VOCs and PAHs:  
Authorized by Petro Oh

## Calibration Procedure

The following calibration procedure applies to all calibrations conducted at the Lakeland Industry & Community Association Air Monitoring Station.

Calibration gas concentrations are generated using a dynamic mass flow controlled calibrator. EPA Protocol one gases are diluted with zero air generated on site. The Mass Flow Controllers in the calibrator are referenced using an NIST traceable flow meter once per month. All listed flows are reported as corrected to Standard Temperature and Pressure (STP).

Generated zero gas is introduced to the analyzer first. Three concentrations of calibration gas are then generated in order to introduce points at approximately 50-80%, 25-40% & 10-20% of the analyzer's full-scale range. An auto zero and span are then performed to validate the daily zero and span values recorded to the next multi-point calibration.

All indicated concentrations are taken from the ESC data logger used to collect the data for monthly reporting.

Conformance of each calibration to Alberta Environment regulations is outlined in the individual calibration reports. The slope and correlation coefficient are derived from the calculated and indicated analyzer responses. The percent change is calculated using the previous calibration correction factor and the current correction factor before adjustment. The calibration conforms to the procedure outlined in the *Air Monitoring Directive, Appendix A-10, Section 1.6*.

# MONTHLY CONTINUOUS DATA SUMMARY

## LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - COLD LAKE

### Continuous Ambient Monitoring – August 2010

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION COLD LAKE SITE						MAXIMUM VALUES							OPERATIONAL TIME (PERCENT)
						1-HOUR					24-HOUR		
PARAMETER	OBJECTIVES		EXCEEDENCES		MONTHLY AVERAGE	READING	DAY	HOUR	WIND SPEED (KPH)	WIND DIRECTION (DEGREES)	READING	DAY	
	1-HR	24-HR	1-HR	24-HR									
SO <sub>2</sub> (PPB)	172	57	0	0	0.02	2	4	VAR	VAR	VAR	0.3	4	100.0
TRS (PPB)	-	-	-	-	0.02	3	6	5	0.2	345(NNW)	0.2	6, 9	100.0
NO <sub>2</sub> (PPB)	212	106	0	0	1.22	8	12	17	7.6	310(NW)	2.7	12	100.0
NO (PPB)	-	-	-	-	0.26	13	9	5	0.6	52(NE)	1.1	9	100.0
NO <sub>x</sub> (PPB)	-	-	-	-	1.63	15	9	5	0.6	52(NE)	3.7	12	100.0
O <sub>3</sub> (PPB)	82	-	0	-	17.88	52	6	12	11.4	134(SE)	25.4	6	100.0
THC (PPM)	-	-	-	-	2.09	4.5	4	6	1.3	238(SW)	2.6	12	100.0
PM 2.5 (UG/M <sup>3</sup> )	-	30	-	2	10.97	355.1	19	15	8.3	256(WSW)	79.1	19	98.9
TEMPERATURE (DEG C)	-	-	-	-	15.18	26.4	7	14, 15	10.6, 11.2	259(WSW), 259(WSW)	20.4	7	100.0
RELATIVE HUMIDITY (%)	-	-	-	-	77.57	99	11	5	0.4	217(SW)	89.7	12	100.0
VECTOR WS (KPH)	-	-	-	-	5.16	20.9	27	14	-	247(WSW)	14.0	27	100.0
VECTOR WD (DEGREES)	-	-	-	-	258(WSW)	-	-	-	-	-	-	-	100.0

VAR-VARIOUS

# Monthly Non-Continuous Data Summary

## LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - COLD LAKE

### Passive Ambient Monitoring Network – August 2010

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION PASSIVE NETWORK			
NETWORK MAXIMUM			NETWORK AVERAGE
PARAMETER	STATION	READING (PPB)	READING (PPB)
SO <sub>2</sub>	#14	0.8	0.4
H <sub>2</sub> S	#5	0.47	0.17
NO <sub>2</sub>	#28	1.8	0.7
O <sub>3</sub>	#32	21.9	16.1

# General Monthly Summary - Cold Lake

## Equipment Operation

The following summary outlines the analyzer performance. Any non-conformances, problems or maintenance performed are detailed at the end of each section.

## AQM STATION – LICA – COLD LAKE

**A trailer audit was performed by Alberta Environment on August 24<sup>th</sup>, 2010.**

### Sulphur Dioxide (PPB)

- Analyzer make / model – Thermo 43i, S/N: 806528242

No operational issues observed during the month. The inlet filter was changed before the monthly calibration was started on August 4<sup>th</sup>. Data was corrected using daily zero information.

### Total Reduced Sulphur (PPB)

- Analyzer make / model –TEI 450i, S/N: 812728560
- Converter - CD NOVA CDN 101, S/N: 250

No operational issues observed during the month. The inlet filter was changed before the monthly calibration was started on August 4<sup>th</sup>. Data was corrected using daily zero information.

### Ozone (PPB)

- Analyzer make / model - TECO 49i, S/N: 700419951

No operational issues observed during the month. The inlet filter was changed before the monthly calibration was started on August 4<sup>th</sup>. Data was corrected using daily zero information.

# General Monthly Summary - Cold Lake

## AQM STATION – LICA – COLD LAKE

### Total Hydrocarbon (PPM)

- Analyzer make / model -TECO 51C-LT, S/N: 427408718

No operational issues observed during the month. The inlet filter was changed before the monthly calibration was started on August 5<sup>th</sup>. A new H2 gas cylinder was replaced on August 12<sup>th</sup>. Data was corrected using daily zero information.

### Nitrogen Dioxide (PPB)

- Analyzer make / model - TECO 42C, S/N: 427408716

No operational issues observed during the month. The inlet filter was changed before the calibration was started on August 4<sup>th</sup>. A single point calibration check was performed using a new calibration gas on August 11<sup>th</sup>. Data was corrected using daily zero information.

### Particulate Matter 2.5 (ug/m<sup>3</sup>)

- Analyzer make / model –TEOM1405F, S/N: 1405A201620804

No operational issues observed during the month. A Teom audit was performed on August 12<sup>th</sup>. Both the FDMS filter and the Teom filter were replaced and the inlet was cleaned on August 12<sup>th</sup>. Data was corrected using Alberta air quality guideline for PM2.5 analyzer. If the data was between 0 to –3, the data was corrected to 0. If the data was below –3, the data was invalidated. 8 hours of data were invalidated as the data were below –3.0 ug/m<sup>3</sup>. There were two 24-hour average readings above guidelines; reading of 79.1 ug/m<sup>3</sup> on August 19<sup>th</sup>, and 40.7 ug/m<sup>3</sup> on August 20<sup>th</sup>. The contraventions were reported to AENV on August 20<sup>th</sup>. The AENV Ref# is 239386.

### Vector Wind Speed (KPH) & Vector Wind Direction (DEG)

- System make / model – Met One 50.5, S/N: F1644

No operational issues observed during the month. The wind system is reported as vector wind speed and vector wind direction.



# General Monthly Summary - Cold Lake

## AQM STATION – LICA – COLD LAKE

### Relative Humidity (PERCENT)

- System make / model - Rotronic Hygroclip-S3
- No operational issues observed during the month.

### Ambient Temperature (DEGC)

- System make / model - Rotronic Hygroclip-S3
- No operational issues observed during the month.

### Trailer Temperature (DEGC)

- System make / model - R&R 61

No operational issues observed during the month.

### Datalogger

- System make / model - ESC 8832, S/N: 263
- Software make / version - ESC v 5.51a

The ESC 8832 is connected to a modem with DSL for continuous connection with the base computer.

### Trailer

No issue was observed during this month.

### Air Quality Index (AQI)

The AQI data was adjusted to reflect regular monthly and daily calibrations, maintenance, and downtime. 6 hours of very poor, 5 hours of poor, and 10 hours of fair AQI values recorded in August 2010, and they were all due to PM2.5. There was also one hour of fair AQI values recorded due to O3 this month. The highest hourly concentration of PM2.5 was 355.1ug/m3 and an AQI value of 186, hour 15 on August 19<sup>th</sup>. The highest hourly concentration of Ozone was 52 ppb and an AQI value of 27 on August 6<sup>th</sup>, hour 12.

# General Monthly Summary - Cold Lake

## AQM STATION – LICA – COLD LAKE

### Passive Network

No issue was observed during this month.

### Volatile Organics (VOCs)

The volatile organics were sampled from August 6<sup>th</sup> to August 30<sup>th</sup>. The sampler was programmed to run for 24 hours, and, every 6 days per sample cycle. The values for the VOCs in this report were reported as ug/m<sup>3</sup> in 3 significant figures. No VOCs lab result is included for August in this report as the data is not available when the monthly report is completed. The results for August will be included in the monthly report next month. The lab result for July is also not available when the monthly report is completed. It will be included in the monthly report next month.

### Polycyclic Aromatic Hydrocarbons (PAHs)

The PAHs were sampled from August 6<sup>th</sup> to August 30<sup>th</sup>. The sampler was programmed to run for 24 hours, and, every 6 days per sample cycle. The values for the PAHs in this report were reported as ng/m<sup>3</sup>. No PAHs lab result for August is included in this report as the data is not available when the monthly report is completed. The results for August will be included in the monthly report next month. The lab result for July is also not available when the monthly report is completed. It will be included in the monthly report next month.

# Continuous Monitoring

# Monthly Summaries, Graphs & Wind Roses

# **Air Quality Index**

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - COLD LAKE

AUGUST 2010

AIR QUALITY INDEX (AQI)

MST		0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY		
DAY	PEAK	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX		
1		9	10	12	9	12	9	8	-	16	16	21	20	21	22	21	22	22	21	18	11	13	12	11	10	22		
2		PM2	PM2	PM2	PM2	PM2	PM2	PM2	NA	PM2	O3_	PM2	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	PM2	PM2	PM2	PM2	PM2	O3_		
3		10	11	8	7	7	11	-	9	11	13	11	12	14	15	16	17	16	16	15	13	11	10	8	7	17		
4		PM2	PM2	PM2	PM2	PM2	PM2	NA	O3_	O3_	PM2	O3_	PM2	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_		
5		6	5	5	9	12	-	11	6	6	13	17	18	19	19	19	19	19	20	18	15	15	6	5	5	20		
6		O3_	O3_	O3_	O3_	PM2	NA	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	PM2	O3_		
7		2	2	1	5	-	-	4	-	-	-	-	-	-	-	-	-	-	14	13	11	10	10	10	14	15		
8		O3_	O3_	O3_	PM2	NA	NA	PM2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	O3_	O3_	O3_	PM2	PM2	PM2	PM2	O3_		
9		13	15	15	-	15	15	15	16	15	12	-	13	14	14	15	16	16	16	14	8	13	12	8	5	16		
10		PM2	PM2	PM2	NA	PM2	PM2	PM2	PM2	PM2	PM2	NA	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	PM2	PM2	PM2	PM2	PM2		
11		8	8	-	7	7	8	8	20	24	21	22	24	27	25	23	21	21	20	18	16	13	11	12	12	27		
12		PM2	PM2	NA	PM2	PM2	PM2	PM2	PM2	PM2	PM2	O3_	PM2	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	PM2	PM2	O3_	O3_		
13		15	-	18	14	10	10	10	14	10	17	25	21	20	18	17	16	15	14	13	8	5	7	4	6	25		
14		O3_	NA	O3_	O3_	O3_	O3_	O3_	O3_	O3_	PM2	PM2	PM2	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	PM2	PM2	PM2	PM2	PM2		
15		-	5	9	9	8	9	9	13	14	14	19	21	21	21	18	15	9	11	9	7	5	9	4	-	21		
16		NA	PM2	PM2	PM2	PM2	PM2	PM2	PM2	PM2	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	PM2	PM2	PM2	PM2	PM2	PM2	NA	O3_		
17		5	1	1	5	1	1	7	6	-	12	15	14	16	19	20	20	20	20	18	12	8	7	-	7	20		
18		PM2	PM2	PM2	PM2	PM2	PM2	PM2	O3_	NA	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	PM2	PM2	NA	PM2	O3_		
19		4	8	8	8	9	9	7	8	9	11	10	8	10	14	16	16	13	7	13	13	11	-	9	4	16		
20		O3_	O3_	PM2	PM2	PM2	PM2	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	NA	O3_	PM2	O3_		
21		4	2	-	4	1	3	7	8	11	14	14	16	16	-	-	17	17	18	16	14	-	2	1	7	19		
22		PM2	PM2	NA	PM2	O3_	PM2	O3_	O3_	O3_	O3_	O3_	O3_	O3_	NA	NA	O3_	O3_	O3_	O3_	O3_	NA	O3_	PM2	PM2	O3_		
23		1	4	-	-	0	3	-	-	6	11	11	10	11	14	10	9	11	10	9	-	9	8	8	7	14		
24		PM2	PM2	NA	NA	PM2	PM2	NA	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	PM2	PM2	PM2	PM2	PM2	PM2	O3_	O3_		
25		5	4	7	6	8	7	7	7	8	8	9	10	12	13	13	13	13	12	13	-	10	9	9	8	13		
26		PM2	O3_	O3_	O3_	PM2	PM2	PM2	PM2	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	NA	O3_	O3_	O3_	O3_	O3_		
27		8	7	7	7	7	7	7	8	9	8	10	12	12	12	13	12	12	12	12	-	14	14	9	5	8	14	
28		O3_	O3_	O3_	O3_	O3_	O3_	O3_	PM2	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	NA	O3_	O3_	O3_	PM2	PM2	O3_		
29		7	6	7	3	5	4	5	7	9	11	12	13	14	14	14	14	-	14	13	8	6	6	4	8	14		
30		PM2	PM2	PM2	PM2	PM2	PM2	PM2	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	NA	O3_	O3_	O3_	O3_	PM2	PM2	PM2	PM2		
31		5	6	7	5	5	6	7	4	6	7	12	12	13	13	14	14	-	9	9	11	11	9	8	9	14		
PEAK		101	122	102	59	36	28	22	20	24	32	25	32	27	91	178	186	113	75	44	40	38	46	70	86			
		O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_		

STATUS FLAG CODES NA - NOT APPLICABLE

V - VARIOUS

AQI CLASS	OZONE (O <sub>3</sub> )					PARTICULATE MATTER 2.5 (PM <sub>2.5</sub> )					NITROGEN DIOXIDE (NO <sub>2</sub> )					SULPHUR DIOXIDE (SO <sub>2</sub> )					FREQUENCY	
	HRS	%	MAX AQI	HR	DAY	HRS	%	MAX AQI	HR	DAY	HRS	%	MAX AQI	HR	DAY	HRS	%	MAX AQI	HR	DAY	HRS	%
VERY POOR (101-255)	0	0.0%	-	-	-	6	0.8%	186	15	19	0	0.0%	-	-	-	0	0.0%	-	-	-	6	0.8%
POOR (51-100)	0	0.0%	-	-	-	5	0.7%	-	-	-	0	0.0%	-	-	-	0	0.0%	-	-	-	5	0.7%
FAIR (26-50)	1	0.1%	27	12	6	10	1.3%	-	-	-	0	0.0%	-	-	-	0	0.0%	-	-	-	11	1.5%
GOOD (1-25)	415	55.8%	-	-	-	242	32.5%	-	-	-	0	0.0%	-	-	-	0	0.0%	-	-	-	657	88.3%
OVERALL	416	55.9%	-	-	-	263	35.3%	-	-	-	0	0.0%	-	-	-	0	0.0%	-	-	-	679	91.3%
UNAVAILABLE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	65	8.7%

# Sulphur Dioxide

# LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - COLD LAKE

AUGUST 2010

SULPHUR DIOXIDE (SO<sub>2</sub>) hourly averages in ppb

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY MAX.	24-HOUR AVG.	RDGS.	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00				
DAY 1	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
2	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
3	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
4	0	0	0	0	IZS	0	0	0	2	2	2	0	0	C	C	C	0	0	0	0	0	0	0	0	0	2	0.3	24
5	0	0	0	IZS	0	0	0	1	1	0	C	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.1	24
6	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
7	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
8	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0.0	24
9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0.0	24
10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0.0	24
11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0.0	24
12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0.0	24
13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0.0	24
14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	1	0	0	0	0	0	0	1	0.0	24
15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0.0	24
16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0.0	24
17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0.0	24
18	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
19	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
20	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
21	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
22	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
23	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
24	0	0	0	0	0	0	0	IZS	0	0	C	C	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
25	0	0	0	0	0	0	IZS	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.1	24
26	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
27	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
28	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
29	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
30	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
31	IZS	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	IZS	1	0.0	24
HOURLY MAX	0	0	0	0	0	0	0	1	2	2	2	1	1	0	0	0	0	0	1	0	0	0	0	0	0			
HOURLY AVG	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			

STATUS FLAG CODES

S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	- MAINTENANCE
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE

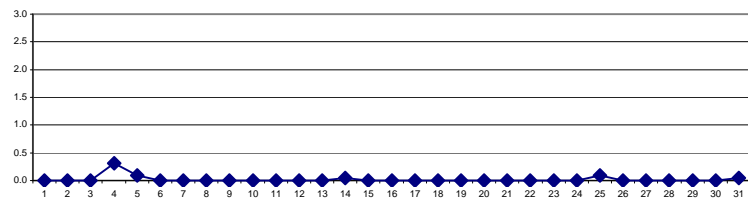
OBJECTIVE LIMIT:

ALBERTA ENVIRONMENT:	1-HR	172	PPB	24-HR	57	PPB
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MONTHLY SUMMARY

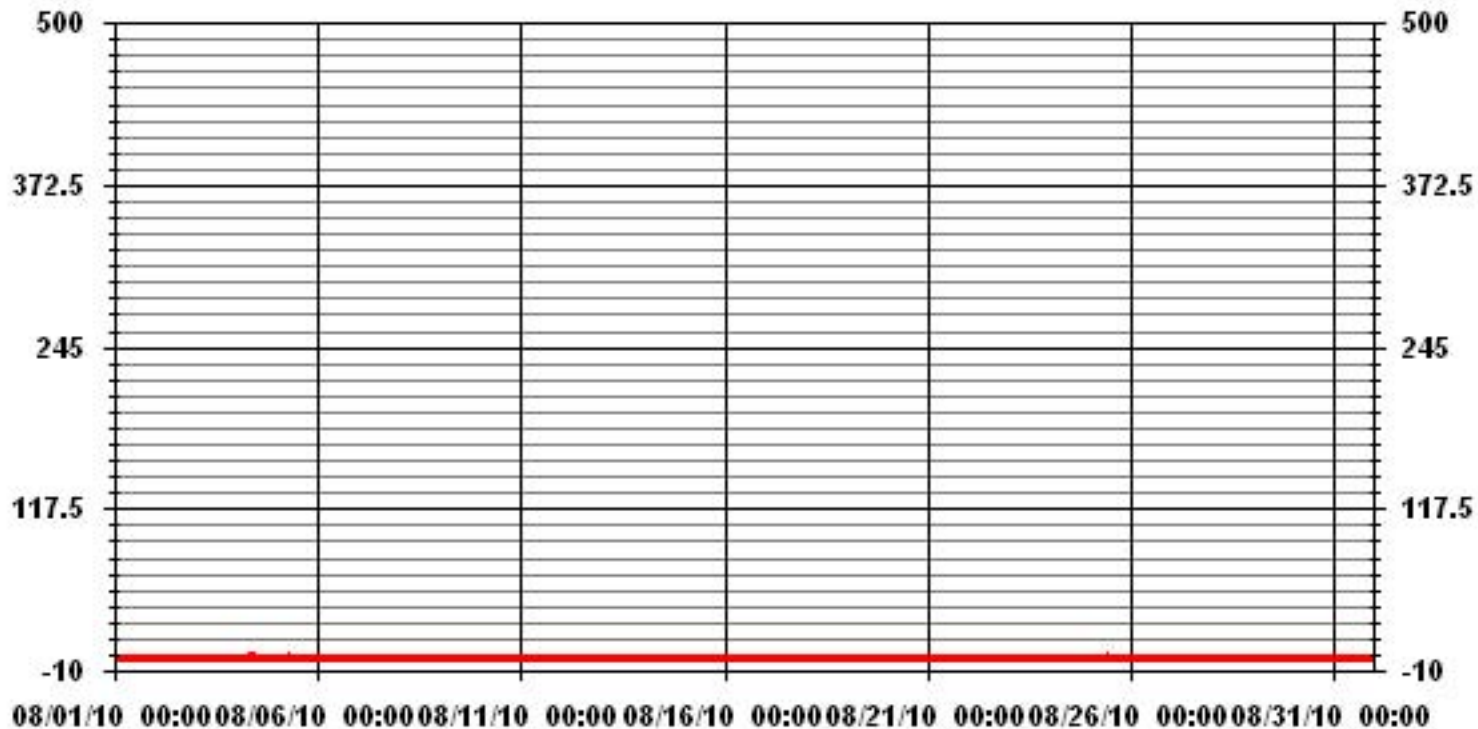
NUMBER OF 1-HR EXCEEDENCES:	0					
NUMBER OF 24-HR EXCEEDENCES:	0					
NUMBER OF NON-ZERO READINGS:	9					
MAXIMUM 1-HR AVERAGE:	2	PPB	@ HOUR(S)	VAR	ON DAY(S)	4
MAXIMUM 24-HR AVERAGE:	0.3	PPB			ON DAY(S)	4
IZS CALIBRATION TIME:	33	HRS	OPERATIONAL TIME:	744	HRS	
MONTHLY CALIBRATION TIME:	7	HRS	AMD OPERATION UPTIME:	100.0	%	
STANDARD DEVIATION:	0.16		MONTHLY AVERAGE:	0.02	PPB	

24 HOUR AVERAGES FOR AUGUST 2010





### 01 Hour Averages



— LICA SO2\_ PPB

# LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - COLD LAKE

AUGUST 2010

## SULPHUR DIOXIDE MAX instantaneous maximum in ppt

MST		0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR			
HOUR START	HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.		
DAY																														
1		0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.0	24	
2		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
3		0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	1	1	1	0	0	0	0	1	0.3	24	
4		0	0	0	0	0	0	0	0	1	4	3	2	1	0	C	C	C	C	0	0	0	0	0	0	0	4	0.6	24	
5		0	0	0	0	0	0	0	0	3	2	1	C	C	0	0	0	0	0	0	0	0	0	0	0	0	3	0.3	24	
6		0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0.1	24	
7		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24	
8		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24	
9		0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.0	24	
10		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24	
11		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.1	24	
12		0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	1	0.2	24	
13		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24	
14		0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0.1	24	
15		0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	1	0.1	24	
16		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24	
17		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24	
18		0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0.1	24	
19		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24	
20		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24	
21		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24	
22		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24	
23		0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0.0	24	
24		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24	
25		0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	1	0.3	24	
26		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24	
27		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24	
28		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24	
29		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24	
30		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24	
31		0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.1	24	
HOURLY MAX		0	0	0	1	0	0	0	3	4	3	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1			
HOURLY AVG		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.3	0.1	0.1	0.2	0.2	0.1	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0				

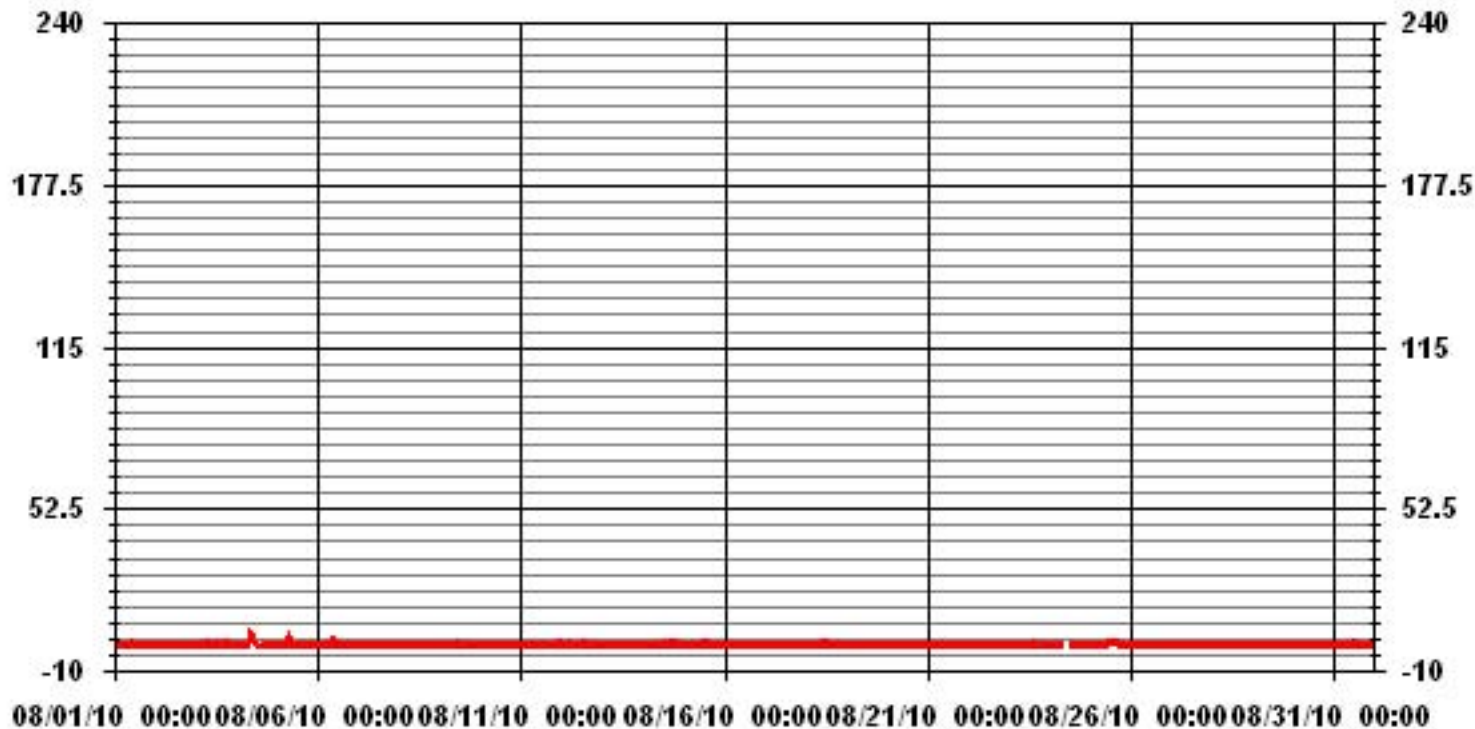
**STATUS FLAG CODES**

S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	- MISSING DATA
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE

**MONTHLY SUMMARY**

NUMBER OF NON-ZERO READINGS:	42					
MAXIMUM INSTANTANEOUS VALUE:	4	PPB	@ HOUR(S)	8	ON DAY(S)	4
IZS CALIBRATION TIME:	33	HRS	OPERATIONAL TIME:	744	HRS	
MONTHLY CALIBRATION TIME:	10	HRS				
STANDARD DEVIATION:	0.34					

### 01 Hour Averages



— LICA SO2MAX PPB

LICA  
 SO2\_ / WDR Joint Frequency Distribution (Percent)

August 2010

Distribution By % Of Samples

Logger Id : 01  
 Site Name : LICA  
 Parameter : SO2\_  
 Units : PPB

Wind Parameter : WDR  
 Instrument Height : 10 Meters

	Direction																
Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 20	2.41	2.13	2.27	3.69	5.11	6.67	11.78	3.12	3.83	5.11	9.80	14.48	11.50	6.10	6.96	4.97	100.00
< 60	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
< 110	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
< 170	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
< 340	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
>= 340	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
Totals	2.41	2.13	2.27	3.69	5.11	6.67	11.78	3.12	3.83	5.11	9.80	14.48	11.50	6.10	6.96	4.97	

Calm : .00 %

Total # Operational Hours : 704

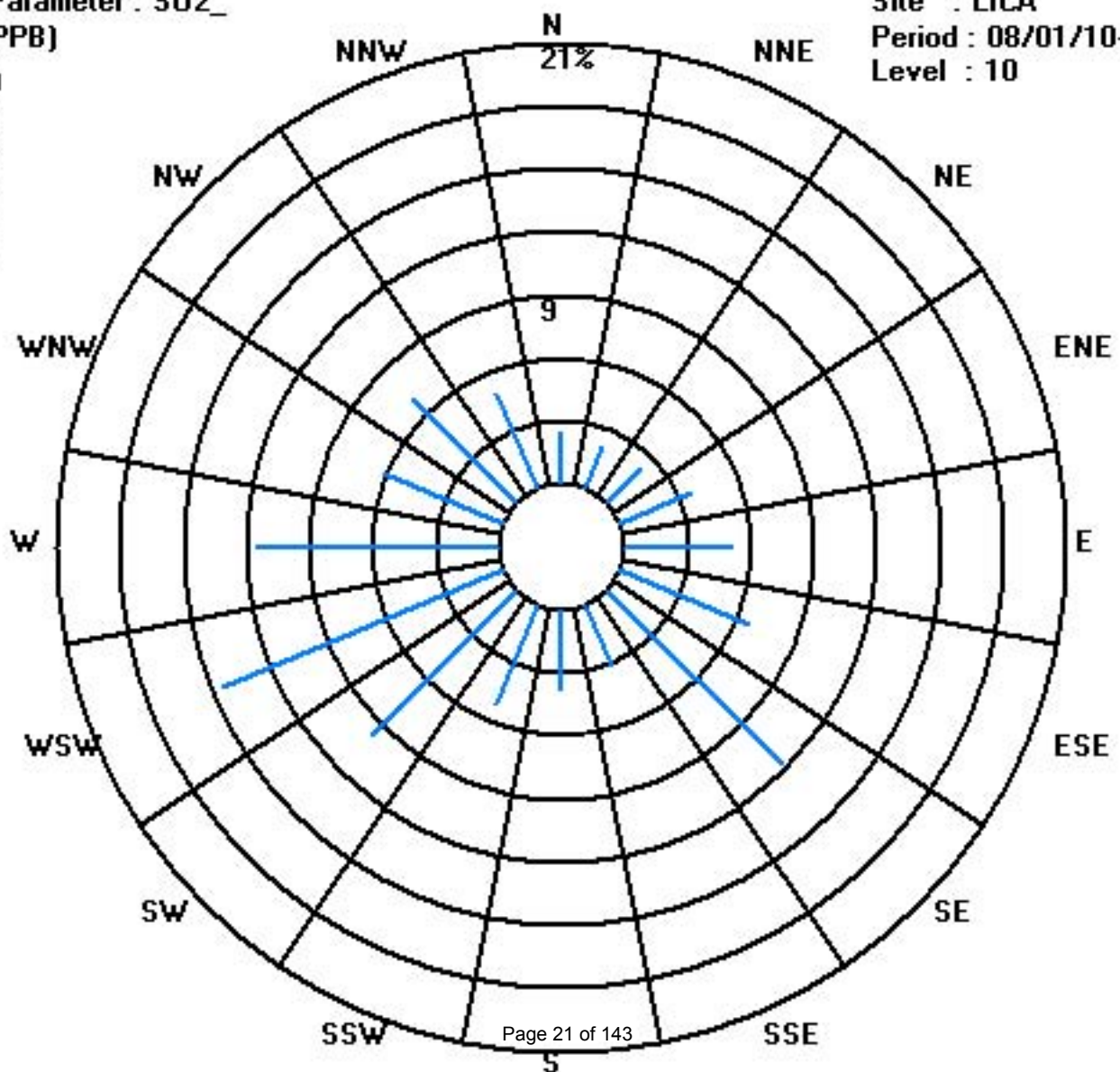
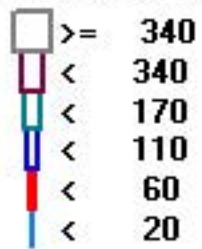
Distribution By Samples

	Direction																
Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 20	17	15	16	26	36	47	83	22	27	36	69	102	81	43	49	35	704
< 60																	
< 110																	
< 170																	
< 340																	
>= 340																	
Totals	17	15	16	26	36	47	83	22	27	36	69	102	81	43	49	35	

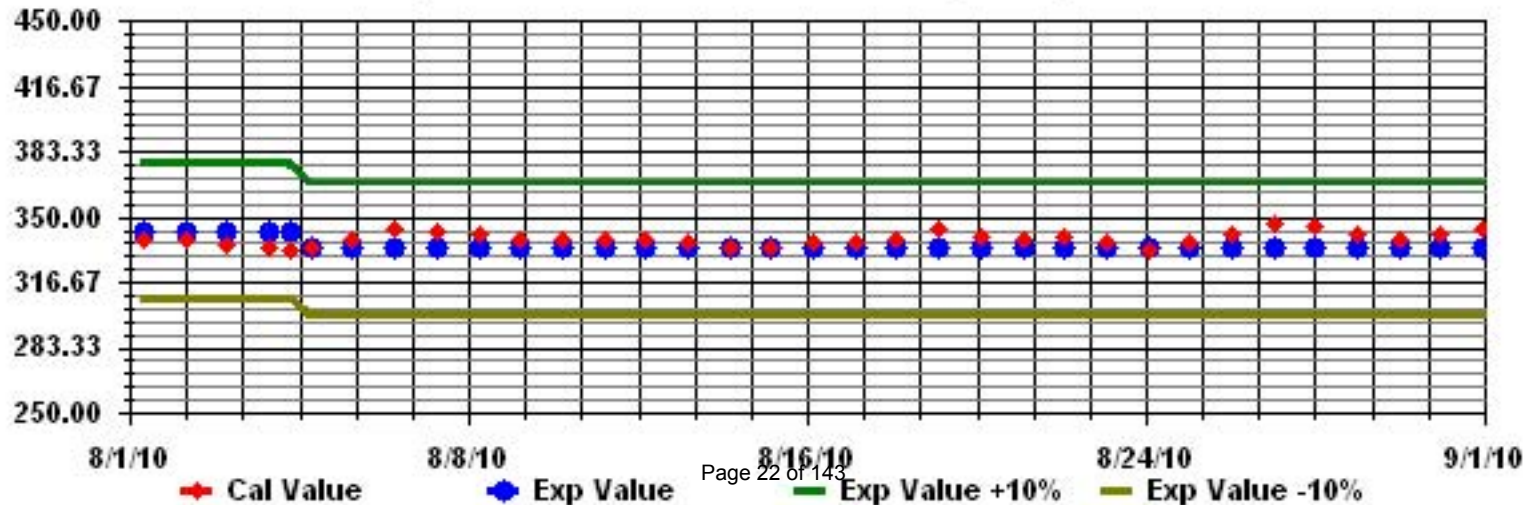
Calm : .00 %

Total # Operational Hours : 704

Class Limits (PPB)



Calibration Graph for Site: LICA Parameter: SO2\_ Sequence: SO2 Phase: SPAN



# Total Reduced Sulphur

# LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - COLD LAKE

AUGUST 2010

## TOTAL REDUCED SULPHUR (TRS) hourly averages in ppb

MST		0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR		
HOURLY MAX	HOURLY AVG	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.	
DAY																													
1		0	0	0	0	0	0	1	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.0	24
2		0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
3		0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
4		0	0	0	0	IZS	0	0	C	C	C	C	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
5		0	0	0	IZS	0	0	0	0	0	0	C	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
6		0	0	IZS	0	1	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0.2	24
7		0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
8		IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0.0	24
9		0	0	0	1	0	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	2	0.2	24
10		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0.0	24	
11		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0.0	24	
12		0	0	0	0	0	0	1	C	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	1	0.0	24	
13		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
14		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0.0	24
15		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0.0	24
16		0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.0	24
17		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
18		0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
19		0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
20		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
21		0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
22		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
23		0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
24		0	0	0	0	0	0	0	IZS	0	0	C	C	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
25		0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
26		0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
27		0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
28		0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
29		0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
30		0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
31		IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0.0	24
HOURLY MAX		0	0	0	1	1	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
HOURLY AVG		0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			

### STATUS FLAG CODES

S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	- MISSING DATA
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE

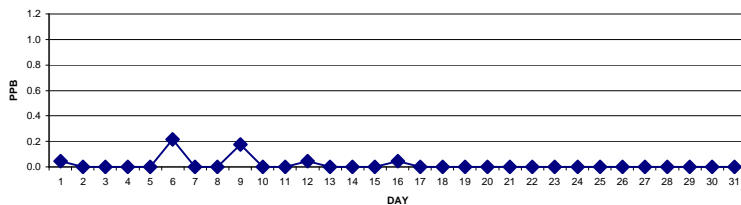
OBJECTIVE LIMIT:

ALBERTA ENVIRONMENT:	1-HR	172	PPB	24-HR	57	PPB
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### MONTHLY SUMMARY

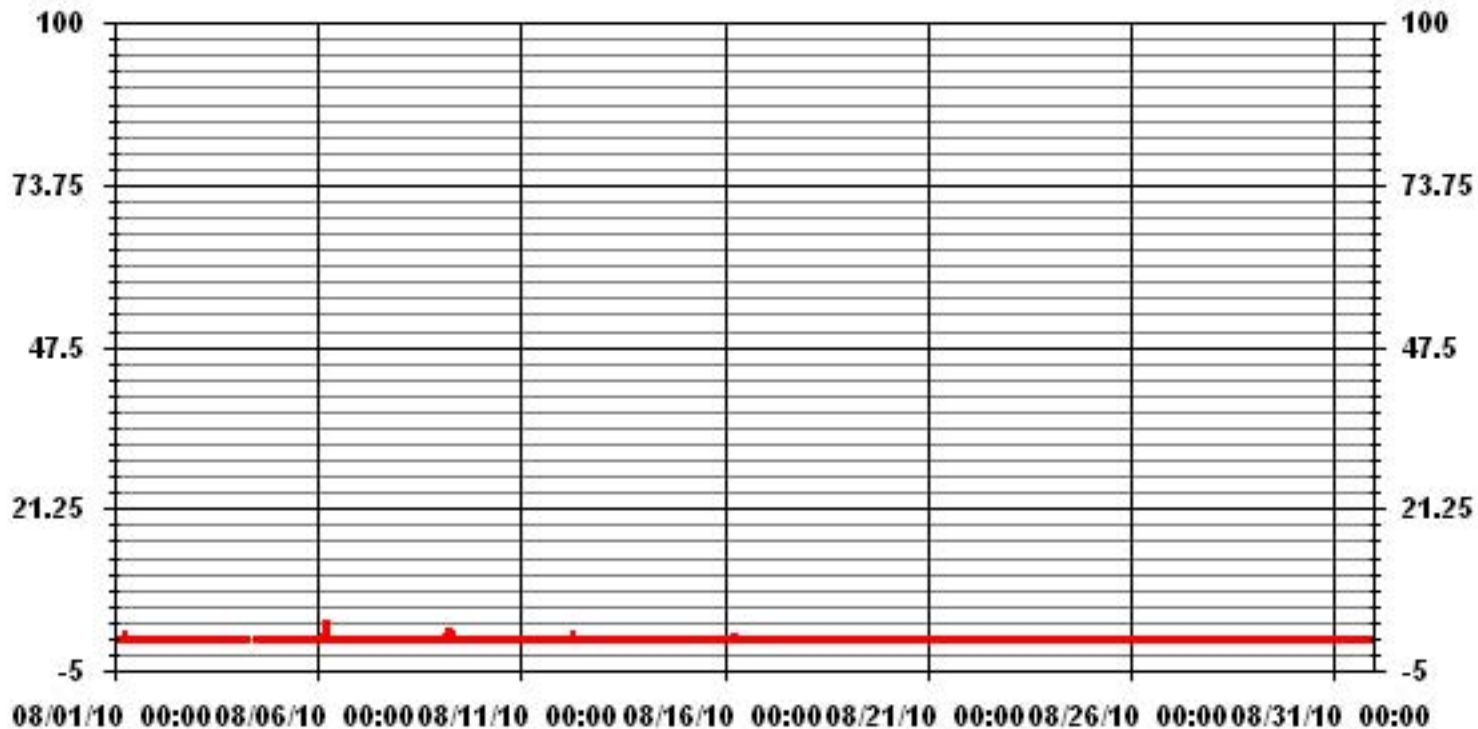
NUMBER OF 1-HR EXCEEDENCES:	0		
NUMBER OF 24-HR EXCEEDENCES:	0		
NUMBER OF NON-ZERO READINGS:	9		
MAXIMUM 1-HR AVERAGE:	3 PPB @ HOUR(S) 5 ON DAY(S) 6		
MAXIMUM 24-HR AVERAGE:	0.2 PPB ON DAY(S) 6,9		
	VAR-VARIOUS		
IZS CALIBRATION TIME:	33 HRS	OPERATIONAL TIME:	744 HRS
MONTHLY CALIBRATION TIME:	9 HRS	AMD OPERATION UPTIME:	100.0 %
STANDARD DEVIATION:	0.17	MONTHLY AVERAGE:	0.02 PPB

24 HOUR AVERAGES FOR AUGUST 2010





### 01 Hour Averages



— LICA TRS\_ PPB

# LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - COLD LAKE

AUGUST 2010

## TOTAL REDUCED SULPHUR MAX    instantaneous maximum in ppb

MST		0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY 24-HOUR			
HOUR START		1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.	
HOUR END		1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00				
DAY																													
1		1	1	1	1	1	0	3	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0.3	24
2		1	1	1	1	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.2	24
3		0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
4		0	0	0	0	IZS	0	0	C	C	C	C	C	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
5		0	0	0	IZS	1	1	0	0	0	0	C	C	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.1	24
6		0	0	IZS	1	2	14	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14	0.8	24
7		0	IZS	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.0	24
8		IZS	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	IZS	1	0.1	24
9		1	1	1	1	1	3	3	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	3	0.6	24
10		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	1	1	0.0	24
11		0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	1	0.1	24
12		2	2	0	2	2	1	C	C	C	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	2	0.5	24
13		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0.0	24
14		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	1	1	0	1	0.1	24	
15		0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	1	0.1	24
16		0	0	0	1	0	1	1	1	1	1	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	1	0.3	24
17		0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0.0	24
18		0	0	0	0	0	0	1	1	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	1	0.1	24
19		0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
20		1	1	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.1	24
21		0	0	1	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.0	24
22		0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
23		0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
24		0	0	0	0	0	0	IZS	0	C	C	C	C	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
25		0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
26		0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
27		0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
28		0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
29		0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
30		0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
31		IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0.0	24
HOURLY MAX		2	2	1	2	2	14	3	2	1	1	0	0	0	0	0	0	0	0	0	0	0	1	1	1				
HOURLY AVG		0.2	0.2	0.1	0.2	0.3	0.8	0.5	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0				

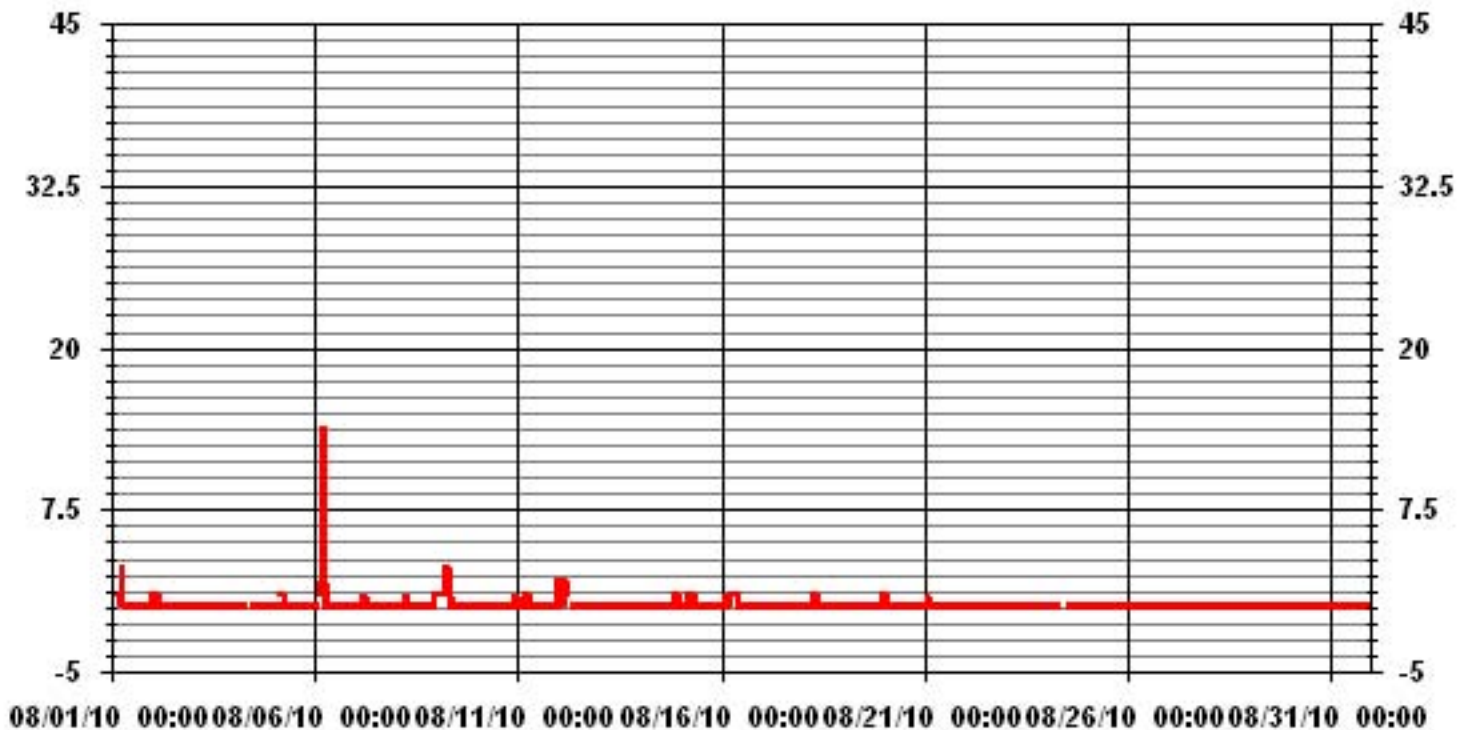
**STATUS FLAG CODES**

S - OUT OF SERVICE	IZS - IZS - DAILY ZERO/SPAN CHECK
N - INVALID DATA	M - MISSING DATA
D - INSTRUMENT DRIFT	P - POWER FAILURE
C - CALIBRATION	NA - NOT APPLICABLE

**MONTHLY SUMMARY**

NUMBER OF NON-ZERO READINGS:	53					
MAXIMUM INSTANTANEOUS VALUE:	14	PPB	@ HOUR(S)	5	ON DAY(S)	6
	VAR - VARIOUS					
IZS CALIBRATION TIME:	33	HRS	OPERATIONAL TIME:	744	HRS	
MONTHLY CALIBRATION TIME:	14	HRS				
STANDARD DEVIATION:	0.64					

### 01 Hour Averages



LICA  
 TRS\_ / WD Joint Frequency Distribution (Percent)

August 2010

Distribution By % Of Samples

Logger Id : 01  
 Site Name : LICA  
 Parameter : TRS\_  
 Units : PPB

Wind Parameter : WD  
 Instrument Height : 10 Meters

	Direction																
Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 3	2.42	2.13	2.27	3.70	5.12	6.69	11.82	3.13	3.84	5.12	9.82	14.10	11.53	6.26	6.98	4.84	99.85
< 10	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.14	.14
< 50	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
>= 50	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
Totals	2.42	2.13	2.27	3.70	5.12	6.69	11.82	3.13	3.84	5.12	9.82	14.10	11.53	6.26	6.98	4.98	

Calm : .00 %

Total # Operational Hours : 702

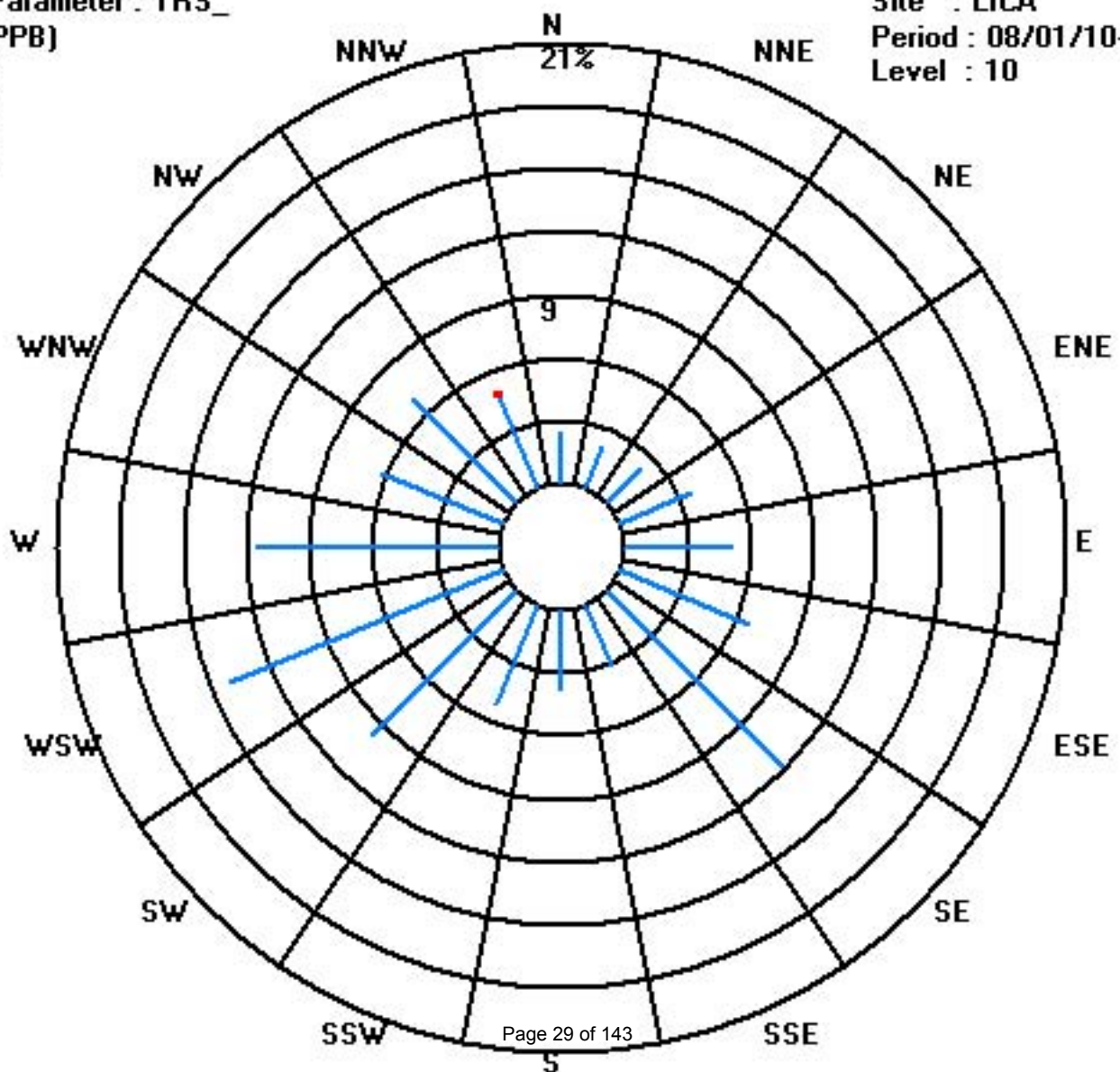
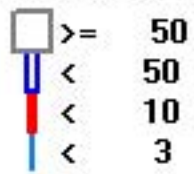
Distribution By Samples

	Direction																
Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 3	17	15	16	26	36	47	83	22	27	36	69	99	81	44	49	34	701
< 10																1	1
< 50																	
>= 50																	
Totals	17	15	16	26	36	47	83	22	27	36	69	99	81	44	49	35	

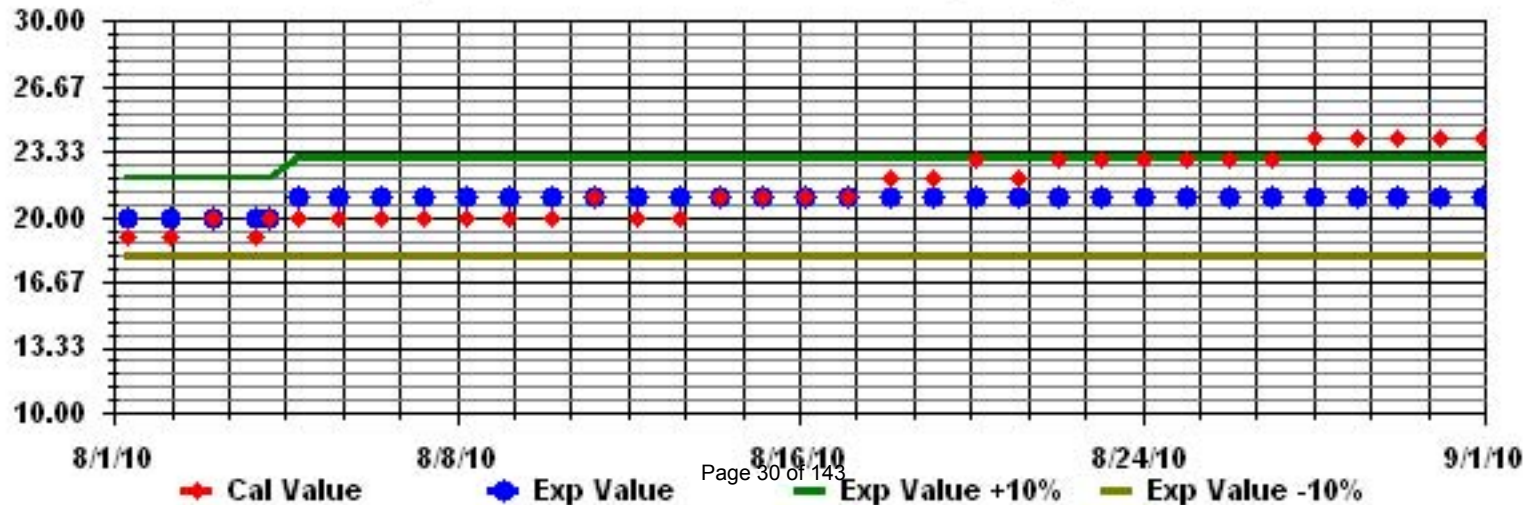
Calm : .00 %

Total # Operational Hours : 702

Class Limits (PPB)



Calibration Graph for Site: LICA Parameter: TRS\_ Sequence: TRS Phase: SPAN



# Total Hydrocarbons

# LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - COLD LAKE

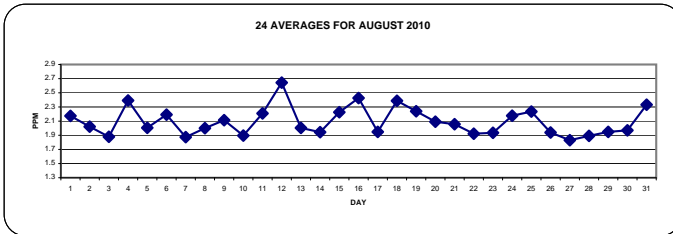
AUGUST 2010

## TOTAL HYDROCARBONS (THC) hourly averages in ppm

MST		0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY 24-HOUR				
DAY	DAY	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.		
1	1	2.3	2.5	2.6	2.7	3	3.4	3.5	IZS	2.1	1.9	1.9	1.9	1.8	1.7	1.7	1.7	1.7	1.8	1.8	1.8	1.9	2	2.1	2.2	2.1	2.2	3.5	2.2	24
2	2	2.6	2.9	2.8	2.7	2.4	2.4	IZS	2	1.8	1.8	1.8	1.7	1.7	1.7	1.7	1.7	1.7	1.8	1.8	1.8	1.9	1.8	2	2	2	2.9	2.0	24	
3	3	2.1	2.1	2	1.8	1.8	IZS	1.8	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.9	1.9	2	2	2	2.1	1.9	24	
4	4	2.1	2.3	3	3.7	IZS	4	4.5	3.5	2.8	2.3	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	2.1	2.1	2.2	2.1	4.5	2.4	24		
5	5	2.2	2.2	2.5	IZS	3	3.1	2.8	C	C	C	C	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.7	1.7	1.9	2	2.2	3.1	2.0	24			
6	6	2.5	2.7	IZS	3	3.3	3.1	2.8	2.4	2.3	2.3	2.1	1.9	1.8	1.8	1.8	1.7	1.7	1.7	1.7	1.9	1.9	2	2.1	1.9	3.3	2.2	24		
7	7	1.8	IZS	1.7	1.8	1.9	1.9	2.1	2	2.3	2.3	2	1.8	1.7	1.7	1.6	1.6	1.6	1.6	1.6	1.7	1.7	1.9	2.3	2.5	2.5	1.9	24		
8	8	IZS	2.5	2.6	2.4	2.2	2.1	2.1	2	1.9	1.8	1.7	1.7	1.7	1.7	1.8	1.7	1.7	1.9	1.8	1.8	2	2.3	2.6	IZS	2.6	2.0	24		
9	9	2.6	2.7	2.7	3	2.8	2.8	2.9	2.1	2	1.9	1.8	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.8	1.8	1.9	2	IZS	2	3.0	2.1	24		
10	10	2.1	2	2	2.2	2.4	2.2	1.9	1.9	1.8	1.8	1.8	1.9	1.9	1.7	1.7	1.7	1.7	1.9	1.8	1.8	1.8	IZS	1.8	1.8	2.4	1.9	24		
11	11	1.9	1.9	1.9	2.1	2.6	2.7	2.6	2.4	2.1	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.7	1.7	1.8	2.3	IZS	2.4	3.3	3.6	3.6	2.2	24		
12	12	2.7	2.6	3.3	3.9	3.2	3.5	3.1	2.6	2.7	2	2.4	2.6	2.5	2.3	2	2	2.2	3.2	3.9	IZS	2	2.1	2	2	3.9	2.6	24		
13	13	2	2.2	2.2	2.1	2.1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	IZS	1.9	1.9	1.9	1.9	1.9	2.2	2.0	24	
14	14	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	IZS	1.9	1.9	2	2.2	2.2	2.1	2.2	1.9	24
15	15	2.2	2.2	2.4	2.7	2.9	3.3	3.3	2.7	2	2	1.9	1.9	1.9	1.9	1.9	1.9	IZS	1.9	1.9	2	2	2	2.1	2.2	3.3	2.2	24		
16	16	2.4	2.6	2.8	3.3	3.4	3.3	3.5	2.9	2.6	2.6	2.2	2.1	2.1	2	1.9	IZS	2.2	2.2	1.9	2	2	2	1.9	1.9	3.5	2.4	24		
17	17	1.9	2	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	IZS	1.9	1.9	1.9	2	2	2	2	2.1	2.4	2.4	1.9	24	
18	18	2.7	3	3	2.9	3	3	2.9	2.7	2.6	2.3	2.1	2	2	IZS	2.1	2.2	2.1	2	2	2	2	2	2	2.1	2.2	3.0	2.4	24	
19	19	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.3	2.2	2.4	2.3	2.1	IZS	2.3	2.3	2.2	2.1	2	1.9	2.1	2.3	2.3	2.6	2.6	2.6	2.2	24		
20	20	2.7	2.6	2.3	2.2	2.2	2.2	2.2	2.1	2.1	1.9	1.9	IZS	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2	2	2	2.2	2.2	2.7	2.1	24		
21	21	2.3	2.4	2.5	2.4	2.3	2.1	2.1	2.1	2.2	2.2	IZS	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.5	2.1	24	
22	22	1.9	1.9	1.9	1.9	1.9	2	2	1.9	1.9	IZS	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2	2.1	2.1	1.9	24		
23	23	2.1	2	1.9	1.9	1.9	2	2	1.9	IZS	1.9	1.9	2	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2	2	2.1	1.9	24	
24	24	2	2	2.1	2.2	2.6	2.9	2.9	IZS	2.2	2.1	2	2	2	2	2	C	C	1.9	2	2	2.1	2.2	2.2	2.3	2.9	2.2	24		
25	25	2.4	2.5	2.6	2.6	2.8	2.8	IZS	2.5	2.4	2.2	2.1	2.1	2.1	2	1.9	1.9	1.9	1.9	1.9	1.9	2	2	2.1	2.3	2.4	2.8	2.2	24	
26	26	2.3	2.2	2.1	2.1	2	IZS	2	2	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.9	1.8	1.8	1.8	1.9	2.3	1.9	24		
27	27	1.8	1.9	1.8	1.8	IZS	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	2	1.9	1.9	1.9	2.0	1.8	24		
28	28	1.9	1.9	1.9	IZS	1.8	1.8	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2	2.0	1.9	24		
29	29	2	2	IZS	2.1	2.1	2.1	2	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2	1.9	2	2.1	1.9	24		
30	30	2	IZS	2	2	2	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2	1.9	1.9	2	1.9	1.9	2	2	2	2.1	2.3	2.3	2.0	24		
31	31	IZS	2.5	2.8	2.9	2.9	3.1	3.3	3.1	2.5	2.5	2.3	2	2	1.9	1.9	1.9	1.9	2	2.1	1.9	1.9	1.9	2	IZS	3.3	2.3	24		
HOURLY MAX		2.7	3.0	3.3	3.9	3.4	4.0	4.5	3.5	2.8	2.6	2.4	2.6	2.5	2.3	2.3	2.2	2.2	3.2	3.9	2.3	2.3	2.4	3.3	3.6					
HOURLY AVG		2.2	2.3	2.3	2.4	2.4	2.5	2.5	2.2	2.1	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.1	2.2					

### STATUS FLAG CODES

S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	- MAINTENANCE
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE
BB	- BELOW BACKGROUND OF 1.5 PPM		

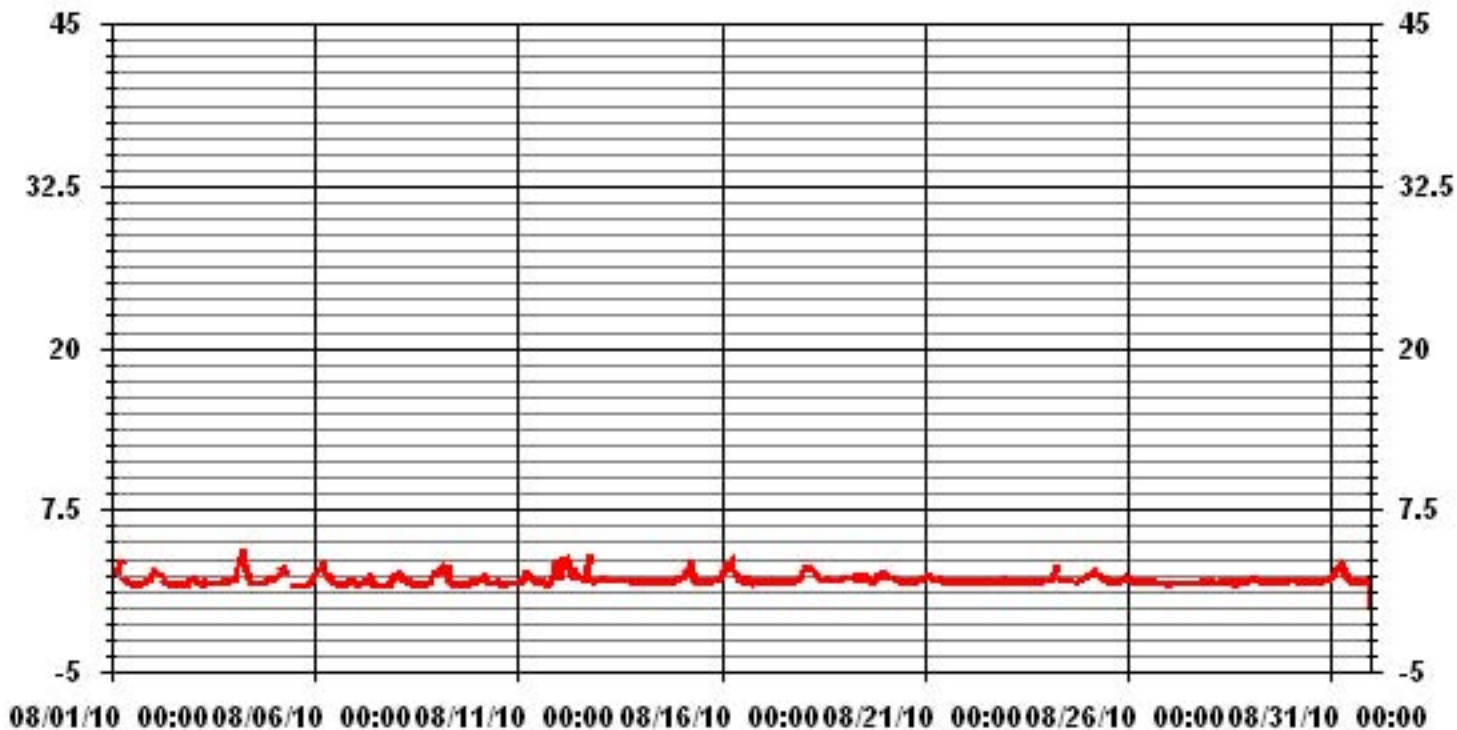


### MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:	705		
MAXIMUM 1-HR AVERAGE:	4.5 PPM	@ HOUR(S)	6 ON DAY(S)
MAXIMUM 24-HR AVERAGE:	2.6 PPM		12 ON DAY(S)
IZS CALIBRATION TIME:	33 HRS	OPERATIONAL TIME:	744 HRS
MONTHLY CALIBRATION TIME:	6 HRS	AMD OPERATION UPTIME:	100.0 %
STANDARD DEVIATION:	0.40	MONTHLY AVERAGE:	2.09 PPM



### 01 Hour Averages



— LICA — THC — PPM

## LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - COLD LAKE

AUGUST 2010

### TOTAL HYDROCARBONS MAX      instantaneous maximum in ppr

MST		0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR		
HOURLY MAX	HOURLY AVG	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.	
DAY																													
1		2.7	2.9	2.8	3.1	3.1	3.8	3.6	<b>IZS</b>	2.4	2.1	2.1	2	1.9	1.9	1.8	1.9	1.9	1.9	2	2	2.1	2.2	2.2	2.4	3.8	2.4	24	
2		3	3.1	3.1	3	2.6	2.5	<b>IZS</b>	2.3	1.8	1.8	1.8	1.9	1.9	1.8	1.8	1.8	1.8	2	1.8	1.8	1.9	1.9	2.1	2.2	3.1	2.2	24	
3		2.2	2.1	2	2	1.8	<b>IZS</b>	2	2	1.9	1.9	1.8	1.8	1.9	1.9	1.8	1.8	1.9	1.9	2	2.1	1.9	2	2.1	2.1	2.2	2.0	24	
4		2.2	2.8	3.9	4.1	<b>IZS</b>	4.7	4.7	4.4	2.9	2.6	2.1	1.9	1.9	1.8	2	1.8	1.9	1.9	2	2.2	2.3	2.7	2.5	4.7	2.7	24		
5		2.3	2.4	2.6	<b>IZS</b>	3.3	3.4	<b>C</b>	<b>C</b>	<b>C</b>	<b>C</b>	<b>C</b>	<b>C</b>	1.7	1.7	1.7	1.8	1.7	1.8	1.8	1.8	1.9	2.1	2.1	2.5	3.4	2.2	24	
6		2.8	2.9	<b>IZS</b>	3.6	3.8	3.5	3.3	2.8	2.4	2.4	2.3	2	1.9	1.8	1.8	1.8	2	1.8	1.9	2.1	2.1	2.2	2.4	2.2	3.8	2.4	24	
7		1.9	<b>IZS</b>	1.8	1.9	2.1	2.3	2.4	2.3	2.7	2.5	2.1	1.9	1.7	1.7	1.9	1.7	1.6	1.7	1.9	1.9	2	2.5	2.7	2.7	2.0	24		
8		<b>IZS</b>	2.6	2.8	2.6	2.4	2.2	2.3	2.1	2	1.9	1.8	1.7	1.7	1.8	1.9	1.9	2	2.1	2	2.2	2.4	2.5	2.9	<b>IZS</b>	2.9	2.2	24	
9		2.9	3.2	3.2	3.2	3.2	3.1	3.2	2.3	2.1	2.1	1.8	1.8	1.8	1.8	1.9	1.8	1.8	1.9	1.9	2.3	2.2	<b>IZS</b>	2.1	3.2	2.3	24		
10		2.3	2.2	2.2	2.9	2.6	2.5	2.2	2	2	1.8	1.9	2.1	2	1.8	1.8	1.8	1.8	2.1	1.9	1.9	1.8	<b>IZS</b>	2	2	2.9	2.1	24	
11		2.1	2.2	2.1	2.8	2.9	2.8	3	2.5	2.5	2.4	2	2	2	2	2	2	1.9	1.9	2	13.3	<b>IZS</b>	9.2	10.3	12	13.3	3.8	24	
12		14.4	2.9	10.9	9.6	3.5	4.5	3.6	2.9	2.8	2.4	2.6	2.7	2.7	3.5	2.1	2	4.4	9	<b>20.2</b>	<b>IZS</b>	2.3	2.4	2.3	2.2	<b>20.2</b>	5.0	24	
13		2.5	2.6	2.7	2.3	2.2	2.2	2.2	2.1	2.1	2.1	2	2	2	2	2	2	2.2	2	<b>IZS</b>	1.9	2	2	1.9	2	2.7	2.1	24	
14		2	2	2	2	2	2	2	2	2	2	1.9	1.9	2	2	2	2	2	<b>IZS</b>	1.9	2.1	2.4	2.4	2.5	2.3	2.5	2.1	24	
15		2.3	2.4	2.6	3	3.2	3.5	3.4	3.1	2.3	2.8	2	1.9	2	2.2	2	2	<b>IZS</b>	2	2	2.3	2.1	2.2	2.2	2.3	3.5	2.4	24	
16		2.8	2.9	3	3.5	3.5	3.5	3.7	3.5	2.7	2.7	2.3	2.1	2.2	2.1	2	<b>IZS</b>	2.3	2.6	1.9	2	2.1	2	2	2	3.7	2.6	24	
17		2	2.1	2.1	2	1.9	1.9	2	2.1	3.5	2.2	2	2	2	2	<b>IZS</b>	2	2	2	2.1	2.2	2.2	2.2	2.4	2.8	3.5	2.2	24	
18		2.9	3.3	3.1	3.2	3.2	3.1	3.1	2.8	2.7	2.6	2.3	2.1	2.1	<b>IZS</b>	2.2	2.3	2.2	2.2	2.1	2.1	2.1	2.1	2.5	2.2	3.3	2.5	24	
19		2.2	2.3	2.3	2.3	2.3	2.4	2.5	4	2.3	2.6	2.6	2.2	<b>IZS</b>	2.4	2.4	2.4	2.2	2.1	2.1	2.3	2.4	2.5	2.9	2.8	4	2.5	24	
20		2.9	2.8	2.7	2.3	2.3	2.3	2.4	2.1	2.3	2	2	<b>IZS</b>	1.9	1.9	1.9	1.9	1.9	1.9	2	2.2	2	2.2	2.5	2.5	2.9	2.2	24	
21		2.5	2.6	2.7	2.6	2.5	2.2	2.2	2.2	2.3	2.4	<b>IZS</b>	2	2	2	2	2	2	2	2.3	2	2	1.9	2	1.9	2.7	2.2	24	
22		1.9	1.9	2	2	2	2.1	2.1	2	2	<b>IZS</b>	2	2	2.1	2	1.9	2	1.9	1.9	2	2	2	2.1	2.1	2.3	2.3	2.0	24	
23		2.2	2	2	2	2	2	2	2	<b>IZS</b>	2	2.4	2	2	2	2	2	2	1.9	1.9	2.1	2	2	2	2	2	2.4	2.0	24
24		2	2.1	2.1	2.4	2.8	3.2	3.2	<b>IZS</b>	2.3	2.2	2.1	2.1	2.1	2.1	2	<b>C</b>	<b>C</b>	2	2.1	2.2	2.2	2.3	2.5	2.5	3.2	2.3	24	
25		2.5	2.6	2.7	2.7	2.9	3	<b>IZS</b>	2.7	2.5	2.3	2.2	2.1	2.1	2.1	2	2	2	2	2	2	2.1	2.2	2.4	2.8	2.8	3	2.4	24
26		2.6	2.3	2.2	2.2	2.1	<b>IZS</b>	2.1	2.1	2	2	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.6	2.0	24	
27		1.9	1.9	1.9	1.8	<b>IZS</b>	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2	2.2	2	2	2	2.2	1.9	24
28		1.9	2	1.9	<b>IZS</b>	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2	2	2.1	1.9	24	
29		2.1	2	<b>IZS</b>	2.2	2.2	2.1	2.1	2.1	1.9	1.9	1.9	1.9	1.9	2	1.9	1.9	1.9	1.9	1.9	2.1	1.9	2	2	2	2	2.2	2.0	24
30		2	<b>IZS</b>	2	2.1	2	2	2	2	2.1	1.9	2	2	1.9	2.2	2.7	2.2	2	2	2	2	2.1	2.1	2.1	2.3	2.4	2.7	2.1	24
31		<b>IZS</b>	2.8	2.9	3	3.1	3.5	3.6	3.5	2.7	2.5	2.6	2	2	2	2.4	1.9	1.9	2.1	2.3	2.1	2	2	2.1	<b>IZS</b>	3.6	2.5	24	
HOURLY MAX		14	3	11	10	4	5	5	4	4	3	3	3	3	4	2	2	4	9	20	13	2	9	10	12				
HOURLY AVG		2.8	2.5	2.8	2.8	2.6	2.8	2.7	2.5	2.3	2.2	2.1	2.0	2.0	2.0	2.0	1.9	2.0	2.2	2.6	2.4	2.1	2.4	2.5	2.6				

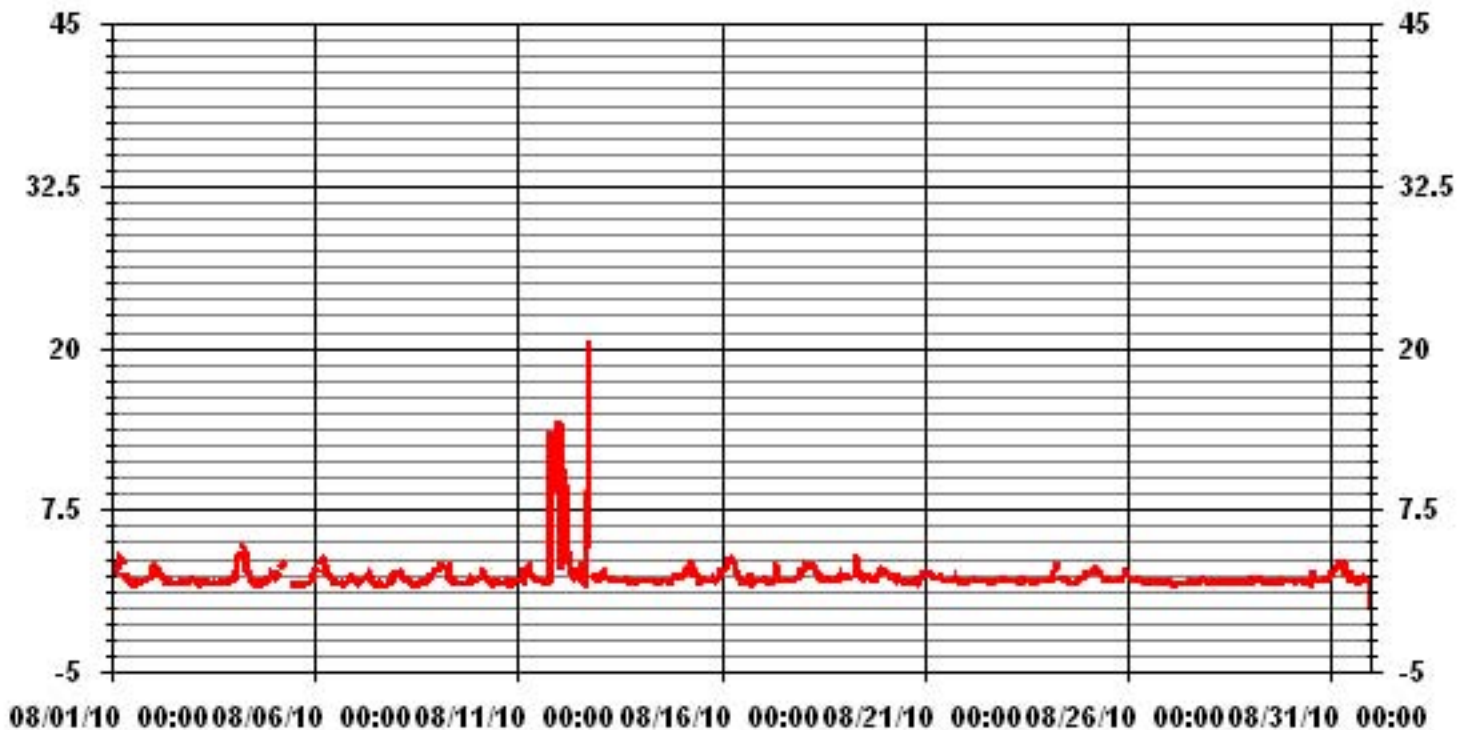
#### STATUS FLAG CODES

S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	- MISSING DATA
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE
BB	- BELOW BACKGROUND OF 1.5 PPM		

#### MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:	703					
MAXIMUM INSTANTANEOUS VALUE:	20.2	PPM	@ HOUR(S)	18	ON DAY(S)	12
IZS CALIBRATION TIME:	33	HRS	OPERATIONAL TIME:	744 HRS		
MONTHLY CALIBRATION TIME:	8	HRS				
STANDARD DEVIATION:	1.26					

### 01 Hour Averages



— LICA THCMAX PPM

LICA  
 THC / WD Joint Frequency Distribution (Percent)

August 2010

Distribution By % Of Samples

Logger Id : 01  
 Site Name : LICA  
 Parameter : THC  
 Units : PPM

Wind Parameter : WD  
 Instrument Height : 10 Meters

	Direction																
Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 3.0	2.26	2.12	2.12	3.54	4.96	5.95	11.48	2.69	3.26	4.53	9.50	13.61	11.63	5.81	6.66	4.68	94.89
< 10.0	.14	.00	.14	.14	.14	.70	.28	.42	.56	.56	.28	.70	.00	.42	.28	.28	5.10
< 50.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
>= 50.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
Totals	2.41	2.12	2.26	3.68	5.10	6.66	11.77	3.12	3.82	5.10	9.78	14.32	11.63	6.24	6.95	4.96	

Calm : .00 %

Total # Operational Hours : 705

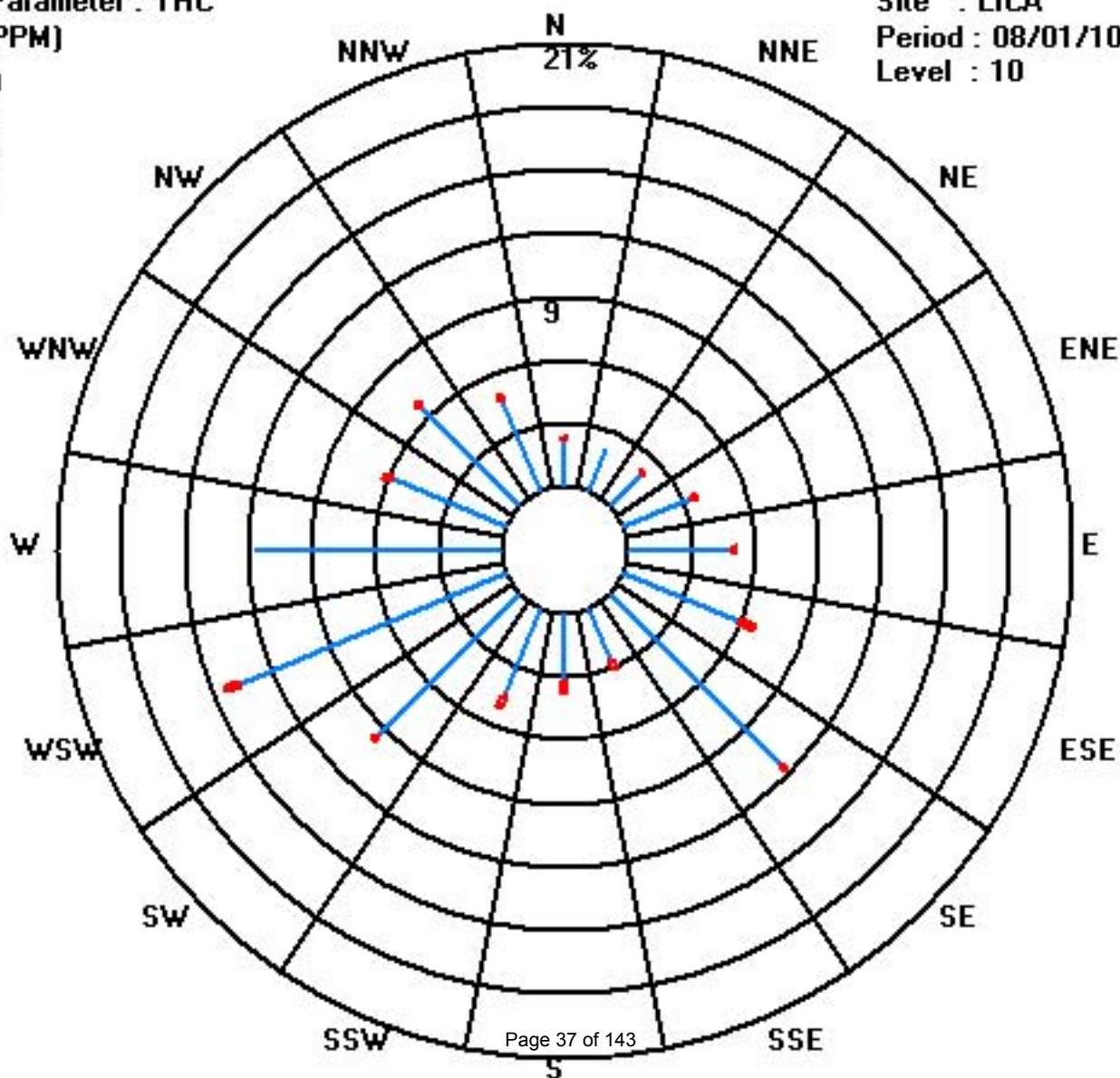
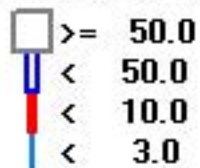
Distribution By Samples

	Direction																
Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 3.0	16	15	15	25	35	42	81	19	23	32	67	96	82	41	47	33	669
< 10.0	1		1	1	1	5	2	3	4	4	2	5		3	2	2	36
< 50.0																	
>= 50.0																	
Totals	17	15	16	26	36	47	83	22	27	36	69	101	82	44	49	35	

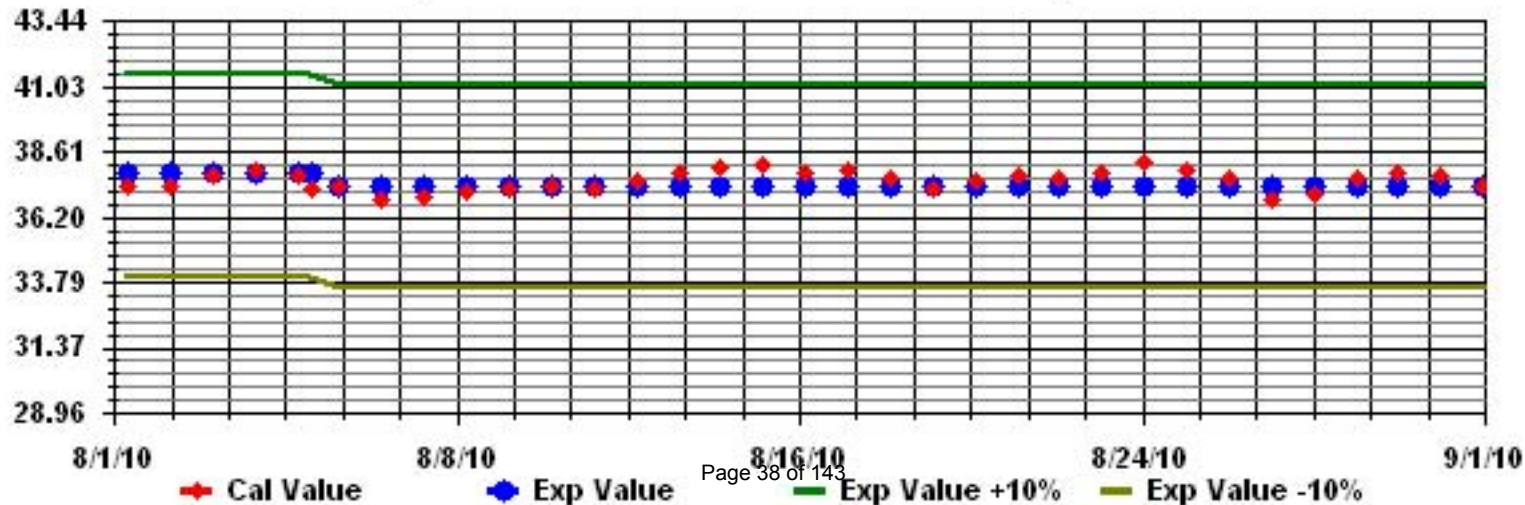
Calm : .00 %

Total # Operational Hours : 705

Class Limits (PPM)



Calibration Graph for Site: LICA Parameter: THC Sequence: THC Phase: SPAN

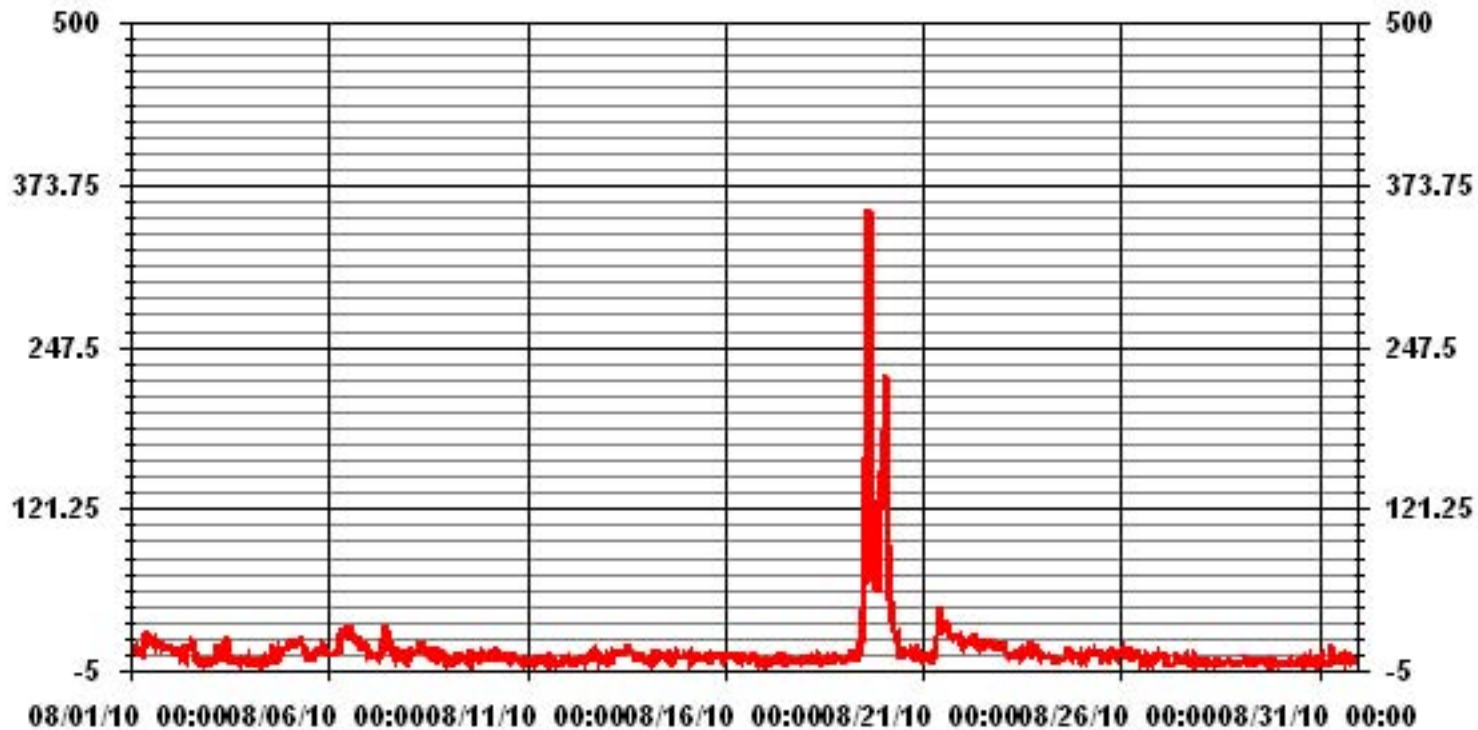


# Particulate Matter 2.5





### 01 Hour Averages



— LICA PM2 UG/M3

LICA  
PM2 / WD Joint Frequency Distribution (Percent)

August 2010

Distribution By % Of Samples

Logger Id : 01  
Site Name : LICA  
Parameter : PM2  
Units : UG/M3

Wind Parameter : WD  
Instrument Height : 10 Meters

	Direction																
Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 30.0	2.32	2.46	2.32	3.83	4.92	6.56	11.62	3.00	3.96	4.92	8.61	13.13	11.08	6.15	6.97	4.92	96.85
< 60.0	.00	.00	.00	.13	.13	.27	.00	.00	.00	.00	.54	.00	.00	.13	.00	.00	1.23
< 80.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.27	.13	.00	.00	.00	.41
< 120.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.13	.13	.00	.00	.00	.00	.27
< 240.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.13	.41	.41	.00	.00	.00	.95
>= 240.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.27	.00	.00	.00	.00	.27
Totals	2.32	2.46	2.32	3.96	5.06	6.83	11.62	3.00	3.96	4.92	9.43	14.22	11.62	6.29	6.97	4.92	

Calm : .00 %

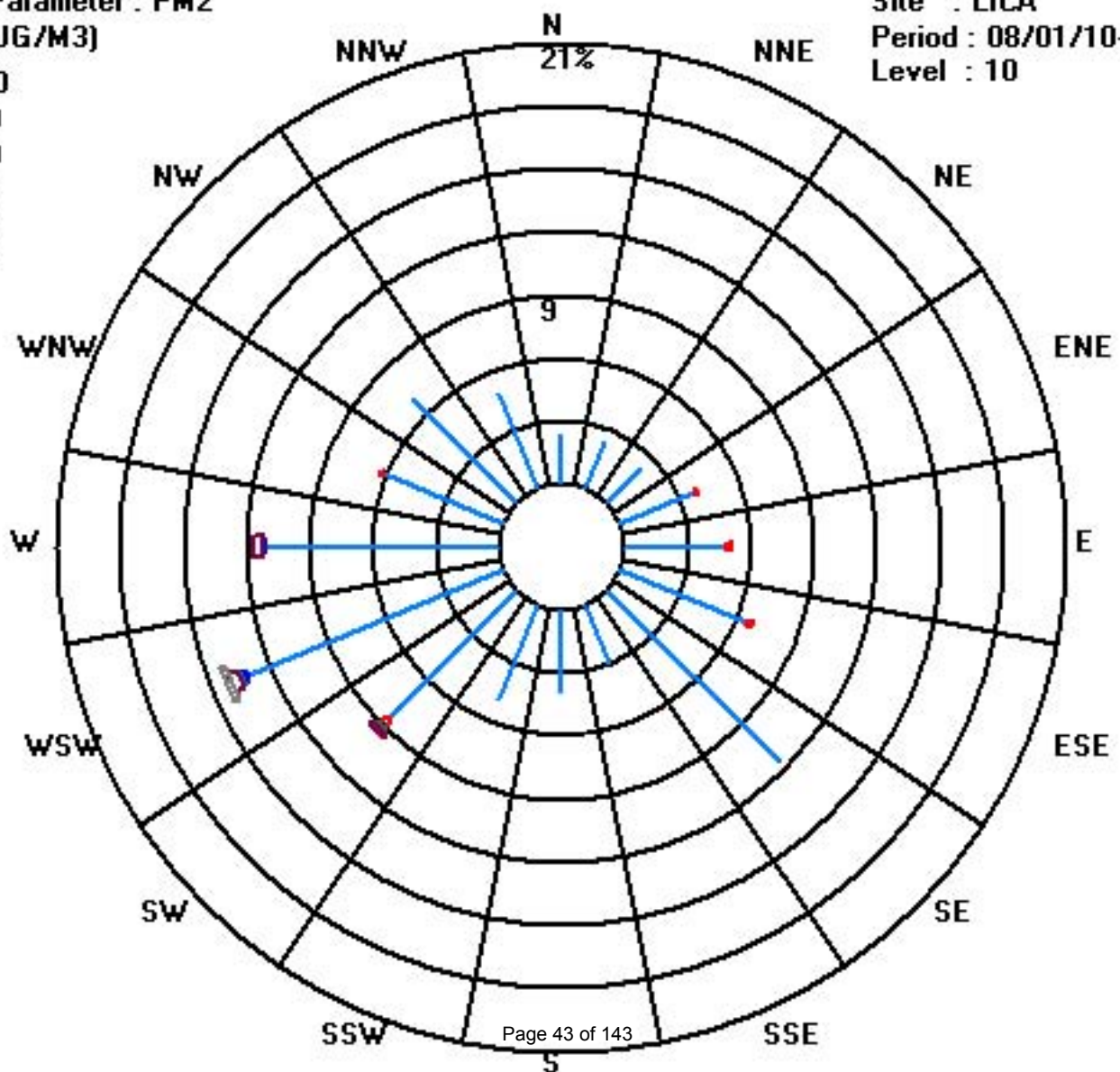
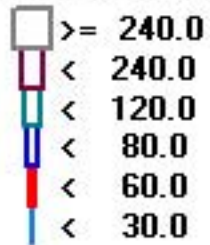
Total # Operational Hours : 731

Distribution By Samples

	Direction																
Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 30.0	17	18	17	28	36	48	85	22	29	36	63	96	81	45	51	36	708
< 60.0				1	1	2					4			1			9
< 80.0												2	1				3
< 120.0											1	1					2
< 240.0											1	3	3				7
>= 240.0												2					2
Totals	17	18	17	29	37	50	85	22	29	36	69	104	85	46	51	36	

Calm : .00 %

Total # Operational Hours : 731



# Nitrogen Dioxide

# LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - COLD LAKE

AUGUST 2010

## NITROGEN DIOXIDE hourly averages in ppb

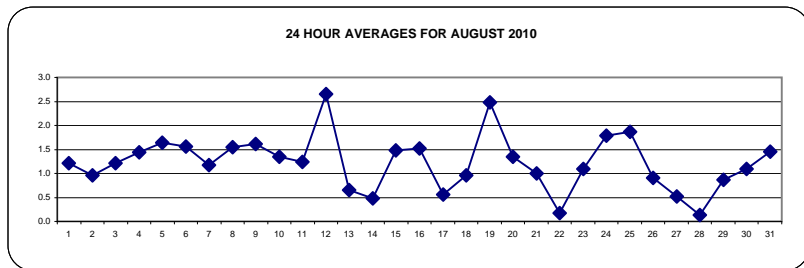
MST	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY MAX.	24-HOUR AVG.	RDGS.
DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	0:00	MAX.	AVG.	RDGS.
1	1	1	1	1	1	2	3	IZS	1	2	1	1	1	1	0	0	0	0	1	2	3	2	2	1	3	1.2	24
2	1	1	1	2	4	2	IZS	2	1	0	0	0	0	0	0	0	0	0	0	1	2	1	2	2	4	1.0	24
3	3	4	3	0	0	IZS	1	4	3	1	1	0	1	0	0	0	0	1	1	1	0	2	1	1	4	1.2	24
4	1	1	2	2	IZS	2	4	C	C	C	C	C	C	C	0	0	0	0	1	1	3	2	2	2	4	1.4	24
5	1	2	2	IZS	4	3	4	5	3	1	C	0	0	0	0	0	0	0	2	3	2	2	2	2	5	1.6	24
6	2	2	IZS	1	1	1	3	3	2	2	1	1	1	1	1	1	1	1	1	1	2	3	3	1	3	1.6	24
7	0	IZS	1	1	2	2	1	1	2	3	2	1	1	0	0	0	0	0	0	1	1	3	2	3	3	1.2	24
8	IZS	2	2	2	2	2	2	2	1	1	1	1	1	1	1	1	2	1	1	2	2	2	2	IZS	2	1.5	24
9	2	1	2	3	2	2	4	3	2	2	1	1	0	1	1	0	0	0	1	2	2	2	IZS	3	4	1.6	24
10	2	1	1	1	1	4	4	2	2	1	1	1	1	0	0	0	2	2	2	1	1	IZS	1	0	4	1.3	24
11	0	0	0	1	1	2	2	3	2	1	1	1	1	C	C	1	1	1	1	2	IZS	1	2	2	3	1.2	24
12	1	0	1	1	1	1	3	3	4	4	2	4	4	3	2	1	4	8	7	IZS	1	2	2	2	8	2.7	24
13	2	2	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	IZS	1	0	1	0	0	2	0.7	24
14	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	IZS	1	1	1	2	2	2	2	0.5	24
15	3	2	1	2	2	3	4	3	1	1	0	0	0	0	1	1	IZS	0	0	3	2	2	2	1	4	1.5	24
16	1	1	1	3	3	4	4	3	1	1	1	0	0	0	0	IZS	4	2	1	2	2	1	0	0	4	1.5	24
17	0	0	0	0	0	0	2	1	2	1	0	0	0	0	IZS	0	0	0	0	2	2	1	1	1	2	0.6	24
18	1	1	1	1	1	2	2	3	1	1	0	1	1	IZS	0	1	1	1	1	1	1	0	0	0	3	1.0	24
19	0	0	1	1	1	2	4	4	1	2	3	2	IZS	4	7	5	3	2	2	3	3	3	2	7	2.5	24	
20	2	3	3	2	2	2	3	3	2	1	0	IZS	0	0	0	0	0	0	1	1	3	1	1	1	3	1.3	24
21	1	1	1	1	1	0	1	1	1	1	IZS	1	1	1	1	1	1	1	1	1	2	1	1	1	2	1.0	24
22	0	0	0	0	0	2	0	1	0	IZS	0	0	0	0	0	1	0	0	0	0	0	0	0	0	2	0.2	24
23	3	2	1	1	0	1	2	2	IZS	1	1	2	1	1	1	1	0	0	1	1	1	0	1	1	3	1.1	24
24	1	1	1	2	3	4	3	IZS	2	2	C	C	C	C	1	1	0	1	3	3	2	2	1	1	4	1.8	24
25	1	1	1	1	2	3	IZS	2	1	2	1	1	1	1	1	1	1	1	1	4	5	2	5	4	5	1.9	24
26	2	1	1	1	1	IZS	1	2	1	1	1	0	1	1	0	1	1	1	1	1	0	0	1	2	0.9	24	
27	1	1	1	0	IZS	1	1	2	1	1	0	0	0	0	0	0	0	0	0	1	1	1	0	0	2	0.5	24
28	0	0	0	IZS	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0.1	24
29	1	1	IZS	2	3	4	3	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	4	0.9	24
30	1	IZS	0	1	2	3	3	1	0	0	0	0	0	1	0	0	1	1	1	2	2	2	2	3	1.1	24	
31	IZS	1	1	1	1	2	1	2	2	2	1	1	1	1	1	1	1	2	4	1	2	1	2	IZS	4	1.5	24
HOURLY MAX	3	4	3	3	4	4	4	5	4	4	3	4	4	4	7	5	4	8	7	4	5	3	5	4			
HOURLY AVG	1.2	1.1	1.1	1.2	1.4	2.0	2.3	2.1	1.4	1.2	0.7	0.7	0.6	0.6	0.6	0.6	0.8	0.9	1.2	1.5	1.7	1.4	1.4	1.3			

### STATUS FLAG CODES

S - OUT OF SERVICE	IZS - IZS - DAILY ZERO/SPAN CHECK
N - INVALID DATA	M - MISSING DATA
D - INSTRUMENT DRIFT	P - POWER FAILURE
C - CALIBRATION	NA - NOT APPLICABLE

**OBJECTIVE LIMIT:**

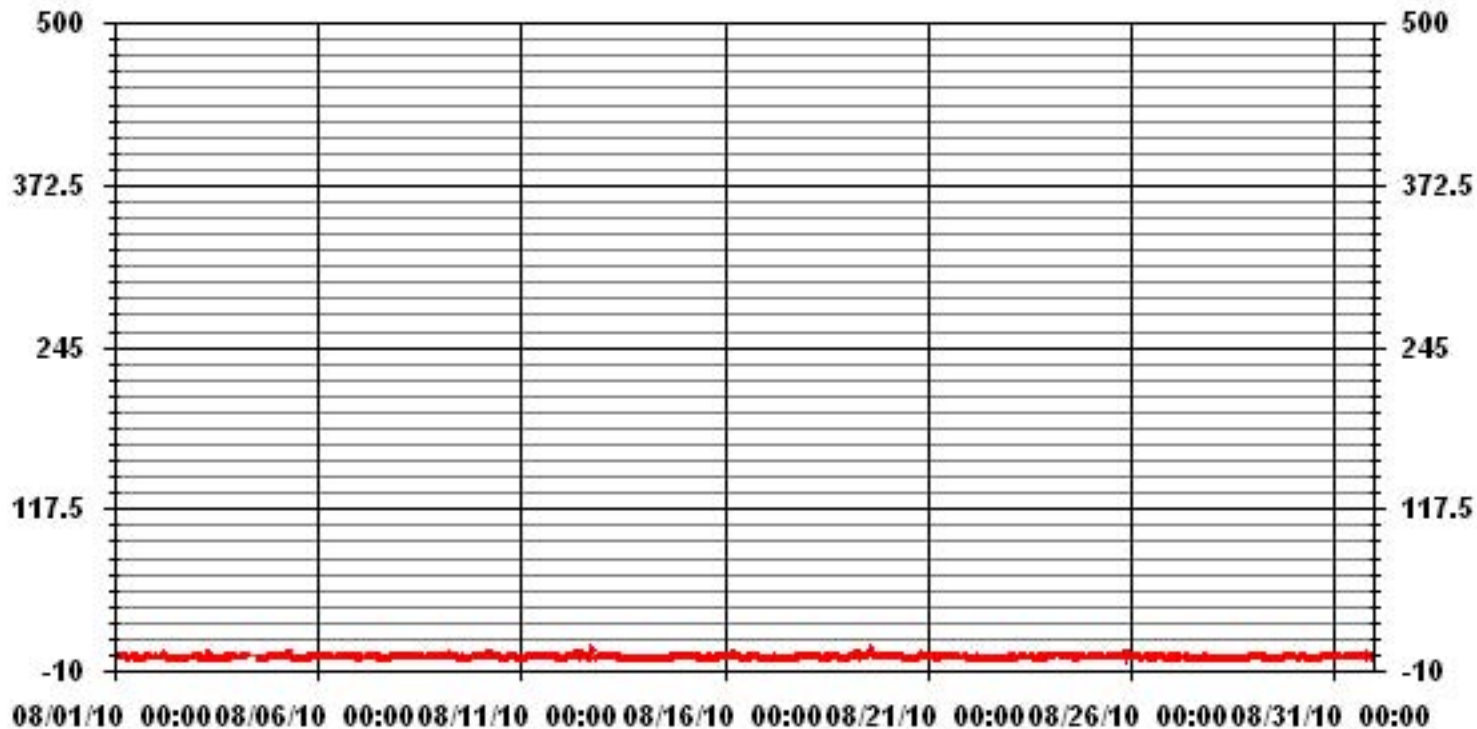
<b>ALBERTA ENVIRONMENT:</b>	1-HR 212 PPB	24-HR 106 PPB
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### MONTHLY SUMMARY

NUMBER OF 1-HR EXCEEDENCES:	0
NUMBER OF 24-HR EXCEEDENCES:	0
NUMBER OF NON-ZERO READINGS:	498
MAXIMUM 1-HR AVERAGE:	8 PPB @ HOUR(S) 17 ON DAY(S) 12
MAXIMUM 24-HR AVERAGE:	2.7 PPB ON DAY(S) 12
IZS CALIBRATION TIME:	33 HRS
MONTHLY CALIBRATION TIME:	14 HRS
STANDARD DEVIATION:	1.15
OPERATIONAL TIME:	744 HRS
AMD OPERATION UPTIME:	100.0 %
MONTHLY AVERAGE:	1.22 PPB

### 01 Hour Averages



— LICA H02\_ PPB

# LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - COLD LAKE

AUGUST 2010

## NITROGEN DIOXIDE MAX instantaneous maximum in ppb

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	3	1	2	2	1	3	4	IZS	2	2	1	2	1	1	1	1	1	2	1	4	5	4	3	2	5	2.1	24
2	2	1	2	3	5	4	IZS	4	1	1	1	1	0	1	0	0	1	1	1	2	3	2	4	4	5	1.9	24
3	4	5	5	2	1	IZS	5	5	3	1	2	1	6	1	1	1	1	1	2	2	1	4	2	1	6	2.5	24
4	2	3	3	3	IZS	4	5	C	C	C	C	C	C	C	1	1	1	1	2	2	5	3	3	3	5	2.6	24
5	3	2	3	IZS	5	5	6	7	5	3	C	C	1	1	1	2	1	1	2	9	6	5	3	3	9	3.5	24
6	6	2	IZS	2	1	19	7	8	4	25	3	3	3	1	2	4	2	2	2	5	4	4	4	3	25	5.0	24
7	1	IZS	1	2	3	5	2	2	4	5	3	1	1	1	1	1	0	0	1	2	3	5	3	3	5	2.2	24
8	IZS	3	3	3	3	3	3	2	2	2	3	2	2	1	2	1	4	2	1	5	4	4	3	IZS	5	2.6	24
9	3	3	6	5	4	10	5	4	3	2	3	2	1	1	1	2	2	2	2	3	7	4	IZS	6	10	3.5	24
10	4	3	2	1	3	6	7	4	3	2	4	3	3	2	1	2	5	4	6	2	2	IZS	3	1	7	3.2	24
11	1	1	1	2	2	4	3	4	4	2	3	1	1	C	C	2	3	2	2	2	IZS	3	4	3	4	2.4	24
12	2	1	1	2	2	2	4	6	12	9	4	4	5	4	3	2	15	21	15	IZS	4	3	3	3	21	5.5	24
13	2	2	1	1	1	1	3	5	1	1	2	2	1	1	1	6	1	1	IZS	1	1	1	1	0	6	1.6	24
14	0	0	0	1	1	0	0	0	2	1	0	1	1	1	1	1	1	IZS	5	1	3	6	4	2	6	1.4	24
15	4	3	2	4	3	5	5	5	3	2	1	1	0	1	2	7	IZS	1	2	6	5	3	3	2	7	3.0	24
16	1	1	2	4	4	9	5	5	4	4	15	3	1	1	1	IZS	20	6	2	4	3	1	1	1	20	4.3	24
17	1	0	0	0	0	1	12	5	23	7	4	2	0	1	IZS	1	1	2	1	3	4	3	2	2	23	3.3	24
18	2	2	2	2	1	6	4	38	4	1	2	1	4	IZS	2	2	2	1	1	1	2	1	1	1	38	3.6	24
19	1	1	1	1	5	9	9	7	2	3	10	3	IZS	7	9	8	4	3	4	4	4	3	4	2	10	4.5	24
20	3	5	3	2	3	3	6	21	3	1	1	IZS	1	1	1	2	2	1	1	4	4	2	1	1	21	3.1	24
21	1	2	2	3	3	2	2	2	2	2	IZS	2	2	4	3	2	3	4	8	4	3	2	2	2	8	2.7	24
22	2	1	1	1	1	7	2	2	1	IZS	4	1	4	1	1	1	1	1	3	2	1	1	0	2	7	1.8	24
23	4	4	2	2	1	2	3	3	IZS	1	2	2	2	2	2	1	0	1	2	2	3	1	1	1	4	1.9	24
24	1	2	2	5	4	5	4	IZS	4	C	C	C	C	1	2	2	1	5	5	4	6	6	2	6	3.4	24	
25	1	2	1	2	5	6	IZS	8	7	32	9	2	2	2	2	2	2	2	3	7	7	4	8	6	32	5.3	24
26	2	1	1	2	1	IZS	3	5	5	26	13	4	4	6	6	6	2	2	2	2	1	1	1	1	26	4.2	24
27	2	2	2	1	IZS	1	2	10	2	1	1	1	1	1	1	1	1	1	2	2	1	1	1	1	10	1.7	24
28	1	1	1	IZS	1	1	1	1	1	1	0	0	0	1	0	0	0	0	0	1	0	1	1	3	3	0.7	24
29	3	1	IZS	3	4	5	4	1	2	1	0	0	0	1	0	2	0	2	2	3	3	1	2	2	5	1.8	24
30	2	IZS	1	4	5	6	5	6	0	1	1	3	2	2	1	1	1	3	2	4	4	3	3	3	6	2.7	24
31	IZS	2	2	2	2	4	3	3	3	2	2	1	3	10	5	4	3	3	21	4	4	3	4	IZS	21	4.1	24
HOURLY MAX	6	5	6	5	5	19	12	38	23	32	15	4	6	10	9	8	20	21	21	9	7	6	8	6			
HOURLY AVG	2.2	2.0	1.9	2.3	2.6	4.8	4.3	6.2	3.9	5.0	3.5	1.8	1.9	2.1	1.8	2.3	2.7	2.5	3.4	3.3	3.4	2.8	2.7	2.3			

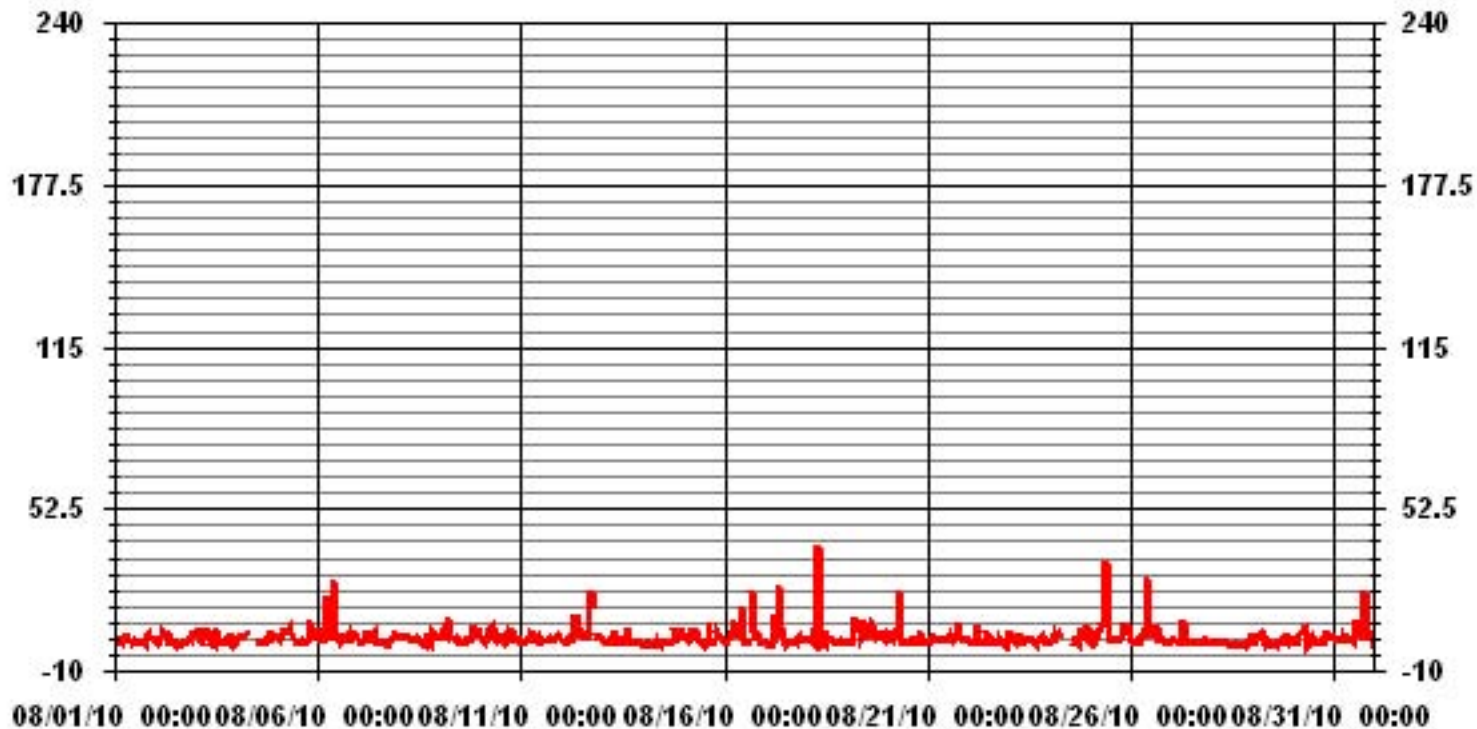
**STATUS FLAG CODES**

S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	- MISSING DATA
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE

**MONTHLY SUMMARY**

NUMBER OF NON-ZERO READINGS:	659					
MAXIMUM INSTANTANEOUS VALUE:	38	PPB	@ HOUR(S)	7	ON DAY(S)	18
IZS CALIBRATION TIME:	33	HRS	OPERATIONAL TIME:	744	HRS	
MONTHLY CALIBRATION TIME:	16	HRS				
STANDARD DEVIATION	3.44					

### 01 Hour Averages



— LICA NO2MAX PPB



LICA  
 NO2\_ / WD Joint Frequency Distribution (Percent)

August 2010

Distribution By % Of Samples

Logger Id : 01  
 Site Name : LICA  
 Parameter : NO2\_  
 Units : PPB

Wind Parameter : WD  
 Instrument Height : 10 Meters

	Direction																
Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 50	2.43	2.15	2.29	3.73	5.16	6.74	11.90	3.15	3.87	5.02	9.46	14.34	11.47	6.16	7.03	5.02	100.00
< 110	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
< 210	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
>= 210	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
Totals	2.43	2.15	2.29	3.73	5.16	6.74	11.90	3.15	3.87	5.02	9.46	14.34	11.47	6.16	7.03	5.02	

Calm : .00 %

Total # Operational Hours : 697

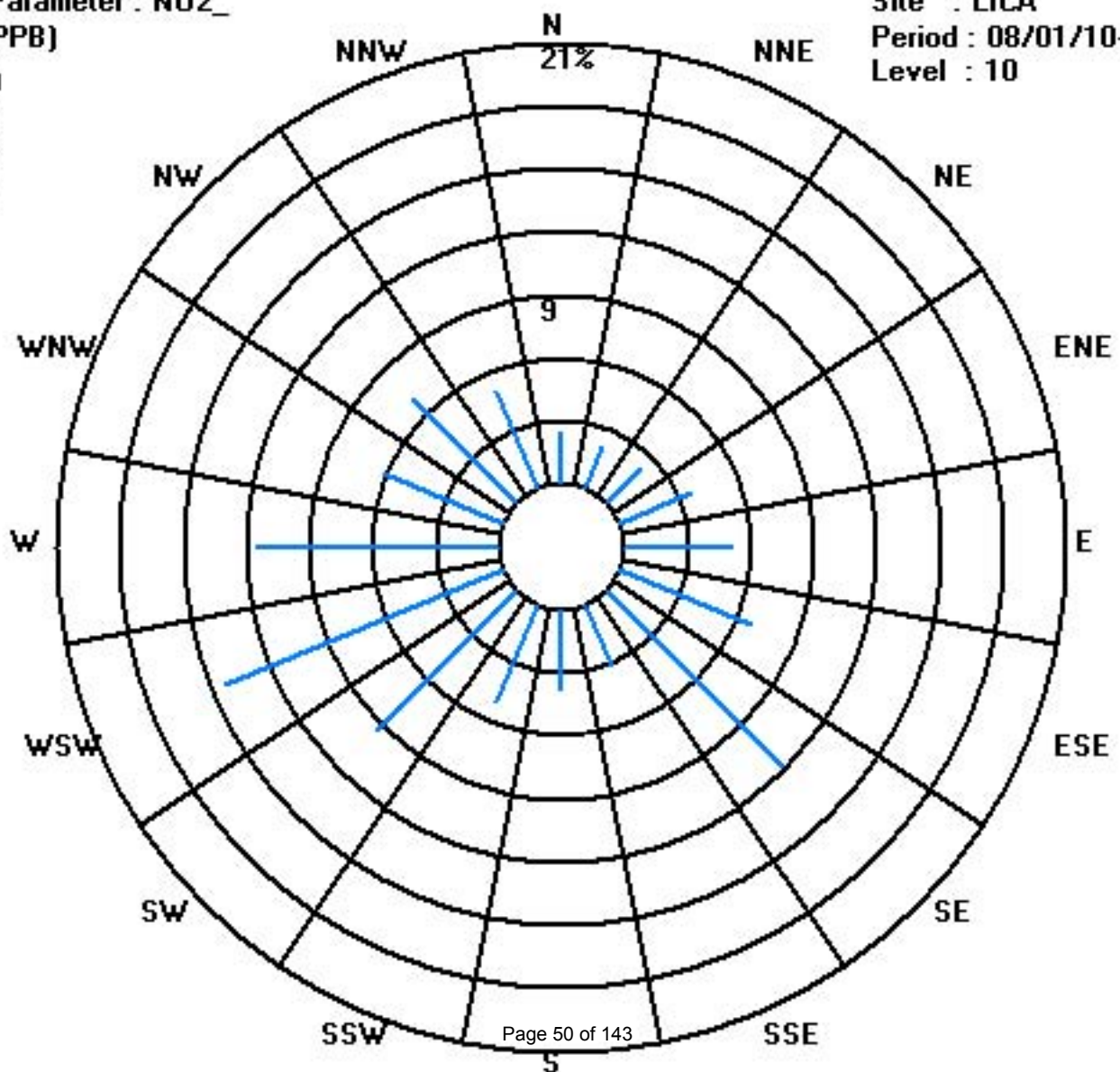
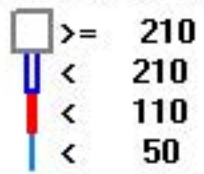
Distribution By Samples

	Direction																
Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 50	17	15	16	26	36	47	83	22	27	35	66	100	80	43	49	35	697
< 110																	
< 210																	
>= 210																	
Totals	17	15	16	26	36	47	83	22	27	35	66	100	80	43	49	35	

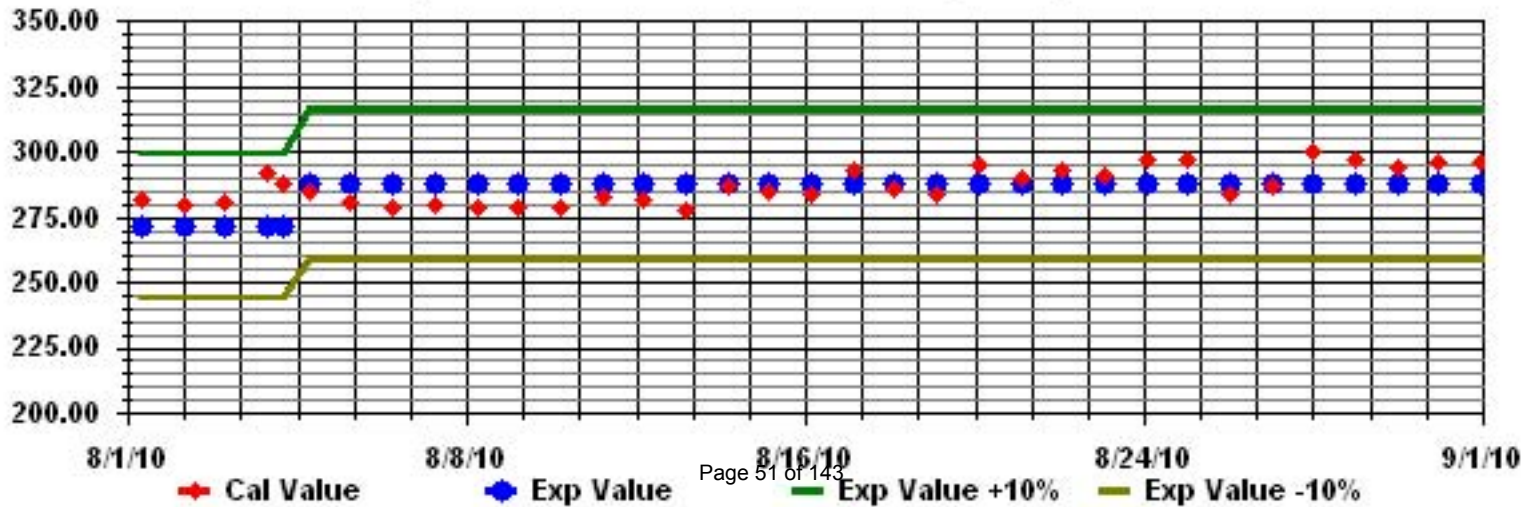
Calm : .00 %

Total # Operational Hours : 697

Class Limits (PPB)



Calibration Graph for Site: LICA Parameter: H02\_ Sequence: H02 Phase: SPAN



# Nitric Oxide

# LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - COLD LAKE

AUGUST 2010

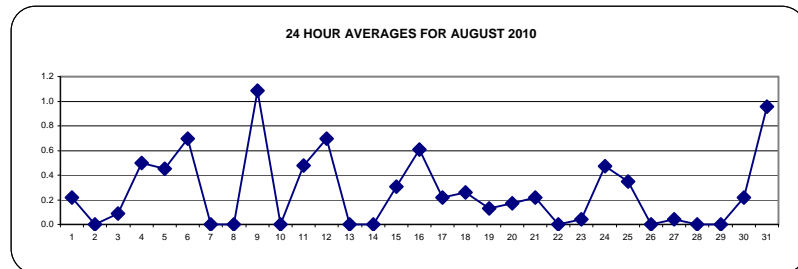
NITRIC OXIDE hourly averages in ppb

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY MAX.	24-HOUR AVG.	RDGS.	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00				
DAY																												
1	0	0	1	0	1	1	2	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0.2	24	
2	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
3	0	0	0	0	0	IZS	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.1	24	
4	0	0	0	0	IZS	2	6	C	C	C	C	C	C	C	0	0	0	0	0	0	0	0	0	0	6	0.5	24	
5	0	0	0	IZS	1	2	2	4	1	0	C	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0.5	24	
6	0	0	IZS	0	0	6	9	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9	0.7	24	
7	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24	
8	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0.0	24	
9	0	0	1	0	2	13	6	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	13	1.1	24	
10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0.0	24		
11	0	0	0	0	0	5	4	1	0	0	0	0	0	C	C	0	0	0	0	0	IZS	0	0	5	0.5	24		
12	0	0	0	0	1	1	2	1	1	0	0	0	1	0	0	0	2	4	3	IZS	0	0	0	0	4	0.7	24	
13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0.0	24	
14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0.0	24	
15	0	0	0	0	0	1	4	2	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	4	0.3	24	
16	0	0	0	0	0	4	6	3	1	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	6	0.6	24	
17	0	0	0	0	0	0	3	0	1	1	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	3	0.2	24	
18	0	0	0	0	0	2	1	3	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	3	0.3	24	
19	0	0	0	0	0	0	1	1	0	0	1	0	0	IZS	0	0	0	0	0	0	0	0	0	0	1	0.1	24	
20	0	0	0	0	0	0	0	4	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	4	0.2	24	
21	1	2	2	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0.2	24	
22	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24	
23	0	0	0	0	0	0	0	0	0	IZS	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0.0	24	
24	0	0	0	0	0	1	3	IZS	3	2	C	C	C	C	0	0	0	0	0	0	0	0	0	0	3	0.5	24	
25	0	0	0	0	1	3	IZS	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	3	0.3	24	
26	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24	
27	0	0	0	0	IZS	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.0	24	
28	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24	
29	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24	
30	0	IZS	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	1	0.2	24	
31	IZS	1	1	2	2	3	5	4	1	1	0	0	0	0	0	0	0	1	0	0	0	0	0	IZS	5	1.0	24	
HOURLY MAX	1	2	2	2	2	13	9	4	3	2	1	1	1	0	0	0	2	4	3	0	1	0	1	1				
HOURLY AVG	0.0	0.1	0.2	0.1	0.3	1.6	1.9	1.1	0.4	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.0				

**STATUS FLAG CODES**

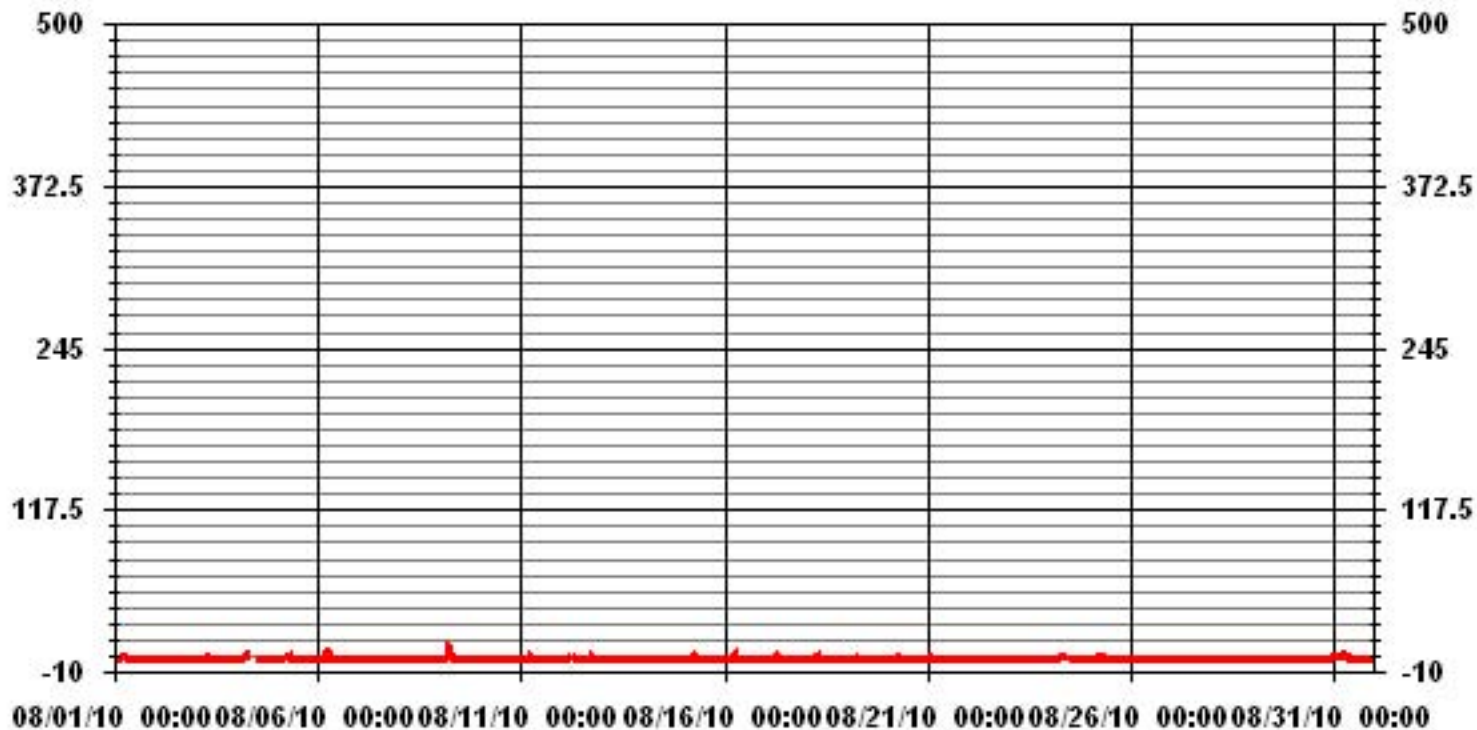
S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	- MISSING DATA
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE



**MONTHLY SUMMARY**

NUMBER OF NON-ZERO READINGS:	80					
MAXIMUM 1-HR AVERAGE:	13	PPB	@ HOUR(S)	5	ON DAY(S)	9
MAXIMUM 24-HR AVERAGE:	1.1	PPB			ON DAY(S)	9
IZS CALIBRATION TIME:	33	HRS	OPERATIONAL TIME:	744	HRS	
MONTHLY CALIBRATION TIME:	14	HRS	AMD OPERATION UPTIME:	100.0	%	
STANDARD DEVIATION:	0.99		MONTHLY AVERAGE:	0.26	PPB	

### 01 Hour Averages



— LICA NO<sub>2</sub> PPB

# LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - COLD LAKE

AUGUST 2010

NITRIC OXIDE MAX instantaneous maximum in ppb

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR		
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.	
DAY																												
1	5	1	2	1	6	6	3	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	6	1.1	24	
2	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
3	0	0	0	0	0	IZS	0	1	1	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2	0.2	24
4	0	0	0	0	IZS	6	9	C	C	C	C	C	C	C	0	0	0	0	0	0	0	0	0	0	9	0.9	24	
5	0	0	0	IZS	1	3	4	6	3	0	C	C	0	0	0	0	0	0	0	3	6	0	0	1	6	1.3	24	
6	5	1	IZS	1	1	71	15	9	0	25	0	1	2	0	0	3	3	0	0	2	0	0	0	0	71	6.0	24	
7	0	IZS	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.1	24	
8	IZS	0	0	0	0	0	0	0	0	13	1	1	0	0	0	0	5	0	0	1	1	1	1	IZS	13	1.1	24	
9	1	1	1	2	5	210	14	3	1	1	0	0	0	0	0	1	0	0	0	3	0	IZS	0	210	10.6	24		
10	0	0	0	0	0	1	2	3	0	1	1	3	2	0	0	1	4	0	0	0	0	0	IZS	0	4	0.8	24	
11	0	0	1	1	1	15	10	2	1	0	1	0	0	C	0	0	0	0	0	0	IZS	0	0	1	15	1.6	24	
12	1	1	1	1	2	5	4	2	10	6	1	1	1	1	0	0	11	12	11	IZS	0	0	0	0	12	3.1	24	
13	0	0	0	0	0	0	1	4	0	0	1	0	0	0	0	3	0	0	IZS	0	0	0	0	0	4	0.4	24	
14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	10	3	0	10	0.6	24	
15	1	0	1	0	2	4	5	4	0	0	0	0	0	0	0	3	IZS	0	0	0	0	0	0	0	5	0.9	24	
16	0	0	0	0	1	46	12	9	2	7	9	1	0	0	2	IZS	8	0	0	0	0	0	0	0	46	4.2	24	
17	0	0	0	0	0	0	22	4	15	8	6	0	0	0	IZS	0	0	2	0	0	1	0	0	0	22	2.5	24	
18	0	0	0	0	1	5	3	26	4	0	0	1	2	IZS	22	0	0	0	0	0	1	0	1	0	26	2.9	24	
19	0	0	0	0	3	3	5	4	1	1	8	0	IZS	0	0	0	0	0	0	0	0	0	1	0	8	1.1	24	
20	0	0	0	0	0	0	1	94	1	0	0	0	IZS	0	0	1	0	0	0	0	0	0	0	1	94	4.3	24	
21	3	2	2	3	1	1	3	1	0	1	IZS	0	2	0	0	10	1	1	1	1	1	470	0	0	470	21.9	24	
22	0	0	0	0	0	1	1	6	0	IZS	12	0	0	2	0	1	0	2	1	1	0	0	0	0	12	1.2	24	
23	0	0	0	0	0	0	0	0	IZS	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0.1	24	
24	0	0	0	0	0	2	4	IZS	4	C	C	C	C	C	0	0	3	0	0	0	2	2	4	0	4	1.2	24	
25	0	0	0	0	4	28	IZS	32	36	14	1	0	0	4	0	0	0	0	0	1	1	2	0	36	5.3	24		
26	0	0	0	0	0	IZS	2	2	10	6	12	13	1	4	19	2	0	1	0	1	4	1	0	19	3.4	24		
27	0	0	0	0	IZS	0	0	19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	19	0.8	24	
28	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24	
29	0	0	IZS	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1	1	2	0	0	0	0	2	0.3	24	
30	0	IZS	0	2	3	5	2	9	0	0	1	10	9	0	0	0	1	0	1	0	1	14	2	1	4	14	2.8	24
31	IZS	4	3	3	5	7	12	10	3	1	2	0	1	5	3	1	1	0	26	0	0	0	0	IZS	26	4.0	24	
HOURLY MAX	5	4	3	3	6	210	22	94	36	25	12	13	10	9	22	10	11	12	26	3	470	10	4	4				
HOURLY AVG	0.6	0.3	0.4	0.5	1.2	14.4	4.6	8.9	3.2	3.0	2.1	0.9	0.8	0.9	1.6	0.8	1.2	0.7	1.3	0.4	16.8	0.6	0.5	0.2				

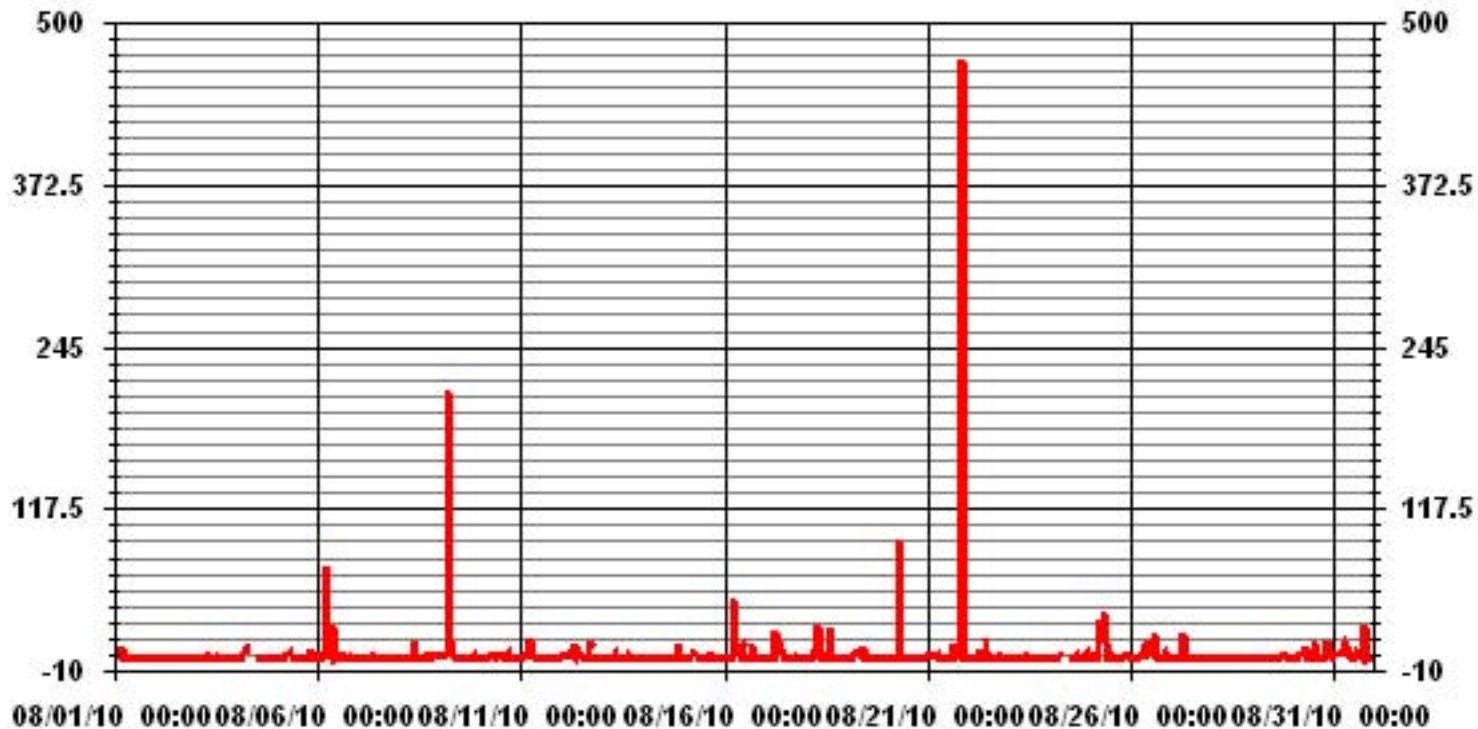
**STATUS FLAG CODES**

S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	- MISSING DATA
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE

**MONTHLY SUMMARY**

NUMBER OF NON-ZERO READINGS:	238					
MAXIMUM INSTANTANEOUS VALUE:	470	PPB	@ HOUR(S)	20	ON DAY(S)	21
IZS CALIBRATION TIME:	33	HRS	OPERATIONAL TIME:	744	HRS	
MONTHLY CALIBRATION TIME:	16	HRS				
STANDARD DEVIATION	20.35					

### 01 Hour Averages





LICA  
 NO\_ / WD Joint Frequency Distribution (Percent)

August 2010

Distribution By % Of Samples

Logger Id : 01  
 Site Name : LICA  
 Parameter : NO\_  
 Units : PPB

Wind Parameter : WD  
 Instrument Height : 10 Meters

	Direction																
Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 50	2.43	2.15	2.29	3.73	5.16	6.74	11.90	3.15	3.87	5.02	9.46	14.34	11.47	6.16	7.03	5.02	100.00
< 110	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
< 210	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
>= 210	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
Totals	2.43	2.15	2.29	3.73	5.16	6.74	11.90	3.15	3.87	5.02	9.46	14.34	11.47	6.16	7.03	5.02	

Calm : .00 %

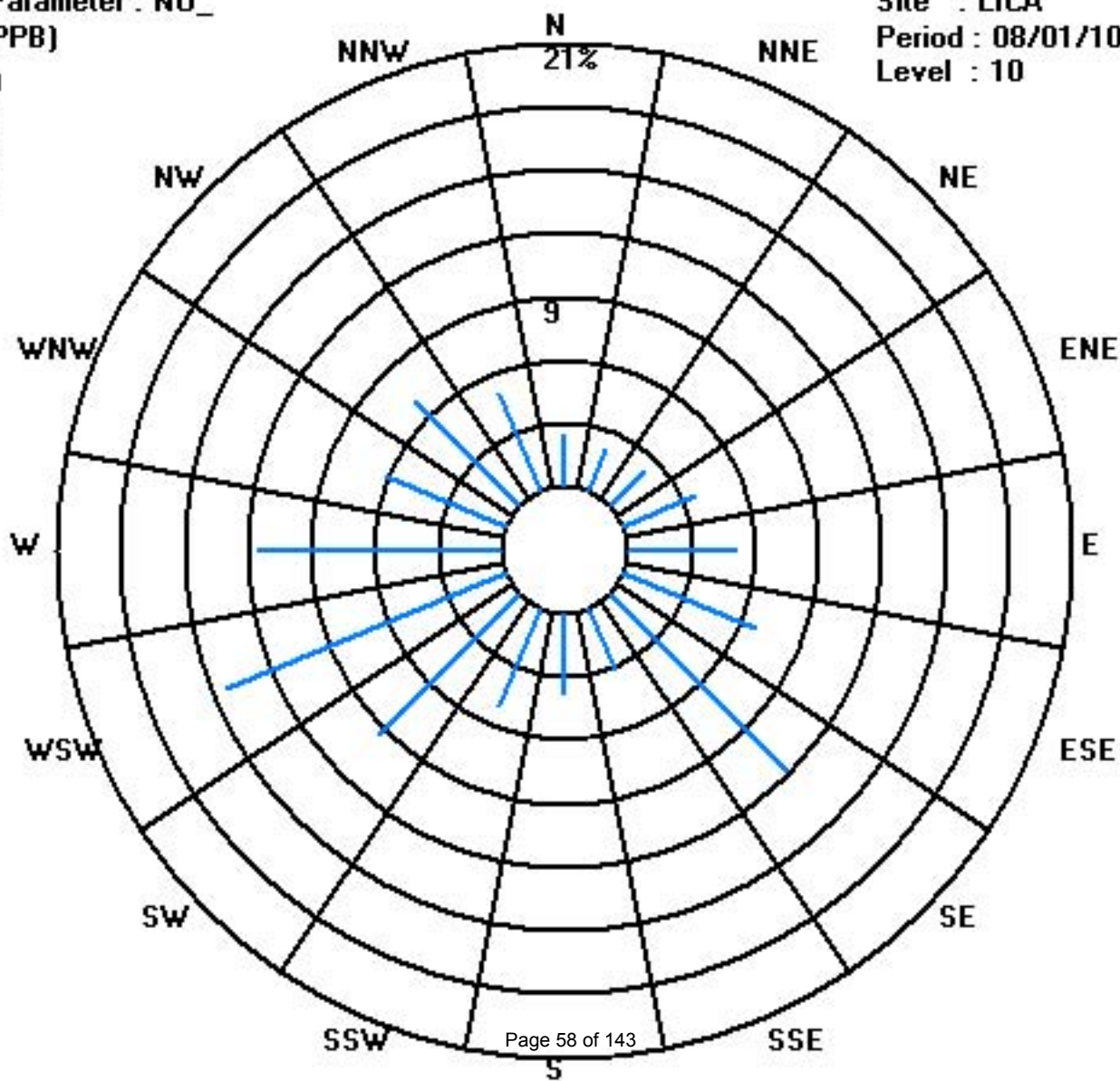
Total # Operational Hours : 697

Distribution By Samples

	Direction																
Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 50	17	15	16	26	36	47	83	22	27	35	66	100	80	43	49	35	697
< 110																	
< 210																	
>= 210																	
Totals	17	15	16	26	36	47	83	22	27	35	66	100	80	43	49	35	

Calm : .00 %

Total # Operational Hours : 697



# Oxides of Nitrogen

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - COLD LAKE

AUGUST 2010

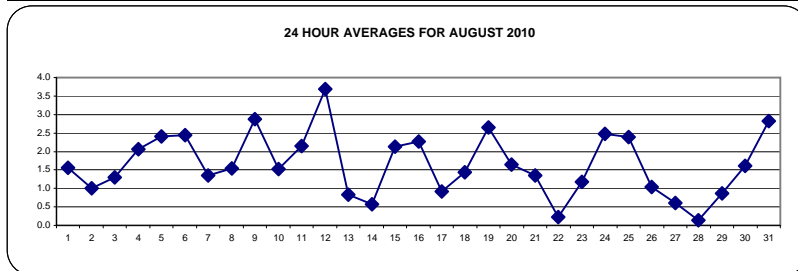
OXIDES OF NITROGEN hourly averages in ppb

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY MAX.	24-HOUR AVG.	RDGS.	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00				
DAY																												
1	2	1	2	2	2	3	5	IZS	2	2	1	1	1	0	0	0	0	0	1	2	3	3	2	1	5	1.6	24	
2	2	1	1	2	4	2	IZS	2	1	0	0	0	0	0	0	0	0	0	1	2	1	2	2	4	1.0	24		
3	3	4	3	0	0	IZS	1	5	4	1	1	0	1	0	0	0	0	1	1	1	0	2	1	1	5	1.3	24	
4	1	2	3	2	IZS	4	10	C	C	C	C	C	C	0	0	0	0	1	1	3	2	2	2	10	2.1	24		
5	2	2	2	IZS	5	6	6	10	5	2	C	0	0	0	0	0	0	1	2	3	2	3	2	10	2.4	24		
6	3	2	IZS	2	1	7	13	4	2	3	2	1	1	1	1	1	1	1	1	1	1	3	3	1	13	2.4	24	
7	0	IZS	1	1	2	2	2	1	3	4	2	1	1	0	0	0	0	0	1	2	3	2	3	4	1.3	24		
8	IZS	2	2	2	2	2	2	2	2	1	1	1	1	0	1	0	2	1	1	3	2	2	2	IZS	3	1.5	24	
9	2	2	3	4	5	15	10	5	3	2	2	1	0	0	0	0	0	1	2	3	2	IZS	4	15	2.9	24		
10	2	1	1	1	1	4	5	2	2	1	1	1	2	0	0	1	3	2	2	1	1	IZS	1	0	5	1.5	24	
11	0	0	1	1	2	8	7	4	3	2	1	1	1	C	C	1	1	2	1	2	IZS	2	3	2	8	2.1	24	
12	2	1	2	1	2	3	5	5	5	5	3	4	5	4	2	1	6	12	10	IZS	1	2	2	2	12	3.7	24	
13	2	2	1	1	1	1	2	2	1	1	1	1	0	0	0	1	1	0	IZS	0	0	1	0	0	2	0.8	24	
14	0	0	0	0	0	0	0	0	1	1	0	0	1	0	0	0	1	IZS	1	0	1	3	2	2	3	0.6	24	
15	3	2	2	2	3	5	8	6	2	1	0	0	0	1	1	1	IZS	0	0	3	3	2	2	2	8	2.1	24	
16	1	1	1	3	4	8	10	6	2	2	2	1	0	0	0	IZS	5	2	1	2	1	0	0	0	10	2.3	24	
17	0	0	0	0	0	0	5	1	4	2	0	0	0	0	IZS	1	0	0	0	2	2	2	1	1	5	0.9	24	
18	1	1	1	1	2	4	4	6	2	1	1	1	1	IZS	1	1	1	1	1	1	1	0	0	0	6	1.4	24	
19	0	0	0	0	1	3	5	5	2	2	4	2	IZS	4	7	6	3	2	2	3	3	3	2	2	7	2.7	24	
20	2	3	3	2	2	2	4	7	3	1	0	IZS	0	0	0	0	0	0	1	1	3	2	1	1	7	1.7	24	
21	2	3	3	2	1	1	1	1	2	2	IZS	1	1	1	1	1	1	1	1	1	2	1	1	0	3	1.3	24	
22	0	0	0	0	0	2	0	1	1	IZS	0	0	0	0	0	1	0	0	0	0	0	0	0	0	2	0.2	24	
23	2	2	1	1	0	1	2	2	IZS	1	2	3	1	2	1	1	0	0	1	1	1	0	1	1	3	1.2	24	
24	1	1	1	2	3	5	6	IZS	6	4	C	C	C	C	1	1	0	1	3	3	3	3	2	1	6	2.5	24	
25	1	1	1	1	4	7	IZS	4	3	2	2	1	1	1	1	1	1	1	1	4	5	2	6	4	7	2.4	24	
26	2	1	0	1	1	IZS	2	2	2	2	1	1	1	1	1	1	1	1	1	1	1	0	0	0	2	1.0	24	
27	1	1	1	0	IZS	1	1	4	1	1	1	0	0	0	0	0	0	0	1	1	0	0	0	4	0.6	24		
28	0	0	0	IZS	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0.1	24	
29	1	1	IZS	2	3	4	3	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	4	0.9	24		
30	1	IZS	0	1	2	5	4	2	0	0	0	1	1	1	0	0	1	1	2	2	3	3	3	4	5	1.6	24	
31	IZS	3	3	3	4	5	7	6	4	3	2	1	2	2	1	1	1	2	6	1	2	1	2	IZS	7	2.8	24	
HOURLY MAX	3	4	3	4	5	15	13	10	6	5	4	4	5	4	7	6	6	12	10	4	5	3	6	4				
HOURLY AVG	1.3	1.4	1.3	1.4	2.0	3.8	4.5	3.4	2.3	1.7	1.1	0.9	0.8	0.7	0.7	0.7	1.0	1.0	1.4	1.5	1.8	1.6	1.6	1.4				

STATUS FLAG CODES

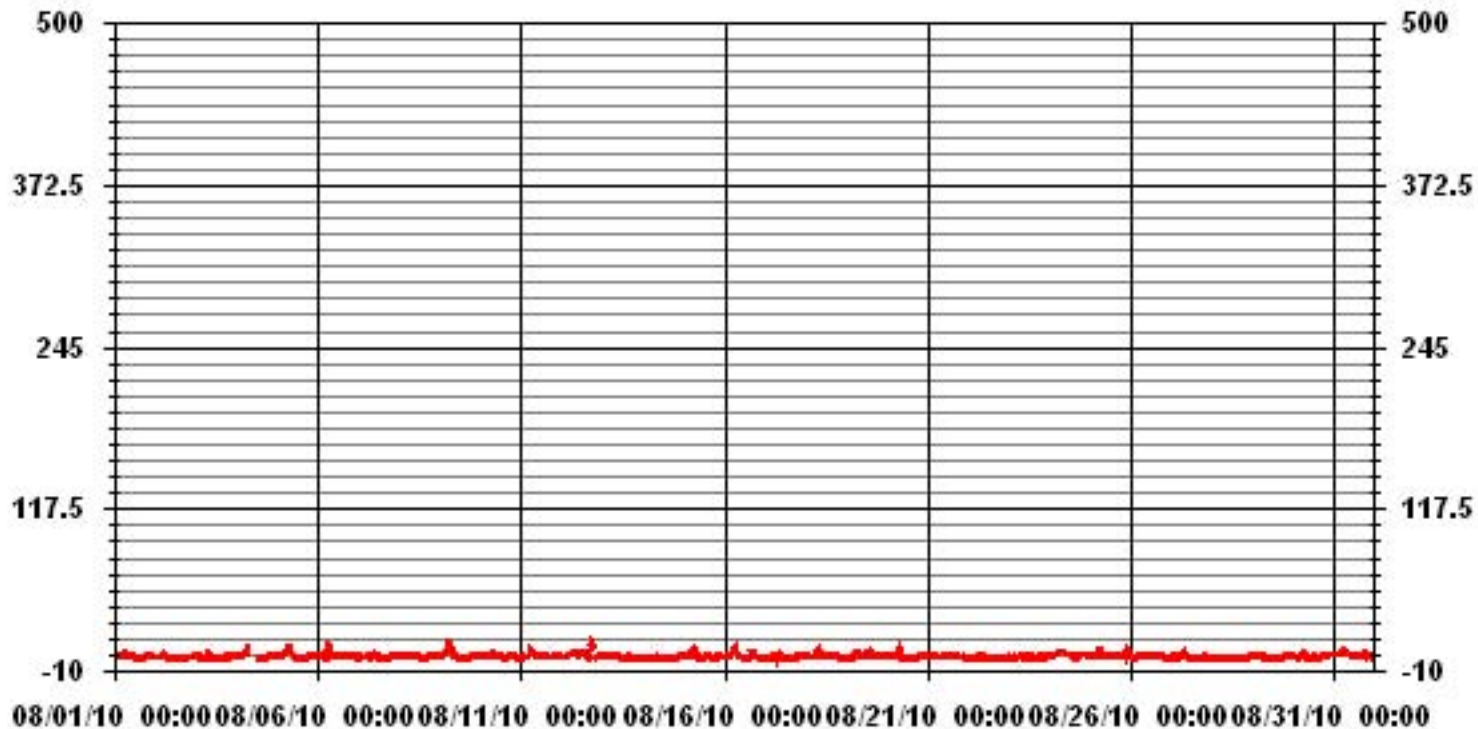
S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	- MISSING DATA
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE



MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:	505					
MAXIMUM 1-HR AVERAGE:	15	PPB	@ HOUR(S)	5	ON DAY(S)	9
MAXIMUM 24-HR AVERAGE:	3.7	PPB			ON DAY(S)	12
IZS CALIBRATION TIME:	33	HRS	OPERATIONAL TIME:	744	HRS	
MONTHLY CALIBRATION TIME:	14	HRS	AMD OPERATION UPTIME:	100.0	%	
STANDARD DEVIATION:	1.86		MONTHLY AVERAGE:	1.63	PPB	

### 01 Hour Averages



— LICA NOX\_ PPB

# LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - COLD LAKE

AUGUST 2010

## OXIDES OF NITROGEN MAX instantaneous maximum in ppb

MST		0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR		
HOUR START	HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.	
DAY																													
1		9	3	4	2	7	7	7	IZS	2	3	2	2	1	1	1	1	2	2	1	4	5	5	4	2	9	3.3	24	
2		2	2	2	3	5	4	IZS	5	2	1	1	1	1	2	0	0	2	1	2	2	3	1	4	4	5	2.2	24	
3		4	5	5	2	1	IZS	5	7	5	2	4	1	8	1	1	1	1	1	2	2	1	4	2	1	8	2.9	24	
4		2	3	4	3	IZS	10	12	C	C	C	C	C	C	C	1	1	1	1	2	3	5	3	3	3	12	3.6	24	
5		3	2	3	IZS	7	8	10	14	9	4	C	C	1	1	1	2	1	1	2	13	11	5	4	4	14	5.0	24	
6		12	4	IZS	3	3	75	18	16	5	48	4	4	6	1	3	6	5	2	2	8	4	4	5	3	75	10.5	24	
7		1	IZS	1	2	3	5	3	2	6	6	4	1	2	1	2	1	0	0	1	2	3	5	3	4	6	2.5	24	
8		IZS	3	3	3	3	3	4	3	3	6	5	4	2	1	3	2	8	3	1	6	5	6	3	IZS	8	3.6	24	
9		3	4	6	6	10	212	19	7	4	4	3	3	2	1	1	2	4	3	3	3	10	5	IZS	6	212	14.0	24	
10		4	3	2	1	3	7	8	8	4	4	5	6	6	2	2	3	10	4	6	3	2	IZS	3	1	10	4.2	24	
11		1	1	2	4	3	18	13	7	5	3	4	2	1	C	C	2	4	2	2	2	IZS	3	4	3	18	4.1	24	
12		3	2	2	2	5	6	8	9	22	12	5	5	6	5	3	3	25	30	25	IZS	5	3	3	3	30	8.3	24	
13		2	3	1	1	1	2	5	9	1	2	3	3	1	2	1	9	2	1	IZS	1	1	1	1	0	9	2.3	24	
14		0	0	0	1	1	0	0	1	3	2	1	1	1	1	1	2	1	IZS	6	1	4	17	7	3	17	2.3	24	
15		5	3	4	4	6	10	10	8	3	2	1	1	1	2	3	10	IZS	1	3	7	6	4	3	3	10	4.3	24	
16		2	2	2	5	5	51	18	14	6	8	21	4	2	2	3	IZS	28	7	2	5	3	2	1	1	51	8.4	24	
17		1	0	0	0	0	1	32	8	34	15	11	2	0	1	IZS	2	1	5	1	3	5	3	2	2	34	5.6	24	
18		2	2	2	3	3	10	8	58	8	2	2	2	5	IZS	3	3	3	1	2	1	3	1	3	1	58	5.6	24	
19		1	1	1	1	7	12	14	10	3	5	19	3	IZS	8	9	8	4	3	5	4	4	3	5	2	19	5.7	24	
20		3	5	3	2	3	3	7	80	5	1	1	IZS	1	1	2	2	2	2	1	1	4	4	3	2	2	80	6.0	24
21		4	4	4	6	4	3	4	3	3	4	IZS	3	3	5	4	9	4	5	10	5	4	3	3	2	10	4.3	24	
22		2	1	1	2	2	8	4	6	2	IZS	10	1	5	2	2	3	1	2	4	4	2	2	1	2	10	3.0	24	
23		4	4	2	2	1	2	3	4	IZS	1	3	4	3	2	2	1	1	1	2	2	3	1	1	1	4	2.2	24	
24		1	1	2	5	5	6	9	IZS	8	C	C	C	C	C	1	2	5	2	6	5	6	8	10	2	10	4.7	24	
25		1	2	1	2	9	25	IZS	28	22	44	11	3	2	5	2	2	2	2	3	7	8	4	11	7	44	8.8	24	
26		2	1	1	2	1	IZS	6	8	15	32	23	9	5	7	8	8	3	3	2	3	2	2	1	1	32	6.3	24	
27		2	2	2	1	IZS	1	3	26	2	1	2	1	2	1	1	1	1	1	1	2	2	1	1	1	26	2.5	24	
28		1	1	1	IZS	1	1	2	1	1	2	1	0	0	1	0	0	0	0	0	1	0	1	1	3	3	0.8	24	
29		3	1	IZS	3	4	6	5	2	3	1	1	1	1	1	3	1	3	3	3	4	3	2	2	2	6	2.4	24	
30		2	IZS	1	6	8	11	7	12	1	1	2	5	9	9	1	2	2	5	2	6	15	5	5	7	15	5.4	24	
31		IZS	7	5	5	7	9	16	13	5	4	4	2	4	15	8	5	4	3	36	4	4	3	4	IZS	36	7.6	24	
HOURLY MAX		12	7	6	6	10	212	32	80	34	48	23	9	9	15	9	10	28	30	36	13	15	17	11	7				
HOURLY AVG		2.8	2.5	2.3	2.8	4.1	17.8	9.0	13.2	6.6	7.9	5.7	2.7	2.9	3.0	2.4	3.2	4.3	3.2	4.6	3.9	4.4	3.7	3.4	2.6				

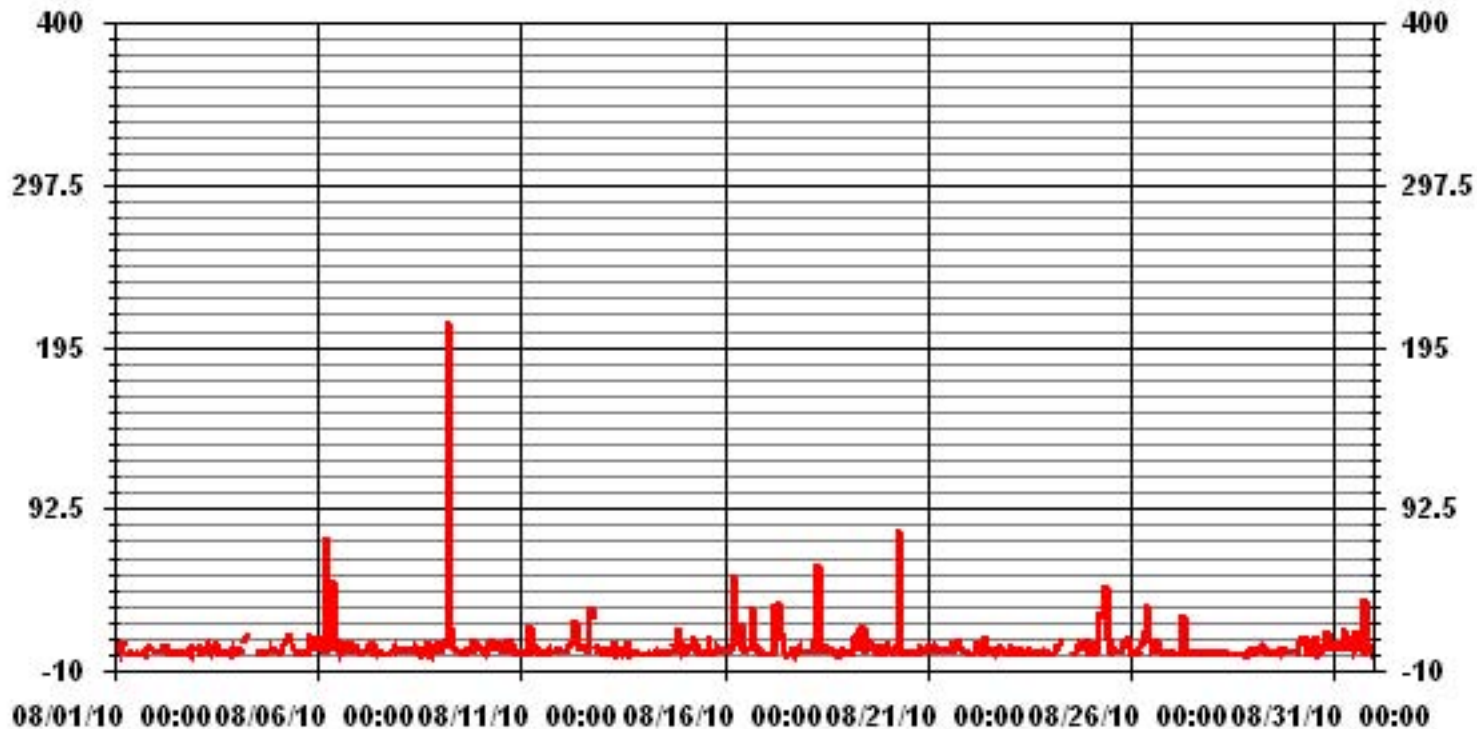
### STATUS FLAG CODES

S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	- MISSING DATA
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE

### MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:	672					
MAXIMUM INSTANTANEOUS VALUE:	212	PPB	@ HOUR(S)	5	ON DAY(S)	9
IZS CALIBRATION TIME:	33	HRS	OPERATIONAL TIME:	744	HRS	
MONTHLY CALIBRATION TIME:	16	HRS				
STANDARD DEVIATION	10.56					

### 01 Hour Averages



— LICA NOXMAX PPB

LICA  
 NOX\_ / WD Joint Frequency Distribution (Percent)

August 2010

Distribution By % Of Samples

Logger Id : 01  
 Site Name : LICA  
 Parameter : NOX\_  
 Units : PPB

Wind Parameter : WD  
 Instrument Height : 10 Meters

	Direction																
Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 50	2.43	2.15	2.29	3.73	5.16	6.74	11.90	3.15	3.87	5.02	9.46	14.34	11.47	6.16	7.03	5.02	100.00
< 110	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
< 210	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
>= 210	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
Totals	2.43	2.15	2.29	3.73	5.16	6.74	11.90	3.15	3.87	5.02	9.46	14.34	11.47	6.16	7.03	5.02	

Calm : .00 %

Total # Operational Hours : 697

Distribution By Samples

	Direction																
Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 50	17	15	16	26	36	47	83	22	27	35	66	100	80	43	49	35	697
< 110																	
< 210																	
>= 210																	
Totals	17	15	16	26	36	47	83	22	27	35	66	100	80	43	49	35	

Calm : .00 %

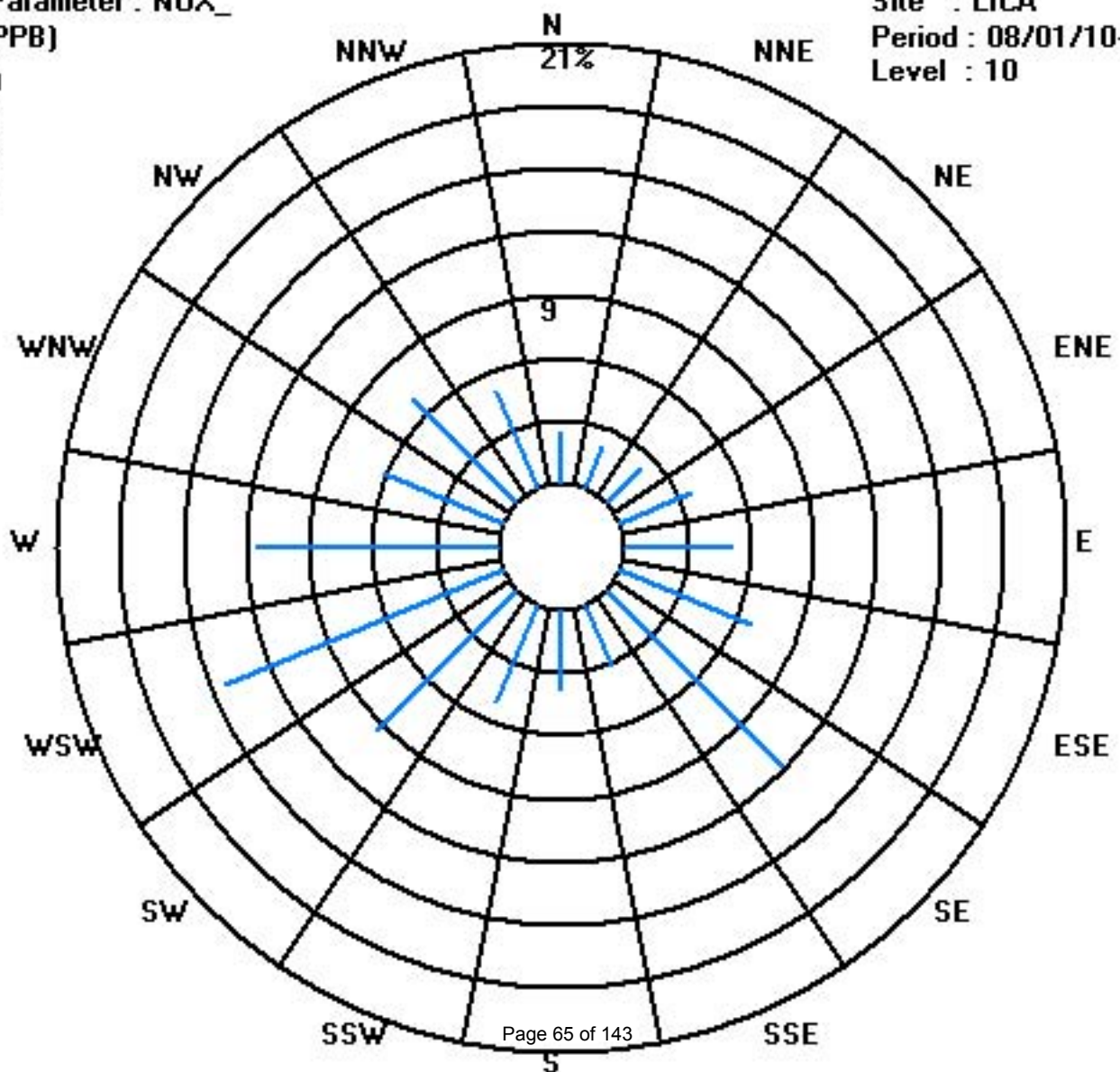
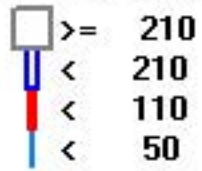
Total # Operational Hours : 697



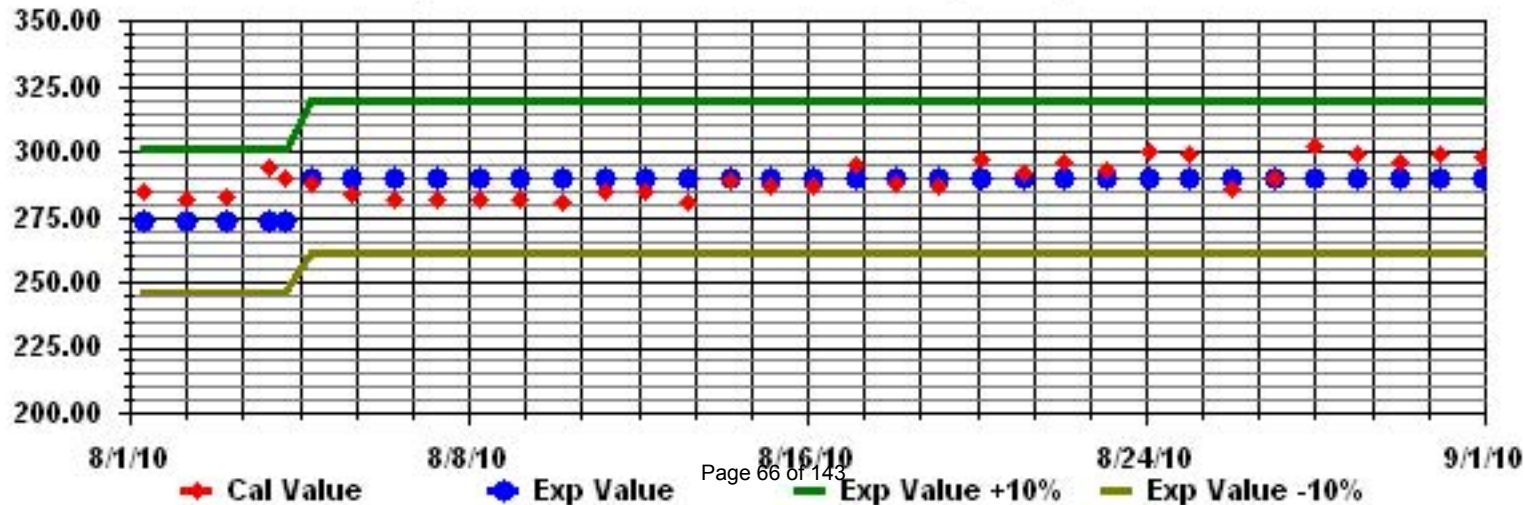
Class Limits (PPB)

Period : 08/01/10-08/31/10

Level : 10



Calibration Graph for Site: LICA Parameter: NOX\_ Sequence: NO2 Phase: SPAN



# Ozone

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - COLD LAKE

AUGUST 2010

OZONE (O<sub>3</sub>) hourly averages in ppb

MST		0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	RDGS.
DAY	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.		
1	1	0	0	0	0	1	4	IZS	22	32	35	39	41	43	42	43	44	42	36	21	9	5	3	1	44	20.2	24	
2	1	1	4	11	8	8	IZS	17	22	21	21	22	27	30	32	33	32	31	29	26	22	19	16	14	33	19.4	24	
3	12	9	10	18	20	IZS	21	11	12	26	34	35	37	38	38	37	38	40	35	29	29	12	9	7	40	24.2	24	
4	4	3	2	1	IZS	0	1	6	10	20	28	29	30	C	C	C	C	28	26	22	18	14	13	12	30	14.1	24	
5	6	8	6	IZS	2	2	7	10	20	24	C	25	27	28	29	31	32	32	27	15	9	7	3	2	32	16.0	24	
6	1	0	IZS	0	0	0	4	21	29	32	39	48	52	50	45	42	41	39	35	31	25	13	14	23	52	25.4	24	
7	30	IZS	36	27	19	20	19	28	20	24	34	38	39	36	34	31	29	27	25	16	9	4	3	5	39	24.0	24	
8	IZS	6	5	5	11	8	11	17	18	27	37	41	42	41	36	29	18	18	18	8	4	3	2	IZS	42	18.4	24	
9	2	0	0	2	0	0	4	11	16	23	30	28	31	38	40	40	40	40	35	23	11	7	IZS	4	40	18.5	24	
10	7	15	13	9	9	10	13	15	17	21	19	15	20	28	31	32	26	13	25	25	21	IZS	17	6	32	17.7	24	
11	3	3	1	1	2	1	2	15	21	27	28	31	31	34	37	34	34	35	32	27	IZS	4	1	1	37	17.6	24	
12	0	0	0	0	0	1	5	9	12	22	21	19	21	21	28	20	18	21	19	18	IZS	18	15	15	14	28	12.9	24
13	10	8	13	12	10	10	10	14	15	16	18	19	24	26	26	25	23	26	IZS	19	17	17	17	15	26	17.0	24	
14	16	14	14	13	13	14	15	16	16	20	24	24	23	25	24	24	23	IZS	28	27	18	7	3	2	28	17.5	24	
15	2	4	4	3	0	0	2	7	18	21	23	24	26	27	28	27	IZS	28	26	16	4	3	2	1	28	12.9	24	
16	0	0	0	0	0	1	1	4	12	14	23	23	25	28	27	IZS	17	18	22	21	17	17	16	17	28	13.2	24	
17	18	12	13	14	18	18	15	19	22	25	28	33	36	35	IZS	33	32	32	28	16	6	4	2	1	36	20.0	24	
18	1	1	1	2	0	1	5	7	12	16	22	28	28	IZS	29	29	29	27	25	23	23	22	20	18	29	16.0	24	
19	17	16	14	13	10	5	5	6	8	6	15	20	IZS	15	17	24	31	33	27	20	18	16	12	11	33	15.6	24	
20	8	8	13	15	15	13	11	15	18	23	24	IZS	26	26	26	27	27	27	25	12	4	2	1	0	27	15.9	24	
21	0	0	0	3	8	9	9	9	12	21	IZS	28	26	31	35	32	29	27	27	24	22	24	22	23	35	18.3	24	
22	24	24	24	23	22	14	13	20	22	IZS	23	22	21	20	19	18	17	18	15	11	12	11	8	5	24	17.7	24	
23	4	7	10	12	13	13	13	15	IZS	17	16	17	20	27	23	18	20	22	29	23	17	18	17	14	29	16.7	24	
24	11	9	7	4	2	2	3	IZS	9	14	19	21	28	29	C	30	31	30	15	8	9	10	14	9	31	14.3	24	
25	5	5	5	2	1	1	IZS	15	19	24	29	34	37	38	40	40	41	38	31	14	6	5	2	5	41	19.0	24	
26	12	13	18	17	19	IZS	15	19	22	22	26	27	27	27	28	30	30	27	27	28	28	29	29	26	30	23.7	24	
27	30	29	24	25	IZS	24	23	25	32	30	26	25	27	25	23	23	22	20	20	18	18	20	19	20	32	23.8	24	
28	20	19	18	IZS	17	19	19	21	23	22	24	25	25	25	24	23	22	21	19	17	18	15	13	12	25	20.0	24	
29	11	11	IZS	8	5	3	6	13	17	19	19	19	20	20	19	19	19	16	14	13	9	8	13	8	20	13.4	24	
30	9	IZS	5	6	8	9	10	12	14	15	15	17	17	19	19	23	27	21	17	7	2	1	0	0	27	11.9	24	
31	IZS	0	0	0	0	0	0	4	12	17	24	30	34	38	39	39	33	27	17	30	25	20	11	IZS	39	18.2	24	
HOURLY MAX	30	29	36	27	22	24	23	28	32	32	39	48	52	50	45	43	44	42	36	31	29	29	29	26				
HOURLY AVG	9.1	7.8	9.0	8.5	8.0	7.1	9.2	13.8	17.4	21.4	25.0	26.9	28.9	30.2	29.6	29.4	28.6	27.4	25.1	19.7	14.9	11.7	10.6	9.5				

STATUS FLAG CODES

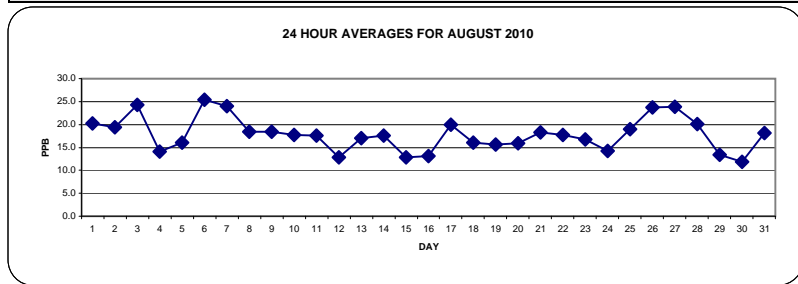
S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	- MISSING DATA
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE

OBJECTIVE LIMIT:

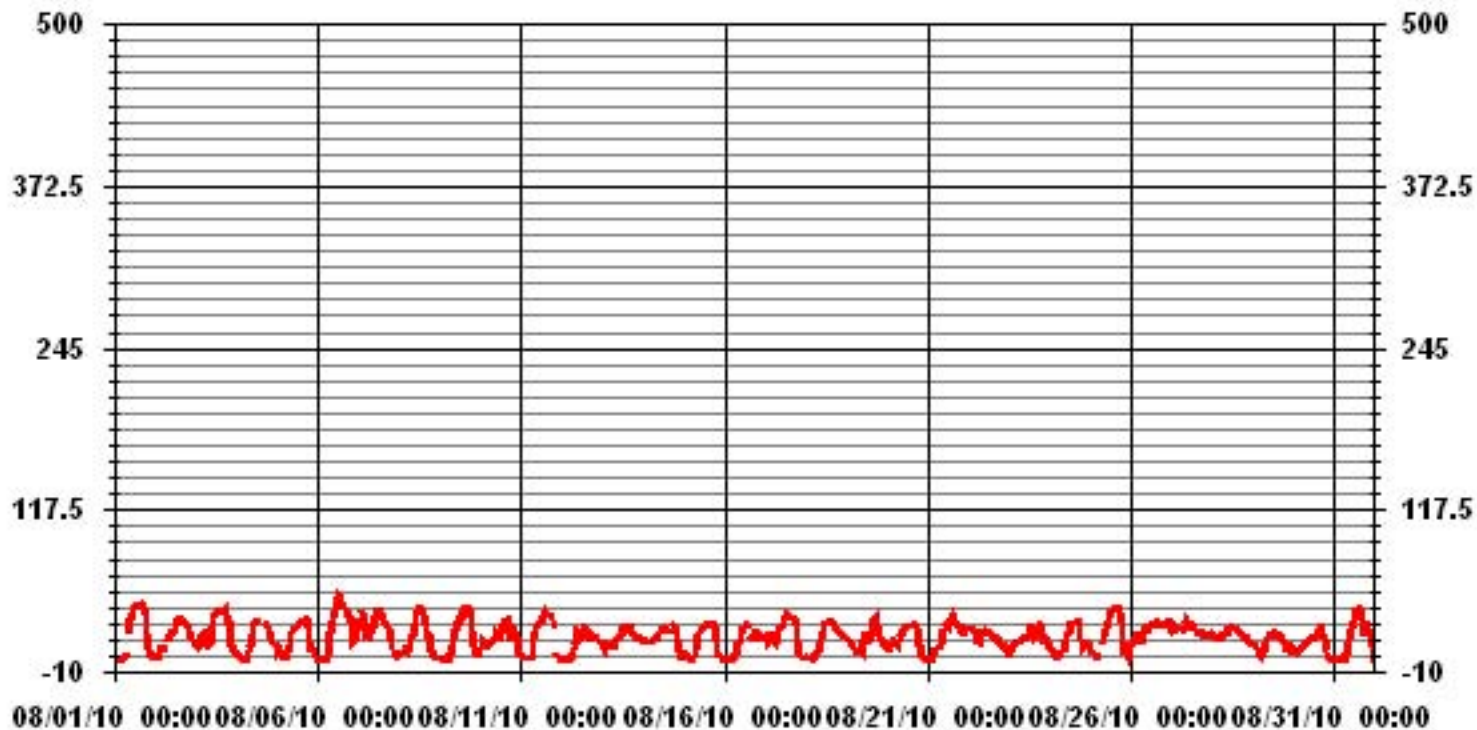
ALBERTA ENVIRONMENT: 1-HR 82 PPB

MONTHLY SUMMARY

NUMBER OF 1-HR EXCEEDENCES:	0					
NUMBER OF NON-ZERO READINGS:	667					
MAXIMUM 1-HR AVERAGE:	52	PPB	@ HOUR(S)	12	ON DAY(S)	6
MAXIMUM 24-HR AVERAGE:	25.4	PPB			ON DAY(S)	6
					VAR-VARIOUS	
IZS CALIBRATION TIME:	33	HRS	OPERATIONAL TIME:	744	HRS	
MONTHLY CALIBRATION TIME:	6	HRS	AMD OPERATION UPTIME	100.0	%	
STANDARD DEVIATION	11.23		MONTHLY AVERAGE	17.88	PPB	



### 01 Hour Averages



— LICA 03\_ PPB

# LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - COLD LAKE

AUGUST 2010

## OZONE MAX instantaneous maximum in ppb

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	DAILY MAX.	24-HOUR AVG.	RDGS.
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00				
DAY																												
1	3	1	0	0	0	3	7	<b>IZS</b>	27	39	40	42	44	44	44	46	47	46	42	30	14	8	5	4	47	23.3	24	
2	3	5	8	12	10	11	<b>IZS</b>	20	24	23	23	25	30	32	34	35	34	34	31	28	24	21	19	16	35	21.8	24	
3	13	11	14	20	20	<b>IZS</b>	25	14	19	34	36	38	39	39	40	39	41	42	40	32	31	18	12	10	42	27.3	24	
4	8	5	3	2	<b>IZS</b>	1	4	8	17	26	30	31	32	<b>C</b>	<b>C</b>	<b>C</b>	<b>C</b>	<b>C</b>	28	24	21	18	14	14	32	15.9	24	
5	9	12	10	<b>IZS</b>	3	4	9	13	23	27	<b>C</b>	<b>C</b>	29	30	31	33	33	33	32	23	14	10	6	3	33	18.4	24	
6	3	1	<b>IZS</b>	1	1	1	16	28	31	36	46	52	<b>54</b>	51	49	44	44	42	38	33	32	22	23	30	<b>54</b>	29.5	24	
7	39	<b>IZS</b>	41	35	27	28	28	31	23	32	37	41	42	39	35	32	31	29	27	23	12	8	4	10	42	28.4	24	
8	<b>IZS</b>	9	8	12	14	12	20	21	23	31	42	45	45	45	39	34	23	22	21	16	8	5	4	<b>IZS</b>	45	22.7	24	
9	5	1	3	4	3	1	9	14	20	28	32	30	36	42	42	42	42	42	40	30	21	9	<b>IZS</b>	8	42	21.9	24	
10	15	22	18	14	14	13	16	17	20	23	21	18	30	33	34	35	34	21	29	28	25	<b>IZS</b>	27	20	35	22.9	24	
11	7	7	2	6	5	3	9	19	26	30	33	33	34	37	40	38	38	41	39	33	<b>IZS</b>	8	6	6	41	21.7	24	
12	6	1	9	6	1	3	8	13	15	29	26	21	25	32	25	21	25	23	21	<b>IZS</b>	20	17	16	15	32	16.4	24	
13	12	11	15	14	11	11	12	16	17	18	19	23	26	28	27	28	26	29	<b>IZS</b>	22	19	18	18	17	29	19.0	24	
14	17	15	14	14	14	15	16	17	18	24	26	26	26	26	27	26	24	<b>IZS</b>	30	29	25	13	5	4	30	19.6	24	
15	8	7	7	6	1	1	4	11	20	24	28	28	30	31	29	<b>IZS</b>	29	29	29	24	7	5	4	2	31	15.6	24	
16	2	1	0	1	0	2	3	8	15	18	26	25	29	29	30	<b>IZS</b>	23	25	25	23	21	19	18	19	30	15.7	24	
17	20	14	16	16	20	20	18	24	27	26	32	36	37	37	<b>IZS</b>	38	34	35	34	27	8	8	4	2	38	23.2	24	
18	2	2	3	4	2	3	7	9	15	19	28	29	30	<b>IZS</b>	31	30	30	29	28	24	24	23	22	19	31	18.0	24	
19	18	17	16	14	13	9	9	9	9	8	30	26	<b>IZS</b>	18	21	30	34	34	34	24	22	17	17	15	34	19.3	24	
20	14	9	15	16	16	14	16	17	22	24	25	<b>IZS</b>	26	27	27	28	28	28	27	23	7	5	3	1	28	18.2	24	
21	1	0	0	9	10	11	11	11	14	28	<b>IZS</b>	30	28	35	38	34	31	29	28	26	24	26	24	24	38	20.5	24	
22	25	25	25	24	24	20	17	23	24	<b>IZS</b>	24	23	22	21	20	20	19	19	19	15	13	13	9	8	25	19.7	24	
23	6	8	11	13	14	13	15	20	<b>IZS</b>	18	17	19	23	29	28	20	23	26	33	26	19	19	18	17	33	18.9	24	
24	12	10	8	5	4	2	6	<b>IZS</b>	12	17	23	25	31	<b>C</b>	<b>C</b>	<b>C</b>	33	34	27	11	13	14	16	13	34	15.8	24	
25	11	9	10	7	3	5	<b>IZS</b>	18	22	28	33	36	39	40	41	42	43	41	35	27	10	9	8	14	43	23.1	24	
26	21	21	21	20	21	<b>IZS</b>	16	22	23	25	28	28	29	28	30	31	32	28	29	29	29	29	30	28	32	26.0	24	
27	32	32	27	27	<b>IZS</b>	25	25	30	35	35	34	27	28	27	24	24	23	22	21	20	20	21	21	21	35	26.1	24	
28	21	20	19	<b>IZS</b>	18	21	21	22	24	24	26	26	26	25	23	23	23	22	21	19	20	17	15	13	26	21.4	24	
29	12	12	<b>IZS</b>	10	6	5	9	15	20	21	20	21	21	22	21	20	20	18	16	15	12	16	16	11	22	15.6	24	
30	11	<b>IZS</b>	7	10	9	12	11	15	16	18	18	18	19	24	23	27	29	23	21	14	4	3	1	1	29	14.5	24	
31	<b>IZS</b>	0	0	0	0	1	1	7	18	24	29	34	37	40	41	42	40	33	26	38	29	27	19	<b>IZS</b>	42	22.1	24	
HOURLY MAX	39	32	41	35	27	28	31	35	39	46	52	54	51	49	46	47	46	42	38	32	29	30	30					
HOURLY AVG	12.3	9.9	11.4	11.1	9.8	9.3	12.7	17.0	20.6	25.2	28.6	29.5	31.5	32.5	32.1	31.8	31.3	30.3	29.0	24.5	18.3	14.9	13.5	12.6				

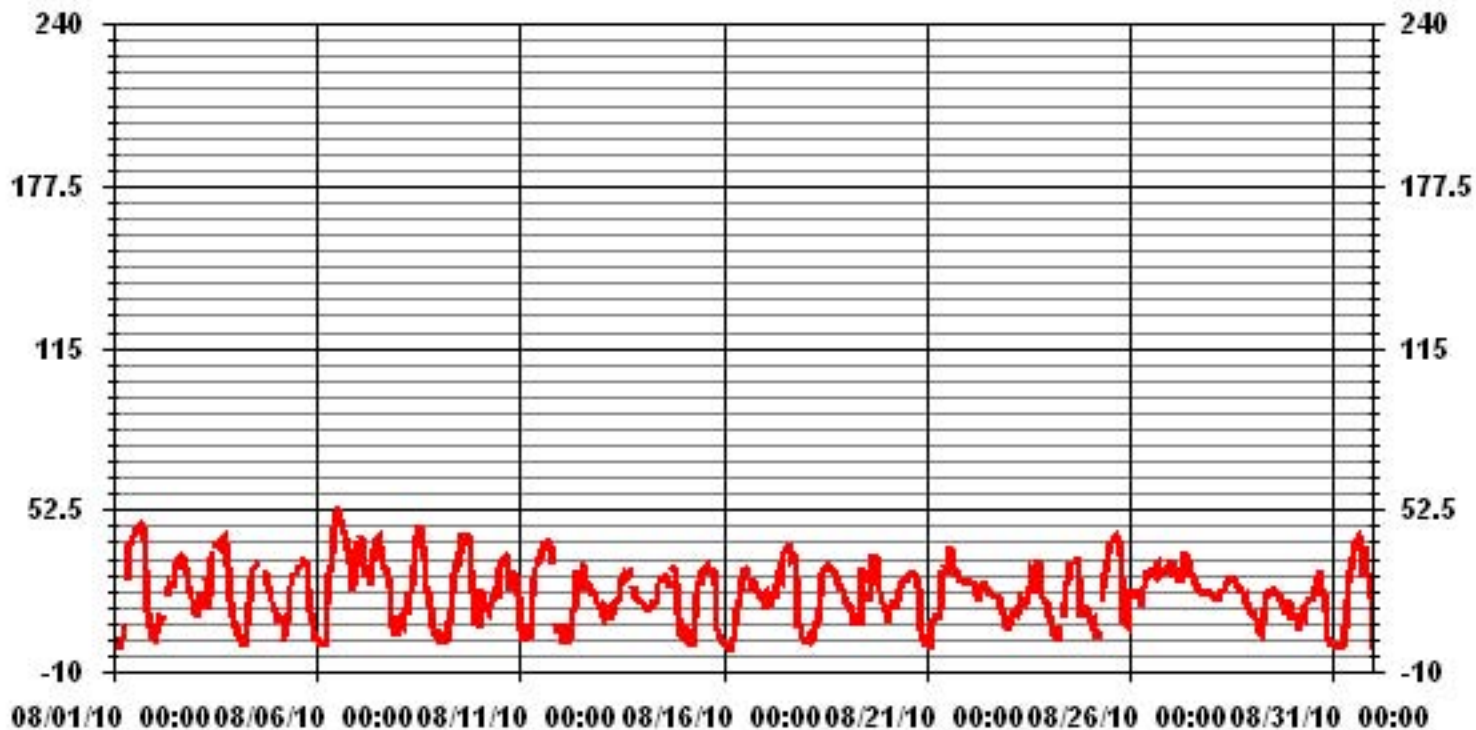
**STATUS FLAG CODES**

S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	- MISSING DATA
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE

**MONTHLY SUMMARY**

NUMBER OF NON-ZERO READINGS:	690
MAXIMUM INSTANTANEOUS VALUE:	54 PPB @ HOUR(S) 12 ON DAY(S) 6
IZS CALIBRATION TIME:	33 HRS
MONTHLY CALIBRATION TIME:	10 HRS
OPERATIONAL TIME:	744 HRS
STANDARD DEVIATION	11.47

### 01 Hour Averages



— LICA O3MAX PPB

LICA  
O3\_ / WD Joint Frequency Distribution (Percent)

August 2010

Distribution By % Of Samples

Logger Id : 01  
Site Name : LICA  
Parameter : O3\_  
Units : PPB

Wind Parameter : WD  
Instrument Height : 10 Meters

	Direction																
Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 50	2.41	2.12	2.26	3.68	5.10	6.66	11.48	3.12	3.82	5.10	9.78	14.60	11.48	6.09	6.95	4.96	99.71
< 110	.00	.00	.00	.00	.00	.00	.28	.00	.00	.00	.00	.00	.00	.00	.00	.00	.28
< 210	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
>= 210	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
Totals	2.41	2.12	2.26	3.68	5.10	6.66	11.77	3.12	3.82	5.10	9.78	14.60	11.48	6.09	6.95	4.96	

Calm : .00 %

Total # Operational Hours : 705

Distribution By Samples

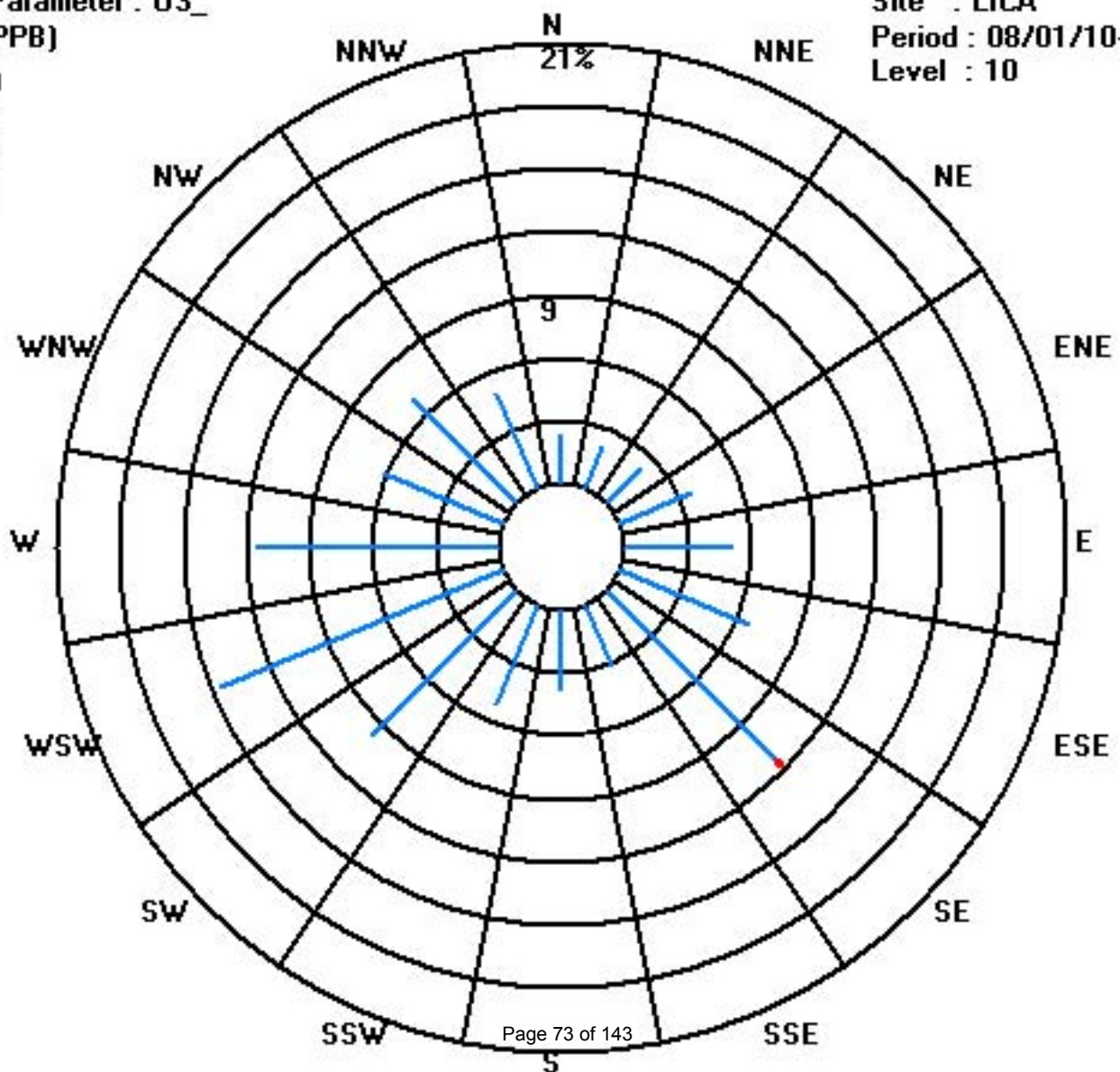
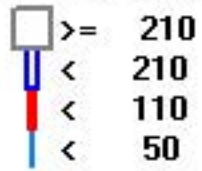
	Direction																
Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 50	17	15	16	26	36	47	81	22	27	36	69	103	81	43	49	35	703
< 110							2										2
< 210																	
>= 210																	
Totals	17	15	16	26	36	47	83	22	27	36	69	103	81	43	49	35	

Calm : .00 %

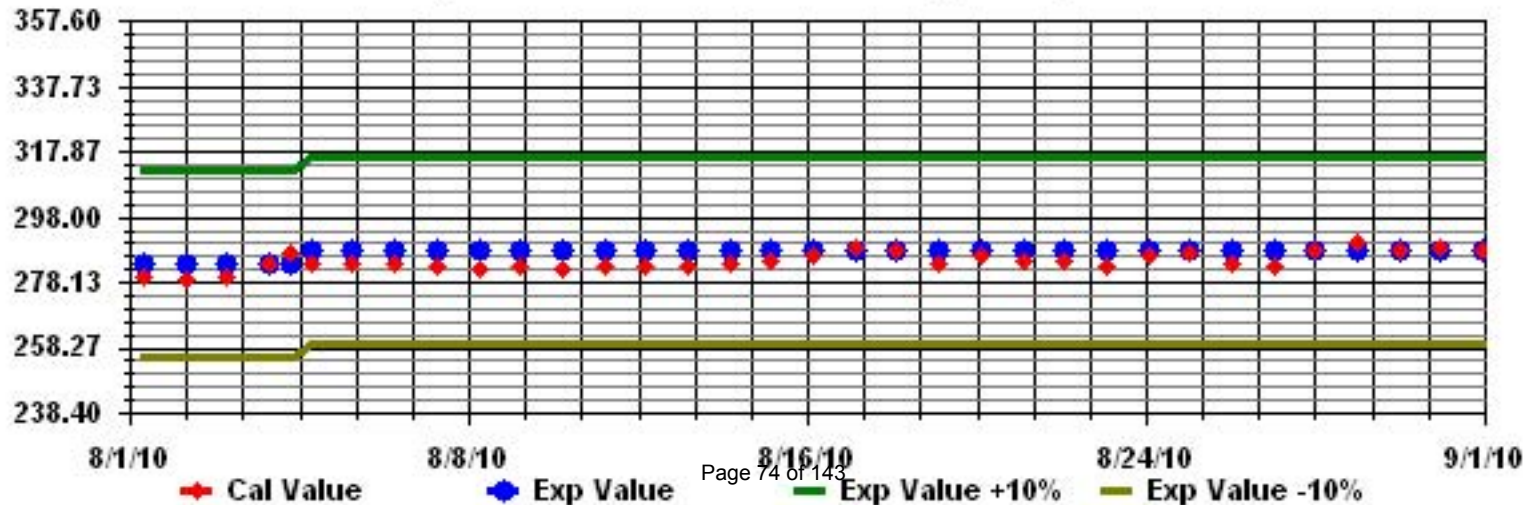
Total # Operational Hours : 705



Class Limits (PPB)



Calibration Graph for Site: LICA Parameter: 03\_ Sequence: 03 Phase: SPAll



# Ambient Temperature

# LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - COLD LAKE

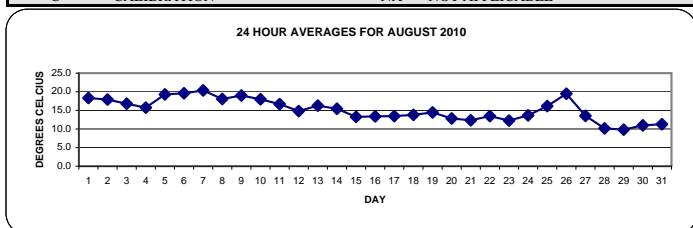
AUGUST 2010

## AMBIENT TEMPERATURE hourly averages (Degrees C)

MST		0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY MAX.	24-HOUR AVG.	RDGS.
DAY	DAY																											
1	1	12.5	11.8	11.2	10.6	10.1	10.7	13.2	16.2	18.8	20.5	21.7	22.6	23.6	24.8	24.8	25.1	24.9	25	24.4	22	18.6	16.4	15.5	14.6	25.1	18.3	24
2	2	13.8	13.3	13.4	13.8	14	14.7	15	16.7	18.5	18.9	19	19.7	21.4	22.1	22	22.8	22.6	22.4	21.4	19.6	17.6	16.5	15.8	14.8	22.8	17.9	24
3	3	14.2	13.7	14.2	15	14.6	15.2	15.2	15	16.4	18.5	19.4	19.2	20.1	21.1	21.6	21.8	21.6	21.6	20.4	18.4	15.7	11.5	9.6	9	21.8	16.8	24
4	4	9.7	9.8	9.5	8.8	7.5	7.7	9.6	12.2	14.4	16.8	18.6	19.6	20.3	21	21.5	21.3	20.8	20.8	20	19.2	18.1	17	16.8	16.7	21.5	15.7	24
5	5	15.3	14.4	13.6	12.2	12	11.9	14.5	17.7	20.5	22.5	23.3	24.1	24	24.9	25.3	25.4	25.2	25	24.1	21.6	18.5	16.9	15.4	14.5	25.4	19.3	24
6	6	14.1	13.5	12.9	12.2	11.5	11.6	14.3	17.3	19	21	23.1	24.3	25.2	25.9	25.5	25	24.6	24.5	23.9	22.7	21	19.2	19.2	18.9	25.9	19.6	24
7	7	18.7	17.8	16.7	15.6	14.8	14.5	15.9	18.1	17.9	19.9	22.9	24.2	25.2	26	<b>26.4</b>	<b>26.4</b>	26.3	26.2	25.7	22.5	18.4	16.8	15.7	16	<b>26.4</b>	<b>20.4</b>	24
8	8	16.6	16	15	14.6	15.5	15.5	15.5	16.2	16.9	18.8	21	22.5	23	23.1	22.8	19.8	18.9	20.7	21.5	19.7	16.6	15.1	14.2	14	23.1	18.1	24
9	9	13.2	11.9	11.2	11.9	10.8	11.2	14.2	16	18.6	21.6	22.8	24	25.1	25.8	26	25.8	25.8	25.6	25.1	22.3	18.5	16.9	16.1	15.4	26.0	19.0	24
10	10	14.9	15.9	15.6	15.1	15.2	15.7	16.8	17.3	17.4	18.4	19	19	20.5	22	23.1	23.6	22.2	19.8	17.3	16.6	16.7	16.9	16.7	16	23.6	18.0	24
11	11	15.2	14.9	14.6	14.2	14	13.5	15.2	16.9	17.6	18.8	18.6	19.2	20	21.1	22.5	20.3	17.2	17	18.2	17.9	15.1	13.5	12.7	11.9	22.5	16.7	24
12	12	11.4	10.8	10.4	10	9.7	10.8	13.8	15.4	15.9	15.2	16	16.3	17.7	19.3	16.8	17.5	17.9	17.6	16.6	15.9	15.4	15.3	15.3	14.6	19.3	14.8	24
13	13	14.2	13.9	14.4	14.5	14.5	14.5	14.9	16	16	16.6	16.6	17.3	18.6	19.8	20.2	18.9	18.8	16.1	17	16.4	15.6	15.5	15.2	15	20.2	16.3	24
14	14	14.7	14.8	14.4	14	14	13.7	14.2	14.6	15.5	16.4	17.3	17.5	17.5	18.8	19.7	20.1	19	19	17.6	15.7	13.2	10.7	9.4	8.7	20.1	15.4	24
15	15	9.2	9.7	9.3	8.8	8.6	9.2	10.5	13.5	14.4	14.9	15.5	17	18	18.5	18.3	16.7	16.3	18	17.8	15.6	11.7	10	8.7	7.9	18.5	13.3	24
16	16	7.2	6.8	7.3	8.3	8.9	9.3	10.6	12.1	14	14.3	16.3	18.3	19.2	20	19.5	18.7	17	15.5	14	13.6	13.3	12.9	12.4	11.8	20.0	13.4	24
17	17	11.6	11.5	11.4	10.9	10.3	9.7	9.8	11.4	13.2	14.8	15.6	16.5	17.3	17.7	18.2	17.9	18.4	18.5	18	14.6	11.2	9.3	8.1	7.2	18.5	13.5	24
18	18	6.6	6.9	8.3	8.2	7.1	7.8	11.3	11.9	13.5	14.7	16.6	17.2	17.6	18.5	18.2	18.4	18.4	18	17.6	16.2	15.4	14.9	14.3	13.4	18.5	13.8	24
19	19	13	12.8	12.6	12.4	12.4	11.9	12.7	13.5	14	13.6	15.1	17.6	18.9	17.7	17.6	18.1	18.9	18.9	17.1	14.4	12.6	11.3	10.2	9.5	18.9	14.5	24
20	20	8.8	8.9	10.2	10.2	9.4	8.5	8.7	10.7	12.1	14.2	15.6	16.8	17.3	17.9	18.1	18.3	17.6	18.4	17.9	13.9	10.6	8.9	7.9	7	18.4	12.8	24
21	21	6.3	6.3	7.1	8.3	9.5	9.8	9.8	10.3	11.1	13.1	14.8	16.1	15.8	16.2	16.5	16.8	16.3	15.3	14.3	13.3	12.4	12.3	12.1	12.4	16.8	12.3	24
22	22	12.6	12.4	12	11.5	11.1	10.8	11	12	12.8	14	14.2	15.2	15.2	15.3	15.2	15.3	15.2	15.3	15.1	14.5	13.9	13.1	12.7	12.7	15.3	13.5	24
23	23	12.1	12	11.5	11.7	11.6	11.6	11.6	11.7	11.4	11.5	12.2	13.2	13.4	13.7	14.1	13.8	15.6	14.6	12.7	11.9	11.5	10.9	10.2	9.8	15.6	12.3	24
24	24	9.5	9.3	8.8	7.9	7.2	6.8	8	9.8	12.3	15	16.4	17.5	19.3	19.2	19.9	20.6	20.8	20.7	17.3	14.5	12.9	11.9	11.7	10.4	20.8	13.7	24
25	25	9.4	9.6	9.5	8.7	7.9	7.9	11	13.1	16	18.5	19.8	21.4	22.4	23.1	23.8	24.1	23.9	23.7	22.6	17.6	14.6	13.2	12.8	13	24.1	16.2	24
26	26	14	14.4	14.6	14.2	13.8	13.7	14.4	16.1	17.8	19.4	21.1	22.3	23.2	24	25.1	25.6	25.6	24.8	23.3	21.7	20.8	19.9	19.3	18.2	25.6	19.5	24
27	27	17.9	15.6	14.2	13.5	13.8	13.5	13	12.9	13.2	13.6	13.2	13.9	14.8	15	15	14.8	15.1	13.2	12.3	11.6	11.2	11.6	10.8	11	17.9	13.5	24
28	28	11.3	10.7	10.4	10.1	9.9	8.6	8.4	8.6	9.1	9	9.8	11.1	11.6	12	12.2	12.1	11.7	11.7	10.7	10.1	9.2	8.9	8.5	8.2	12.2	10.2	24
29	29	8.2	8.1	8	7.7	7.4	7.7	8.1	8.9	9.1	9.1	9.9	10.9	12	12.2	12.3	12.6	12.5	11.2	10.7	10	10.1	10	9.6	9.5	12.6	9.8	24
30	30	9.3	9.4	9.2	9.1	8.9	9.2	9.4	9.8	10.4	11.4	12.5	12.2	11.6	12.8	13.3	14.7	15.5	13.7	13.5	11.6	10.1	9.3	8.5	8	15.5	11.0	24
31	31	7	5.9	5.1	5.1	5	<b>4.8</b>	5.5	8.3	11.4	13.3	14.8	15.8	17	17.7	18.1	18.1	17	16.5	15.1	11.7	11.2	10.1	8.8	7.4	18.1	11.3	24
HOURLY MAX		18.7	17.8	16.7	15.6	15.5	15.7	16.8	18.1	20.5	22.5	23.3	24.3	25.2	26.0	26.4	26.4	26.3	26.2	25.7	22.7	21.0	19.9	19.3	18.9			
HOURLY AVG		12.0	11.7	11.5	11.3	11.0	11.0	12.1	13.6	14.8	16.1	17.2	18.1	18.9	19.6	19.8	19.7	19.4	19.0	18.2	16.4	14.6	13.4	12.7	12.2			

### STATUS FLAG CODES

S	- OUT OF SERVICE	OD	- OUTSIDE DETECTION LIMITS
N	- INVALID DATA	M	- MISSING DATA
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE

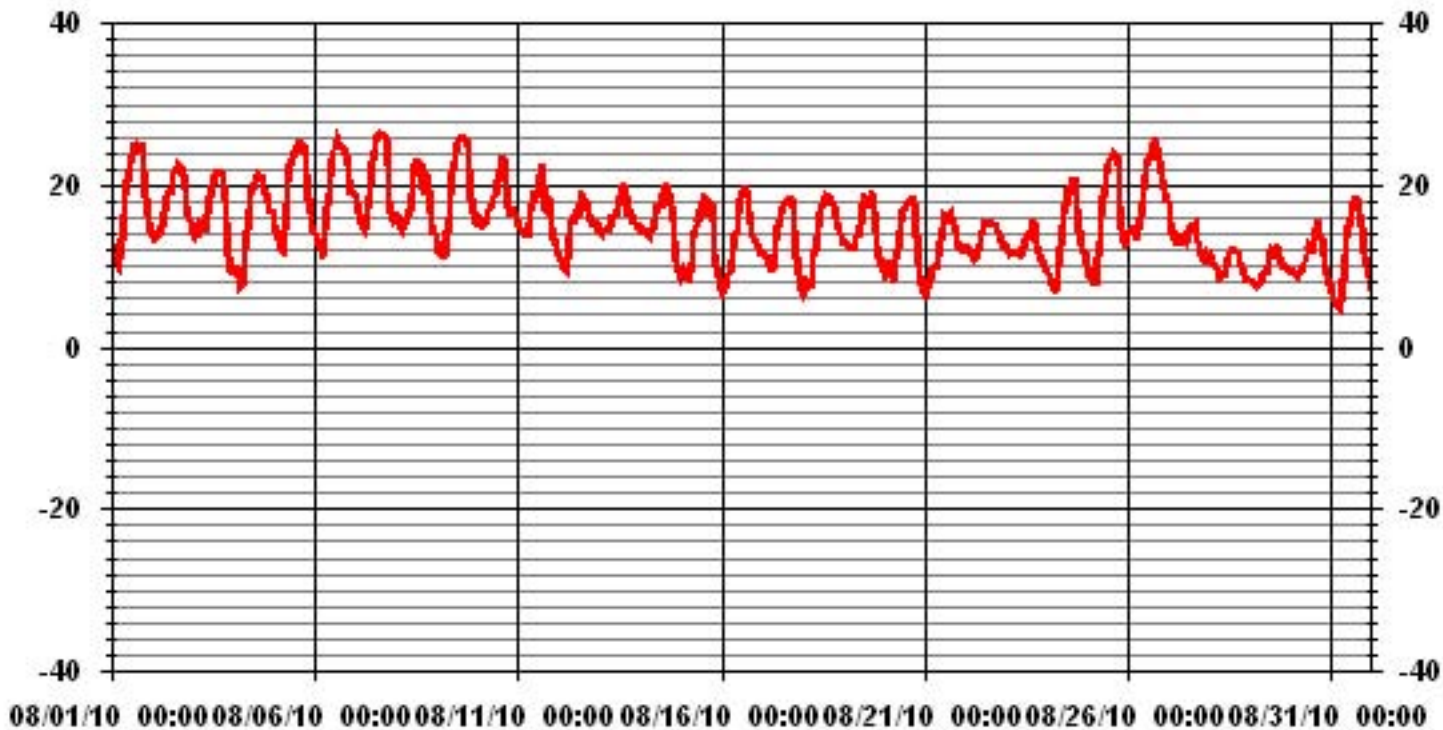


### MONTHLY SUMMARY

MINIMUM 1-HR AVERAGE:	4.8 °C	@ HOUR(S)	5	ON DAY(S)	31
MAXIMUM 1-HR AVERAGE:	26.4 °C	@ HOUR(S)	14, 15	ON DAY(S)	7
MAXIMUM 24-HR AVERAGE:	20.4 °C			ON DAY(S)	7
VAR-VARIOUS					
CALIBRATION TIME:	0	HRS	OPERATIONAL TIME:	744	HRS
STANDARD DEVIATION:	4.73		AMD OPERATION UPTIME:	100.0	%
			MONTHLY AVERAGE:	15.18	°C

\* Outside detection limits of sensor.

### 01 Hour Averages



— LICA TPX DGC

# Relative Humidity

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - COLD LAKE

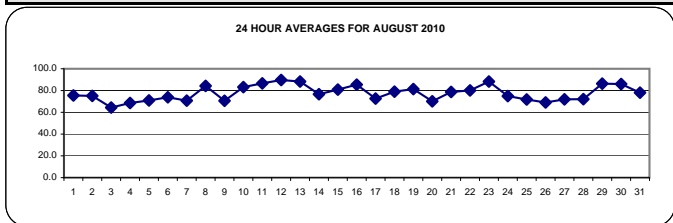
AUGUST 2010

RELATIVE HUMIDITY hourly averages (%)

MST		0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
DAY	HOURLY MAX	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
1	96	96	96	96	96	97	97	86	79	70	64	60	55	48	48	47	46	47	55	70	85	91	93	94	97	75.5	24	
2	95	95	96	96	95	94	93	87	78	76	75	72	62	57	53	49	50	50	54	60	71	77	81	86	96	75.1	24	
3	90	93	93	89	87	80	81	88	81	58	46	45	40	38	36	36	35	34	41	53	50	77	86	88	93	64.4	24	
4	87	89	91	92	93	93	91	83	71	59	51	45	43	43	41	42	47	50	57	64	71	79	81	83	93	68.6	24	
5	90	92	93	95	96	96	89	79	66	59	50	46	47	46	43	44	46	47	55	71	82	87	91	92	96	70.9	24	
6	93	93	93	94	95	93	86	79	72	67	62	55	49	48	53	56	57	60	65	71	77	86	85	82	95	73.8	24	
7	83	79	83	88	91	91	88	81	88	80	67	55	50	46	43	44	43	44	62	82	86	90	91	90	91	70.7	24	
8	89	91	94	93	92	95	97	94	92	82	71	63	61	63	66	74	87	81	75	83	93	94	96	96	97	84.3	24	
9	96	96	97	97	96	95	87	79	72	62	54	51	47	41	39	40	41	43	49	64	82	87	89	90	97	70.6	24	
10	90	85	87	91	91	89	87	86	86	81	80	80	72	62	57	55	65	87	93	94	95	94	93	96	96	83.2	24	
11	98	98	98	98	98	99	96	88	86	80	81	78	76	71	66	75	80	80	76	78	91	95	96	96	99	86.6	24	
12	96	96	97	97	97	97	92	90	90	93	90	88	83	76	95	91	83	81	84	86	87	87	86	90	97	89.7	24	
13	93	94	94	94	95	95	94	89	88	85	86	85	76	70	69	80	83	91	90	91	94	93	94	95	95	88.3	24	
14	93	93	94	95	92	91	88	85	81	74	68	66	67	60	56	52	55	53	56	63	78	91	93	95	95	76.6	24	
15	94	94	94	95	95	96	94	86	79	76	74	65	61	59	64	70	72	62	62	75	91	93	95	95	96	80.9	24	
16	95	96	97	97	97	97	95	85	82	69	63	60	52	56	64	84	91	95	96	96	96	96	96	94	97	85.4	24	
17	92	94	95	96	94	94	93	86	77	66	56	44	39	42	46	48	47	46	51	73	87	91	92	94	96	72.6	24	
18	94	95	96	95	95	96	88	88	82	76	68	63	JULY	59	60	61	64	67	70	76	77	79	82	85	96	79.0	24	
19	87	89	91	93	94	95	94	93	91	96	92	85	78	76	65	55	52	52	59	73	79	84	88	91	96	81.3	24	
20	93	93	82	76	77	81	80	70	67	62	59	55	53	50	47	46	48	47	52	77	88	92	94	94	94	70.1	24	
21	95	94	95	96	95	94	94	93	89	79	69	64	67	64	64	60	62	65	68	75	78	75	77	77	96	78.7	24	
22	75	75	77	79	82	87	87	82	77	73	74	71	72	73	74	74	77	78	80	85	89	93	95	94	95	80.1	24	
23	95	93	92	90	90	90	90	90	96	95	94	88	85	79	78	85	75	79	82	86	90	90	92	94	96	88.3	24	
24	95	96	96	97	97	97	94	88	81	71	64	61	50	48	45	41	42	44	67	82	84	85	84	89	97	74.9	24	
25	93	92	94	94	95	94	82	74	66	57	52	48	48	48	48	46	48	48	54	78	89	91	92	92	95	71.8	24	
26	92	93	94	94	90	89	85	76	70	64	55	53	51	50	48	48	52	57	63	66	69	72	78	94	69.0	24		
27	73	83	89	87	86	84	83	80	73	69	73	70	61	57	56	55	52	68	73	74	74	67	71	68	89	71.9	24	
28	67	71	74	76	78	83	80	77	71	76	71	62	59	58	58	59	61	63	68	73	81	84	89	91	91	72.1	24	
29	91	91	92	92	94	94	92	89	88	95	90	81	74	71	70	68	69	81	88	90	90	93	94	95	95	86.3	24	
30	96	95	95	96	96	96	94	91	88	83	79	80	85	80	77	65	56	71	75	88	93	94	95	96	96	86.0	24	
31	96	96	96	97	97	97	97	92	82	74	65	56	50	45	45	46	52	59	72	86	90	92	95	96	97	78.0	24	
HOURLY MAX	98	98	98	98	98	99	97	95	96	96	94	88	85	80	95	91	87	91	95	96	96	96	96	96	96	96		
HOURLY AVG	90.7	91.3	92.1	92.4	92.5	92.5	90.0	85.3	80.4	74.8	69.3	64.5	60.7	57.4	57.0	57.3	58.9	61.9	66.7	76.1	83.2	86.8	88.9	90.2				

STATUS FLAG CODES

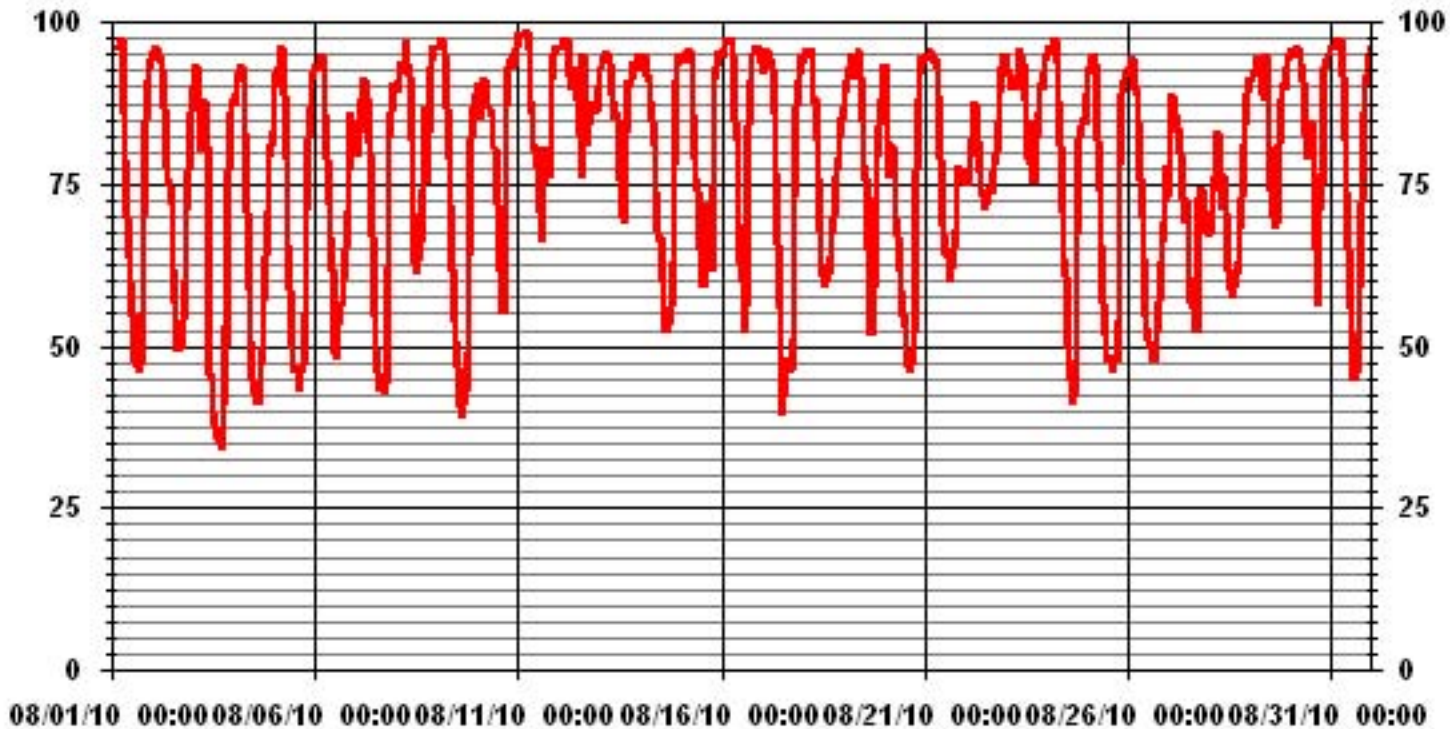
S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	- MISSING DATA
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE



MONTHLY SUMMARY

MAXIMUM 1-HR AVERAGE:	99	%	@ HOUR(S)	5	ON DAY(S)	11
MAXIMUM 24-HR AVERAGE:	89.7	%			ON DAY(S)	12
CALIBRATION TIME:	0	HRS	OPERATIONAL TIME:	744	HRS	
STANDARD DEVIATION:	16.93		AMD OPERATION UPTIME:	100.0	%	
			MONTHLY AVERAGE:	77.57	%	

### 01 Hour Averages





# Vector Wind Speed

## LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - COLD LAKE

AUGUST 2010

### VECTOR WIND SPEED (WS) hourly averages (km/hr)

MST	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
DAY	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
1	0.6	0.7	0.2	0.5	0.3	1.7	0.6	1.6	1.7	2	3	4.2	4.4	3.5	2.7	3.3	2.3	2.6	2.7	1.3	0.7	1.1	0.6	0.6	4.4	1	24
2	0.6	1.3	1.9	4.8	3.4	4.3	5.2	5.2	10	9.4	8.7	8	9.6	10	9.9	11	10.1	9.7	9.4	9.3	6.6	6.8	5.8	6	11	6.6	24
3	5.9	5	3.9	6.6	5.6	5.1	6.4	9.1	7.6	11.4	11.7	9.6	10.1	10	11.4	8.8	10.5	11.1	4.5	4.6	4	0.9	1.4	1	11.7	6.3	24
4	0.5	0.5	0.3	0.2	0.6	0.7	1.3	3.7	4.7	5.6	8.2	8.9	8.5	8.2	8	8.8	8.3	8.7	7.7	5.1	4.7	2.6	3.4	2.4	8.9	4.4	24
5	2.5	3.7	2.2	1.2	0.4	2.6	3.7	3.5	4.7	3.4	5.6	6	5	5.3	4.2	3.8	5.4	4.7	2.7	1.7	1.8	0.5	0.6	1	6.0	3.2	24
6	0.6	0.4	0.5	0.2	0.5	0.2	2	6.5	7.5	6.6	8.9	11.5	11.4	11.9	11.3	11.2	11.2	10.5	6.7	6.7	2	0.5	1.4	3.5	11.9	5.6	24
7	8.9	5	2.4	2.3	1.7	1.9	1.1	2.8	7.1	6.2	5.4	8.2	9	9.3	10.6	11.2	10.7	9.2	5.5	2.2	1.3	0.7	0.3	2.6	11.2	5.2	24
8	1.3	1.3	1.8	2.4	4.5	0.8	3.4	2.9	4.9	7.3	5.8	6.2	4.2	4.8	4.1	5.1	2.2	3.1	2.6	1.5	2.1	2.5	2.1	3.7	7.3	3.4	24
9	1.5	0.6	2	2.3	0.3	0.6	1.8	4	3.2	2.1	3.5	3.6	4.1	5	5.5	5.3	5	4.3	2.4	2.3	0.6	0.8	1	0.9	5.5	2.6	24
10	1.8	2.7	1.5	1.3	1.2	2.7	2	1.7	6.3	5.2	4.2	5.2	3.8	6	6.4	5.1	0.9	3.3	9.1	3.3	2.4	3.2	0.1	0.8	9.1	3.3	24
11	1	0.7	0.6	0.9	1.1	0.4	0.8	4.1	4.6	2.1	3	4.8	5.1	1.4	6.3	6.7	3.3	3.1	1.9	0.7	1	0.6	0.6	0.2	6.7	2.3	24
12	1.1	0.4	0.7	0.3	0.6	0.8	0.5	2.9	3.6	0.4	7	4	1.5	1.4	4	4.5	7	7.6	6.8	4.9	5.3	6.2	6.3	4.1	7.6	3.4	24
13	2.6	4	4.1	5	4.6	5.9	6.5	8.5	11	12.2	11.9	10.1	12.5	12.1	13.8	7.5	4.6	7.7	9.6	7.5	5.7	8.1	7.6	6	13.8	7.9	24
14	7.2	8.2	8.7	8.7	9.8	8.8	9.1	8.9	9.1	12.5	13.7	11.8	9.5	10.3	12.7	12.3	12.4	10.6	7.8	5.2	2.9	1.9	1.2	0.9	13.7	8.5	24
15	2.3	2.5	1.8	1.6	0.4	0.4	0.8	1.6	5	4.4	7.3	6.4	3	1.7	3.8	5.2	5.1	4.4	4	1.7	0.7	1.1	1.4	0.6	7.3	2.8	24
16	0.2	0.4	0.4	0.5	0.7	1.2	1.2	2.8	4.4	6.5	8	6.3	5.8	6.3	4	3.1	1.6	7.7	8.2	3.3	2.1	3.3	3.4	3.8	8.2	3.6	24
17	2.4	1.5	2.5	6.4	8.2	7.4	6	5.5	2.8	1.8	2.9	2.1	1	1.6	2.5	3.1	3	4.3	2.5	1.7	0.6	0.6	0.5	8.2	3.0	24	
18	0.6	0.1	0.2	0.5	1	1.1	1.3	4.5	5.2	5.3	8.8	9.1	10.8	11.3	10.3	10.8	9.1	7.8	7.7	6.5	7.1	8.3	8.4	6	11.3	5.9	24
19	7.1	6.1	5.9	4.9	1.8	0.4	0.7	1.7	2.6	3.4	0.5	5.5	7.2	8.1	7.8	8.3	7.5	6.7	3.8	3.7	3.6	4	4.1	3.9	8.3	4.6	24
20	3	3.4	5.6	6.1	5.4	4.7	3.4	8.1	9.2	12	10.9	11.5	11.9	13.2	11.8	12.2	8.4	7.6	4.4	0.6	1	0.3	0.1	0.2	13.2	6.5	24
21	0.7	0.2	0.7	1.8	5.6	4.2	7.5	5.8	4.4	1.4	6.2	8.3	8.8	8.2	9	10.5	8.9	8.1	7.8	5.3	5.1	4.4	3.8	4.7	10.5	5.5	24
22	4.7	5.3	5.7	5.5	3.2	0.5	1	3.3	4.3	3.9	5.4	3.5	2.4	2.9	2.5	2.1	3.3	2.8	1.9	1.9	3.2	3.1	1.8	2	5.7	3.2	24
23	3.8	4.5	5.9	5.5	6.2	5.7	5.2	6.5	6.8	8.7	8	11.8	10.3	12.3	11.9	8.5	9.7	8.5	11.4	5	5.9	6.2	6.5	6.5	12.3	7.6	24
24	6.3	6.1	4.4	4.1	3.5	3.4	2	4.2	4.6	3.2	2.9	2.8	3.8	4.6	3.9	4	2.4	1	2.1	3.7	4.2	4.5	1	6.3	3.6	24	
25	0.7	1	0.6	0.2	0.7	1	3.5	5.4	5.9	4.3	5.6	6.3	8.3	9	8.8	7.8	7.4	5.4	3.1	2.7	0.7	1.1	1	1.1	9.0	3.8	24
26	1.6	0.5	4.4	3.2	7.7	8.8	5.2	7.8	10.8	12	13	13.4	13.2	13	11.8	12.8	11.6	11.1	13.6	13.6	15.7	16	6.9	6.6	16.0	9.8	24
27	7.2	9.4	14	13.5	12.5	11.5	15.4	16.2	18.4	17.1	18.8	19	19.5	19.4	<b>20.9</b>	17.9	16.1	14.4	11.2	7.4	7.6	11.5	7.3	10.9	<b>20.9</b>	<b>14.0</b>	24
28	11.5	9.9	9.6	9.6	9.6	12.3	13	13.7	16.5	15.5	16.6	17	15.4	14.3	13.8	13.6	11	10.2	7.4	6.3	5.8	5.2	4.8	4.5	17.0	11.1	24
29	4.3	3.5	3.5	3.6	3.1	2.6	4.4	6.3	4.1	4.8	8.2	7.4	7.7	7.9	8.1	7.3	6.8	6.7	4.9	3.3	0.8	0.4	2.5	1.4	8.2	4.7	24
30	1.9	1	0.6	1.3	2.3	2.5	2.3	4.2	3.7	3.7	3.6	6.3	4.4	5.3	2.6	1.1	2.5	4.1	1.7	0.8	0.4	0.5	1.3	0.1	6.3	2.4	24
31	0.9	0.4	1.1	0.7	0.9	1.2	0.5	1.6	3.1	3.2	3.4	5.4	4.9	5.4	4.6	3.8	1.8	1.6	0.2	1.4	2.7	1.8	1.3	0.1	5.4	2.2	24
HOURLY MAX	11.5	9.9	14.0	13.5	12.5	12.3	15.4	16.2	18.4	17.1	18.8	19.0	19.5	19.4	<b>20.9</b>	17.9	16.1	14.4	13.6	13.6	15.7	16.0	8.4	10.9			
HOURLY AVG	3.1	2.9	3.2	3.4	3.5	3.4	3.8	5.3	6.4	6.4	7.4	7.9	7.6	7.9	8.1	7.6	6.8	6.8	5.6	4.0	3.5	3.5	3.0	2.8			

#### STATUS FLAG CODES

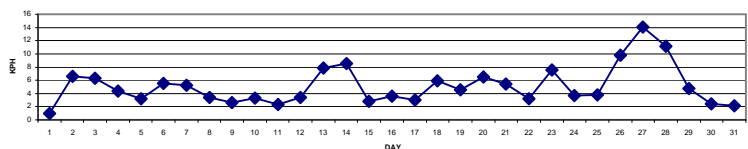
S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	- MISSING DATA
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE

LAST CALIBRATION: November 5, 2008

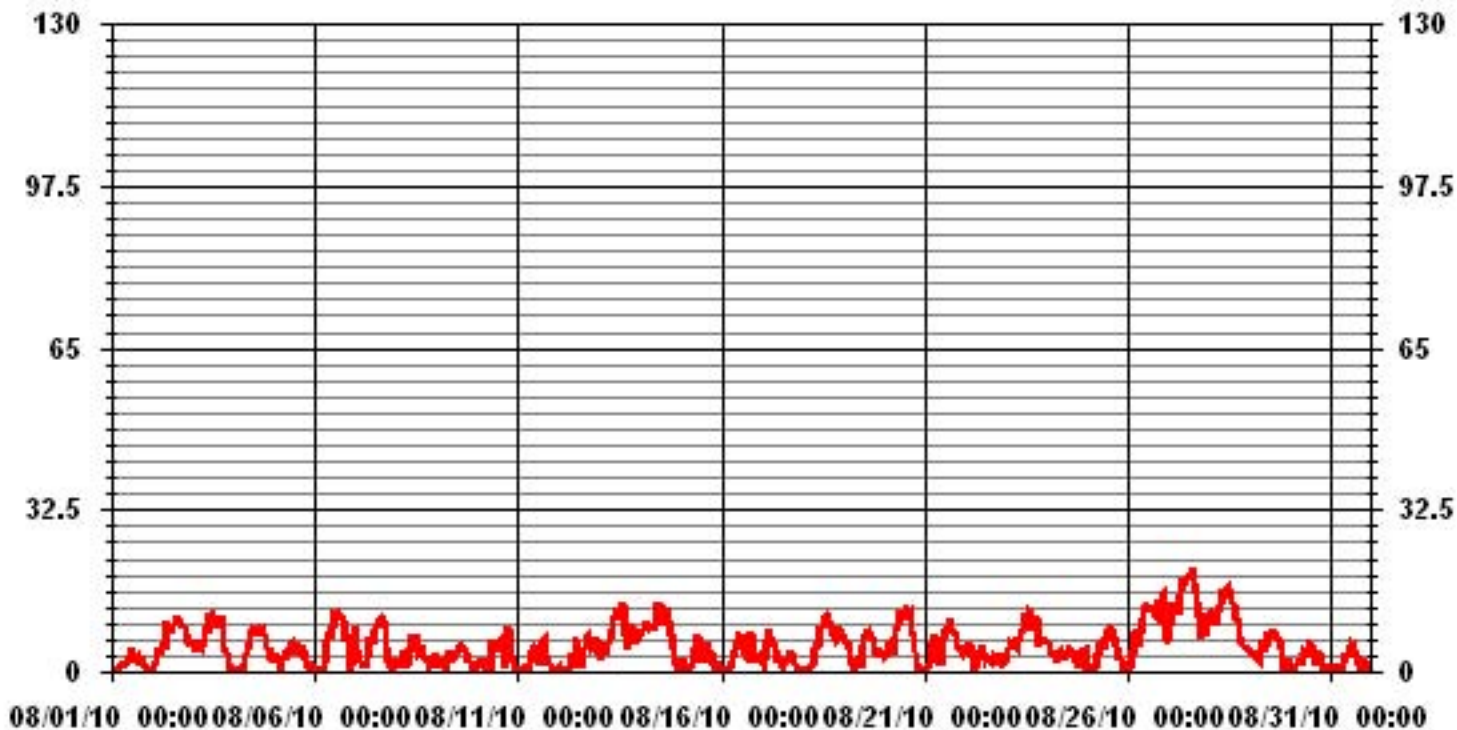
#### MONTHLY SUMMARY

MAXIMUM 1-HR AVERAGE:	20.9	KPH	@ HOUR(S)	14	ON DAY(S)	27
MAXIMUM 24-HR AVERAGE:	14.0	KPH			ON DAY(S)	27
CALMS (≤ 0 KPH)	2.96	%	OPERATIONAL TIME:	744	HRS	
MONTHLY CALIBRATION TIME:	0	HRS	AMD OPERATION UPTIME	100.0	%	
STANDARD DEVIATION:	4.02		MONTHLY AVERAGE	5.16	KPH	

24 HOUR AVERAGES FOR AUGUST 2010



### 01 Hour Averages



— LICA WSP KPH

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - COLD LAKE

AUGUST 2010

VECTOR WIND SPEED MAX instantaneous maximum in km/hr

MST		0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	
HOUR START	HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	
DAY																											
1		2.9	3.3	3.7	2.1	3.3	3.9	3.7	3.4	5.8	5.8	10.9	9.3	12.6	10.2	8.1	8.5	7.5	6.1	6.4	2.5	1.7	3.1	2.1	2	12.6	
2		3.3	4.8	5.6	7.2	6.3	7.5	7.9	10.3	17.6	14.8	14.8	12.4	14.3	16.5	15.8	17.2	17.2	14.5	13.8	14.2	9.8	10.3	7.9	9.1	17.6	
3		8.6	8.2	6.5	10.2	8.6	9.7	10.4	13.2	14.8	19.2	18.6	14.8	18.2	20.3	19.1	14.3	17.4	17.1	8.2	8.3	6.9	1.8	3.2	2.6	20.3	
4		1.7	1.9	1.9	2.3	2.3	3.5	4.7	6.1	8.3	10.2	14.5	13.6	13.9	12.3	13.5	14.8	12.8	14.4	12.7	8.3	7.5	4.7	4.2	4.9	14.8	
5		3.2	4.5	3.6	4.1	5.3	4.9	6.7	7.1	7.7	8.5	11.3	11.9	9.1	10.2	10.3	11.7	9.5	9.4	5.6	3.1	3.5	3.9	3.3	1.8	11.9	
6		1.9	1.4	1.3	1.5	2.8	1.8	6.9	10.4	10.3	10.6	17.1	18.1	16.4	17	16.8	22.1	18.4	16.8	13.3	9.9	5.8	3.1	3.5	9.7	22.1	
7		13.3	10	5.2	4.1	4.2	5.9	5.5	9.5	12.2	11	11.8	15	16.9	16.3	16.7	17.9	18.4	16.2	10.7	4.1	3.2	1.5	1.5	7.1	18.4	
8		5.6	4.2	8.5	9.7	9.6	4.2	7.6	9.8	9.8	12.6	11.7	12.4	8.9	8.7	9.1	15.9	5.1	7.7	5.4	2.8	4	3.7	3.8	6.9	15.9	
9		4.3	2.3	6.1	6.3	3.6	4.3	7.4	8.2	6.9	7.1	6.9	8.4	10	13.8	12	11.9	10.7	8.6	5.6	4.2	2.2	1.6	2.2	2	13.8	
10		3.5	4.9	3.7	5.8	6	5.9	5.2	9.2	11	8.2	8.7	12.3	8	10.8	11.7	10.3	5.6	10.5	15.4	9.9	9.6	7.7	6.2	3	15.4	
11		2.7	3.6	2.2	3.1	3.8	3	2.9	7.9	8.8	6.1	7.5	9.4	9.4	10.2	10.5	14.8	8.3	10.9	4.5	2.9	3.5	2.7	3.4	2.9	14.8	
12		3.7	3.3	2.4	2	4.1	5.1	5.3	10.2	8.5	12.8	12.5	6.9	5.3	12.1	8.4	8.8	11.7	16.1	12.6	6.8	9.2	10.3	9.6	7.4	16.1	
13		4.1	6	6.4	7.5	8.7	9.8	11	16.1	15.1	18.8	17.3	16.1	21	20.9	21	18.8	10.4	17	15	10.3	10.1	11.8	11.1	10	21	
14		10.9	12.8	12.6	12.1	14.5	13.6	14.4	13.4	18.5	21.8	21	18.7	16.9	17.8	21.2	22.7	19.2	18.6	14.8	9.4	4.6	3.3	3.8	4.5	22.7	
15		5.5	5.7	5	2.7	2	2.8	3.3	4.4	9.9	9.5	14	12.8	8.3	10.1	14.3	9.7	10.7	8.2	7.8	4.4	3.1	2.9	3.1	1.5	14.3	
16		4.4	3.1	3.7	5.2	3.4	3.3	3	5.2	7.7	11.4	12.5	12.5	10.8	12	10.6	6.6	3.3	17.1	14.4	6.8	7.3	6.9	7	8.6	17.1	
17		6.4	3.7	5.4	12.2	11.9	11	10.2	10.2	7.8	8.1	10	7.6	8.5	7.9	7.7	10.9	7.9	8.5	6.7	3.9	1.3	1.6	1.7	1.7	12.2	
18		3.7	4.1	2.7	2.3	2.4	2.5	5.5	7	9.3	8.6	15.1	15.8	15.6	15.9	15.2	15.8	13.4	12.6	10.6	9.3	10.2	10.7	11.9	8.4	15.9	
19		11	9.5	8.5	8.4	8.1	8.1	7.6	8.6	7.9	9.3	18.1	16.8	15.2	13.7	12	12.2	12.4	10.5	7.8	5.2	6	5.4	5	5.9	18.1	
20		4.2	5.6	8.7	9.6	7	7.6	7.7	11.7	13.8	17.4	18.7	18.7	17	20.8	18.9	20.8	13.7	12	7.9	3.2	2.8	2.1	2	3.1	20.8	
21		2.8	2.5	3.6	7.8	9.6	8.3	12.2	9.3	7.9	8.8	10.4	16	13.6	14	15.3	16.7	13.7	13	12.1	9.7	9.2	9.2	8	8	16.7	
22		7.9	10.5	10.3	10.7	6.1	3.3	2.7	7.4	11.4	9.2	8.7	9.9	7.2	6.3	5.5	4.1	5.4	6	3.7	3.2	7.3	6.5	3.7	4	11.4	
23		7.2	7	9.5	8	9.3	10.2	9.8	10.5	11.8	14	13.5	15.2	17.5	19.3	21.2	13.8	15.2	14.3	21.8	8.5	9	8.9	11.5	9.6	21.8	
24		8.8	8.5	7.2	5.7	5	5.9	5.3	7.7	8.5	7.4	5	7.2	9.4	8.7	9.3	10.6	10.5	6	2.4	3.3	5.1	7.2	6.3	3.6	10.6	
25		2.1	3	1.6	2.8	2.7	2.7	6.7	7.9	9.4	8.4	9.7	14.2	16.4	16.7	14.3	13.5	12.5	8.1	5.8	3.9	2.8	3.2	3.4	5	16.7	
26		8.9	10.5	10.2	7.5	14.6	12.6	11.5	14.8	17	19.6	18.9	20.4	20.9	20.2	19.3	20.2	18.1	17.9	20.5	21.9	21.5	21.7	16.8	15.7	21.9	
27		14.6	15.3	22.1	22	18	18.6	22.7	24.2	28	29.4	29.7	28.9	<b>34.7</b>	27.2	29.6	27.3	23.7	25	23.2	15.9	13.6	18.4	11.5	17.7	<b>34.7</b>	
28		19.2	17.1	17.1	14.9	16.6	16.9	19.7	19.2	25	24.4	23.4	24.9	22.7	21.1	22.9	22	16.2	15.8	12.6	10.4	13.3	8.3	6.8	7.4	25	
29		6.8	6.4	5.2	7.6	4.7	4.5	7	10.4	9.2	10.9	16.1	13.3	12.3	13	12.4	12	11.4	11.5	8	6.3	3.5	6	7.1	3.7	16.1	
30		3.8	4.5	2.6	3.3	4.1	4.5	4.5	7.8	6.7	7.8	10.6	9.3	8.3	12.2	7.2	7	6.2	7.2	3.8	2.9	2.2	1.8	4.2	3.1	12.2	
31		2.9	3.6	3.1	2.9	3.9	4.6	2.1	4.2	7.6	7.3	9.2	13.5	13.5	12.8	11.2	10.6	7.4	2.6	11.9	14.4	5.5	6.2	3	3.3	14.4	
PEAK		19.2	17.1	22.1	22.0	18.0	18.6	22.7	24.2	28.0	29.4	29.7	28.9	34.7	27.2	29.6	27.3	23.7	25.0	23.2	21.9	21.5	21.7	16.8	17.7		

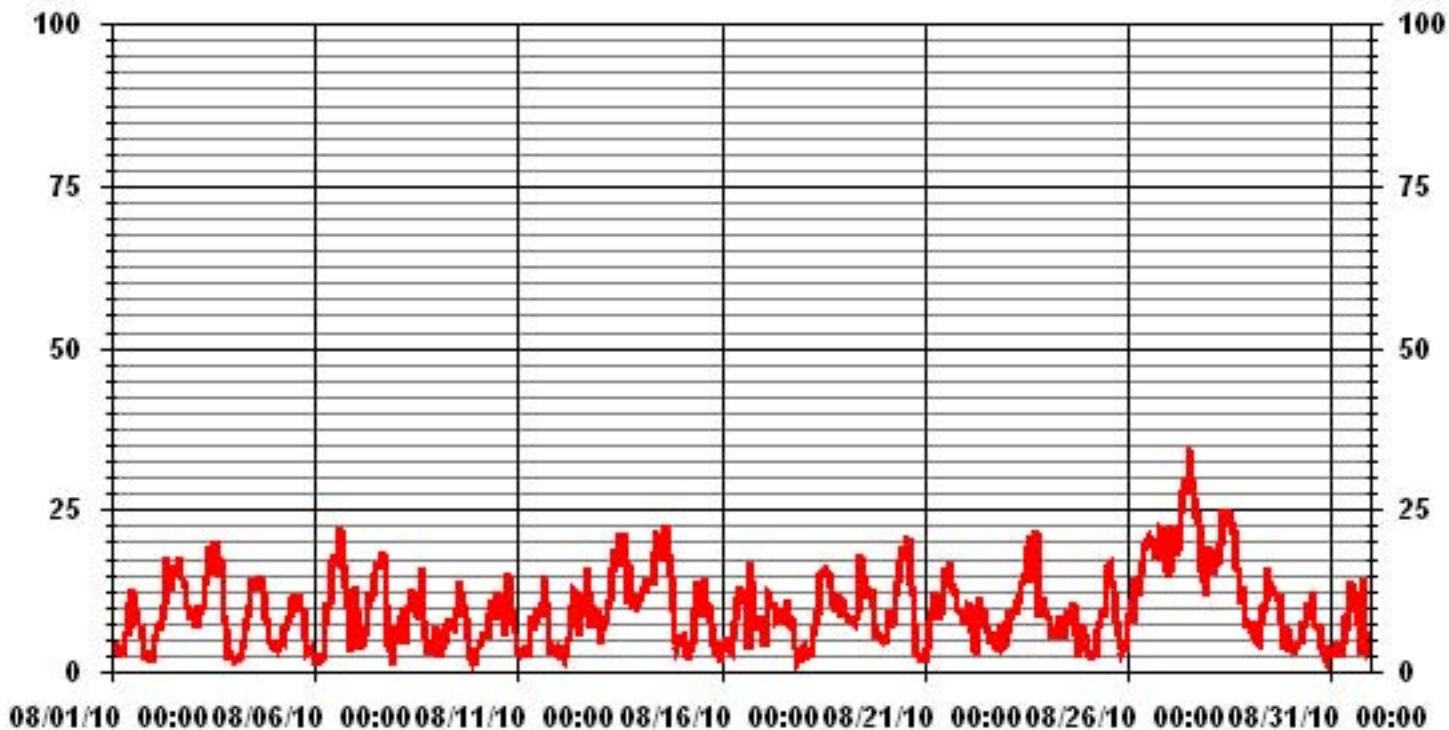
STATUS FLAG CODES

S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	- MISSING DATA
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE

MONTHLY SUMMARY

MAXIMUM INSTANTANEOUS READING	34.7	KPH	@ HOUR(S)	12
			ON DAY(S)	27

### 01 Hour Averages



— LICA WSMAX KPH

LICA  
WSP / WD Joint Frequency Distribution (Percent)

August 2010

Distribution By % Of Samples

Logger Id : 01  
Site Name : LICA  
Parameter : WSP  
Units : KPH

Wind Parameter : WD  
Instrument Height : 10 Meters

		Direction																
Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq	
< 6.0	1.47	1.61	1.88	3.49	3.76	4.43	6.18	2.68	3.22	4.56	7.79	8.46	4.83	3.22	1.74	2.28	61.69	
< 12.0	.53	.67	.40	.40	.80	1.20	5.10	.13	.00	.13	1.74	2.95	5.91	2.28	4.43	2.01	28.76	
< 20.0	.00	.00	.00	.00	.40	.94	.00	.00	.00	.00	.00	2.68	.94	.40	.67	.40	6.45	
< 29.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.13	.00	.00	.00	.00	.13	
< 39.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	
>= 39.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	
Totals	2.01	2.28	2.28	3.89	4.97	6.58	11.29	2.82	3.22	4.70	9.54	14.24	11.69	5.91	6.85	4.70		

Calm : 2.95 %

Total # Operational Hours : 744

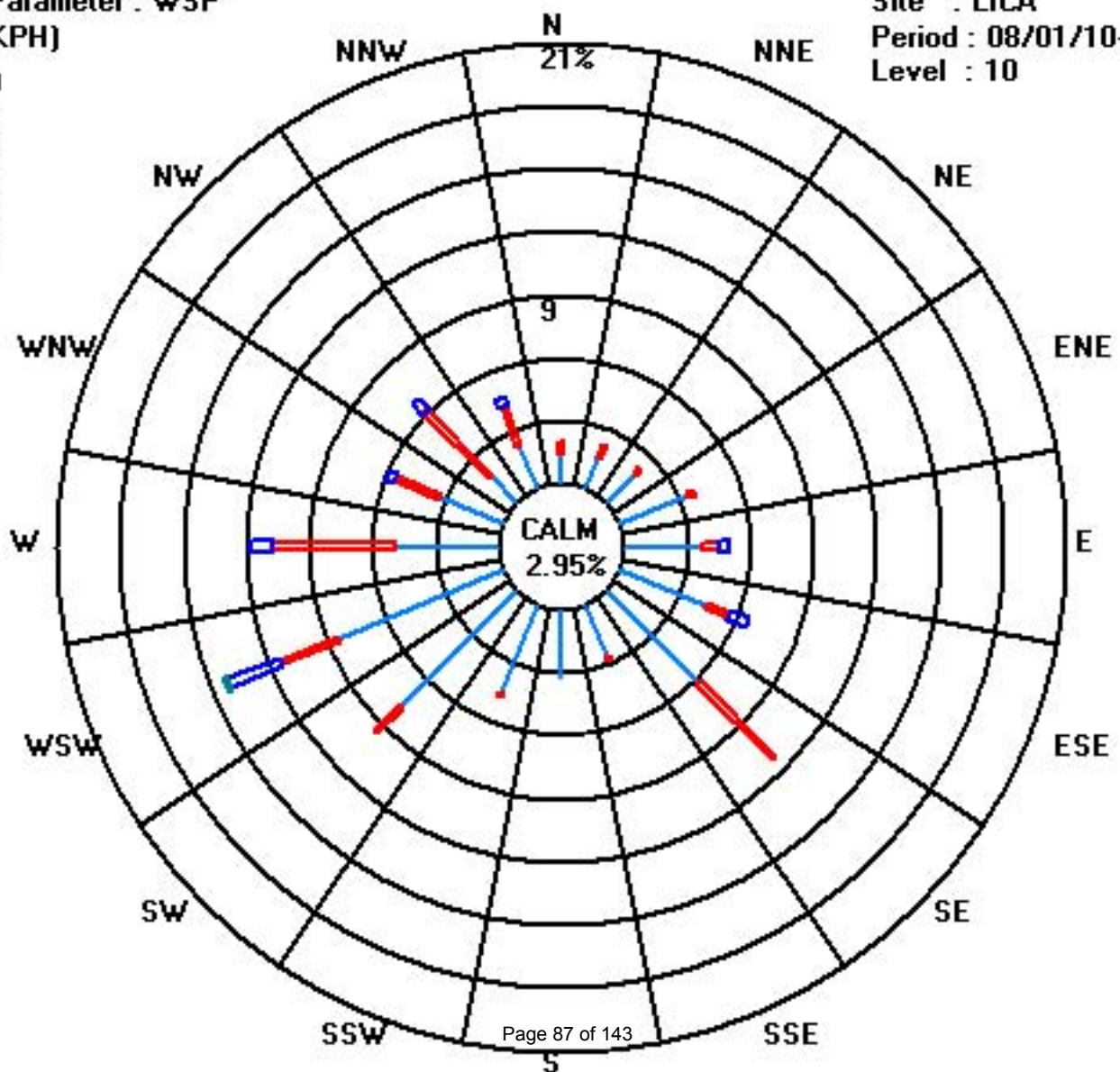
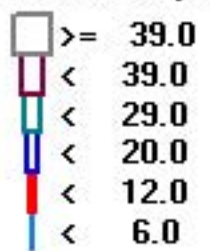
Distribution By Samples

		Direction																
Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq	
< 6.0	11	12	14	26	28	33	46	20	24	34	58	63	36	24	13	17	459	
< 12.0	4	5	3	3	6	9	38	1		1	13	22	44	17	33	15	214	
< 20.0					3	7						20	7	3	5	3	48	
< 29.0												1					1	
< 39.0																		
>= 39.0																		
Totals	15	17	17	29	37	49	84	21	24	35	71	106	87	44	51	35		

Calm : 2.95 %

Total # Operational Hours : 744

Class Limits (KPH)



# Vector Wind Direction



# LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - COLD LAKE

AUGUST 2010

## VECTOR WIND DIRECTION (WD) hourly averages in degrees

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	24-HOUR	24-HOUR AVG	QUADRANT	RDGS.	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	AVG.	QUADRANT	RDGS.		
DAY																													
1	243	234	175	219	123	207	311	28	110	132	227	264	280	269	236	275	230	188	211	160	142	202	140	136	230		SW	24	
2	221	218	220	242	245	242	252	269	300	290	271	278	281	282	268	266	274	263	256	253	250	246	250	249	265		W	24	
3	261	259	275	327	331	334	300	301	304	327	334	322	319	318	330	330	319	305	299	303	325	163	228	210	313		NW	24	
4	180	177	175	139	180	222	238	246	238	265	279	276	283	276	277	284	266	261	262	256	245	243	253	248	264		W	24	
5	231	238	226	232	153	239	240	250	270	267	272	269	316	249	259	222	224	216	147	176	148	120	196	75	242		WSW	24	
6	65	50	35	2	333	345	105	125	127	124	128	128	134	132	130	130	128	128	131	128	131	104	42	122	126		SE	24	
7	137	143	237	111	128	130	173	196	246	241	240	253	255	261	259	261	269	263	227	212	118	289	251	241		WSW	24		
8	140	138	246	200	233	191	312	148	137	137	153	147	165	209	201	236	123	156	204	199	223	234	261	249	187		S	24	
9	259	216	230	243	211	52	256	247	235	185	144	169	202	206	172	200	194	192	172	137	139	75	86	78	193		S	24	
10	94	107	89	296	236	52	83	271	353	36	43	124	100	74	67	104	91	238	246	100	335	75	336	236	73		ENE	24	
11	186	221	140	144	249	217	268	231	241	233	183	211	240	203	229	226	221	218	211	165	176	215	107	182	219		SW	24	
12	227	160	100	178	164	248	212	249	273	325	249	259	290	334	257	284	316	310	302	284	287	301	304	288	285		WNW	24	
13	276	291	315	306	304	311	316	318	321	322	330	322	324	331	334	345	359	311	314	322	304	311	317	309	320		NW	24	
14	315	313	309	305	311	314	314	311	311	323	321	321	325	323	301	331	309	335	350	335	293	261	203	213	317		NW	24	
15	244	246	230	239	105	46	78	0	24	81	26	347	353	0	298	23	15	341	338	325	139	211	205	122	355		N	24	
16	183	202	196	289	209	105	115	140	125	130	133	137	132	134	144	195	106	350	49	73	93	96	81	77	110		ESE	24	
17	55	287	300	333	327	328	327	341	326	350	16	79	126	143	319	237	246	242	224	219	144	139	128	84	317		NW	24	
18	188	297	236	147	128	108	153	120	130	135	136	134	133	134	133	131	131	131	127	126	129	128	127	129	131		SE	24	
19	127	132	134	135	2	166	66	131	237	206	61	288	274	274	254	256	261	267	241	228	230	241	245	242	237		SW	24	
20	254	244	235	236	222	228	219	254	261	268	266	262	268	256	263	261	253	256	267	262	182	198	251	148	255		WSW	24	
21	118	125	252	181	132	129	129	127	126	93	74	106	105	99	104	120	100	106	103	106	80	78	62	69	106		ESE	24	
22	77	88	91	88	115	219	243	77	75	26	25	9	10	14	8	26	356	348	335	339	347	340	287	287	36		NE	24	
23	268	283	290	273	267	263	264	279	284	289	293	303	295	300	291	279	281	287	304	286	261	269	264	264	283		W	24	
24	263	268	268	233	237	230	196	225	244	241	240	216	229	231	235	242	221	181	125	115	123	132	130	132	223		SW	24	
25	87	103	35	8	79	72	122	128	138	159	148	195	216	230	246	268	261	263	257	230	158	103	68	159	207		SSW	24	
26	90	333	82	71	116	121	74	86	93	93	105	108	112	104	101	105	106	95	92	94	102	115	125	331	100		E	24	
27	294	255	237	257	248	244	249	253	256	258	248	256	254	248	247	253	253	262	248	233	226	237	216	230	249		WSW	24	
28	232	229	227	236	241	259	254	251	255	255	256	257	270	268	279	283	273	265	272	269	282	259	263	256	257		WSW	24	
29	267	262	241	257	254	260	287	329	29	23	323	13	24	35	29	33	42	125	122	122	66	43	83	50	11		NNE	24	
30	90	75	295	72	62	84	58	109	132	117	333	359	47	88	181	171	290	39	352	209	189	112	242	214	67		ENE	24	
31	118	171	241	145	119	154	211	180	241	247	234	215	218	227	208	219	184	126	26	329	79	17	66	303	208		SSW	24	
HOURLY AVG	315	333	315	333	333	345	327	341	353	350	334	359	353	334	334	345	359	350	352	339	347	340	336	331					

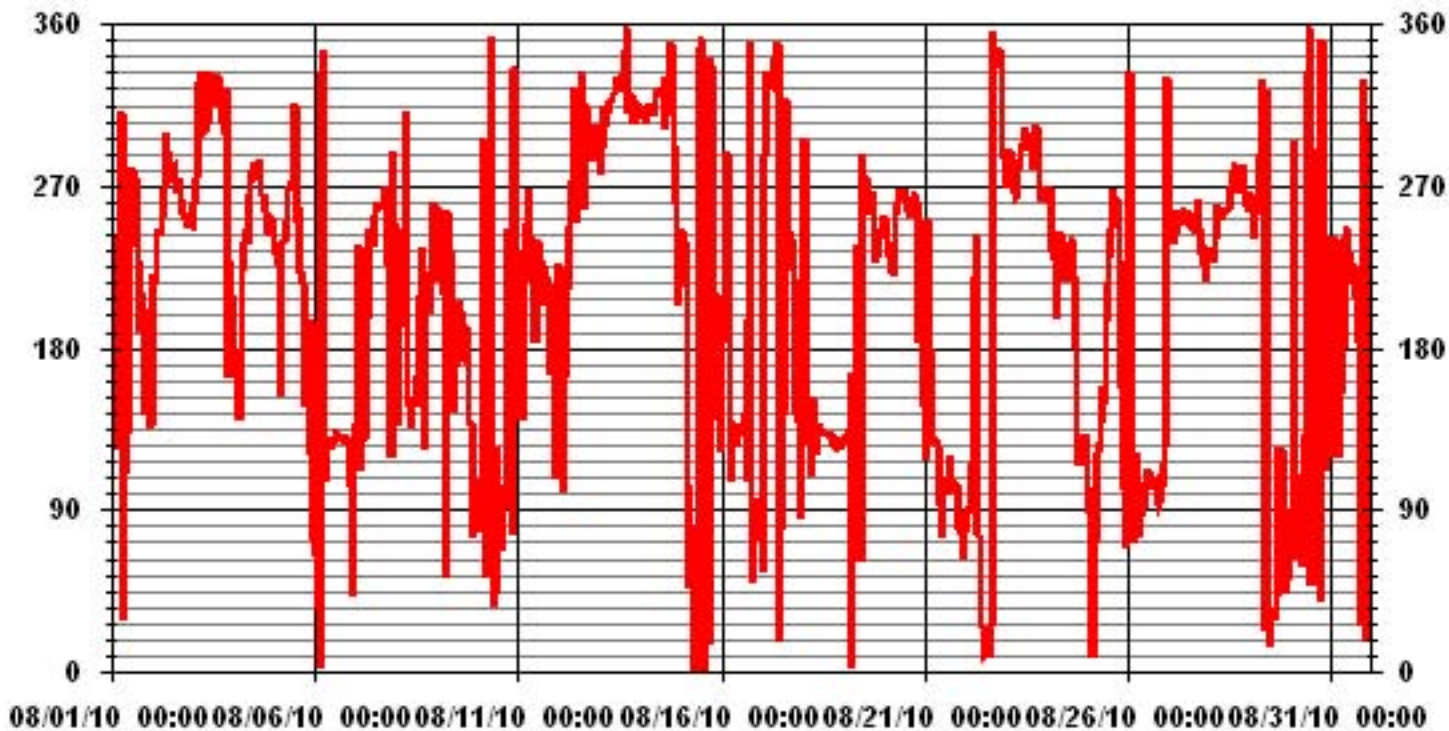
**STATUS FLAG CODES**

S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	- MISSING DATA
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE

LAST CALIBRATION:	November 5, 2008
DECLINATION :	19 DEGREES FROM MAGNETIC NORTH

MONTHLY CALIBRATION TIME:	0	HRS	OPERATIONAL TIME:	744	HRS
STANDARD DEVIATION	87.63		AMD OPERATION UPTIME	100.0	%
			MONTHLY AVERAGE	258	DEG

### 01 Hour Averages



— LICA WDR DEG

# Standard Deviation Wind Direction

# LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - COLD LAKE

AUGUST 2010

## STANDARD DEVIATION WIND DIRECTION (STDWDIR) hourly averages in degrees

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00
DAY																								
1	59	34	78	54	50	30	63	40	51	51	46	43	41	50	60	42	45	38	25	22	31	20	35	38
2	53	55	54	16	18	17	18	23	21	21	23	21	23	23	23	23	21	21	20	16	16	16	14	17
3	18	17	18	16	19	22	17	14	17	22	20	20	21	28	25	23	20	17	15	11	16	23	29	28
4	47	54	55	66	30	59	37	21	26	24	24	23	25	24	26	22	21	21	19	17	15	24	12	18
5	8	9	21	54	65	46	18	25	30	40	35	33	36	34	40	51	31	29	21	18	20	72	64	31
6	42	50	28	50	43	43	23	13	14	22	21	15	19	18	13	19	14	13	12	11	47	66	44	44
7	19	22	44	15	37	36	30	36	21	25	31	27	26	24	24	24	21	23	21	17	23	35	38	42
8	50	41	49	29	21	43	39	47	29	19	37	35	42	32	32	38	22	22	21	33	19	13	16	10
9	49	55	39	27	47	50	37	26	31	44	38	38	47	43	41	35	33	32	28	29	68	39	24	40
10	19	15	29	45	61	34	46	31	21	23	30	24	26	27	30	33	36	15	20	37	43	25	35	51
11	41	60	47	42	46	53	54	23	24	49	43	36	34	64	31	25	35	39	30	66	50	43	63	62
12	50	55	50	66	47	40	66	45	44	63	22	22	61	67	25	23	18	14	14	17	19	15	15	18
13	18	11	14	13	14	15	15	16	15	16	18	18	18	21	20	25	28	17	14	15	15	12	14	14
14	15	16	14	13	15	15	15	16	18	17	18	19	19	19	19	25	15	19	19	14	12	16	28	59
15	33	41	26	21	57	50	49	49	24	32	27	32	59	49	38	30	30	30	26	30	46	41	22	41
16	48	47	72	63	47	35	42	23	21	13	21	29	34	32	37	27	36	33	22	28	50	29	23	26
17	34	27	39	20	15	14	16	22	36	68	53	58	61	38	59	48	38	26	27	31	24	36	40	52
18	64	74	66	64	54	36	51	19	18	20	25	20	14	19	17	14	14	13	11	12	12	12	12	11
19	12	13	14	18	38	67	32	60	37	50	64	44	24	22	19	19	20	20	20	18	16	14	10	12
20	13	22	18	18	22	20	27	19	21	21	23	25	23	22	23	22	20	21	19	43	27	58	38	63
21	44	71	34	34	12	20	11	15	29	56	28	25	25	27	24	19	24	23	22	20	20	21	23	23
22	22	20	22	20	27	49	38	30	29	46	25	36	43	37	29	27	22	24	27	23	18	23	23	19
23	18	19	16	20	21	20	20	19	21	19	18	15	17	16	19	21	21	21	15	19	18	19	19	18
24	17	17	20	17	15	19	44	20	27	37	32	44	43	29	30	39	37	31	24	11	9	11	14	69
25	59	56	40	60	45	34	20	13	26	36	35	37	30	26	27	24	22	22	16	13	55	33	44	42
26	52	45	28	38	19	16	32	23	21	23	23	22	22	22	23	22	22	21	20	20	21	21	41	17
27	22	20	22	20	20	20	18	19	19	20	20	19	20	19	18	20	19	21	20	24	24	22	24	22
28	21	22	23	22	21	21	19	21	20	20	20	23	22	23	22	21	23	21	21	20	20	19	18	18
29	20	21	17	17	16	16	17	19	27	27	33	24	28	28	25	23	23	19	18	18	51	51	22	37
30	24	60	28	31	22	21	21	22	21	36	36	21	24	33	30	50	44	25	32	41	57	34	48	46
31	55	47	44	64	36	58	57	41	33	45	52	40	42	46	42	40	25	13	51	42	40	33	38	57

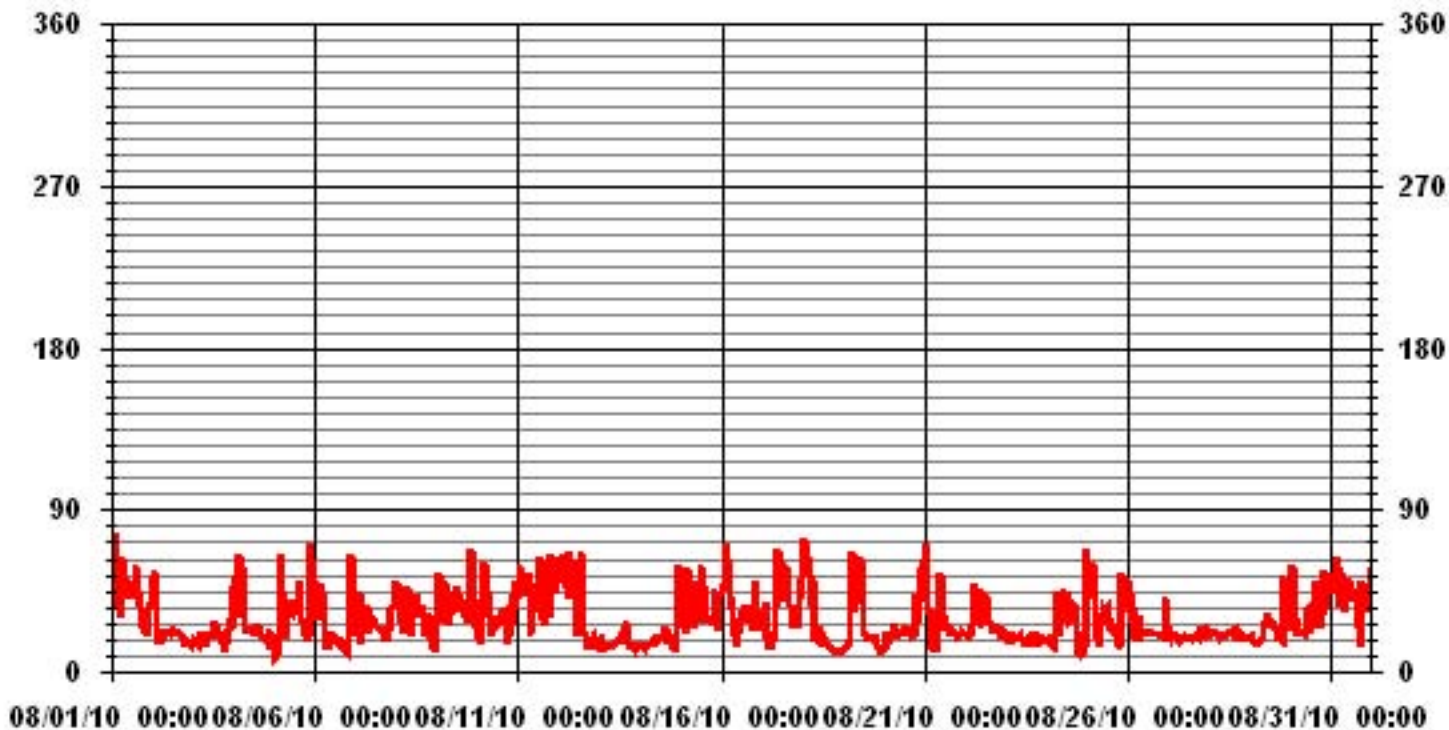
**STATUS FLAG CODES**

S - OUT OF SERVICE	IZS - IZS - DAILY ZERO/SPAN CHECK
N - INVALID DATA	M - MISSING DATA
D - INSTRUMENT DRIFT	P - POWER FAILURE
C - CALIBRATION	NA - NOT APPLICABLE

LAST CALIBRATION: November 5, 2008

CALIBRATION TIME: 0 HRS      OPERATIONAL TIME: 744 HRS

### 01 Hour Averages



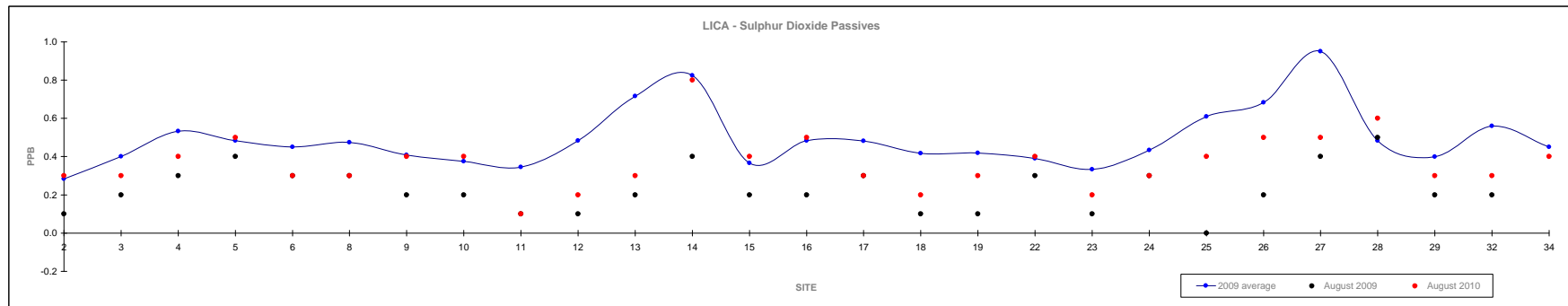
— LICA STDWDIR DEG

# Non-Continuous Monitoring

### Passive Summary Results for August 2010

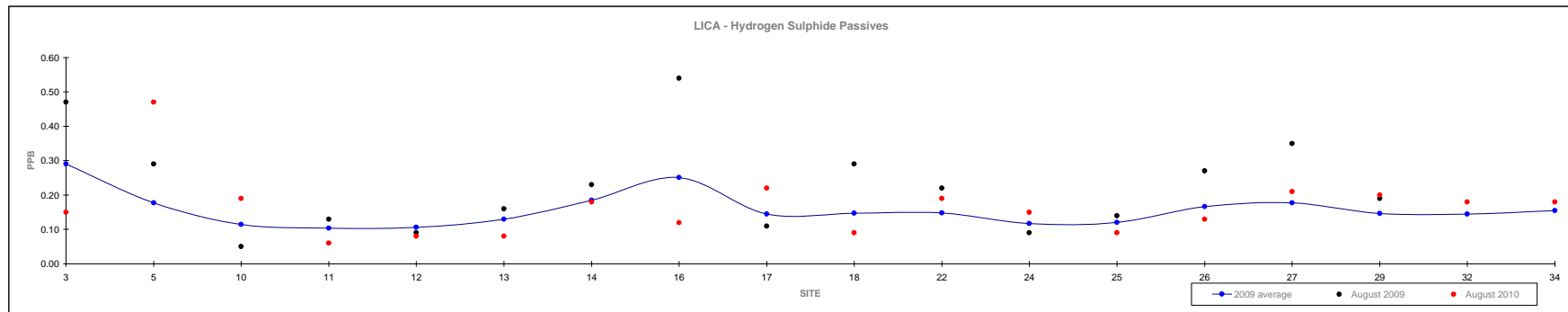
Lakeland Industry & Community Association

	Sulphur Dioxide ppb																												Reading	Site				
	2009														August 2010																			
Mean	0.3	0.4	0.5	0.5	0.5	0.5	0.4	0.4	0.3	0.5	0.7	0.8	0.4	0.5	0.5	0.4	0.4	0.4	0.3	0.4	0.6	0.7	1.0	0.5	0.4	0.6	0.5	0.4	0.4	0.1	0.4	0.4	-	
Minimum	0.1	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.3	0.2	0.2	0.2	0.4	0.1	0.1	0.1	0.1	0.1	0.1	#11
Maximum	0.9	0.9	1.3	1.1	1.2	0.9	1.0	0.9	0.8	1.1	1.2	2.2	0.9	1.1	1.0	1.3	0.8	0.9	0.8	1.1	1.4	1.4	2.6	0.9	0.8	1.2	0.5	0.8	0.8	0.8	0.8	0.8	0.8	#14



### Passive Summary Results for August 2010 Lakeland Industry & Community Association

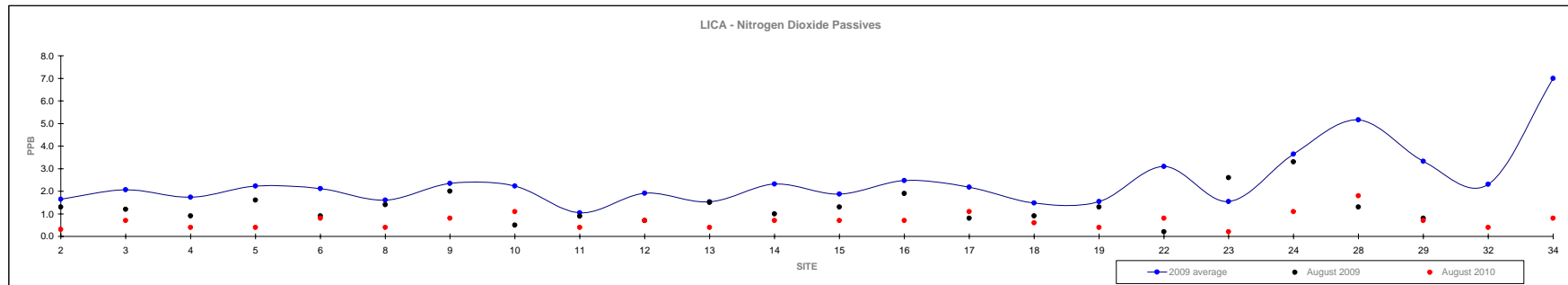
	Hydrogen Sulphide ppb																August 2010			
	3	5	10	11	12	13	14	16	17	18	22	24	25	26	27	29	32	34	Reading	Site
<b>Mean</b>	0.29	0.18	0.12	0.10	0.11	0.13	0.19	0.25	0.15	0.15	0.15	0.12	0.12	0.17	0.18	0.15	0.15	0.16	0.17	-
<b>Minimum</b>	0.05	0.09	0.03	0.03	0.05	0.03	0.11	0.07	0.08	0.05	0.04	0.06	0.03	0.06	0.07	0.04	0.10	0.10	0.06	#11
<b>Maximum</b>	0.80	0.29	0.20	0.16	0.21	0.20	0.30	0.54	0.26	0.29	0.24	0.24	0.18	0.28	0.35	0.28	0.19	0.21	0.47	#5





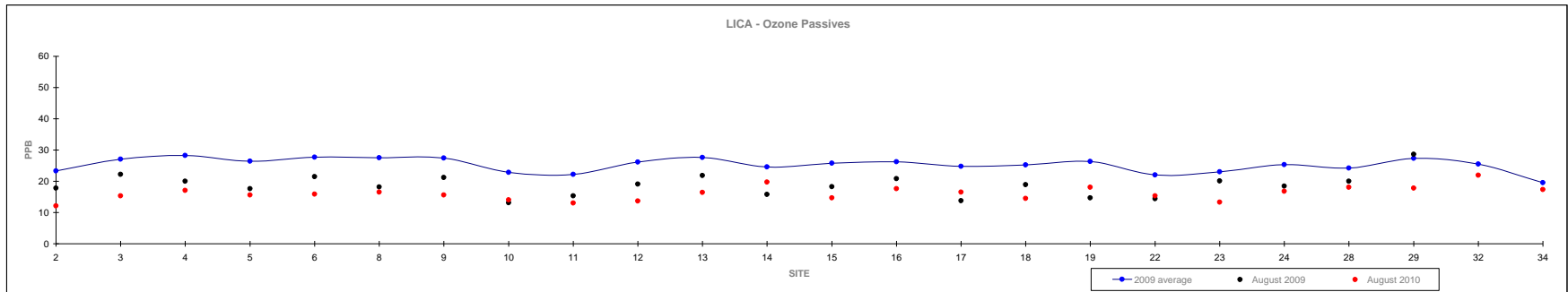
### Passive Summary Results for August 2010 Lakeland Industry & Community Association

	Nitrogen Dioxide ppb																												August 2010	
	2	3	4	5	6	8	9	10	11	12	13	14	15	16	17	18	19	22	23	24	28	29	32	34	Reading	Site				
Mean	1.6	2.1	1.7	2.2	2.1	1.6	2.4	2.2	1.0	1.9	1.5	2.3	1.9	2.5	2.2	1.5	1.5	3.1	1.5	3.6	5.2	3.3	2.3	7.0	0.7	-				
Minimum	0.9	0.8	0.8	1.0	0.8	0.9	1.5	0.4	0.5	0.5	0.9	0.9	1.0	1.7	0.7	0.7	0.9	0.2	0.4	2.7	1.0	0.5	1.2	5.6	0.2	#23				
Maximum	2.9	4.6	3.7	5.0	4.4	3.0	4.0	5.0	2.0	6.4	2.9	6.1	3.6	3.9	4.1	3.5	2.4	7.2	2.6	5.6	10.6	7.0	3.0	8.4	0.7	#28				



### Passive Summary Results for August 2010 Lakeland Industry & Community Association

	Ozone ppb																												August 2010	
	2	3	4	5	6	8	9	10	11	12	13	14	15	16	17	18	19	22	23	24	28	29	32	34	Reading	Site				
Mean	23.3	27.1	28.3	26.5	27.7	27.5	27.5	22.8	22.2	26.2	27.6	24.6	25.8	26.2	24.8	25.2	26.3	22.0	23.0	25.3	24.2	27.3	25.5	19.6	16.1	-				
Minimum	13.3	17.9	17.3	16.0	17.7	15.4	14.9	12.0	14.6	17.3	15.5	14.8	15.5	15.1	13.8	17.7	14.7	13.6	15.3	12.5	14.8	17.8	24.7	18.5	12.1	#2				
Maximum	32.3	38.6	47.5	37.9	43.6	38.6	42.6	38.2	30.2	46.0	36.5	35.4	42.3	36.7	46.5	36.2	41.7	32.6	32.6	40.5	37.7	40.0	26.3	20.6	21.9	#32				



# Calibration Reports

# Sulphur Dioxide

### SO<sub>2</sub> Calibration Report

#### Station Information

Calibration Date	August 4, 2010	Previous Calibration	July 13, 2010
Company	Lakeland Community and Industry Association		
Plant / Location	LICA 1 - Cold Lake South		
Start Time (MST)	13:28	End Time (MST)	16:49
Reason:	Monthly Calibration		
Barometric Pressure	NA mmHg	Station Temperature	23 Deg C
Cal Gas	52.2 ppm	Cal Gas Expiry date	19/12/2010
DAS Output Voltage	0 - 1 Volts		

#### Equipment Information

Analyzer Make / Model:	Thermon 43i	S/N :	806528242	Method:	UV absorbtion
Converter Make / Model:	NA	S/N :	NA		
Calibrator Make / Model:	API 700	S/N :	831	Method:	Dilution
DAS Make / Model:	ESC 8832	S/N :	3485		
Flow Meter:	Bios DC-2	S/N :	1193		

#### Analyzer Settings

Before Calibration		After Calibration	
Concentration Range	0 - 500 ppb		
Sample Flow / Box Temp	443 ccm, 28.1 Deg C	444 ccm, 28.1 Deg C	
HVPS / Lamp Setting	-632, 743	-632, 742	
PMT / RxCell Temp	OK Deg C, 45.1 Deg C	OK Deg C, 45.2 Deg C	
Converter / IZS Temp	NA Deg C, 45.0 Deg C	NA Deg C, 45.0 Deg C	
Offset / Slope	5.3, 0.987	5.4, 1.007	

#### Calibration Data

Dilution Flow Rate	Source Gas Flow Rate	Calculated Concentration	Indicated Conc. (DAS)	Correction Factor
4998	0	0	0	N/A
4958	43.1	450	449	1.0019
4977	19.2	201	199	1.0080
4983	14.4	150	151	0.9961
4999	0	0	0	N/A
Sum of Least Squares				0.2376
New Correction Factor				1.0019

#### Before Calibration

#### After Calibration

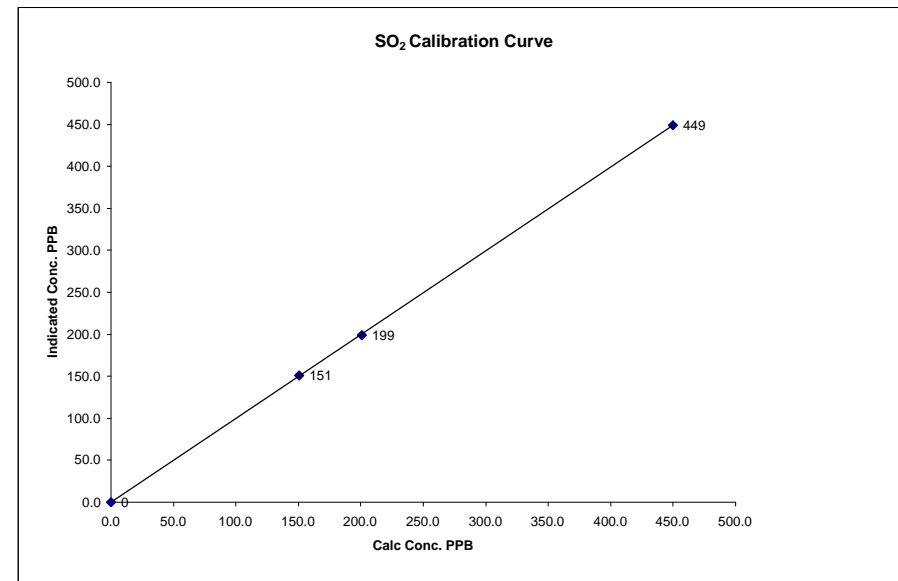
Auto Zero	0.1	-0.1
Auto Span	334	334
Sample Lines Connected	YES	
Percent Change from Previous Calibration	-1.0%	

Calibration Performed by: Ting Xyu

### SO<sub>2</sub> Calibration Curve

Calibration Date	August 4, 2010
Company	Lakeland Community and Industry Association
Plant / Location	LICA 1 - Cold Lake South
Start Time (MST)	13:28
End Time (MST)	16:49

Calculated Conc. ppb	Indicated Response ppb	Correction Factor	Correlation Coefficient Slope (≥ 0.995) (0.85 to 1.15)	Intercept (± 3% F.S.)
0	0	n/a	0.999979	0.997657
150	151	0.9961		-0.000859
201	199	1.0080		
450	449	1.0019		



Notes:

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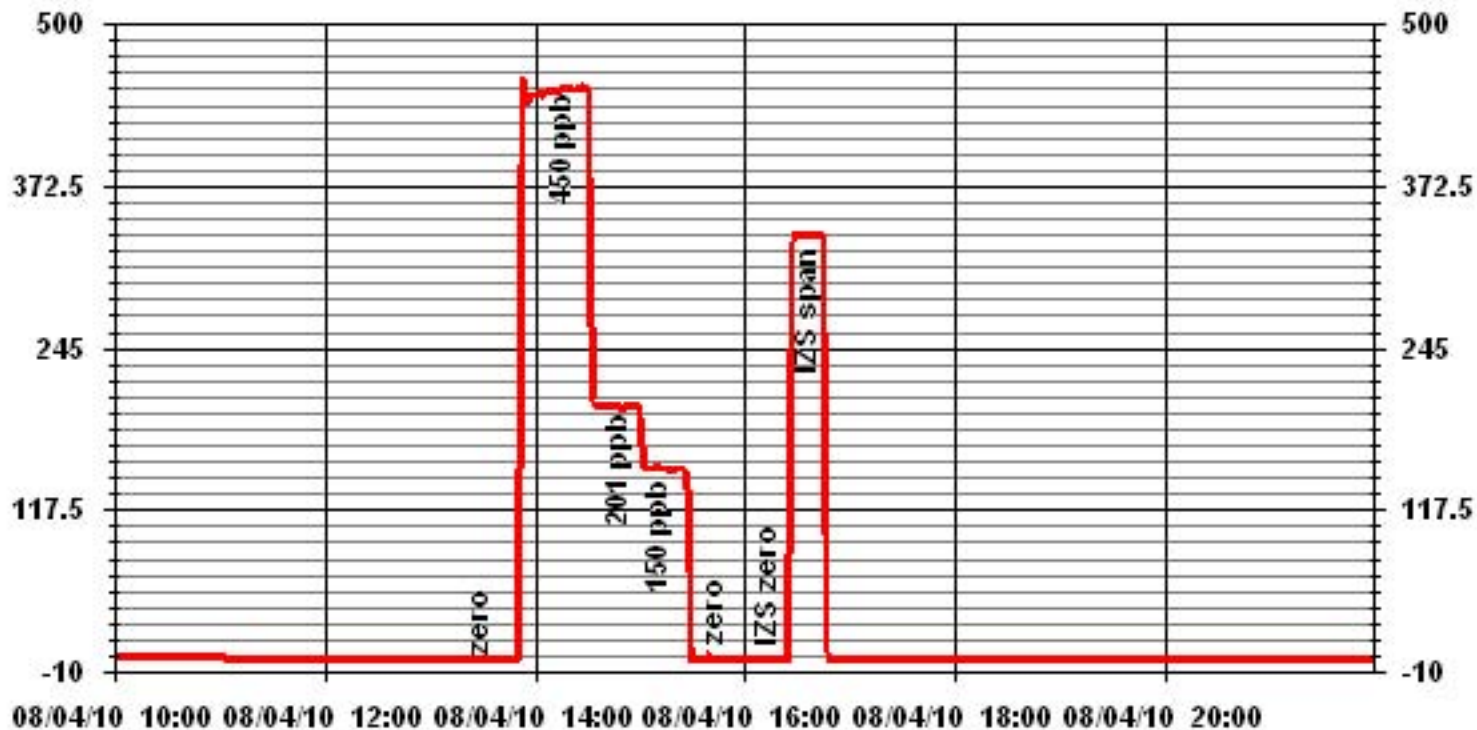


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### 01 Minute Averages



# Total Reduced Sulphur

**TRS Calibration Report  
Station Information**

Calibration Date	August 4, 2010	Previous Calibration	July 8, 2010
Company	Lakeland Industry & Community Association		
Plant / Location	LICA 1 - Cold Lake South		
Start Time (MST)	7:19	End Time (MST)	11:46
Reason:	Post Repair Calibration		
Barometric Pressure	NA mm Hg	Station Temperature	22 Deg C
Cal Gas	10.8 ppm	Cal Gas Expiry date	June 22, 2010
DAS Output Voltage	0 - 10 Volts		

**Equipment Information**

Analyzer Make / Model:	TEI 4501	S/N :	812728560	Method:	Fluorescent
Converter Make / Model:	CD Nova CDN 101	S/N :	250		
Calibrator Make / Model:	API 700	S/N :	831	Method:	Dilution
DAS Make / Model:	ESC 8832	S/N :	3485		
Flow Meter:	API 700	S/N :	831		

**Analyzer Settings**

Before Calibration		After Calibration	
Concentration Range	0 - 100 ppb		
Sample Flow / Box Temp	360 ccm 32.2 Deg C	359 ccm 31.9 Deg C	
HVPS / Lamp Setting	-623.1 756	-623.1 755	
PMT / RxCell Temp	OK Deg C 45.0 Deg C	OK Deg C 45.0 Deg C	
Converter / IZS Temp	849 Deg C 45.0 Deg C	849 Deg C 45.0 Deg C	
Offset / Slope	11.1 1.166	11 1.151	

**Calibration Data**

Dilution Flow Rate	Source Gas Flow Rate	Calculated Concentration	Indicated Conc. (DAS)	Correction Factor
4998	0	0	0	N/A
4962	37	80	78	1.0248
4962	37	80	80	0.9992
4983	18.5	40	40	0.9987
4987	10.6	23	23	0.9960
4999	0	0	0	N/A
Sum of Least Squares				0.9989
New Correction Factor				0.9992

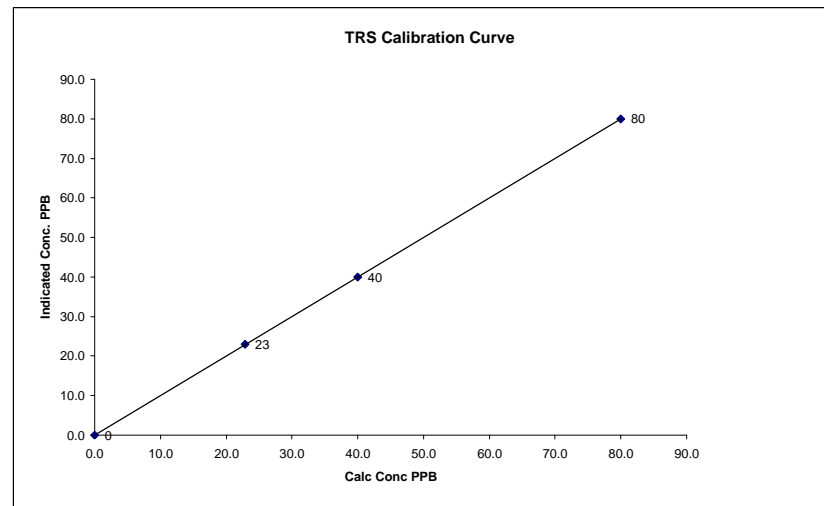
	Before Calibration	After Calibration
Auto Zero	0.2	0.1
Auto Span	20	21
Sample Lines Connected		YES
Percent Change from Previous Calibration		-2.5%

Calibration Performed by: Ting Xu

**TRS Calibration Curve**

Calibration Date	August 4, 2010
Company	Lakeland Industry & Community Association
Plant / Location	LICA 1 - Cold Lake South
Start Time (MST)	7:19
End Time (MST)	11:46

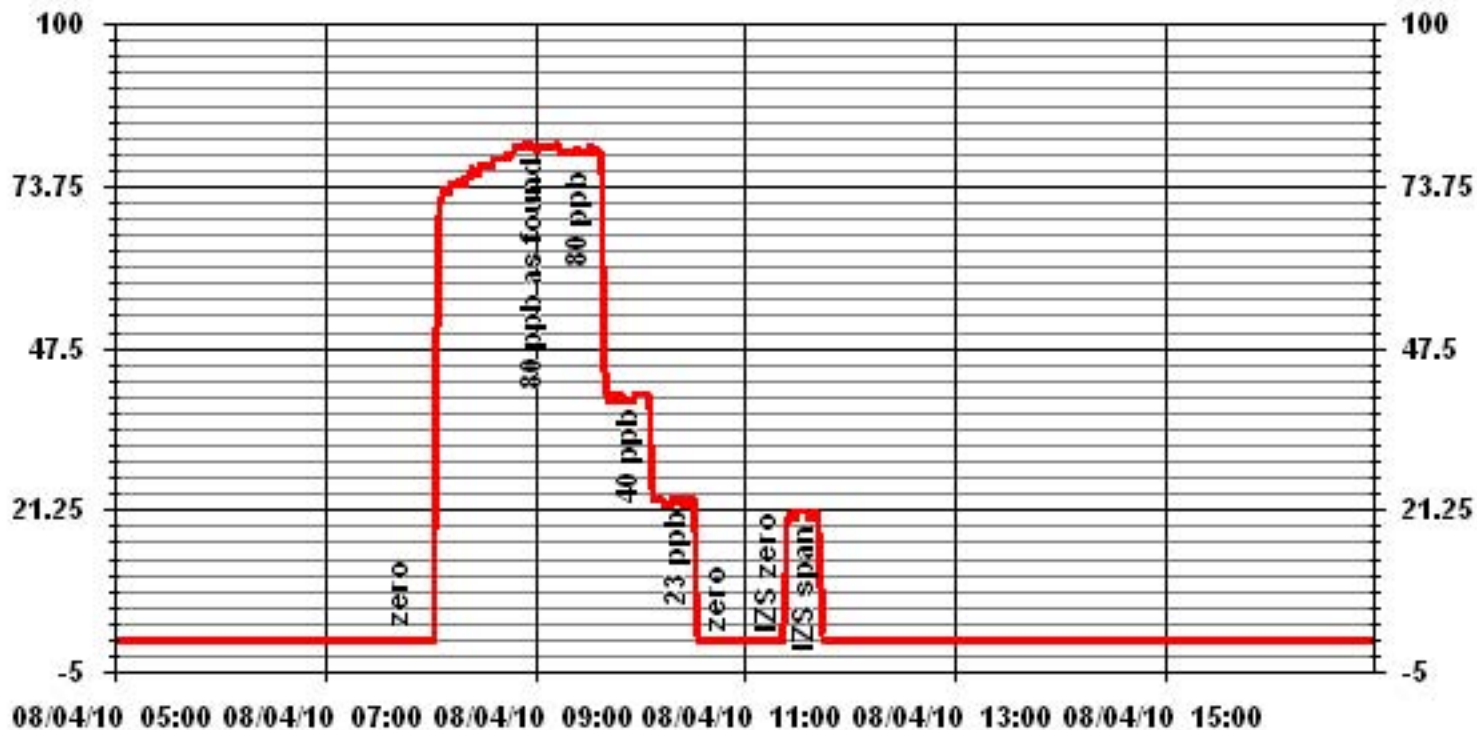
Calculated Conc. ppb	Indicated Response ppb	Correction Factor	Correlation Coefficient Slope	(≥ 0.995) (0.85 to 1.15)	0.999999
0	0	n/a	Intercept	(± 3% F.S.)	1.000546
23	23	0.9960			
40	40	0.9987			
80	80	0.9992			



Notes: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_



### 01 Minute Averages



# Total Hydrocarbons

### THC Calibration Report

#### Station Information

Calibration Date:	August 5, 2010	Previous Calibration	July 14, 2010
Company:	Lakeland Industry and Community Association		
Plant / Location:	LICA1/Cold Lake		
Start Time (MST)	7:48	End Time (MST)	11:05
Reason:	Monthly Calibration		
Barometric Pressure:	NA mmHg	Station Temperature:	22 Deg C
Calibrator:	API 700	S/N:	831
Cal Gas Concentration:	207Prop/602Meth	ppm	Cal Gas Expiry Date: 8/21/2011
DAS make & Model:	ESC 8832	S/N :	3485
Output Voltage Range:	0 - 10 VDC		

#### Analyzer Information

Make / Model	TECO 51C-LT	S/N :	51CLT-42740-8718	Method	Flame Ionization
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#### Analyzer Settings

	Before Calibration	After Calibration
Concentration Range	0 - 50 ppm	0 - 50 ppm
Sample Pressure	6.5 psi	6.5 psi
Hydrogen Pressure	8 psi	8 psi
Air Pressure	20 psi	20 psi

#### Calibration Data

Dilution Flow	Source Gas Flow	Calculated Concentration	Indicated Concentration	Correction Factor
1999	0	0.0	0.2	N/A
1999	0	0.0	0.0	N/A
1999	70	39.6	39.8	0.9956
1999	35	20.2	19.9	1.0128
1999	20	11.6	11.2	1.0359
1999	0	0.0	0.0	N/A
			Correction Factor:	0.9956

#### Percent Change

Previous Calibration Correction Factor:	0.9907
Current Correction Factor Before Span Adjust:	0.9956
Percent Change:	-0.5%

#### IZS Calibration Data

	Before Calibration	After Calibration
Auto Zero	0.1	0.0
Auto Span	37.7	37.4
Sample Lines Connected		YES

#### Cylinder Pressures

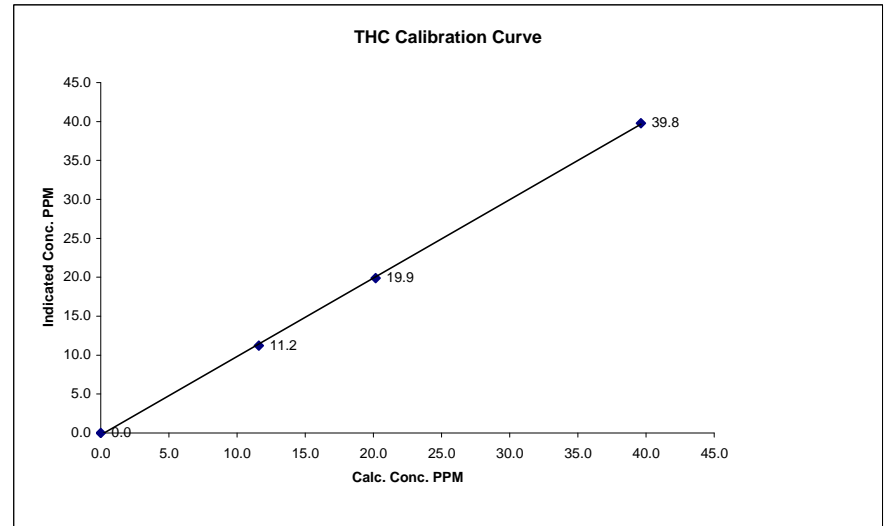
Span	1000 psi
Hydrogen	400 psi
Zero Air	32 psi Maxxam-owned API 701 zero air supply with catalytic oxidizer

Calibration Performed by: Ting Xu

### THC Calibration Curve

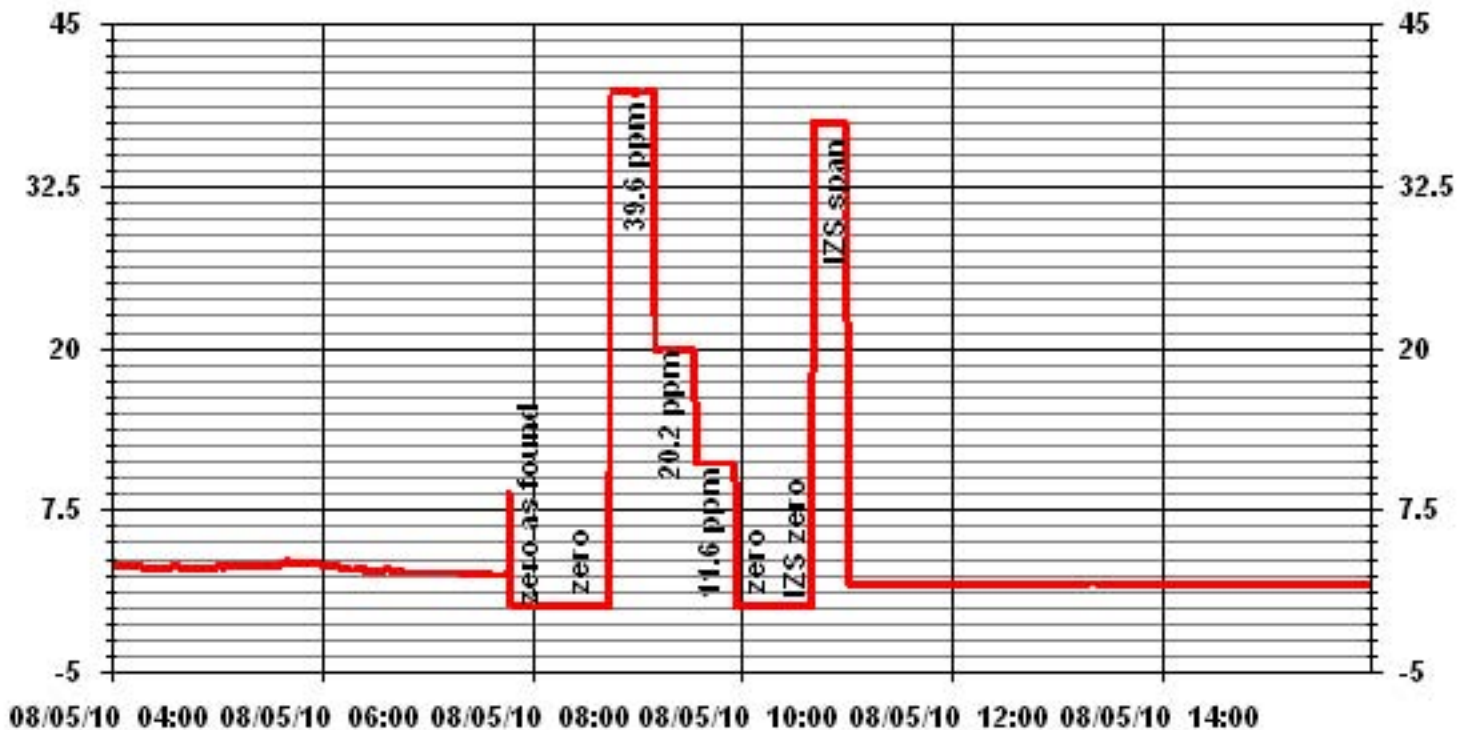
Calibration Date	August 5, 2010
Company	Lakeland Industry and Community Association
Plant / Location	LICA1/Cold Lake
Start Time (MST)	7:48
End Time (MST)	11:05

Calculated Conc. ppm	Indicated Response ppm	Correction Factor	Correlation Coefficient Slope	(≥ 0.995)	0.999812
0.0	0.0		Intercept	(0.85 to 1.15)	1.006809
11.6	11.2	1.0359		(± 3% F.S.)	-0.242311
20.2	19.9	1.0128			
39.6	39.8	0.9956			



Notes:

### 01 Minute Averages



# Particulate Matter 2.5

**TEOM 1405F Audit**

	<b><u>Station</u></b>		<b><u>Audit Transfer Standard</u></b>
Date:	August 12, 2010	Make/Model:	Bios DC-2
Station Name:	LICA 1	Serial Number:	1193
Location:	Cold Lake South	Cell s/n:	2272
Operator:	LICA	Thermometer s/n:	Hg Thermometer 990

	<b><u>Sampler</u></b>		<b><u>Set-up and current Sampler readings</u></b>
Make/Model	Thermo Scientific Series 1405F	F-Main Set Pt (l/min)	3.00
Unit #	AMU 1775	F-Aux Set Pt (l/min)	13.67
Unit s/n	1405A201620804	Filter Load (%)	24.7%
Firmware Ver.	1.52	K <sub>o</sub> Factor	14578.0
Parameter	PM 2.5 (with FDMS)	Temp (°C)	13.8
		Press (ATM)	0.930

**Conversion from mmHg or "Hg to ATM (Atmospheres)**

ATM = (mmHg) X (1.316 X 10<sup>-3</sup>)    or    ATM = ("Hg) X (3.34207 X 10<sup>-2</sup>)

**Note: Tolerances are noted as BOLD in Brackets**

**Audit**

<b>Status</b>			
Noise <b>&lt;0.10ug</b>	0.011	Warnings	None
Pump Vacuum <b>&lt;0.40atm</b>	0.36		
<b>Temperature/Pressure</b>			
Measured Temp ( <b>± 2 °C</b> )	14.1	D °C	-0.3
Measured Press ( <b>± 0.01atm</b> )	0.930	DATM	0.000
<b>Flow Audit</b>			
Indicated Main Flow (l/min)	3.00	Main Flow Drift ( <b>±10.0%</b> )	3.53%
Measured Main Flow (l/min)	2.97	Flow Adjusted to Measured?	Yes
Indicated Bypass Flow (l/min)	13.67	Bypass Flow Drift ( <b>±10.0%</b> )	1.81%
Measured Bypass Flow (l/min)	13.62	Flow Adjusted to Measured?	Yes
<b>Leak Check</b>		<b>Instrument Setup</b>	
Main ( <b>&lt; 0.15 l/min</b> )	NA	Flow Control = Active	
Aux ( <b>&lt; 0.6 l/min</b> )	NA	Report Conditions = Standard (25.0 C and 1atm)	
<b>K<sub>o</sub> Factor</b>			
Measured	NA		
K <sub>o</sub> Difference ( <b>± 2.5%</b> )	NA		

**Start Time:** 7:40      **Finish Time:** 9:20

**Sample Inlet Cleaned:** Yes      **New Filters Installed:** Yes  
**New Filter Loading %:** 16.3%

**Comments:** \_\_\_\_\_

**Auditor/s:** Ting Xu

# Nitrogen Dioxide

**NOx - NO- NO<sub>2</sub> Calibration Report**

**Station Information**

Calibration Date	August 4, 2010	Previous Calibration	July 13, 2010
Company	LICA	Plant/Location	LICA 1 - Cold Lake South
Start Time (MST)	7:19	End Time (MST)	13:33
Reason:	Monthly Calibration	Other	
Barometric Pressure	NA mmHg	Station Temperature	24 Deg C
Cal Gas Concentration	NOx 51.8 ppm	NO 51.6 ppm	Cal Gas Expiry date 19-Dec-10
DAS Output Voltage	0 - 10	Chart Rec. Output	NA Volts

**Equipment Information**

Analyzer Make / Model:	TECO 42C	S/N :	427408716	Method:	Chemiluminescent
Calibrator Make / Model:	Envionics 2000	S/N:	1991		
DAS Make / Model:	ESC 8832	S/N :	3485		
Chart Recorder Make / Model:	NA	S/N:	NA		
Flow Meter:	Envionics 2000	S/N :	1991		

**Analyzer Settings**

Before Calibration				After Calibration			
Concentration Range	0 - 500			ppb			
Sample Flow/Conv. Temp	726	ccm	317	Deg C	722	ccm	317.0
Ozone Flow / Vacuum	OK	ccm	181.4	"Hg-A	OK	ccm	181.2
HVPS / A ZERO	-820	Volts	NA	MV	-821	Volts	NA
Rx/ Temp / PMT Temp	50.0	Deg C	-2.5	Deg C	49.6	Deg C	-2.5
Box Temp / IZS Temp	28.3	Deg C	OK	Deg C	26.3	Deg C	OK
Offset	4	NOx	3.7	NO	3.9	NOx	3.6
Slope	1.006	NOx	0.940	NO	1.006	NOx	0.940
NO <sub>2</sub> COEF / Conv Efficiency	0.998	NO <sub>2</sub>	NA		0.998	NO <sub>2</sub>	NA

**Dilution Calibration Data**

Dilution Air Flow Rate	Source Flow Rate	O3 Set Point	Calculated Concentration			Indicated Concentration			Correction Factor	
			NOx	NO	NO <sub>2</sub>	NOx	NO	NO <sub>2</sub>	NOx	NO
2997	0.0	----	0	0	0	0	0	0	----	----
2974	23.3	----	403	401	----	405	402	3	0.9943	0.9978
2988	11.7	----	202	201	----	202	201	1	1.0002	1.0013
2999	5.8	----	100	100	----	100	99	1	0.9999	1.0061
3000	0.0	----	0	0	0	1	0	0	----	----

**Gas Phase Titration Calibration Data**

Dilution Air Flow Rate	Source Flow Rate	O3 Set Point	Calculated Concentration			Indicated Concentration			NO <sub>2</sub> Correction Factor	NO <sub>2</sub> Conv Efficiency
			NOx	NO	NO <sub>2</sub>	NOx	NO	NO <sub>2</sub>		
2978	23.3	----	402	401	----	404	402	2	----	----
2978	23.3	300	402	----	326	404	78	326	1.0000	100.00%
2981	23.3	150	402	----	144	404	260	144	1.0000	100.00%
2978	23.3	75	402	----	63	404	341	63	1.0000	100.00%

Linearity	Sum of Least Squares	NOx= 0.996	NO= 0.999	NO <sub>2</sub> = 1.000	
OK?	Yes No	Correction Factors:	NOx= 0.9943	NO= 0.9978	NO <sub>2</sub> = 1.0000
Average Converter Efficiency= 100.00%					

	Before Calibration				After Calibration			
Auto Zero	0.3	NOx	0.4	NO <sub>2</sub>	0.2	NOx	0.2	NO <sub>2</sub>
Auto Span	294	NOx	292	NO <sub>2</sub>	290	NOx	288	NO <sub>2</sub>
Sample Lines Connected					YES			

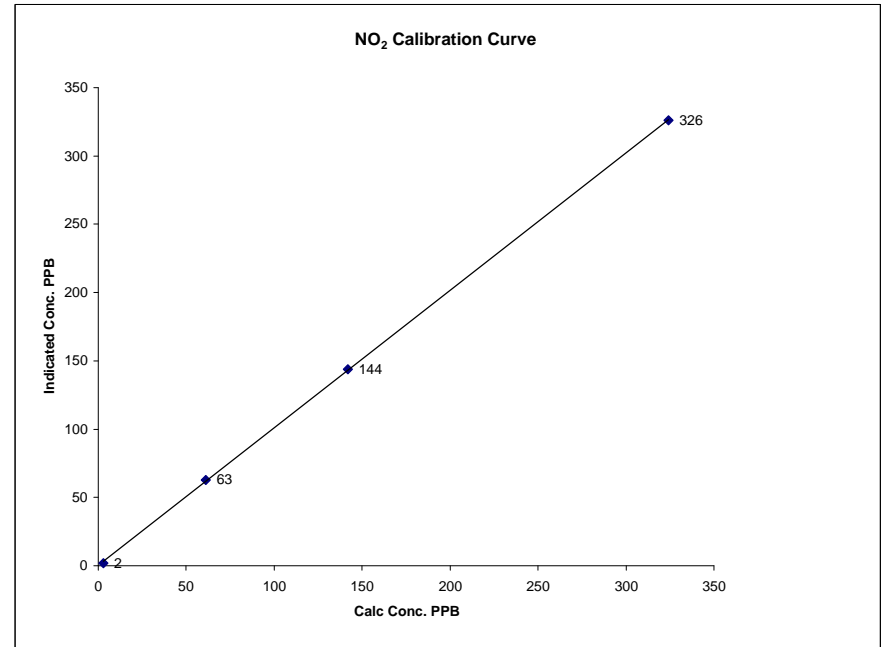
Notes

Calibration Performed by: Ting Xu

**NO<sub>2</sub> Calibration Curve**

Calibration Date	August 4, 2010	<b>LICA</b>	
Company		<b>LICA 1 - Cold Lake South</b>	
Plant / Location			
Start Time (MST)	7:19	End Time (MST)	13:33

Calculated Conc. ppb	Indicated Response ppb	Correction Factor	Correlation Coefficient (≥ 0.995)	(0.85 to 1.15) (± 3% F.S.)
3	2	N/A	Slope	0.999930
61	63	0.9683	Intercept	1.006625
142	144	0.9861		0.37224
324	326	0.9939		



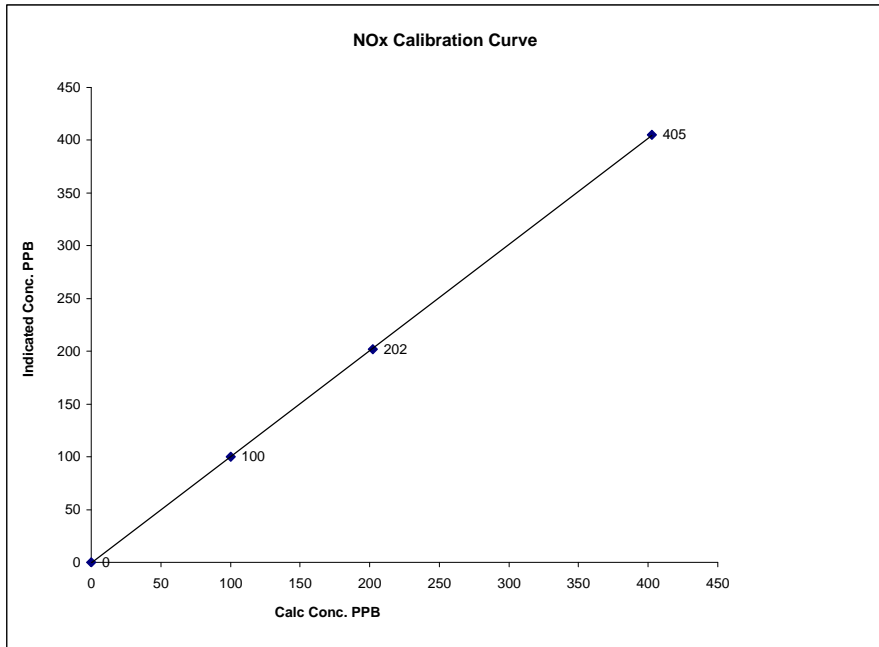
Notes: Wrong percent of gas flow was put during the beginning of as found point, which caused the reading reached 500ppb. Corrected the gas flow so that the data went back to normal.



### NOx Calibration Curve

Calibration Date August 4, 2010  
 Company LICA  
 Plant / Location LICA 1 - Cold Lake South  
 Start Time (MST) 7:19 End Time (MST) 13:33

Calculated Conc. ppb	Indicated Response ppb	Correction Factor	Correlation Coefficient (≥ 0.995)	0.999989
0	0	N/A	Slope (0.85 to 1.15)	1.005904
100	100	0.9999	Intercept (± 3% F.S.)	-0.46587
202	202	1.0002		
403	405	0.9943		

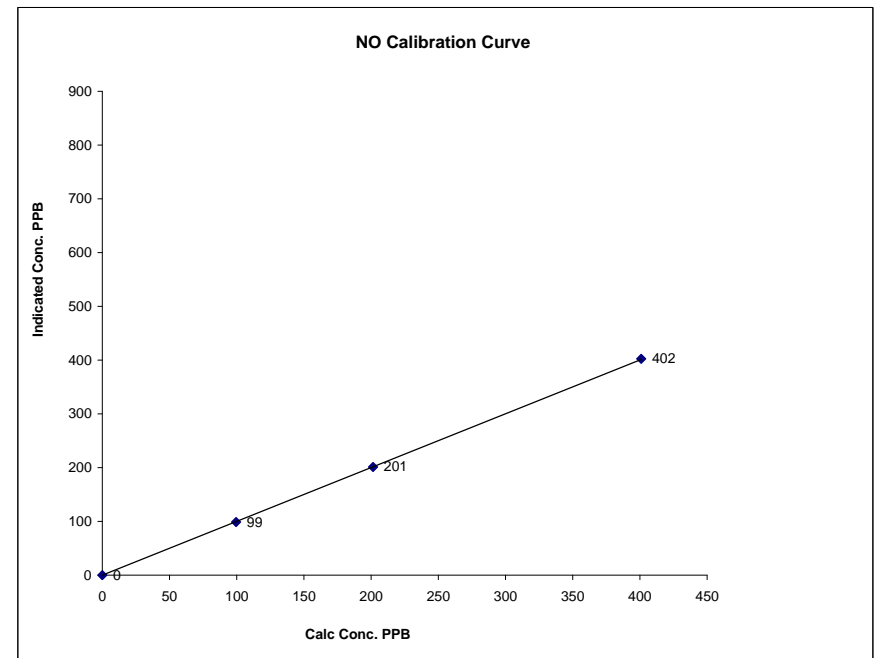


Notes:

### NO Calibration Curve

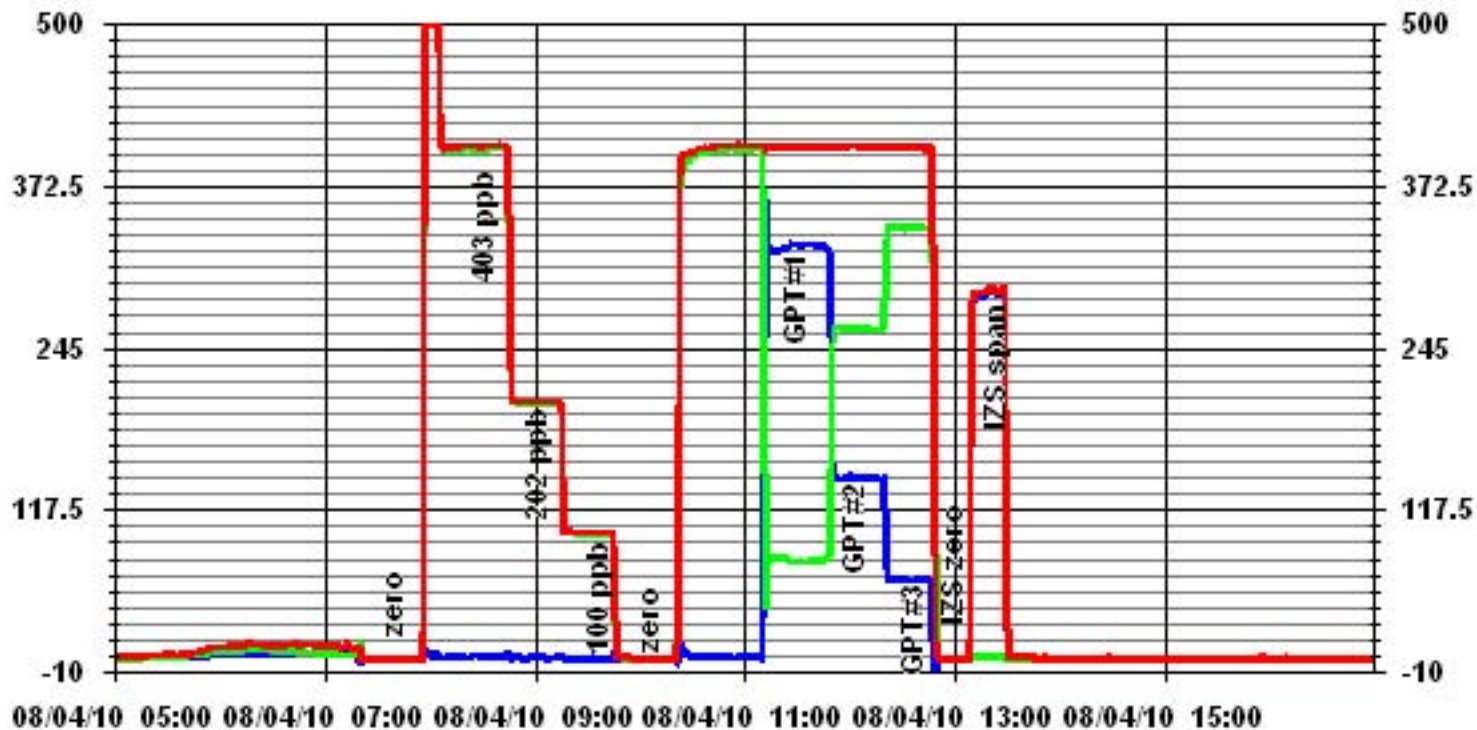
Calibration Date August 4, 2010  
 Company LICA  
 Plant / Location LICA 1 - Cold Lake South  
 Start Time (MST) 7:19 End Time (MST) 13:33

Calculated Conc. ppb	Indicated Response ppb	Correction Factor	Correlation Coefficient (≥ 0.995)	0.999994
0	0	N/A	Slope (0.85 to 1.15)	1.005017
100	99	1.0061	Intercept (± 3% F.S.)	-1.4072
201	201	1.0013		
401	402	0.9978		



Notes:

### 01 Minute Averages



**NOx - NO- NO2 Calibration Report**

**Station Information**

Calibration Date	August 11, 2010	Previous Calibration	August 4, 2010
Company	LICA	Plant/Location	LICA 1 - Cold Lake South
Start Time (MST)	13:20	End Time (MST)	-
Reason:	As Found	Other	
Barometric Pressure	NA mmHg	Station Temperature	22 Deg C
Cal Gas Concentration	NOx 52.2 ppm	NO 52 ppm	Cal Gas Expiry date 08-Feb-12
DAS Output Voltage	0 - 10	Chart Rec. Output	NA Volts

**Equipment Information**

Analyzer Make / Model:	TECO 42C	S/N :	427408716	Method:	Chemiluminescent
Calibrator Make / Model:	EnviroNics 2000	S/N:	1991		
DAS Make / Model:	ESC 8832	S/N :	3485		
Chart Recorder Make / Model:	NA	S/N:	NA		
Flow Meter:	EnviroNics 2000	S/N :	1991		

**Analyzer Settings**

Before Calibration				After Calibration			
Concentration Range	0 - 500			ppb			
Sample Flow/Conv. Temp	715 ccm	317 Deg C		722 ccm	317.0 Deg C		
Ozone Flow / Vacuum	OK ccm	181.4 "Hg-A		OK ccm	181.2 "Hg-A		
HVPS / A ZERO	-820 Volts	NA MV		-821 Volts	NA MV		
Rx/ Temp / PMT Temp	49.7 Deg C	-2.5 Deg C		49.6 Deg C	-2.5 Deg C		
Box Temp / IZS Temp	26.7 Deg C	OK Deg C		26.3 Deg C	OK Deg C		
Offset	3.9 NOx	3.6 NO		3.9 NOx	3.6 NO		
Slope	1.006 NOx	0.940 NO		1.006 NOx	0.940 NO		
NO2 COEF / Conv Efficiency	0.998 NO2	NA		0.998 NO2	NA		

**Dilution Calibration Data**

Dilution Air Flow Rate	Source Flow Rate	O3 Set Point	Calculated Concentration			Indicated Concentration			Correction Factor	
			NOx	NO	NO2	NOx	NO	NO2	NOx	NO
2997	0.0	----	0	0	0	0	0	0	----	----
2983	23.1		401	400	----	392	389	3	1.0233	1.0272

**Gas Phase Titration Calibration Data**

Dilution Air Flow Rate	Source Flow Rate	O3 Set Point	Calculated Concentration			Indicated Concentration			NO2 Correction Factor	NO2 Conv Efficiency
			NOx	NO	NO2	NOx	NO	NO2		

Linearity OK?	Yes	No	Sum of Least Squares	NOx=	NO=	NO2=
			Correction Factors:	NOx= 0.0000	NO= 0.0000	NO2= 0.0000
				Average Converter Efficiency=		

	Before Calibration				After Calibration			
Auto Zero	0.3	NOx	0.4	NO2	0.2	NOx	0.2	NO2
Auto Span	294	NOx	292	NO2	290	NOx	288	NO2
	Sample Lines Connected				YES			

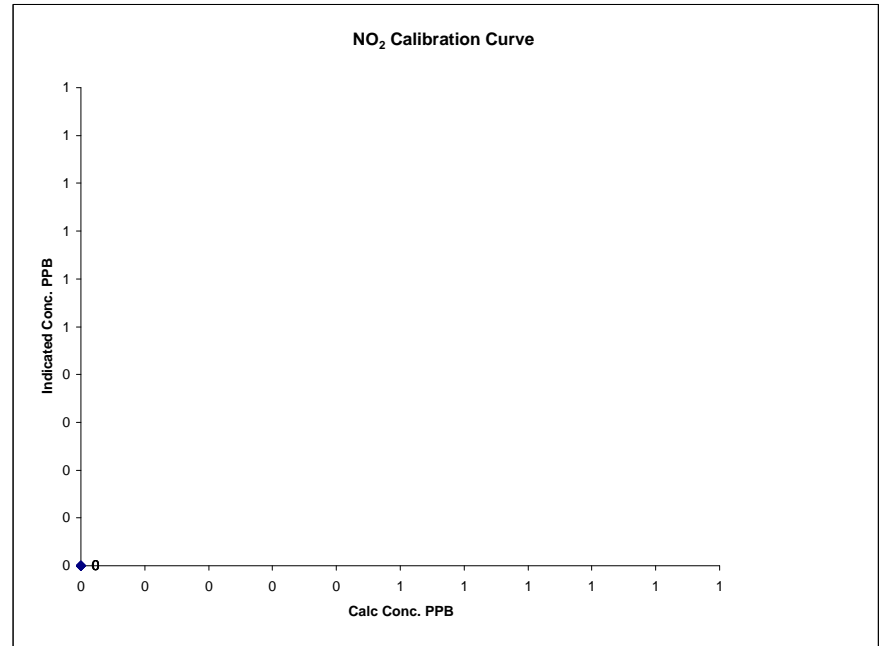
Notes

Calibration Performed by: Ting Xu

**NO2 Calibration Curve**

Calibration Date	August 11, 2010	Company	LICA
Plant / Location	LICA 1 - Cold Lake South	Start Time (MST)	13:20
End Time (MST)	-		

Calculated Conc. ppb	Indicated Response ppb	Correction Factor	Correlation Coefficient (≥ 0.995)	#DIV/0!
0	0	N/A	Slope (0.85 to 1.15)	#DIV/0!
0	0	#DIV/0!	Intercept (± 3% F.S.)	#DIV/0!
0	0	#DIV/0!		
0	0	#DIV/0!		

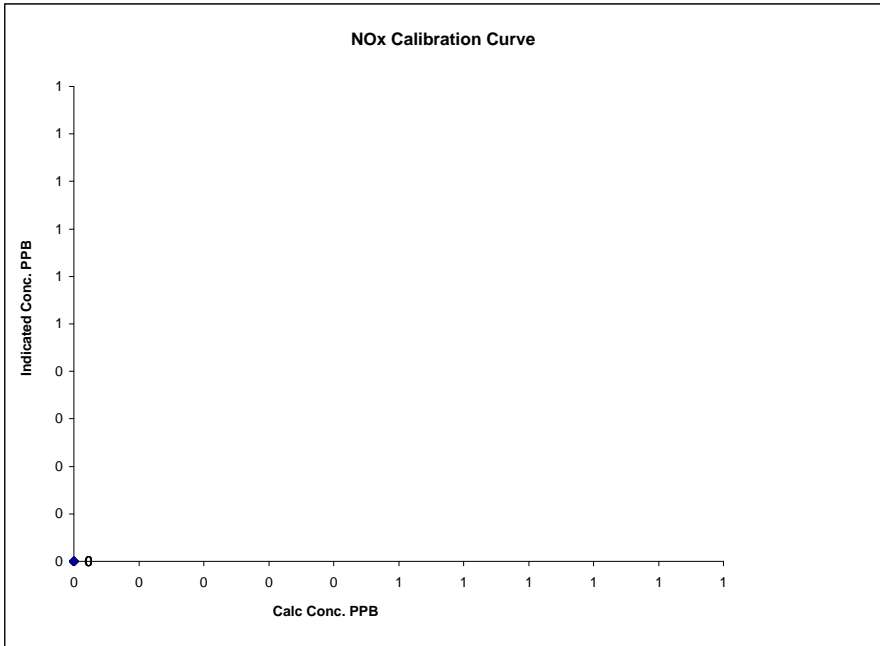


Notes:

### NOx Calibration Curve

Calibration Date August 11, 2010  
 Company LICA  
 Plant / Location LICA 1 - Cold Lake South  
 Start Time (MST) 13:20 End Time (MST) -

Calculated Conc. ppb	Indicated Response ppb	Correction Factor	Correlation Coefficient Slope Intercept	( $\geq 0.995$ ) (0.85 to 1.15) ( $\pm 3\%$ F.S.)	#DIV/0!
0	0	N/A			#DIV/0!
0	0	#DIV/0!			#DIV/0!
0	0	#DIV/0!			#DIV/0!
0	0	#DIV/0!			#DIV/0!

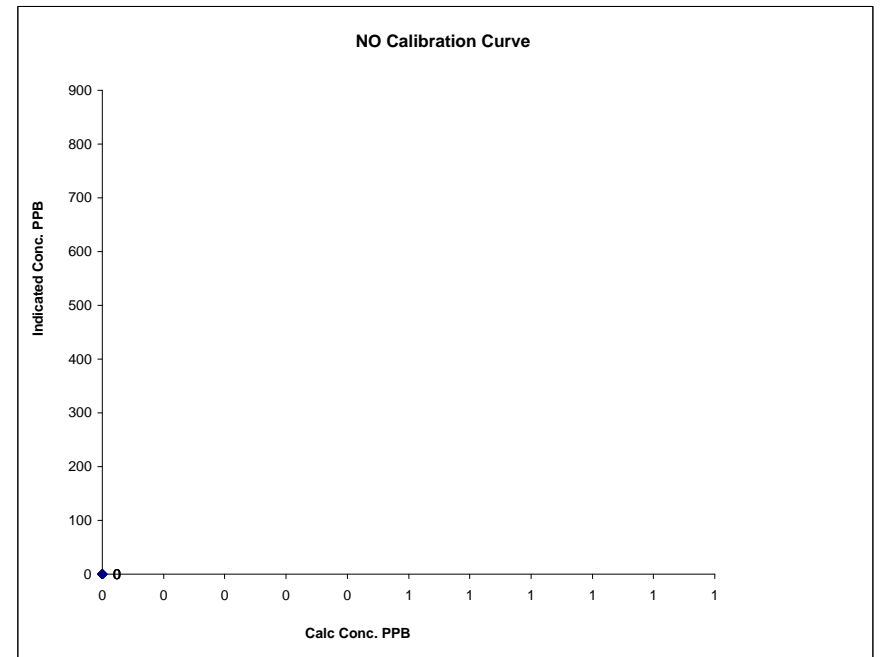


Notes:

### NO Calibration Curve

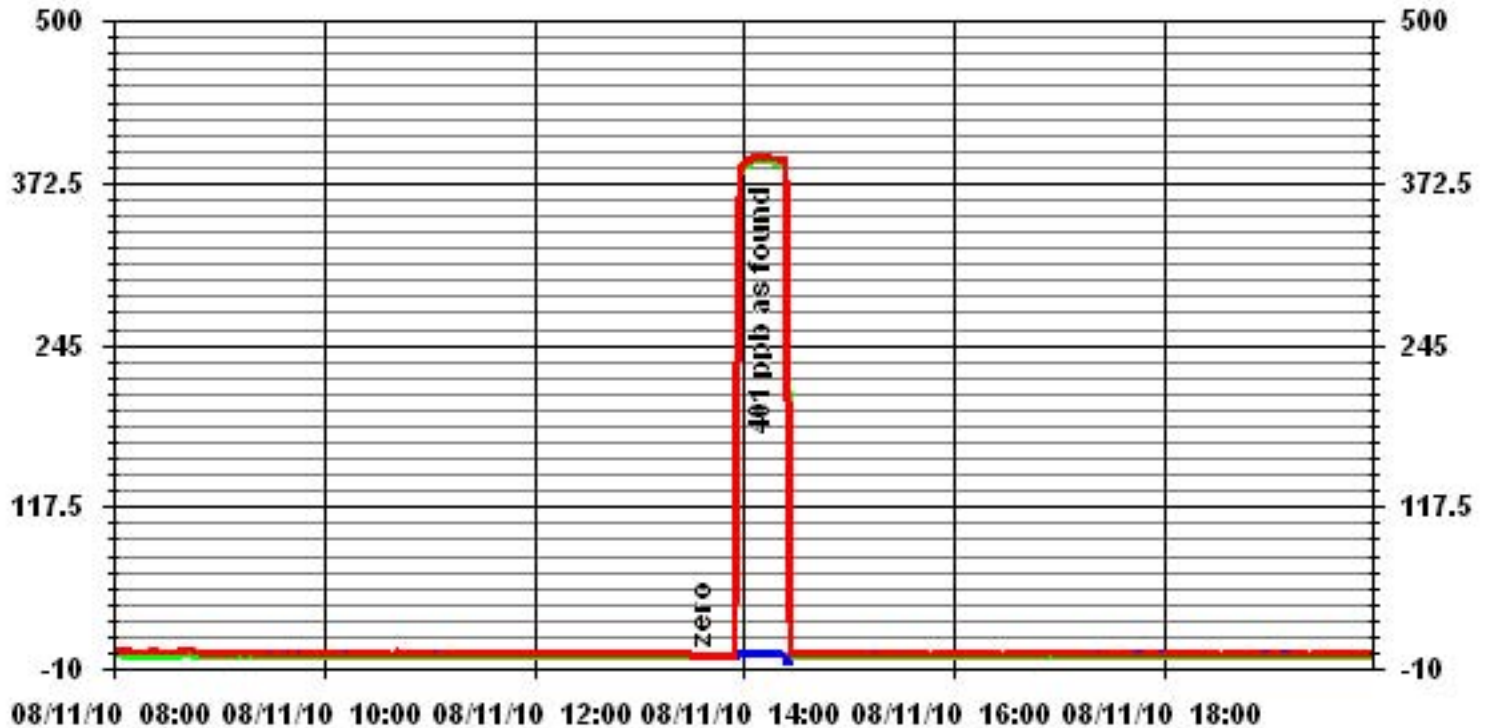
Calibration Date August 11, 2010  
 Company LICA  
 Plant / Location LICA 1 - Cold Lake South  
 Start Time (MST) 13:20 End Time (MST) -

Calculated Conc. ppb	Indicated Response ppb	Correction Factor	Correlation Coefficient Slope Intercept	( $\geq 0.995$ ) (0.85 to 1.15) ( $\pm 3\%$ F.S.)	#DIV/0!
0	0	N/A			#DIV/0!
0	0	#DIV/0!			#DIV/0!
0	0	#DIV/0!			#DIV/0!
0	0	#DIV/0!			#DIV/0!



Notes:

### 01 Minute Averages



# Ozone

### O<sub>3</sub> Calibration Report

#### Station Information

Calibration Date	August 4, 2010	Previous Calibration	July 14, 2010
Company	Lakeland Industry & Community Association		
Plant / Location	LICA 1 - Cold Lake South		
Start Time (MST)	13:28	End Time (MST)	17:02
Reason:	Monthly Calibration		
Barometric Pressure	NA mm Hg	Station Temperature	22 Deg C
DAS Output Voltage	0 - 10 Volts		

#### Equipment Information

Analyzer Make / Model:	TEI 49i	S/N :	700419951	Method:	Fluorescent
Calibrator Make / Model:	Enviroics 2000	S/N :	1991	Method:	GPT
DAS Make / Model:	ESC 8832	S/N :	3485		

#### Analyzer Settings

	Before Calibration		After Calibration	
Concentration Range	0 - 500			
Cell A Flow/ Cell B Flow	742 ccm	757 ccm	746 ccm	761 ccm
Pressure	709 mmHg		717 mmHg	
Bench Lamp Temp	53.5 Deg C		53.5 Deg C	
O <sub>3</sub> Lamp/Box Temp	67.6 Deg C	27.7 Deg C	67.6 Deg C	27.7 Deg C
Offset / Slope	0.7	1.013	0.7	1.021

#### Calibration Data

Dilution Flow Rate	Ozone Set Point	Calculated Concentration	Indicated Conc. (DAS)	Correction Factor
3000	0	0	0	N/A
3005	350	324	321	1.0093
3005	350	324	324	1.0000
3002	150	142	138	1.0290
3002	75	61	60	1.0167
3007	0	0	0	N/A
Sum of Least Squares				N/A
New Correction Factor				1.0000

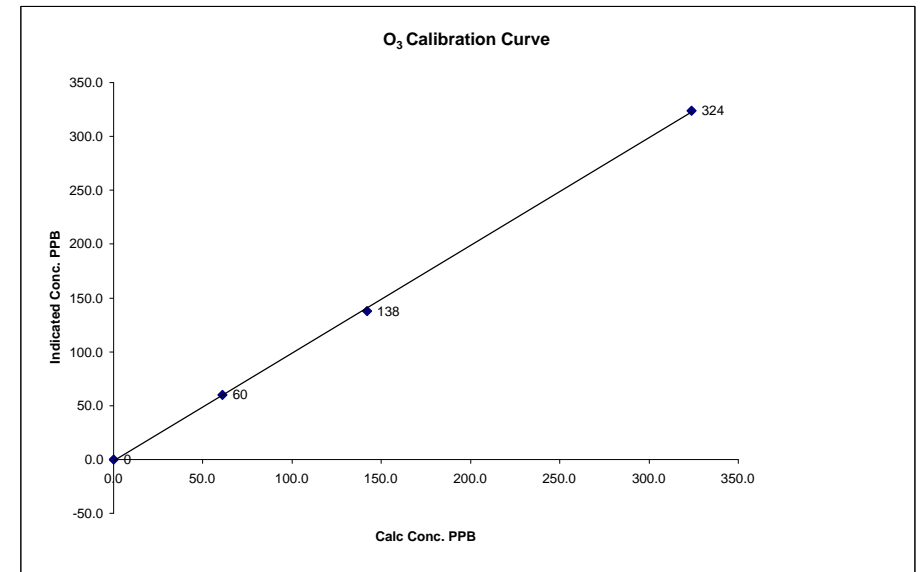
	Before Calibration	After Calibration
Auto Zero	-0.2	-0.2
Auto Span	284	288
Sample Lines Connected		YES
Percent Change from Previous Calibration		-1.2%

Calibration Performed by: Ting Xu

### O<sub>3</sub> Calibration Curve

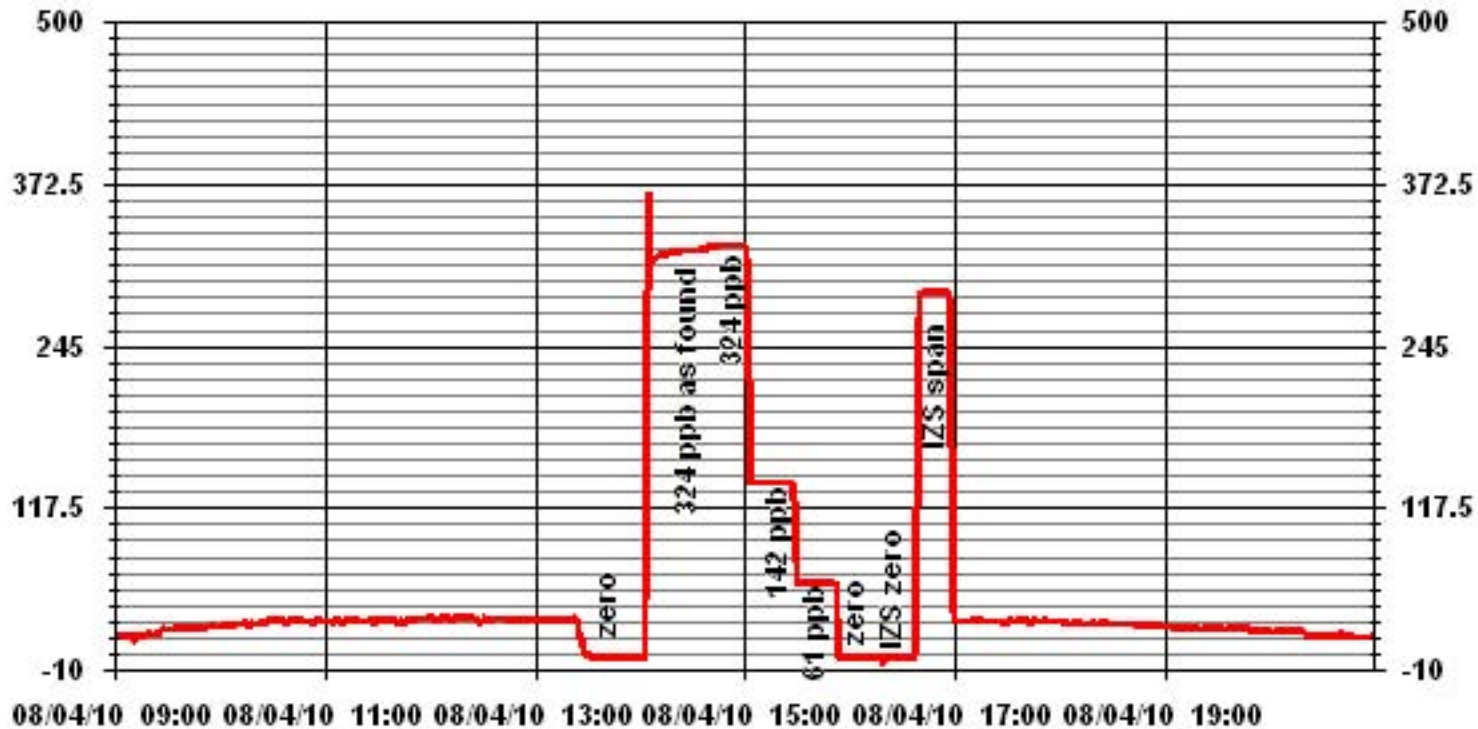
Calibration Date	August 4, 2010		
Company	Lakeland Industry & Community Association		
Plant / Location	LICA 1 - Cold Lake South		
Start Time (MST)	13:28	End Time (MST)	17:02

Calculated Conc. ppb	Indicated Response ppb	Correction Factor	Correlation Coefficient Slope	(≥ 0.995) (0.85 to 1.15)	0.999820
0	0	n/a	Intercept	(± 3% F.S.)	-1.315954
61	60	1.0167			
142	138	1.0290			
324	324	1.0000			



Notes:

### 01 Minute Averages





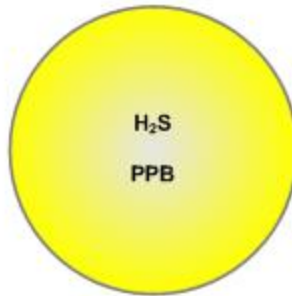
# Passive Bubble Maps

# Lakeland Industry & Community Association H<sub>2</sub>S Passive Bubble Map

AUGUST 2010

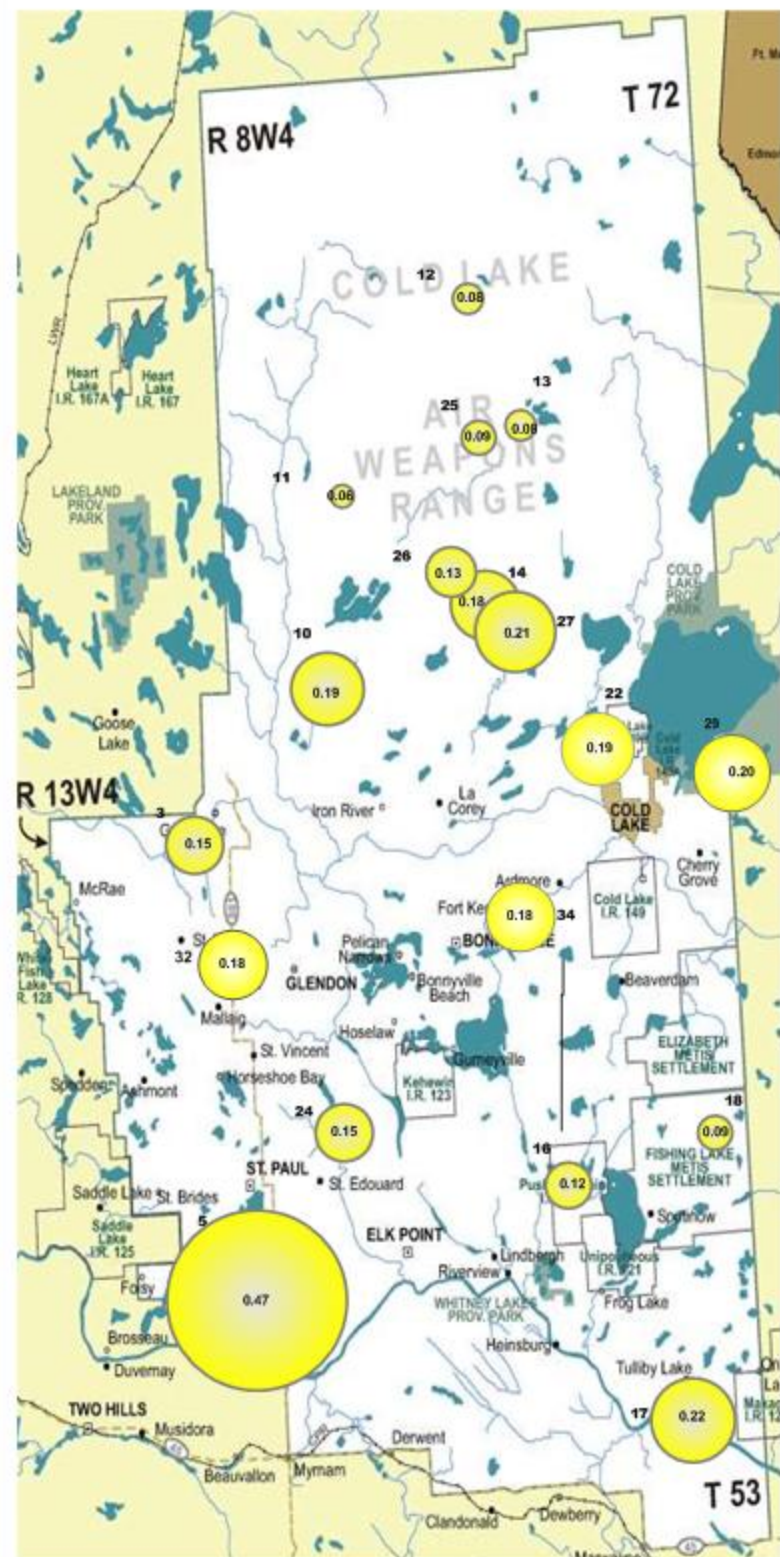
## PASSIVE STATIONS

		DUPLICATE
3 – Therien	0.15 PPB	0.15 PPB
5 – Lake Eliza	0.47 PPB	NA
10 – La Corey	0.19 PPB	NA
11 – Wolf Lake	0.06 PPB	0.05 PPB
12 – Foster Creek	0.08 PPB	NA
13 – Primrose	0.08 PPB	0.08 PPB
14 – Maskwa	0.18 PPB	NA
16 – Frog Lake	0.11 PPB	0.12 PPB
17 – Clear Range	0.22 PPB	NA
18 – Fishing Lake	0.09 PPB	0.09 PPB
22 – Cold Lake South	0.19 PPB	NA
24 – Fort George	0.15 PPB	NA
25 – Burnt Lake	0.09 PPB	0.09 PPB
26 – Mahihkan	0.13 PPB	NA
27 – Mahkeses	0.19 PPB	0.22 PPB
29 – Cold Lake South 2	0.20 PPB	NA
32 – St. Lina	0.18 PPB	NA
34 – Portable	0.18 PPB	NA



## Summary

Minimum : 0.06 PPB – Wolf Lake  
Maximum: 0.47 PPB – Lake Eliza  
Average: 0.17 PPB \*Includes Duplicates



# Lakeland Industry & Community Association NO<sub>2</sub> Passive Bubble Map

AUGUST 2010

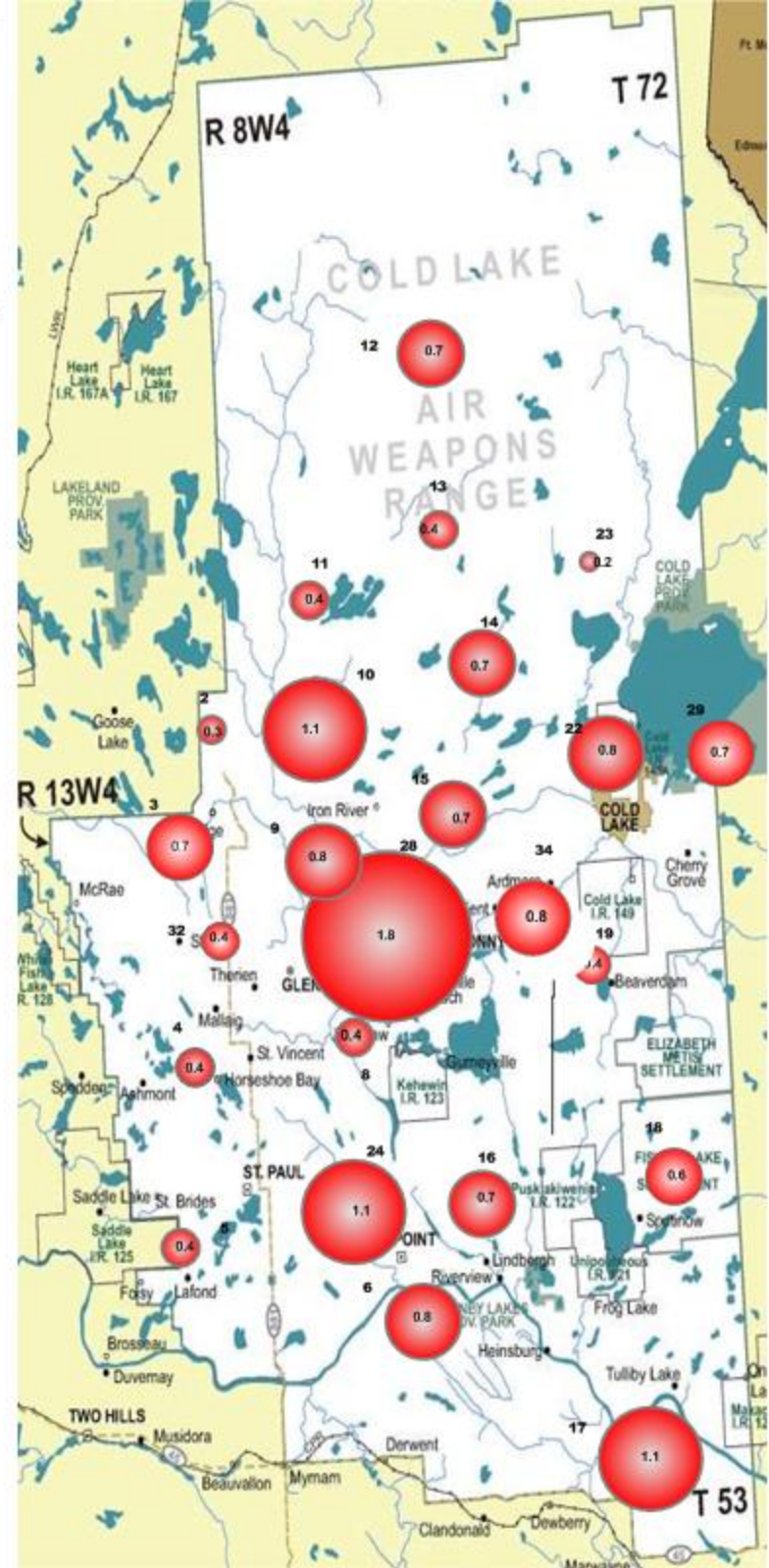
## PASSIVE STATIONS

		DUPLICATE
2 – Sand River	0.3 PPB	0.3 PPB
3 – Therien	0.7 PPB	NA
4 – Flat Lake	0.4 PPB	0.4 PPB
5 – Lake Eliza	0.4 PPB	NA
6 – Telegraph Creek	0.8 PPB	0.7 PPB
8 – Muriel-Kehewin	0.4 PPB	NA
9 – Dupre	0.7 PPB	0.9 PPB
10 – La Corey	1.1 PPB	NA
11 – Wolf Lake	0.3 PPB	0.4 PPB
12 – Foster Creek	0.7 PPB	NA
13 – Primrose	0.4 PPB	0.4 PPB
14 – Maskwa	0.7 PPB	NA
15 – Ardmore	0.8 PPB	0.6 PPB
16 – Frog Lake	0.7 PPB	NA
17 – Clear Range	1.1 PPB	1.0 PPB
18 – Fishing Lake	0.6 PPB	NA
19 – Beaverdam	0.4 PPB	0.4 PPB
22 – Cold Lake South	0.8 PPB	NA
23 – Medley-Martineau	0.2 PPB	NA
24 – Fort George	1.1 PPB	1.1 PPB
28 – Town of Bonnyville	1.8 PPB	NA
29 – Cold Lake South 2	0.6 PPB	0.7 PPB
32 – St. Lina	0.4 PPB	NA
34 – Portable	0.8 PPB	NA



## Summary

Minimum : 0.2 PPB – Medley-Martineau  
Maximum: 1.8 PPB – Town of Bonnyville  
Average: 0.7 PPB \*Includes Duplicates

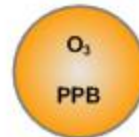


# Lakeland Industry & Community Association O<sub>3</sub> Passive Bubble Map

AUGUST 2010

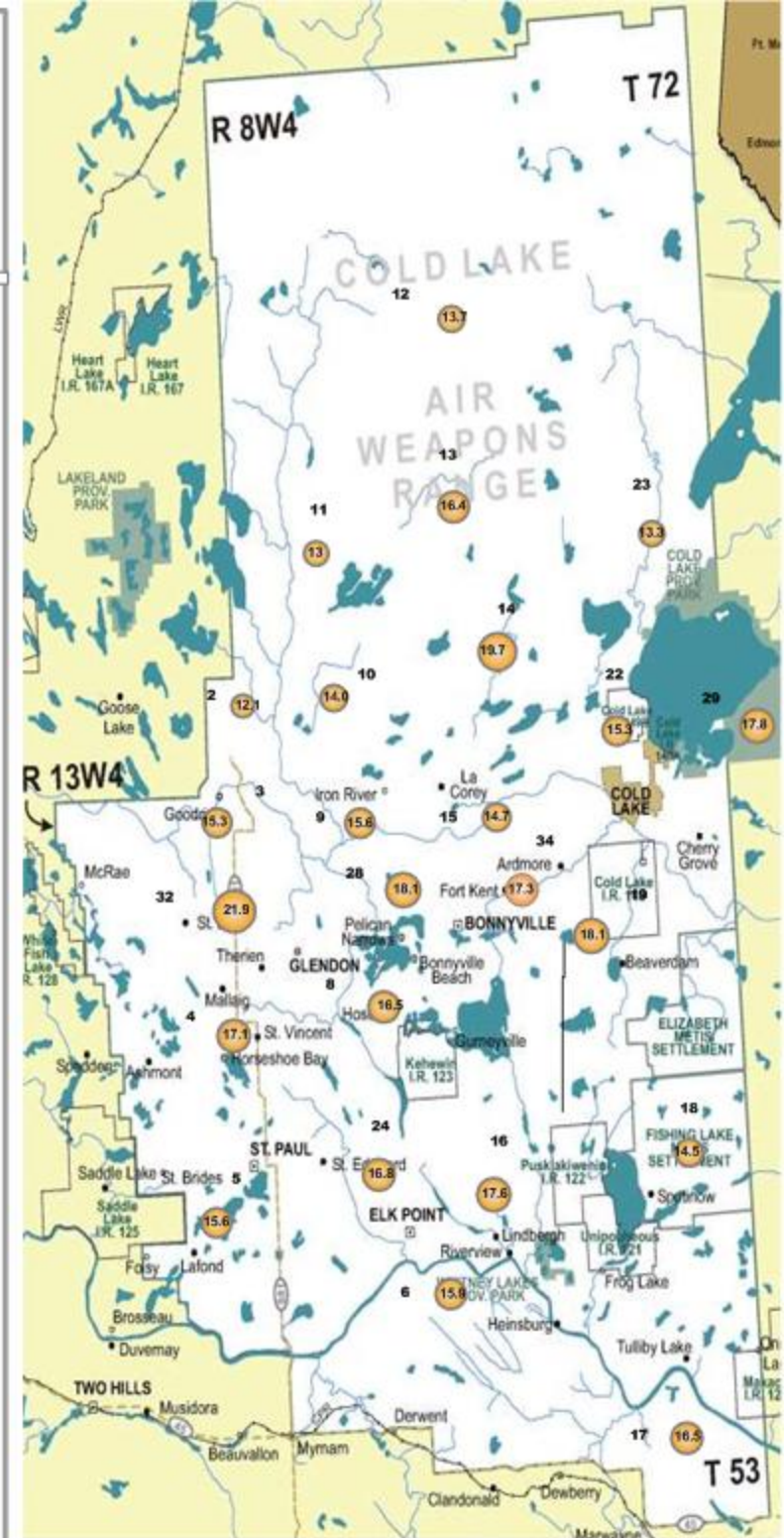
## PASSIVE STATIONS

		DUPLICATE
2 – Sand River	11.1 PPB	13.0 PPB
3 – Therien	15.3 PPB	NA
4 – Flat Lake	17.2 PPB	17.0 PPB
5 – Lake Eliza	15.6 PPB	NA
6 – Telegraph Creek	16.5 PPB	15.2 PPB
8 – Muriel-Kehewin	16.5 PPB	NA
9 – Dupre	15.1 PPB	16.0 PPB
10 – La Corey	14.0 PPB	NA
11 – Wolf Lake	11.8 PPB	14.1 PPB
12 – Foster Creek	13.7 PPB	NA
13 – Primrose	16.2 PPB	16.6 PPB
14 – Maskwa	19.7 PPB	NA
15 – Ardmore	13.2 PPB	16.2 PPB
16 – Frog Lake	17.6 PPB	NA
17 – Clear Range	15.2 PPB	17.8 PPB
18 – Fishing Lake	14.5 PPB	NA
19 – Beaverdam	18.1 PPB	18.1 PPB
22 – Cold Lake South	15.3 PPB	NA
23 – Medley-Martineau	13.3 PPB	NA
24 – Fort George	17.9 PPB	15.6 PPB
28 – Town of Bonnyville	18.1 PPB	NA
29 – Cold Lake South 2	18.0 PPB	17.6 PPB
32 – St. Lina	21.9 PPB	NA
34 – Portable	17.3 PPB	NA



## Summary

Minimum : 12.1 PPB –Sand River  
 Maximum: 21.9 PPB –St. Lina  
 Average: 16.1 PPB \*Includes Duplicates



# Lakeland Industry & Community Association SO<sub>2</sub> Passive Bubble Map

AUGUST 2010

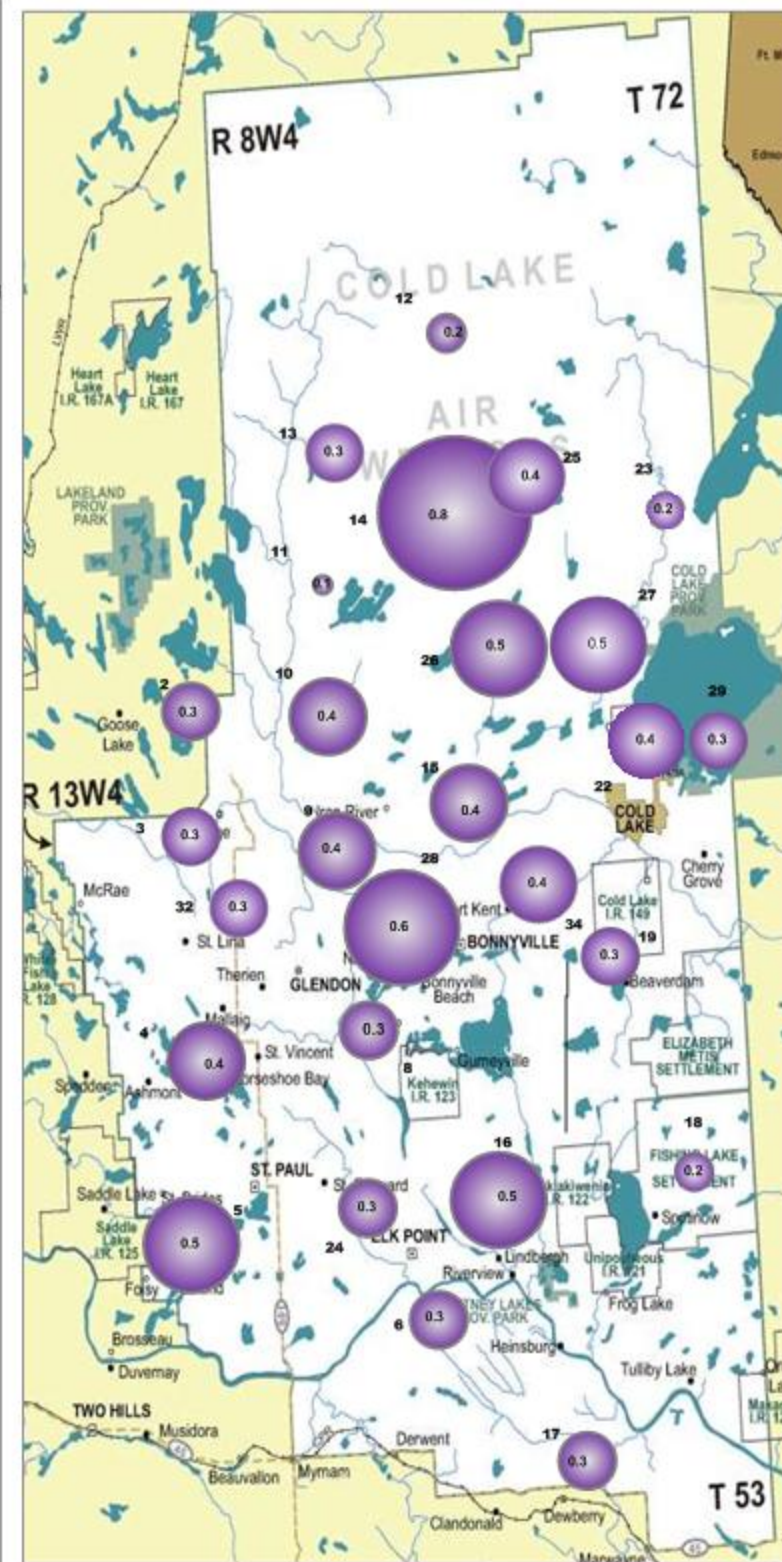
## PASSIVE STATIONS

		DUPLICATE
2 – Sand River	0.3 PPB	0.2 PPB
3 – Therien	0.3 PPB	NA
4 – Flat Lake	0.4 PPB	0.3 PPB
5 – Lake Eliza	0.5 PPB	NA
6 – Telegraph Creek	0.3 PPB	0.2 PPB
8 – Muriel-Kehewin	0.3 PPB	NA
9 – Dupre	0.3 PPB	0.4 PPB
10 – La Corey	0.4 PPB	NA
11 – Wolf Lake	0.1 PPB	0.1 PPB
12 – Foster Creek	0.2 PPB	NA
13 – Primrose	0.3 PPB	0.3 PPB
14 – Maskwa	0.8 PPB	NA
15 – Ardmore	0.4 PPB	0.4 PPB
16 – Frog Lake	0.5 PPB	NA
17 – Clear Range	0.3 PPB	0.3 PPB
18 – Fishing Lake	0.2 PPB	NA
19 – Beaverdam	0.2 PPB	0.3 PPB
22 – Cold Lake South	0.4 PPB	NA
23 – Medley-Martineau	0.2 PPB	NA
24 – Fort George	0.2 PPB	0.4 PPB
25 – Burnt Lake	0.4 PPB	NA
26 – Mahikan	0.4 PPB	0.5 PPB
27 – Mahkeses	0.5 PPB	NA
28 – Town of Bonnyville	0.5 PPB	0.6 PPB
29 – Cold Lake South 2	0.3 PPB	NA
32 – St. Lina	0.3 PPB	NA
34 – Portable	0.4 PPB	NA



## Summary

Minimum : 012 PPB – Wolf Lake  
 Maximum: 0.8 PPB –Maskwa  
 Average: 0.4 PPB \*Includes Duplicates



# Passive Field Data

# Field Notes

ID	SAMPLER	START		END		NOTES
		DATE	TIME	DATE	TIME	
2	SO <sub>2</sub> /NO <sub>2</sub> /O <sub>3</sub>	07/28/10	08:345	09/01/10	11:45	
2A (Dup)	SO <sub>2</sub> /NO <sub>2</sub> /O <sub>3</sub>	07/28/10	08:345	09/01/10	11:45	
3	H <sub>2</sub> S/SO <sub>2</sub> /NO <sub>2</sub> /O <sub>3</sub>	07/28/10	07:45	09/01/10	11:05	
3A (Dup)	H <sub>2</sub> S	07/28/10	07:45	09/01/10	11:05	
4	SO <sub>2</sub> /NO <sub>2</sub> /O <sub>3</sub>	07/29/10	12:50	09/02/10	13:40	
4A (Dup)	SO <sub>2</sub> /NO <sub>2</sub> /O <sub>3</sub>	07/29/10	12:50	09/02/10	13:40	
5	H <sub>2</sub> S/SO <sub>2</sub> /NO <sub>2</sub> /O <sub>3</sub>	07/29/10	12:00	09/02/10	13:00	
5A (Dup)	NA	NA	NA	NA	NA	
6	SO <sub>2</sub> /NO <sub>2</sub> /O <sub>3</sub>	07/28/10	10:25	09/02/10	11:35	
6A (Dup)	SO <sub>2</sub> /NO <sub>2</sub> /O <sub>3</sub>	07/28/10	10:25	09/02/10	11:35	
8	SO <sub>2</sub> /NO <sub>2</sub> /O <sub>3</sub>	07/29/10	13:50	09/02/10	14:40	
8A (Dup)	NA	NA	NA	NA	NA	
9	SO <sub>2</sub> /NO <sub>2</sub> /O <sub>3</sub>	07/28/10	18:45	09/01/10	09:09	
9A (Dup)	SO <sub>2</sub> /NO <sub>2</sub> /O <sub>3</sub>	07/28/10	18:45	09/01/10	09:09	
10	H <sub>2</sub> S/SO <sub>2</sub> /NO <sub>2</sub> /O <sub>3</sub>	07/28/10	09:25	09/01/10	12:30	
10A (Dup)	NA	NA	NA	NA	NA	
11	H <sub>2</sub> S/SO <sub>2</sub> /NO <sub>2</sub> /O <sub>3</sub>	07/28/10	10:25	09/01/10	13:10	
11A (Dup)	H <sub>2</sub> S/SO <sub>2</sub> /NO <sub>2</sub> /O <sub>3</sub>	07/28/10	10:25	09/01/10	13:10	
12	H <sub>2</sub> S/SO <sub>2</sub> /NO <sub>2</sub> /O <sub>3</sub>	07/28/10	12:00	09/01/10	14:47	
12A (Dup)	NA	NA	NA	NA	NA	
13	H <sub>2</sub> S/SO <sub>2</sub> /NO <sub>2</sub> /O <sub>3</sub>	07/28/10	13:55	09/01/10	16:45	
13A (Dup)	H <sub>2</sub> S/SO <sub>2</sub> /NO <sub>2</sub> /O <sub>3</sub>	07/28/10	13:55	09/01/10	16:45	
14	H <sub>2</sub> S/SO <sub>2</sub> /NO <sub>2</sub> /O <sub>3</sub>	07/28/10	14:55	09/01/10	17:45	
14A (Dup)	NA	NA	NA	NA	NA	
15	SO <sub>2</sub> /NO <sub>2</sub> /O <sub>3</sub>	07/28/10	18:10	09/01/10	07:47	
15A (Dup)	SO <sub>2</sub> /NO <sub>2</sub> /O <sub>3</sub>	07/28/10	18:10	09/01/10	07:47	
16	H <sub>2</sub> S/SO <sub>2</sub> /NO <sub>2</sub> /O <sub>3</sub>	07/29/10	08:40	09/02/10	10:07	
16A (Dup)	H <sub>2</sub> S	07/29/10	08:40	09/02/10	10:07	

ID	SAMPLER	START		END		NOTES
		DATE	TIME	DATE	TIME	
17	H <sub>2</sub> S/SO <sub>2</sub> /NO <sub>2</sub> /O <sub>3</sub>	07/29/10	09:35	09/02/10	10:48	
17A (Dup)	SO <sub>2</sub> /NO <sub>2</sub> /O <sub>3</sub>	07/29/10	09:35	09/02/10	10:48	
18	H <sub>2</sub> S/SO <sub>2</sub> /NO <sub>2</sub> /O <sub>3</sub>	07/29/10	07:45	09/02/10	09:23	
18A (Dup)	H <sub>2</sub> S	07/29/10	07:45	09/02/10	09:23	
19	SO <sub>2</sub> /NO <sub>2</sub> /O <sub>3</sub>	07/29/10	06:30	09/02/10	08:15	
19A (Dup)	SO <sub>2</sub> /NO <sub>2</sub> /O <sub>3</sub>	07/29/10	06:30	09/02/10	08:15	
22	H <sub>2</sub> S/SO <sub>2</sub> /NO <sub>2</sub> /O <sub>3</sub>	07/28/10	17:20	09/01/10	06:55	
22A (Dup)	NA	NA	NA	NA	NA	
23	SO <sub>2</sub> /NO <sub>2</sub> /O <sub>3</sub>	07/28/10	16:30	09/01/10	19:03	
23A (Dup)	NA	NA	NA	NA	NA	
24	H <sub>2</sub> S/SO <sub>2</sub> /NO <sub>2</sub> /O <sub>3</sub>	07/29/10	11:15	09/02/10	12:10	
24A (Dup)	SO <sub>2</sub> /NO <sub>2</sub> /O <sub>3</sub>	07/29/10	11:15	09/02/10	12:10	
25	H <sub>2</sub> S/SO <sub>2</sub>	07/28/10	13:25	09/01/10	16:26	
25A (Dup)	H <sub>2</sub> S	07/28/10	13:25	09/01/10	16:26	
26	H <sub>2</sub> S/SO <sub>2</sub>	07/28/10	14:40	09/01/10	17:25	
26A (Dup)	SO <sub>2</sub>	07/28/10	14:40	09/01/10	17:25	
27	H <sub>2</sub> S/SO <sub>2</sub>	07/28/10	15:25	09/01/10	18:10	
27A (Dup)	H <sub>2</sub> S	07/28/10	15:25	09/01/10	18:10	
28	SO <sub>2</sub> /NO <sub>2</sub> /O <sub>3</sub>	07/29/10	14:25	09/01/10	08:51	
28A (Dup)	SO <sub>2</sub>	07/29/10	14:25	09/01/10	08:51	
29	H <sub>2</sub> S/SO <sub>2</sub> /NO <sub>2</sub> /O <sub>3</sub>	07/28/10	17:20	09/01/10	06:55	
29A (Dup)	NO <sub>2</sub> /O <sub>3</sub>	07/28/10	17:20	09/01/10	06:55	
32	H <sub>2</sub> S/SO <sub>2</sub> /NO <sub>2</sub> /O <sub>3</sub>	07/28/10	07:05	09/01/10	09:59	
32A (Dup)	NA	NA	NA	NA	NA	
34	H <sub>2</sub> S/SO <sub>2</sub> /NO <sub>2</sub> /O <sub>3</sub>	07/29/10	15:25	09/01/10	08:21	
34A (Dup)	NA	NA	NA	NA	NA	



# Passive Network Laboratory Analysis



Your Project #: 2010/07/28 - 2010/09/01  
Site: LICA

**Attention: MICHAEL BISAGA**  
LAKELAND INDUSTRY AND COMMUNITY ASSOCIATION  
PO BOX 8237  
5107W- 50TH STREET  
BONNYVILLE, AB  
CANADA T9N 2J5

**Report Date: 2010/09/13**

**CERTIFICATE OF ANALYSIS**

**MAXXAM JOB #: B081224**  
**Received: 2010/09/07, 10:33**

Sample Matrix: Air  
# Samples Received: 45

Analyses	Quantity	Date Extracted	Date Analyzed	LaboratoryMethod	AnalyticalMethod
H2S Passive Analysis 0	25	2010/09/10	2010/09/13	EINDSOP-00150	Tang.Passive H2S in
NO2 Passive Analysis 0	35	2010/09/10	2010/09/13	EINDSOP-00148	Tang Passive NO2 in
O3 Passive Analysis 0	35	2010/09/13	2010/09/13	EINDSOP-00197	EPA 300 R2.1
SO2 Passive Analysis 0	39	2010/09/13	2010/09/13	EINDSOP-00149	Tang Passive SO2 in

\* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

(1) The detection limit is based on a 30 day sampling period.

**Encryption Key**

Please direct all questions regarding this Certificate of Analysis to your Project Manager.

LEVI MANCHAK,  
Email:  
Phone# (780)378-8500

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Total cover pages: 1

**RESULTS OF CHEMICAL ANALYSES OF AIR**

MaxxamID		W76954	W76955	W76956	W76957	W76958		
SamplingDate		2010/07/28 08:35	2010/07/28 08:35	2010/07/28 07:45	2010/07/28 07:45	2010/07/29 12:50		
	<b>Units</b>	<b>2</b>	<b>2A (DUP)</b>	<b>3</b>	<b>3A (DUP)</b>	<b>4</b>	<b>RDL</b>	<b>QC Batch</b>

<b>Passive Monitoring</b>								
CalculatedH2S	ppb			0.14	0.15		0.02	4251322
CalculatedNO2	ppb	0.3	0.3	0.7		0.4	0.1	4248928
CalculatedO3	ppb	11.1	13.0	15.3		17.2	0.1	4253546
CalculatedSO2	ppb	0.3	0.2	0.3		0.4	0.1	4253607

RDL = Reportable Detection Limit

MaxxamID		W76959	W76960	W76961	W76962	W76963		
SamplingDate		2010/07/29 12:50	2010/07/29 12:00	2010/07/29 10:25	2010/07/29 10:25	2010/07/29 13:50		
	<b>Units</b>	<b>4A (DUP)</b>	<b>5</b>	<b>6</b>	<b>6A (DUP)</b>	<b>8</b>	<b>RDL</b>	<b>QC Batch</b>

<b>Passive Monitoring</b>								
CalculatedH2S	ppb		0.47				0.02	4251322
CalculatedNO2	ppb	0.4	0.4	0.8	0.7	0.4	0.1	4248928
CalculatedO3	ppb	17.0	15.6	16.5	15.2	16.5	0.1	4253546
CalculatedSO2	ppb	0.3	0.5	0.3	0.2	0.3	0.1	4253607

RDL = Reportable Detection Limit

MaxxamID		W76964	W76965	W76966		W76967		
SamplingDate		2010/07/28 18:45	2010/07/28 18:45	2010/07/28 09:50		2010/07/28 10:25		
	<b>Units</b>	<b>9</b>	<b>9A (DUP)</b>	<b>10</b>	<b>QC Batch</b>	<b>11</b>	<b>RDL</b>	<b>QC Batch</b>

<b>Passive Monitoring</b>								
CalculatedH2S	ppb			0.19	4251322	0.06	0.02	4251322
CalculatedNO2	ppb	0.7	0.9	1.1	4248928	0.3	0.1	4248932
CalculatedO3	ppb	15.1	16.0	14.0	4253546	11.8	0.1	4253546
CalculatedSO2	ppb	0.3	0.4	0.4	4253607	0.1	0.1	4253607

RDL = Reportable Detection Limit

**RESULTS OF CHEMICAL ANALYSES OF AIR**

MaxxamID		W76968	W76969	W76970	W76971		
SamplingDate		2010/07/28 10:25	2010/07/28 12:00	2010/07/28 13:55	2010/07/28 13:55		
	<b>Units</b>	<b>11A(DUP)</b>	<b>12</b>	<b>13</b>	<b>13A(DUP)</b>	<b>RDL</b>	<b>QC Batch</b>

<b>Passive Monitoring</b>							
CalculatedH2S	ppb	0.05	0.08	0.08	0.08	0.02	4251322
CalculatedNO2	ppb	0.4	0.7	0.4	0.4	0.1	4248932
CalculatedO3	ppb	14.1	13.7	16.2	16.6	0.1	4253546
CalculatedSO2	ppb	0.1	0.2	0.3	0.3	0.1	4253607
RDL = Reportable Detection Limit							

MaxxamID		W76972		W76973	W76977	W76978		
SamplingDate		2010/07/28 14:55		2010/07/28 18:10	2010/07/28 18:10	2010/07/29 08:40		
	<b>Units</b>	<b>14</b>	<b>QC Batch</b>	<b>15</b>	<b>15A(DUP)</b>	<b>16</b>	<b>RDL</b>	<b>QC Batch</b>

<b>Passive Monitoring</b>							
CalculatedH2S	ppb	0.18	4251322			0.11	0.02 4251322
CalculatedNO2	ppb	0.7	4248932	0.8	0.6	0.7	0.1 4248932
CalculatedO3	ppb	19.7	4253547	13.2	16.2	17.6	0.1 4253547
CalculatedSO2	ppb	0.8	4253607	0.4	0.4	0.5	0.1 4253609
RDL = Reportable Detection Limit							

MaxxamID		W76979	W76980	W76981	W76982	W76983		
SamplingDate		2010/07/29 08:40	2010/07/29 09:35	2010/07/29 09:35	2010/07/29 07:45	2010/07/29 07:45		
	<b>Units</b>	<b>16A(DUP)</b>	<b>17</b>	<b>17A(DUP)</b>	<b>18</b>	<b>18A(DUP)</b>	<b>RDL</b>	<b>QC Batch</b>

<b>Passive Monitoring</b>							
CalculatedH2S	ppb	0.12	0.22		0.09	0.09	0.02 4251322
CalculatedNO2	ppb		1.1	1.0	0.6		0.1 4248932
CalculatedO3	ppb		15.2	17.8	14.5		0.1 4253547
CalculatedSO2	ppb		0.3	0.3	0.2		0.1 4253609
RDL = Reportable Detection Limit							

### RESULTS OF CHEMICAL ANALYSES OF AIR

MaxxamID		W76990	W76998	W77001	W77002	W77003		
SamplingDate		2010/07/29	2010/07/29	2010/07/28	2010/07/28	2010/07/29		
		06:30	06:30	17:20	16:30	11:15		
	<b>Units</b>	<b>19</b>	<b>19A(DUP)</b>	<b>22</b>	<b>23</b>	<b>24</b>	<b>RDL</b>	<b>QC Batch</b>

<b>Passive Monitoring</b>								
CalculatedH2S	ppb			0.19		0.15	0.02	4251322
CalculatedNO2	ppb	0.4	0.4	0.8	0.2	1.1	0.1	4248932
CalculatedO3	ppb	18.1	18.1	15.3	13.3	17.9	0.1	4253547
CalculatedSO2	ppb	0.2	0.3	0.4	0.2	0.2	0.1	4253609

RDL = Reportable Detection Limit

MaxxamID		W77004	W77005	W77006	W77007	W77008		
SamplingDate		2010/07/29	2010/07/28	2010/07/28	2010/07/28	2010/07/28		
		11:15	13:25	13:25	14:40	14:40		
	<b>Units</b>	<b>24A(DUP)</b>	<b>25</b>	<b>25A(DUP)</b>	<b>26</b>	<b>26A(DUP)</b>	<b>RDL</b>	<b>QC Batch</b>

<b>Passive Monitoring</b>								
CalculatedH2S	ppb		0.09	0.09	0.13		0.02	4251322
CalculatedNO2	ppb	1.1					0.1	4248932
CalculatedO3	ppb	15.6					0.1	4253547
CalculatedSO2	ppb	0.4	0.4		0.4	0.5	0.1	4253609

RDL = Reportable Detection Limit

MaxxamID		W77009	W77010	W77011	W77012	W77013		
SamplingDate		2010/07/28	2010/07/28	2010/07/29	2010/07/29	2010/07/28		
		15:25	15:25	14:25	14:25	17:20		
	<b>Units</b>	<b>27</b>	<b>27A(DUP)</b>	<b>28</b>	<b>28A(DUP)</b>	<b>29</b>	<b>RDL</b>	<b>QC Batch</b>

<b>Passive Monitoring</b>								
CalculatedH2S	ppb	0.19	0.22			0.20	0.02	4251322
CalculatedNO2	ppb			1.8		0.6	0.1	4248932
CalculatedO3	ppb			18.1		18.0	0.1	4253547
CalculatedSO2	ppb	0.5		0.5	0.6	0.3	0.1	4253609

RDL = Reportable Detection Limit

**RESULTS OF CHEMICAL ANALYSES OF AIR**

MaxxamID		W77016	W77167	W77168		
SamplingDate		2010/07/28 17:20	2010/07/28 07:05	2010/07/28 15:25		
	<b>Units</b>	<b>29A (DUP)</b>	<b>32</b>	<b>34</b>	<b>RDL</b>	<b>QC Batch</b>

<b>Passive Monitoring</b>						
CalculatedH2S	ppb		0.18	0.18	0.02	4251322
CalculatedNO2	ppb	0.7	0.4	0.8	0.1	4248932
CalculatedO3	ppb	17.6	21.9	17.3	0.1	4253547
CalculatedSO2	ppb		0.3	0.4	0.1	4253609
RDL = Reportable Detection Limit						



Maxxam Job #: B081224  
Report Date: 2010/09/13

LAKELAND INDUSTRY AND COMMUNITY ASSOCIATION  
Client Project #: 2010/07/28 - 2010/09/01  
Site Reference: LICA  
Sampler Initials: SB

**General Comments**

**Results relate only to the items tested.**

Quality Assurance Report

Maxxam Job Number: PB081224

QA/QC Batch Num Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
4248928 DF4	CalibrationCheck	CalculatedNO2	2010/09/10		98	%	76 - 118
	SpikedBlank	CalculatedNO2	2010/09/10		95	%	N/A
	MethodBlank	CalculatedNO2	2010/09/10	<0.1		ppb	
4248932 DF4	CalibrationCheck	CalculatedNO2	2010/09/10		99	%	76 - 118
	SpikedBlank	CalculatedNO2	2010/09/10		103	%	N/A
	MethodBlank	CalculatedNO2	2010/09/10	<0.1		ppb	
4251322 TM5	CalibrationCheck	CalculatedH2S	2010/09/10		102	%	80 - 120
	SpikedBlank	CalculatedH2S	2010/09/10		100	%	N/A
4253546 OZ	CalibrationCheck	CalculatedO3	2010/09/13		101	%	91 - 107
	SpikedBlank	CalculatedO3	2010/09/13		99	%	N/A
	MethodBlank	CalculatedO3	2010/09/13	<0.1		ppb	
4253547 OZ	CalibrationCheck	CalculatedO3	2010/09/13		99	%	91 - 107
	SpikedBlank	CalculatedO3	2010/09/13		101	%	N/A
	MethodBlank	CalculatedO3	2010/09/13	<0.1		ppb	
4253607 DF4	CalibrationCheck	CalculatedSO2	2010/09/13		102	%	95 - 105
	SpikedBlank	CalculatedSO2	2010/09/13		97	%	N/A
	MethodBlank	CalculatedSO2	2010/09/13	<0.1		ppb	
4253609 DF4	CalibrationCheck	CalculatedSO2	2010/09/13		103	%	95 - 105
	SpikedBlank	CalculatedSO2	2010/09/13		102	%	N/A
	MethodBlank	CalculatedSO2	2010/09/13	<0.1		ppb	

Calibration Check: A calibration standard analyzed at different times to evaluate on-going calibration accuracy.  
 Spiked Blank: A blank matrix to which a known amount of the analyte has been added. Used to evaluate analyte recovery.  
 Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.





## Validation Signature Page

**Maxxam Job #: B081224**

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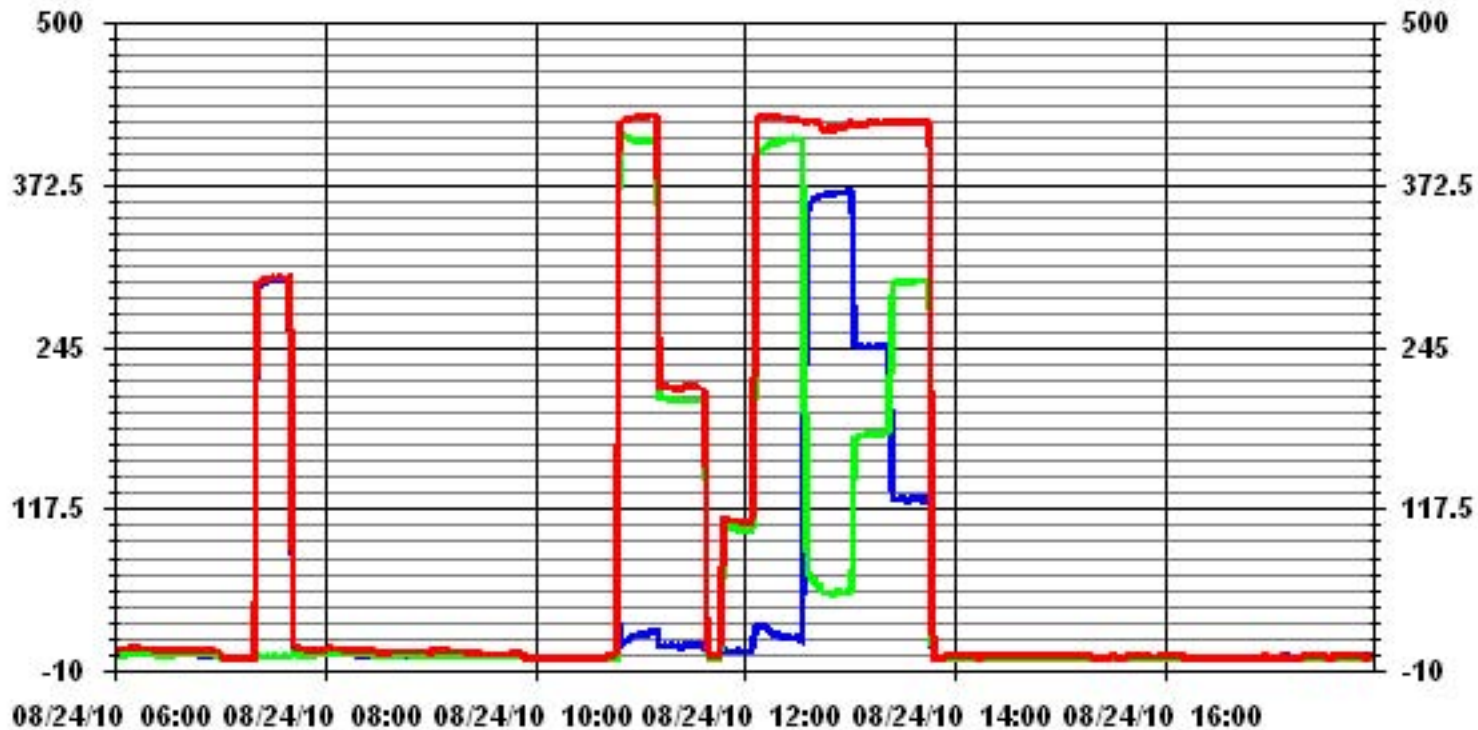
The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).

=====

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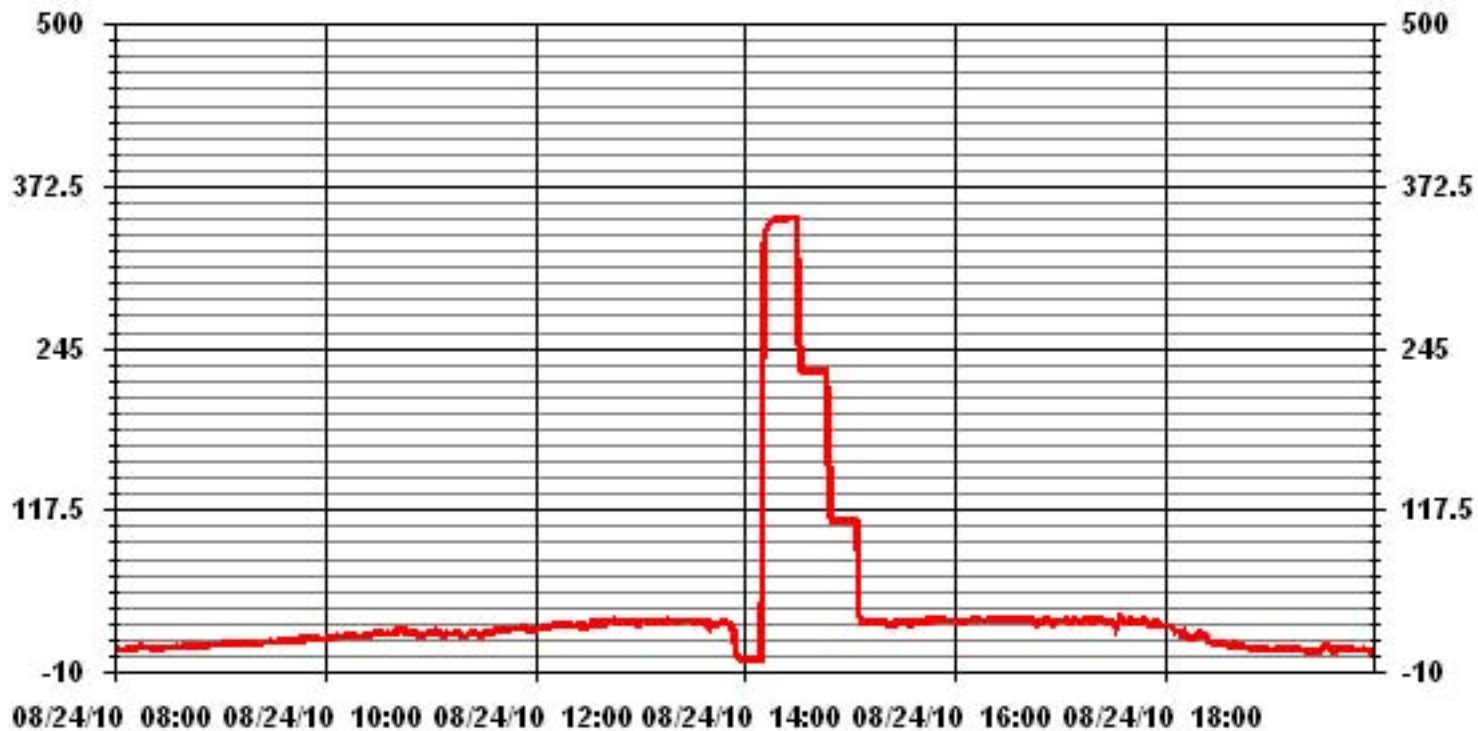
# Alberta Environment Audit Results

### 01 Minute Averages

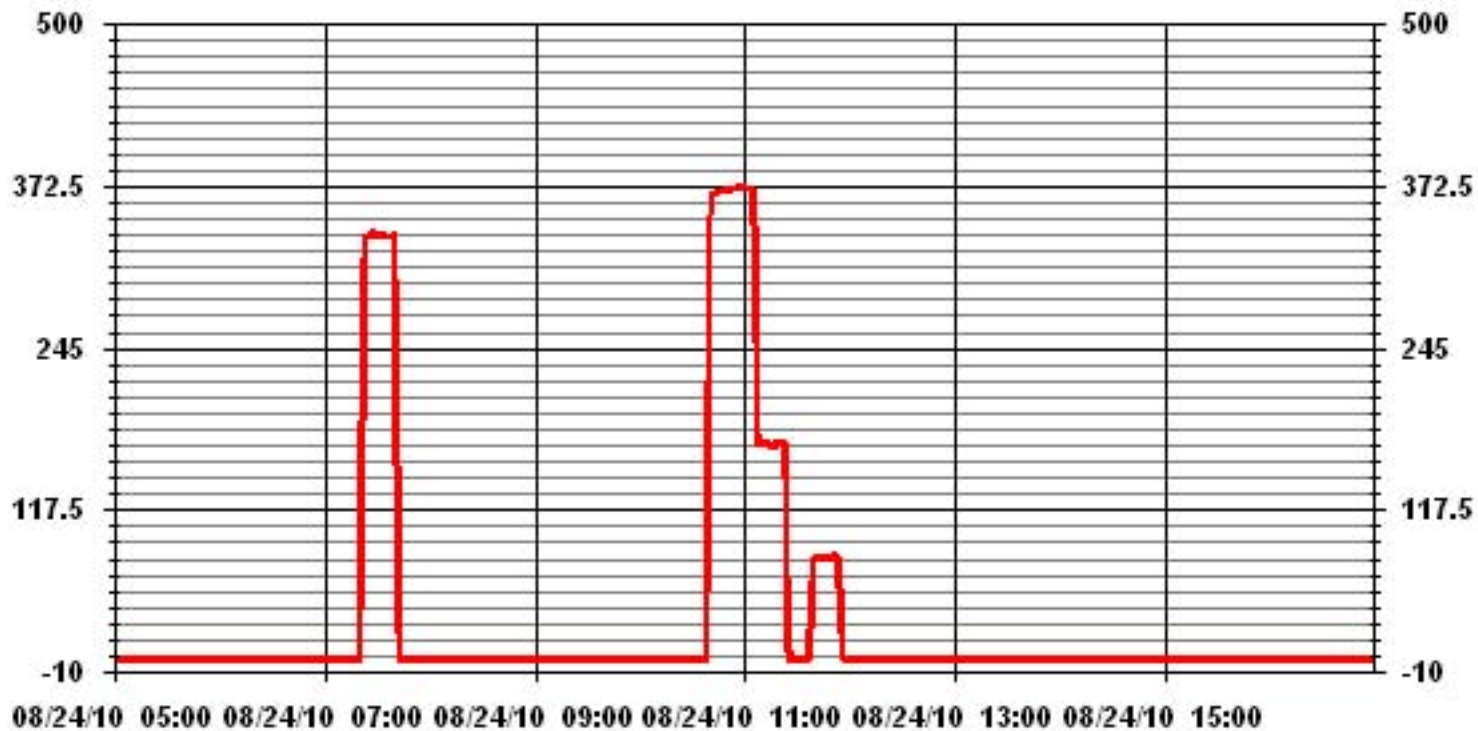


— LICA NOX\_ PPB — LICA NO\_ PPB — LICA NO2\_ PPB

### 01 Minute Averages

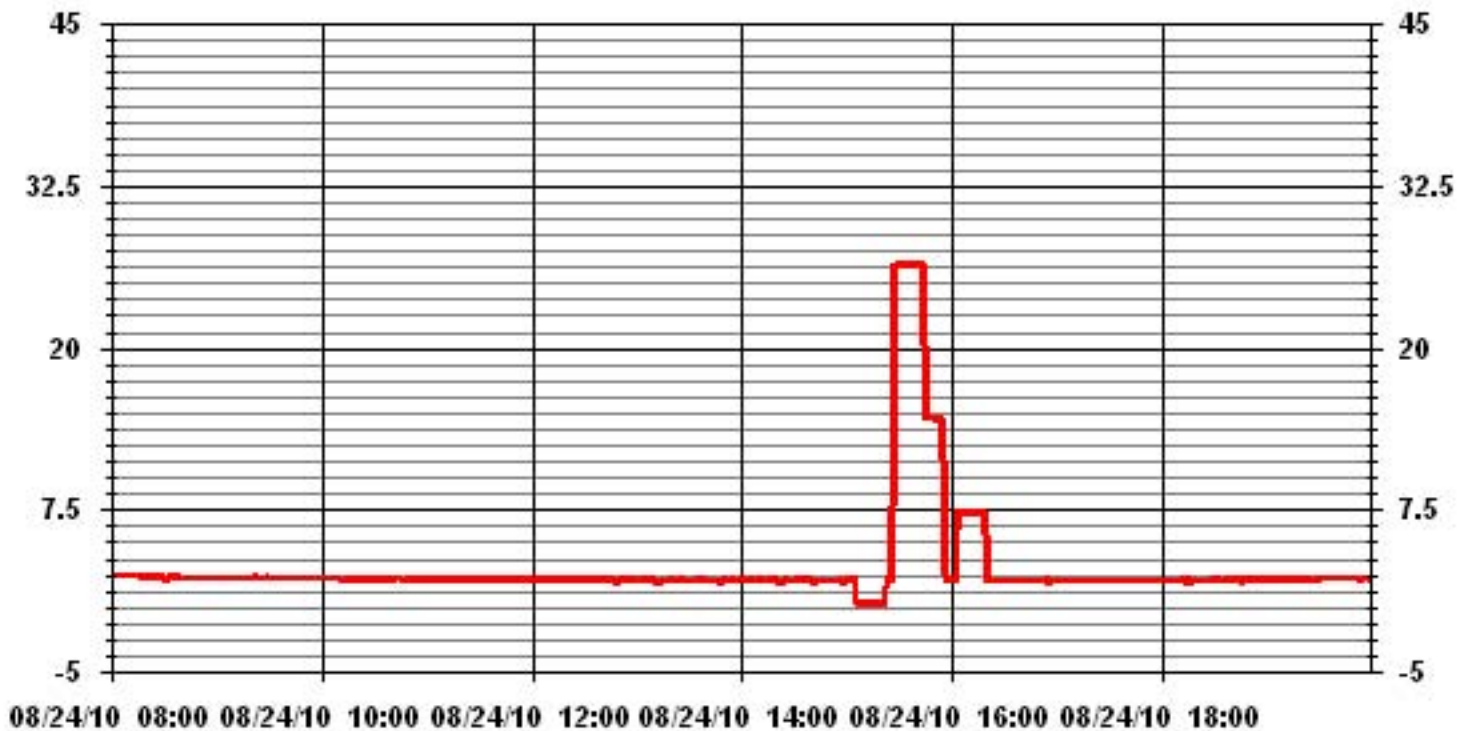


### 01 Minute Averages

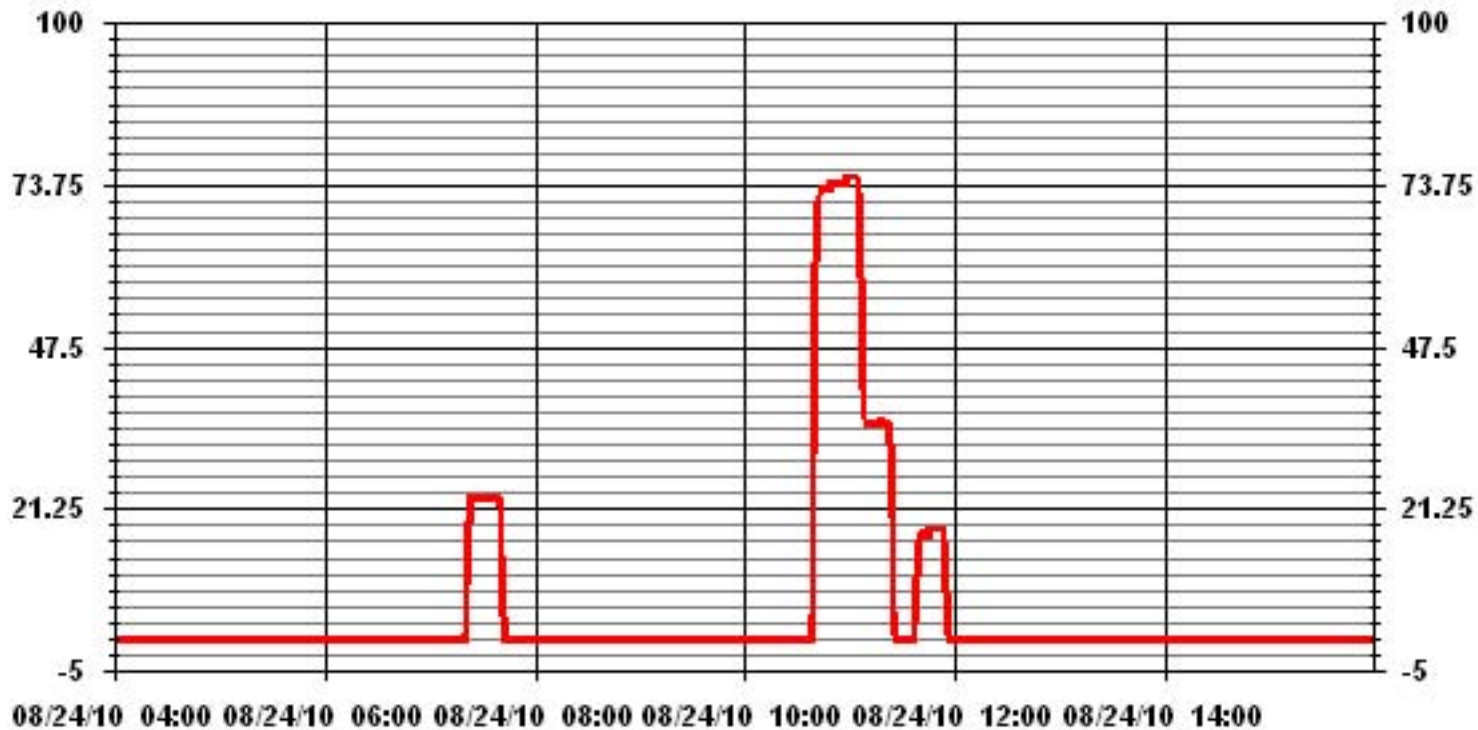


— LICA SO2\_ PPB

### 01 Minute Averages



### 01 Minute Averages



# Lakeland Industry & Community Association

Maskwa Monitoring Site  
Ambient Air Monitoring  
Data Report  
For  
August 2010

Prepared By:



September 3, 2010



# Lakeland Industry & Community Association

## Ambient Air Monitoring

### Maskwa

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## Introduction

The following Ambient Air Monitoring report was prepared for:

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**Lakeland Industry & Community Association**  
Box 8237  
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Bonnyville, Alberta  
T9N 2J5

Monitoring Location: Maskwa  
Data Period: August 2010

The monthly ambient data report:

- Prepared by Lily Lin
- Reviewed by Craig Snider

# Calibration Procedure

The following calibration procedure applies to all calibrations conducted at the Lakeland Industry & Community Association Air Monitoring Station.

Calibration gas concentrations are generated using a dynamic mass flow controlled calibrator. EPA Protocol one gases are diluted with zero air generated on site. The Mass Flow Controllers in the calibrator are referenced using an NIST traceable flow meter once per month. All listed flows are reported as corrected to Standard Temperature and Pressure (STP).

Generated zero gas is introduced to the analyzer first. Three concentrations of calibration gas are then generated in order to introduce points at approximately 50-80%, 25-40% & 10-20% of the analyzer's full-scale range. An auto zero and span are then performed to validate the daily zero and span values recorded to the next multi-point calibration.

All indicated concentrations are taken from the ESC data logger used to collect the data for monthly reporting.

The calibrations conducted at the LICA - Maskwa Air Monitoring Stations conform to the following Maxxam Analytics Standard Operation Procedures:

- CAL SOP-00211
- CAL SOP-00209
- CAL SOP-00213
- CAL SOP-00214
- CAL SOP-00208

Conformance of each calibration to Alberta Environment regulations is outlined in the individual calibration reports. The slope and correlation coefficient are derived from the calculated and indicated analyzer responses. The percent change is calculated using the previous calibration correction factor and the current correction factor before adjustment. All calibration's and maintenance conforms to the procedures outlined in the *Air Monitoring Directive, Appendix A-10, Section 1.6*.

# MONTHLY CONTINUOUS DATA SUMMARY

## LAKELAND INDUSTRY & COMMUNITY ASSOCIATION – MASKWA

### Continuous Ambient Monitoring – August 2010

LICA MASKWA SITE						MAXIMUM VALUES						OPERATIONAL TIME (PERCENT)	
						OBJECTIVES			EXCEEDENCES		MONTHLY AVERAGE		1-HOUR
PARAMETER	1-HR	24-HR	1-HR	24-HR	READING	DAY	HOUR	WIND SPEED (KPH)	WIND DIRECTION (DEGREES)	READING			DAY
SO2 (PPB)	172	57	0	0	0.71	12	2	6	5.2	298(WNW)	2.8	2	100.0
H2S (PPB)	10	3	0	0	0.02	2	24	19	3.1	128(SE)	0.2	30	100.0
THC (PPM)	-	-	-	-	2.07	3.3	12	4	0.9	0(N)	2.3	12	99.9
NOx (PPB)	-	-	-	-	1.45	18	2, 23	6, 5	5.2, 5.6	298(WNW), 305(WNW)	7.1	23	100.0
NO (PPB)	-	-	-	-	0.47	11	24	7	2	281(W)	2.5	24	100.0
NO <sub>2</sub> (PPB)	212	106	0	0	0.95	12	23	5	5.6	305(WNW)	4.8	23	100.0
VECTOR WS (KPH)	-	-	-	-	4.21	14.8	26	14	-	96(E)	8.2	26	100.0
VECTOR WD (DEGREES)	-	-	-	-	267(W)	-	-	-	-	-	-	-	100.0
RELATIVE HUMIDITY (%)	-	-	-	-	75.26	93	VAR	VAR	VAR	VAR	84.8	30	100.0
TEMPERATURE (DEG C)	-	-	-	-	14.83	27.2	7	15	4.3	269(W)	20.5	7	100.0
BAROMETRIC PRESSURE (MILIBAR)	-	-	-	-	939	950	4	VAR	VAR	VAR	948.5	15	100.0
PRECIPITATION (MM)	-	-	-	-	0.07	6.1	11	15	6.8	206(SSW)	6.2	11	100.0

VAR-VARIOUS

# General Monthly Summary

## Equipment Operation

The following summary outlines the analyzer performance. Any non-conformances, problems or maintenance performed are detailed at the end of each section.

### AQM STATION – LICA – Maskwa

**A trailer audit was performed by Alberta Environment on August 25<sup>th</sup>.**

#### Sulphur Dioxide (PPB)

- Analyzer make / model - API 100E, S/N: 508

No operational issue was observed during the month. The inlet filter was changed before the monthly calibration was started. Data was corrected using daily zero information.

#### Hydrogen Sulphide (PPB)

- Analyzer make / model - API 101E, S/N: 511

No operational issue was observed during the month. The inlet filter was changed before the monthly calibration was started. Data was corrected using daily zero information.

#### Total HydroCarbon (PPM)

- Analyzer make / model –TECO 51C-LT, S/N: 436609738

No operational issue was observed during the month. It was noticed that the H<sub>2</sub> gas was low upon the site on August 11<sup>th</sup>. Replaced the H<sub>2</sub> gas cylinder and re-lit the analyzer. After that, the daily calibration program was run. The inlet filter was changed before the monthly calibration was started on August 16<sup>th</sup>. During the monthly calibration, the as found span reading dropped due to a pressure warning from the calibrator causing the calibration gas to stop flowing. The point was re-done and the calibration was continued. Data was corrected using daily zero information.

# General Monthly Summary

## AQM STATION – LICA – Maskwa

### Nitrogen Dioxide (PPB)

- Analyzer make / model - API 200E, S/N:594

No operational issue was observed during the month. The inlet filter was changed before the monthly calibration was started. Data was corrected using daily zero information.

### Vector Wind Speed (KPH) & Vector Wind Direction (DEG)

- System make / model - Climatronics MIII replaced to Met One 50.5H, S/N: H10703

The wind system is reported as vector wind speed and vector wind direction. The wind system went well throughout the month.

### Relative Humidity (PERCENT)

- System make / model - Met One 083

No operational issues observed during the month.

### Precipitation (MM)

- System make / model - Met One 387

No operational issues observed during this month.

# General Monthly Summary

## AQM STATION – LICA – Maskwa

### Barometric Pressure (MILLIBAR)

- System make / model - Met One 092

No operation issue was observed during the month.

### Ambient Temperature (DEGC)

- System make / model - Met One 060

No operational issue was observed during the month.

### Trailer Temperature (DEG C)

- System make / model – R&R 61

No operational issue was observed during the month.

### Standard Deviation Wind Direction (DEG)

- System make / model – Climatronics MIII replaced to Met One 50.5H

No operational issue was observed during the month.

# General Monthly Summary

## **AQM STATION – LICA – Maskwa**

### **Datalogger**

- System make / model - ESC 8832
- Software make/version - ESC v 5.51a

No operational issue was observed during the month.

### **Trailer**

The manifold and inlet pipe were cleaned on August 17<sup>th</sup>.



# Continuous Monitoring

# Monthly Summaries, Graphs & Wind Roses

# Sulphur Dioxide

# LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - MASKWA

AUGUST 2010

## SULPHUR DIOXIDE (SO<sub>2</sub>) hourly averages in ppb

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR		
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	MAX.	AVG.	RDGS.		
DAY 1	0	0	0	0	0	0	0	0	3	1	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	3	0.2	24	
2	0	0	0	2	2	2	12	7	6	4	6	3	2	1	1	1	IZS	0	0	0	0	1	11	4	12	2.8	24	
3	4	0	0	0	0	0	0	1	1	0	0	1	0	2	2	IZS	3	1	1	0	0	0	0	0	4	0.7	24	
4	0	0	0	0	0	0	1	1	4	7	5	2	2	2	IZS	4	3	1	0	2	0	0	2	2	7	1.7	24	
5	2	1	0	1	0	0	2	11	6	2	1	2	2	IZS	0	0	1	0	0	1	1	0	0	0	11	1.4	24	
6	0	0	0	0	0	0	0	1	1	1	1	1	IZS	1	1	1	1	1	1	1	1	1	1	1	1	0.7	24	
7	1	1	1	1	1	1	1	1	1	1	1	IZS	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	24	
8	1	1	1	1	1	1	1	1	1	1	IZS	1	1	1	1	1	1	0	0	1	1	0	1	1	1	0.9	24	
9	1	1	1	1	1	0	0	3	2	IZS	2	1	1	1	1	1	1	1	1	1	1	0	0	0	3	1.0	24	
10	0	0	0	1	1	1	1	2	IZS	0	1	1	1	1	1	1	1	1	1	1	0	0	0	0	2	0.7	24	
11	0	0	0	1	1	1	1	IZS	1	2	1	0	0	0	0	1	1	1	1	1	1	1	0	0	2	0.7	24	
12	0	0	0	0	1	1	IZS	1	1	1	2	2	1	2	2	1	1	1	1	5	1	1	3	1	5	1.3	24	
13	1	0	1	0	1	IZS	0	1	1	1	1	1	1	1	1	0	1	0	1	0	1	0	0	0	1	0.6	24	
14	0	0	0	0	IZS	0	0	0	0	1	1	3	2	2	1	5	2	1	1	1	1	1	1	1	5	1.0	24	
15	1	1	1	IZS	0	0	0	1	0	0	1	1	2	2	3	1	0	1	1	1	0	0	0	0	3	0.7	24	
16	0	0	IZS	0	0	0	0	0	0	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	1	0.3	24	
17	0	IZS	0	1	0	0	0	1	3	1	C	C	C	C	C	0	1	1	1	0	0	0	0	0	3	0.5	24	
18	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0.0	24
19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0.0	24	
20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24	
21	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	2	1	1	1	0	IZS	0	0	2	0.3	24	
22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0.0	24	
23	0	1	3	3	4	8	3	2	4	1	0	2	0	2	11	8	3	1	IZS	2	2	0	2	1	11	2.7	24	
24	1	3	2	0	0	0	1	7	2	1	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	7	0.7	24	
25	0	0	0	0	0	0	0	0	0	C	C	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0.0	24	
26	0	0	0	0	0	0	0	0	0	1	1	3	1	2	2	IZS	1	3	1	1	0	2	1	0	3	0.8	24	
27	1	4	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	4	0.2	24	
28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	2	0	0	1	2	5	0.4	24	
29	7	3	1	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	7	0.5	24	
30	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24	
31	0	0	0	0	0	0	0	0	0	0	0	IZS	1	0	0	0	0	0	0	0	0	0	0	0	1	0.0	24	
HOURLY MAX	7	4	3	3	4	8	12	11	6	7	6	3	2	2	11	8	3	3	2	5	2	2	11	5				
HOURLY AVG	0.7	0.5	0.4	0.4	0.4	0.5	0.8	1.4	1.3	0.9	0.9	0.9	0.6	0.8	1.0	1.0	0.8	0.6	0.5	0.6	0.4	0.3	0.8	0.6				

### STATUS FLAG CODES

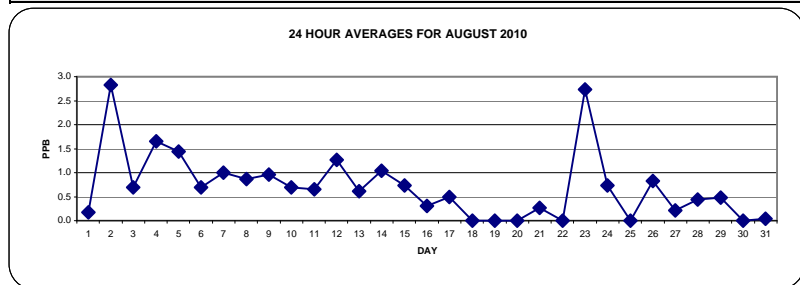
S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	- MAINTENANCE
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE

OBJECTIVE LIMIT:

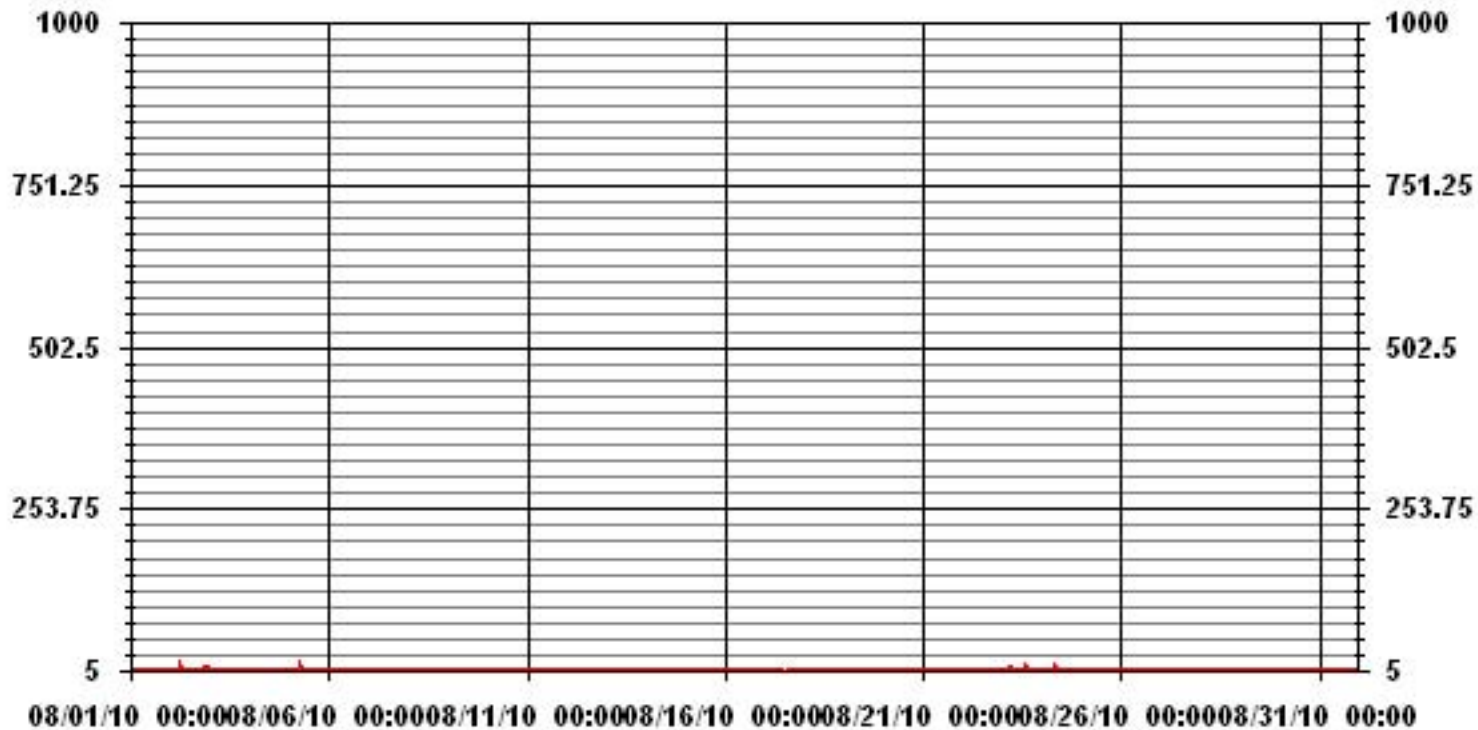
ALBERTA ENVIRONMENT:	1-HR	172	PPB	24-HR	57	PPB
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### MONTHLY SUMMARY

NUMBER OF 1-HR EXCEEDENCES:	0		
NUMBER OF 24-HR EXCEEDENCES:	0		
NUMBER OF NON-ZERO READINGS:	288		
MAXIMUM 1-HR AVERAGE:	12 PPB @ HOUR(S) 6 ON DAY(S) 2		
MAXIMUM 24-HR AVERAGE:	2.8 PPB ON DAY(S) 2		
IZS CALIBRATION TIME:	32 HRS	OPERATIONAL TIME:	744 HRS
MONTHLY CALIBRATION TIME:	7 HRS	AMD OPERATION UPTIME:	100.0 %
STANDARD DEVIATION:	1.38	MONTHLY AVERAGE:	0.71 PPB



### 01 Hour Averages



# LAKELAND INDUSTRY & COMMUNITY ASSOCIATION -MASKWA

AUGUST 2010

## SULPHUR DIOXIDE MAX instantaneous maximum in ppt

MST		0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR		
DAY	HR	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	MAX.	AVG.	RDGS.		
1		0	0	0	0	0	0	0	0	9	3	1	0	0	0	0	0	0	IZS	1	1	1	1	1	1	9	0.8	24	
2		1	1	1	4	4	9	22	17	15	10	19	6	10	2	5	4	IZS	3	1	1	1	6	28	11	28	7.9	24	
3		14	1	1	1	1	1	1	1	1	1	1	6	1	5	9	IZS	13	3	2	1	1	1	1	1	14	3.0	24	
4		0	1	1	1	1	1	2	3	11	14	20	7	4	9	IZS	17	11	6	3	4	1	1	4	4	20	5.5	24	
5		2	2	1	1	1	1	11	16	15	10	4	9	7	IZS	1	1	4	1	1	1	1	1	1	1	16	4.0	24	
6		1	1	1	1	1	1	1	1	1	1	1	1	IZS	1	1	1	1	1	1	1	1	1	2	1	2	1.0	24	
7		1	1	1	1	1	1	1	2	1	2	1	IZS	1	1	1	1	1	1	1	1	1	1	1	1	2	1.1	24	
8		2	1	1	1	1	1	1	1	2	1	IZS	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1.1	24	
9		1	1	1	1	1	1	1	7	4	IZS	3	1	1	1	1	1	1	1	1	1	1	1	1	1	7	1.5	24	
10		1	1	1	2	2	1	1	6	IZS	1	1	1	2	1	2	1	1	1	1	1	1	1	1	1	6	1.4	24	
11		1	1	1	1	1	1	2	IZS	2	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	3	1.2	24	
12		1	1	1	1	1	1	IZS	1	1	2	6	7	2	11	8	1	1	1	7	11	4	3	6	1	11	3.4	24	
13		1	1	1	1	1	IZS	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	24	
14		1	1	1	1	IZS	1	1	1	1	1	4	14	7	14	11	22	9	1	1	2	1	1	1	1	22	4.3	24	
15		1	2	1	IZS	1	1	1	1	1	1	1	2	3	4	9	1	1	1	1	1	1	1	0	1	9	1.6	24	
16		1	1	IZS	0	1	1	1	1	1	1	1	1	1	1	2	3	1	1	1	1	1	1	1	1	3	1.1	24	
17		1	IZS	1	1	1	1	1	1	7	1	C	C	C	C	C	1	1	1	1	1	1	1	1	1	7	1.3	24	
18		IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24	
19		0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	IZS	0	1	0.0	24
20		0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	1	0.0	24
21		0	0	0	0	0	0	0	0	0	1	2	2	2	2	2	7	4	4	4	0	IZS	0	0	0	7	1.1	24	
22		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0.0	24	
23		1	5	7	9	10	13	13	6	6	4	0	8	3	10	18	13	11	8	IZS	15	3	0	5	4	18	7.5	24	
24		6	11	11	1	1	0	4	20	7	5	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	20	2.9	24	
25		0	0	0	0	0	0	0	C	C	C	C	0	1	1	1	1	IZS	0	1	0	0	0	0	0	1	0.3	24	
26		0	1	0	1	1	1	1	0	2	3	3	11	3	5	6	IZS	2	5	5	2	1	6	4	1	11	2.8	24	
27		6	15	1	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	1	1	0	1	1	15	1.1	24	
28		0	0	0	0	0	0	0	0	0	0	0	0	1	IZS	0	1	0	0	7	2	4	2	7	11	11	1.5	24	
29		11	11	4	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	11	1.1	24	
30		0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	1	1	0	0	1	1	0	0	0	0	1	0.2	24	
31		0	0	0	0	0	0	0	0	0	0	IZS	2	1	0	1	1	1	1	0	2	0	0	0	0	2	0.4	24	
HOURLY MAX		14	15	11	9	10	13	22	20	15	14	20	14	10	14	18	22	13	8	7	15	4	6	28	11				
HOURLY AVG		1.8	2.0	1.3	1.0	1.0	1.2	2.2	3.0	3.0	2.3	2.6	2.9	1.8	2.6	3.0	2.6	2.4	1.5	1.5	1.8	1.0	1.1	2.3	1.6				

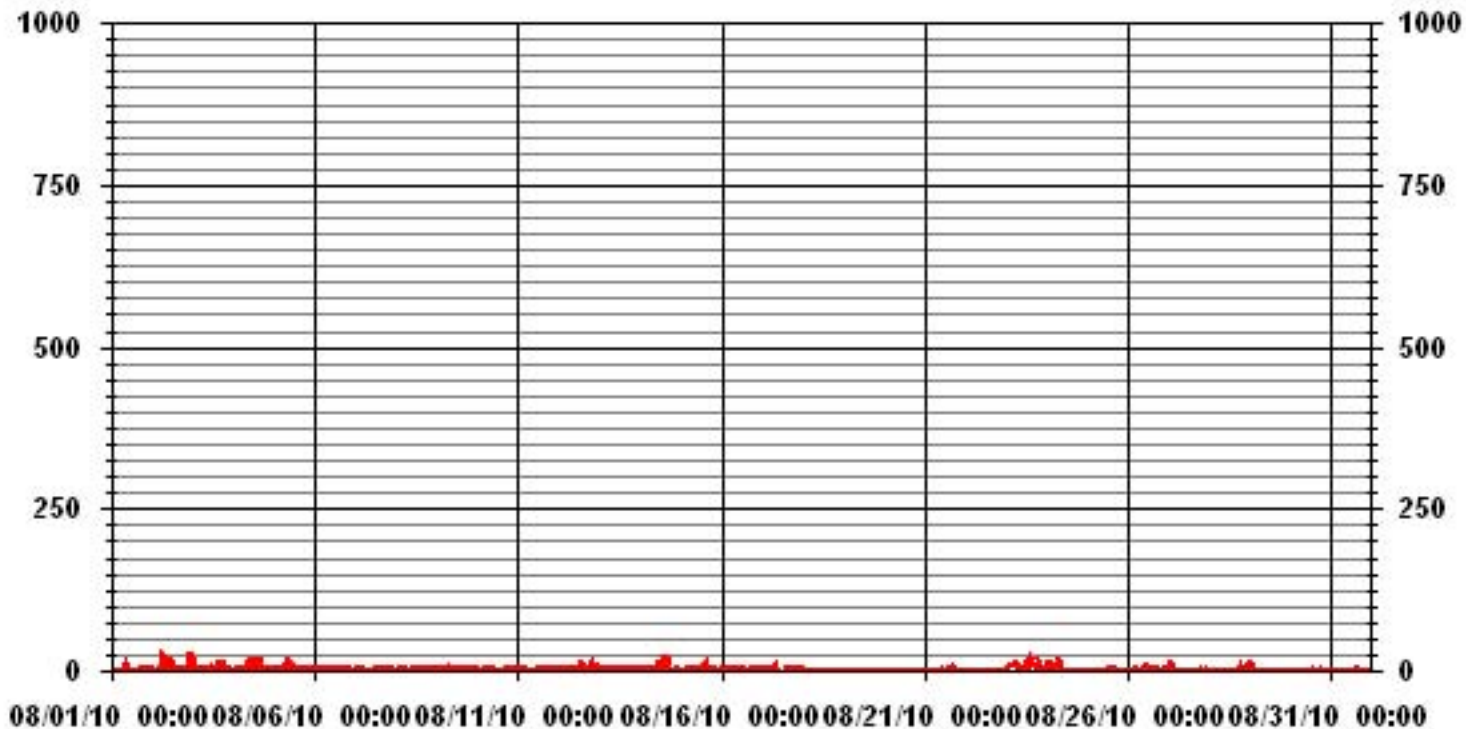
**STATUS FLAG CODES**

S - OUT OF SERVICE	IZS - IZS - DAILY ZERO/SPAN CHECK
N - INVALID DATA	M - MISSING DATA
D - INSTRUMENT DRIFT	P - POWER FAILURE
C - CALIBRATION	NA - NOT APPLICABLE

**MONTHLY SUMMARY**

NUMBER OF NON-ZERO READINGS:	464					
MAXIMUM INSTANTANEOUS VALUE:	28	PPB	@ HOUR(S)	22	ON DAY(S)	2
IZS CALIBRATION TIME:	32	HRS		OPERATIONAL TIME:	744	HRS
MONTHLY CALIBRATION TIME:	9	HRS				
STANDARD DEVIATION:	3.57					

### 01 Hour Averages



— LICA30 SO2MAX PPB

LICA30  
SO2\_ / WDR Joint Frequency Distribution (Percent)

August 2010

Distribution By % Of Samples

Logger Id : 30  
Site Name : LICA30  
Parameter : SO2\_  
Units : PPB

Wind Parameter : WDR  
Instrument Height : 10 Meters

Limit	Direction																Freq
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
< 20	7.94	5.39	5.53	3.82	6.24	3.40	6.09	4.96	6.38	11.63	7.65	6.66	8.08	4.68	4.82	6.66	100.00
< 60	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
< 110	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
< 170	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
< 340	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
>= 340	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
Totals	7.94	5.39	5.53	3.82	6.24	3.40	6.09	4.96	6.38	11.63	7.65	6.66	8.08	4.68	4.82	6.66	

Calm : .00 %

Total # Operational Hours : 705

Distribution By Samples

Limit	Direction																Freq
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
< 20	56	38	39	27	44	24	43	35	45	82	54	47	57	33	34	47	705
< 60																	
< 110																	
< 170																	
< 340																	
>= 340																	
Totals	56	38	39	27	44	24	43	35	45	82	54	47	57	33	34	47	

Calm : .00 %

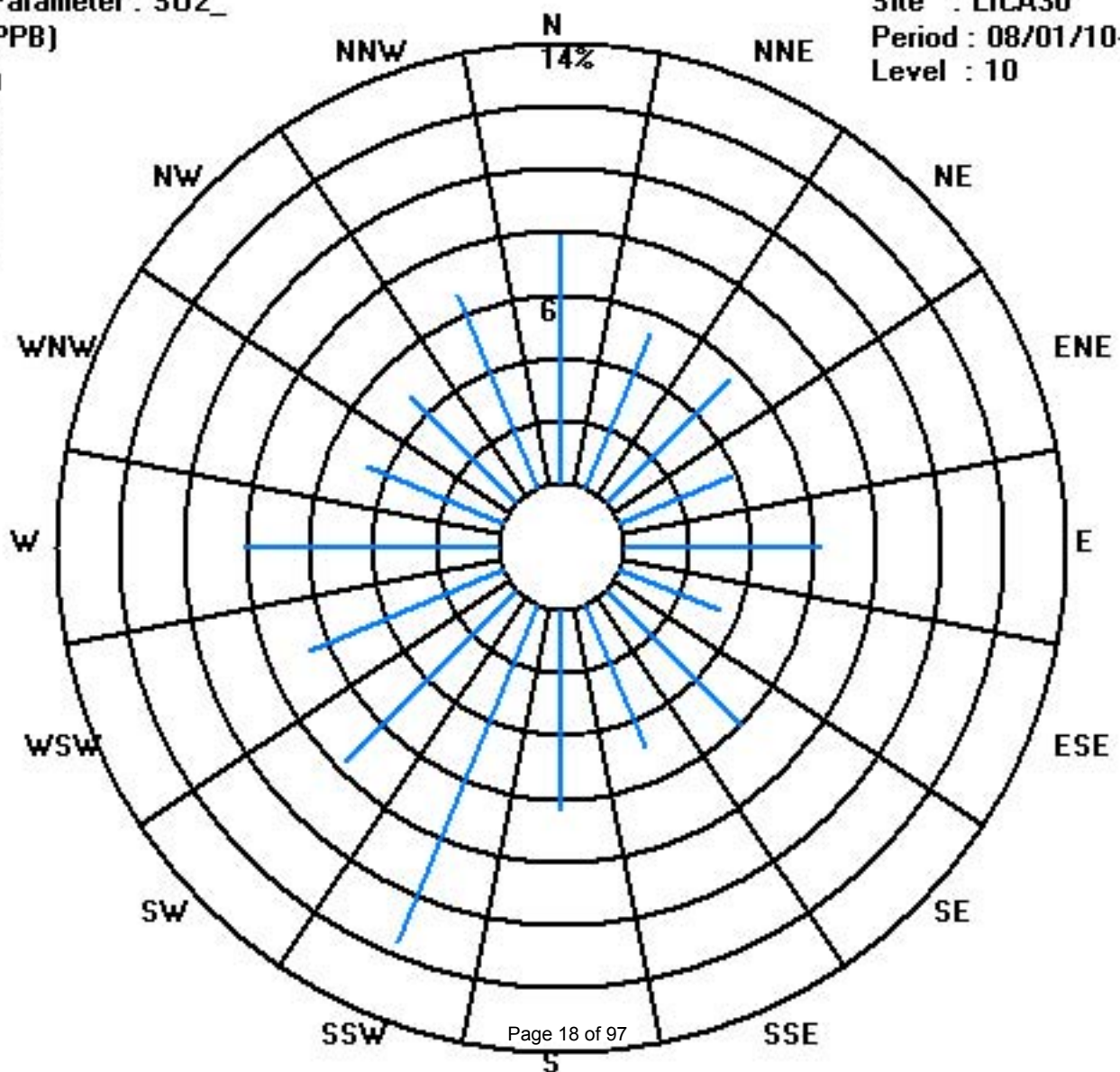
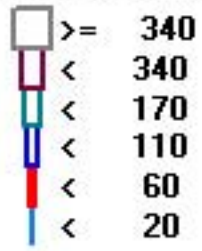
Total # Operational Hours : 705



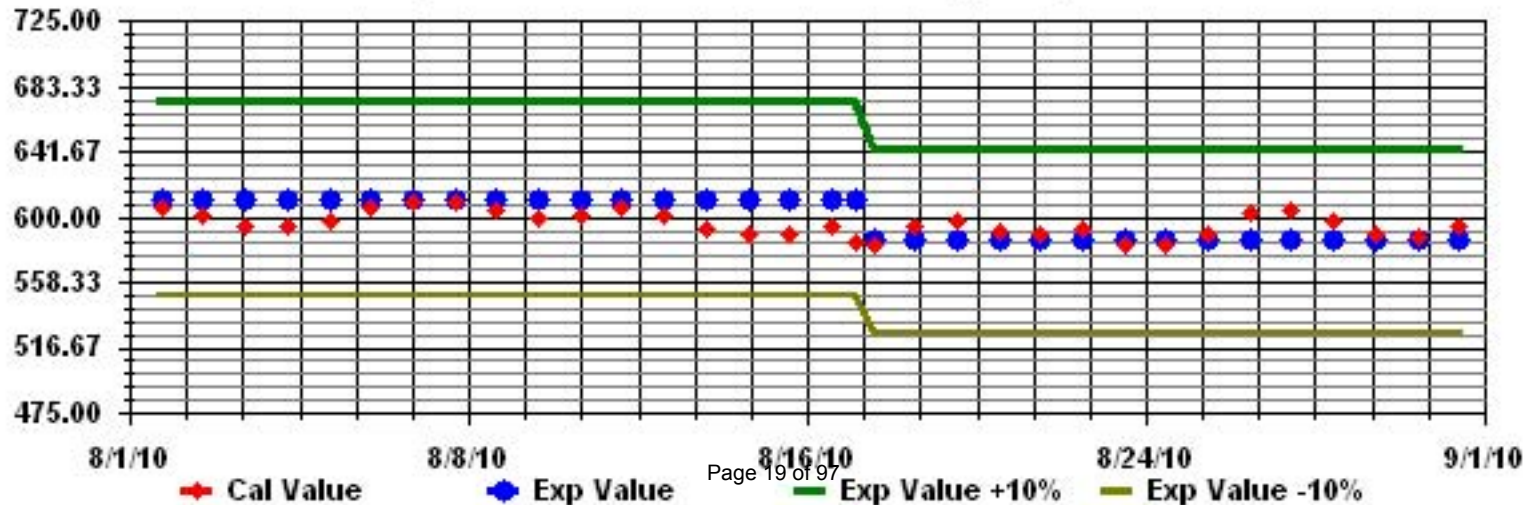
Class Limits (PPB)

Period : 08/01/10-08/31/10

Level : 10



Calibration Graph for Site: LICA30 Parameter: S02\_ Sequence: S02 Phase: SPAll



# Hydrogen Sulphide

# LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - MASKWA

AUGUST 2010

HYDROGEN SULPHIDE (H<sub>2</sub>S) hourly averages in ppb

MST		0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY 24-HOUR				
DAY	HOURLY MAX	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.		
1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0.0	0.0	24	
2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0.0	0.0	24	
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0.0	0.0	24	
4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0.0	0.0	24	
5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	24	
6	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	24	
7	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	24	
8	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	24	
9	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	24	
10	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	24	
11	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	24	
12	0	0	0	0	0	0	0	IZS	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.0	0.0	24	
13	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	24	
14	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	24	
15	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	24	
16	0	0	IZS	0	0	0	0	0	0	0	C	C	C	C	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	24	
17	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	C	0	0	0	0	0	0	0	0	0	0	0.0	0.0	24	
18	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	24	
19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0.0	0.0	24	
20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0.0	0.0	24	
21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0.0	0.0	24		
22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0.0	0.0	24		
23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0.0	0.0	24	
24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	2	0	0	0	0	2	0.1	0.1	24	
25	0	0	0	0	0	0	0	0	0	C	C	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0.0	0.0	24	
26	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	1	0.1	0.1	24
27	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	1	0.0	0.0	24
28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0.0	0.0	24	
29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	24	
30	0	1	1	0	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.2	0.2	24	
31	0	0	1	1	0	1	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.1	0.1	24	
HOURLY MAX		0	1	1	1	1	1	1	1	0	1	0	1	0	0	0	0	0	0	0	0	2	0	0	0					
HOURLY AVG		0.0	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0					

STATUS FLAG CODES

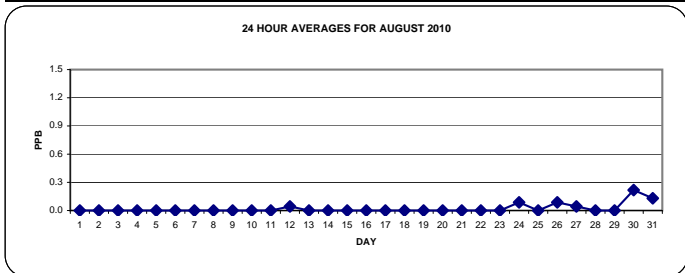
S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	- MAINTENANCE
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE

OBJECTIVE LIMIT:

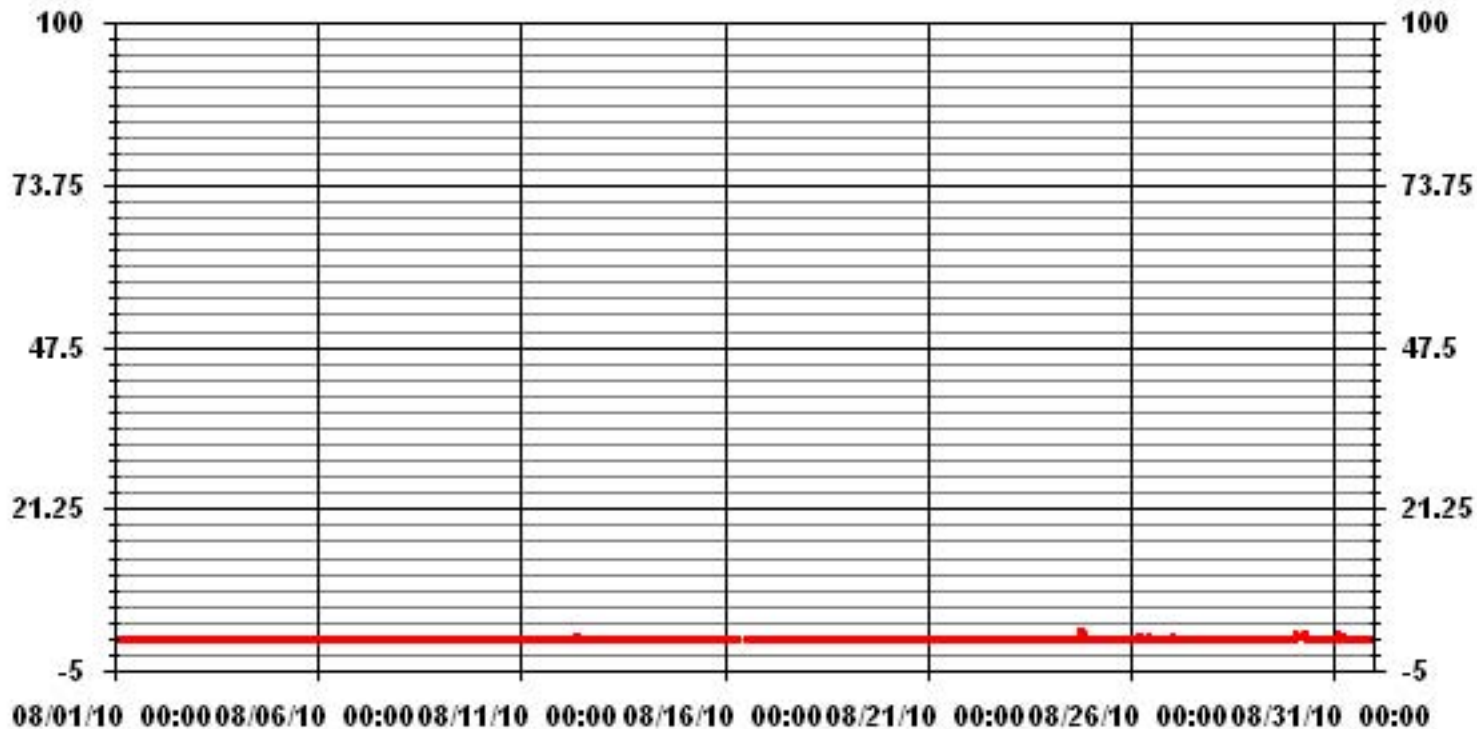
ALBERTA ENVIRONMENT: 1-HR 10 PPB 24-HR 3 PPB

MONTHLY SUMMARY

NUMBER OF 1-HR EXCEEDENCES:	0
NUMBER OF 24-HR EXCEEDENCES:	0
NUMBER OF NON-ZERO READINGS:	13
MAXIMUM 1-HR AVERAGE:	2 PPB @ HOUR(S) 19 ON DAY(S) 24
MAXIMUM 24-HR AVERAGE:	0.2 PPB ON DAY(S) 30
	VAR-VARIOUS
IZS CALIBRATION TIME:	32 HRS
MONTHLY CALIBRATION TIME:	7 HRS
OPERATIONAL TIME:	744 HRS
AMD OPERATION UPTIME:	100.0 %
STANDARD DEVIATION:	0.15
MONTHLY AVERAGE:	0.02 PPB



### 01 Hour Averages



— LICA30 H2S\_ PPB

# LAKELAND INDUSTRY & COMMUNITY ASSOCIATION -MASKWA

AUGUST 2010

## HYDROGEN SULPHIDE MAX instantaneous maximum in ppb

MST		0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	23:00	DAILY	24-HOUR		
DAY	DAY	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.		
1	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	1	0.0	24	
2	2	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	1	0	0	0	0	1	0.1	24	
3	3	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	1	0.1	24	
4	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0.0	24	
5	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0.0	24	
6	6	0	0	0	0	1	1	0	1	1	0	0	0	IZS	0	1	0	0	0	0	0	0	0	0	0	0	1	0.2	24	
7	7	0	0	0	0	0	1	1	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0.1	24	
8	8	1	0	0	0	0	1	1	0	0	1	IZS	1	0	0	1	0	0	0	0	0	0	1	1	1	1	1	0.4	24	
9	9	0	0	0	0	0	0	1	0	0	IZS	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0.1	24	
10	10	0	0	0	1	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.0	24	
11	11	0	0	0	0	0	1	0	IZS	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.2	24	
12	12	0	0	0	0	0	1	IZS	0	0	1	1	0	0	0	1	0	0	0	1	0	0	0	0	0	0	1	0.2	24	
13	13	0	0	0	0	0	IZS	0	0	0	0	0	0	0	1	1	0	0	0	0	1	0	0	0	0	0	1	0.1	24	
14	14	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24	
15	15	0	1	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.0	24	
16	16	0	0	IZS	0	0	0	0	0	C	C	C	C	C	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24	
17	17	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24	
18	18	IZS	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	IZS	1	0.1	24
19	19	0	0	0	0	0	0	0	0	0	1	1	1	1	0	1	1	0	1	1	0	0	0	0	0	0	IZS	0	0.4	24
20	20	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0.1	24
21	21	0	0	0	0	0	0	0	0	1	0	0	1	1	0	0	0	0	1	0	1	0	1	IZS	0	0	1	0.2	24	
22	22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	1	1	0	0	1	0.1	24	
23	23	0	0	1	0	0	0	0	0	0	0	0	0	0	1	1	0	1	IZS	0	0	0	0	0	0	0	1	0.2	24	
24	24	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	IZS	3	4	0	0	0	0	4	0.3	24	
25	25	0	0	0	0	0	0	0	C	C	C	C	0	0	0	0	0	IZS	0	0	0	0	0	0	0	1	1	0.1	24	
26	26	1	0	0	0	0	3	0	0	0	0	0	4	1	0	0	IZS	0	0	0	1	0	1	2	0	4	0.6	24		
27	27	1	1	1	1	0	1	1	1	0	1	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	1	1	0.4	24	
28	28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	1	1	1	1	0.1	24	
29	29	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	1	0	0	1	1	1	0.1	24	
30	30	0	4	3	2	4	0	2	3	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0.8	24	
31	31	0	0	3	2	1	2	2	1	0	0	IZS	0	1	0	0	0	0	0	0	0	1	0	1	1	0	3	0.7	24	
HOURLY MAX		1	4	3	2	4	3	2	3	1	1	1	4	1	1	1	1	1	1	3	4	1	1	2	1					
HOURLY AVG		0.1	0.2	0.3	0.2	0.2	0.4	0.3	0.3	0.1	0.1	0.1	0.3	0.1	0.1	0.2	0.1	0.0	0.1	0.1	0.3	0.1	0.1	0.2	0.2					

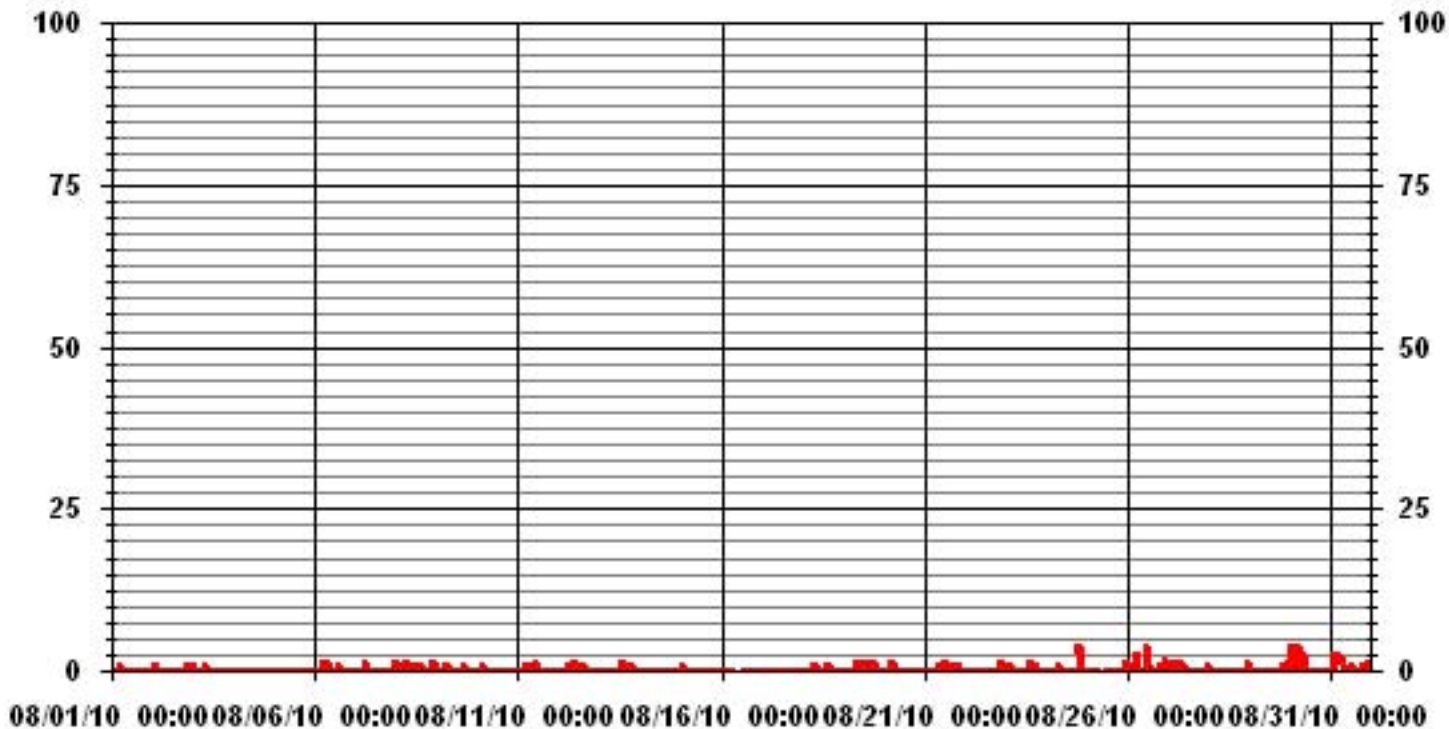
**STATUS FLAG CODES**

S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	- MISSING DATA
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE

**MONTHLY SUMMARY**

NUMBER OF NON-ZERO READINGS:	102					
MAXIMUM INSTANTANEOUS VALUE:	4	PPB	@ HOUR(S)	VAR	ON DAY(S)	VAR
IZS CALIBRATION TIME:	32	HRS	OPERATIONAL TIME:	744	HRS	
MONTHLY CALIBRATION TIME:	10	HRS				
STANDARD DEVIATION:	0.53					

### 01 Hour Averages



— LICA30 H2S MAX PPB

LICA30  
H2S\_ / WDR Joint Frequency Distribution (Percent)

August 2010

Distribution By % Of Samples

Logger Id : 30  
Site Name : LICA30  
Parameter : H2S\_  
Units : PPB

Wind Parameter : WDR  
Instrument Height : 10 Meters

	Direction																
Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 3	7.94	5.39	5.53	3.82	6.24	3.40	6.09	4.53	6.38	11.77	7.80	6.66	8.08	4.82	4.82	6.66	100.00
< 10	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
< 50	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
>= 50	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
Totals	7.94	5.39	5.53	3.82	6.24	3.40	6.09	4.53	6.38	11.77	7.80	6.66	8.08	4.82	4.82	6.66	

Calm : .00 %

Total # Operational Hours : 705

Distribution By Samples

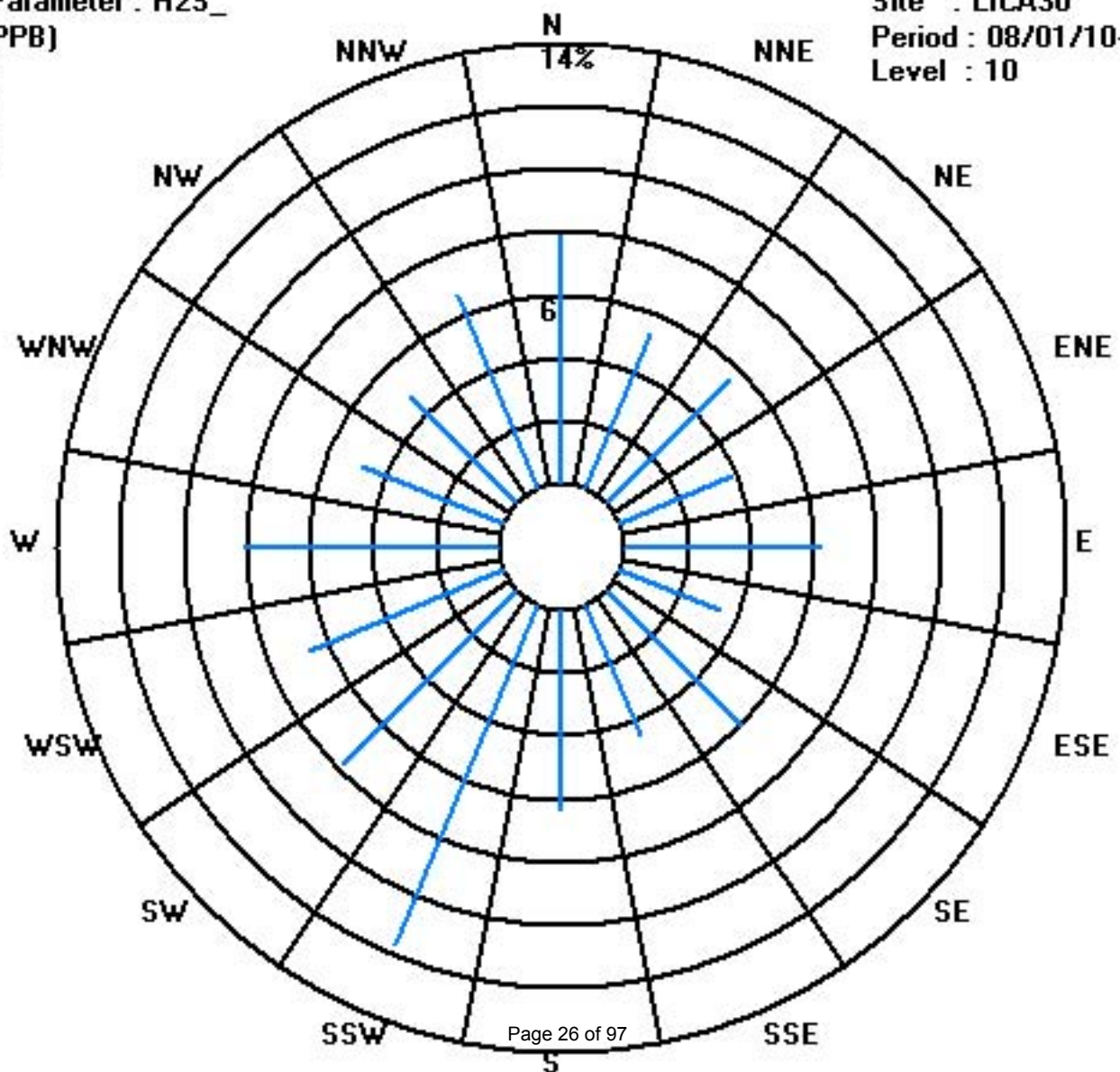
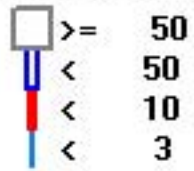
	Direction																
Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 3	56	38	39	27	44	24	43	32	45	83	55	47	57	34	34	47	705
< 10																	
< 50																	
>= 50																	
Totals	56	38	39	27	44	24	43	32	45	83	55	47	57	34	34	47	

Calm : .00 %

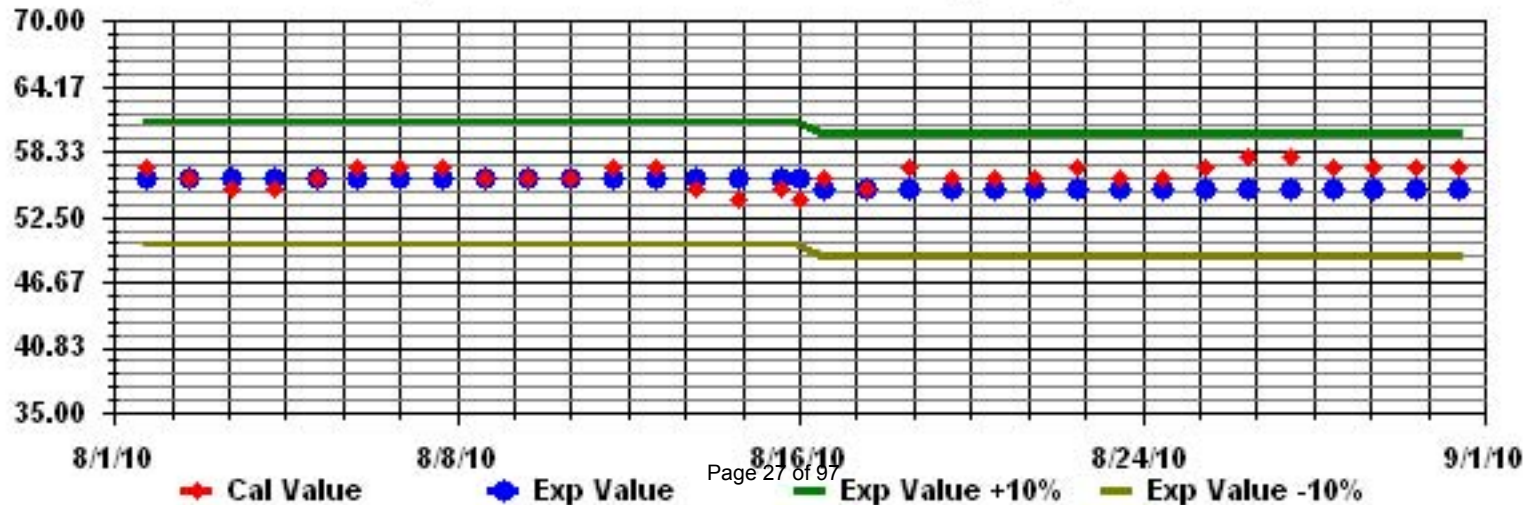
Total # Operational Hours : 705



Class Limits (PPB)



Calibration Graph for Site: LICA30 Parameter: H2S\_ Sequence: H2S Phase: SPAll



# Total Hydrocarbons

# LAKELAND INDUSTRY & COMMUNITY ASSOCIATION -MASKWA

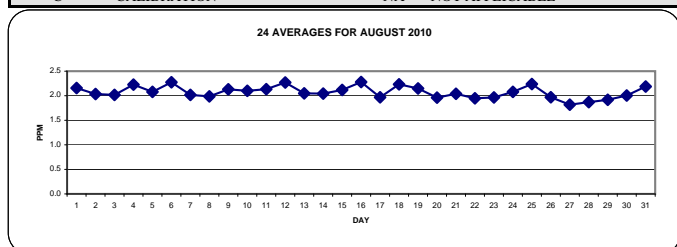
AUGUST 2010

## TOTAL HYDROCARBONS hourly averages in ppm

MST		0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR		
DAY	HOURLY MAX	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.	
1		2.2	2.3	2.3	2.4	2.6	2.6	2.4	2.3	2.2	2	1.9	1.9	2	2	2	2	2	IZS	2	2	2	2.1	2.2	2.2	2.6	2.2	24	
2		2.2	2.3	2.5	2.4	2.1	2	2	2	2	2	1.9	2	1.9	1.9	1.9	IZS	1.9	1.9	1.9	2	2	2	2	2.1	2.5	2.0	24	
3		2.1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	IZS	2	2	2	2	2	2	2.1	2.1	2.1	2.0	24	
4		2.2	2.5	2.6	2.8	2.8	2.7	2.7	2.5	2.2	2	2	2.1	2	2	IZS	2	2	2	2	2	2	2	2	2.1	2.1	2.8	2.2	24
5		2.1	2.2	2.2	2.2	2.3	2.3	2.3	2.2	2	1.9	1.9	1.9	1.9	IZS	1.9	1.9	1.9	2	2	2	2.1	2.1	2.2	2.3	2.3	2.1	24	
6		2.3	2.5	2.4	2.6	2.9	2.8	2.8	2.7	2.3	2.2	2.3	2.3	IZS	2.1	2	2	2	2	2	2	2	2	2	2	2.1	2.9	2.3	24
7		2.1	2.1	2.2	2.3	2.3	2.2	2.1	2	2.1	2	2.1	IZS	2	1.9	1.9	1.8	1.8	1.8	1.8	1.9	2	1.9	2	2.1	2.3	2.0	24	
8		2	2	2	2	2.1	2.1	2	2	1.9	2	IZS	2	2	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2	2	2.1	2.2	2.2	2.0	24	
9		2.3	2.3	2.4	2.3	2.4	2.4	2.5	2.4	2.1	IZS	2	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2	2.1	2.1	2.2	2.3	2.5	2.1	24	
10		2.4	2.4	2.4	2.5	2.3	2.1	2.1	2	IZS	2	1.9	2	1.9	1.9	1.9	1.9	1.9	2	2	2	2.1	2.1	2.2	2.3	2.5	2.1	24	
11		2.2	2.2	2.1	2.3	2.2	2.5	2.3	IZS	2.1	2.1	2	2.1	2.1	M	C	2.2	1.9	2	2	2	2	2.2	2.2	2.5	2.1	23		
12		2.2	2.4	2.7	2.9	3.3	3.2	IZS	2.5	2.2	2.5	2.1	2.1	2	2	2	2	2.1	2	2	2	2	2	2	2	3.3	2.3	24	
13		2	2	2.1	2.1	2.1	IZS	2.1	2.1	2.1	2.1	2	2	2	2	2	2	2	2	2	2	2	2.1	2.1	2.1	2.1	2.1	2.0	24
14		2.1	2.1	2.1	2.1	IZS	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2.1	2.1	2.1	2.3	2.3	2.0	24
15		2.3	2.4	2.4	IZS	2.3	2.3	2.4	2.1	2.1	2	2	2	2	2	2	2	2	2	2	2	2	2.1	2.1	2.2	2.4	2.1	24	
16		2.3	2.5	IZS	2.6	2.9	2.9	3	2.5	2.1	2	2	2.4	C	C	C	C	C	2.1	2	2	2	2	2	2	3.0	2.3	24	
17		2	IZS	1.9	2	2	2	1.9	2	2	1.9	1.9	1.9	1.9	C	1.9	1.9	1.9	2	2	2	2	2	2	2.1	2.2	2.2	24	
18		IZS	2.2	2.4	2.6	2.7	2.7	2.5	2.5	2.4	2.3	2.1	2	2	2	2	2.1	2.3	2.2	2.1	2	2	2	2	IZS	2.7	2.2	24	
19		2.1	2.1	2.1	2.2	2.2	2.3	2.3	2.4	2.4	2.3	2.3	2.3	2.2	2.2	2.2	2.1	2	1.9	1.9	1.9	1.9	1.9	IZS	2.2	2.4	2.1	24	
20		2.2	2.2	2	2	2	2	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	IZS	2.1	2.1	2.2	24	
21		2.2	2.4	2.2	2.2	2.2	2.1	2.2	2.2	2.1	2.1	2	2	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	IZS	1.9	1.9	2	24	
22		2	2	1.9	1.9	2	2.1	2.1	2	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2	2	2.1	1.9	24	
23		2	2	1.9	2	2	2	1.9	2	2	1.9	1.9	1.9	1.9	1.9	2	2	2	2	IZS	2	2	1.9	2	2	2	2.0	24	
24		2	2	2.1	2.1	2.2	2.2	2.2	2.1	2	2	2.1	2.2	2.1	2	2	2	2	IZS	2	2	2	2.1	2.3	2.1	2.3	2.1	24	
25		2.6	2.5	2.4	2.4	2.5	2.6	2.7	2.4	2.3	2.3	2.2	2.1	C	C	1.9	1.9	IZS	1.9	1.9	1.9	2	2	2.2	2.3	2.7	2.2	24	
26		2.3	2.2	2.1	2.1	2	2	2	2	2	2.1	2.1	2.1	1.9	1.9	1.9	IZS	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	2.3	2.0	24
27		1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	IZS	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.8	1.9	1.9	1.8	24	
28		1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.8	1.8	1.9	1.9	IZS	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2	1.9	2.0	1.9	24
29		1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	IZS	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2	1.9	2	2.1	2.1	1.9	24
30		2.1	2.1	2.1	2	2.1	2	2.1	2.1	1.9	1.9	1.9	1.9	IZS	1.9	1.9	1.9	1.9	1.9	1.9	2	2	2.1	2.2	2.2	2.2	2.0	24	
31		2.2	2.4	2.7	2.5	2.5	2.6	2.6	2.5	2.2	2.1	IZS	2	2	2	1.9	1.9	1.9	1.9	1.9	1.9	2	2.1	2.2	2.3	2.7	2.2	24	
HOURLY MAX		2.6	2.5	2.7	2.9	3.3	3.2	3.0	2.7	2.4	2.5	2.3	2.4	2.2	2.2	2.2	2.1	2.3	2.2	2.1	2.0	2.1	2.1	2.3	2.3				
HOURLY AVG		2.1	2.2	2.2	2.2	2.3	2.3	2.2	2.2	2.1	2.0	2.0	2.0	2.0	2.0	2.0	1.9	2.0	1.9	1.9	2.0	2.0	2.0	2.1	2.1				

### STATUS FLAG CODES

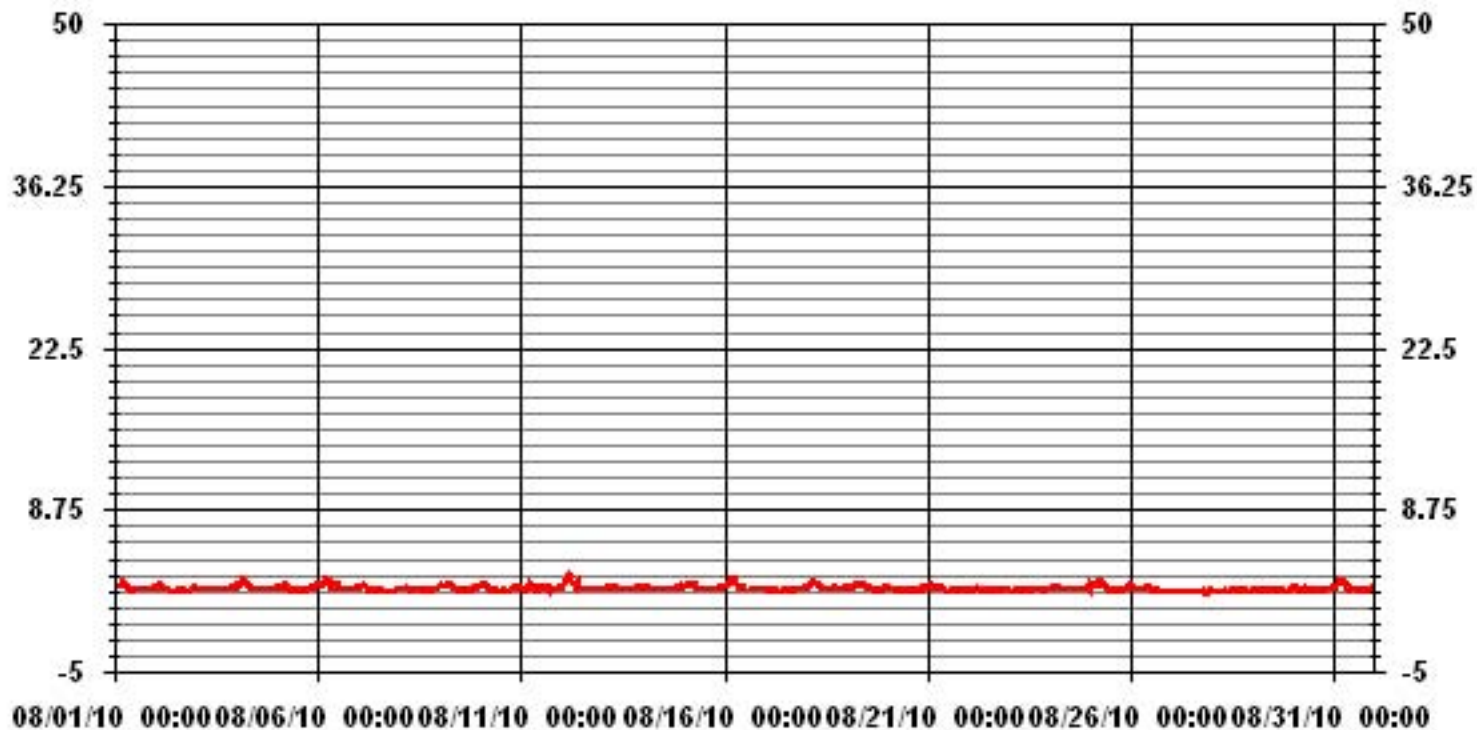
S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	- MAINTENANCE
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE



### MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:	703					
MAXIMUM 1-HR AVERAGE:	3.3	PPM	@ HOUR(S)	4	ON DAY(S)	12
MAXIMUM 24-HR AVERAGE:	2.3	PPM			ON DAY(S)	12
					VAR- VARIOUS	
IZS CALIBRATION TIME:	32	HRS	OPERATIONAL TIME:	743	HRS	
MONTHLY CALIBRATION TIME:	8	HRS	AMD OPERATION UPTIME:	99.9	%	
STANDARD DEVIATION:	0.21		MONTHLY AVERAGE:	2.07	PPM	

### 01 Hour Averages



— LICA30 THC PPM

# LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - MASKWA

AUGUST 2010

## TOTAL HYDROCARBONS MAX instantaneous maximum in ppr

MST		0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR		
HOURLY MAX	HOURLY AVG	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.	
DAY																													
1		2.3	2.3	2.4	2.5	2.7	2.7	2.6	2.4	2.3	2	2	2	2	2.1	2	2	2	<b>IZS</b>	2	2	2.1	2.3	2.3	2.2	2.7	2.2	24	
2		2.3	2.5	2.7	2.6	2.2	2.1	2.1	2	2	2	2	2.1	2	2	2	1.9	<b>IZS</b>	2	2	2	2	2	2	2.1	2.2	2.7	2.1	24
3		2.2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	<b>IZS</b>	2	2	2	2	2	2.1	2.2	2.2	2.2	2.2	2.0	24
4		2.5	2.7	2.7	2.9	3	2.8	2.8	2.8	2.4	2.1	2.1	2.2	2.1	2.2	<b>IZS</b>	2	2	2	2	2	2	2	2	2.1	2.1	3	2.3	24
5		2.2	2.3	2.3	2.3	2.4	2.4	2.4	2.3	2.1	2	2	2	2	<b>IZS</b>	1.9	2	2	2	2	2	2	2.1	2.2	2.2	2.4	2.4	2.2	24
6		2.4	2.6	2.5	2.7	3.1	3	2.9	2.9	2.5	2.3	2.3	<b>IZS</b>	2.1	2.1	2	2	2	2	2	2	2	2	2.1	2	2.3	3.1	2.4	24
7		2.2	2.2	2.2	2.3	2.3	2.4	2.3	2	2.1	2.1	<b>IZS</b>	2	2	1.9	1.9	1.8	1.9	1.9	2	2	2	2	2.1	2.3	2.4	2.1	24	
8		2.1	2.1	2.1	2.1	2.2	2.1	2	2	2	2.1	<b>IZS</b>	2	2	2	2	1.9	1.9	1.9	1.9	2	2	2	2.1	2.2	2.3	2.3	2.0	24
9		2.4	2.4	2.5	2.5	2.5	2.6	2.6	2.7	2.2	<b>IZS</b>	2.1	2	1.9	1.9	2	1.9	1.9	1.9	2	2	2.2	2.2	2.3	2.4	2.7	2.2	24	
10		2.5	2.5	2.5	2.6	2.5	2.1	2.2	2.1	<b>IZS</b>	2	2	2	2	2	1.9	2	2	2.1	2.1	2.1	2.1	2.2	2.5	2.4	2.6	2.2	24	
11		2.3	2.2	2.3	2.7	2.3	3	2.7	<b>IZS</b>	2.2	2.2	2.1	2.1	2.1	2.1	<b>M</b>	<b>C</b>	<b>C</b>	2	2	2	2	2.1	2.1	2.3	2.3	3	2.3	23
12		2.3	2.5	3.6	3.1	3.8	3.6	<b>IZS</b>	2.6	2.4	2.6	2.4	2.5	2	2.1	2.1	2.2	2.6	2	2	2	2	2	2.1	2	3.8	2.5	24	
13		2.1	2.1	2.1	2.1	2.1	<b>IZS</b>	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	24
14		2.1	2.1	2.1	2.1	<b>IZS</b>	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2.1	2.1	2.1	2.2	2.3	2.3	2.1	24
15		2.4	2.5	2.5	<b>IZS</b>	2.4	2.6	2.5	2.2	2.1	2	2	2	2	2	2	2	2	2	2	2	2.1	2.1	2.1	2.2	2.3	2.6	2.2	24
16		2.5	2.6	<b>IZS</b>	2.9	3.2	3.1	3.2	2.6	2.3	2	2.1	<b>C</b>	<b>C</b>	<b>C</b>	<b>C</b>	<b>C</b>	2.2	2	2	2	2	2	2	2	3.2	2.4	24	
17		2	<b>IZS</b>	2	2	2	2	2	2	2	2	2	2	1.9	1.9	<b>C</b>	1.9	2	2	2	2	2	2	2.1	2.2	2.3	2.3	2.0	24
18		<b>IZS</b>	2.3	2.6	2.7	2.9	3	2.7	2.6	2.7	2.4	2.3	2	2	2.1	2.1	2.2	2.3	2.3	2.2	2	2	2	2	<b>IZS</b>	3	2.3	24	
19		2.1	2.1	2.1	2.3	2.3	2.4	2.4	2.5	2.5	2.3	2.4	2.4	2.3	2.3	2.2	2.2	2	1.9	1.9	2	1.9	1.9	<b>IZS</b>	2.2	2.5	2.2	24	
20		2.3	2.3	2.1	2	2	2	1.9	2	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2	<b>IZS</b>	2.2	2.2	2.3	2.0	24	
21		2.3	2.6	2.4	2.4	2.4	2.2	2.3	2.3	2.2	2.1	2.1	2	2	2	2	1.9	2	2	2	1.9	<b>IZS</b>	2	2	2	2.6	2.1	24	
22		2	2	2	2	2	2.2	2.2	2.1	1.9	1.9	1.9	2	2	2	1.9	1.9	1.9	1.9	1.9	2	<b>IZS</b>	2	2	2	2.2	2.0	24	
23		2	2	2	2.1	2.1	2	2	2	2	2	2	2	1.9	2	2	2	2	2.1	2	<b>IZS</b>	2.1	2.1	2	2.1	2	2.1	2.0	24
24		2.1	2.1	2.2	2.1	2.2	2.3	2.3	2.2	2.1	2	2.3	2.2	2.3	2.1	2	2	2	<b>IZS</b>	2	2	2	2	2.8	2.9	2.2	2.9	2.2	24
25		<b>4.1</b>	3.1	2.7	2.5	2.7	2.8	2.9	2.8	2.4	2.3	2.2	2.2	<b>C</b>	<b>C</b>	2	1.9	<b>IZS</b>	1.9	1.9	2	2	2.1	2.3	2.4	<b>4.1</b>	2.4	24	
26		2.4	2.3	2.3	2.1	2	2.1	2	2	2.6	2.5	2.4	2.8	2.1	1.9	2	<b>IZS</b>	1.9	2	2	1.9	1.8	1.9	1.9	1.8	2.8	2.1	24	
27		1.8	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	<b>IZS</b>	1.9	1.9	1.8	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	24
28		1.9	1.9	1.8	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	<b>IZS</b>	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2	2	2	2	2	1.9	24
29		2	1.9	1.9	1.9	2	2	2	2	1.9	1.9	1.9	1.9	<b>IZS</b>	1.9	1.9	1.9	1.9	1.9	1.9	2	2	2	2.4	2.3	2.4	2.0	24	
30		2.2	2.3	2.3	2.2	2.4	2.2	2.4	2.3	2	2	1.9	<b>IZS</b>	1.9	2	2	2	2	2	2	2	2	2.1	2.2	2.4	2.2	2.4	2.1	24
31		2.3	2.4	3.4	2.7	2.8	3.2	3.8	2.8	2.3	2.2	<b>IZS</b>	2.1	2.1	2	2	1.9	1.9	1.9	1.9	2	2	3.1	2.9	2.4	3.8	2.4	24	
HOURLY MAX		4	3	4	3	4	4	4	3	3	3	2	3	2	2	2	2	3	2	2	2	2	3	3	2				
HOURLY AVG		2.3	2.3	2.3	2.3	2.4	2.4	2.4	2.3	2.2	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.2	2.2			

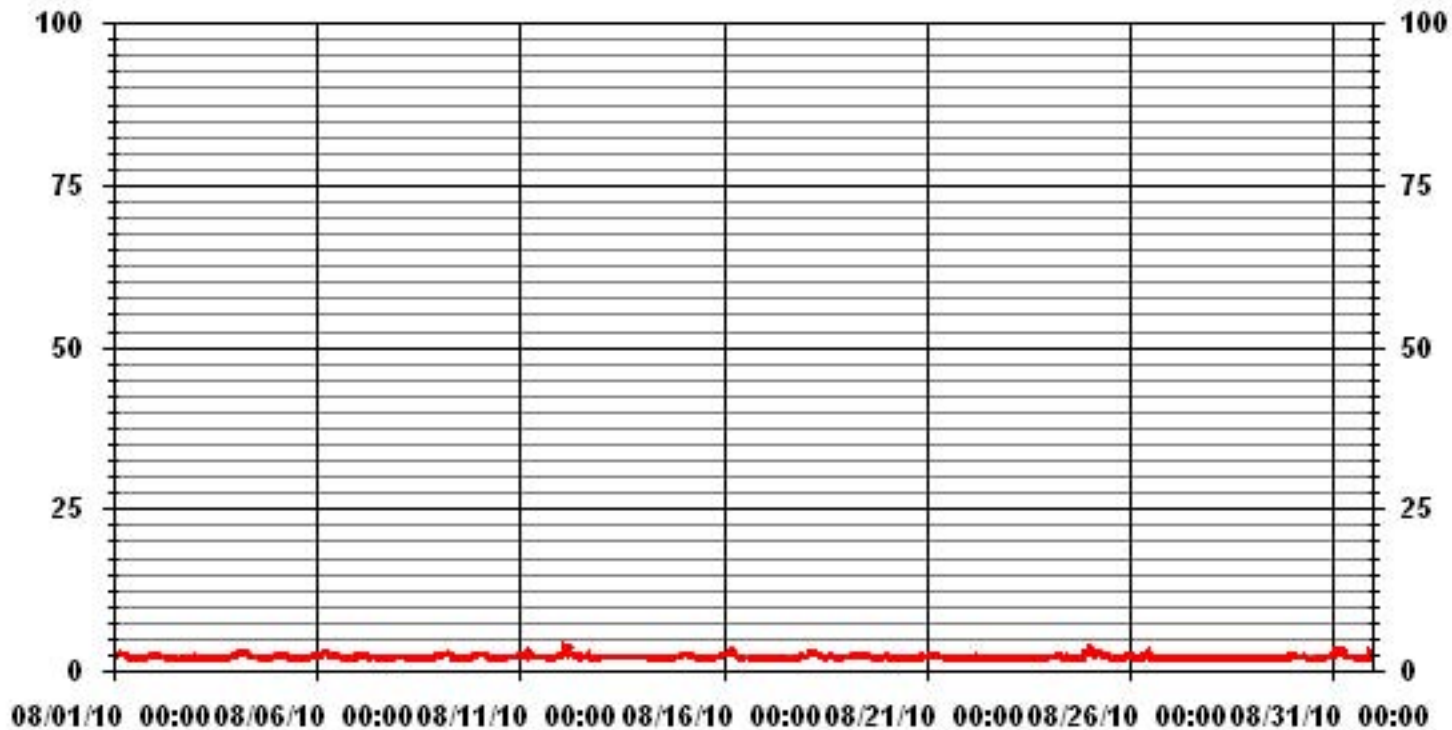
**STATUS FLAG CODES**

S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	- MISSING DATA
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE
BB	- BELOW BACKGROUND OF 1.5 PPM		

**MONTHLY SUMMARY**

NUMBER OF NON-ZERO READINGS:	701					
MAXIMUM INSTANTANEOUS VALUE:	4.1	PPM	@ HOUR(S)	0	ON DAY(S)	25
IZS CALIBRATION TIME:	32	HRS	OPERATIONAL TIME:	743	HRS	
MONTHLY CALIBRATION TIME:	10	HRS				
STANDARD DEVIATION:	0.30					

### 01 Hour Averages



— LICA30 THCMAX PPM

LICA30  
 THC / WDR Joint Frequency Distribution (Percent)

August 2010

Distribution By % Of Samples

Logger Id : 30  
 Site Name : LICA30  
 Parameter : THC  
 Units : PPM

Wind Parameter : WDR  
 Instrument Height : 10 Meters

	Direction																
Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 3.0	7.82	5.40	5.54	3.69	6.25	3.55	5.68	4.69	6.68	11.37	7.68	6.68	8.10	4.83	4.83	6.68	99.57
< 10.0	.14	.00	.00	.14	.00	.00	.00	.14	.00	.00	.00	.00	.00	.00	.00	.00	.42
< 50.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
>= 50.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
Totals	7.96	5.40	5.54	3.84	6.25	3.55	5.68	4.83	6.68	11.37	7.68	6.68	8.10	4.83	4.83	6.68	

Calm : .00 %

Total # Operational Hours : 703

Distribution By Samples

	Direction																
Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 3.0	55	38	39	26	44	25	40	33	47	80	54	47	57	34	34	47	700
< 10.0	1			1				1									3
< 50.0																	
>= 50.0																	
Totals	56	38	39	27	44	25	40	34	47	80	54	47	57	34	34	47	

Calm : .00 %

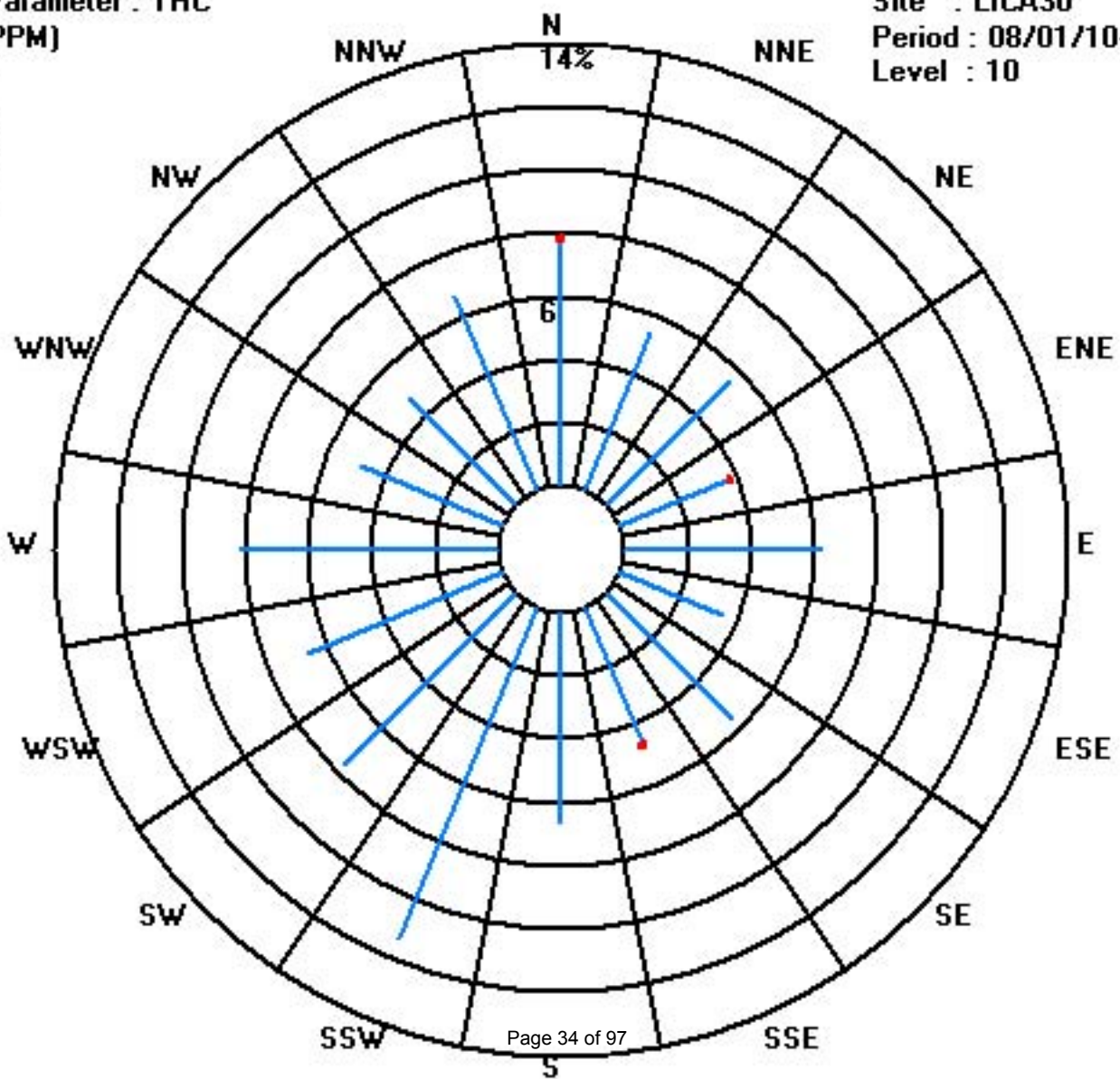
Total # Operational Hours : 703



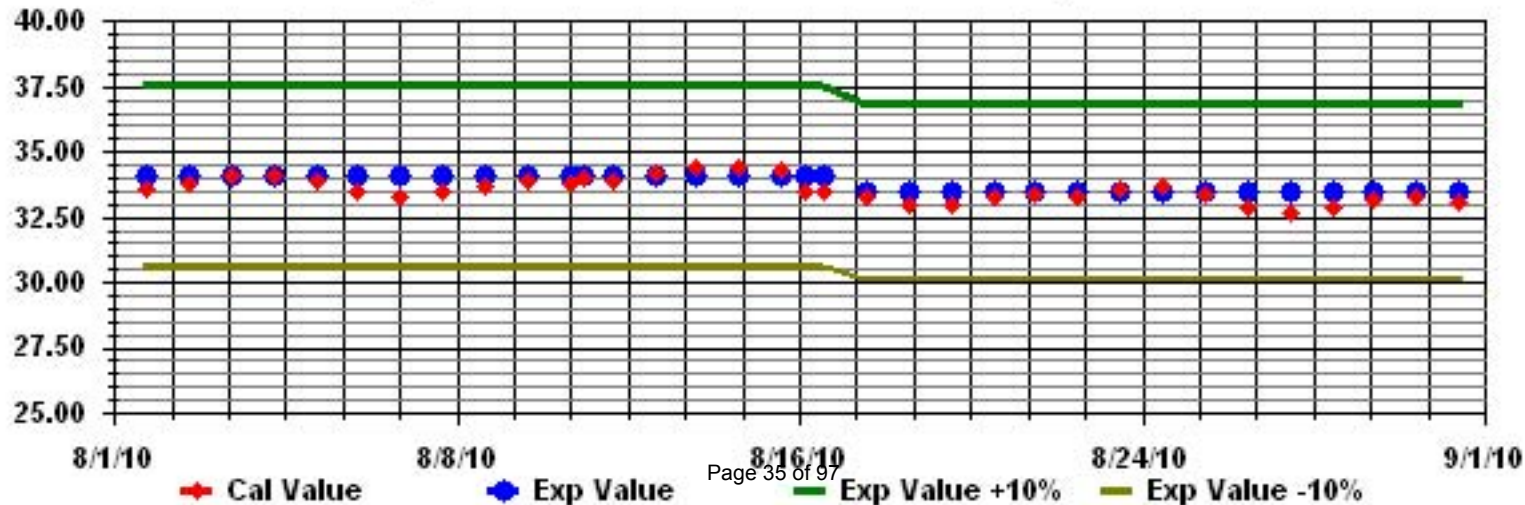
Class Limits (PPM)

Period : 08/01/10-08/31/10

Level : 10



Calibration Graph for Site: LICA30 Parameter: THC Sequence: THC Phase: SPAll



# Nitrogen Dioxide

# LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - MASKWA

AUGUST 2010

## NITROGEN DIOXIDE hourly averages in ppb

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY MAX.	24-HOUR AVG.	RDGS.	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00				
DAY																												
1	0	0	0	0	0	0	0	1	7	2	1	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	7	0.5	24
2	2	0	0	8	3	4	10	3	3	2	2	1	1	0	0	0	IZS	0	0	0	0	1	10	5	10	2.4	24	
3	5	1	0	0	0	0	2	1	1	0	0	0	0	0	0	IZS	1	0	0	0	0	0	0	0	5	0.5	24	
4	0	0	0	0	1	3	7	5	4	3	3	1	1	1	IZS	2	2	0	0	2	0	0	3	4	7	1.8	24	
5	6	4	1	2	1	0	5	7	3	1	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	7	1.3	24	
6	0	0	0	0	0	0	0	3	1	1	1	1	IZS	0	0	0	0	0	0	0	1	2	2	0	3	0.5	24	
7	0	0	1	0	1	3	0	1	1	1	0	IZS	0	0	0	0	0	0	0	0	0	0	0	1	3	0.4	24	
8	1	0	2	4	1	2	2	3	2	1	IZS	0	0	0	0	1	0	0	0	0	0	0	1	1	4	0.9	24	
9	2	3	2	1	0	0	1	4	3	IZS	4	0	0	0	0	0	0	0	0	0	0	0	3	2	0	4	1.1	24
10	0	0	0	2	2	0	1	6	IZS	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	6	0.6	24	
11	0	0	0	0	0	0	2	IZS	5	5	1	0	0	0	1	1	1	0	0	0	0	1	1	5	0.8	24		
12	0	0	0	0	0	0	IZS	2	4	2	3	2	0	1	1	0	1	0	0	5	0	0	3	0	5	1.0	24	
13	1	0	1	1	2	IZS	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0.3	24	
14	0	0	0	1	IZS	0	0	0	0	0	0	1	1	0	0	2	0	0	0	0	0	0	1	2	2	0.3	24	
15	3	4	2	IZS	1	1	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	4	0.6	24	
16	0	0	IZS	0	0	0	0	0	1	C	C	C	C	C	C	C	0	0	0	0	0	0	0	0	1	0.1	24	
17	0	IZS	0	0	0	0	0	0	0	0	0	1	1	1	C	0	0	0	0	0	0	0	0	0	1	0.1	24	
18	IZS	0	0	0	0	0	0	1	2	1	1	0	0	0	0	0	0	1	0	0	0	1	1	IZS	2	0.4	24	
19	1	1	2	2	2	1	4	2	5	3	2	1	2	4	5	3	2	1	1	2	0	1	IZS	4	5	2.2	24	
20	3	3	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0.3	24	
21	0	0	0	0	0	0	0	0	1	2	2	1	0	1	1	2	4	4	2	0	IZS	0	0	0	4	0.9	24	
22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0.0	24	
23	1	4	4	5	7	12	4	4	6	1	1	2	1	2	9	6	4	4	IZS	8	12	0	9	5	12	4.8	24	
24	7	6	4	6	6	5	4	5	5	5	2	1	1	1	1	0	IZS	0	0	0	0	0	0	0	7	2.6	24	
25	0	0	0	0	0	0	1	1	C	C	C	C	0	1	1	0	IZS	0	0	0	1	0	0	1	0.3	24		
26	0	2	0	1	1	5	0	0	0	2	2	4	2	2	2	IZS	1	4	2	1	0	5	2	0	5	1.7	24	
27	2	8	1	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	1	1	0	0	0	8	0.6	24	
28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	2	0	2	5	8	6	8	1.0	24
29	7	2	1	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	7	0.4	24	
30	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	1	0	0	0	1	0	0	0	0	1	0.1	24	
31	0	0	0	0	0	0	0	1	2	2	IZS	1	0	0	1	0	1	0	1	1	1	0	0	0	2	0.5	24	
HOURLY MAX	7	8	4	8	7	12	10	7	7	5	4	4	2	4	9	6	4	4	2	8	12	5	10	6				
HOURLY AVG	1.4	1.3	0.7	1.1	0.9	1.2	1.5	1.7	2.0	1.2	0.9	0.6	0.4	0.5	0.9	0.6	0.6	0.6	0.3	0.7	0.6	0.6	1.4	1.0				

### STATUS FLAG CODES

S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	- MAINTENANCE
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE

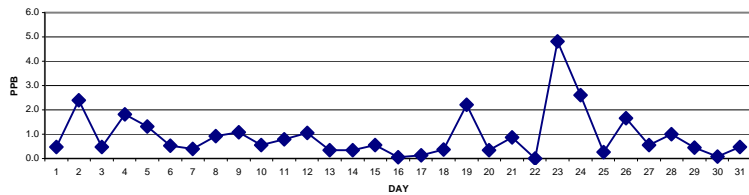
### OBJECTIVE LIMIT:

ALBERTA ENVIRONMENT:	1-HR	212	PPB	24-HR	106	PPB
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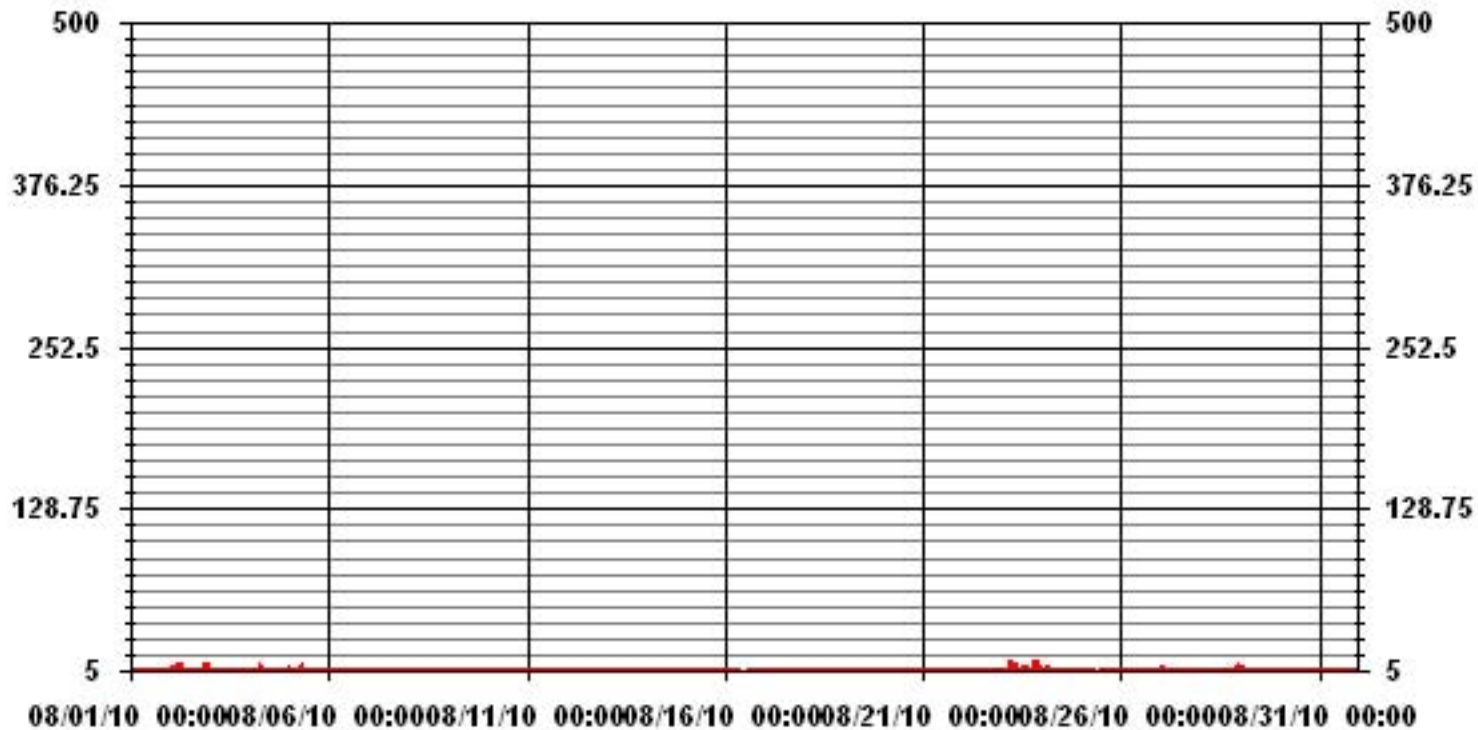
### MONTHLY SUMMARY

NUMBER OF 1-HR EXCEEDENCES:	0		
NUMBER OF 24-HR EXCEEDENCES:	0		
NUMBER OF NON-ZERO READINGS:	259		
MAXIMUM 1-HR AVERAGE:	12 PPB @ HOUR(S) 5 ON DAY(S) 23		
MAXIMUM 24-HR AVERAGE:	4.8 PPB ON DAY(S) 23		
IZS CALIBRATION TIME:	32 HRS	OPERATIONAL TIME:	744 HRS
MONTHLY CALIBRATION TIME:	12 HRS	AMD OPERATION UPTIME:	100.0 %
STANDARD DEVIATION:	1.78	MONTHLY AVERAGE:	0.95 PPB

24 HOUR AVERAGES FOR AUGUST 2010



### 01 Hour Averages



# LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - MASKWA

AUGUST 2010

## NITROGEN DIOXIDE MAX instantaneous maximum in ppb

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR		
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.	
DAY																												
1	1	0	0	0	0	0	2	2	13	5	2	1	1	1	1	14	1	IZS	0	0	0	1	0	1	14	2.0	24	
2	3	2	3	10	10	9	15	7	8	5	9	3	6	0	1	3	IZS	1	0	1	1	11	16	11	16	5.9	24	
3	12	2	0	0	0	3	10	3	2	1	1	4	1	2	3	IZS	4	0	0	0	0	0	0	0	12	2.1	24	
4	1	1	1	1	2	9	9	8	8	8	10	4	3	5	IZS	8	7	4	4	7	0	0	6	7	10	4.9	24	
5	8	7	3	5	3	2	9	11	7	4	2	4	3	IZS	0	1	2	0	0	0	0	2	1	1	11	3.3	24	
6	0	0	0	1	1	1	2	5	5	2	1	1	IZS	0	1	1	1	1	1	1	2	3	4	1	5	1.5	24	
7	1	1	1	1	2	26	1	4	3	2	1	IZS	0	0	0	0	0	0	0	0	0	1	1	2	26	2.0	24	
8	4	2	6	5	2	3	3	4	4	1	IZS	1	1	2	1	2	1	0	0	0	1	1	1	2	6	2.0	24	
9	4	5	4	2	1	1	3	7	6	IZS	8	1	1	1	1	1	1	0	0	0	1	6	5	2	8	2.7	24	
10	0	1	0	4	7	2	2	12	IZS	1	1	1	4	1	2	1	1	3	2	1	1	1	0	0	12	2.1	24	
11	0	0	0	0	0	1	5	IZS	8	7	3	1	1	1	17	12	2	2	1	1	1	1	3	1	17	3.0	24	
12	1	1	1	0	0	1	IZS	3	7	4	11	7	1	7	11	1	2	1	5	13	3	2	9	1	13	4.0	24	
13	2	1	2	2	4	IZS	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	2	0	0	4	1.3	24	
14	1	1	1	2	IZS	1	1	1	1	1	3	6	4	6	6	11	5	1	0	0	0	1	3	3	11	2.6	24	
15	6	6	5	IZS	2	3	2	1	1	0	0	0	2	3	8	0	0	0	0	0	0	0	0	0	8	1.7	24	
16	0	1	IZS	0	0	0	0	0	C	C	C	C	C	C	C	C	2	0	0	0	0	0	0	0	2	0.2	24	
17	0	IZS	0	0	0	0	0	0	3	0	1	2	2	4	C	2	1	0	0	1	0	0	0	1	4	0.8	24	
18	IZS	0	0	0	0	0	0	3	4	2	2	1	1	1	1	1	1	2	1	1	1	2	2	IZS	4	1.2	24	
19	2	2	3	3	3	8	6	4	6	5	4	3	3	6	7	4	2	1	2	3	2	2	IZS	5	8	3.7	24	
20	5	6	1	1	1	3	1	2	1	0	1	0	3	1	1	0	0	0	1	1	0	IZS	0	0	6	1.3	24	
21	0	0	0	0	0	1	0	1	2	4	7	4	1	5	6	5	11	10	10	1	IZS	1	0	0	11	3.0	24	
22	0	0	0	0	0	2	2	3	0	0	0	0	1	0	0	1	1	0	0	IZS	0	0	0	1	3	0.5	24	
23	2	8	10	11	16	15	14	9	10	6	1	5	3	6	13	9	10	12	IZS	12	16	1	16	16	16	9.6	24	
24	13	13	11	9	9	6	6	9	7	7	2	2	1	2	2	3	1	IZS	0	1	0	0	1	1	13	4.6	24	
25	0	0	0	1	0	1	2	C	C	C	C	C	C	2	2	1	IZS	1	1	3	2	1	1	1	3	1.1	24	
26	1	6	2	12	5	8	6	0	4	5	5	7	3	4	6	IZS	2	9	9	3	1	14	7	1	14	5.2	24	
27	7	16	1	1	0	0	1	1	0	0	1	0	0	0	IZS	0	0	0	0	2	2	1	2	2	16	1.6	24	
28	1	1	1	0	0	0	2	8	0	1	0	0	1	IZS	0	0	0	0	6	5	7	7	11	11	11	2.7	24	
29	10	9	4	1	1	1	0	0	0	0	0	0	IZS	0	0	0	0	0	1	2	1	0	1	0	10	1.3	24	
30	0	0	0	0	0	1	0	1	0	0	0	0	IZS	0	2	10	1	1	1	1	3	1	0	0	10	1.0	24	
31	0	0	0	0	0	1	0	3	3	3	IZS	2	1	1	12	1	3	1	2	4	3	1	0	0	12	1.8	24	
HOURLY MAX	13	16	11	12	16	26	15	12	13	8	11	7	6	7	17	14	11	12	10	13	16	14	16	16				
HOURLY AVG	2.8	3.1	2.0	2.4	2.3	3.6	3.5	3.9	4.1	2.7	2.9	2.3	1.8	2.3	4.2	3.0	2.2	1.8	1.6	2.2	1.6	2.1	3.0	2.4				

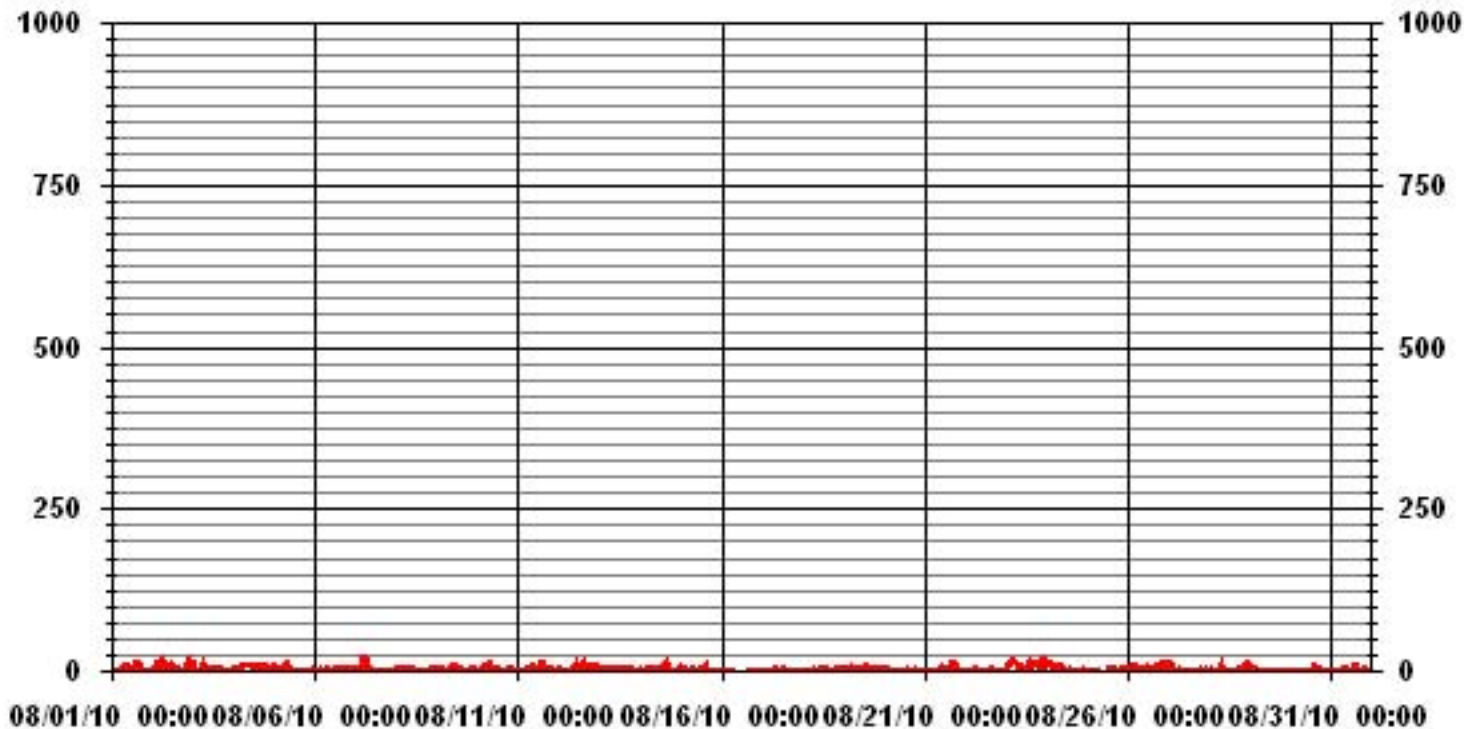
**STATUS FLAG CODES**

S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	- MISSING DATA
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE

**MONTHLY SUMMARY**

NUMBER OF NON-ZERO READINGS:	495					
MAXIMUM INSTANTANEOUS VALUE:	26	PPB	@ HOUR(S)	5	ON DAY(S)	7
IZS CALIBRATION TIME:	32	HRS	OPERATIONAL TIME:	744	HRS	
MONTHLY CALIBRATION TIME:	15	HRS				
STANDARD DEVIATION	3.55					

### 01 Hour Averages



— LICA30 NO2MAX PPB

LICA30  
 NO2\_ / WDR Joint Frequency Distribution (Percent)

August 2010

Distribution By % Of Samples

Logger Id : 30  
 Site Name : LICA30  
 Parameter : NO2\_  
 Units : PPB

Wind Parameter : WDR  
 Instrument Height : 10 Meters

	Direction																
Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 50	8.00	5.42	5.57	3.85	6.28	3.42	5.71	4.57	6.28	11.71	7.85	6.71	8.14	4.85	4.85	6.71	100.00
< 110	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
< 210	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
>= 210	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
Totals	8.00	5.42	5.57	3.85	6.28	3.42	5.71	4.57	6.28	11.71	7.85	6.71	8.14	4.85	4.85	6.71	

Calm : .00 %

Total # Operational Hours : 700

Distribution By Samples

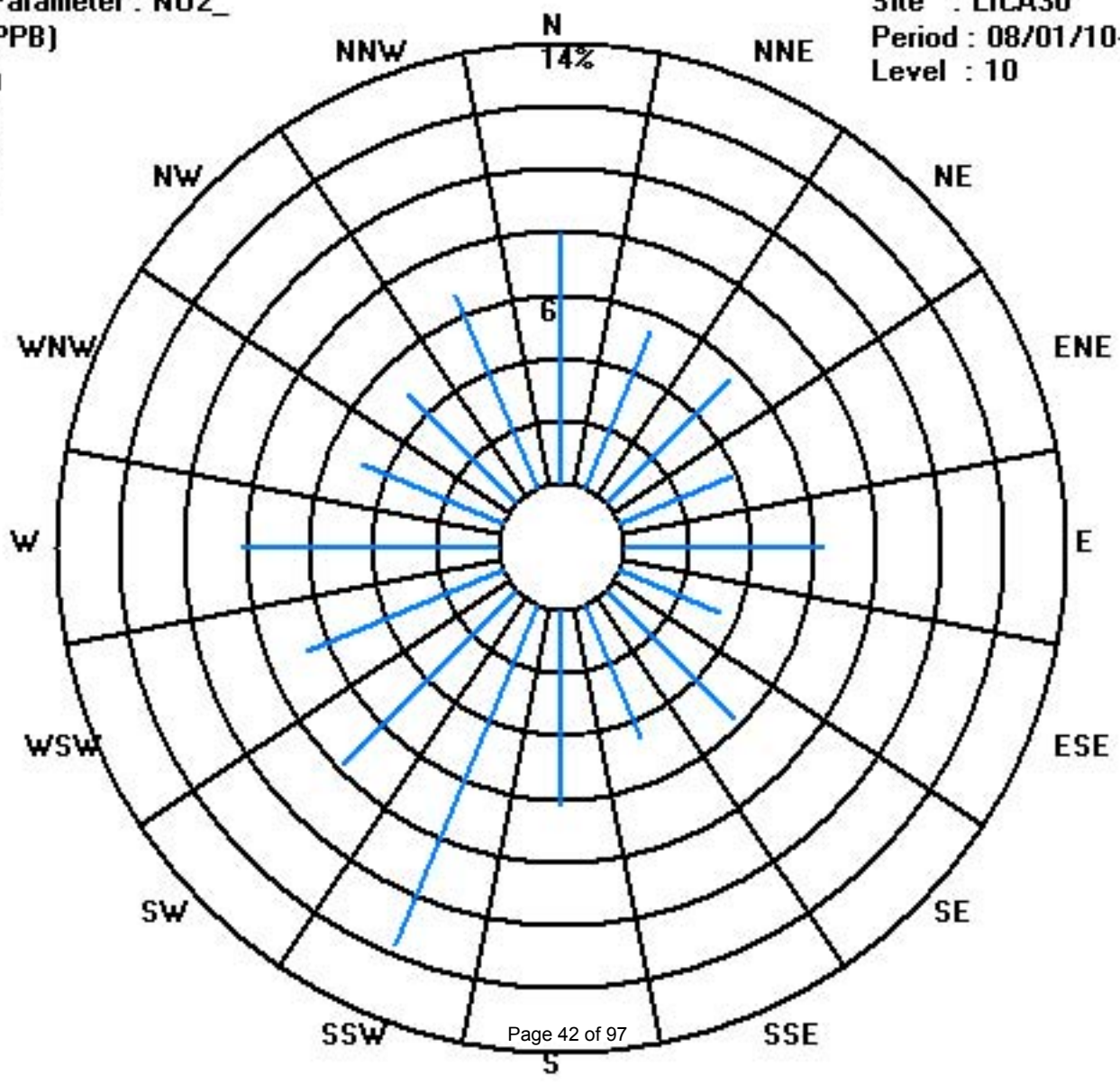
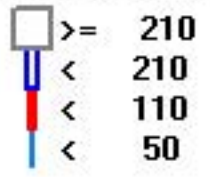
	Direction																
Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 50	56	38	39	27	44	24	40	32	44	82	55	47	57	34	34	47	700
< 110																	
< 210																	
>= 210																	
Totals	56	38	39	27	44	24	40	32	44	82	55	47	57	34	34	47	

Calm : .00 %

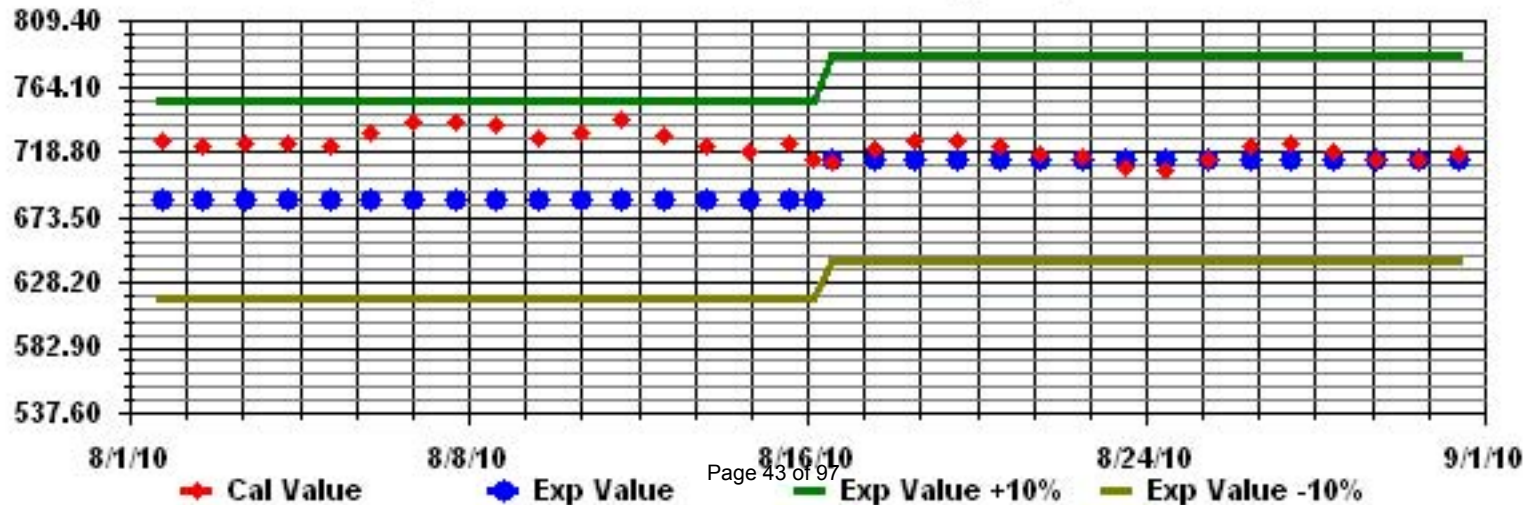
Total # Operational Hours : 700



Class Limits (PPB)



Calibration Graph for Site: LICA30 Parameter: NO2\_ Sequence: NO2 Phase: SPAN



# Nitric Oxide

# LAKELAND INDUSTRY & COMMUNITY ASSOICATION - MASKWA

AUGUST 2010

NITRIC OXIDE hourly averages in ppb

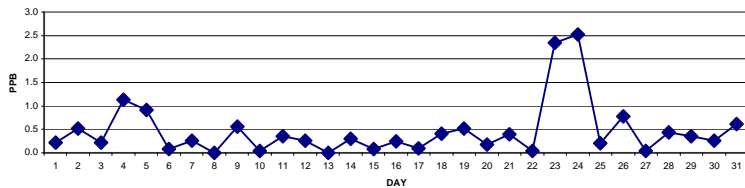
MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY 24-HOUR				
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.		
DAY																													
1	0	0	0	0	0	0	1	0	4	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	4	0.2	24	
2	0	0	0	1	0	0	7	1	1	0	0	0	0	0	0	0	IZS	0	0	0	0	0	2	0	7	0.5	24		
3	0	0	0	0	0	0	2	1	1	0	0	0	0	0	0	IZS	1	0	0	0	0	0	0	0	2	0.2	24		
4	0	0	0	0	0	4	6	4	3	2	2	1	1	1	IZS	1	1	0	0	0	0	0	0	0	6	1.1	24		
5	0	0	0	0	0	1	6	10	3	1	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	10	0.9	24		
6	0	0	0	0	0	0	1	1	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	1	0.1	24		
7	0	0	0	0	0	6	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	6	0.3	24		
8	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24	
9	0	0	0	0	0	0	2	5	3	IZS	3	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0.6	24		
10	0	0	0	0	0	0	0	1	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.0	24		
11	0	0	0	0	0	0	0	IZS	4	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0.3	24		
12	0	0	0	0	0	0	IZS	0	0	1	2	0	0	0	1	0	0	0	0	1	0	0	1	0	2	0.3	24		
13	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24		
14	0	0	0	0	IZS	0	0	0	0	0	0	1	1	1	0	3	1	0	0	0	0	0	0	0	3	0.3	24		
15	0	0	0	IZS	IZS	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0.1	24		
16	0	0	IZS	1	1	0	1	0	1	C	C	C	C	C	C	C	0	0	0	0	0	0	0	0	1	0.3	24		
17	0	IZS	0	0	0	0	0	0	1	0	0	1	0	0	C	0	0	0	0	0	0	0	0	0	1	0.1	24		
18	IZS	1	0	0	0	0	1	3	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	3	0.4	24	
19	0	0	0	0	0	1	3	2	3	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	3	0.5	24
20	0	0	0	0	0	1	0	1	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	IZS	0	1	0.2	24	
21	0	0	0	0	0	0	0	1	1	1	1	0	0	1	1	1	1	1	0	0	IZS	0	0	0	1	0.4	24		
22	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	1	0.0	24		
23	0	2	3	4	4	7	1	2	4	1	1	1	0	1	8	6	3	2	IZS	0	0	0	2	2	8	2.3	24		
24	4	5	3	2	5	6	7	11	10	4	1	0	0	0	0	0	0	IZS	0	0	0	0	0	0	11	2.5	24		
25	0	0	0	0	0	1	1	1	C	C	C	1	0	0	0	0	IZS	0	0	0	0	0	0	0	1	0.2	24		
26	0	0	0	1	0	0	0	0	0	2	2	3	1	2	2	IZS	1	2	1	0	0	1	0	0	3	0.8	24		
27	0	1	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	1	0.0	24		
28	0	0	0	0	0	0	0	1	1	1	0	1	0	IZS	0	0	0	0	1	0	0	1	1	3	3	0.4	24		
29	4	2	1	0	0	1	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	4	0.3	24		
30	0	0	0	1	0	0	0	0	1	0	0	0	IZS	0	1	2	0	0	0	1	0	0	0	0	2	0.3	24		
31	1	1	1	0	1	1	1	3	3	2	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0.6	24		
HOURLY MAX	4	5	3	4	5	7	7	11	10	4	3	3	1	2	8	6	3	2	1	1	0	1	2	3					
HOURLY AVG	0.3	0.4	0.3	0.3	0.4	1.0	1.4	1.6	1.6	0.8	0.5	0.3	0.1	0.3	0.6	0.4	0.3	0.2	0.1	0.1	0.0	0.1	0.2	0.2					

STATUS FLAG CODES

S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	- MAINTENANCE
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE

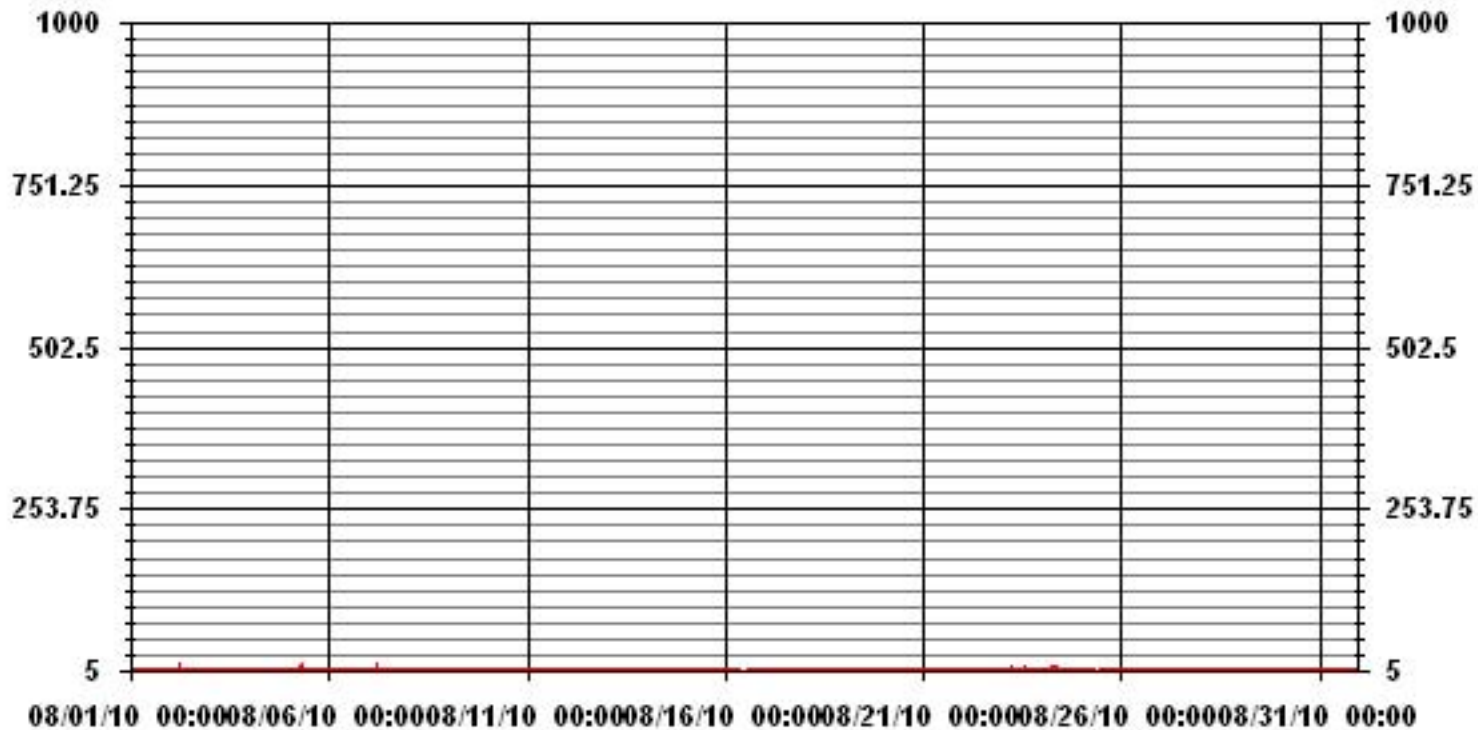
24 HOUR AVERAGES FOR AUGUST 2010



MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:	153
MAXIMUM 1-HR AVERAGE:	11 PPB @ HOUR(S) 7 ON DAY(S) 24
MAXIMUM 24-HR AVERAGE:	2.5 PPB ON DAY(S) 24
IZS CALIBRATION TIME:	32 HRS
MONTHLY CALIBRATION TIME:	12 HRS
STANDARD DEVIATION:	1.27
OPERATIONAL TIME:	744 HRS
AMD OPERATION UPTIME:	100.0 %
MONTHLY AVERAGE:	0.47 PPB

### 01 Hour Averages



# LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - MASKWA

AUGUST 2010

**NITRIC OXIDE MAX** instantaneous maximum in ppb

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR		
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.	
DAY																												
1	0	0	0	0	0	0	1	2	11	2	0	0	0	0	0	11	0	IZS	0	0	0	0	0	0	0	11	1.2	24
2	0	0	0	4	2	4	14	5	7	4	7	1	2	0	0	0	IZS	1	1	0	0	0	0	7	1	14	2.6	24
3	3	0	0	0	0	0	22	3	2	2	0	2	1	1	2	IZS	2	1	0	0	0	0	0	1	1	22	1.9	24
4	1	0	1	0	1	27	15	6	5	4	8	2	2	3	IZS	6	3	2	1	1	1	1	0	1	27	4.0	24	
5	0	0	0	1	0	4	15	18	8	4	1	3	1	IZS	1	1	1	0	0	1	1	0	0	1	18	2.7	24	
6	1	0	0	0	1	1	2	2	2	0	1	0	IZS	1	0	0	1	0	0	0	0	0	0	0	2	0.5	24	
7	1	0	0	0	0	91	0	1	1	1	1	1	IZS	1	1	0	1	0	0	0	0	0	0	0	91	4.3	24	
8	0	0	1	0	1	1	1	3	3	1	IZS	1	1	1	0	0	0	0	0	0	0	0	0	0	3	0.6	24	
9	0	0	1	0	0	1	6	9	5	IZS	6	2	0	0	1	0	0	0	0	0	0	0	0	0	1	9	1.4	24
10	0	0	0	2	0	0	1	3	IZS	1	1	1	2	0	1	0	0	1	0	0	0	0	0	0	3	0.6	24	
11	0	1	0	0	1	0	2	IZS	6	6	2	1	1	1	10	3	0	1	0	0	0	1	0	0	10	1.6	24	
12	0	0	0	1	1	2	IZS	1	1	2	14	3	0	4	9	0	1	0	2	6	1	1	4	1	14	2.3	24	
13	0	0	0	1	0	IZS	1	1	1	1	1	1	0	0	0	1	1	1	1	1	0	0	0	0	1	0.5	24	
14	0	0	1	0	IZS	1	1	1	1	1	2	5	3	6	6	13	6	1	1	0	0	1	1	0	13	2.2	24	
15	1	1	1	IZS	1	2	1	1	1	0	1	1	1	1	3	1	1	1	1	1	1	1	1	1	3	1.1	24	
16	1	1	IZS	2	1	1	1	1	C	C	C	C	C	C	C	C	1	0	1	1	1	1	1	1	2	1.0	24	
17	1	IZS	1	1	1	0	1	1	3	1	1	1	1	2	C	1	1	1	1	0	0	1	1	1	3	1.0	24	
18	IZS	1	1	1	1	1	1	5	5	2	2	1	1	0	1	1	1	1	1	1	1	1	0	0	IZS	5	1.3	24
19	1	1	1	1	1	17	8	6	6	2	2	2	2	2	3	1	1	1	1	1	1	1	1	1	17	2.7	24	
20	1	1	1	1	1	3	1	2	1	1	1	1	7	3	2	1	1	1	1	1	1	1	IZS	1	1	7	1.5	24
21	1	1	1	1	1	1	1	1	2	3	3	2	1	3	4	2	5	3	3	1	IZS	1	1	1	5	1.9	24	
22	1	1	1	1	1	2	2	2	1	1	1	1	1	1	1	1	1	1	1	IZS	1	1	1	1	2	1.1	24	
23	1	7	9	10	12	10	7	4	7	3	1	4	2	2	12	10	9	5	IZS	2	2	0	6	11	12	5.9	24	
24	12	19	17	6	6	10	15	26	16	11	2	1	0	0	0	2	0	IZS	1	1	1	1	1	1	26	6.5	24	
25	1	1	1	1	1	1	2	C	C	C	C	C	C	1	2	1	IZS	1	0	1	1	0	1	1	2	1.0	24	
26	1	1	1	7	3	1	1	1	4	6	5	6	3	3	4	IZS	2	4	3	1	1	3	0	0	7	2.7	24	
27	1	4	0	1	1	1	2	1	1	1	1	1	1	1	IZS	1	1	1	1	1	1	1	1	1	4	1.1	24	
28	1	1	1	1	1	1	14	15	1	2	1	1	1	1	IZS	1	1	1	1	4	2	2	2	5	8	15	3.0	24
29	7	6	2	1	1	2	1	1	1	1	1	1	IZS	1	1	1	0	1	1	2	1	1	1	1	7	1.6	24	
30	1	1	1	1	1	1	1	1	1	1	1	1	IZS	1	3	13	1	1	1	5	1	1	1	1	13	1.8	24	
31	1	1	1	1	1	1	1	6	4	4	IZS	1	0	0	1	0	0	0	0	0	0	0	0	0	6	1.0	24	
HOURLY MAX	12	19	17	10	12	91	22	26	16	11	14	6	7	6	13	9	5	4	6	2	3	7	11					
HOURLY AVG	1.3	1.6	1.5	1.5	1.4	6.2	4.7	4.4	3.8	2.4	2.5	1.7	1.3	1.5	2.9	2.2	1.4	1.1	0.9	1.0	0.6	0.6	1.2	1.2				

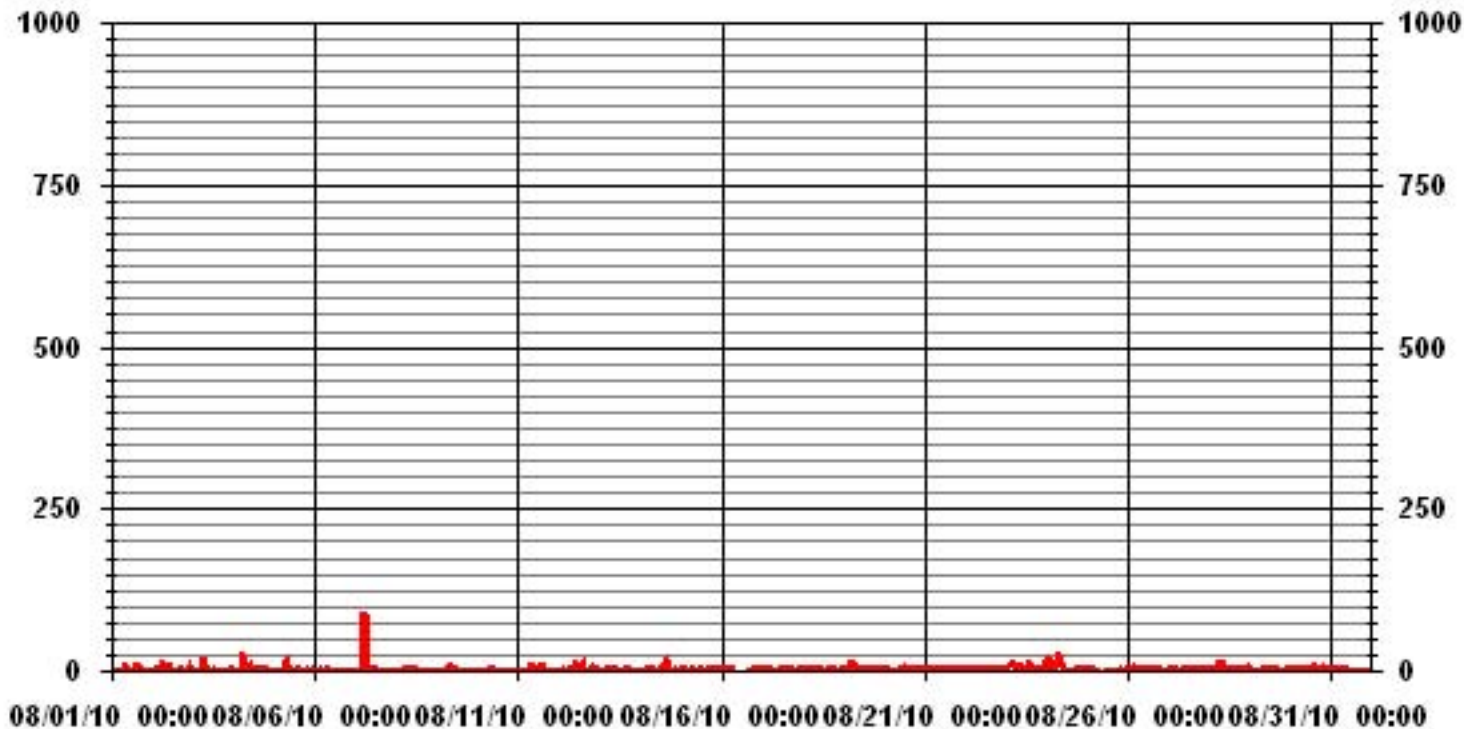
**STATUS FLAG CODES**

S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	- MISSING DATA
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE

**MONTHLY SUMMARY**

NUMBER OF NON-ZERO READINGS:	517					
MAXIMUM INSTANTANEOUS VALUE:	91	PPB	@ HOUR(S)	5	ON DAY(S)	7
IZS CALIBRATION TIME:	32	HRS	OPERATIONAL TIME:	744	HRS	
MONTHLY CALIBRATION TIME:	15	HRS				
STANDARD DEVIATION	4.66					

### 01 Hour Averages



LICA30  
 NO\_ / WDR Joint Frequency Distribution (Percent)

August 2010

Distribution By % Of Samples

Logger Id : 30  
 Site Name : LICA30  
 Parameter : NO\_  
 Units : PPB

Wind Parameter : WDR  
 Instrument Height : 10 Meters

	Direction																
Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 50	8.00	5.42	5.57	3.85	6.28	3.42	5.71	4.57	6.28	11.71	7.85	6.71	8.14	4.85	4.85	6.71	100.00
< 110	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
< 210	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
>= 210	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
Totals	8.00	5.42	5.57	3.85	6.28	3.42	5.71	4.57	6.28	11.71	7.85	6.71	8.14	4.85	4.85	6.71	

Calm : .00 %

Total # Operational Hours : 700

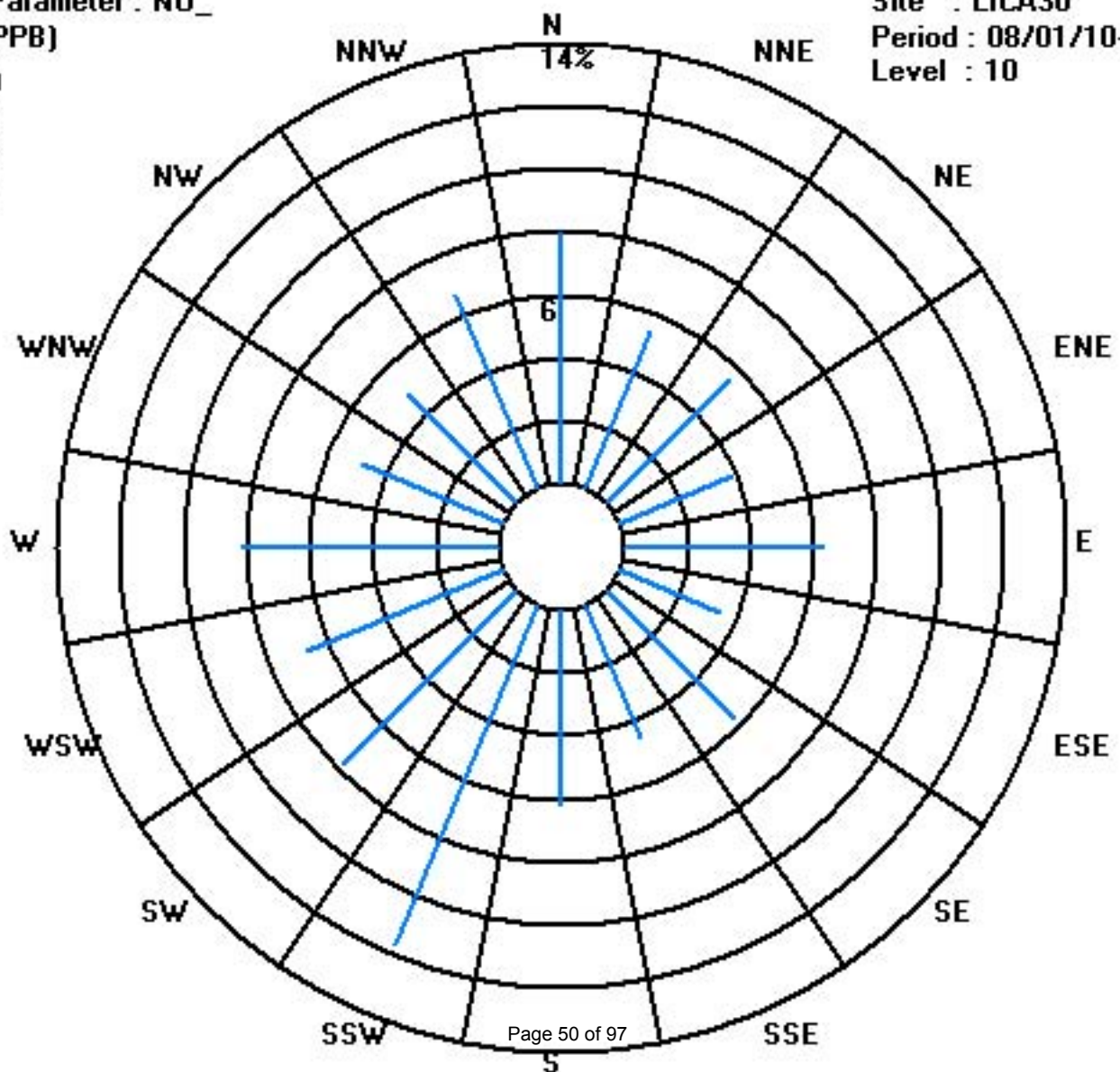
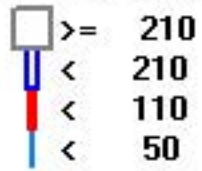
Distribution By Samples

	Direction																
Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 50	56	38	39	27	44	24	40	32	44	82	55	47	57	34	34	47	700
< 110																	
< 210																	
>= 210																	
Totals	56	38	39	27	44	24	40	32	44	82	55	47	57	34	34	47	

Calm : .00 %

Total # Operational Hours : 700





# Oxides of Nitrogen

**LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - MASKWA**  
**AUGUST 2010**

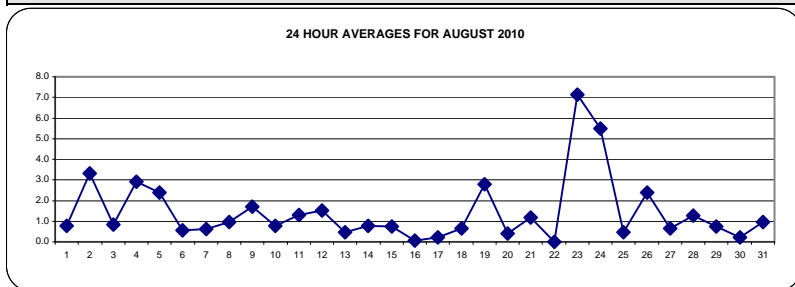
**OXIDES OF NITROGEN** hourly averages in ppb

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR		
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.	
DAY																												
1	0	0	0	0	0	0	1	1	12	3	1	0	0	0	0	0	<b>IZS</b>	0	0	0	0	0	0	0	12	0.8	24	
2	2	0	0	10	3	4	<b>18</b>	6	5	3	3	2	2	0	0	0	<b>IZS</b>	0	0	0	0	1	12	5	<b>18</b>	3.3	24	
3	5	1	0	0	0	0	4	2	2	1	0	1	0	1	1	<b>IZS</b>	1	0	0	0	0	0	0	0	5	0.8	24	
4	0	0	0	0	1	7	14	8	7	5	5	2	2	2	<b>IZS</b>	3	3	0	0	2	0	0	2	4	14	2.9	24	
5	6	4	1	3	1	1	11	17	7	2	0	1	1	<b>IZS</b>	0	0	0	0	0	0	0	0	0	0	17	2.4	24	
6	0	0	0	0	0	0	1	4	2	1	1	1	0	<b>IZS</b>	0	0	0	0	0	0	1	2	1	0	4	0.6	24	
7	0	0	0	0	1	9	0	2	1	1	0	<b>IZS</b>	0	0	0	0	0	0	0	0	0	0	0	0	9	0.6	24	
8	1	0	2	4	1	2	3	3	2	1	<b>IZS</b>	1	0	0	0	1	0	0	0	0	0	0	0	1	4	1.0	24	
9	2	3	2	0	0	0	4	9	6	<b>IZS</b>	7	1	0	0	0	0	0	0	0	0	0	0	3	2	0	9	1.7	24
10	0	0	0	2	2	0	1	8	<b>IZS</b>	1	0	0	2	0	0	0	0	2	0	0	0	0	0	0	8	0.8	24	
11	0	0	0	0	0	0	3	<b>IZS</b>	9	9	1	1	1	0	0	2	1	1	0	0	0	0	1	1	9	1.3	24	
12	0	0	0	0	0	1	<b>IZS</b>	2	5	3	6	3	0	2	2	0	1	0	0	6	0	0	4	0	6	1.5	24	
13	1	0	1	2	2	<b>IZS</b>	1	1	1	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	2	0.5	24	
14	0	0	0	1	<b>IZS</b>	0	0	1	0	0	1	3	2	1	0	5	1	0	0	0	0	0	1	2	5	0.8	24	
15	3	4	2	<b>IZS</b>	2	2	1	0	0	0	0	0	0	1	2	0	0	0	0	0	0	0	0	0	4	0.7	24	
16	0	0	<b>IZS</b>	0	0	0	0	0	1	<b>C</b>	<b>C</b>	<b>C</b>	<b>C</b>	<b>C</b>	<b>C</b>	<b>C</b>	0	0	0	0	0	0	0	0	1	0.1	24	
17	0	<b>IZS</b>	0	0	0	0	0	0	1	0	0	2	1	1	<b>C</b>	0	0	0	0	0	0	0	0	0	2	0.2	24	
18	<b>IZS</b>	0	0	0	0	0	0	4	4	2	2	0	0	0	0	0	0	1	0	0	0	0	1	<b>IZS</b>	4	0.6	24	
19	1	1	2	2	2	2	7	5	8	4	3	2	2	4	5	3	2	1	1	2	0	1	<b>IZS</b>	4	8	2.8	24	
20	4	3	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	<b>IZS</b>	0	4	0.4	24	
21	0	0	0	0	0	0	0	0	2	3	3	1	0	2	1	3	5	5	2	0	<b>IZS</b>	0	0	0	5	1.2	24	
22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	<b>IZS</b>	0	<b>IZS</b>	0	0	0	0	0.0	24	
23	1	6	7	9	11	<b>18</b>	5	5	9	2	1	3	1	3	17	11	7	6	<b>IZS</b>	9	13	0	12	8	<b>18</b>	7.1	24	
24	11	13	8	9	11	11	11	17	16	10	3	2	1	1	1	1	0	<b>IZS</b>	0	0	0	0	0	0	17	5.5	24	
25	0	0	0	0	0	1	2	2	<b>C</b>	<b>C</b>	<b>C</b>	1	1	1	0	<b>IZS</b>	0	0	0	0	1	0	0	2	0.5	24		
26	0	2	0	2	1	5	0	0	0	5	3	7	3	4	4	<b>IZS</b>	2	6	2	1	0	6	2	0	7	2.4	24	
27	2	9	1	0	0	0	0	0	0	0	0	0	0	0	<b>IZS</b>	0	0	0	0	1	1	0	0	1	9	0.7	24	
28	0	0	0	0	0	0	0	1	0	0	0	0	0	<b>IZS</b>	0	0	0	0	3	0	2	5	9	9	1.3	24		
29	11	4	1	1	0	0	0	0	0	0	0	0	<b>IZS</b>	0	0	0	0	0	0	0	0	0	0	0	11	0.7	24	
30	0	0	0	0	0	0	0	0	0	0	0	<b>IZS</b>	0	1	3	0	0	0	0	1	0	0	0	0	3	0.2	24	
31	0	0	0	0	0	0	0	4	4	4	<b>IZS</b>	2	1	1	1	1	1	0	1	1	1	0	0	4	1.0	24		
HOURLY MAX	11	13	8	10	11	18	18	17	16	10	7	7	3	4	17	11	7	6	3	9	13	6	12	9				
HOURLY AVG	1.7	1.7	0.9	1.5	1.3	2.1	2.9	3.4	3.6	2.2	1.5	1.3	0.7	0.9	1.4	1.1	0.8	0.8	0.3	0.8	0.6	0.6	1.6	1.2				

**STATUS FLAG CODES**

S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	- MAINTENANCE
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE

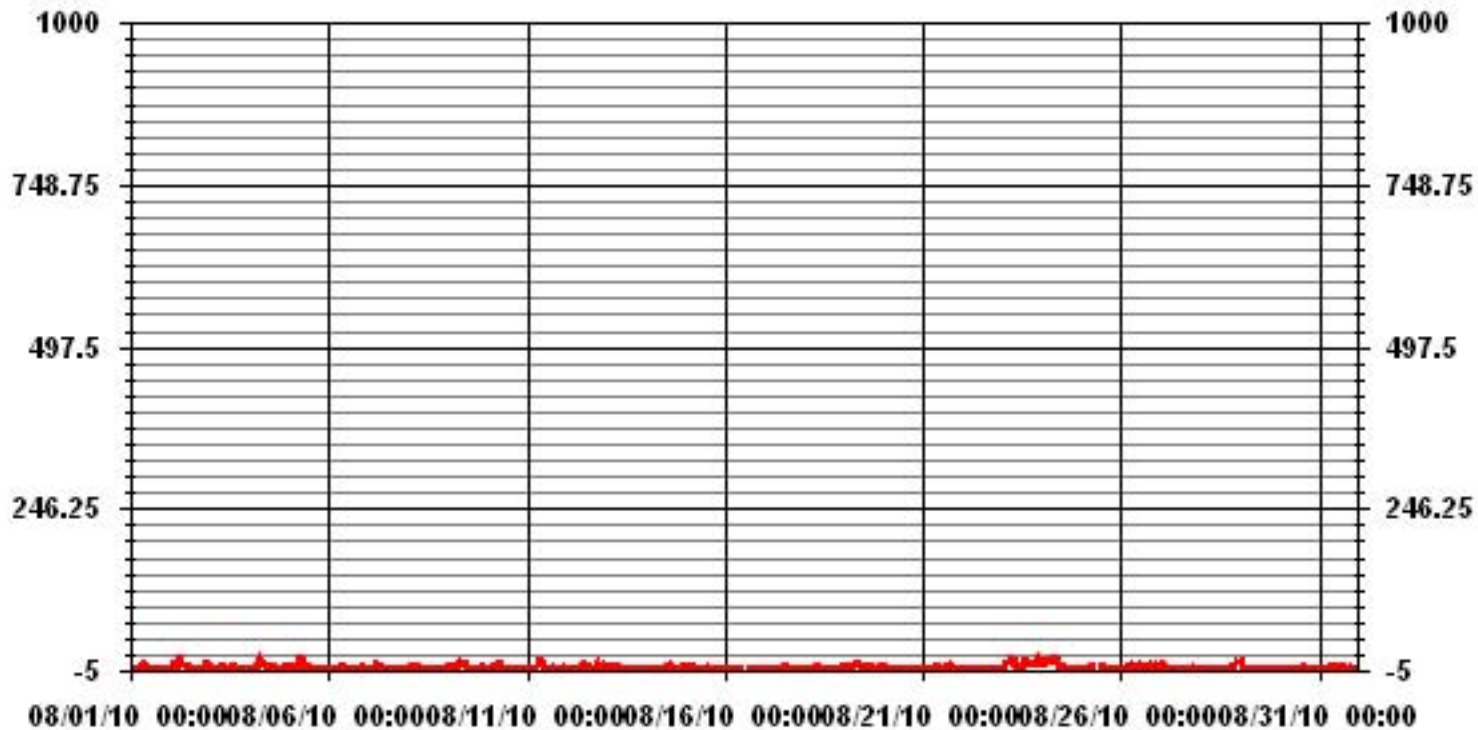
24 HOUR AVERAGES FOR AUGUST 2010



**MONTHLY SUMMARY**

NUMBER OF NON-ZERO READINGS:	286
MAXIMUM 1-HR AVERAGE:	18 PPB @ HOUR(S) 6, 5 ON DAY(S) 2, 23
MAXIMUM 24-HR AVERAGE:	7.1 PPB ON DAY(S) 23
IZS CALIBRATION TIME:	32 HRS
MONTHLY CALIBRATION TIME:	12 HRS
STANDARD DEVIATION:	2.86
OPERATIONAL TIME:	744 HRS
AMD OPERATION UPTIME:	100.0 %
MONTHLY AVERAGE:	1.45 PPB

### 01 Hour Averages



— LICA30 NOX\_ PPB

# LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - MASKWA

AUGUST 2010

## OXIDES OF NITROGEN MAX instantaneous maximum in ppb

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR		
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.	
DAY																												
1	1	0	0	0	0	1	3	4	24	7	2	1	1	1	1	24	1	IZS	0	0	0	1	0	1	24	3.2	24	
2	3	1	4	15	13	15	29	14	16	9	17	6	9	1	2	4	IZS	2	0	1	1	11	23	12	29	9.0	24	
3	15	2	0	0	0	3	29	5	3	2	1	6	1	3	6	IZS	6	1	0	0	0	0	0	0	29	3.6	24	
4	1	1	0	1	2	34	23	13	13	12	19	5	5	7	IZS	14	10	6	4	8	0	0	6	7	34	8.3	24	
5	8	7	3	6	3	6	25	28	15	8	3	7	4	IZS	1	2	3	0	0	0	0	2	1	1	28	5.8	24	
6	0	0	0	1	1	1	3	7	7	2	2	1	IZS	1	0	0	1	1	1	1	2	3	3	1	7	1.7	24	
7	1	1	1	1	2	105	1	5	4	3	1	IZS	1	1	0	0	0	0	0	0	0	1	1	2	105	5.7	24	
8	4	1	7	5	3	4	4	7	7	2	IZS	2	1	2	1	2	0	0	0	0	1	1	1	2	7	2.5	24	
9	4	5	4	2	1	1	9	15	12	IZS	14	3	1	1	2	1	1	0	0	0	1	6	5	2	15	3.9	24	
10	0	0	0	6	7	1	3	15	IZS	2	2	2	6	1	3	2	1	3	2	1	1	1	0	0	15	2.6	24	
11	0	0	0	0	0	1	7	IZS	14	12	4	1	2	1	27	14	2	2	1	0	1	1	2	1	27	4.0	24	
12	1	1	1	1	1	4	IZS	4	8	7	24	11	1	11	20	2	2	1	7	18	5	3	12	1	24	6.3	24	
13	2	1	2	2	4	IZS	4	2	2	1	1	1	1	1	1	1	1	1	2	2	1	1	0	0	4	1.5	24	
14	0	1	0	2	IZS	1	1	2	2	1	4	11	7	12	12	24	10	1	0	0	0	2	2	3	24	4.3	24	
15	6	6	5	IZS	3	4	2	1	1	0	0	1	2	3	10	0	0	0	0	0	0	0	1	0	10	2.0	24	
16	0	0	IZS	1	0	0	1	0	C	C	C	C	C	C	C	C	2	0	0	0	0	0	0	0	2	0.3	24	
17	0	IZS	0	0	0	0	0	1	5	1	2	3	3	5	C	3	1	0	0	0	0	0	0	1	5	1.1	24	
18	IZS	0	1	0	0	0	1	7	7	3	4	1	1	1	1	2	1	2	1	1	1	1	2	IZS	7	1.7	24	
19	3	2	2	3	4	24	14	8	11	6	4	4	4	7	10	5	2	1	2	4	2	2	IZS	6	24	5.7	24	
20	5	6	1	1	1	5	1	4	2	0	2	1	6	3	3	0	0	0	1	1	0	IZS	0	0	6	1.9	24	
21	0	0	0	0	0	1	0	1	3	6	9	6	2	8	10	7	15	13	13	1	IZS	1	0	0	15	4.2	24	
22	0	0	0	0	0	3	4	4	0	0	0	0	2	0	1	1	1	0	0	IZS	0	0	0	1	4	0.7	24	
23	3	14	18	21	27	23	20	12	17	8	2	9	5	8	24	18	19	16	IZS	15	18	1	22	27	27	15.1	24	
24	25	31	28	15	15	15	22	35	24	19	5	3	3	2	5	1	IZS	1	1	0	0	1	1	1	35	11.1	24	
25	0	1	0	1	0	2	3	C	C	C	C	C	C	2	3	2	IZS	1	0	4	3	1	1	1	4	1.5	24	
26	0	6	2	19	8	8	6	0	7	11	11	13	6	7	10	IZS	4	13	12	4	1	16	7	1	19	7.5	24	
27	7	19	1	1	0	0	3	2	0	0	2	1	0	0	IZS	0	0	0	0	2	2	1	2	2	19	2.0	24	
28	2	1	1	1	0	0	16	22	1	2	0	0	2	IZS	1	0	0	0	9	7	9	8	15	19	22	5.0	24	
29	17	15	5	1	1	1	0	0	0	0	0	0	IZS	0	0	0	0	0	1	3	1	0	1	0	17	2.0	24	
30	0	0	0	0	0	1	1	1	0	1	0	IZS	0	4	22	1	1	1	1	8	1	0	0	0	22	1.9	24	
31	1	1	0	0	0	1	1	8	6	7	IZS	3	2	2	13	2	4	1	2	4	3	1	0	0	13	2.7	24	
HOURLY MAX	25	31	28	21	27	105	29	35	24	19	24	13	9	12	27	24	19	16	13	18	18	16	23	27				
HOURLY AVG	3.6	4.1	2.9	3.5	3.2	8.8	7.9	7.8	7.5	4.7	5.0	3.8	2.9	3.4	6.9	4.9	3.1	2.3	2.0	2.9	1.8	2.2	3.6	3.1				

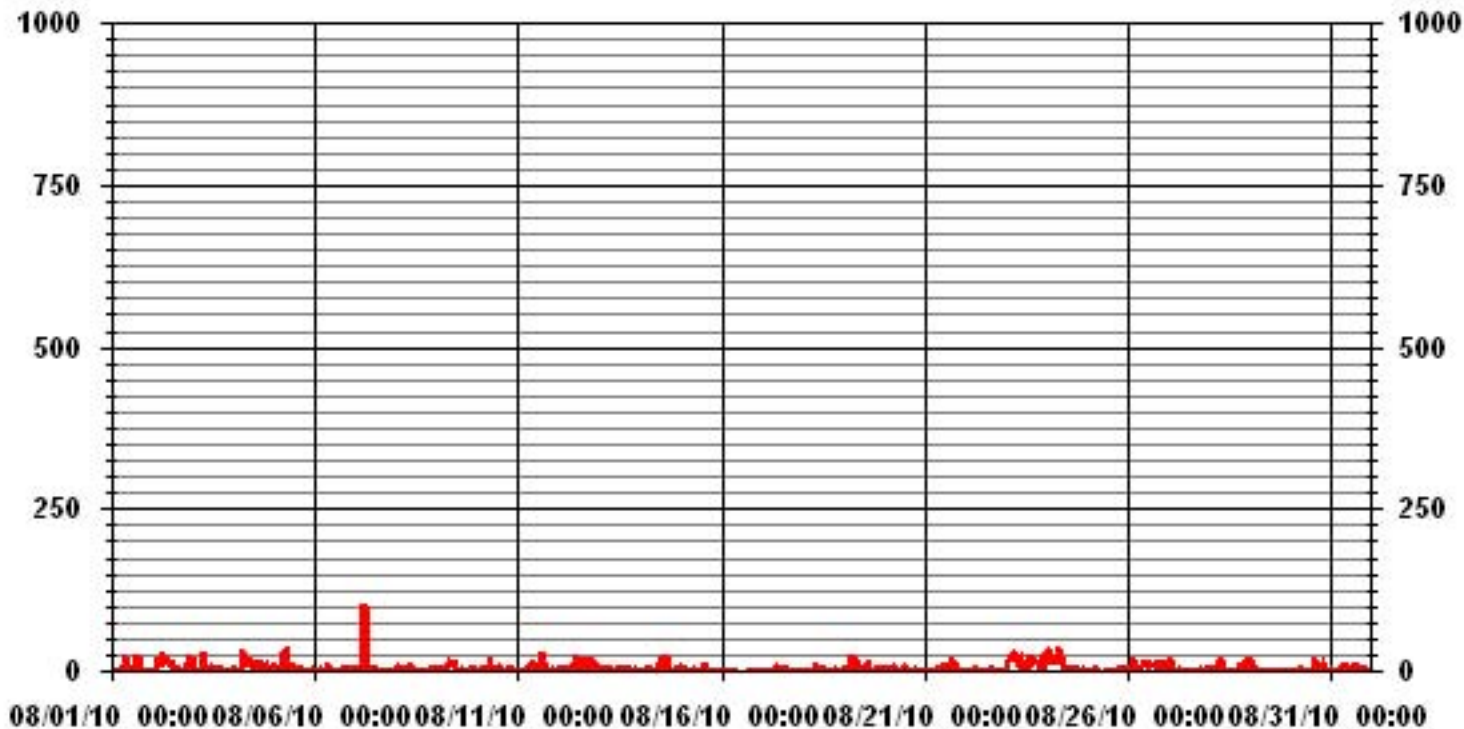
**STATUS FLAG CODES**

S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	- MISSING DATA
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE

**MONTHLY SUMMARY**

NUMBER OF NON-ZERO READINGS:	513
MAXIMUM INSTANTANEOUS VALUE:	105 PPB @ HOUR(S) 5 ON DAY(S) 7
IZS CALIBRATION TIME:	32 HRS
MONTHLY CALIBRATION TIME:	15 HRS
STANDARD DEVIATION	7.23
OPERATIONAL TIME:	744 HRS

### 01 Hour Averages



— LICA30 NOXMAX PPB

LICA30  
 NOX\_ / WDR Joint Frequency Distribution (Percent)

August 2010

Distribution By % Of Samples

Logger Id : 30  
 Site Name : LICA30  
 Parameter : NOX\_  
 Units : PPB

Wind Parameter : WDR  
 Instrument Height : 10 Meters

	Direction																
Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 50	8.00	5.42	5.57	3.85	6.28	3.42	5.71	4.57	6.28	11.71	7.85	6.71	8.14	4.85	4.85	6.71	100.00
< 110	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
< 210	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
>= 210	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
Totals	8.00	5.42	5.57	3.85	6.28	3.42	5.71	4.57	6.28	11.71	7.85	6.71	8.14	4.85	4.85	6.71	

Calm : .00 %

Total # Operational Hours : 700

Distribution By Samples

	Direction																
Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 50	56	38	39	27	44	24	40	32	44	82	55	47	57	34	34	47	700
< 110																	
< 210																	
>= 210																	
Totals	56	38	39	27	44	24	40	32	44	82	55	47	57	34	34	47	

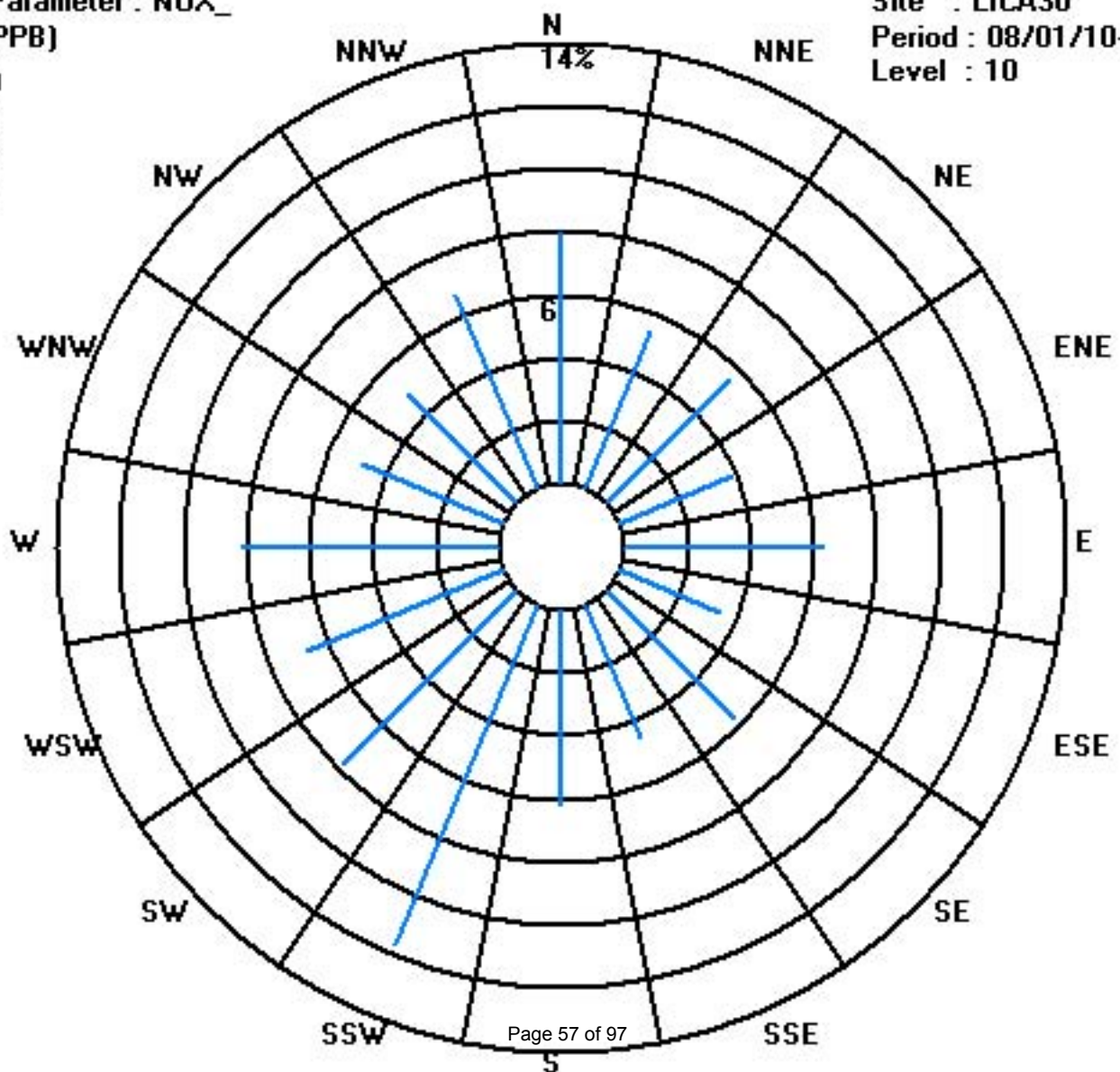
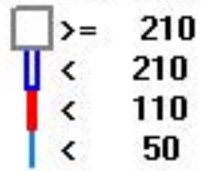
Calm : .00 %

Total # Operational Hours : 700

Class Limits (PPB)

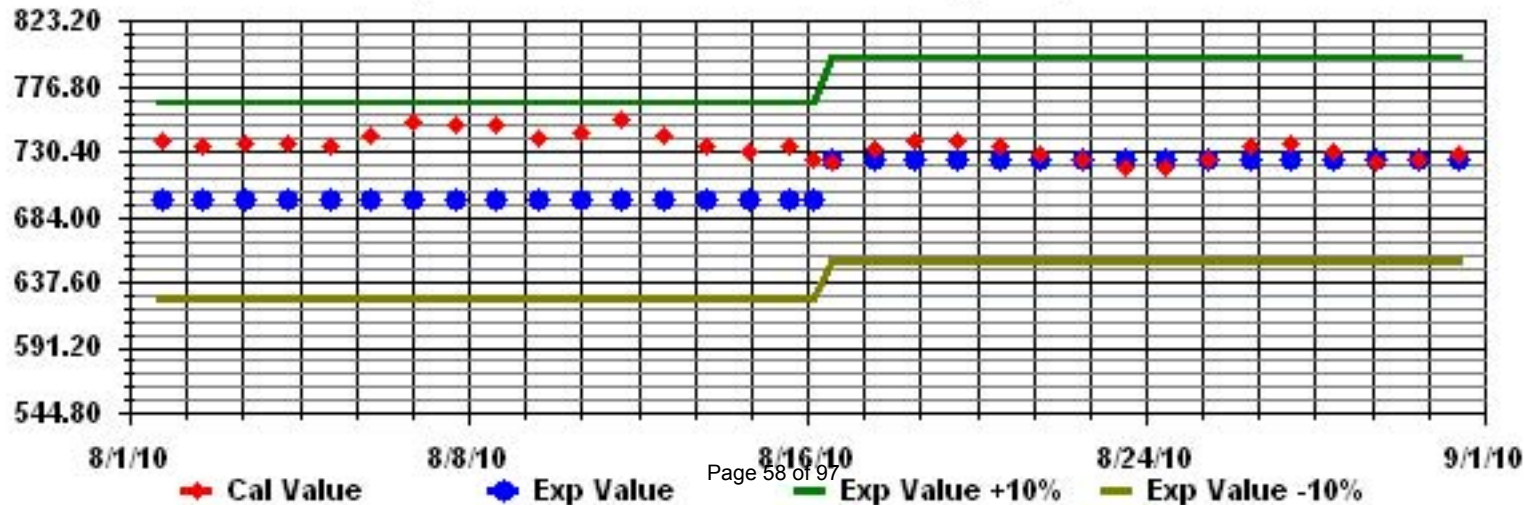
Period : 08/01/10-08/31/10

Level : 10





Calibration Graph for Site: LICA30 Parameter: NOX\_ Sequence: NO2 Phase: SPAN



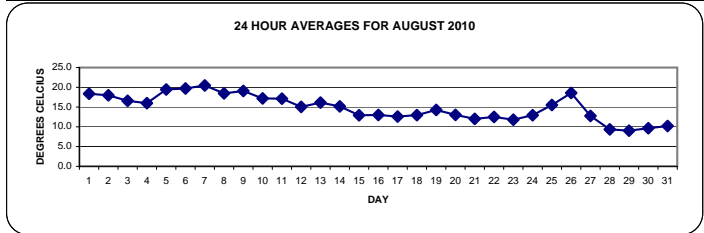
# Temperature

**LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - MASKWA**  
**AUGUST 2010**  
**AMBIENT TEMPERATURE hourly averages (Degrees C)**

MST		0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	DAILY	24-HOUR	RDGS.
DAY	HOURLY MAX	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.		
1	11.8	11.4	11	10.4	10	10.7	13.8	17.7	20.5	21.6	22.9	23.1	24.5	25.1	25.7	25.6	25.2	24.7	23.6	20.6	17.2	15.5	14.5	13.6	25.7	18.4	24		
2	13.2	12.7	12.6	13.3	13.8	14.4	15.7	16.8	17.5	18.3	19.3	21.1	22.3	23.1	23.8	23.5	22.5	22.6	21.5	19	17.1	16.7	16.2	14.4	23.8	18.0	24		
3	14.5	14.7	14.3	13.9	14.2	13.7	14	14.8	17.4	19.2	18.7	19.5	21.4	22.2	22.5	22.5	22	21.1	20	17	12.2	10	8.9	9.2	22.5	16.6	24		
4	9.2	8.6	8.4	7.6	6.9	6.7	8.6	12.7	16.7	19	19.9	20.8	21.6	22.5	22.7	22.2	22.4	22	19.8	18.6	17.5	16.6	16.6	16	22.7	16.0	24		
5	14.2	13	12.3	11.7	11.6	11.7	15.5	19.5	22.4	24	24.7	24.9	25.6	25.1	26.4	25.3	25.8	25.5	23.7	20.3	17.9	16.8	15.1	13.8	26.4	19.5	24		
6	12.9	12.2	11.9	11.6	10.9	10.9	12.9	18	21.3	23	24.4	25.4	26.5	26.9	26.9	26	25.6	25.1	23.9	21.6	19.8	19.5	19	16.8	26.9	19.7	24		
7	16.7	17.5	17	15.4	14.2	13.5	15.6	17.8	20	22.3	24.3	25.6	26.2	26.7	26.9	<b>27.2</b>	26.9	26.6	25.2	21.2	17.1	15.3	15.5	16.6	<b>27.2</b>	<b>20.5</b>	24		
8	16.5	15.3	14.7	14.4	15.2	15.4	15.9	17.3	18.9	20.5	22.5	23.2	23.3	23.7	22.9	21.3	22.1	22.5	22.2	18.5	15.9	13.9	13.8	13.3	23.7	18.5	24		
9	12.9	12.4	11.7	11.5	10.4	10.2	13	18.1	21.7	23.7	24.2	25.1	26	26.2	26.4	25.4	26.2	25.9	24.1	20.5	17	16.6	14.6	13.8	26.4	19.1	24		
10	13.4	13.3	13.3	13.7	14.7	15.1	15.3	15.7	16	18.6	20.5	21.2	20.9	20.3	22.8	21.8	20.7	18.8	17.6	16.8	16	15.1	15.7	15.2	22.8	17.2	24		
11	14.8	13.9	13.5	13.2	13.1	13.9	14.4	15.3	16.9	20	22	21.1	22.1	23.7	23.8	19.4	19.2	18.6	20	17.5	14.5	13.4	13.9	12.9	23.8	17.1	24		
12	13	12.5	11.6	10.8	10.8	11.8	14.1	14.2	13.8	15	17.9	19	18.8	18.4	18.4	17.9	17.7	17.1	16	15.4	15	14.4	13.9	13.8	19.0	15.1	24		
13	14	13.9	13.9	13.8	13.9	13.9	14.3	14.7	15.1	15.5	16.8	18.3	19.5	18.5	19.7	20.8	20.2	17.9	17.1	16.3	15.5	14.7	14.5	14.3	20.8	16.1	24		
14	14.2	14	13.8	13.6	13.5	13.1	13.5	14.8	15.6	16.6	17.4	17.9	18.6	19.4	19.9	19.5	19.1	19	16.9	14.8	11.8	9.8	8.6	8.6	19.9	15.2	24		
15	9.2	9.2	9	9.1	9.5	10.3	10.8	12.3	12.9	15.2	15.8	17.6	19.1	18.9	18.7	15.6	16.8	17.4	16.2	13	10	8.7	7.8	7.2	19.1	12.9	24		
16	6.5	6.9	7.8	8.2	8.5	8.8	9.7	11.4	14.5	16.5	18.8	19.1	19.7	20.1	19	18.4	16.6	12.8	12.6	12.5	11.8	10.9	10.7	10.2	20.1	13.0	24		
17	10.3	10.3	9.7	9.4	8.8	8.3	8.1	9.7	13.6	15.6	17.4	16.3	17	18.1	17.9	16.9	17.4	18.1	16.1	12.3	9.7	8.1	7	6.2	18.1	12.6	24		
18	5.9	5.5	5.1	4.8	4.9	5.3	7.5	10.7	13.5	14.5	17.9	17.3	18.3	18.6	17.8	18.2	17.9	17.1	16.7	15.4	14.8	14.5	14.4	14.4	18.6	13.0	24		
19	13.1	12.4	12.5	12.7	11.6	11.2	12.3	14	14.6	13.8	14.3	17.4	18	16.8	17.4	18.8	19.2	18.5	16.7	14.3	11.8	10.6	10.4	10.2	19.2	14.3	24		
20	10	10.6	10.4	9.9	9.1	8.7	9.5	11.1	13.2	15.2	16.5	18	18.6	18.5	18.5	19.5	19.1	18.5	16.1	11.6	8.9	7.5	7	6.4	19.5	13.0	24		
21	5.2	4.5	5.7	6.4	7.5	7.7	8.2	9.2	11.8	14.9	16.8	17.8	17.5	17.7	18.4	18.3	17.5	15.9	14.5	12.9	11.2	10.1	9.1	9.6	18.4	12.0	24		
22	10.4	10.5	10.7	9.7	8	8	9.2	11.3	12.9	14.7	15.5	14.1	14.5	14.3	15.3	15.1	15.1	14.9	14.1	13.3	12.4	12	12	12	15.5	12.5	24		
23	11.8	11.6	11.4	11.4	11.4	11.5	11.5	10.9	11.1	11.4	12.1	13	12.9	13.9	12.7	14.7	14.6	12.9	11.6	11	10.6	9.8	9.9	9.6	14.7	11.8	24		
24	9.5	9.3	8.4	7.5	5.7	5.1	7.5	12.9	15.1	15.9	15.8	17.3	18.5	18.5	19.2	20.1	20.8	19.8	14.9	12.7	10.1	9.4	8.5	8	20.8	12.9	24		
25	8	7.8	8.6	7.9	7.7	7.6	8.5	14.3	15.9	18	20.2	20.6	22	23.6	24.1	24.3	24.1	23.4	20.1	16	13.4	12.2	12.2	12.2	24.3	15.5	24		
26	13	13.3	12.9	12.9	12.7	12.8	13.4	15.1	17	18.8	20.5	21.8	22.9	23.8	24.4	24.8	24.6	23.8	21.4	20.1	19.7	19.5	18.9	17.7	24.8	18.6	24		
27	16.4	14.8	14	13	13.3	13	12.3	11.9	12.4	13.3	14	12.2	13.2	13.9	13.7	14.1	13.3	12.6	11.6	10.8	10.8	10.7	10.8	10	16.4	12.8	24		
28	10.1	10.5	10.1	8.9	8	7	7.3	7.9	8.2	8.7	9.6	10.5	11.3	11	11.5	11.7	11.7	10.7	9.6	8.4	8.3	8	7.8	7.8	11.7	9.4	24		
29	8	7.8	7.6	7.5	7.4	7.2	7.6	7.8	8.4	9.6	10.6	9.7	10.1	10.8	11.5	11.2	10.9	10.8	9.5	8.8	8.4	8.4	8.5	8.4	11.5	9.0	24		
30	8.2	7.8	7.8	7.8	7.7	7.8	7.8	8.4	9.8	10.1	11.1	12.6	13.1	12.6	14.3	12.8	13.7	13.5	11.6	9.1	7.4	6.2	5.6	4.7	14.3	9.6	24		
31	3.8	3.6	<b>3.1</b>	4.2	4.6	4.4	4.8	8.9	12.1	13.5	15.1	15.7	16.9	17.7	17.6	17.4	16.6	14.6	12.6	10.8	8.8	6.7	6	5.5	17.7	10.2	24		
HOURLY MAX	16.7	17.5	17.0	15.4	15.2	15.4	15.9	19.5	22.4	24.0	24.7	25.6	26.5	26.9	27.2	26.9	26.6	25.2	21.6	19.8	19.5	19.0	17.7						
HOURLY AVG	11.3	11.0	10.8	10.5	10.3	10.3	11.4	13.4	15.2	16.7	18.0	18.6	19.4	19.7	20.0	19.7	19.5	18.8	17.3	15.2	13.3	12.3	11.9	11.4					

**STATUS FLAG CODES**

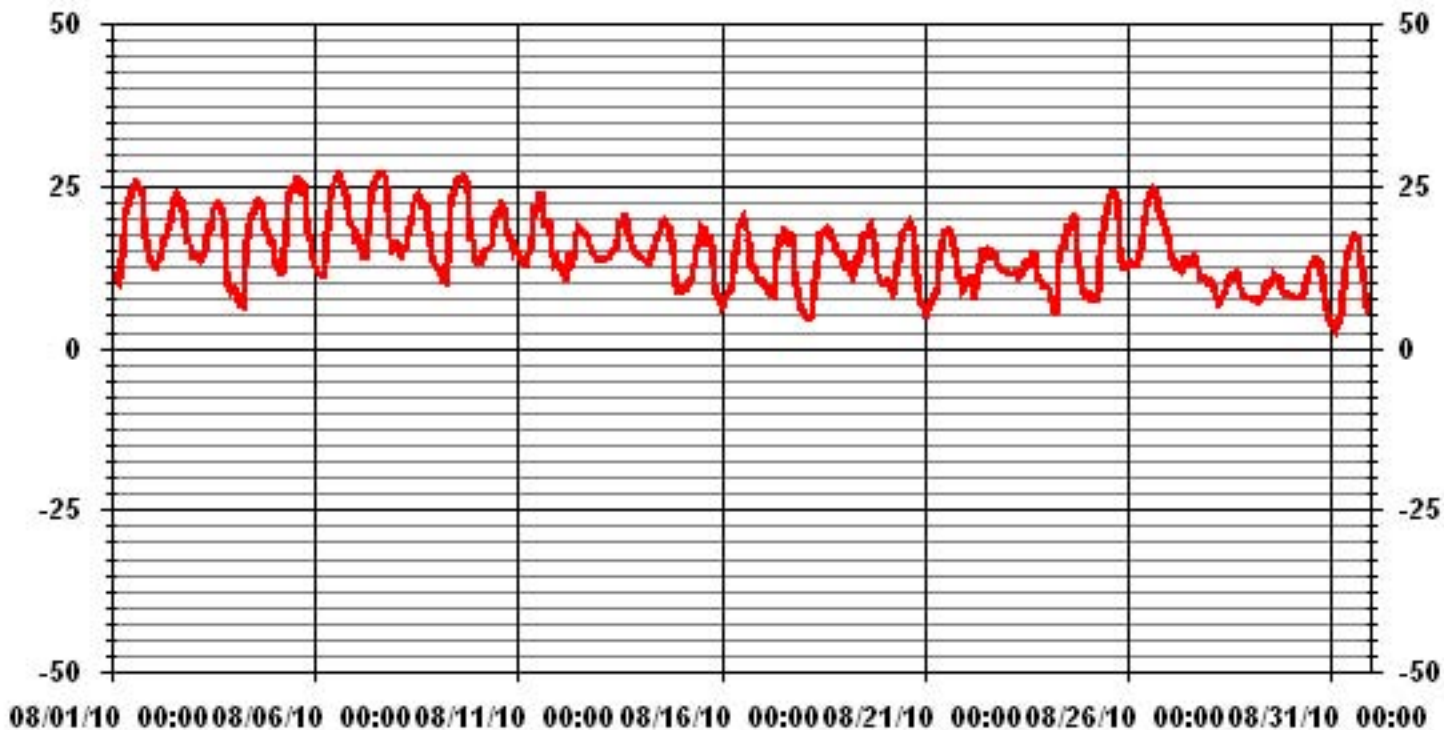
S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	- MAINTENANCE
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE



**MONTHLY SUMMARY**

MINIMUM 1-HR AVERAGE:	3.1 °C	@ HOUR(S)	2	ON DAY(S)	31
MAXIMUM 1-HR AVERAGE:	27.2 °C	@ HOUR(S)	15	ON DAY(S)	7
MAXIMUM 24-HR AVERAGE:	20.5 °C			ON DAY(S)	7
CALIBRATION TIME:	0	HRS			
OPERATIONAL TIME:			744	HRS	
STANDARD DEVIATION:	5.24				
AMT OPERATION UPTIME:			100.0	%	
MONTHLY AVERAGE:			14.83	°C	

### 01 Hour Averages



# Precipitation

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - MASKWA

AUGUST 2010

PRECIPITATION hourly averages (mm)

MST		0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	DAILY	
DAY	HOURLY MAX	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	TOTAL	RDGS.
1		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	24
2		0	0	0	0.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.1	24
3		0	0	0	0	0	0.1	0.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2	24
4		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	24
5		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	24
6		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	24
7		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.3	24
8		1.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1.5	1.5	24
9		0	0.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.1	24
10		0	0	0	0.1	0	0	0	0	0.1	0	0	0	0	0	0	0	0.2	0.2	0.1	0	0	0	0	0	0.2	0.7	24
11		0	0	0	0	0	0	0	0	0	0	0	0	0	0	6.1	0.1	0	0	0	0	0	0	0	0	6.1	6.2	24
12		0	0	0	0.1	0	0	0	3.8	0.7	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0	0	3.8	4.7	24
13		0.4	0.3	0	0	0.2	0	0	0.1	0	0	0	0	0	0.5	0	0	0	0	0	0	1.6	0.1	0	0	1.6	3.2	24
14		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	24
15		0	0	0	0	0	0.2	0	0.2	0.2	0	0	0	0	0	0.1	1.2	0	0	0	0	0	0	0	0	1.2	1.9	24
16		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1.2	0.5	2.2	0.6	0	0	0	0	2.2	4.5	24
17		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	24
18		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	24
19		0	0	0	0	0	0	0	0.1	0.7	2.4	0.1	0	0	0	0	0	0	0	0	0	0	0	0	0	2.4	3.3	24
20		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	24
21		0	0	0	0	0	0	0.1	0.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2	24
22		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	24
23		0	0	0	0	0	0	0.4	2	0.2	0.3	0	0	0	0	1	0	0.2	2	0	0	0	0	0	0.1	2.0	6.2	24
24		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	24
25		0	0	0.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.1	23
26		0.2	3.2	0.7	0.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3.2	4.2	24
27		0	0	0	0	0	0	0	0.2	0	0	0.2	0.1	0	0	0	0.5	0	0	0	0	0	0	0	0	0.5	1.0	24
28		0	0	0	0	0.1	0	0	0	0	0.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.4	24
29		0	0	0	0	0	0	0	0.1	0	0	0	0.3	0.4	0.1	0.3	0.6	0.1	0.2	1.4	0.2	0	0.2	0.1	1.3	1.4	5.3	24
30		0	0	0	0.7	1.6	1.3	0.5	0.1	0	0	0	0	0	1.5	0	0	0	0	0	0	0	0	0	0	1.6	5.7	24
31		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0	0	0	0	0	0	0.1	0.1	24
HOURLY MAX		1.5	3.2	0.7	0.7	1.6	1.3	0.5	3.8	0.7	2.4	0.2	0.3	0.4	1.5	1.0	6.1	1.2	2.0	2.2	0.6	1.6	0.2	0.1	1.3			

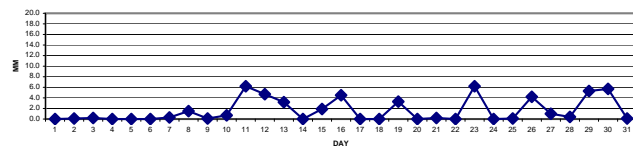
STATUS FLAG CODES

S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	- MAINTENANCE
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	MD	-MISSING DATA

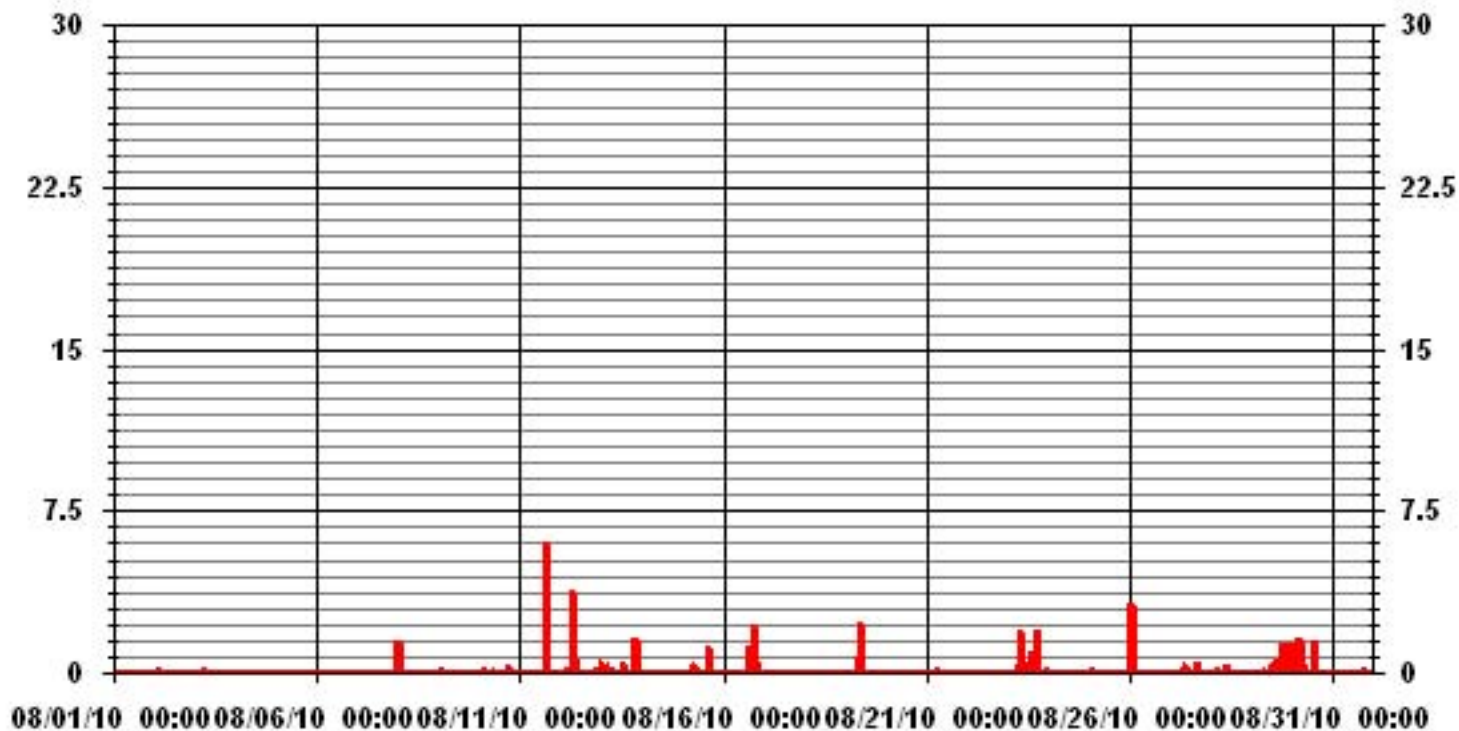
MONTHLY SUMMARY

MAXIMUM 1-HR AVERAGE:	6.1	MM	HOUR(S)	15	ON DAY(S)	11
MAXIMUM DAILY TOTAL	6.2	MM			ON DAY(S)	11
MONTHLY TOTAL	49.9	MM				
CALIBRATION TIME:	0	HRS	OPERATIONAL TIME:	743	HRS	
STANDARD DEVIATION:	0.37		AMD OPERATION UPTIME:	99.9	%	
			MONTHLY AVERAGE:	0.07	MM	

DAILY TOTALS FOR AUGUST 2010



### 01 Hour Averages



# Relative Humidity



# LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - MASKWA

AUGUST 2010

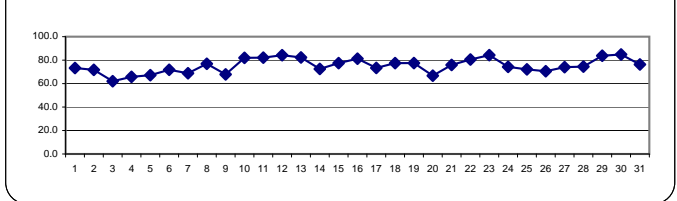
## RELATIVE HUMIDITY hourly averages (%)

MST		0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR		
HOUR START	HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.	
DAY																													
1		92	93	93	93	93	93	92	81	69	63	58	56	52	50	46	47	49	51	56	71	86	91	92	92	93	73.3	24	
2		93	93	93	93	89	86	82	80	79	75	70	63	56	51	48	49	51	50	54	65	71	73	75	82	93	71.7	24	
3		85	87	86	85	83	85	87	83	69	54	52	46	36	37	35	33	32	34	37	42	64	76	80	81	87	62.0	24	
4		85	89	91	91	92	91	85	72	57	46	44	42	40	37	38	43	47	51	62	67	72	77	78	81	92	65.8	24	
5		87	89	90	92	92	92	81	68	57	48	45	44	43	45	41	45	46	47	53	68	78	82	88	91	92	67.2	24	
6		92	92	93	93	93	93	92	78	64	59	56	55	50	47	49	54	55	58	63	72	79	76	74	85	93	71.8	24	
7		87	85	85	89	92	92	85	78	72	66	60	51	49	46	44	42	41	43	47	63	82	87	84	82	92	68.8	24	
8		86	91	89	92	89	88	86	82	75	72	65	63	63	61	63	72	61	56	61	75	84	90	89	92	92	76.9	24	
9		92	92	92	93	93	93	91	74	58	49	48	43	43	39	40	43	39	43	51	68	83	81	89	91	93	67.8	24	
10		91	92	91	90	88	87	87	87	86	77	69	68	68	70	60	66	72	82	85	87	90	92	91	91	92	82.0	24	
11		91	92	92	92	93	93	93	92	89	76	67	69	66	61	60	76	73	75	72	84	91	91	91	92	93	82.1	24	
12		93	93	93	93	93	93	90	91	89	78	75	75	74	73	73	74	78	74	78	81	83	86	88	89	93	84.2	24	
13		88	89	90	90	90	88	88	87	85	82	75	70	77	71	64	68	74	77	80	84	90	89	89	90	90	82.3	24	
14		89	88	88	88	85	85	82	79	75	69	65	63	61	56	51	51	54	49	55	64	78	85	90	90	90	72.5	24	
15		89	89	89	90	89	90	88	82	82	74	69	60	53	54	56	69	70	61	63	78	89	91	92	92	92	77.5	24	
16		92	92	92	92	92	92	92	90	79	68	57	56	58	59	62	66	76	89	91	91	90	91	91	91	91	92	81.2	24
17		91	91	91	90	90	90	90	83	70	64	54	55	51	47	49	56	57	48	59	76	86	90	91	92	92	73.4	24	
18		92	92	92	92	92	92	88	79	74	63	63	61	60	64	63	66	72	72	77	78	78	78	79	92	92	77.5	24	
19		84	87	88	88	90	91	91	86	87	91	89	83	78	68	58	54	48	54	63	71	74	76	78	83	91	77.5	24	
20		85	75	71	71	73	73	72	70	65	59	56	52	49	49	45	46	47	57	78	87	91	91	91	91	91	66.8	24	
21		91	91	92	91	91	90	90	85	70	59	55	55	58	57	57	59	65	70	75	78	81	86	86	92	92	75.9	24	
22		83	83	84	87	91	91	89	81	76	69	67	73	73	74	71	73	73	75	82	83	88	89	90	88	91	80.5	24	
23		87	86	86	86	85	84	83	89	89	87	86	81	79	76	85	79	77	83	81	85	85	88	87	88	89	84.3	24	
24		88	88	89	90	91	91	92	75	68	66	70	64	57	53	52	47	42	49	74	78	88	89	90	91	92	74.3	24	
25		92	91	91	91	92	92	91	69	63	58	54	51	51	49	48	44	46	49	63	82	90	91	92	91	92	72.1	24	
26		89	90	90	91	91	90	89	84	76	69	63	57	55	52	50	50	51	54	61	66	68	69	71	67	91	70.5	24	
27		72	82	87	86	84	84	85	85	78	69	68	80	70	64	63	59	64	69	71	73	71	69	70	73	87	74.0	24	
28		72	72	72	77	82	84	81	77	76	78	73	66	62	65	64	62	61	67	75	84	85	84	84	84	85	74.5	24	
29		84	85	86	87	87	88	87	88	84	77	74	80	80	76	73	77	80	81	85	88	90	91	91	91	91	83.8	24	
30		91	91	91	91	91	91	91	91	88	85	82	76	73	77	71	77	71	70	82	90	91	91	92	92	92	84.8	24	
31		91	92	91	92	92	92	91	78	73	64	59	52	48	47	48	53	65	70	81	87	90	91	92	92	92	76.3	24	
HOURLY MAX		93	93	93	93	93	93	93	92	91	91	89	83	80	77	85	79	80	89	91	91	91	92	92	92	92			
HOURLY AVG		87.9	88.5	88.6	89.2	89.3	89.2	87.7	82.3	75.8	69.6	64.7	62.1	59.0	57.4	56.1	57.5	58.1	60.8	66.8	75.6	82.3	84.7	85.9	87.1				

### STATUS FLAG CODES

S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	- MAINTENANCE
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE

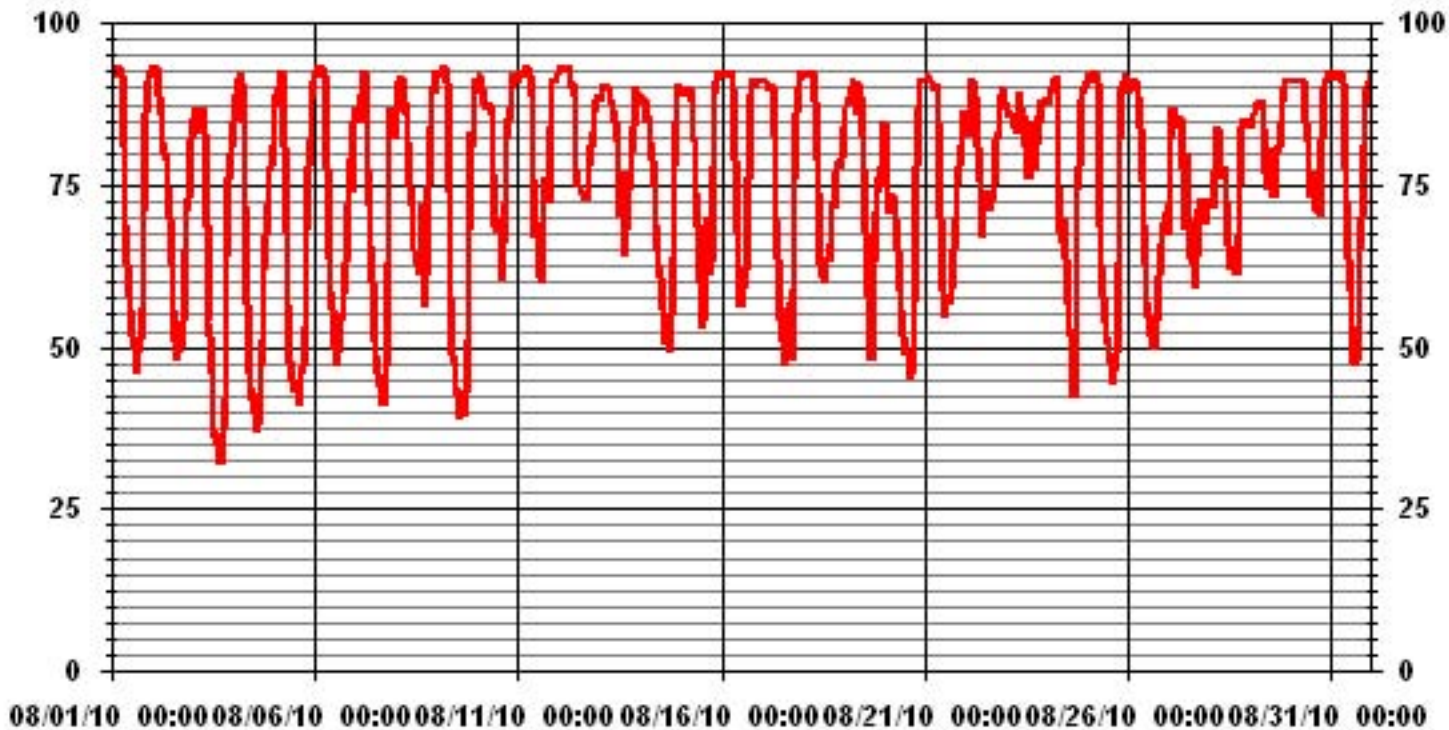
24 HOUR AVERAGES FOR AUGUST 2009



### MONTHLY SUMMARY

MAXIMUM 1-HR AVERAGE:	93	%	@ HOUR(S)	VAR	ON DAY(S)	VAR
MAXIMUM 24-HR AVERAGE:	84.8	%			ON DAY(S)	30
					VAR-VARIOUS	
CALIBRATION TIME:	0	HRS	OPERATIONAL TIME:	744	HRS	
			AMD OPERATION UPTIME:	100.0	%	
STANDARD DEVIATION:	15.69		MONTHLY AVERAGE:	75.26	%	

### 01 Hour Averages



# Barometric Pressure

# LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - MASKWA

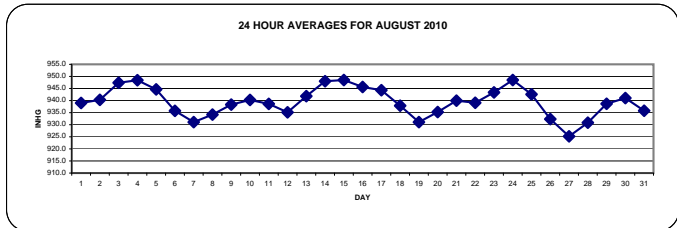
AUGUST 2010

## BAROMETRIC PRESSURE hourly averages (millibar)

MST		0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR		
DAY	HOURLY MAX	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.	
1	940	940	940	939	939	939	940	941	940	940	940	940	939	939	939	938	938	938	938	938	938	938	938	938	937	941	939.0	24	
2	937	938	937	938	938	939	939	940	940	941	941	941	941	941	941	941	942	941	941	942	942	942	942	942	942	942	942	940.3	24
3	943	943	943	944	945	945	946	947	947	948	949	949	949	949	949	949	949	949	949	949	949	949	949	949	949	949	949	947.4	24
4	949	949	949	949	948	948	949	949	949	950	950	950	949	949	949	949	948	948	948	947	947	947	947	947	947	947	950	948.4	24
5	947	947	946	946	946	946	946	947	947	947	947	946	946	945	945	944	943	943	942	942	941	941	941	940	940	947	944.6	24	
6	940	940	939	939	938	938	938	938	938	938	937	937	936	936	935	935	934	933	933	932	932	931	931	930	940	940	935.8	24	
7	930	930	930	930	930	930	930	931	931	932	932	932	932	931	931	931	931	931	932	932	932	931	932	932	931	932	932	931.1	24
8	932	932	932	932	932	933	934	934	935	935	935	935	935	935	935	935	935	935	935	935	935	935	935	935	935	935	935	934.2	24
9	935	935	935	936	936	936	937	938	938	939	939	940	939	939	940	940	939	939	940	940	940	940	940	940	940	940	940	938.3	24
10	940	939	939	940	940	940	941	941	941	941	941	941	941	941	940	940	940	940	940	940	940	940	940	940	940	940	941	940.3	24
11	939	939	939	939	939	939	939	940	940	940	940	940	939	939	939	938	938	938	938	938	938	937	937	937	936	940	938.6	24	
12	936	935	935	934	934	934	934	934	934	934	935	935	934	934	935	935	935	936	936	936	937	937	937	937	937	937	937	935.1	24
13	936	937	938	939	939	940	940	941	941	942	942	942	942	943	943	942	943	943	944	944	945	945	945	945	946	946	946	941.8	24
14	946	946	946	946	947	947	947	948	948	949	949	949	949	949	948	948	949	949	949	949	949	949	949	948	948	949	948.0	24	
15	948	948	948	948	948	948	948	948	949	949	949	949	949	949	949	949	949	949	949	949	948	948	948	948	948	949	948.5	24	
16	948	948	948	948	948	947	947	947	948	948	948	947	946	946	945	944	943	943	943	942	942	943	943	943	943	948	945.6	24	
17	944	944	944	944	945	945	945	946	946	946	946	946	946	945	945	945	944	944	943	943	942	942	942	941	946	944.3	24		
18	941	941	940	940	940	939	939	940	940	940	939	939	939	938	938	937	937	936	935	935	935	934	934	933	941	937.9	24		
19	932	931	931	931	931	931	931	930	931	930	930	930	930	930	931	931	931	932	932	932	932	932	932	932	932	932	932	931.1	24
20	932	932	932	932	932	933	933	934	935	935	935	936	936	936	937	936	937	937	938	937	937	938	938	938	938	938	938	935.3	24
21	938	938	939	939	939	940	940	940	941	941	941	941	941	940	940	940	940	940	941	940	940	940	940	940	940	941	940.0	24	
22	940	940	939	939	939	939	939	939	939	939	939	939	939	939	939	939	939	939	939	939	939	939	939	939	939	940	939.1	24	
23	940	940	940	940	940	941	941	941	942	942	942	943	944	944	945	945	945	946	946	946	947	947	947	947	947	947	947	943.4	24
24	947	947	947	948	948	948	949	950	950	950	950	950	950	950	950	949	949	948	948	947	947	946	946	946	950	948.5	24		
25	946	946	946	945	944	944	944	944	944	944	943	942	942	942	942	941	941	941	941	940	940	939	939	939	946	942.6	24		
26	939	940	939	939	937	937	939	938	937	936	936	934	934	933	932	930	929	928	926	925	923	921	922	922	940	932.3	24		
27	922	922	924	923	923	923	923	924	924	925	926	926	926	927	927	927	927	926	927	927	927	927	926	926	927	927	925.2	24	
28	926	926	926	926	927	927	928	928	929	928	930	931	931	932	932	933	933	934	935	935	935	936	936	936	936	936	936	930.8	24
29	937	937	937	937	937	937	938	938	939	939	939	939	939	939	939	939	939	939	939	939	940	940	941	941	941	941	938.7	24	
30	940	941	941	941	941	941	941	942	942	942	942	942	942	942	942	942	941	941	940	940	939	939	939	939	942	941.0	24		
31	938	938	938	937	937	937	937	937	937	937	938	938	937	937	936	936	935	935	934	934	933	933	933	932	932	938	935.8	24	
HOURLY MAX	949	949	949	949	948	948	949	950	950	950	950	950	950	950	950	949	949	949	949	949	949	949	949	949	949	949	949	949	
HOURLY AVG	939	939	939	939	939	939	939	940	940	940	940	940	940	940	940	940	939	939	939	939	939	939	939	939	939	939	939	939	

### STATUS FLAG CODES

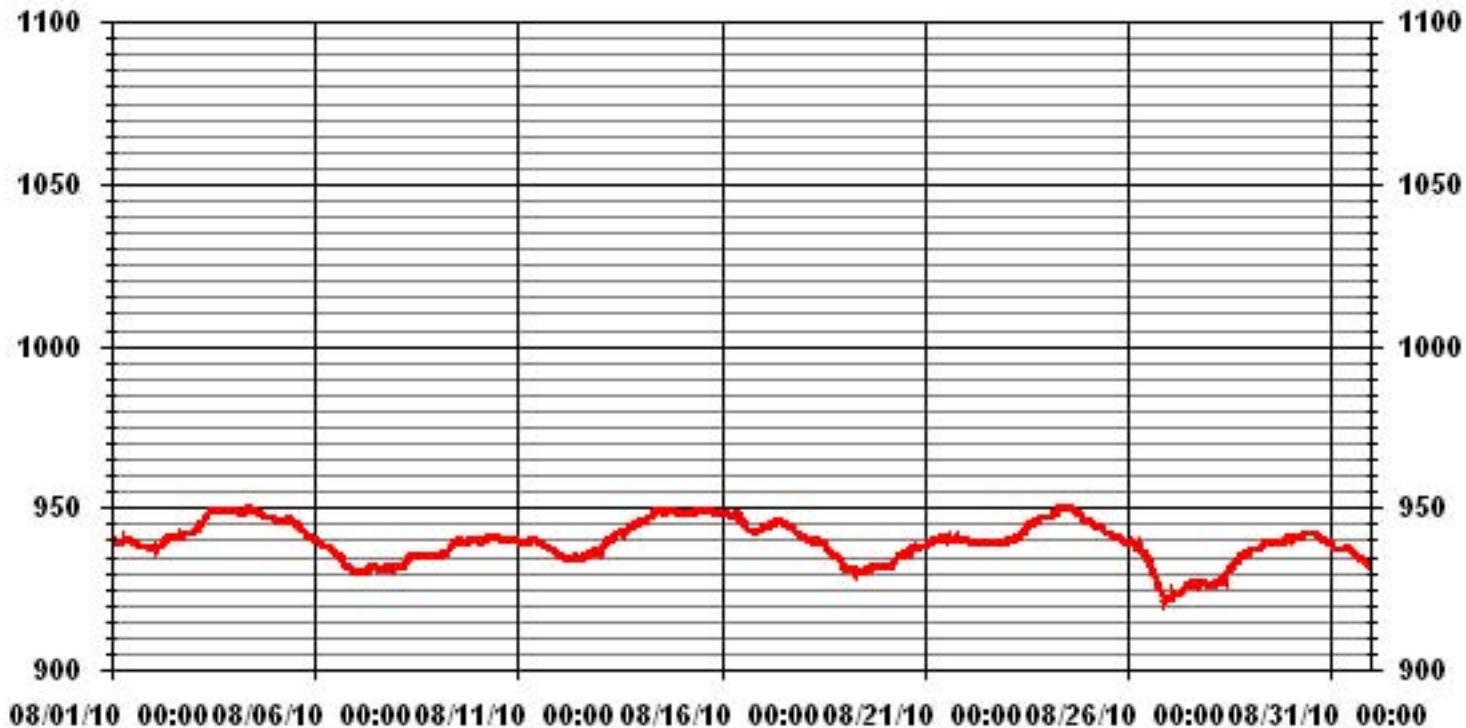
S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	- MAINTENANCE
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE



### MONTHLY SUMMARY

MAXIMUM 1-HR AVERAGE:	950	MB	@ HOUR(S)	VAR	ON DAY(S)	4
MAXIMUM 24-HR AVERAGE:	948.5	MB			ON DAY(S)	15
					VAR-VARIOUS	
CALIBRATION TIME:	0	HRS	OPERATIONAL TIME:	744	HRS	
			AMD OPERATION UPTIME:	100.0	%	
STANDARD DEVIATION:	6.22		MONTHLY AVERAGE:	939	MB	

### 01 Hour Averages



# Vector Wind Speed

# LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - MASKWA

AUGUST 2010

WIND SPEED hourly averages (km/hr)

MST		0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR		
HOURLY MAX	HOURLY AVG	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.	
DAY																													
1		0.6	1.5	1.1	0.7	1.3	0.9	1.5	0.9	0.6	2.4	3.6	4.4	3.4	3	3	3.9	5.2	4.3	5.1	2.9	3.3	2.7	1.9	2.3	5.2	2.3	24	
2		1.3	0.9	0.5	2.9	2.5	3.3	5.2	5.7	5.3	6.2	6.2	5.6	6.4	7.5	6.6	6.3	6.3	6.7	4.5	3.9	3.5	4.1	3.9	1.9	7.5	4	24	
3		2.8	4	5.6	5	6.5	4.1	4.1	4.5	5.9	6.6	6.1	6	6.8	6.6	6.8	7.9	7.2	5.2	4.8	4	1.3	1.7	1.9	2	7.9	4.3	24	
4		1.9	1.3	1.7	1.9	2.8	1.8	1.2	1.3	3.6	4.7	7.4	6.6	5.6	6.6	6.6	5.8	6.1	5.5	3.9	3.5	3	2.8	2.8	2.1	7.4	3.2	24	
5		1.5	1.8	1.7	0.9	0.8	0.9	1.8	2.8	2.5	3.7	4.1	3.7	2.9	4	4.8	2	3.7	6.6	5.3	3.2	3.9	3.7	3.1	1.1	6.6	1.8	24	
6		0.3	1	0.9	1	1	0.9	1.8	2.9	3.8	5.4	6.7	8.7	9.8	12.1	11.4	11.3	11.4	8.2	5.8	6	4.7	4.3	4.1	1	12.1	4.9	24	
7		2.4	4.8	4.9	1.2	2.6	0.8	1.7	4.3	4.1	3.6	4.3	5.9	6.3	6.6	6.1	4.3	6.4	4.7	3.6	2.6	2.7	3.5	3	4.2	6.6	3.3	24	
8		2.8	2.1	0.6	3.7	6.3	2.6	3	1.5	5	5.6	4.7	4.9	5.5	7.4	7.1	4.3	4.2	2.7	3.9	3.4	3.4	3.5	3.2	2.4	7.4	3.5	24	
9		1.8	2.1	2.3	2	1.2	0.2	1.7	1.4	0.8	1.6	4.3	6.1	6.4	7.4	8	6.1	5.5	5.6	5.5	2.6	2.8	2.4	1.1	1.8	8	2.9	24	
10		2.6	2.6	1	0.4	3.1	3.8	3.3	2.2	4.1	5.1	4.9	4.6	5.5	3.5	6.1	2	0.5	2.3	5.5	1.8	1.4	2.1	1.1	1.4	6.1	1.9	24	
11		0.4	0.5	0.8	1.4	1.4	1.5	1.8	0.7	1.8	1.3	5.7	8.1	6.4	3.5	4.2	6.8	2.9	3.7	2	2.8	2.9	1.8	4.4	1.6	8.1	2.3	24	
12		1.9	1.1	0.6	0.9	0.9	1.4	0.6	1.1	2	1.9	1.5	1.6	3.7	4.1	5.7	5.7	6	5.2	5.3	5.2	4.9	5.3	5.3	4.2	6	2.3	24	
13		4.2	6.3	4	4	4	4	5.6	4.9	7	7.7	7.4	8.4	8.7	7.8	7.3	9	8.4	7.2	7.2	7.6	5.5	5.3	6.2	5.2	9	6.3	24	
14		4.7	6	4.8	5.3	7.3	6.4	5.4	6.3	6.4	8.4	7.8	6.6	6.8	7	9.3	10	7.9	7.7	6.7	4.6	1.9	1.6	0.9	1.3	10	5.5	24	
15		1.8	1.8	2.1	2	1.6	0.2	2.3	3.6	4.2	4.9	5.7	4.9	4.6	5.1	5.5	8.8	5.9	4.8	5.2	1.4	1.4	1.5	1.4	1.4	8.8	1.8	24	
16		1.4	0.9	0.8	1.1	0.1	1.4	1.7	1.7	3.1	3.7	4.4	5.4	4.9	5.7	5.3	3	1.8	9.8	5	3.9	7.6	5.8	5.4	4.8	9.8	2	24	
17		4.2	3.4	5.9	5.8	4.5	3.6	4.6	2.2	1.8	1.9	1	0.7	3.4	3.1	2.2	0.5	2	5.3	2.3	1.5	1.5	1.5	1.3	1.4	5.9	0.5	24	
18		1.9	0.3	0.8	0.7	0.3	1	0.8	1.7	2.1	4.4	5.9	7.3	8	7.2	6.5	7.7	6.2	4.3	7	5	6.6	7.2	5.9	5.5	8	4	24	
19		4.8	2.9	5	1	1.1	1.1	1	1.6	1.7	8.4	1.8	3.2	5.7	5.8	4.3	4.4	6.9	3.7	4.2	3.7	2.6	2.8	5.2	6.6	8.4	2.3	24	
20		5.4	4	4.2	3.9	3.9	4.5	4.3	5.3	6.7	8.7	7.9	8.3	8	7.7	6.1	7.2	6.5	5.1	3.4	1	1	1	1.3	1.6	8.7	4.1	24	
21		1	1.3	2.2	1.1	2.5	1.8	1.8	0.9	2.2	2.9	6.1	5.6	6.7	7.7	6.9	7.3	6.9	5.6	4.9	4.5	3.3	2.3	2.4	2	7.7	3.3	24	
22		4.6	3.1	2.5	1.4	0.8	1.2	1.8	4.4	5.2	5.5	5.9	6.2	2.9	4.8	2.6	1.7	2	1.5	1.1	3.7	4.1	2.2	1.2	1.9	6.2	2.7	24	
23		3.6	4.7	5	5.7	5.7	5.6	5.1	5.4	6.7	6.4	5.8	6.2	6.8	6.1	6.9	6.9	8.3	5.4	4.2	5.8	5.3	5	5.7	5.6	8.3	5.4	24	
24		4.9	4.6	3.5	3	1.5	1.1	1.2	2	2.4	2.7	4.2	4.6	4.7	4.6	5.3	4.1	4.3	3.7	3.1	3.1	1.4	1.5	1.4	0.5	5.3	1.9	24	
25		0.7	0.3	0.3	0.3	0.9	1.1	1.6	3.8	4.6	5.2	7.6	8.1	8.3	5.9	5.5	5.5	3.9	3.4	2.3	3	2.3	1.2	2.5	0.7	8.3	2.2	24	
26		1.6	0.2	3.5	4.1	4	4.6	4	6.6	8.4	9.9	12.5	14.1	12.8	14.5	<b>14.8</b>	14.4	13.3	13.6	11.9	11	11.7	13.1	3.8	8.2	<b>14.8</b>	<b>8.2</b>	24	
27		2.8	3.9	8.8	9.3	7.6	6.9	6.9	7.7	9.2	9.4	9.5	8.3	9.4	9.8	10	8.7	9.3	7.3	6.9	7.1	8.1	8	7.8	8.7	10	7.7	24	
28		8.4	6.7	7.3	5.6	7.3	5.8	6.4	7.8	8	7.8	8.1	10.5	11.3	9.8	9.7	9.4	8.3	6.3	5.7	3.4	4.1	3.7	4.2	4.6	11.3	6.7	24	
29		4.2	4	2.9	2.5	2.8	3	3.3	5.2	7.7	7	6.6	4.3	5.4	6	5.7	4.4	3.1	1.3	1.5	1.2	1.2	0.9	0.4	0.7	7.7	2.9	24	
30		2.3	1.6	1.3	1.3	3.5	1.2	4.1	2.5	4	4.8	4.4	4.8	4	1.8	0.8	4.7	1.9	0.7	0.6	0.9	1.7	0.8	1.1	0.7	4.8	1.4	24	
31		1	1	0.6	0.3	1.1	0.9	0.6	0.8	3.5	3.9	5	8.3	5.4	6.1	7.8	3.4	2.4	2.4	4.3	0.3	2.5	1.4	1.7	1.9	8.3	1.4	24	
HOURLY MAX		8.4	6.7	8.8	9.3	7.6	6.9	6.9	7.8	9.2	9.9	12.5	14.1	12.8	14.5	14.8	14.4	13.3	13.6	11.9	11.0	11.7	13.1	7.8	8.7				
HOURLY AVG		2.7	2.6	2.8	2.6	2.9	2.5	2.9	3.3	4.3	5.2	5.7	6.2	6.3	6.4	6.4	6.0	5.6	5.2	4.6	3.7	3.6	3.4	3.1	2.9				

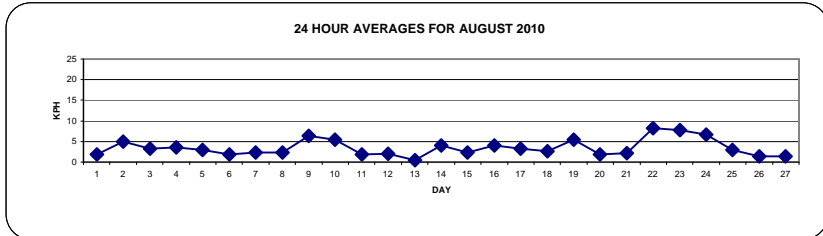
**STATUS FLAG CODES**

S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	- MAINTENANCE
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE

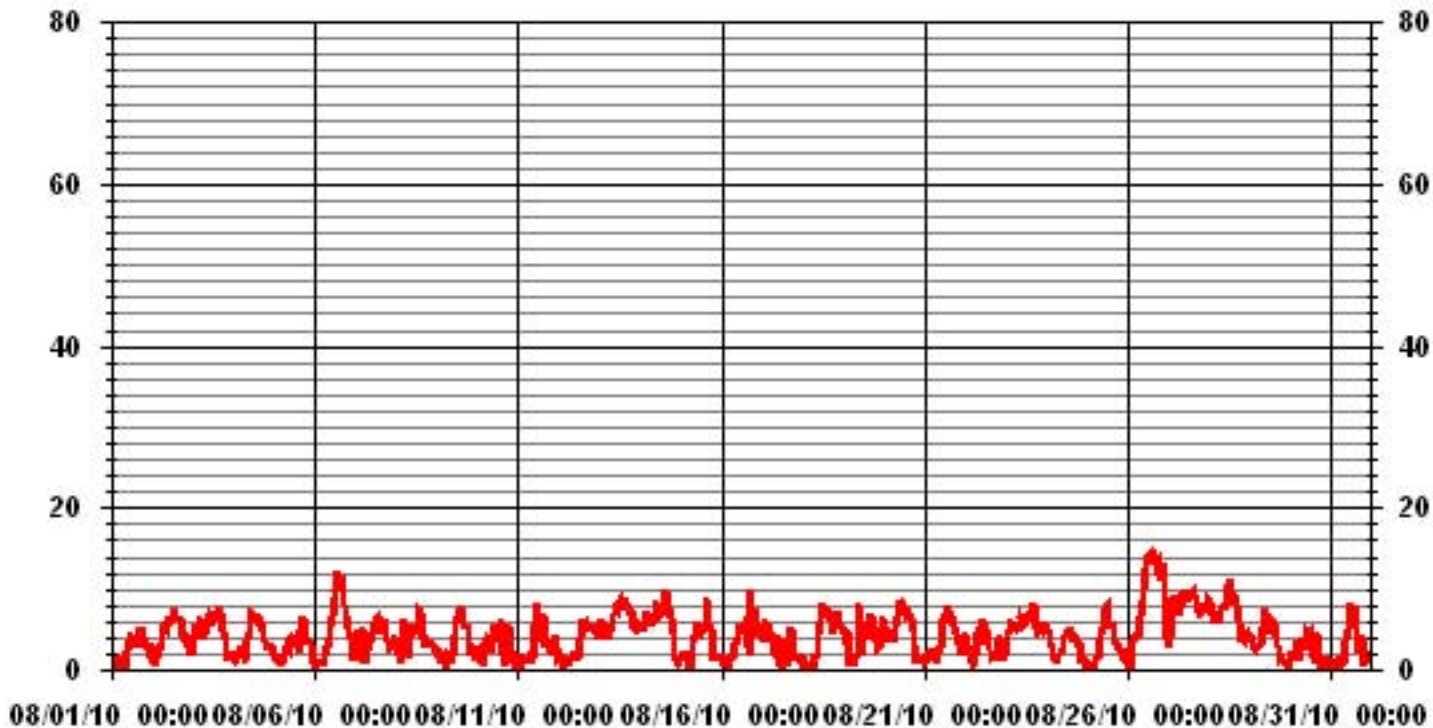
LAST CALIBRATION: February 4, 2009

**MONTHLY SUMMARY**

MAXIMUM 1-HR AVERAGE:	14.8 KPH	@ HOUR(S)	14	ON DAY(S)	26
MAXIMUM 24-HR AVERAGE:	8.2 KPH			ON DAY(S)	26
CALMS (≤ 1 KPH)	6.45 %	OPERATIONAL TIME:	744	HRS	
MONTHLY CALIBRATION TIME:	0 HRS	AMD OPERATION UPTIME	100.0	%	
STANDARD DEVIATION	2.71	MONTHLY AVERAGE	4.21	KPH	



### 01 Hour Averages



— LICA30 WSP KPH



# LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - MASKWA

AUGUST 2010

## VECTOR WIND SPEED MAX instantaneous maximum in km/hr

MST		0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY
HOUR START		0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	MAX.
HOUR END		1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	
DAY																										
1		2.6	4.5	3.2	4.3	3.2	3.2	6.6	11.4	13.5	13.3	19.4	21.3	22.1	17.6	18.5	22.1	20.8	17.8	11.8	8.4	8	7.1	4.3	5.8	22.1
2		4.5	5.4	21.7	15.3	20.6	24.3	24.5	29.7	23.9	29.9	27.7	26.9	32.5	33.7	31.2	31.8	30.3	31.8	25.4	20.8	21.7	24.1	21.7	15.3	33.7
3		16.6	15	18.7	16.3	27.3	17.2	22.4	18.3	24.5	27.7	23.4	26.7	32.7	32.2	31.6	35.5	31.2	21.3	19.1	14.8	9.3	4.3	4.5	4.5	35.5
4		3.4	3	4.7	4.7	4.7	4.5	4.7	11.2	23	24	36.7	27.9	23.4	29.7	26.9	26.2	27.1	27.3	22.8	24.1	19.8	20.6	16.6	19.8	36.7
5		6.3	6.5	6.9	6.7	14.8	3.4	14.2	14.2	15.3	18.1	21.3	19.8	21.1	23	21.7	14.6	16.8	21	17.9	10.7	8.8	8.2	7.5	12.7	23
6		2.8	10.3	3.7	3.6	3.2	3.4	4.1	16.8	20.2	21	24.7	32.2	29.7	32.7	30.3	32.9	33.1	25.6	20	21.7	16.6	13.8	15.9	12.3	33.1
7		14.6	14.8	12.5	16.4	15.3	12.5	15.3	17.4	20.2	17.6	21	26	28.1	24.7	29.2	32.7	39.1	31.6	22.8	16.3	7.3	5.4	9.9	21.4	39.1
8		16.7	21	10.7	13.5	15.7	16.8	12.9	7.7	16.1	20	23.8	28.8	19.1	22.6	20.6	24.3	26.2	22.8	11	8.8	11.8	6.9	9.5	7.7	28.8
9		7.3	6.7	6.3	6.3	4.7	3.2	10.8	13.1	12.9	13.3	15.3	22.3	27.1	25.1	25.1	20.2	24.2	20.5	17.8	10.9	10.1	9.7	3	13.3	27.1
10		15.1	13.8	11.6	9.7	19.8	15.1	14	<b>80.8</b>	17.2	21.5	20.6	23.6	22.8	18.5	25.1	13.3	12	7.5	22.8	17	12.9	13.1	10.7	4.7	<b>80.8</b>
11		10.1	5	11	4.1	8.2	8.6	5.8	10.1	12	13.8	19.3	19.7	19.5	21.2	21.3	38.7	15.5	11	9.7	10.5	8.2	8.8	10.5	6.7	38.7
12		7.3	3.9	11.4	4.1	3.9	6.9	6	12.9	16.1	12.3	12.9	12.7	19.4	26	22.1	25.6	23	26.7	19.4	21.1	22.8	21.3	23.4	19.6	26.7
13		20.6	26.8	16.1	14.4	17.2	17.4	18.5	18.1	33.1	26.4	28.8	39.6	33.5	27.9	34	37.2	37.2	26.9	29.7	29.7	23.2	18.9	24.5	17.6	39.6
14		23	20.4	19.8	18.9	29.9	20.2	20.9	27.5	25.4	33.5	36	29.8	30.7	28.8	37.8	36.7	32.3	27.5	25.8	16.6	7.3	7.1	5.4	7.7	37.8
15		15.1	7.1	4.7	5	5.4	7.8	13.6	12.7	17.9	20.6	22.8	21.7	28.4	21.5	30.5	33.1	19.6	18.5	18.2	9.2	3.6	4.1	3.7	4.1	33.1
16		3.2	3.7	3.7	3.7	3.2	5	12.3	10.6	16.1	19.6	14.2	19.1	26	24.3	21.1	18.1	28.4	24.3	17.2	9.5	21.6	16.5	14.2	12.1	28.4
17		11	11	14.6	16.8	13.1	9	12.7	11.8	9.9	14.2	18.3	13.3	16.8	14.8	17.2	14.2	15.7	18.1	12.7	5.6	5.4	3.5	3.7	4.1	18.3
18		4.9	4.1	5.4	3.4	2.4	5	2.6	3.9	14.8	18.3	26.9	22.6	28.2	23.9	20.2	30.5	23	16.4	21.5	15.5	23	23.2	17.4	19.6	30.5
19		14.8	13.6	17.6	12.7	11.6	10.1	12.5	13.1	13.5	35.7	21.7	18.5	31	27.9	23.2	21.5	36.3	20.2	11.8	20.2	21.3	10.6	11.6	13.5	36.3
20		18.3	20.9	24.7	18.7	21.3	23.4	25.8	24.5	31.1	41.1	32.3	41.9	33.8	38.5	27.9	46	38.7	25.4	13.3	5.4	3	3.9	3.9	4.1	46
21		3.7	5.2	9.3	11.2	13.8	5.6	5.6	5.1	15.7	16.6	24.3	25.6	29.5	26.9	27.9	27.5	26.7	24.9	23	19.6	16.6	21.5	8	7.8	29.5
22		9.7	7.5	11.4	12.3	3.7	4.3	9.3	17.9	18.7	18.5	27.5	14.8	11.5	12.7	12.9	13.6	13.1	12.7	11.2	8.2	9.5	8.2	6.9	12.9	27.5
23		20.6	19.8	24.7	19.8	25	25	18.7	25.2	24.7	27.5	21.9	28	30.1	27.5	32.9	34.1	34.6	32.4	21.1	31.6	26	28.6	24.5	24.3	34.6
24		22.8	21.5	19.2	21.3	5.6	6	10.3	12	13.8	9.5	10.1	13.1	15.9	13.3	16.1	15.5	22.1	14	6.6	7.1	5.3	7.3	3.2	3.2	22.8
25		5	3.4	2.4	2.4	4.1	4.5	10.1	16.1	12.7	16.1	21.1	27.7	22.6	24.1	28.4	23.2	21.7	19.6	13.5	5.8	7.1	3.7	16.1	12.3	28.4
26		12.9	12.9	18.7	21.5	23.7	19.1	15.1	23.9	30.3	40.4	41.1	50.3	41.7	43.4	46	43.6	38.7	38.2	42.3	40.8	52	49.4	22.4	31.8	52
27		26.4	25.4	47.3	40.6	35.9	32.1	35.3	40.9	52.7	45.8	51.6	45.2	52.9	56.5	45.3	42.5	55.3	38.5	31.4	27.3	34	38.7	31.4	31.2	56.5
28		35.5	33.6	44.1	26.5	48.2	29.7	34.6	34	37.6	41.7	43.2	45.1	43	46.2	43	42.4	31.6	30.3	30.8	17.7	27.7	20.9	21.5	19.8	48.2
29		14.9	17.9	9.5	9.9	10.3	7.8	8.6	12	15.9	18.3	19.6	20.2	15.1	23.7	19.4	12.7	10.6	8.6	11.4	9.3	7.5	5.2	3.2	6.3	23.7
30		5.4	5.6	3.9	5.4	16.3	47.5	12.5	15.3	17.9	20.4	18.5	19.2	18.3	12.9	16.1	15.1	18.3	10.8	3.7	2.8	4.3	3.9	5.4	4.1	47.5
31		2.4	5.2	2.8	3.9	3.7	3.7	2.4	9.2	12.3	14.2	17	23.9	18.1	23	20.6	11.6	12.5	15.3	18.3	15.5	18.9	3.9	6	11.4	23.9
PEAK		35.5	33.6	47.3	40.6	48.2	47.5	35.3	80.8	52.7	45.8	51.6	50.3	52.9	56.5	46.0	46.0	55.3	38.5	42.3	40.8	52.0	49.4	31.4	31.8	

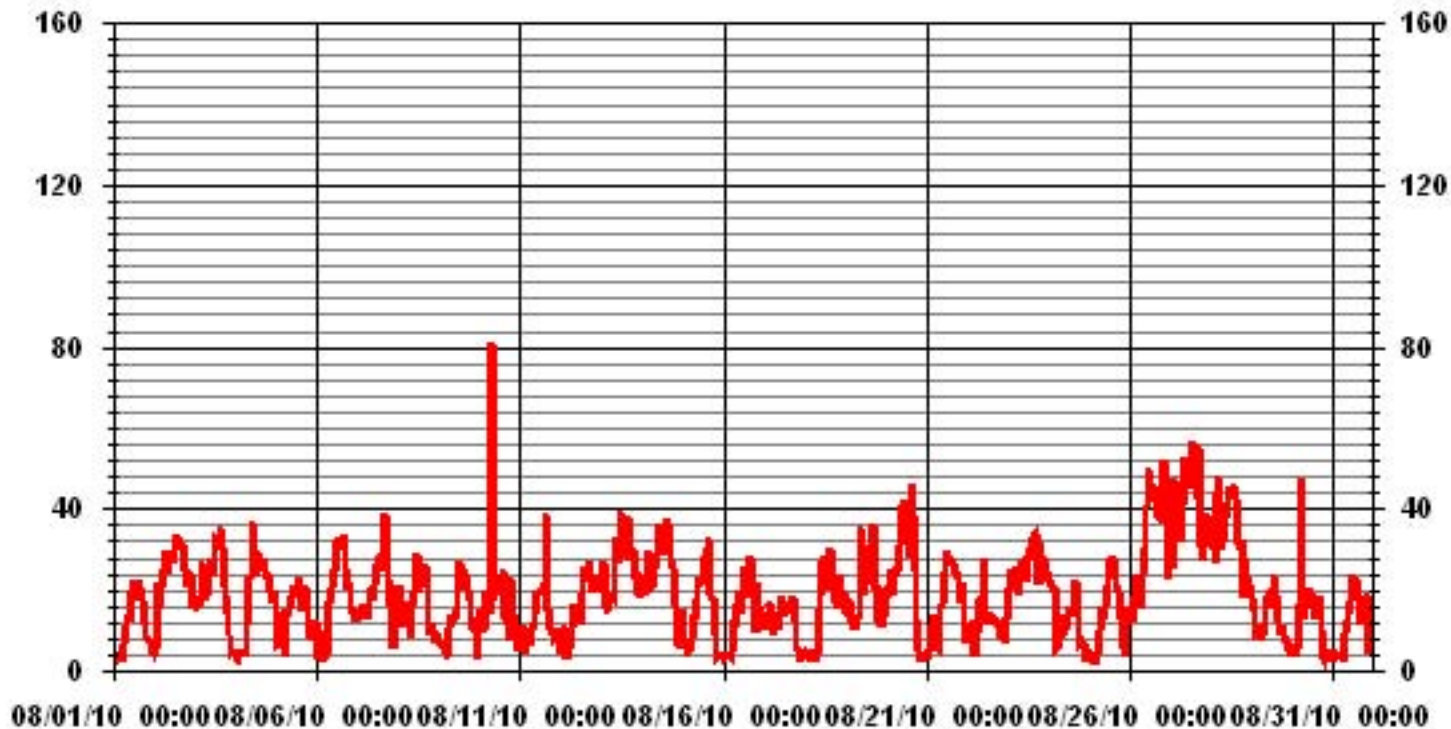
**STATUS FLAG CODES**

S - OUT OF SERVICE	IZS - IZS - DAILY ZERO/SPAN CHECK
N - INVALID DATA	M - MISSING DATA
D - INSTRUMENT DRIFT	P - POWER FAILURE
C - CALIBRATION	NA - NOT APPLICABLE

**MONTHLY SUMMARY**

MAXIMUM INSTANTANEOUS READING	80.8	KPH	@ HOUR(S)	7
			ON DAY(S)	10

### 01 Hour Averages



LICA30  
WSP / WDR Joint Frequency Distribution (Percent)

August 2010

Distribution By % Of Samples

Logger Id : 30  
Site Name : LICA30  
Parameter : WSP  
Units : KPH

Wind Parameter : WDR  
Instrument Height : 10 Meters

	Direction																
Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 6.0	5.10	4.83	4.83	3.62	4.16	2.82	4.16	3.89	5.77	10.88	6.72	3.62	4.43	3.36	3.36	4.03	75.67
< 12.0	2.55	.53	.67	.13	1.07	.26	1.88	.94	1.07	1.20	.80	2.82	3.62	1.61	1.34	2.41	22.98
< 20.0	.00	.00	.00	.00	.94	.26	.13	.00	.00	.00	.00	.00	.00	.00	.00	.00	1.34
< 29.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
< 39.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
>= 39.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
Totals	7.66	5.37	5.51	3.76	6.18	3.36	6.18	4.83	6.85	12.09	7.52	6.45	8.06	4.97	4.70	6.45	

Calm : .00 %

Total # Operational Hours : 744

Distribution By Samples

	Direction																
Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 6.0	38	36	36	27	31	21	31	29	43	81	50	27	33	25	25	30	563
< 12.0	19	4	5	1	8	2	14	7	8	9	6	21	27	12	10	18	171
< 20.0					7	2	1										10
< 29.0																	
< 39.0																	
>= 39.0																	
Totals	57	40	41	28	46	25	46	36	51	90	56	48	60	37	35	48	

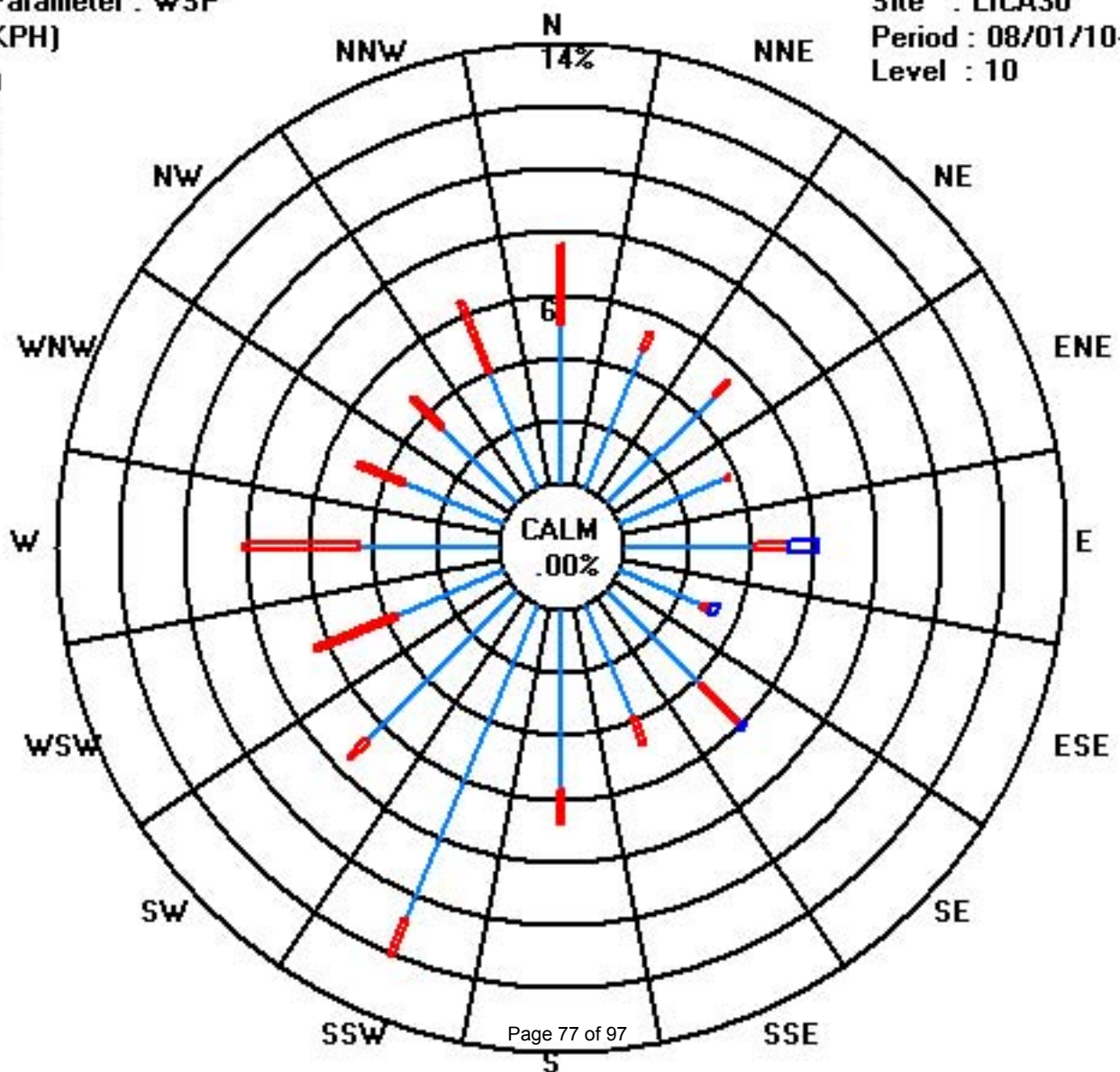
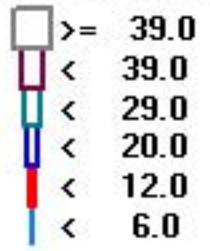
Calm : .00 %

Total # Operational Hours : 744

Class Limits (KPH)

Period : 08/01/10-08/31/10

Level : 10



# Vector Wind Direction

# LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - MASKWA

AUGUST 2010

## WIND DIRECTION hourly averages in degrees

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	24-HOUR	24-HOUR AVG	RDGS.	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	AVG.	QUADRANT		
DAY 1	142	182	210	191	156	156	193	12	232	185	213	210	210	209	203	196	180	203	196	188	187	203	194	192	196	SSW	24	
2	207	217	204	267	320	284	298	319	314	314	310	287	275	277	289	267	274	276	251	251	252	265	285	250	282	WNW	24	
3	308	354	6	1	358	344	332	325	343	352	350	335	349	333	327	325	326	337	348	2	335	178	179	193	340	NNW	24	
4	200	180	184	203	201	225	236	324	297	309	298	288	297	288	296	296	282	271	257	261	252	258	263	261	275	W	24	
5	223	224	222	226	87	190	240	280	316	318	303	321	259	214	227	221	184	187	184	178	198	203	186	101	223	SW	24	
6	203	103	81	84	101	65	34	84	146	149	143	125	133	125	132	127	127	132	139	139	139	156	157	143	130	SE	24	
7	192	193	202	205	120	124	126	199	221	225	222	240	243	242	242	269	270	268	254	230	194	192	206	219	225	SW	24	
8	220	226	202	191	204	229	220	218	196	169	171	171	174	181	198	211	272	251	192	208	197	194	214	221	199	SSW	24	
9	231	225	214	217	215	64	214	245	262	183	192	169	163	202	168	171	196	169	156	149	148	148	119	84	178	S	24	
10	62	70	35	333	10	39	19	345	53	61	75	86	108	64	81	112	154	208	200	16	108	127	19	31	72	ENE	24	
11	20	24	81	120	201	5	21	191	190	218	190	191	184	193	200	206	223	207	195	158	180	181	202	202	192	S	24	
12	227	217	148	119	11	159	198	347	160	230	298	331	325	312	330	351	346	347	330	314	325	320	317	333	324	NW	24	
13	355	358	352	346	335	335	349	347	350	355	357	347	342	343	350	348	345	354	351	2	347	357	358	359	350	350	N	24
14	344	354	356	351	0	1	356	337	341	347	339	331	320	327	337	320	336	359	11	10	349	322	219	224	343	NNW	24	
15	240	212	209	212	214	291	96	40	61	51	32	4	343	323	344	26	21	3	15	7	153	202	195	192	13	NNE	24	
16	172	220	143	124	152	71	64	55	99	121	166	161	149	126	125	131	350	31	37	40	35	23	16	19	73	ENE	24	
17	14	17	29	13	11	9	20	358	333	331	293	121	196	214	212	6	190	211	225	209	137	185	193	169	359	N	24	
18	198	212	108	123	87	79	39	26	173	144	148	155	137	151	155	152	141	130	136	130	136	139	158	157	143	SE	24	
19	148	133	168	231	86	148	126	47	264	159	256	275	274	272	267	258	279	251	209	227	249	229	207	204	225	SW	24	
20	211	243	240	244	245	257	268	271	269	281	277	279	280	275	264	268	257	272	350	140	170	130	133	118	264	W	24	
21	95	50	100	71	32	114	42	94	95	96	124	87	73	93	96	117	118	116	128	129	101	88	41	9	98	E	24	
22	34	42	64	54	224	2	20	40	47	39	31	29	10	23	31	76	44	48	61	35	36	19	335	332	33	NNE	24	
23	291	294	299	297	297	305	320	298	309	322	332	318	336	318	302	300	287	320	302	284	277	273	285	275	302	WNW	24	
24	283	290	273	262	166	224	246	281	224	211	195	187	207	195	196	193	198	178	136	128	73	126	29	1	209	SSW	24	
25	46	1	87	94	91	116	40	174	178	173	174	197	203	225	247	268	262	240	230	204	192	134	91	62	202	SSW	24	
26	54	335	65	80	73	122	28	50	82	97	97	102	101	101	96	92	94	97	95	94	88	103	357	7	89	E	24	
27	274	264	227	272	255	248	249	260	262	267	257	247	252	255	266	254	260	250	243	224	228	237	227	224	249	WSW	24	
28	235	241	250	242	270	257	256	253	245	261	255	266	279	286	283	280	286	275	285	259	277	273	291	314	267	W	24	
29	308	316	334	330	356	7	17	21	30	34	34	37	26	40	24	20	10	1	118	24	170	162	76	107	18	NNE	24	
30	23	42	55	60	34	77	50	45	67	78	57	58	100	82	150	176	301	323	188	193	154	89	179	198	73	ENE	24	
31	137	106	25	140	107	132	66	202	207	215	206	198	207	200	185	202	220	9	41	177	83	41	76	51	182	S	24	
HOURLY AVG	355	358	356	351	358	344	356	358	350	355	357	347	349	343	350	351	350	359	351	314	349	357	358	359				

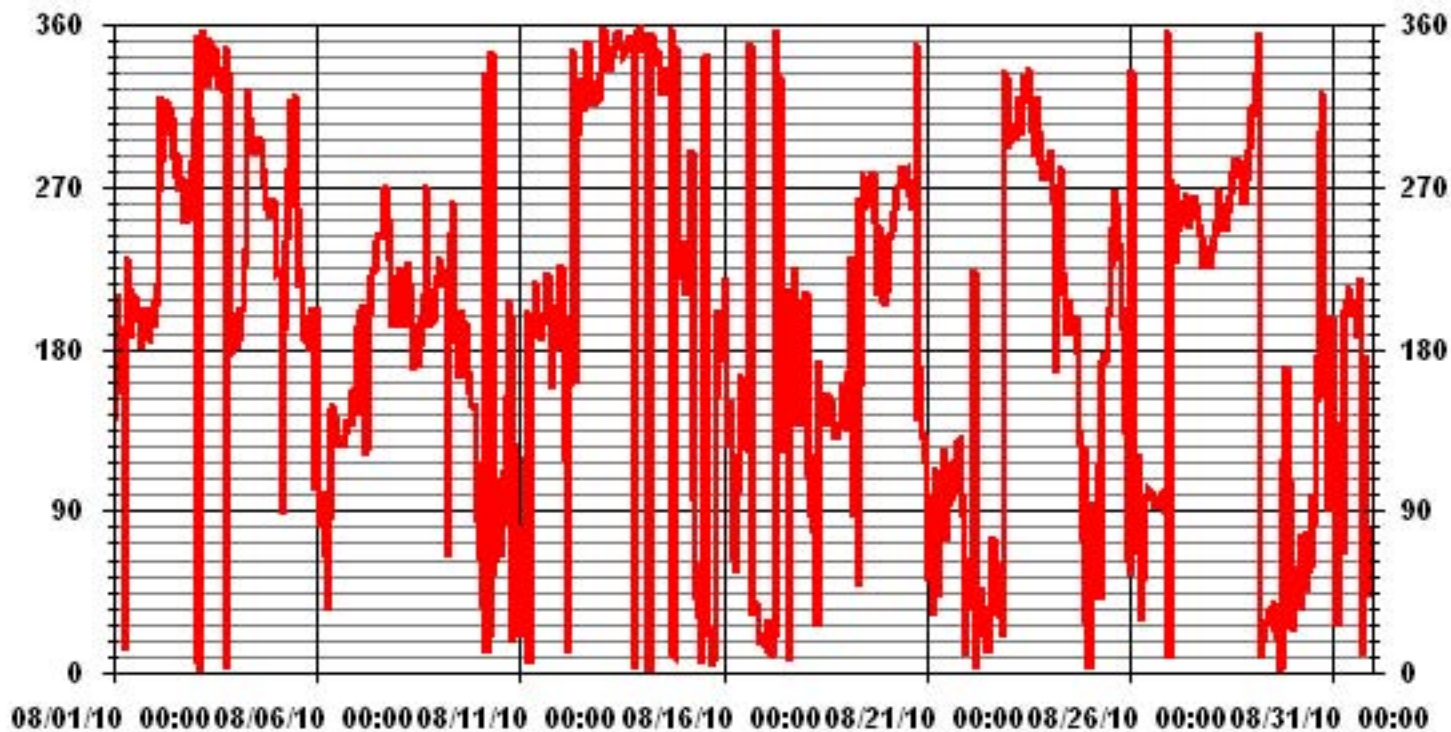
### STATUS FLAG CODES

S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	- MAINTENANCE
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE

LAST CALIBRATION:	February 4, 2009
DECLINATION :	19 DEGREES FROM MAGNETIC NORTH

MONTHLY CALIBRATION TIME:	0 HRS	OPERATIONAL TIME:	744 HRS
STANDARD DEVIATION	101.08	AMD OPERATION UPTIME	100.0 %
		MONTHLY AVERAGE	267 DEG

### 01 Hour Averages



— LICA30 WDR DEG

# Standard Deviation Wind Direction



# LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - MASKWA

AUGUST 2010

## STANDARD DEVIATION WIND DIRECTION (STDWDIR) hourly averages in degrees

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	
DAY																									
1	49	31	39	64	45	34	38	59	77	53	48	38	59	62	60	50	31	31	16	13	8	11	15	18	
2	33	49	60	46	46	49	40	44	40	43	42	45	42	42	47	44	40	37	43	37	38	41	39	38	
3	45	35	40	31	29	38	45	41	39	39	41	43	41	39	45	40	39	44	37	28	57	21	28	11	
4	18	13	20	29	10	23	35	50	41	42	37	37	39	39	40	40	38	41	39	41	33	35	35	41	
5	36	23	46	32	67	31	36	34	48	48	45	46	56	33	47	51	49	26	19	12	11	11	32	22	
6	56	30	32	33	39	36	22	32	41	31	36	32	31	28	28	26	26	25	26	20	16	18	29	43	
7	58	24	17	37	33	60	34	27	36	47	50	40	36	36	53	77	62	53	47	28	11	7	46	23	
8	28	51	67	13	16	34	29	40	25	32	40	46	30	27	23	25	42	36	17	18	14	9	14	21	
9	25	26	20	24	43	28	53	46	45	62	44	31	39	33	34	40	45	38	21	14	13	23	36	32	
10	17	20	30	61	46	34	33	53	25	31	33	33	31	29	36	42	51	19	24	44	44	31	45	34	
11	42	39	43	38	43	28	32	60	59	59	33	23	31	60	49	31	30	20	32	15	22	30	34	29	
12	25	29	49	52	38	45	61	64	68	39	58	51	42	39	42	39	39	39	39	42	44	45	44	40	
13	46	31	32	37	38	41	35	38	37	31	36	39	39	37	38	38	37	35	37	28	38	32	30	27	
14	39	32	31	35	29	27	34	42	43	37	39	42	40	43	40	37	40	32	22	22	28	34	52	42	
15	30	25	20	27	34	55	31	20	27	33	28	41	44	42	32	19	23	35	20	57	35	18	23	26	
16	42	59	50	27	55	33	36	28	30	36	41	42	42	38	31	35	45	17	22	19	17	29	21	18	
17	20	20	18	21	21	25	27	39	60	55	77	68	46	52	48	53	47	27	34	29	33	16	39	11	
18	30	72	47	66	35	45	43	16	41	27	40	28	30	30	26	26	25	23	21	19	19	23	24	21	
19	23	34	25	54	64	45	65	34	61	26	50	38	35	33	37	42	38	42	18	29	38	31	12	10	
20	19	38	34	35	36	41	42	37	38	39	40	40	42	39	42	41	40	42	34	23	47	50	21	20	
21	39	47	30	62	37	38	44	46	33	49	34	45	37	35	35	38	34	32	27	26	30	31	33	27	
22	16	16	26	51	53	44	55	24	29	39	33	21	42	22	36	44	44	39	25	16	16	27	54	43	
23	37	38	39	35	36	40	39	37	36	40	41	40	40	41	36	36	34	39	44	31	34	33	30	32	
24	34	33	37	39	51	42	50	34	48	39	21	30	28	25	25	32	37	27	9	12	28	26	21	53	
25	29	40	58	46	45	46	38	45	27	29	30	25	25	40	46	43	48	37	30	10	17	38	42	47	
26	53	67	45	31	34	35	27	23	30	35	32	34	33	29	28	28	30	29	31	31	31	31	32	46	28
27	46	42	32	37	40	41	43	43	42	44	41	41	42	42	40	42	41	42	38	29	29	36	34	29	
28	35	40	41	42	42	41	43	37	38	41	43	39	36	35	38	35	38	39	40	39	39	40	38	39	
29	37	44	40	38	31	23	22	20	20	22	23	39	27	32	32	24	30	48	33	42	39	44	66	53	
30	19	22	37	32	17	47	19	29	30	28	29	30	32	29	56	23	47	43	51	45	27	47	47	35	
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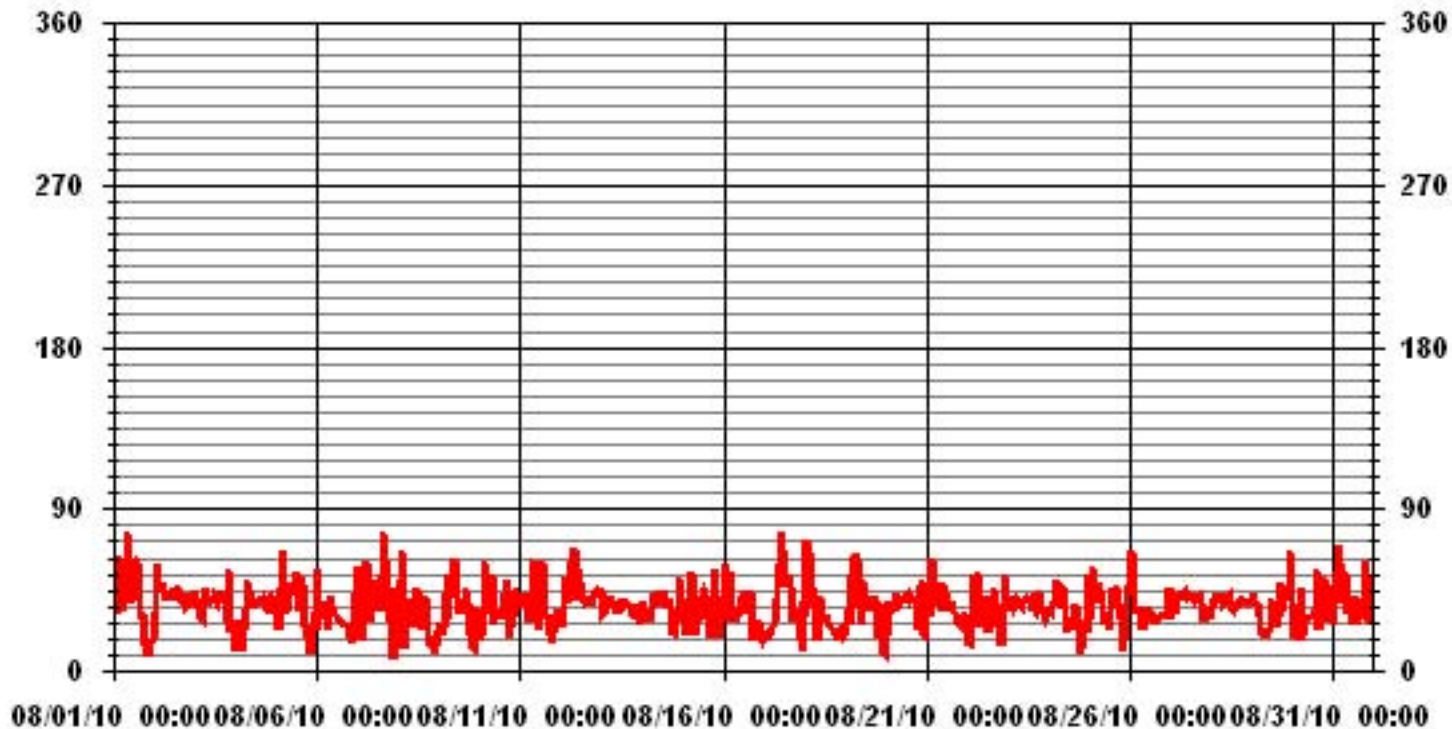
### STATUS FLAG CODES

S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	- MISSING DATA
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE

LAST CALIBRATION: February 4, 2009

CALIBRATION TIME: 0 HRS OPERATIONAL TIME: 744 HRS

### 01 Hour Averages



— LICA30 STDWDIR DEG

# Calibration Reports

# Sulphur Dioxide

### SO<sub>2</sub> Calibration Report

#### Station Information

Calibration Date	August 17, 2010	Previous Calibration	July 15, 2010
Company	Lakeland Industry & Community Association		
Plant / Location	Cold Lake - Maskwa		
Start Time (MST)	10:46	End Time (MST)	14:37
Reason:	Monthly Calibration		
Barometric Pressure	947 mBar	Station Temperature	21 Deg C
Cal Gas	51.4 ppm	Cal Gas Expiry date	2-Aug-2012
DAS Output Voltage	0 - 1 Volts	Chart Rec. Output	0 - 1 Volts

#### Equipment Information

Analyzer Make / Model:	API 100E	S/N :	508	Method:	Fluorescent
Converter Make / Model:	-	S/N :	-		
Calibrator Make / Model:	API 700	S/N :	831	Method:	Dilution
DAS Make / Model:	ESC 8832	S/N :	AO 791		
Flow Meter:	API 700	S/N :	831		

#### Analyzer Settings

Before Calibration		After Calibration	
Concentration Range	0 - 1000	ppb	
Sample Flow / Box Temp	613 ccm	29.1 Deg C	612 ccm
HVPS / Lamp Setting	494	3317	494
PMT / RxCell Temp	7.7 Deg C	50 Deg C	7.7 Deg C
Converter / IZS Temp	NA Deg C	45 Deg C	NA Deg C
Offset / Slope	36	0.979	26
			0.961

#### Calibration Data

Dilution Flow Rate	Source Gas Flow Rate	Calculated Concentration	Indicated Conc. (DAS)	Correction Factor
4998	0	0	0	N/A
4926	71.9	739	751	0.9846
4926	71.9	739	740	0.9992
4962	38.3	394	392	1.0043
4983	16.3	168	166	1.0096
4998	0	0	0	N/A
Sum of Least Squares				1.0007
New Correction Factor				0.9992

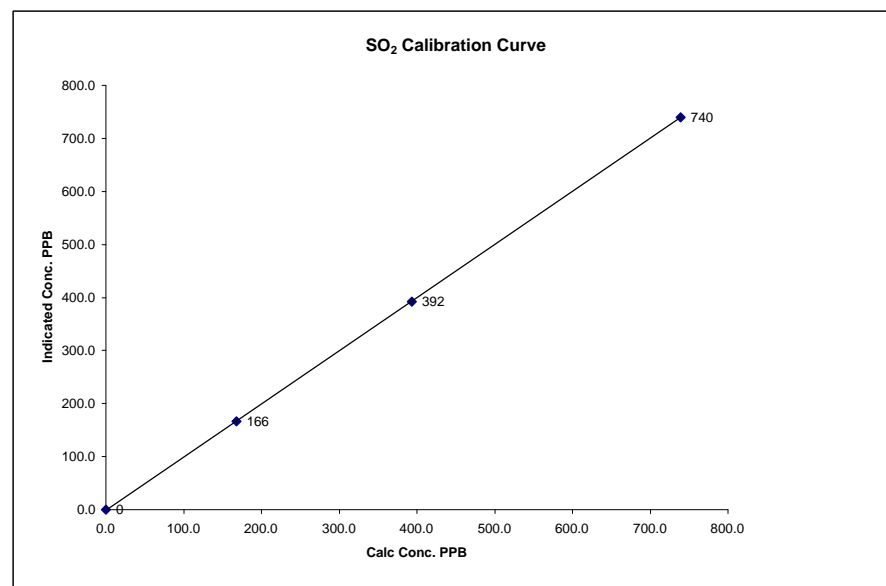
	Before Calibration	After Calibration
Auto Zero	0.2	0.2
Auto Span	594	585
Sample Lines Connected		YES
Percent Change from Previous Calibration		1.3%

Calibration Performed by: Ting Xu

### SO<sub>2</sub> Calibration Curve

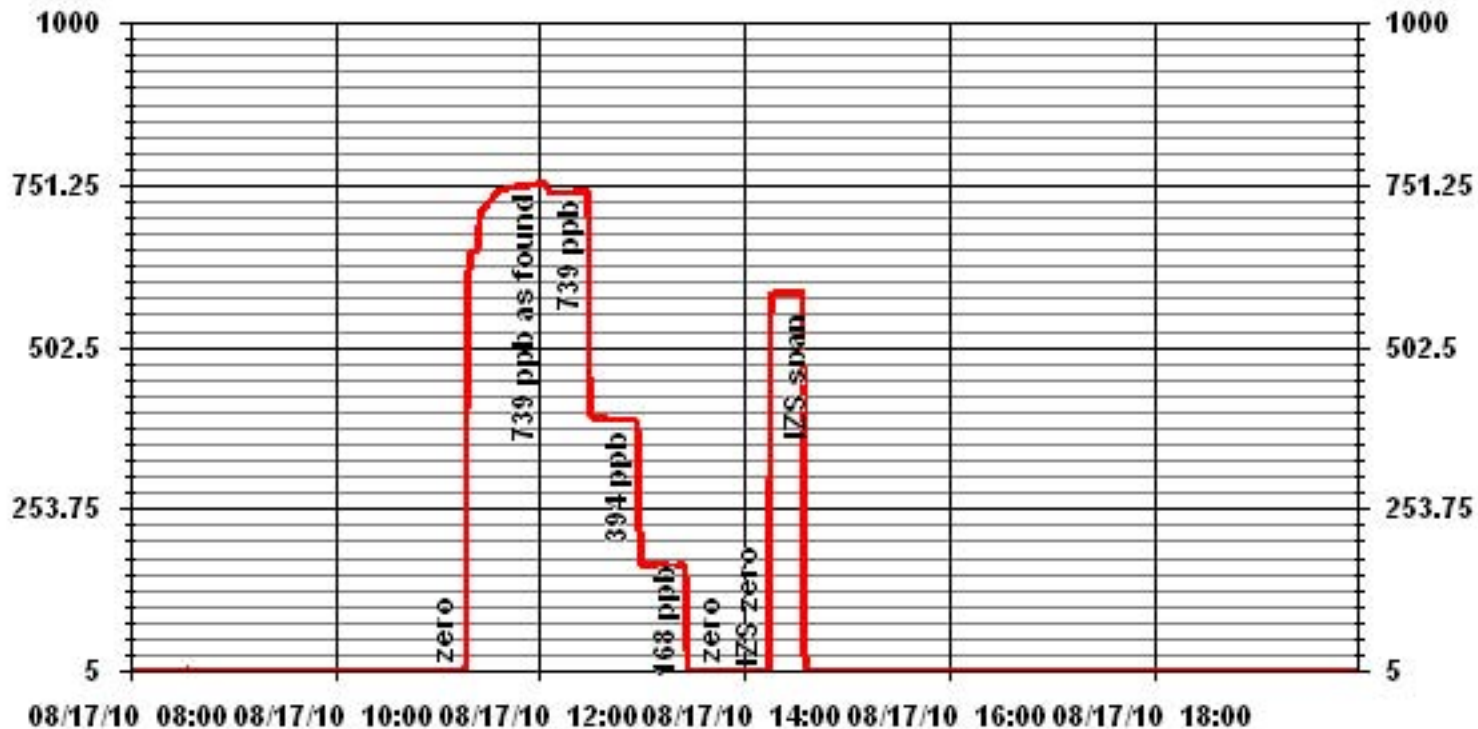
Calibration Date	August 17, 2010
Company	Lakeland Industry & Community Association
Plant / Location	Cold Lake - Maskwa
Start Time (MST)	10:46
End Time (MST)	14:37

Calculated Conc. ppb	Indicated Response ppb	Correction Factor	Correlation Coefficient Slope	(≥ 0.995) (0.85 to 1.15)	
0	0	n/a	Intercept	(± 3% F.S.)	-1.068932
168	166	1.0096			
394	392	1.0043			
739	740	0.9992			



Notes:

### 01 Minute Averages



# Hydrogen Sulphide

## H<sub>2</sub>S Calibration Report

### Station Information

Calibration Date	August 16, 2010	Previous Calibration	July 15, 2010
Company	Lakelnad Industry & Community Association		
Plant / Location	Cold Lake - Maskwa		
Start Time (MST)	8:50	End Time (MST)	12:29
Reason:	Monthly Calibration		
Barometric Pressure	944 mBar	Station Temperature	21 Deg C
Cal Gas	10.8 ppm	Cal Gas Install date	06/22/2009
DAS Output Voltage	0 - 1 Volts		

### Equipment Information

Analyzer Make / Model:	API 101E	S/N :	511	Method:	Fluorescent
Converter Make / Model:	Internal	S/N :	N/A		
Calibrator Make / Model:	API 700	S/N :	831	Method:	Dilution
DAS Make / Model:	ESC 8832	S/N :	AO 791		
Flow Meter:	API 700	S/N :	831		

### Analyzer Settings

		Before Calibration		After Calibration	
Concentration Range		0 - 100		ppb	
Sample Flow / Box Temp	546 ccm	30.2 Deg C	540	31	Deg C
HVPS / Lamp Setting	552	2198	552	2197	
PMT / RxCell Temp	7.8 Deg C	50 Deg C	7.8 Deg C	50 Deg C	
Converter / IZS Temp	315.2 Deg C	45 Deg C	315.3 Deg C	45 Deg C	
Offset / Slope	30	0.981	30	0.982	

### Calibration Data

Dilution Flow Rate	Source Gas Flow Rate	Calculated Concentration	Indicated Conc. (DAS)	Correction Factor
4998	0	0	0	N/A
4962	37	80	79	1.0118
4962	37	80	80	0.9992
4982	18.5	40	40	0.9989
4986	10.6	23	23	0.9962
4998	0	0	0	N/A
Sum of Least Squares				0.9990
New Correction Factor				0.9992

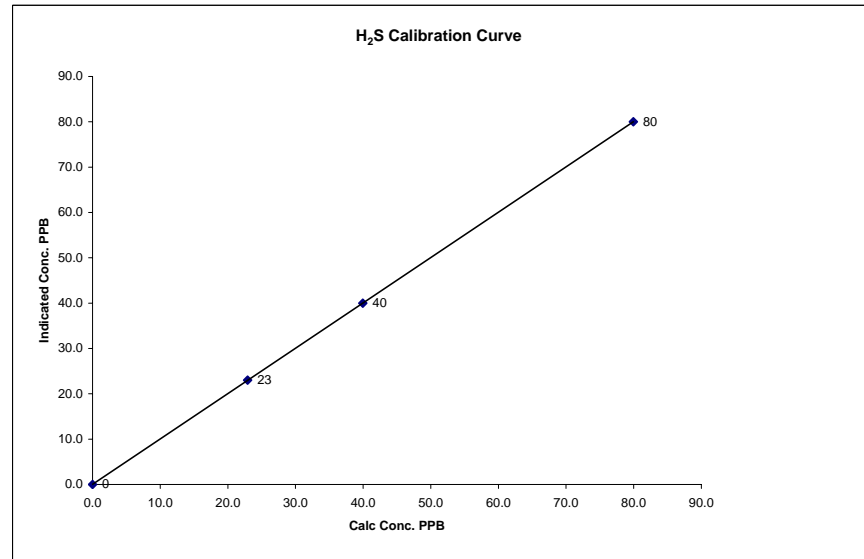
		Before Calibration	After Calibration
Auto Zero		0.0	-0.1
Auto Span		55	55
Sample Lines Connected			YES
Percent Change from Previous Calibration			-1.2%

Calibration Performed by: Ting Xu

## H<sub>2</sub>S Calibration Curve

Calibration Date	August 16, 2010
Company	Lakelnad Industry & Community Association
Plant / Location	Cold Lake - Maskwa
Start Time (MST)	8:50
End Time (MST)	12:29

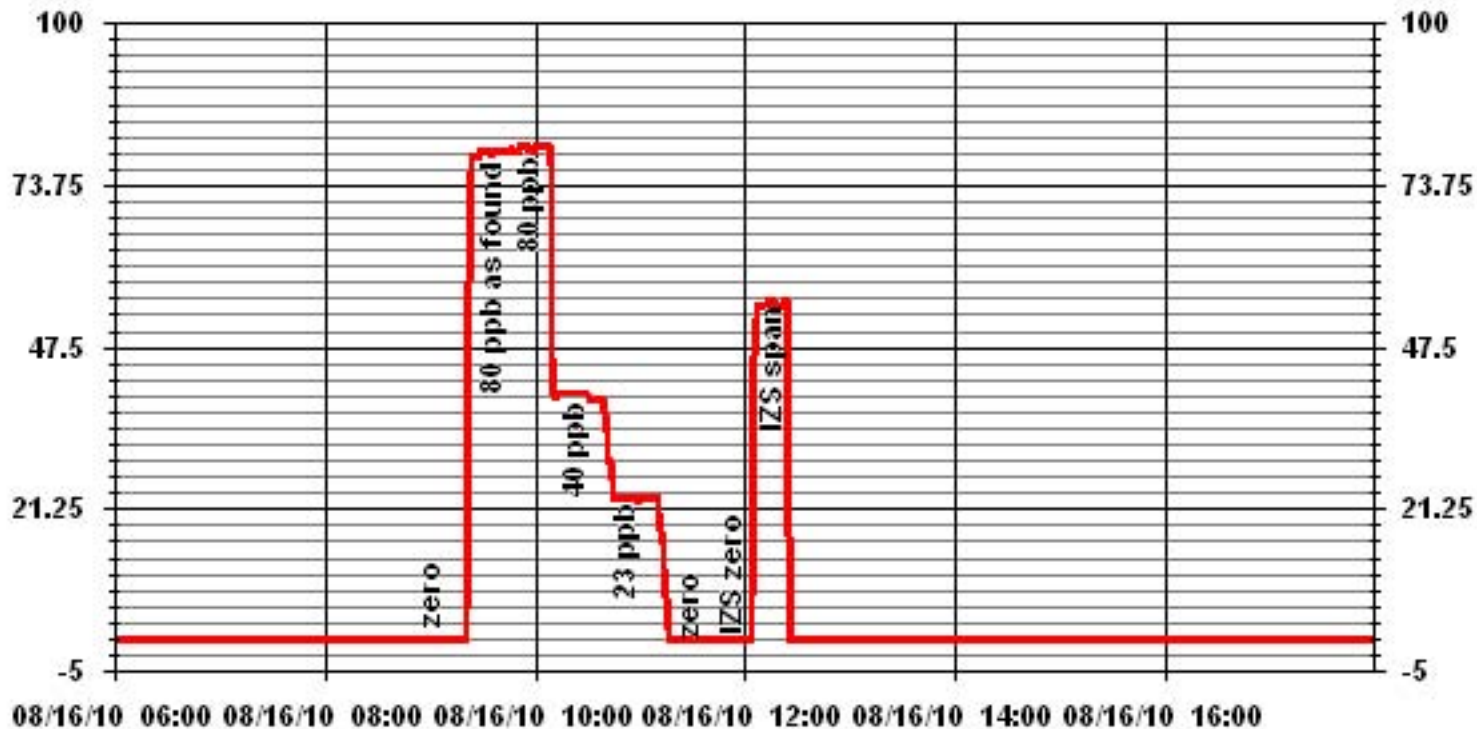
Calculated Conc. ppb	Indicated Response ppb	Correction Factor	Correlation Coefficient Slope	(≥ 0.995) (0.85 to 1.15)	0.999999 1.000553
0	0	n/a	Intercept	(± 3% F.S.)	0.029358
23	23	0.9962			
40	40	0.9989			
80	80	0.9992			



Notes:



### 01 Minute Averages



# Total Hydrocarbons

### THC Calibration Report

#### Station Information

Calibration Date:	August 16, 2010	Previous Calibration	July 19, 2010
Company:	Lakeland Industry & Community Association		
Plant / Location:	Cold Lake - Maskwa		
:	(MST) 11:48	End Time	(MST) 15:41
Reason:	Monthly Calibration		
Barometric Pressure:	944 mBar	Station Temperature:	21 Deg C
Calibrator:	API 700	S/N:	831
Cal Gas Concentration:	207 Prop/ 602 Meth/1171.25THC	ppm	Cal Gas Expiry Date: August 21, 2011
DAS make & Model:	ESC 8832	S/N :	AO 791
Output Voltage Range:	0 - 10	VDC	

#### Analyzer Information

Make / Model	TECO 51C-LT	S/N :	436609738	Method	Flame Ionization
--------------	-------------	-------	-----------	--------	------------------

#### Analyzer Settings

	Before Calibration		After Calibration	
Concentration Range	0 -50	ppm	0 - 50	ppm
Sample Pressure	7.5	psi	7.5	psi
Hydrogen Pressure	8	psi	8	psi
Air Pressure	20	psi	20	psi

#### Calibration Data

Dilution Flow	Source Gas Flow	Calculated Concentration	Indicated Concentration	Correction Factor
1999	0.0	0.0	0.3	N/A
1999	0.0	0.0	0.0	N/A
1999	70.0	39.6	39.9	0.9931
1998	35.0	20.2	20.2	0.9982
1998	20.0	11.6	11.5	1.0094
1998	0	0.0	0.0	N/A
Correction Factor:				0.9931

Previous Calibration Correction Factor:	0.9857
Current Correction Factor Before Span Adjust:	0.9931
Percent Change:	-0.75%

#### IZS Calibration Data

	Before Calibration	After Calibration
Auto Zero	0.3	0.0
Auto Span	34.4	33.5
Sample Lines Connected		YES

#### Cylinder Pressures

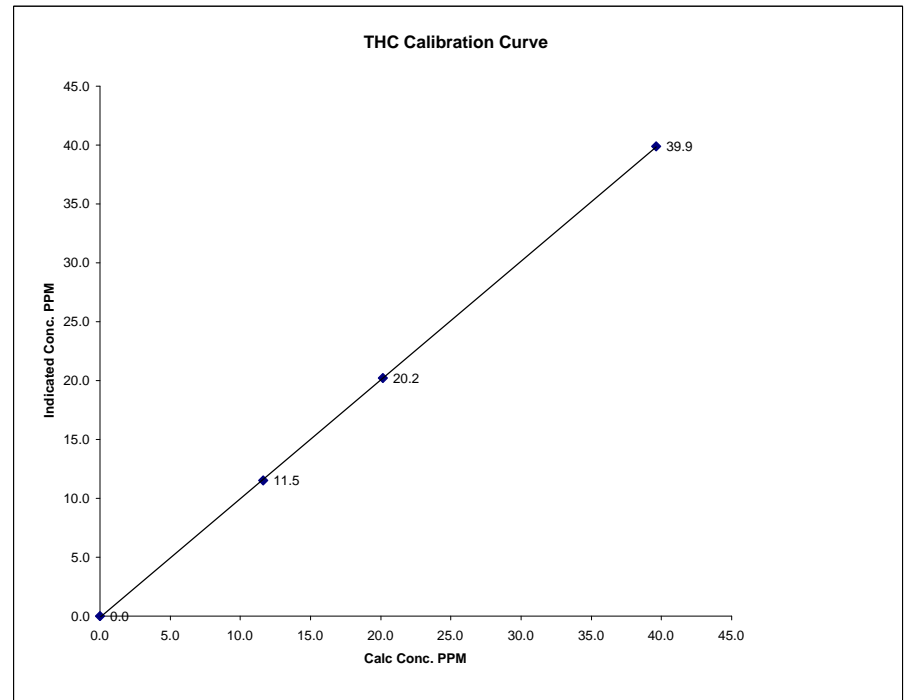
Span	1500	psi
Hydrogen	1900	psi
Zero Air	32	psi

Calibration Performed by: Ting Xu

### THC Calibration Curve

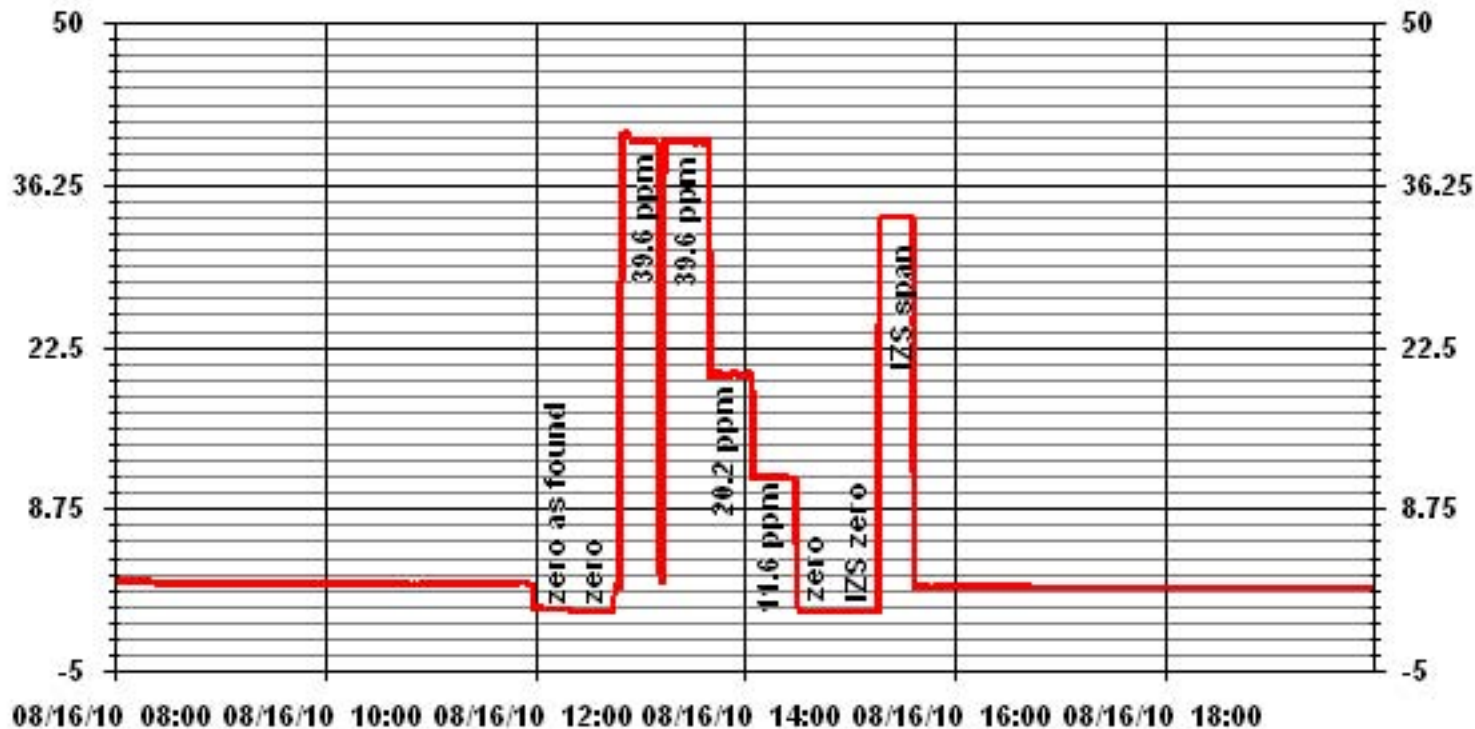
Calibration Date	August 16, 2010		
Company	Lakeland Industry & Community Association		
Plant / Location	Cold Lake - Maskwa		
Start Time (MST)	11:48	End Time (MST)	15:41

Calculated Conc. ppm	Indicated Response ppm	Correction Factor	Correlation Coefficient Slope	(≥ 0.995) (0.85 to 1.15)	0.999972
0.0	0.0		Intercept	(± 3% F.S.)	-0.092782
11.6	11.5	1.0094			
20.2	20.2	0.9982			
39.6	39.9	0.9931			



Notes:

### 01 Minute Averages



# Nitrogen Dioxide

**NOx - NO- NO2 Calibration Report**

**Station Information**

Calibration Date	August 16, 2010	Previous Calibration	July 19, 2010
Company	LICA	Plant/Location	Maskwa
Start Time (MST)	8:50	End Time (MST)	15:22
Reason:	Monthly Calibration	Other	
Barometric Pressure	944 mmHg	Station Temperature	21 Deg C
Cal Gas Concentration	NOx 52.2 ppm	NO 52 ppm	Cal Gas Expiry date 02-Aug-12
DAS Output Voltage	0 - 1 Volts	Chart Rec. Output	NA Volts

**Equipment Information**

Analyzer Make / Model:	API 200E	S/N :	594	Method:	Chemiluminescent
Calibrator Make / Model:	EnviroNics 2000	S/N:	1991		
DAS Make / Model:	ESC 8832	S/N :	AO 791		
Chart Recorder Make / Model:	NA	S/N:	NA		
Flow Meter:	EnviroNics 2000	S/N :	1991		

**Analyzer Settings**

Before Calibration				After Calibration			
Concentration Range			0-1000	ppb			
Sample Flow/Conv. Temp	458 ccm	314.6 Deg C		456 ccm	314.2 Deg C		
Ozone Flow / Vacuum	79 ccm	5.7 "Hg-A		79 ccm	5.6 "Hg-A		
HVPS / A ZERO	767 Volts	16.8 MV		767 Volts	17.4 MV		
Rx/ Temp / PMT Temp	49.8 Deg C	6.5 Deg C		50.0 Deg C	6.6 Deg C		
Box Temp / IZS Temp	29.2 Deg C	45.2 Deg C		30.4 Deg C	45.1 Deg C		
Offset	2.2 NOx	0.2 NO		2.2 NOx	0.2 NO		
Slope	1.125 NOx	1.125 NO		1.111 NOx	1.105 NO		
NO2 COEF / Conv Efficiency	NA NO2	0.994		NA NO2	0.994		

**Dilution Calibration Data**

Dilution Air Flow Rate	Source Flow Rate	O3 Set Point	Calculated Concentration			Indicated Concentration			Correction Factor	
			NOx	NO	NO2	NOx	NO	NO2	NOx	NO
4994	0.0	----	0	0	0	-1	0	-1	----	----
4916	76.7	----	802	799	----	811	813	-2	0.9876	0.9826
4916	76.7	----	802	799	----	801	800	1	0.9999	0.9986
4962	33.6	----	351	350	----	351	349	3	0.9974	1.0021
4975	19.2	----	201	200	----	200	199	1	0.9984	1.0046
4995	0.0	----	0	0	0	-1	0	-1	----	----

**Gas Phase Titration Calibration Data**

Dilution Air Flow Rate	Source Flow Rate	O3 Set Point	Calculated Concentration			Indicated Concentration			NO2 Correction Factor	NO2 Conv Efficiency
			NOx	NO	NO2	NOx	NO	NO2		
4917	76.7	----	802	799	----	802	799	3	----	----
4917	76.7	600	802	----	536	801	266	537	0.9963	100.19%
4917	76.7	300	802	----	275	803	527	276	0.9928	100.37%
4917	76.7	150	802	----	139	802	663	140	0.9858	100.74%

Linearity OK?	Yes	No	Sum of Least Squares	NOx= 1.001	NO= 0.999	NO2= 0.998
			Correction Factors:	NOx= 0.9999	NO= 0.9986	NO2= 0.9963
				Average Converter Efficiency= 100.43%		

	Before Calibration				After Calibration			
Auto Zero	-0.4	NOx	-0.3	NO2	-0.3	NOx	-0.6	NO2
Auto Span	736	NOx	724	NO2	725	NOx	714	NO2
	Sample Lines Connected				YES			

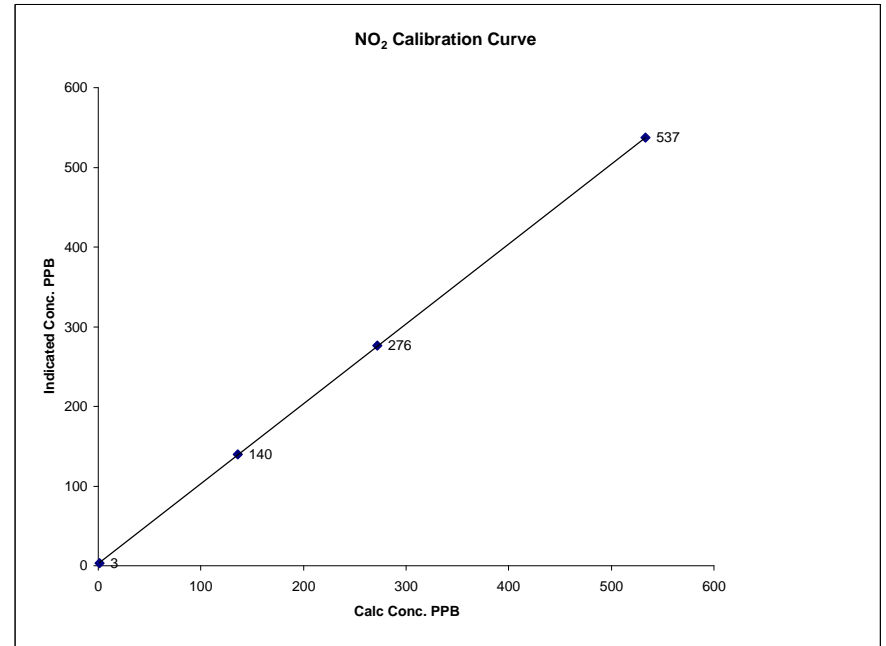
Notes

Calibration Performed by: Ting Xu

**NO2 Calibration Curve**

Calibration Date	August 16, 2010	<b>LICA</b>	
Company		<b>Maskwa</b>	
Plant / Location			
Start Time (MST)	8:50	End Time (MST)	15:22

Calculated Conc. ppb	Indicated Response ppb	Correction Factor	Correlation Coefficient (≥ 0.995)	
1	3	N/A	Slope	0.999990
136	140	0.9714	Intercept	1.003031
272	276	0.9855		2.78617
533	537	0.9926		

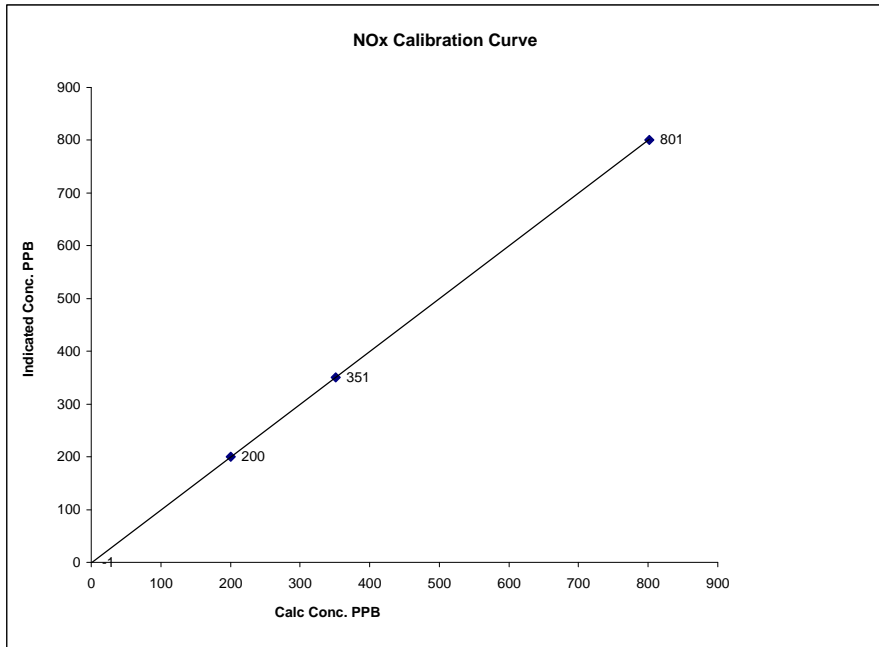


Notes: No CE gain adjustment.

### NOx Calibration Curve

Calibration Date August 16, 2010  
 Company LICA  
 Plant / Location Maskwa  
 Start Time (MST) 8:50 End Time (MST) 15:22

Calculated Conc. ppb	Indicated Response ppb	Correction Factor	Correlation Coefficient (≥ 0.995)	0.999999
0	-1	N/A	Slope (0.85 to 1.15)	1.000015
201	200	1.0034	Intercept (± 3% F.S.)	-0.67815
351	351	1.0003		
802	801	1.0011		

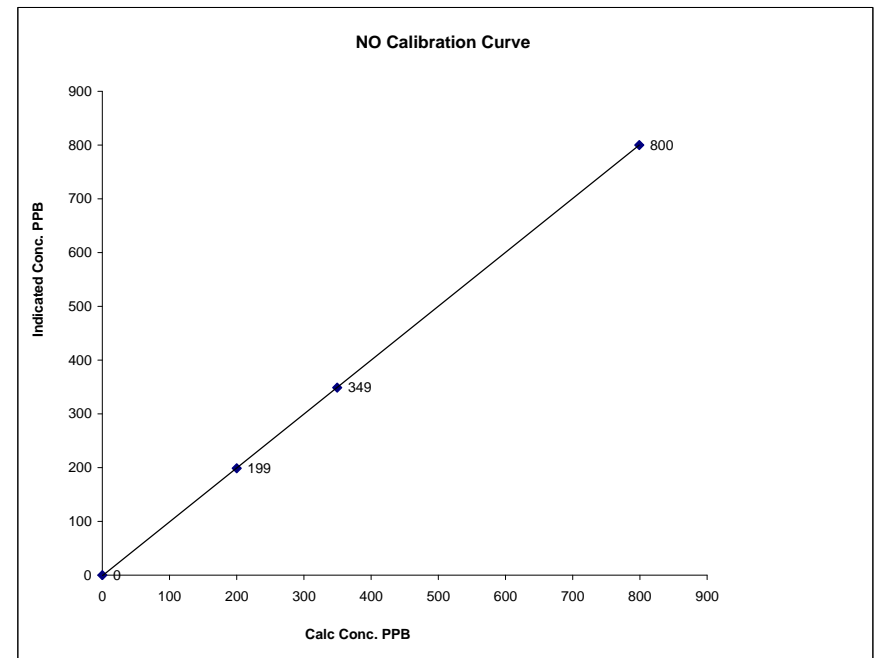


Notes:

### NO Calibration Curve

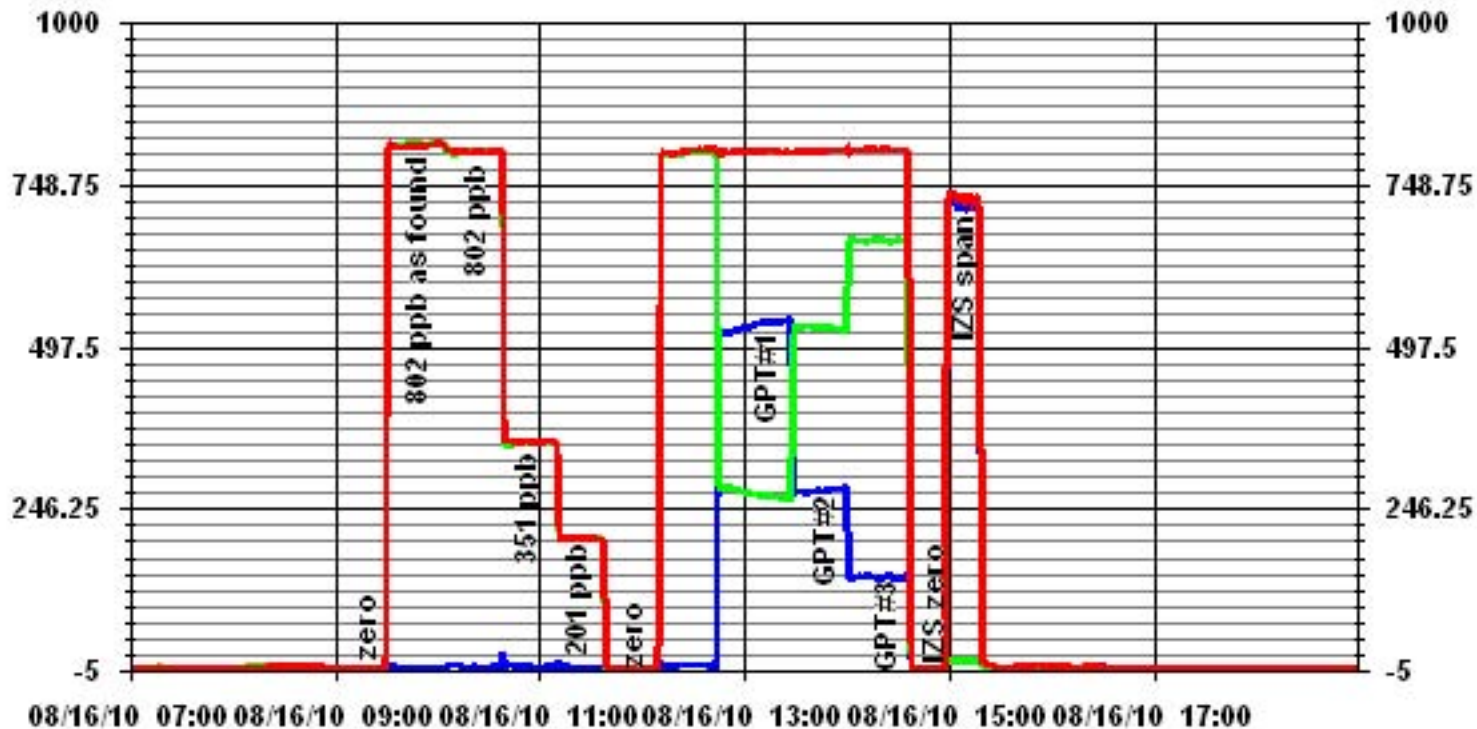
Calibration Date August 16, 2010  
 Company LICA  
 Plant / Location Maskwa  
 Start Time (MST) 8:50 End Time (MST) 15:22

Calculated Conc. ppb	Indicated Response ppb	Correction Factor	Correlation Coefficient (≥ 0.995)	0.999996
0	0	N/A	Slope (0.85 to 1.15)	1.003630
200	199	1.0046	Intercept (± 3% F.S.)	-2.2286
350	349	1.0021		
799	800	0.9986		



Notes:

### 01 Minute Averages





# Lakeland Industry & Community Association

St. Lina Monitoring Site  
Ambient Air Monitoring  
Data Report  
For  
August 2010

Prepared By:



September 8, 2010

# Lakeland Industry & Community Association

## St. Lina

### Ambient Air Monitoring

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## Introduction

The following Ambient Air Monitoring report was prepared for:

Mr. Mike Bisaga

**Lakeland Industry & Community Association**

Box 8237

5107W – 50 Street

Bonnyville, Alberta

T9N 2J5

Monitoring Location: St. Lina

Data Period: August 2010

The monthly ambient data report:

- Prepared by Lily Lin
- Reviewed by Craig Snider

# Calibration Procedure

The following calibration procedure applies to all calibrations conducted at the Lakeland Industry & Community Association Air Monitoring Station.

Calibration gas concentrations are generated using a dynamic mass flow controlled calibrator. EPA Protocol one gases are diluted with zero air generated on site. The Mass Flow Controllers in the calibrator are referenced using an NIST traceable flow meter once per month. All listed flows are reported as corrected to Standard Temperature and Pressure (STP).

Generated zero gas is introduced to the analyzer first. Three concentrations of calibration gas are then generated in order to introduce points at approximately 50-80%, 25-40% & 10-20% of the analyzer's full-scale range. An auto zero and span are then performed to validate the daily zero and span values recorded to the next multi-point calibration.

All indicated concentrations are taken from the ESC data logger used to collect the data for monthly reporting.

The calibrations conducted at the LICA – St. Lina Air Monitoring Stations conform to the following Maxxam Analytics Standard Operation Procedures:

- CAL SOP-00211
- CAL SOP-00209
- CAL SOP-00213
- CAL SOP-00214
- CAL SOP-00208
- CAL SOP-00215

Conformance of each calibration to Alberta Environment regulations is outlined in the individual calibration reports. The slope and correlation coefficient are derived from the calculated and indicated analyzer responses. The percent change is calculated using the previous calibration correction factor and the current correction factor before adjustment. All calibration's and maintenance conforms to the procedures outlined in the *Air Monitoring Directive, Appendix A-10, Section 1.6*.

# MONTHLY CONTINUOUS DATA SUMMARY

## LAKELAND INDUSTRY & COMMUNITY ASSOCIATION – ST. LINA

### Continuous Ambient Monitoring – August 2010

LICA ST. LINA SITE						MAXIMUM VALUES							OPERATIONAL TIME (PERCENT)			
						OBJECTIVES					EXCEEDENCES					1-HOUR
PARAMETER	1-HR	24-HR	1-HR	24-HR	MONTHLY AVERAGE	READING	DAY	HOUR	WIND SPEED (KPH)	WIND DIRECTION (DEGREES)	READING	DAY				
SO2 (PPB)	172	57	0	0	0.03	2	VAR	VAR	VAR	VAR	0.2	VAR	99.5			
H2S (PPB)	10	3	0	0	0.06	2	11, 15	16, 3	5.3, 4.9	202(SSW), 213(SSW)	0.6	6	99.5			
THC (PPM)	-	-	-	-	2.00	2.8	1	3	14.3	75(ENE)	2.1	VAR	96.8			
OZONE (PPB)	82	-	0	-	23.19	53	6	12	7	61(ENE)	38.9	6	99.5			
NOx (PPB)	-	-	-	-	0.49	8	19	12	11.4	319(NW)	2.8	19	99.5			
NO (PPB)	-	-	-	-	0.08	6	11	16	5.3	202(SSW)	0.5	24	99.5			
NO2 (PPB)	212	106	0	0	0.37	8	19	12	11.4	319(NW)	2.5	19	99.5			
PM2.5 (ug/m3)	-	30	-	3	23.13	446.6	19	13	10.4	290(WNW)	143.2	19	99.4			
TEMPERATURE (DEGREE C)	-	-	-	-	12.79	24.8	26	16	17.4	64(ENE)	18.2	26	100.0			
BP (MILLIBAR)	-	-	-	-	927	942	24	12	10.5	108(ESE)	939.0	24	99.7			
RH (%)	-	-	-	-	72.60	91	VAR	VAR	VAR	VAR	84.7	29	100.0			
PRECIPITATION (MM)	-	-	-	-	0.07	2.8	23	10	14.4	305(WNW)	12.3	23	100.0			
VECTOR WS (KPH)	-	-	-	-	9.65	30.4	27	16	-	277(W)	22.3	27	99.3			
VECTOR WD (DEGREES)	-	-	-	-	283(W)	-	-	-	-	-	-	-	99.3			

VAR-VARIOUS

# General Monthly Summary

## Equipment Operation

The following summary outlines the analyzer performance. Any non-conformances, problems or maintenance performed are detailed at the end of each section.

### AQM STATION – LICA – St. Lina

**A trailer audit was performed by Alberta Environment on August 27<sup>th</sup>.**

#### **Sulphur Dioxide (PPB)**

- Analyzer make / model - API 100E, S/N: 468

No operational issue was observed during this month. The inlet filter was changed before the monthly calibration was started. 4 hours of hourly data and 12 hours of maximum concentration were invalidated due to small power failures this month. Data was corrected using daily zero information.

#### **Hydrogen Sulphide (PPB)**

- Analyzer make / model - API 101E, S/N: 510

No operational issue was observed during this month. The inlet filter was changed before the monthly calibration was started. 4 hours of hourly data and 12 hours of maximum concentration were invalidated due to small power failures this month. Data was corrected using daily zero information.

#### **Ozone (PPB)**

- Analyzer make / model –Thermo 49i, S/N: 1002240371

No operational issue was observed during this month. The inlet filter was changed before the monthly calibration was started. 4 hours of hourly data and 12 hours of maximum concentration were invalidated due to small power failures this month. Data was corrected using daily zero information.

# General Monthly Summary

## AQM STATION – LICA – St. Lina

### Total HydroCarbon (PPM)

- Analyzer make / model –TECO 51C, S/N: 77021-384

No operational issue was observed during this month. A power failure occurred on August 11<sup>th</sup>, which caused the analyzer to flame out. The analyzer was relit on August 12<sup>th</sup>. 19 hours of data were invalidated due to this issue. A new gas cylinder was changed following a power failure on August 19<sup>th</sup>. 4 hours of hourly data and 12 hours of maximum concentration were invalidated due to small power failures this month. Data was corrected using daily zero information.

### Nitrogen Dioxide (PPB)

- Analyzer make / model - API 200E, S/N: 592

No operational issue was observed during this month. The inlet filter was changed before the monthly calibration was started. 4 hours of hourly data and 12 hours of maximum concentration were invalidated due to small power failures this month. Data was corrected using daily zero information.

### Particulate Matter 2.5 (UG/M3)

- Analyzer make / model – Thermo Scientific Series 1405F, S/N: 1405A208301003

No operational issue was observed during this month. The unit was installed on August 18<sup>th</sup> following an installation calibration/audit. 6 hours of maximum concentration were invalidated due to small power failures this month. The total operational time was 321 hours. Data was corrected using Alberta air quality guideline. If the data was between 0 to –3, the data was corrected to 0. If the data was below –3, the data was invalidated. 2 hours of data were invalidated because the readings were below –3. There were three 24-hour average readings above guidelines; reading of 143.2 ug/m3 on August 19<sup>th</sup>, 50.6 ug/m3 on August 20<sup>th</sup> and 40.3 ug/m3 on August 21<sup>st</sup>. The contraventions were reported to AENV on August 20<sup>th</sup>. The AENV Ref# is 239387.

# General Monthly Summary

## AQM STATION – LICA – St. Lina

### Temperature (Degree C)

- Analyzer make / model – Met One 060

No operational issue was observed during the month. The temperature sensor was installed on August 18<sup>th</sup>, and it started collecting data on August 19<sup>th</sup>. The total operational time was 298 hours.

### Barometric Pressure (Millibar)

- Analyzer make / model - Met One 092

No operational issue was observed during this month. The BP sensor was installed on August 18<sup>th</sup>. The total operational time was 320 hours.

### Relative Humidity (%)

- Analyzer make / model - Met One 083

No operational issue was observed during this month. The RH sensor was installed on August 18<sup>th</sup>, and it started collecting data on August 19<sup>th</sup>. The total operational time was 298 hours.

### Precipitation (MM)

- Analyzer make / model - Met One 387

No operational issue was observed during this month. The BP sensor was installed on August 18<sup>th</sup>. The total operational time was 320 hours.



## General Monthly Summary

### AQM STATION – LICA – St. Lina

#### Vector Wind Speed (KPH) & Vector Wind Direction (DEG)

- System make / model – Met 50.5, S/N: H12635

The wind system is reported as vector wind speed and vector wind direction.

No operational issue was observed during this month. 4 hours of hourly data and 12 hours of maximum concentration were invalidated due to small power failures this month.

#### Datalogger

- System make / model - ESC 8832, S/N: AO717
- Software make/version - ESC v 5.51a

The station is connected to a modem to allow for daily polling of the station.

#### Trailer

No issue was observed this month. The manifold and inlet pipes were cleaned on August 21<sup>st</sup>.

# Continuous Monitoring

# Monthly Summaries, Graphs & Wind Roses

# Sulphur Dioxide

**LAKELAND INDUSTRY & COMMUNITY ASSOCIATION -ST. LINA**  
**AUGUST 2010**  
**SULPHUR DIOXIDE (SO<sub>2</sub>) hourly averages in ppb**

MST		0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR		
DAY	HR	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	MAX.	AVG.	RDGS.	
1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0.0	24	
2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0.0	24	
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0.0	24	
4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0.0	24	
5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0.0	24	
6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0.0	24	
7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0.0	24	
8	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24	
9	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24	
10	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24	
11	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	P	P	1	0	0	0	0	0	0	0	1	0.0	22	
12	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	C	0	0	0	0	0	0	0	0	0	0	0.0	24	
13	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24	
14	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24	
15	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24	
16	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24	
17	0	0	0	IZS	0	0	0	0	0	0	0	C	C	C	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24	
18	0	0	IZS	0	0	0	0	0	0	0	0	0	0	P	P	C	C	0	0	0	0	0	0	0	0	0	0.0	22	
19	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24	
20	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0.0	24
21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24	
22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0.0	24	
23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0.0	24	
24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	IZS	1	0	0	0	2	0.2	24	
25	0	0	0	0	0	0	0	0	0	0	0	1	2	1	1	0	0	0	0	0	IZS	0	0	0	0	2	0.2	24	
26	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	IZS	0	0	0	0	0	0	1	0.2	24	
27	0	0	0	0	0	0	0	0	0	C	C	C	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0.0	24	
28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0.0	24	
29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0.0	24	
30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0.0	24	
31	0	0	0	0	0	0	0	0	0	0	1	2	C	C	C	C	C	0	0	0	0	0	0	0	0	2	0.2	24	
HOURLY MAX		0	0	0	0	0	0	0	0	0	0	1	2	2	1	1	2	1	1	0	0	0	1	0	0	0			
HOURLY AVG		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			

**STATUS FLAG CODES**

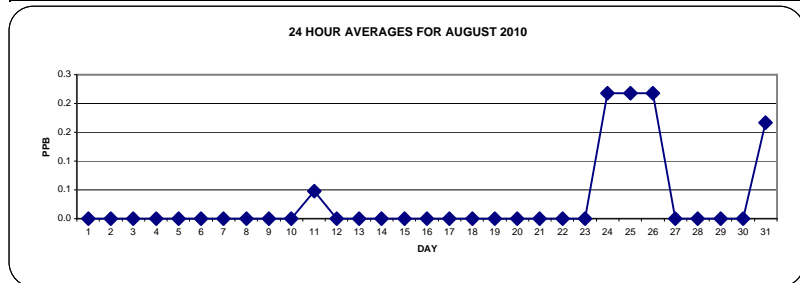
S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	- MAINTENANCE
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE

**OBJECTIVE LIMIT:**

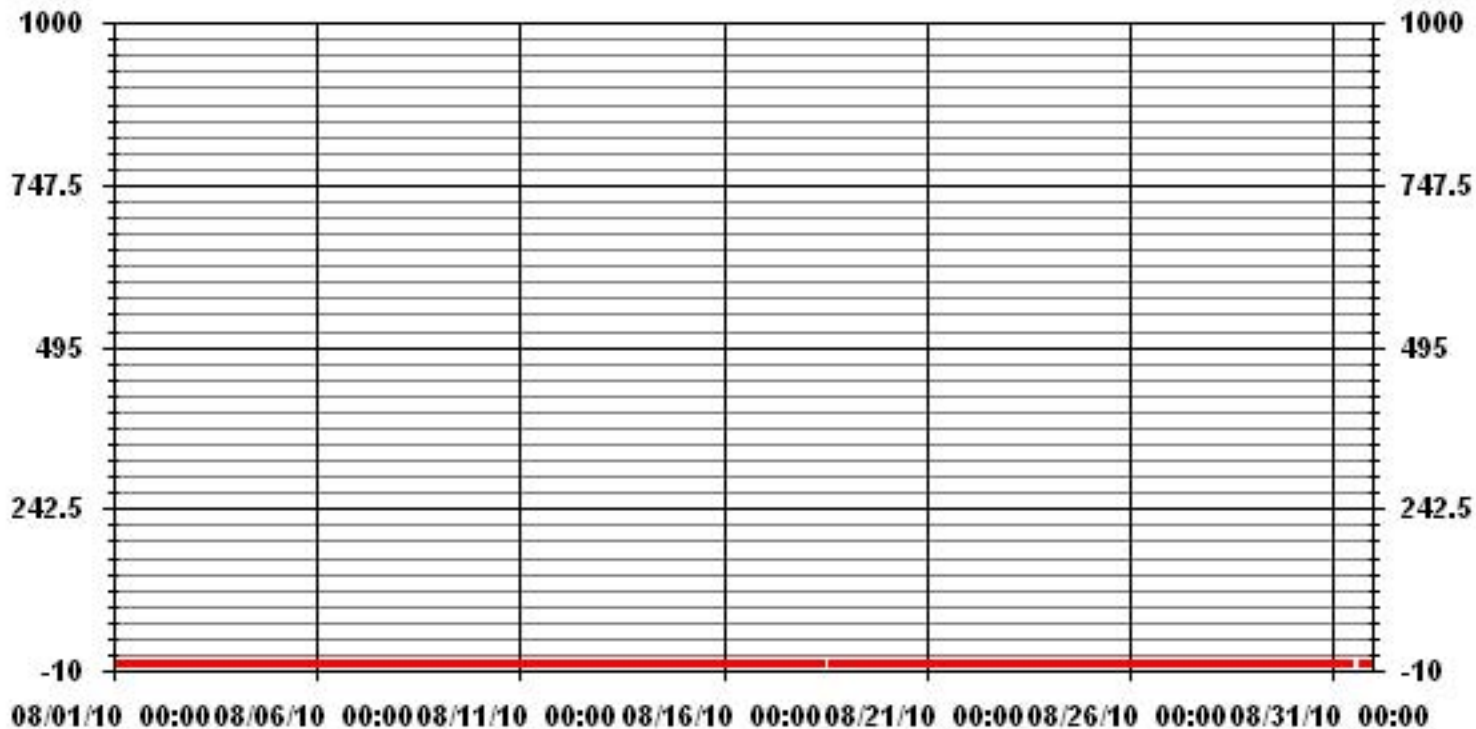
<b>ALBERTA ENVIRONMENT:</b>	1-HR	172	PPB	24-HR	57	PPB
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**MONTHLY SUMMARY**

NUMBER OF 1-HR EXCEEDENCES:	0					
NUMBER OF 24-HR EXCEEDENCES:	0					
NUMBER OF NON-ZERO READINGS:	15					
MAXIMUM 1-HR AVERAGE:	2	PPB	@ HOUR(S)	VAR	ON DAY(S)	VAR
MAXIMUM 24-HR AVERAGE:	0.2	PPB			ON DAY(S)	VAR
IZS CALIBRATION TIME:	31	HRS	OPERATIONAL TIME:	740 HRS		
MONTHLY CALIBRATION TIME:	15	HRS	AMD OPERATION UPTIME:	99.5 %		
STANDARD DEVIATION:	0.20		MONTHLY AVERAGE:	0.03 PPB		



### 01 Hour Averages



— LICA31 SO2\_ PPB

# LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - ST. LINA

AUGUST 2010

## SULPHUR DIOXIDE MAX instantaneous maximum in ppt

MST		0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	23:00	DAILY	24-HOUR		
DAY	DAY	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.		
1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0.0	24	
2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0.0	24	
3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0.0	24	
4	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0.0	24	
5	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0.0	24	
6	6	0	0	P	0	0	0	1	1	0	1	1	1	1	1	IZS	1	1	1	1	1	1	1	1	1	1	1	0.7	23	
7	7	1	1	1	1	1	1	1	1	1	1	1	1	1	IZS	0	1	1	1	1	1	1	1	1	1	1	1	1.0	24	
8	8	1	0	P	1	1	1	1	1	1	0	0	1	IZS	0	1	0	0	0	0	1	0	1	0	1	1	1	0.5	23	
9	9	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	1	1	1	1	1	1	0	0	0	1	1	1	0.3	24	
10	10	0	0	0	0	0	0	1	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.0	24	
11	11	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	P	P	5	0	0	1	0	0	0	P	5	0.3	21		
12	12	1	1	1	1	1	1	1	0	IZS	1	1	0	1	0	1	C	0	1	0	0	0	0	0	0	0	1	0.5	24	
13	13	0	0	0	1	0	1	1	IZS	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.2	24	
14	14	0	0	0	0	0	0	IZS	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.2	24	
15	15	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24	
16	16	0	0	0	0	IZS	0	0	0	0	0	1	0	3	3	1	1	1	0	0	0	0	0	0	0	0	3	0.4	24	
17	17	0	0	0	IZS	0	0	0	P	0	P	C	C	C	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	22	
18	18	0	0	IZS	0	0	0	0	0	1	1	1	1	P	P	C	C	1	1	1	1	1	1	1	1	1	1	0.6	22	
19	19	1	IZS	0	0	0	0	0	0	0	0	0	0	1	P	P	0	0	0	0	0	0	0	0	0	0	1	0.1	23	
20	20	IZS	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	IZS	1	1.0	24
21	21	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	24	
22	22	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	24	
23	23	0	0	1	1	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	IZS	0	0	0	1	0	0.2	24	
24	24	0	0	0	0	0	0	0	0	0	0	1	0	0	2	4	4	1	1	1	IZS	2	1	1	0	4	0.8	24		
25	25	0	P	1	1	1	1	1	1	1	1	3	3	3	2	1	1	1	1	IZS	1	1	1	1	1	1	3	1.3	23	
26	26	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2	2	IZS	1	1	1	1	P	1	0	2	1.1	23	
27	27	0	0	0	1	0	1	0	0	C	C	C	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	1	0.1	24	
28	28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	1	1	1	1	1	1	1	1	1	0.3	24	
29	29	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	IZS	1	1	1	1	1	1	1	1	1	1	1.0	24	
30	30	1	1	1	1	1	1	1	0	1	0	0	1	1	IZS	0	1	1	1	1	1	1	1	1	1	1	1	0.8	24	
31	31	1	1	1	1	1	1	1	1	1	3	4	C	C	C	C	C	C	C	0	0	0	0	0	0	4	0.9	24		
HOURLY MAX		1	1	1	1	1	1	1	1	1	3	4	3	3	3	4	4	5	1	1	1	2	1	1	1					
HOURLY AVG		0.3	0.3	0.4	0.5	0.4	0.4	0.5	0.4	0.4	0.5	0.7	0.5	0.6	0.6	0.5	0.7	0.8	0.4	0.4	0.5	0.4	0.4	0.4	0.3					

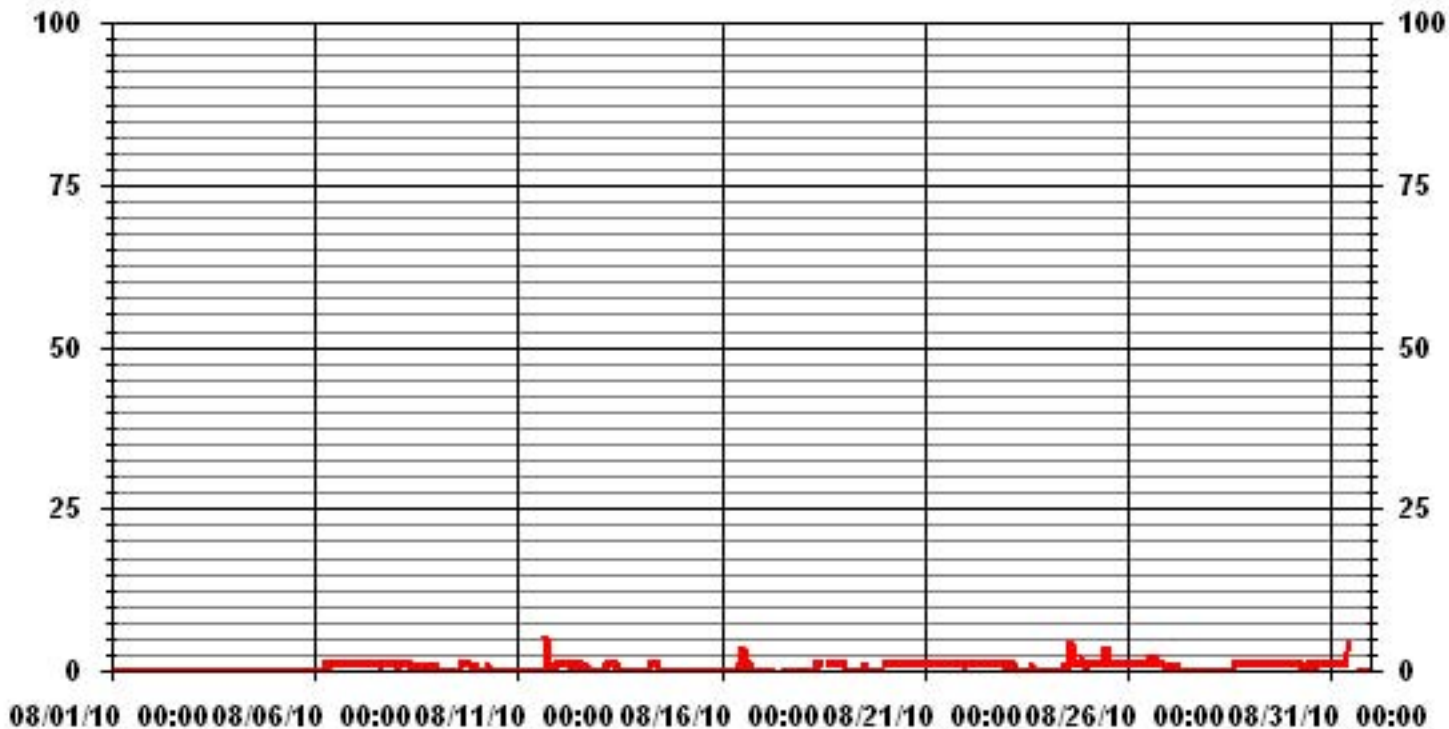
**STATUS FLAG CODES**

S - OUT OF SERVICE	IZS - DAILY ZERO/SPAN CHECK
N - INVALID DATA	M - MISSING DATA
D - INSTRUMENT DRIFT	P - POWER FAILURE
C - CALIBRATION	NA - NOT APPLICABLE

**MONTHLY SUMMARY**

NUMBER OF NON-ZERO READINGS:	287					
MAXIMUM INSTANTANEOUS VALUE:	5	PPB	@ HOUR(S)	16	ON DAY(S)	11
IZS CALIBRATION TIME:	31	HRS	OPERATIONAL TIME:	732	HRS	
MONTHLY CALIBRATION TIME:	16	HRS				
STANDARD DEVIATION:	0.64					

### 01 Hour Averages



— LICA31 SO2MAX PPB



LICA31  
 SO2\_ / WDR Joint Frequency Distribution (Percent)

August 2010

Distribution By % Of Samples

Logger Id : 31  
 Site Name : LICA31  
 Parameter : SO2\_  
 Units : PPB

Wind Parameter : WDR  
 Instrument Height : 10 Meters

	Direction																
Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 20	6.34	5.76	4.75	8.06	4.46	3.89	1.87	4.17	4.61	6.05	11.52	5.33	12.24	11.23	4.61	5.04	100.00
< 60	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
< 110	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
< 170	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
< 340	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
>= 340	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
Totals	6.34	5.76	4.75	8.06	4.46	3.89	1.87	4.17	4.61	6.05	11.52	5.33	12.24	11.23	4.61	5.04	

Calm : .00 %

Total # Operational Hours : 694

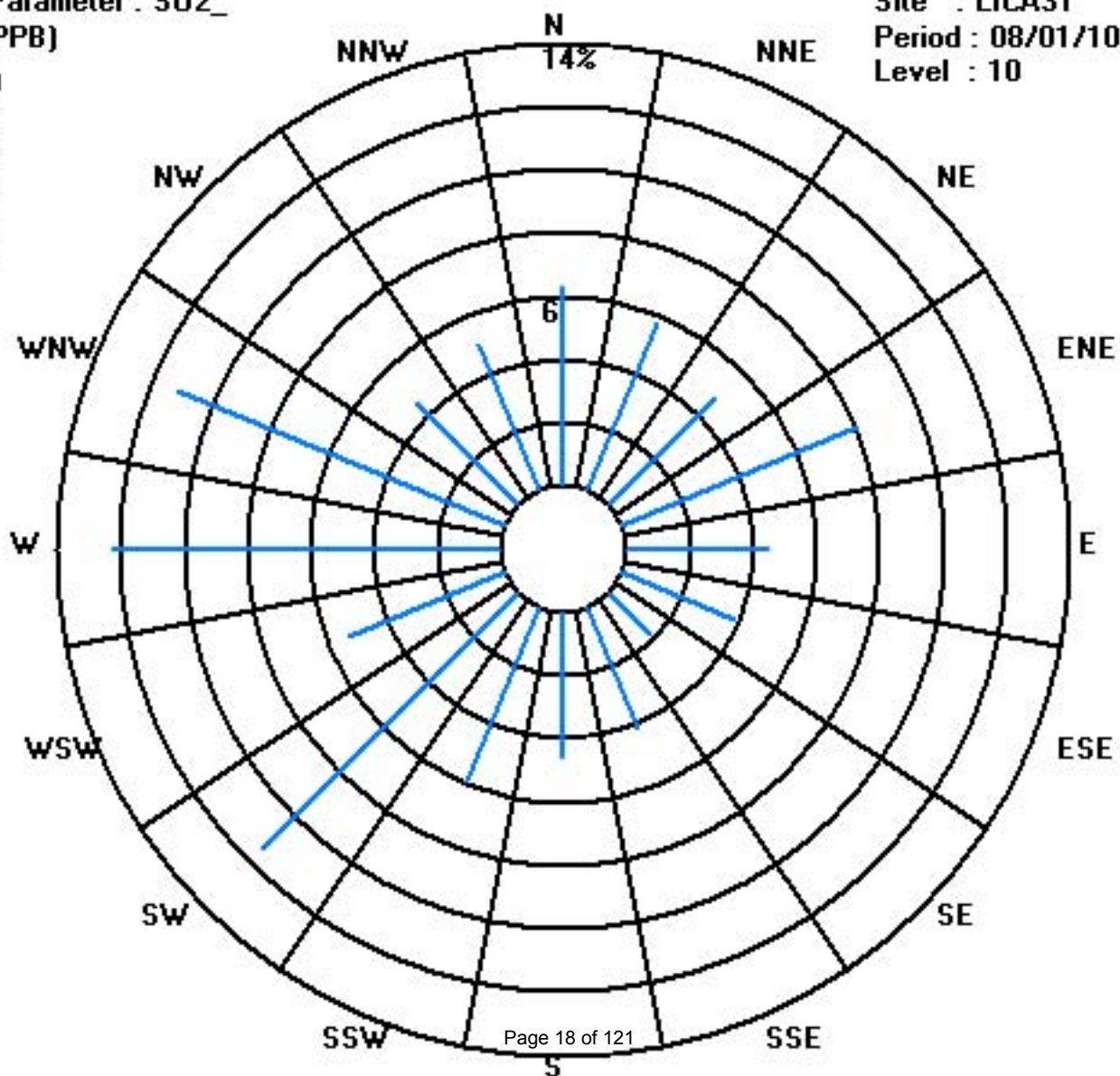
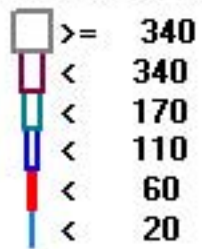
Distribution By Samples

	Direction																
Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 20	44	40	33	56	31	27	13	29	32	42	80	37	85	78	32	35	694
< 60																	
< 110																	
< 170																	
< 340																	
>= 340																	
Totals	44	40	33	56	31	27	13	29	32	42	80	37	85	78	32	35	

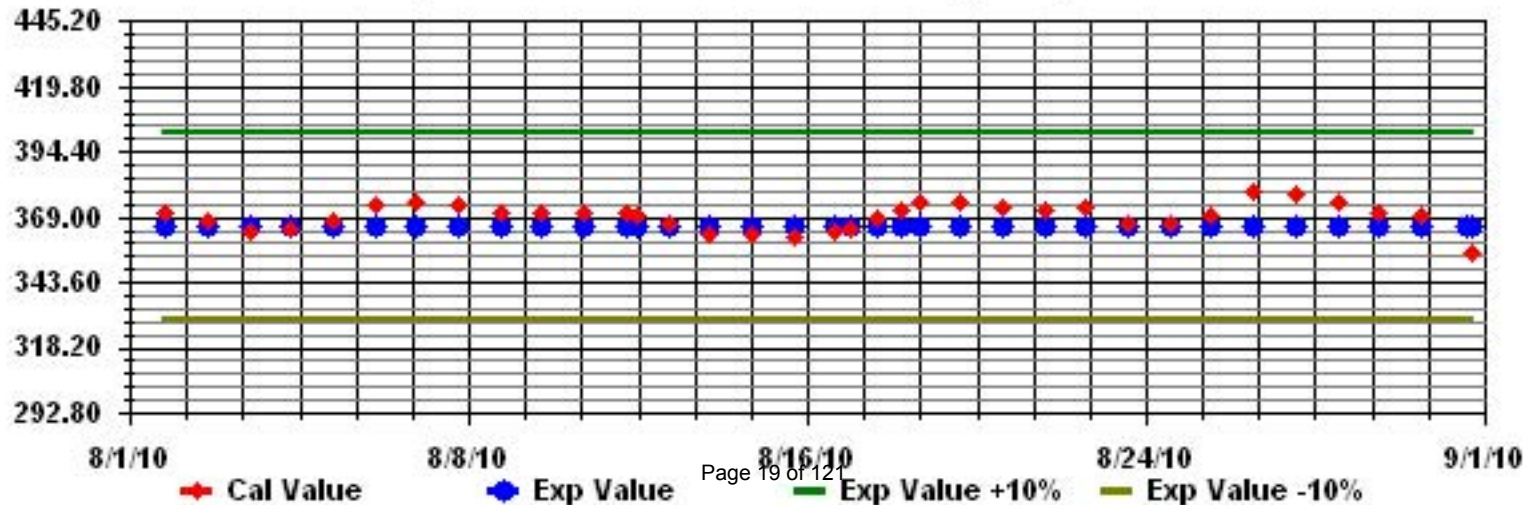
Calm : .00 %

Total # Operational Hours : 694

Class Limits (PPB)



Calibration Graph for Site: LICA31 Parameter: S02\_ Sequence: S02 Phase: SPAll



# Hydrogen Sulphide

# LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - ST. LINA

AUGUST 2010

HYDROGEN SULPHIDE (H<sub>2</sub>S) hourly averages in ppb

MST		0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY 24-HOUR			
DAY	HOURLY MAX	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.	
1	0	0	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.3	24
2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
5	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.0	24
6	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	1	0.6	24
7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
8	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0.1	24
9	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.1	24
10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0.1	22
12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
15	0	0	1	2	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0.3	24
16	0	0	0	1	1	1	1	0	0	0	0	1	0	0	0	1	1	1	1	1	0	1	0	0	0	0	1	0.3	24
17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	22
19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0.1	24
20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
31	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
HOURLY MAX		1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1			
HOURLY AVG		0.1	0.0	0.1	0.2	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1			

STATUS FLAG CODES

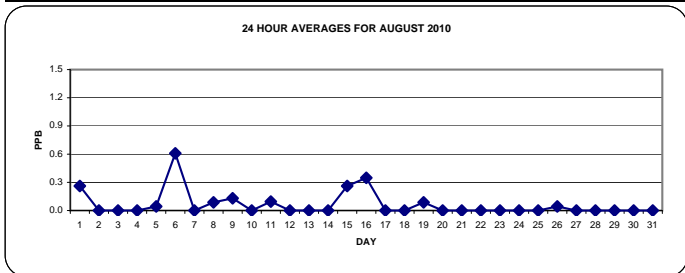
S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	- MAINTENANCE
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE

OBJECTIVE LIMIT:

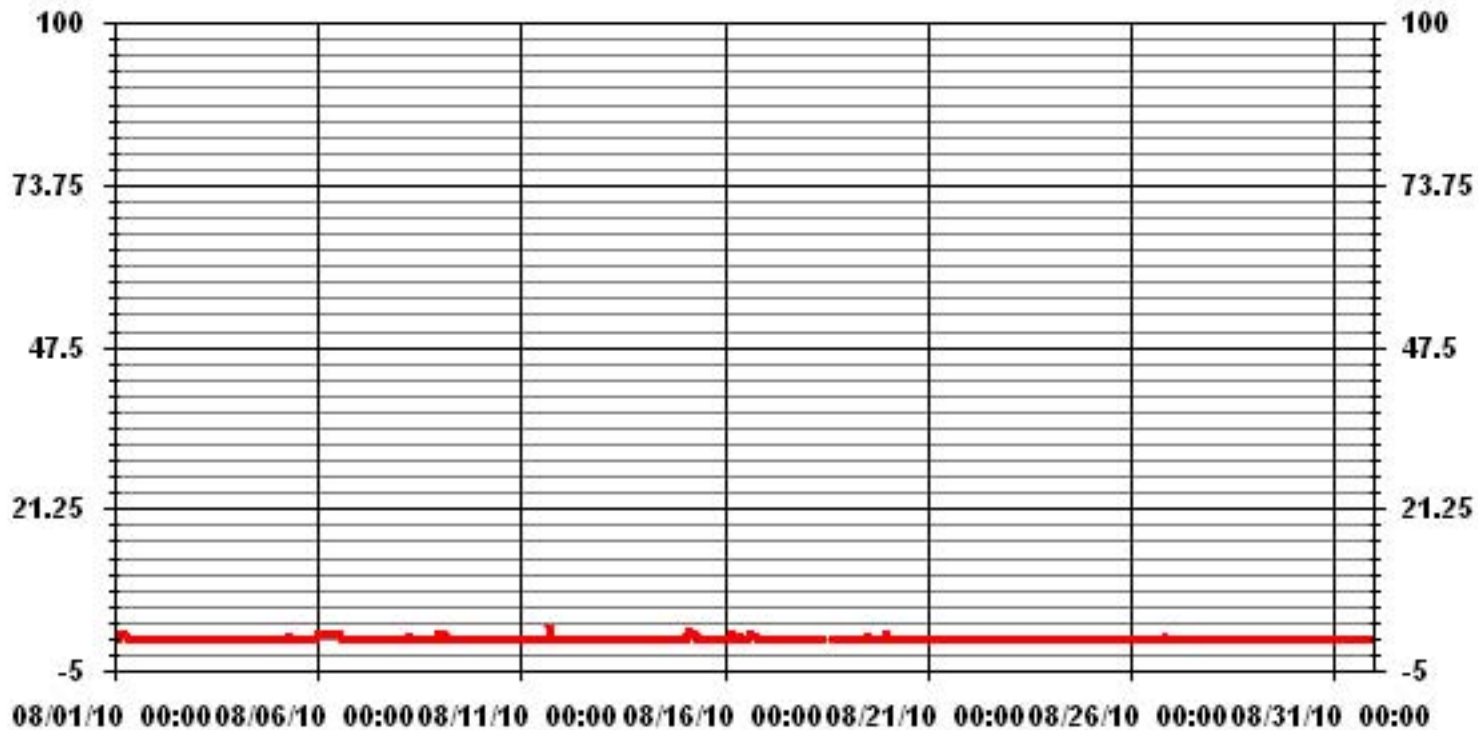
ALBERTA ENVIRONMENT: 1-HR 10 PPB 24-HR 3 PPB

MONTHLY SUMMARY

NUMBER OF 1-HR EXCEEDENCES:	0
NUMBER OF 24-HR EXCEEDENCES:	0
NUMBER OF NON-ZERO READINGS:	43
MAXIMUM 1-HR AVERAGE:	2 PPB @ HOUR(S) 16, 3 ON DAY(S) 11, 15
MAXIMUM 24-HR AVERAGE:	0.6 PPB ON DAY(S) 6 VAR-VARIOUS
IZS CALIBRATION TIME:	31 HRS
MONTHLY CALIBRATION TIME:	16 HRS
STANDARD DEVIATION:	0.26
OPERATIONAL TIME:	740 HRS
AMD OPERATION UPTIME:	99.5 %
MONTHLY AVERAGE:	0.06 PPB



### 01 Hour Averages



# LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - ST. LINA

AUGUST 2010

## HYDROGEN SULPHIDE MAX instantaneous maximum in ppb

MST		0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR			
HOUR START	HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.		
DAY																														
1		0	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	1	0	0	<b>IZS</b>	0	0	0	0	0	1	0.6	24	
2		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	<b>IZS</b>	<b>IZS</b>	0	0	0	0	0	0	0.0	24	
3		0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	<b>IZS</b>	0	0	0	0	0	0	0	1	0.0	24	
4		0	0	0	1	0	1	0	0	0	0	0	1	0	0	0	0	<b>IZS</b>	0	0	0	0	0	0	0	0	1	0.1	24	
5		0	0	0	0	0	0	0	1	1	0	0	0	0	0	<b>IZS</b>	0	0	0	0	0	0	0	0	0	1	1	0.1	24	
6		1	1	<b>P</b>	1	1	1	1	1	1	1	1	1	1	1	<b>IZS</b>	0	0	0	0	0	0	0	0	0	0	1	0.6	23	
7		0	0	0	0	0	0	1	0	0	0	0	0	0	<b>IZS</b>	0	0	0	0	0	0	0	0	0	0	0	1	0.0	24	
8		0	0	<b>P</b>	1	0	1	2	2	1	1	0	0	<b>IZS</b>	0	0	0	0	0	0	0	0	0	0	0	1	2	0.4	23	
9		1	1	1	1	1	0	0	0	0	0	0	<b>IZS</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.2	24	
10		0	0	0	0	0	0	0	0	0	0	<b>IZS</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24	
11		0	0	0	0	0	0	0	0	0	<b>IZS</b>	1	0	0	0	<b>P</b>	<b>P</b>	<b>10</b>	0	0	0	0	0	0	0	<b>P</b>	<b>10</b>	0.6	21	
12		0	0	0	0	0	0	0	<b>IZS</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24	
13		0	0	0	0	0	0	0	<b>IZS</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24	
14		0	0	0	0	0	0	<b>IZS</b>	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.0	24	
15		0	1	2	2	2	<b>IZS</b>	1	1	1	1	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	2	0.6	24	
16		1	1	1	1	<b>IZS</b>	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	24
17		1	1	1	<b>IZS</b>	0	0	0	<b>P</b>	0	<b>P</b>	<b>C</b>	<b>C</b>	<b>C</b>	0	0	0	0	0	0	0	0	0	0	0	0	1	0.2	22	
18		0	0	<b>IZS</b>	0	0	0	0	0	0	0	0	0	<b>P</b>	<b>P</b>	<b>C</b>	<b>C</b>	0	0	0	0	0	0	0	0	0	0	0.0	22	
19		0	<b>IZS</b>	0	0	0	0	0	0	0	0	0	0	1	<b>P</b>	0	0	0	0	0	0	0	0	0	1	1	1	0.1	23	
20		<b>IZS</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	<b>IZS</b>	0	0.0	24	
21		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	<b>IZS</b>	0	0.0	24		
22		0	0	0	1	1	1	1	1	1	0	0	1	1	1	1	2	1	1	2	1	1	2	1	<b>IZS</b>	3	1	3	1.0	24
23		1	1	2	2	2	2	2	2	1	1	1	3	3	2	2	1	2	1	1	1	1	<b>IZS</b>	1	3	3	3	1.7	24	
24		3	3	2	2	2	3	6	5	5	4	5	<b>C</b>	<b>C</b>	<b>C</b>	0	0	0	0	0	0	<b>IZS</b>	0	0	0	0	6	2.0	24	
25		0	<b>P</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	<b>IZS</b>	<b>IZS</b>	0	0	0	0	0	0	0.0	23	
26		0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	<b>IZS</b>	1	1	1	<b>P</b>	1	1	1	0.3	23		
27		0	0	0	0	0	1	0	0	<b>C</b>	<b>C</b>	<b>C</b>	0	0	0	0	0	<b>IZS</b>	0	0	0	0	0	0	0	0	1	0.1	24	
28		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	<b>IZS</b>	0	0	0	0	0	0	0	0	0	0	0.0	24	
29		0	0	0	0	0	0	0	0	0	0	0	0	0	0	<b>IZS</b>	0	0	0	0	0	0	0	0	0	0	0	0.0	24	
30		0	0	0	0	0	0	0	0	<b>C</b>	<b>C</b>	<b>C</b>	<b>C</b>	<b>C</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24	
31		0	0	0	0	0	0	0	0	0	0	0	0	<b>IZS</b>	1	<b>C</b>	<b>C</b>	0	0	0	0	0	0	0	0	1	0.0	24		
HOURLY MAX		3	3	2	2	2	3	6	5	5	4	5	3	3	2	2	1	10	1	1	2	1	1	3	3					
HOURLY AVG		0.3	0.4	0.4	0.4	0.3	0.4	0.5	0.5	0.5	0.4	0.4	0.3	0.3	0.3	0.2	0.1	0.6	0.1	0.2	0.2	0.1	0.1	0.3	0.3					

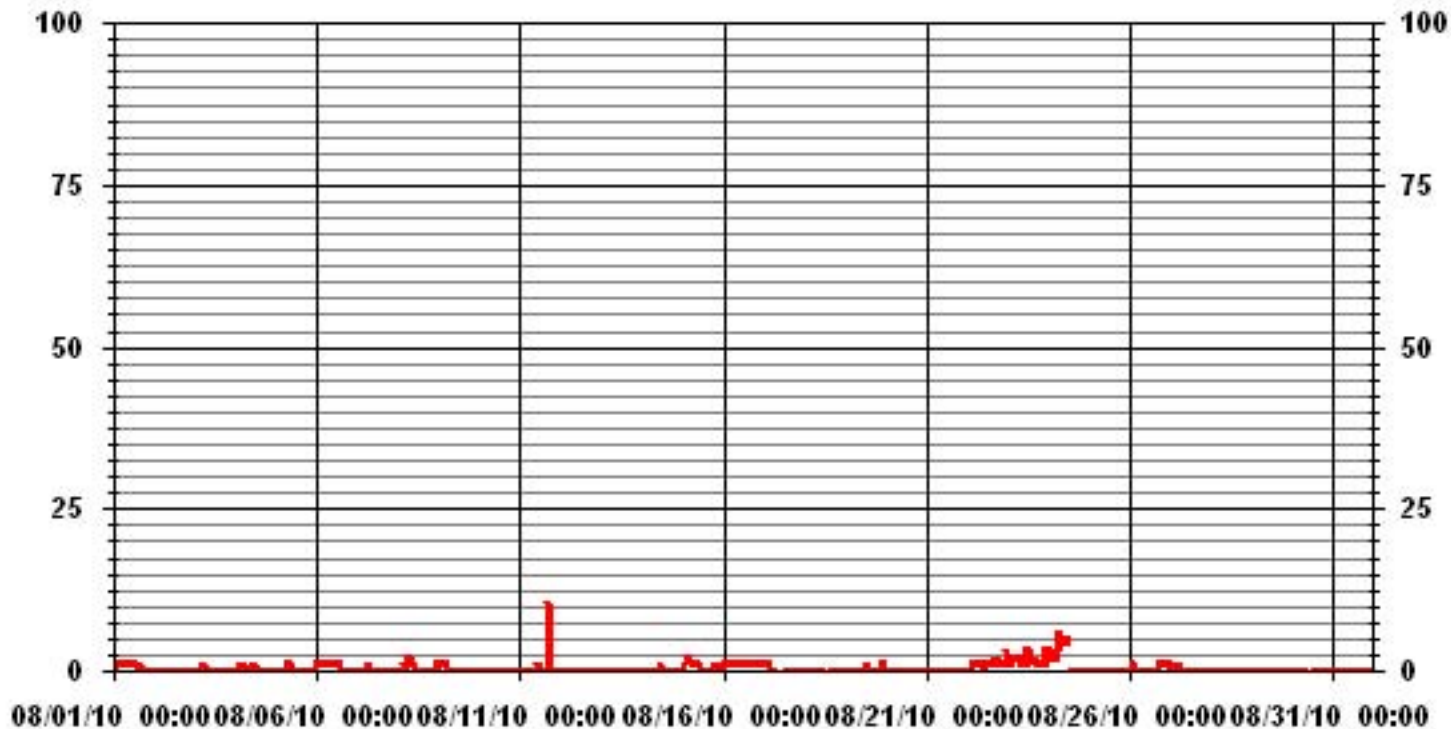
**STATUS FLAG CODES**

S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	- MISSING DATA
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE

**MONTHLY SUMMARY**

NUMBER OF NON-ZERO READINGS:	150				
MAXIMUM INSTANTANEOUS VALUE:	10	PPB	@ HOUR(S)	16	ON DAY(S) 11
IZS CALIBRATION TIME:	31	HRS	OPERATIONAL TIME:	732	HRS
MONTHLY CALIBRATION TIME:	18	HRS			
STANDARD DEVIATION:	0.79				

### 01 Hour Averages





LICA31  
H2S\_ / WDR Joint Frequency Distribution (Percent)

August 2010

Distribution By % Of Samples

Logger Id : 31  
Site Name : LICA31  
Parameter : H2S\_  
Units : PPB

Wind Parameter : WDR  
Instrument Height : 10 Meters

	Direction																
Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 3	6.34	5.62	4.90	8.08	4.47	3.60	1.87	4.47	4.61	6.06	11.54	5.48	11.97	11.25	4.61	5.05	100.00
< 10	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
< 50	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
>= 50	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
Totals	6.34	5.62	4.90	8.08	4.47	3.60	1.87	4.47	4.61	6.06	11.54	5.48	11.97	11.25	4.61	5.05	

Calm : .00 %

Total # Operational Hours : 693

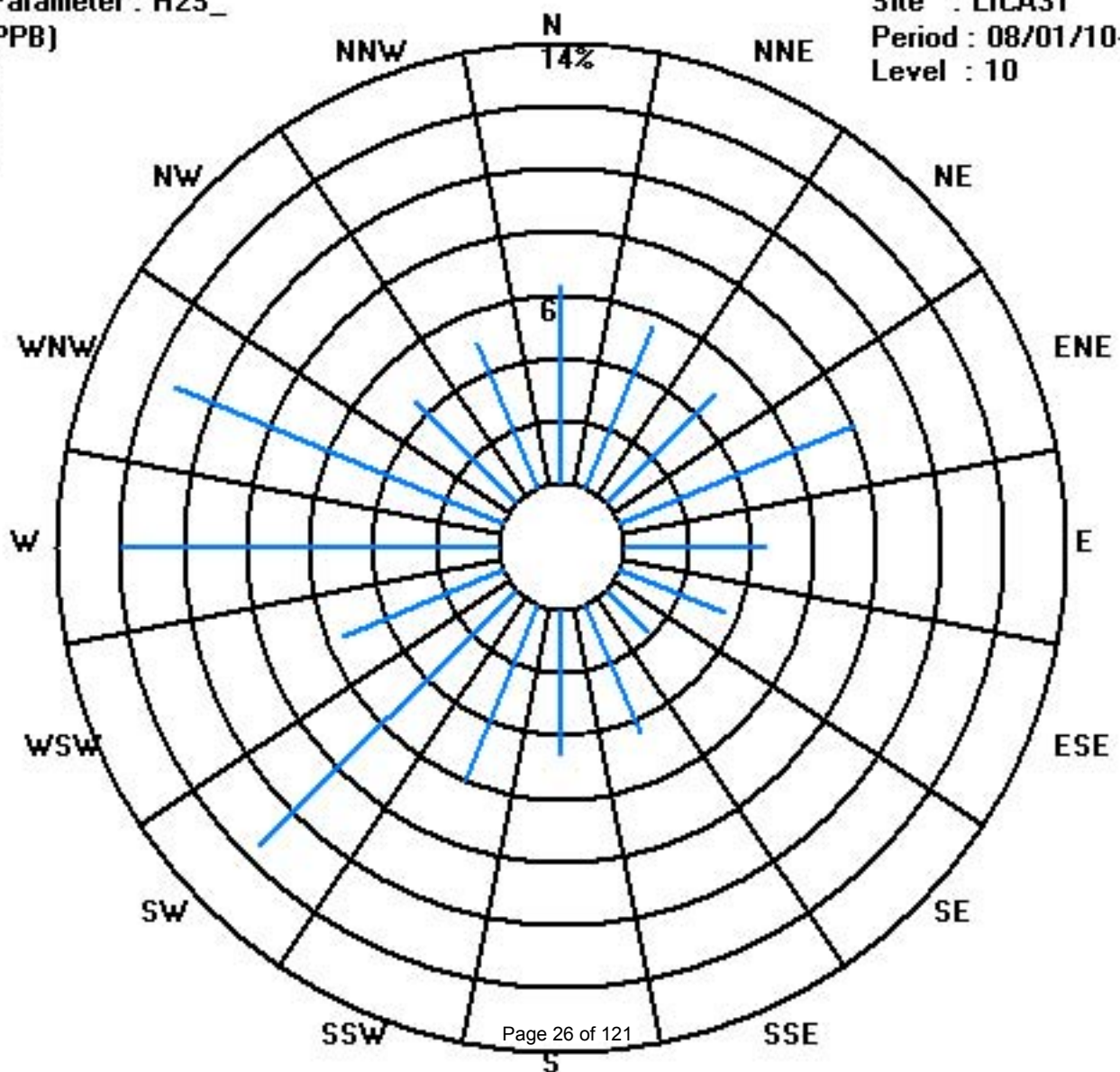
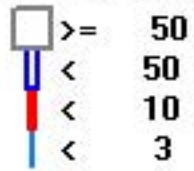
Distribution By Samples

	Direction																
Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 3	44	39	34	56	31	25	13	31	32	42	80	38	83	78	32	35	693
< 10																	
< 50																	
>= 50																	
Totals	44	39	34	56	31	25	13	31	32	42	80	38	83	78	32	35	

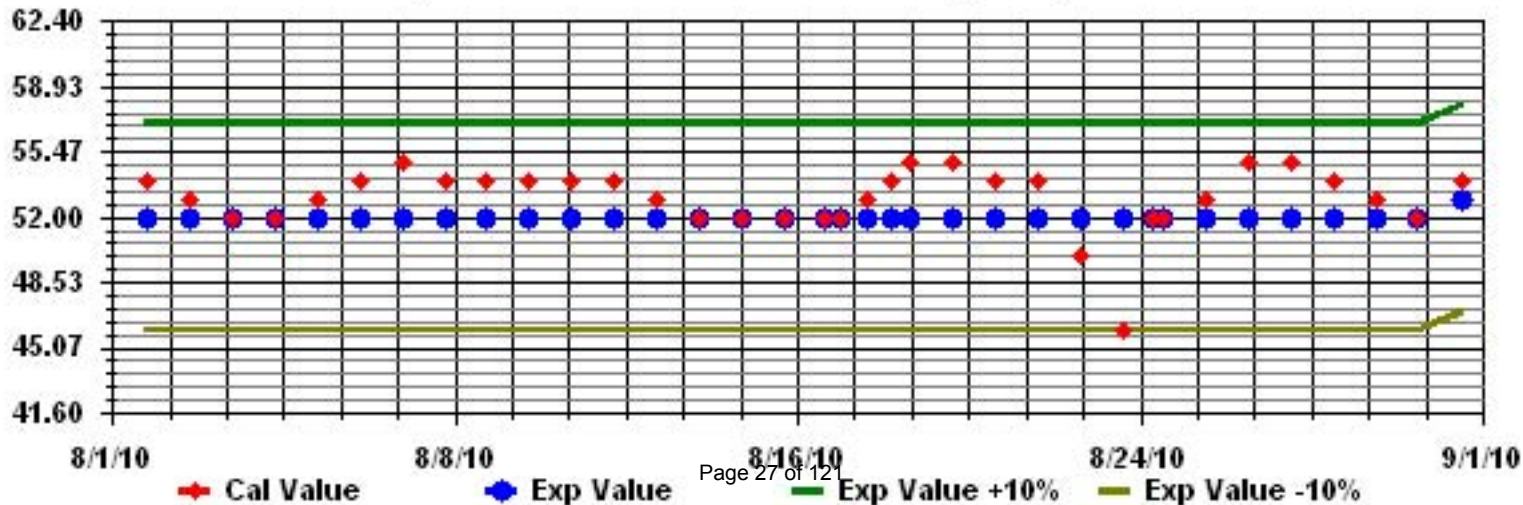
Calm : .00 %

Total # Operational Hours : 693

Class Limits (PPB)



Calibration Graph for Site: LICA31 Parameter: H2S\_ Sequence: H2S Phase: SPAll



# Total Hydrocarbons

# LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - ST. LINA

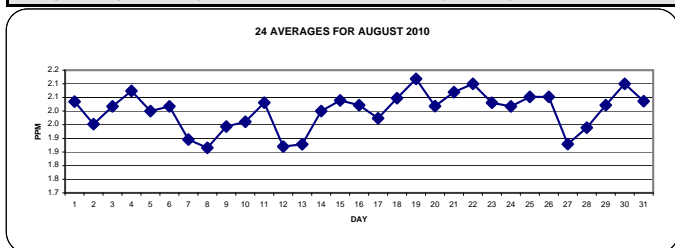
AUGUST 2010

## TOTAL HYDROCARBONS hourly averages in ppm

MST		0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR		
DAY	HOURLY MAX	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.	
1		2.1	2.1	2.2	<b>2.8</b>	2.3	2.3	2.1	2.1	2	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	<b>IZS</b>	1.9	1.9	2	2	<b>2.8</b>	2.0	24	
2		2	2	2	2	2	2.1	2.1	2	2	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	<b>IZS</b>	1.9	2	1.9	1.9	1.9	2.1	2.0	24	
3		1.9	2.1	1.9	1.9	1.9	1.9	1.9	2	2	2	2	2	2	2	2	2	2	<b>IZS</b>	2.1	2.2	2.4	2.1	2.1	2	2.4	2.0	24	
4		2	2	2.2	2.3	2.3	2.3	2.1	2.1	2.1	2	2	2	2	2	2	<b>IZS</b>	2.1	2.2	1.9	2	2	2	2	2	2.3	2.1	24	
5		2.1	2	2.2	2.3	2	2.2	2.2	2.1	2.1	2	1.9	1.9	1.9	1.9	<b>IZS</b>	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2	2.3	2.0	24	
6		2	2.1	2.1	2.1	2.2	2.3	2.3	2.3	2.1	2	2	1.9	1.9	1.9	<b>IZS</b>	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2	2.3	2.0	24	
7		2.1	2	2	2	2	2	2	2	1.9	1.9	1.9	1.8	1.8	<b>IZS</b>	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	2.1	1.9	24	
8		1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	<b>IZS</b>	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.8	1.9	1.8	1.9	1.9	1.9	1.9	24	
9		2	1.9	2	2	2	2	2	2	2	1.9	1.9	<b>IZS</b>	1.9	1.8	1.9	1.8	1.8	1.8	1.9	1.9	2	2	2.1	2.1	1.9	1.9	24	
10		2.1	1.9	1.9	1.9	1.9	1.9	1.9	2.2	2.3	2.1	<b>IZS</b>	1.9	1.9	1.8	1.9	1.9	2	1.9	1.9	1.9	1.9	2	2	2	2.3	2.0	24	
11		2	2	2	2	2.3	2.1	2.2	2.2	2	<b>IZS</b>	1.9	1.9	1.9	<b>P</b>	<b>P</b>	<b>N</b>	<b>N</b>	<b>N</b>	<b>N</b>	<b>N</b>	<b>N</b>	<b>N</b>	<b>N</b>	<b>N</b>	2.3	2.0	14	
12		<b>N</b>	<b>N</b>	<b>N</b>	<b>N</b>	<b>N</b>	<b>N</b>	<b>N</b>	<b>N</b>	<b>N</b>	<b>N</b>	<b>M</b>	<b>C</b>	<b>C</b>	2	1.8	1.8	1.8	1.8	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.9	12	
13		1.8	1.8	1.8	1.8	1.8	1.8	1.8	<b>IZS</b>	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2	1.9	1.9	2	2.0	1.9	24	
14		2	2	2	2	2	2	2	2	1.9	1.9	2	2	2	2	2	2	2	1.9	2	2	2.1	2	2	2.2	2.2	2.0	24	
15		2.2	2	2.1	2.2	2.2	<b>IZS</b>	2.2	2.1	2.1	2	2	2	1.9	2	2	2	1.9	1.9	2	2	2.1	2	2	2	2.2	2.0	24	
16		2.1	2.1	2.1	2.1	<b>IZS</b>	2.1	2	2.1	2.1	2	2	2	2	2	2	2.1	2	2	1.9	1.9	2	2	1.9	2	2.1	2.0	24	
17		2	2	1.9	<b>IZS</b>	2	2	2	2	1.9	<b>C</b>	<b>C</b>	<b>C</b>	<b>C</b>	2	2	2	2	2	1.9	1.9	1.9	2	2	2	2.0	2.0	24	
18		2	2.1	<b>IZS</b>	2	2	2	2	2.1	2.2	2.3	2.4	2.2	<b>P</b>	<b>P</b>	<b>C</b>	<b>C</b>	1.9	1.9	1.9	1.9	2	2	2	2	2.4	2.0	22	
19		2	<b>IZS</b>	2	2	2.1	2	2	2	2	2	2	2.1	2.5	<b>C</b>	2.2	2.1	2.2	2.1	2	2.2	2.3	2.3	2.2	2.3	2.5	2.1	24	
20		<b>IZS</b>	2.2	2.1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2.1	2	2	2	2	<b>IZS</b>	2.2	2.0	24
21		2.1	2	2.1	2.1	2.2	2.1	2.1	2.2	2.2	2.2	2.1	2.1	2.1	2	2	2	2	2	2	2	2	2	2	2	<b>IZS</b>	2	2.2	24
22		2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2	2.1	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2	2	2.2	2.2	<b>IZS</b>	2.1	2.2	2.2	2.1	24	
23		2.2	2.1	2.1	2.1	2.1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2.2	2.0	24
24		2	2	2	2	2	2	2	2	2.1	2.1	2.1	2.1	2	2	2	2	2	2	2	2	<b>IZS</b>	2	2	2	2	2.1	2.0	24
25		2	2	2	2	2.1	2.1	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2	2	2	2	2	<b>IZS</b>	2	2	2	2	2	2.2	2.1	24
26		2	2	2.1	2.3	2.3	2.2	2.1	2.2	2.1	2	2	2.1	2.1	2.1	2	2	2	<b>IZS</b>	2	2	1.9	1.9	1.9	1.9	1.9	2.3	2.1	24
27		1.9	1.8	1.8	1.8	1.8	1.9	1.9	1.9	1.9	<b>C</b>	<b>C</b>	1.9	1.9	<b>C</b>	<b>C</b>	1.9	<b>IZS</b>	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	24	
28		1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	<b>IZS</b>	2	2	2	2	2	2	2	2	2.1	2.1	1.9	24
29		2	2.1	2.1	2	2	2	2	2	2	2	2	2	2	2	<b>IZS</b>	2	2	2	2	2	2	2	2.1	2.1	2.1	2.1	2.0	24
30		2.1	2.1	2.1	2.2	2.2	2.2	2.2	2.2	2.2	2.1	2	2	2	<b>C</b>	<b>C</b>	<b>C</b>	<b>C</b>	2	2	2	2	2.1	2.1	2.1	2.2	2.1	24	
31		2.2	2.1	2.1	2.2	2.2	2.2	2.1	2.1	2.1	2	2	2	<b>IZS</b>	1.9	1.9	<b>C</b>	1.9	1.9	2	2	2	1.9	2	2	2.2	2.0	24	
HOURLY MAX		2.2	2.2	2.2	2.8	2.3	2.3	2.3	2.3	2.3	2.3	2.4	2.2	2.5	2.1	2.2	2.1	2.2	2.1	2.2	2.2	2.4	2.3	2.2	2.3				
HOURLY AVG		2.0	2.0	2.0	2.1	2.1	2.1	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	2.0	2.0	2.0	2.0	2.0	2.0				

### STATUS FLAG CODES

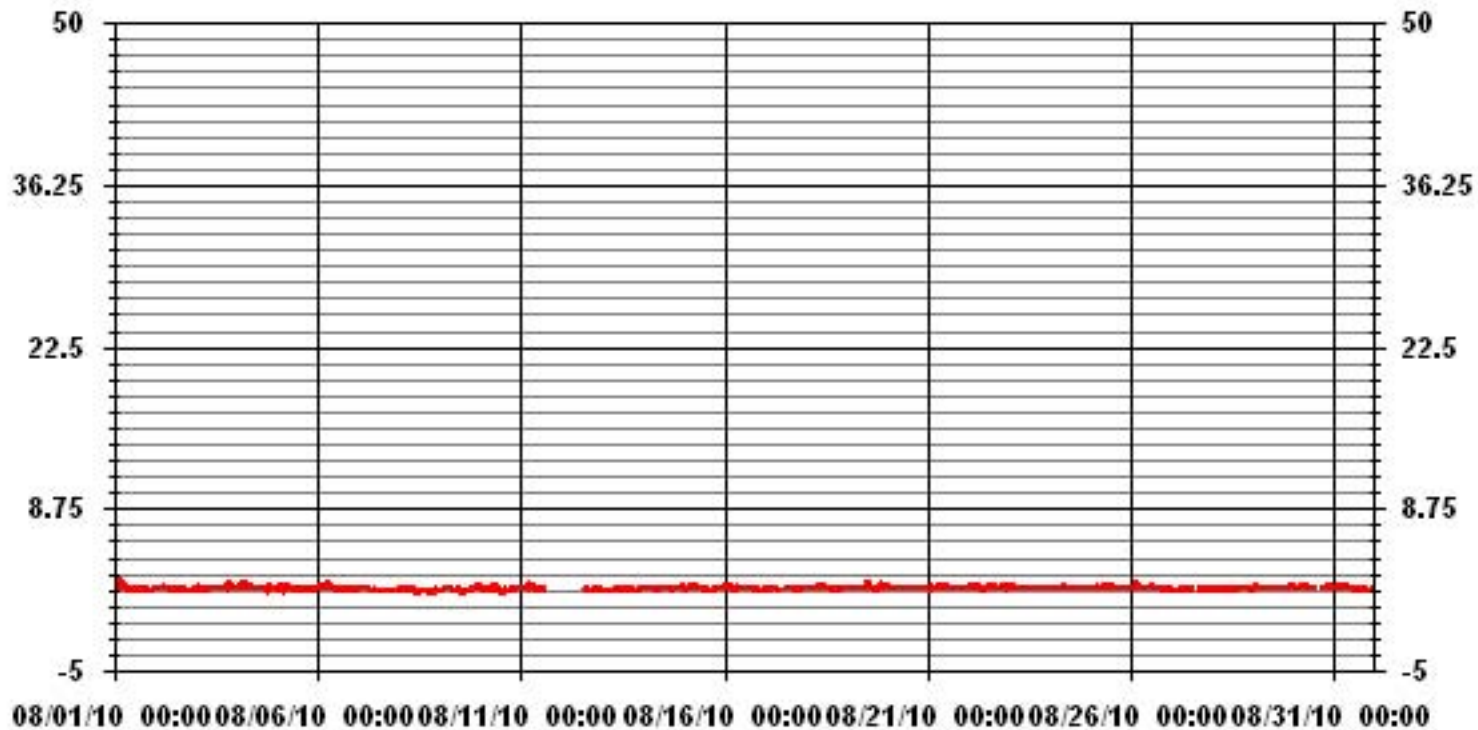
S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	- MAINTENANCE
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE



### MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:	672
MAXIMUM 1-HR AVERAGE:	2.8 PPM @ HOUR(S) 3 ON DAY(S) 1
MAXIMUM 24-HR AVERAGE:	2.1 PPM ON DAY(S) VAR VAR- VARIOUS
IZS CALIBRATION TIME:	30 HRS
MONTHLY CALIBRATION TIME:	18 HRS
STANDARD DEVIATION:	0.12
OPERATIONAL TIME:	720 HRS
AMD OPERATION UPTIME:	96.8 %
MONTHLY AVERAGE:	2.00 PPM

### 01 Hour Averages



— LICA31 THC PPM

## LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - ST. LINA

AUGUST 2010

### TOTAL HYDROCARBONS MAX      instantaneous maximum in ppr

MST		0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR		
HOURLY MAX	HOURLY AVG.	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.	
DAY																													
1		4.1	3	4.3	9.7	<b>9.8</b>	5.4	2.1	3.7	2.1	2	1.9	2.7	2.1	2.2	1.9	1.9	1.9	2	1.9	<b>IZS</b>	4.8	2	2.6	2.7	<b>9.8</b>	3.3	24	
2		2.4	2.5	2.6	2.3	2.3	3.1	3	2.6	2.6	2.4	2.4	2.1	2.2	2	2.4	2.4	2.3	2	<b>IZS</b>	2.1	2.8	2.2	2	2.1	3.1	2.4	24	
3		2.2	3	2.4	1.9	2.2	1.9	2.1	2.4	2.7	2.2	2.1	2.2	2.2	2	2.2	2.2	2	<b>IZS</b>	2.4	3.3	4.2	3	3.3	2.4	4.2	2.5	24	
4		2.4	2.2	3.1	3.6	3	3.8	2.3	2.7	2.2	2.3	2.4	2.3	2.2	2.3	2.6	<b>IZS</b>	3.6	3.5	2.1	3.1	2.5	2	2.2	3.8	2.6	24		
5		2.9	2.2	3.2	3.7	2	3.9	4.4	2.2	2.1	2.2	1.9	2.1	1.9	2.2	1.9	<b>IZS</b>	1.9	1.9	1.9	1.9	1.9	2	1.9	2	4.4	2.4	24	
6		2	2.1	<b>P</b>	2.1	2.2	2.3	2.4	2.3	2.2	2.1	2	1.9	1.9	1.9	<b>IZS</b>	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.1	2.1	2.4	2.0	23
7		3.1	2	2	2.1	2.1	2	2	2	2	1.9	1.9	2.1	1.9	<b>IZS</b>	1.8	1.9	2	2	1.8	2.3	2.9	2	1.9	2.2	3.1	2.1	24	
8		3.1	2.2	<b>P</b>	1.9	1.9	1.9	1.9	2	2.2	1.9	1.9	2	<b>IZS</b>	1.9	1.9	1.9	1.9	2.2	3	2.3	2.1	1.9	1.9	1.9	3.1	2.1	23	
9		2	2	2	2	2.1	2	2.4	2.2	2	1.9	1.9	<b>IZS</b>	1.9	2.2	4.9	1.8	1.9	1.9	1.9	2	2.1	2.2	2.2	2.2	4.9	2.2	24	
10		2.2	2.7	1.9	1.9	2.1	1.9	2.1	2.3	2.3	2.3	<b>IZS</b>	2	1.9	1.9	2	2	2.1	2	1.9	1.9	2	2	2.1	2.2	2.7	2.1	24	
11		2.2	2.1	2.1	2.1	9.5	2.1	2.4	2.4	2	<b>IZS</b>	1.9	2	2	1.9	<b>P</b>	<b>P</b>	<b>N</b>	<b>N</b>	<b>N</b>	<b>N</b>	<b>N</b>	<b>N</b>	<b>N</b>	<b>N</b>	<b>N</b>	9.5	2.7	14
12		<b>N</b>	<b>N</b>	<b>N</b>	<b>N</b>	<b>N</b>	<b>N</b>	<b>N</b>	<b>N</b>	<b>N</b>	<b>N</b>	<b>N</b>	<b>N</b>	<b>M</b>	<b>C</b>	<b>C</b>	1.9	1.8	1.8	1.9	2.3	2.3	2.4	2.1	2.2	2.4	2.1	12	
13		1.9	2	2	1.8	1.8	1.9	1.8	<b>IZS</b>	1.9	2	1.9	1.9	1.9	2	1.9	1.9	2.2	2.1	2.1	2.1	2.1	2.2	2	2	2	2.2	2.0	24
14		2	2.1	2	2	2.1	2	<b>IZS</b>	2.1	2	2	2.1	2.2	2.2	2.2	2.1	2.2	2.2	2.1	2.2	2.1	2.2	2	3.9	2	3.8	4.8	2.4	24
15		3.4	2.9	2.2	2.2	2.4	<b>IZS</b>	2.2	2.5	2.3	2.4	2	2.1	2	2.1	2.3	2.3	2	1.9	2	2	2.3	2	2	2.1	3.4	2.2	24	
16		2.1	2.1	2.1	2.1	<b>IZS</b>	2.1	2.1	2.1	2.1	2	2	2	2	2	2.1	2.1	2.1	2	2	2	2	2	2	2	2	2.1	2.0	24
17		2	2	2	<b>IZS</b>	2.2	2	2	<b>P</b>	2	<b>P</b>	<b>C</b>	<b>C</b>	<b>C</b>	4.2	2	2.9	2.1	2	2	2	2	2	2	2	2	4.2	2.2	22
18		2	2.1	<b>IZS</b>	2.1	2.1	2	2	2.2	2.3	2.4	2.5	2.4	<b>P</b>	<b>P</b>	<b>C</b>	<b>C</b>	1.9	1.9	1.9	2	2	2	2	2	2	2.5	2.1	22
19		2	<b>IZS</b>	2	2.5	2.8	2.3	2.9	2.1	2	2.1	2.5	2.6	<b>C</b>	<b>C</b>	<b>C</b>	2.3	3	2.1	2.1	3.6	4.3	2.3	2.3	2.3	4.3	2.5	24	
20		<b>IZS</b>	2.3	2.1	2.1	2	2	2	2.3	2.8	2.1	2.2	2.4	2.5	2.5	2.4	2.4	2.2	6.2	2.5	2	2	3.3	<b>IZS</b>	<b>IZS</b>	6.2	2.5	24	
21		2.3	2.1	2.8	2.2	2.2	2.2	2.2	2.3	2.3	2.3	2.2	2.2	2.1	2	2	2	2	2	2	2.1	2.1	2.1	2.1	<b>IZS</b>	2	2.8	2.2	24
22		2.1	2.1	2.2	2.2	2.2	2.2	2.3	2.1	2.1	2.1	2.3	2.2	2.6	2.7	2.2	2.2	2.1	2.1	2.2	3.9	5.4	<b>IZS</b>	2.8	2.9	5.4	2.5	24	
23		3.1	2.6	2.3	2.4	2.4	2.3	2.6	2.4	2.1	2.3	2.2	2.3	2.4	2.3	2.4	2.2	2.2	2.3	2.3	2.1	<b>IZS</b>	2.4	2	2	3.1	2.3	24	
24		2	2	2	2	2	2	2.1	2.2	2.1	2.1	2.1	2	2	2	2	2	2	2	2	2	<b>IZS</b>	2	2	2	2.1	2.2	2.0	24
25		2	<b>P</b>	2.2	2	2.1	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.4	2.4	2.4	2.2	3.7	2.2	<b>IZS</b>	2	2	2.2	2.2	2.1	3.7	2.2	23	
26		2.1	2	2.2	2.3	2.3	2.3	2.2	2.1	2	2	2	2.1	2.1	2.1	2.1	2	2	<b>IZS</b>	2	2	2	2	<b>P</b>	2	2.2	2.3	2.1	23
27		2.2	2.2	1.9	1.9	1.9	1.9	1.9	1.9	1.9	<b>C</b>	<b>C</b>	1.9	1.9	<b>C</b>	<b>C</b>	2	<b>IZS</b>	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.2	1.9	24
28		1.9	1.9	1.9	2	2.1	2.2	2	2	2	2	2.1	2	2.1	2	2.3	<b>IZS</b>	2.2	2.1	2.2	2.1	2.9	2.2	2.3	2.4	2.9	2.1	24	
29		2.5	2.8	2.8	3.4	2.7	2.5	2.7	2	2	2	2	2	2	2.4	<b>IZS</b>	2	2	2	2	2	2	2	2.1	2.1	2.2	3.4	2.3	24
30		2.1	2.1	2.2	2.3	2.3	2.3	2.3	2.3	2.6	2.3	2.1	2.1	2.2	<b>C</b>	<b>C</b>	<b>C</b>	<b>C</b>	<b>C</b>	<b>C</b>	2	2.1	2.3	2.3	2.2	2.1	2.6	2.2	24
31		4	2.5	2.2	2.2	2.2	2.2	2.1	2.1	2.1	2	2	2	<b>IZS</b>	2.1	<b>C</b>	<b>C</b>	1.9	2	3.5	2	2	2	2.1	2.1	4	2.3	24	
HOURLY MAX		4	3	4	10	10	5	4	4	3	2	3	3	3	4	5	3	4	4	6	4	5	3	4	5				
HOURLY AVG		2.4	2.3	2.3	2.5	2.7	2.4	2.3	2.3	2.2	2.1	2.1	2.1	2.1	2.2	2.3	2.1	2.1	2.1	2.3	2.2	2.6	2.1	2.2	2.3				

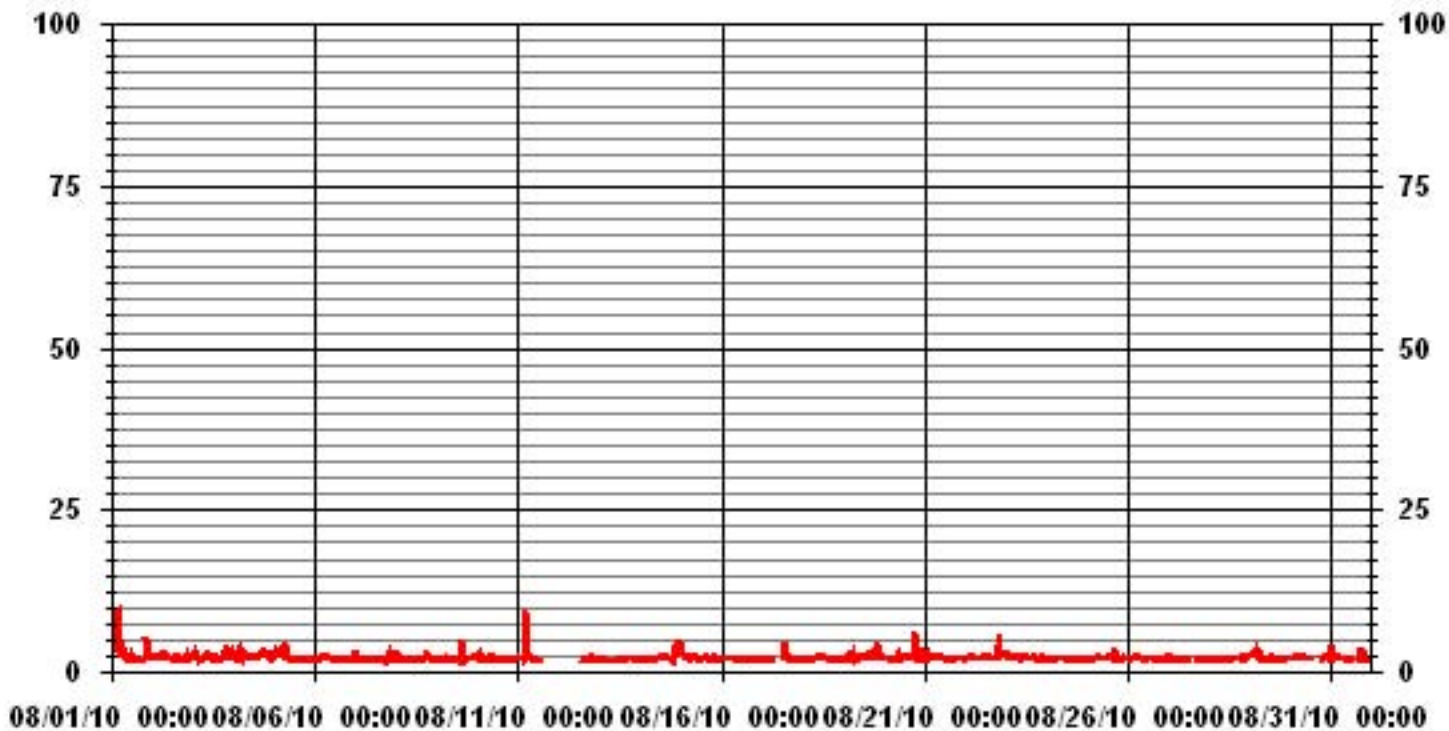
#### STATUS FLAG CODES

S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	- MISSING DATA
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE
BB	- BELOW BACKGROUND OF 1.5 PPM		

#### MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:	661					
MAXIMUM INSTANTANEOUS VALUE:	9.8	PPM	@ HOUR(S)	4	ON DAY(S)	1
IZS CALIBRATION TIME:	30	HRS	OPERATIONAL TIME:	714 HRS		
MONTHLY CALIBRATION TIME:	22 HRS					
STANDARD DEVIATION:	0.70					

### 01 Hour Averages





LICA31  
 THC / WDR Joint Frequency Distribution (Percent)

August 2010

Distribution By % Of Samples

Logger Id : 31  
 Site Name : LICA31  
 Parameter : THC  
 Units : PPM

Wind Parameter : WDR  
 Instrument Height : 10 Meters

	Direction																
Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 3.0	6.25	5.80	4.76	8.33	4.61	4.01	2.08	4.76	4.76	5.50	11.16	5.50	11.90	11.60	4.46	4.46	100.00
< 10.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
< 50.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
>= 50.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
Totals	6.25	5.80	4.76	8.33	4.61	4.01	2.08	4.76	4.76	5.50	11.16	5.50	11.90	11.60	4.46	4.46	

Calm : .00 %

Total # Operational Hours : 672

Distribution By Samples

	Direction																
Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 3.0	42	39	32	56	31	27	14	32	32	37	75	37	80	78	30	30	672
< 10.0																	
< 50.0																	
>= 50.0																	
Totals	42	39	32	56	31	27	14	32	32	37	75	37	80	78	30	30	

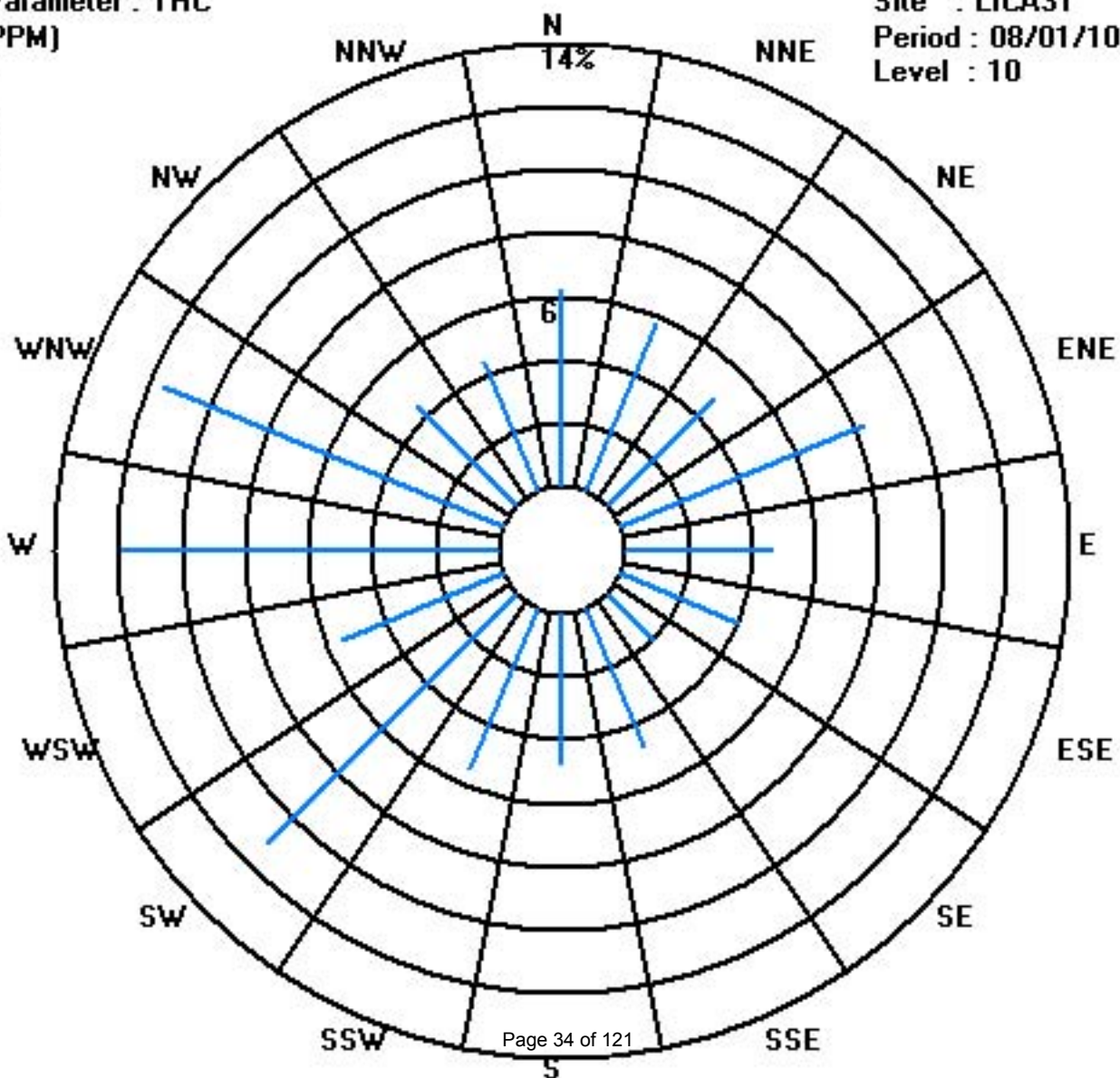
Calm : .00 %

Total # Operational Hours : 672

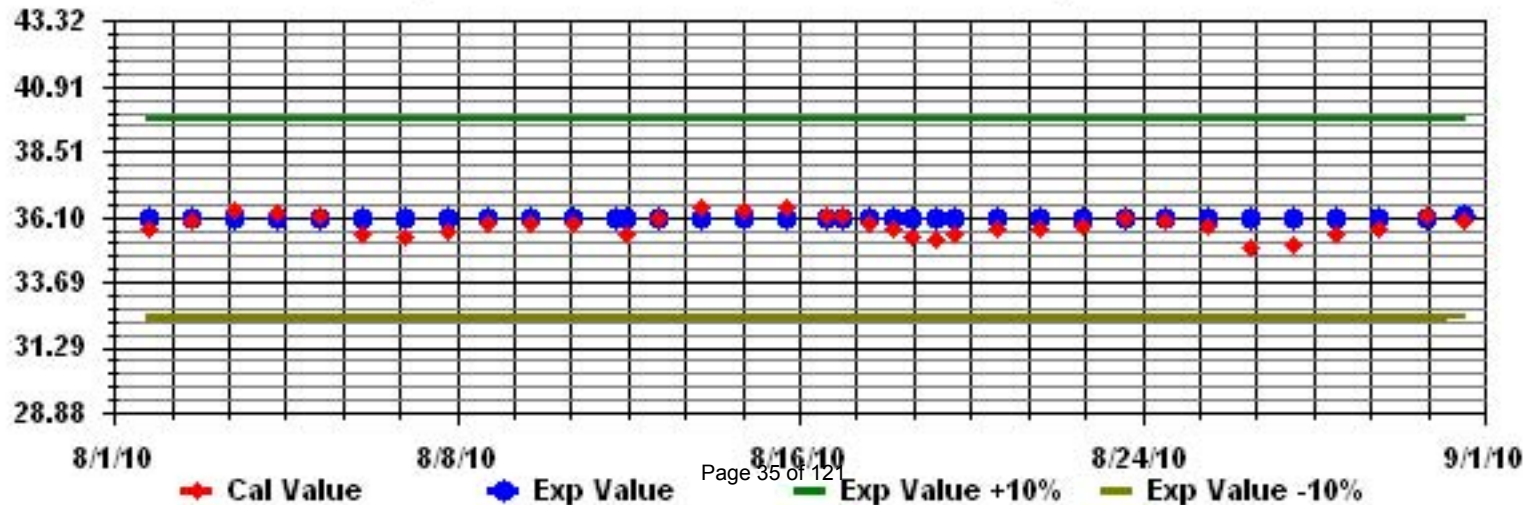
Class Limits (PPM)

Period : 08/01/10-08/31/10

Level : 10



Calibration Graph for Site: LICA31 Parameter: THC Sequence: THC Phase: SPAll



# Ozone

# LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - ST. LINA

AUGUST 2010

OZONE (O<sub>3</sub>) hourly averages in ppb

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	RDGS.	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.		
DAY																												
1	25	24	19	16	18	14	11	14	19	25	35	36	36	38	40	37	40	40	38	<b>IZS</b>	32	30	30	36	40	28.4	24	
2	39	36	33	31	27	22	20	21	24	27	29	29	29	30	30	30	28	28	<b>IZS</b>	23	21	21	22	21	39	27.0	24	
3	19	18	17	21	21	16	12	10	13	20	23	27	26	32	34	34	35	<b>IZS</b>	31	30	28	26	24	21	35	23.4	24	
4	21	20	17	15	14	13	13	13	20	25	27	27	28	31	32	28	<b>IZS</b>	28	28	26	26	23	22	20	32	22.5	24	
5	19	18	16	17	15	14	13	12	18	23	25	26	27	28	27	<b>IZS</b>	29	32	32	30	31	30	30	28	32	23.5	24	
6	27	27	25	33	35	34	35	37	40	46	51	52	<b>53</b>	51	<b>IZS</b>	47	45	45	43	39	35	33	31	31	<b>53</b>	<b>38.9</b>	24	
7	30	29	27	28	28	25	20	22	26	30	32	32	31	<b>IZS</b>	28	27	27	27	27	25	24	25	27	25	32	27.0	24	
8	24	26	20	18	20	21	21	19	21	23	23	23	<b>IZS</b>	27	23	24	23	23	23	21	21	20	21	15	27	21.7	24	
9	13	16	15	13	14	17	17	16	18	21	24	<b>IZS</b>	31	36	39	39	46	48	42	37	34	36	31	29	48	27.5	24	
10	31	33	31	30	27	25	25	19	17	27	<b>IZS</b>	32	33	33	33	28	24	31	34	30	29	20	21	20	34	27.5	24	
11	23	23	24	17	23	22	17	18	24	<b>IZS</b>	35	37	35	31	<b>P</b>	<b>P</b>	35	38	37	31	34	26	27	31	38	28.0	22	
12	28	27	28	26	24	18	16	16	<b>IZS</b>	22	29	24	32	30	<b>C</b>	40	37	35	31	31	29	22	20	16	40	26.4	24	
13	15	16	24	25	19	15	15	<b>IZS</b>	16	19	20	19	19	20	23	22	21	18	20	18	15	17	19	19	25	18.9	24	
14	17	17	16	17	17	20	<b>IZS</b>	19	20	22	23	23	24	24	25	24	25	23	23	20	21	20	21	18	25	20.8	24	
15	18	20	14	5	7	<b>IZS</b>	6	12	15	17	19	23	25	27	29	29	26	26	24	21	20	25	26	24	29	19.9	24	
16	20	19	18	18	<b>IZS</b>	19	20	18	14	20	25	27	29	32	28	30	28	23	26	23	21	18	20	16	32	22.3	24	
17	14	15	17	<b>IZS</b>	17	13	13	16	19	21	25	<b>C</b>	<b>C</b>	29	31	32	31	31	30	26	24	24	21	19	32	22.3	24	
18	17	15	<b>IZS</b>	12	14	18	19	15	14	15	18	22	<b>P</b>	<b>P</b>	<b>C</b>	<b>C</b>	27	26	25	24	25	23	20	20	27	19.4	22	
19	18	<b>IZS</b>	13	12	11	10	11	13	10	14	14	17	22	21	25	31	32	28	22	25	23	21	19	15	32	18.6	24	
20	<b>IZS</b>	22	21	23	23	21	19	20	21	24	25	25	25	26	28	29	28	26	25	25	26	27	25	<b>IZS</b>	29	24.3	24	
21	14	16	23	21	15	17	21	15	20	25	30	31	32	31	31	32	34	31	25	22	20	18	<b>IZS</b>	19	34	23.6	24	
22	19	16	14	14	14	13	13	12	16	18	19	21	22	24	25	26	24	22	18	18	17	<b>IZS</b>	15	11	26	17.9	24	
23	14	15	14	19	20	19	20	21	22	23	24	26	24	23	25	26	24	21	19	19	<b>IZS</b>	15	14	15	26	20.1	24	
24	17	18	19	20	18	17	14	12	11	11	16	25	28	33	38	33	35	33	33	<b>IZS</b>	32	32	27	23	38	23.7	24	
25	22	22	23	25	25	22	19	21	22	23	25	27	33	38	36	35	36	33	<b>IZS</b>	28	28	29	26	25	38	27.1	24	
26	22	23	21	17	16	17	18	17	21	23	24	33	35	35	36	37	37	<b>IZS</b>	32	28	25	30	30	29	37	26.3	24	
27	29	26	23	25	26	27	24	20	19	24	29	<b>C</b>	<b>C</b>	25	24	22	<b>IZS</b>	24	24	23	21	22	23	22	29	23.9	24	
28	21	21	21	21	21	22	22	24	25	25	24	24	24	24	23	<b>IZS</b>	19	19	18	16	16	15	14	13	25	20.5	24	
29	13	12	11	10	10	10	12	13	13	13	14	15	17	15	<b>IZS</b>	18	18	16	16	15	14	12	9	7	18	13.2	24	
30	10	7	6	6	6	4	4	5	11	15	20	23	21	<b>IZS</b>	19	20	19	19	17	16	16	16	15	23	13.5	24		
31	16	14	15	14	13	11	10	12	15	21	24	<b>C</b>	<b>C</b>	<b>C</b>	<b>C</b>	<b>C</b>	<b>C</b>	30	30	29	30	27	26	26	30	20.2	24	
HOURLY MAX	39	36	33	33	35	34	35	37	40	46	51	52	53	51	40	47	46	48	43	39	35	36	31	36				
HOURLY AVG	20.5	20.4	19.5	19.0	18.6	17.9	16.7	16.7	18.8	22.1	25.0	26.9	28.5	29.4	29.3	30.0	29.8	28.4	27.3	24.8	24.6	23.4	22.6	21.0				

### STATUS FLAG CODES

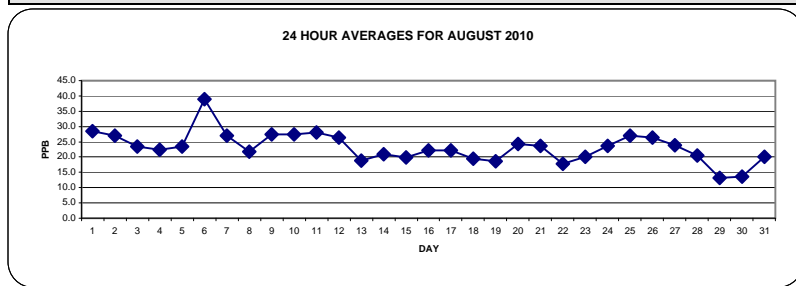
S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	- MISSING DATA
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE

OBJECTIVE LIMIT:

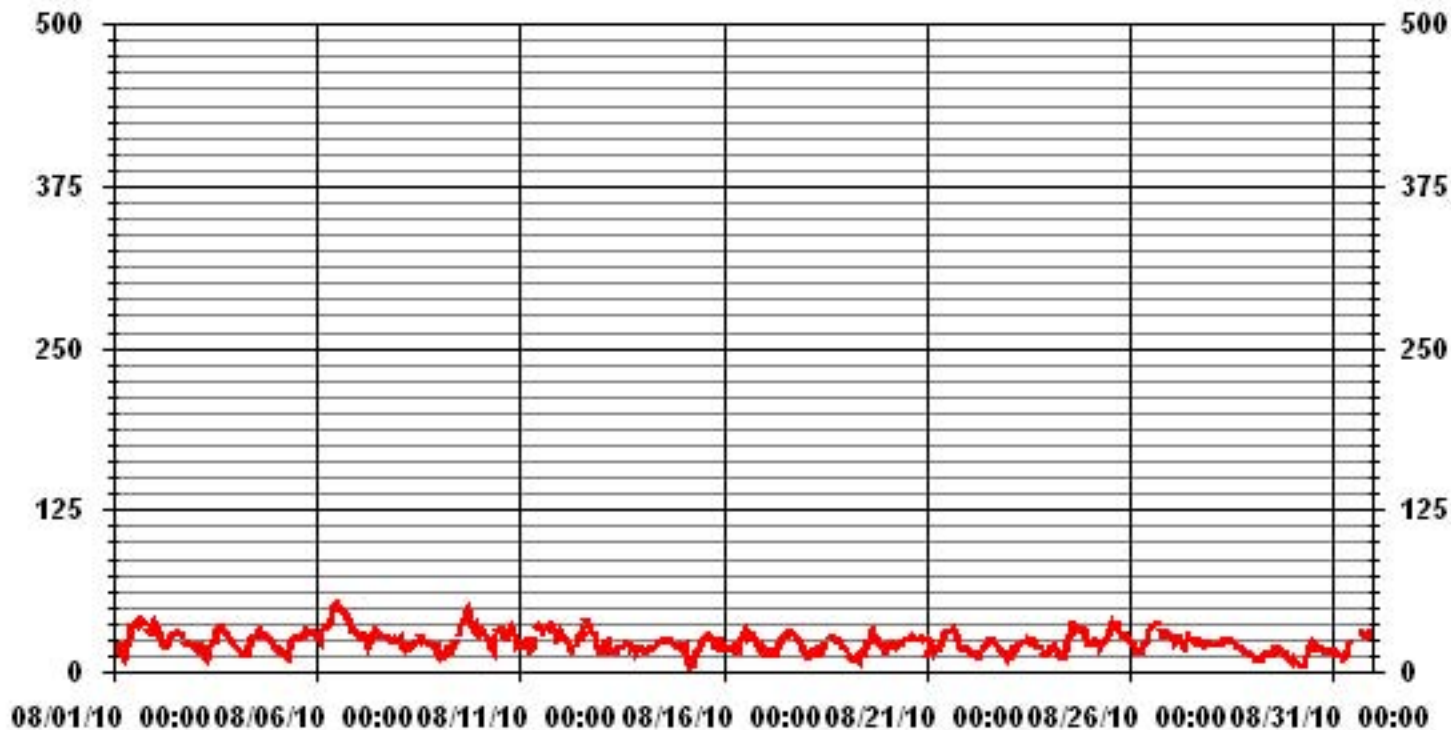
ALBERTA ENVIRONMENT: 1-HR 82 PPB

### MONTHLY SUMMARY

NUMBER OF 1-HR EXCEEDENCES:	0				
NUMBER OF NON-ZERO READINGS:	696				
MAXIMUM 1-HR AVERAGE:	53	PPB	@ HOUR(S)	12	ON DAY(S) 6
MAXIMUM 24-HR AVERAGE:	38.9	PPB			ON DAY(S) 6
					VAR-VARIOUS
IZS CALIBRATION TIME:	31	HRS	OPERATIONAL TIME:	740	HRS
MONTHLY CALIBRATION TIME:	13	HRS	AMD OPERATION UPTIME	99.5	%
STANDARD DEVIATION	7.73		MONTHLY AVERAGE	23.19	PPB



### 01 Hour Averages



— LICA31\_03\_ PPB

# LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - ST. LINA

AUGUST 2010

## OZONE MAX instantaneous maximum in ppb

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR		
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.	
DAY																												
1	27	28	21	22	20	18	15	18	27	31	45	39	38	42	43	42	42	42	42	<b>IZS</b>	34	31	34	38	45	32.1	24	
2	40	39	34	32	30	25	21	22	26	29	30	31	31	31	33	31	29	30	<b>IZS</b>	25	23	23	23	22	40	28.7	24	
3	21	19	20	23	23	18	16	12	17	35	37	41	40	39	43	44	47	<b>IZS</b>	34	37	30	34	29	25	47	29.7	24	
4	25	33	18	16	15	29	27	21	29	51	30	29	30	34	37	38	<b>IZS</b>	35	36	35	28	31	29	21	51	29.4	24	
5	27	26	19	33	23	20	17	14	31	25	27	28	29	30	39	<b>IZS</b>	35	34	38	32	39	32	31	34	39	28.8	24	
6	28	50	<b>P</b>	43	45	42	49	44	44	50	54	54	54	53	<b>IZS</b>	49	46	47	44	43	38	35	35	34	54	44.6	23	
7	33	32	29	29	29	29	23	24	29	32	33	44	37	<b>IZS</b>	29	29	28	33	28	27	33	27	28	28	44	30.1	24	
8	28	28	<b>P</b>	22	24	24	25	21	22	26	25	25	<b>IZS</b>	30	25	25	24	25	25	25	22	21	22	20	30	24.3	23	
9	21	19	18	18	16	18	18	19	20	24	27	<b>IZS</b>	37	41	41	44	51	<b>84</b>	47	39	45	51	40	36	<b>84</b>	33.7	24	
10	49	50	35	34	34	34	34	31	30	47	<b>IZS</b>	41	40	36	40	42	38	43	47	34	40	24	33	25	50	37.4	24	
11	37	37	39	24	31	31	29	25	45	<b>IZS</b>	51	41	45	39	<b>P</b>	<b>P</b>	<b>P</b>	42	50	46	37	37	30	33	<b>P</b>	51	37.5	21
12	39	34	31	28	26	26	30	26	<b>IZS</b>	29	33	31	37	<b>C</b>	<b>C</b>	48	43	43	39	37	37	34	27	24	48	33.4	24	
13	22	23	35	27	24	23	23	<b>IZS</b>	22	26	25	21	21	31	33	29	28	26	26	19	22	18	20	20	35	24.5	24	
14	25	25	17	25	20	22	<b>IZS</b>	30	23	24	31	31	32	25	32	45	25	25	25	38	34	31	35	33	45	28.4	24	
15	25	29	21	13	20	<b>IZS</b>	9	15	16	21	29	30	28	30	30	29	28	26	22	28	27	27	26	30	24.2	24		
16	21	20	19	19	<b>IZS</b>	21	21	20	18	26	27	29	32	35	32	32	37	28	34	31	24	21	26	24	37	26.0	24	
17	15	17	19	<b>IZS</b>	18	16	15	<b>P</b>	20	<b>P</b>	27	<b>C</b>	<b>C</b>	30	33	33	32	33	32	27	26	25	23	20	33	24.3	22	
18	18	16	<b>IZS</b>	13	16	20	20	18	15	16	20	23	<b>P</b>	<b>P</b>	<b>C</b>	<b>C</b>	29	27	27	26	26	24	21	20	29	20.8	22	
19	19	<b>IZS</b>	14	13	13	12	24	18	11	19	20	29	27	<b>P</b>	29	36	36	33	26	27	24	24	21	17	36	22.4	23	
20	<b>IZS</b>	25	24	24	23	23	21	21	23	25	26	26	27	27	31	30	31	28	28	28	30	31	40	<b>IZS</b>	40	26.9	24	
21	22	23	38	36	29	34	35	26	39	36	38	38	36	39	40	34	37	41	34	33	30	23	<b>IZS</b>	25	41	33.3	24	
22	40	25	18	22	22	22	25	20	27	31	24	34	28	39	38	28	32	29	20	19	19	<b>IZS</b>	17	13	40	25.7	24	
23	17	17	15	20	21	20	22	22	23	24	26	28	24	25	27	33	25	23	21	20	<b>IZS</b>	19	15	19	33	22.0	24	
24	19	22	27	27	23	24	24	17	18	21	29	31	40	39	46	35	42	41	43	<b>IZS</b>	39	39	36	36	46	31.2	24	
25	28	<b>P</b>	25	32	31	25	24	28	31	31	38	43	44	46	45	42	44	41	<b>IZS</b>	37	41	31	29	34	46	35.0	23	
26	36	33	28	23	32	23	25	23	31	29	37	42	36	36	38	39	39	<b>IZS</b>	40	34	31	<b>P</b>	35	36	42	33.0	23	
27	44	28	27	26	27	29	30	25	27	27	37	<b>C</b>	<b>C</b>	<b>C</b>	30	25	<b>IZS</b>	34	25	24	22	23	24	23	44	27.9	24	
28	22	28	22	27	24	25	24	25	27	38	25	26	25	28	30	<b>IZS</b>	23	24	26	22	17	30	17	19	38	25.0	24	
29	13	12	12	11	16	14	14	14	14	14	16	20	23	17	<b>IZS</b>	28	24	24	17	23	28	19	17	19	28	17.8	24	
30	22	18	12	13	7	6	7	7	19	19	30	28	23	<b>IZS</b>	23	22	27	26	24	17	22	22	18	19	30	18.7	24	
31	25	21	22	20	17	13	14	14	21	24	27	<b>C</b>	<b>C</b>	<b>C</b>	<b>C</b>	<b>C</b>	<b>C</b>	37	31	32	31	27	28	37	23.8	24		
HOURLY MAX	49	50	39	43	45	42	49	44	45	51	54	54	54	53	46	49	51	84	47	43	45	51	40	38				
HOURLY AVG	26.9	26.8	23.5	23.8	23.3	22.9	22.7	21.4	24.8	28.6	30.8	32.7	33.2	34.2	34.7	35.1	34.5	34.9	32.3	29.3	30.0	28.0	27.1	25.4				

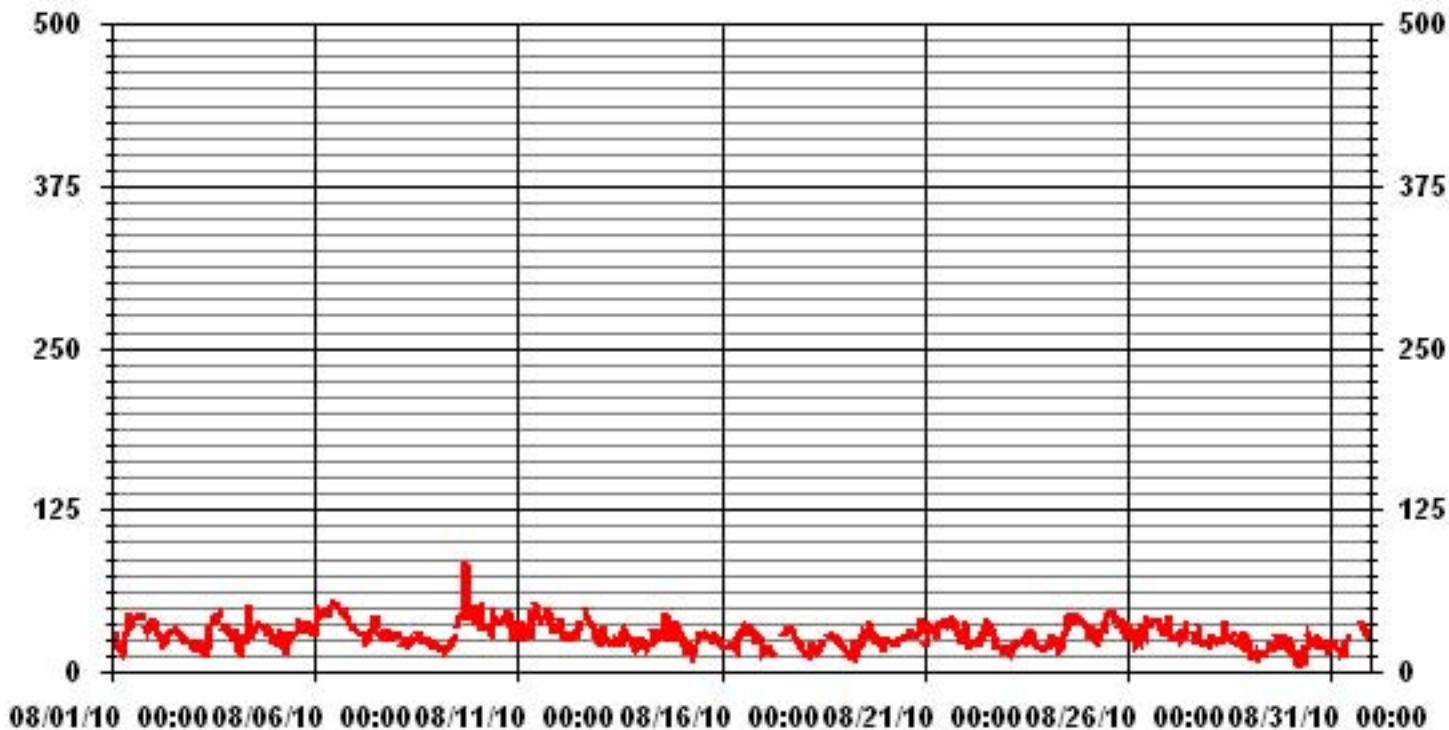
**STATUS FLAG CODES**

S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	- MISSING DATA
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE

**MONTHLY SUMMARY**

NUMBER OF NON-ZERO READINGS:	685				
MAXIMUM INSTANTANEOUS VALUE:	84	PPB	@ HOUR(S)	17	ON DAY(S) 9
IZS CALIBRATION TIME:	31	HRS	OPERATIONAL TIME:	732	HRS
MONTHLY CALIBRATION TIME:	16	HRS			
STANDARD DEVIATION	9.06				

### 01 Hour Averages



— LICA31 O3MAX PPB



LICA31  
 O3\_ / WDR Joint Frequency Distribution (Percent)

August 2010

Distribution By % Of Samples

Logger Id : 31  
 Site Name : LICA31  
 Parameter : O3\_  
 Units : PPB

Wind Parameter : WDR  
 Instrument Height : 10 Meters

	Direction																
Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 50	6.32	5.74	4.59	7.61	4.45	3.87	1.86	4.16	4.59	6.03	11.49	5.45	12.21	11.35	4.59	5.02	99.42
< 110	.00	.00	.14	.43	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.57
< 210	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
>= 210	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
Totals	6.32	5.74	4.74	8.04	4.45	3.87	1.86	4.16	4.59	6.03	11.49	5.45	12.21	11.35	4.59	5.02	

Calm : .00 %

Total # Operational Hours : 696

Distribution By Samples

	Direction																
Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 50	44	40	32	53	31	27	13	29	32	42	80	38	85	79	32	35	692
< 110			1	3													4
< 210																	
>= 210																	
Totals	44	40	33	56	31	27	13	29	32	42	80	38	85	79	32	35	

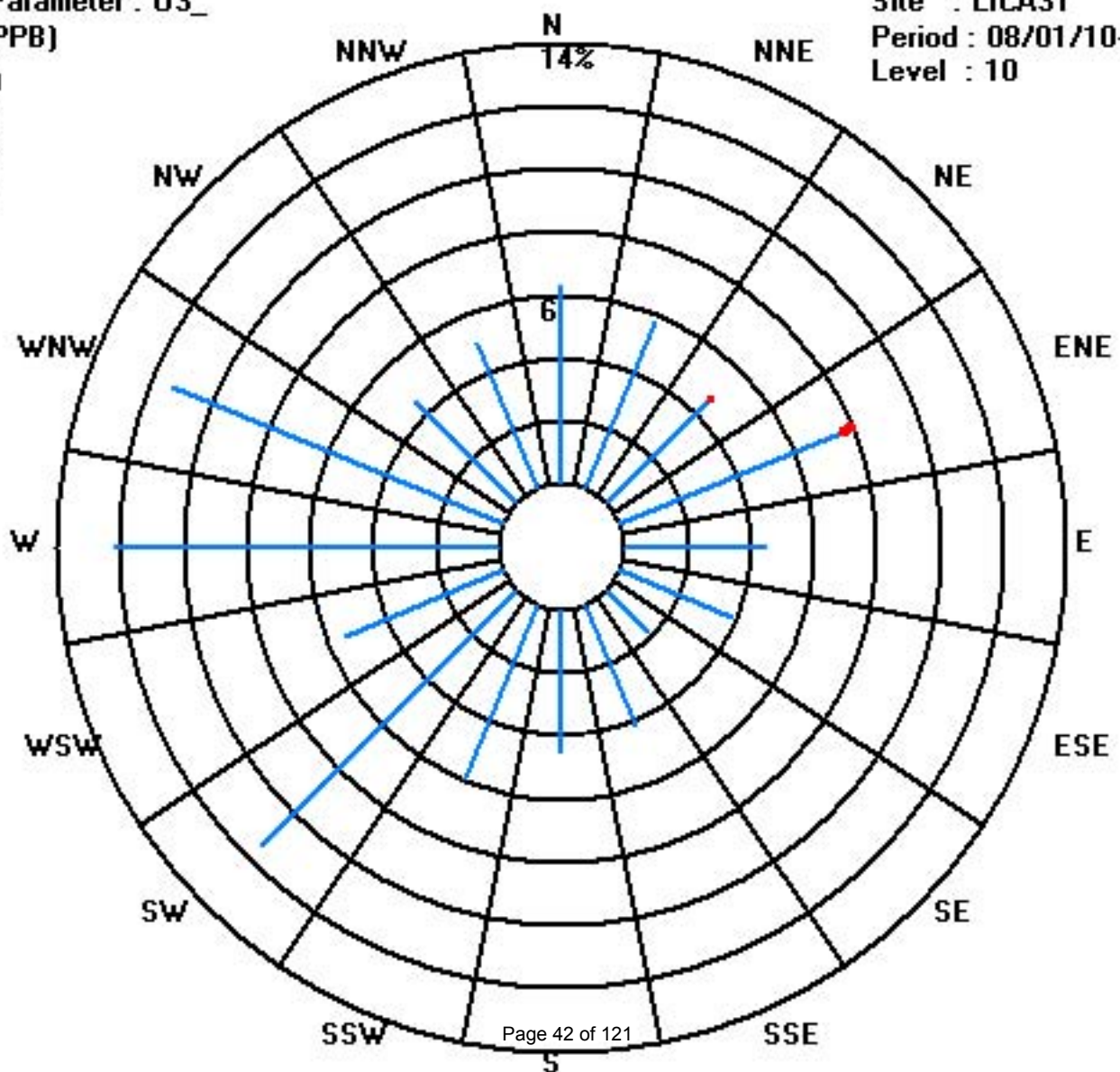
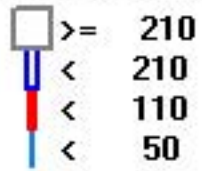
Calm : .00 %

Total # Operational Hours : 696

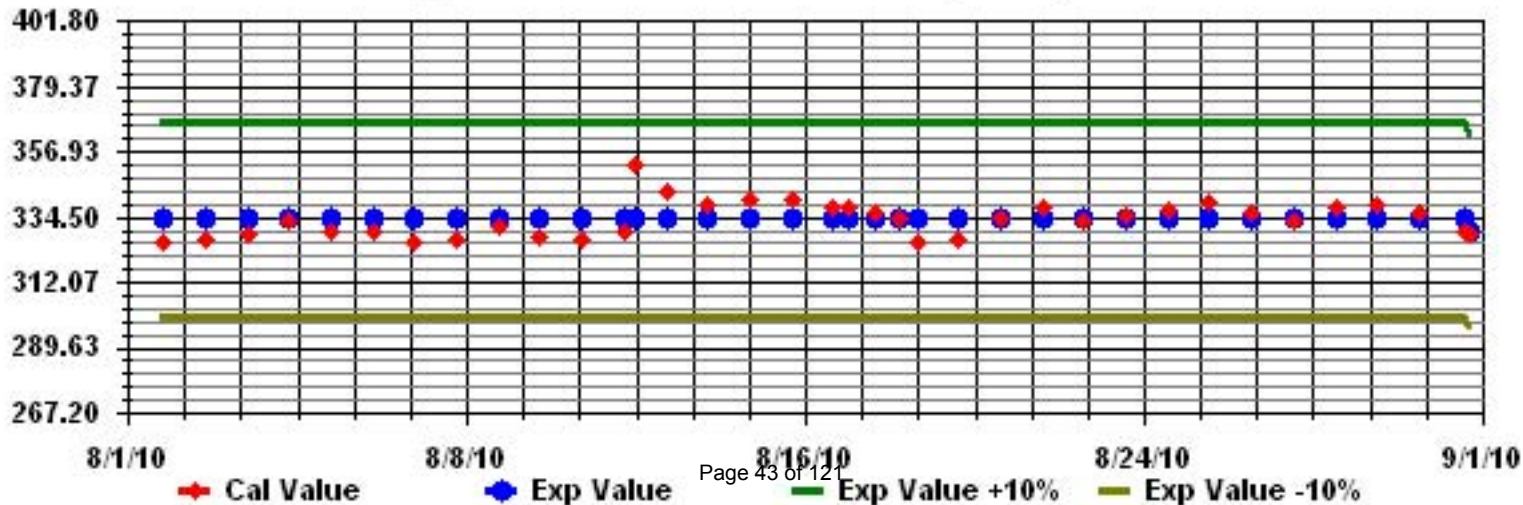
Class Limits (PPB)

Period : 08/01/10-08/31/10

Level : 10



Calibration Graph for Site: LICA31 Parameter: 03\_ Sequence: 03 Phase: SPAN



# Nitrogen Dioxide

# LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - ST. LINA

AUGUST 2010

## NITROGEN DIOXIDE hourly averages in ppb

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY MAX.	24-HOUR AVG.	RDGS.
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00			
DAY																											
1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	1	2	1	0	2	0.2	24
2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	1	0.0	24
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0.0	24
4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0.0	24
5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0.0	24
6	0	0	0	0	0	1	1	0	0	0	0	0	0	0	IZS	0	0	0	0	1	2	1	1	1	2	0.3	24
7	0	0	1	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	1	0.0	24
8	0	0	0	1	1	1	1	1	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	1	1	0.3	24
9	1	1	0	1	1	1	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	1	1	0.3	24
10	1	0	0	0	0	0	0	1	1	1	IZS	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0.2	24
11	0	0	0	1	0	1	0	0	0	IZS	0	0	0	0	P	P	0	0	0	2	0	2	1	1	2	0.4	22
12	1	1	1	1	2	1	1	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0.3	24
13	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
14	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
15	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
16	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	4	0.2	24
17	0	0	0	IZS	0	0	0	0	0	0	C	C	C	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
18	0	0	IZS	1	0	0	0	0	0	0	0	P	P	C	C	0	0	0	0	0	0	0	0	0	1	0.1	22
19	0	IZS	0	0	1	1	1	1	1	1	1	2	8	6	4	3	3	3	2	2	3	5	4	5	8	2.5	24
20	IZS	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	IZS	2	0.1	24
21	1	1	1	1	1	2	2	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	IZS	0	2	0.9	24
22	0	1	1	1	1	1	1	1	0	0	1	1	1	1	1	1	1	1	0	1	1	IZS	0	0	1	0.7	24
23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0.0	24
24	0	0	0	0	0	1	1	1	1	1	2	1	0	3	2	2	1	1	2	IZS	1	1	1	1	3	1.0	24
25	1	1	0	0	1	1	1	1	1	1	1	2	2	1	1	1	1	1	IZS	1	1	1	2	1	2	1.0	24
26	1	0	1	3	2	1	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	3	0.3	24
27	0	0	0	0	0	0	0	0	C	C	C	C	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0.0	24
28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0.0	24
29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	1	1	1	1	0.1	24
30	0	1	1	2	1	1	1	0	1	C	C	C	C	C	C	C	C	0	0	1	1	1	1	1	2	0.8	24
31	1	1	1	1	2	2	3	2	2	2	3	3	IZS	6	1	C	2	0	1	1	1	1	1	2	6	1.8	24
HOURLY MAX	1	2	1	3	2	2	3	2	2	2	3	3	8	6	4	3	3	3	2	2	3	5	4	5			
HOURLY AVG	0.3	0.3	0.2	0.4	0.4	0.5	0.4	0.3	0.3	0.2	0.3	0.4	0.5	0.6	0.5	0.3	0.3	0.2	0.2	0.3	0.4	0.5	0.4	0.5			

### STATUS FLAG CODES

S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	- MAINTENANCE
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE

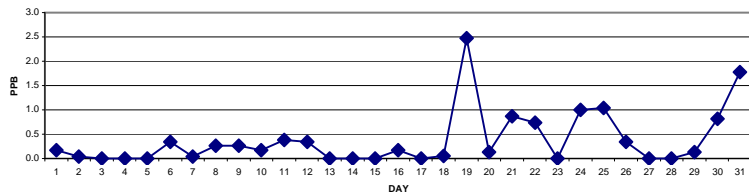
### OBJECTIVE LIMIT:

ALBERTA ENVIRONMENT:	1-HR	212	PPB	24-HR	106	PPB
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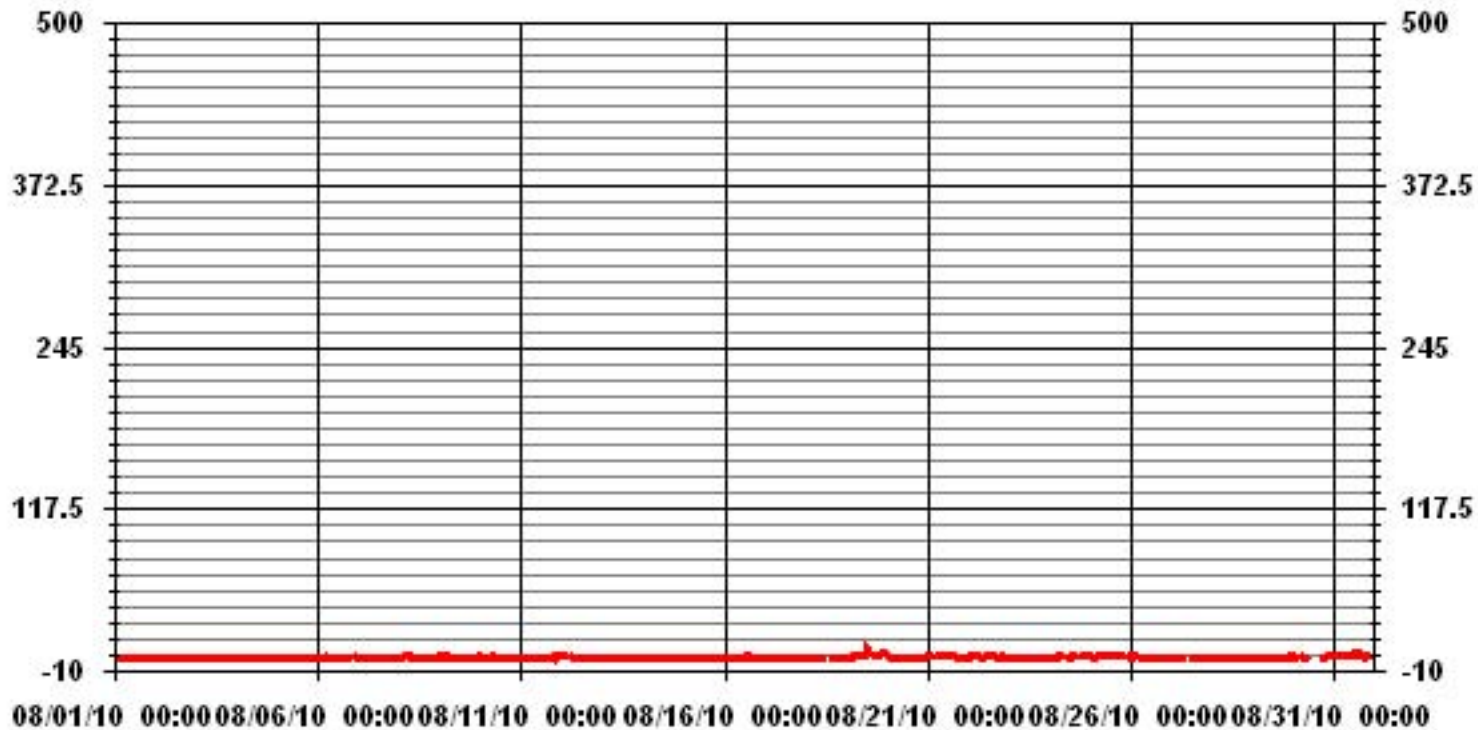
### MONTHLY SUMMARY

NUMBER OF 1-HR EXCEEDENCES:	0		
NUMBER OF 24-HR EXCEEDENCES:	0		
NUMBER OF NON-ZERO READINGS:	179		
MAXIMUM 1-HR AVERAGE:	8 PPB @ HOUR(S) 12 ON DAY(S) 19		
MAXIMUM 24-HR AVERAGE:	2.5 PPB ON DAY(S) 19		
IZS CALIBRATION TIME:	31 HRS	OPERATIONAL TIME:	740 HRS
MONTHLY CALIBRATION TIME:	18 HRS	AMD OPERATION UPTIME:	99.5 %
STANDARD DEVIATION:	0.82	MONTHLY AVERAGE:	0.37 PPB

24 HOUR AVERAGES FOR AUGUST 2010



### 01 Hour Averages



— LICA31 NO2\_ PPB

# LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - ST. LINA

AUGUST 2010

## NITROGEN DIOXIDE MAX instantaneous maximum in ppb

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR		
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.	
DAY																												
1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	2	4	3	1	4	0.5	24
2	1	1	1	1	1	1	1	1	1	1	7	1	1	1	1	1	1	1	IZS	0	0	0	0	0	0	7	1.0	24
3	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	1	0.0	24
4	0	0	0	0	0	9	2	2	1	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	9	0.6	24
5	0	0	0	0	0	14	1	1	0	1	0	0	5	0	1	IZS	0	0	0	0	0	0	0	0	1	14	1.0	24
6	0	0	P	1	1	1	1	1	1	0	0	0	0	0	IZS	0	0	0	0	0	4	9	2	1	1	9	1.0	23
7	1	1	1	1	1	1	1	1	1	1	0	0	0	0	IZS	0	0	0	1	0	3	1	0	0	0	3	0.7	24
8	2	0	P	1	2	2	2	2	1	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	1	3	3	0.7	23
9	2	2	1	2	2	1	1	1	0	1	1	IZS	1	1	2	0	0	0	0	0	0	0	1	2	1	2	1.0	24
10	1	0	0	0	3	0	1	2	2	1	IZS	0	0	0	0	0	0	0	0	0	1	0	1	0	2	3	0.6	24
11	1	2	1	2	1	15	1	1	1	IZS	0	0	1	0	P	P	1	0	2	10	1	29	3	P	29	3.6	21	
12	2	2	1	2	4	1	2	1	IZS	2	1	8	13	0	1	0	0	0	0	0	0	0	0	0	0	13	1.7	24
13	0	0	0	0	0	0	1	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.0	24
14	0	0	0	0	0	1	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0.1	24
15	0	0	1	1	1	IZS	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0.2	24
16	1	0	0	0	IZS	1	0	0	1	0	0	0	1	1	40	0	0	0	0	0	0	0	0	0	0	40	2.0	24
17	0	0	0	IZS	0	0	0	P	0	P	C	C	C	0	0	0	0	0	0	0	4	0	0	1	4	0.3	22	
18	0	1	IZS	1	2	0	0	11	1	1	1	0	P	P	C	C	0	0	1	1	1	1	1	1	1	11	1.3	22
19	1	IZS	1	1	2	2	2	3	1	2	1	8	39	P	6	3	4	4	3	3	5	8	5	6	39	5.0	23	
20	IZS	3	1	0	0	1	1	6	1	1	1	0	0	0	1	0	0	0	2	0	1	4	1	IZS	6	1.1	24	
21	2	2	2	2	2	2	2	2	2	2	2	2	2	1	1	1	1	1	1	1	1	1	2	IZS	1	2	1.6	24
22	1	1	2	1	2	2	1	2	1	1	1	2	1	1	2	2	1	1	1	2	2	IZS	1	1	2	1.4	24	
23	1	1	0	1	1	2	1	1	2	6	2	1	8	1	1	0	0	1	1	IZS	0	1	1	1	8	1.5	24	
24	0	0	0	0	1	2	1	2	2	3	34	19	1	64	3	5	2	4	3	IZS	2	2	1	1	64	6.6	24	
25	1	P	1	1	1	1	1	2	2	2	3	4	4	2	20	27	1	3	IZS	2	3	1	5	2	27	4.0	23	
26	2	1	3	5	5	2	1	1	1	1	1	1	1	1	1	1	1	IZS	0	1	0	P	0	0	5	1.4	23	
27	0	0	0	0	0	0	2	3	C	C	C	C	C	7	0	6	0	IZS	1	7	0	2	1	1	7	1.6	24	
28	0	0	0	0	0	1	0	0	0	0	0	0	0	5	0	0	IZS	0	11	0	1	1	0	1	11	0.9	24	
29	0	0	0	0	1	1	1	0	0	0	0	0	0	1	IZS	0	0	0	0	1	1	2	2	1	2	0.5	24	
30	1	2	2	2	2	1	1	2	C	C	C	C	C	C	C	C	C	C	1	1	1	2	2	2	2	2	1.6	24
31	2	2	2	2	13	5	5	4	3	4	10	4	IZS	217	C	C	58	1	2	2	2	2	3	217	16.4	24		
HOURLY MAX	2	3	3	5	13	15	5	11	3	6	34	19	39	217	40	27	58	11	7	10	9	29	5	6				
HOURLY AVG	0.8	0.8	0.7	0.9	1.6	2.3	1.1	1.8	0.9	1.1	2.4	1.9	3.5	10.8	3.4	1.6	2.5	1.0	0.9	1.2	1.4	2.2	1.1	1.1				

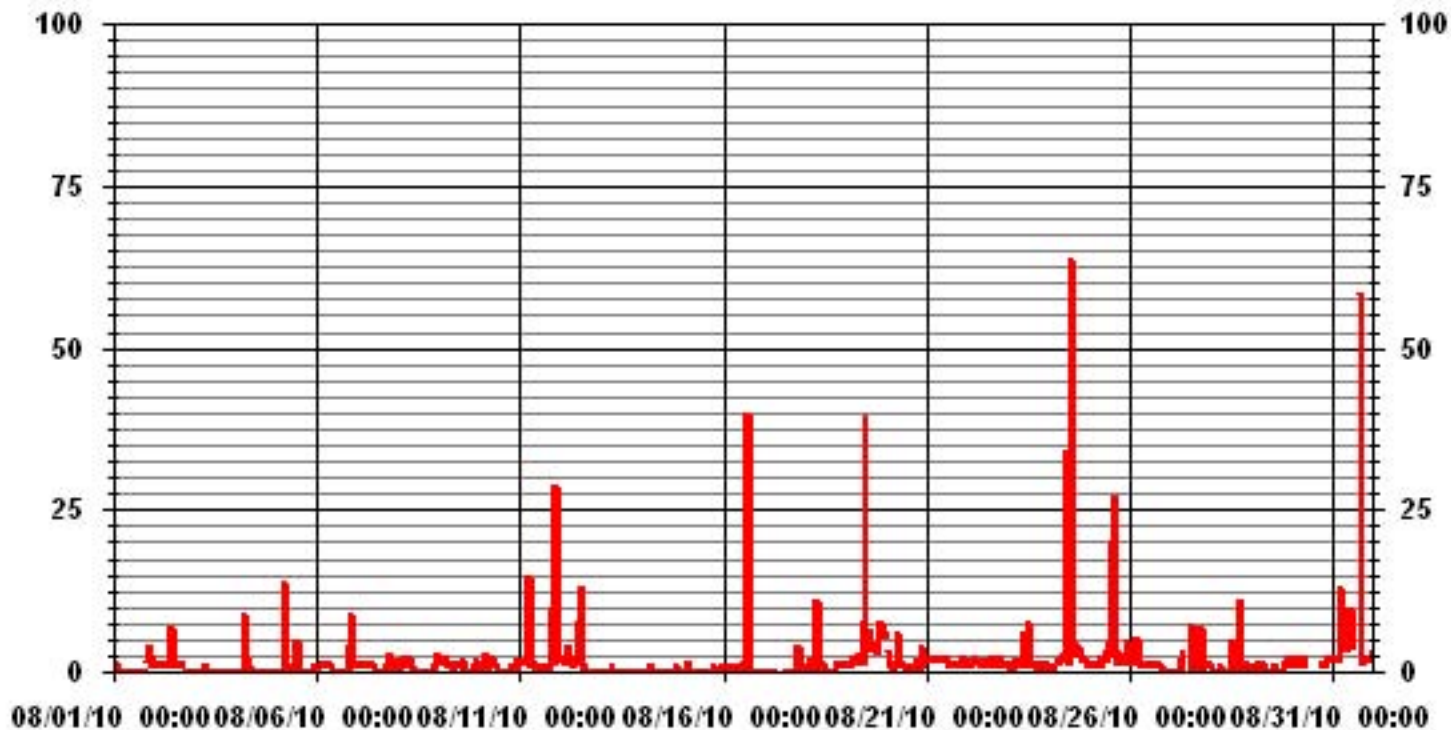
**STATUS FLAG CODES**

S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	- MISSING DATA
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE

**MONTHLY SUMMARY**

NUMBER OF NON-ZERO READINGS:	372					
MAXIMUM INSTANTANEOUS VALUE:	217	PPB	@ HOUR(S)	13	ON DAY(S)	31
IZS CALIBRATION TIME:	31	HRS	OPERATIONAL TIME:	732	HRS	
MONTHLY CALIBRATION TIME:	20	HRS				
STANDARD DEVIATION	9.53					

### 01 Hour Averages



— LICA31 IIO2MAX PPB



LICA31  
 NO2\_ / WDR Joint Frequency Distribution (Percent)

August 2010

Distribution By % Of Samples

Logger Id : 31  
 Site Name : LICA31  
 Parameter : NO2\_  
 Units : PPB

Wind Parameter : WDR  
 Instrument Height : 10 Meters

		Direction																
	Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
<	50	6.36	5.49	4.63	8.10	4.48	3.90	2.02	4.48	4.63	6.07	11.57	5.49	11.72	11.28	4.63	5.06	100.00
<	110	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
<	210	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
>=	210	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
	Totals	6.36	5.49	4.63	8.10	4.48	3.90	2.02	4.48	4.63	6.07	11.57	5.49	11.72	11.28	4.63	5.06	

Calm : .00 %

Total # Operational Hours : 691

Distribution By Samples

		Direction																
	Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
<	50	44	38	32	56	31	27	14	31	32	42	80	38	81	78	32	35	691
<	110																	
<	210																	
>=	210																	
	Totals	44	38	32	56	31	27	14	31	32	42	80	38	81	78	32	35	

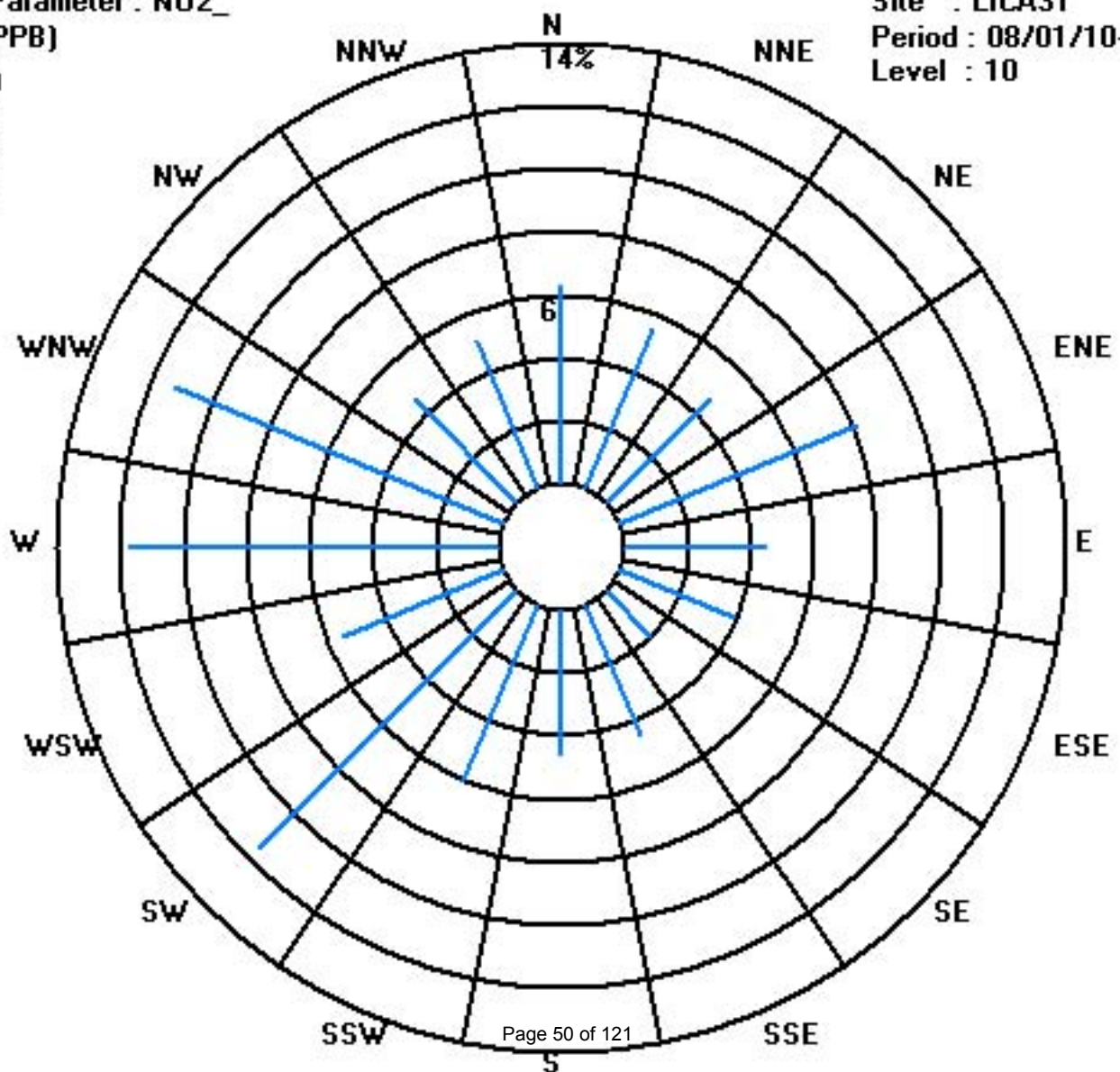
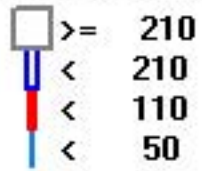
Calm : .00 %

Total # Operational Hours : 691

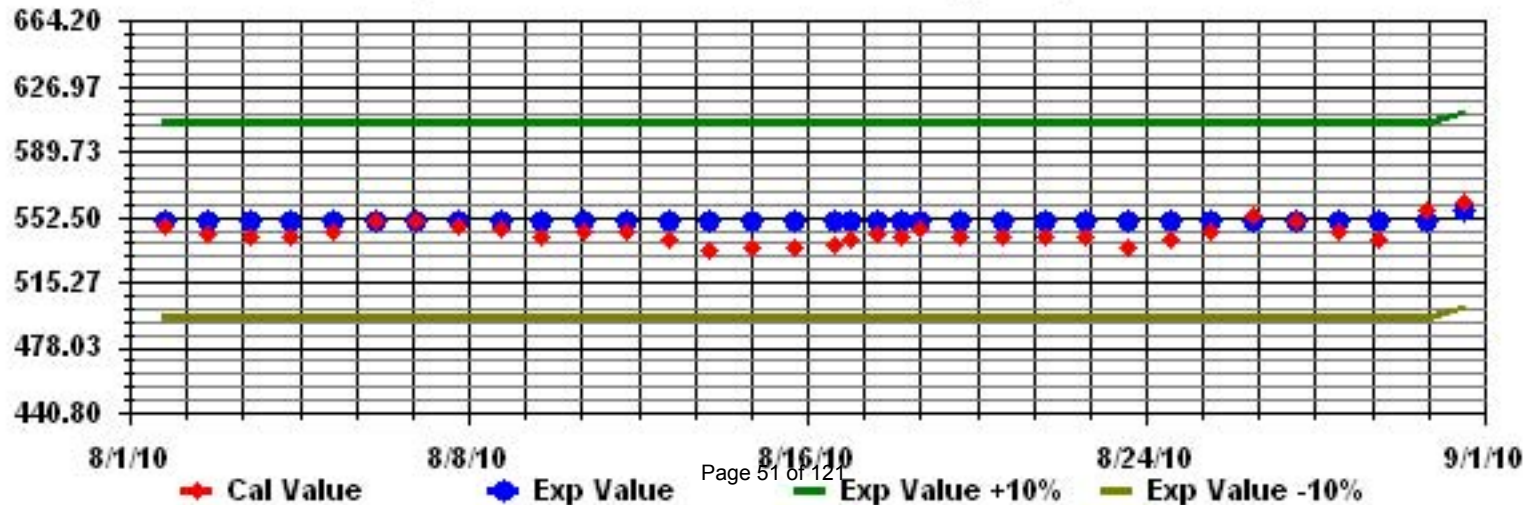
Class Limits (PPB)

Period : 08/01/10-08/31/10

Level : 10



Calibration Graph for Site: LICA31 Parameter: NO2\_ Sequence: NO2 Phase: SPAN



# Nitric Oxide

# LAKELAND INDUSTRY & COMMUNICATY ASSOCIATION - ST. LINA

AUGUST 2010

NITRIC OXIDE hourly averages in ppb

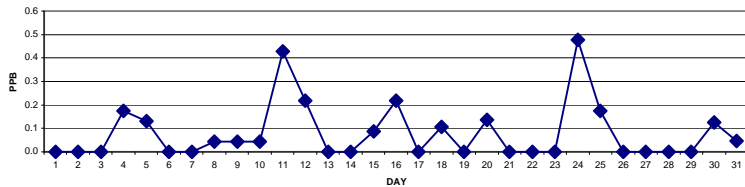
MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY 24-HOUR			
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.	
DAY																												
1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
4	0	0	0	0	0	1	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0.2	24
5	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.1	24
6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
8	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.0	24
9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.0	24
10	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.0	24
11	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0.4	22
12	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.2	24
13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.1	24
16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0.2	24
17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.1	22
19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
24	0	0	0	0	0	0	0	1	2	2	2	1	1	1	0	1	0	0	0	0	0	0	0	0	0	2	0.5	24
25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.2	24
26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
30	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.1	24
31	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.0	24
HOURLY MAX	0	0	0	0	0	1	2	1	2	2	2	1	1	1	3	1	6	0	0	1	0	1	0	0	0	0	0	0
HOURLY AVG	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.3	0.2	0.2	0.2	0.1	0.2	0.1	0.1	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

STATUS FLAG CODES

S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	- MAINTENANCE
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE

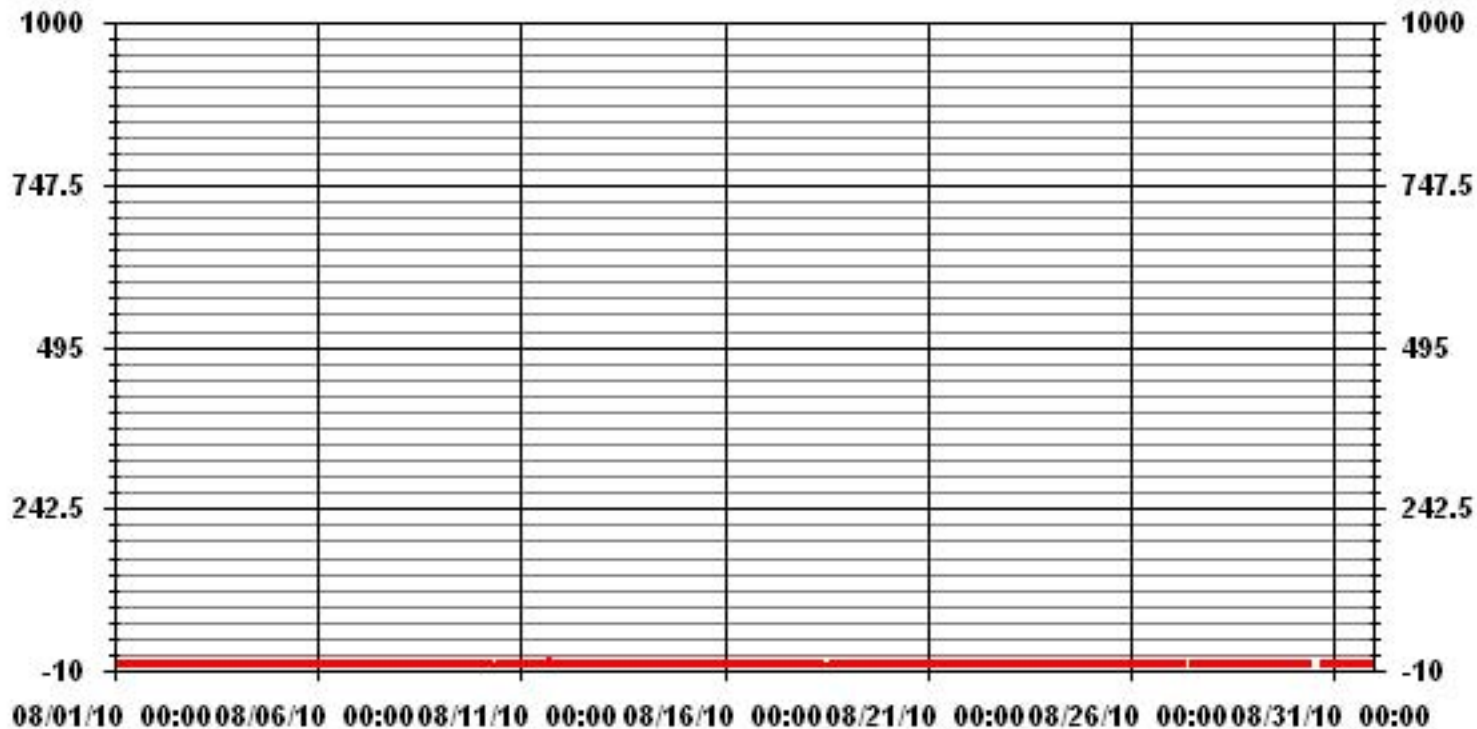
24 HOUR AVERAGES FOR AUGUST 2010



MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:	43
MAXIMUM 1-HR AVERAGE:	6 PPB @ HOUR(S) 16 ON DAY(S) 11
MAXIMUM 24-HR AVERAGE:	0.5 PPB ON DAY(S) 24
IZS CALIBRATION TIME:	31 HRS
MONTHLY CALIBRATION TIME:	18 HRS
STANDARD DEVIATION:	0.37
OPERATIONAL TIME:	740 HRS
AMD OPERATION UPTIME:	99.5 %
MONTHLY AVERAGE:	0.08 PPB

### 01 Hour Averages



— LICA31 NO\_ PPB

# LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - ST. LINA

AUGUST 2010

## NITRIC OXIDE MAX instantaneous maximum in ppb

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR		
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.	
DAY																												
1	0	0	0	0	0	0	1	2	0	0	0	0	0	1	0	0	0	0	1	<b>IZS</b>	1	2	0	0	2	2	0.3	24
2	1	0	0	0	0	1	2	1	1	1	12	0	1	1	1	1	1	<b>IZS</b>	1	1	1	0	0	0	12	1.2	24	
3	0	1	1	0	0	0	1	2	2	1	2	1	1	1	1	1	<b>IZS</b>	1	1	1	0	0	0	0	2	0.8	24	
4	0	0	1	1	0	28	6	5	1	1	1	2	1	1	1	<b>IZS</b>	1	1	1	0	1	0	0	28	2.3	24		
5	1	0	0	0	1	30	2	2	1	1	1	2	5	0	3	<b>IZS</b>	1	1	0	0	0	0	1	0	30	2.3	24	
6	1	0	<b>P</b>	1	0	0	1	1	1	1	0	0	0	0	<b>IZS</b>	1	0	1	0	2	2	0	1	0	2	0.6	23	
7	0	1	0	1	0	0	1	1	1	1	1	1	1	1	<b>IZS</b>	1	1	1	1	1	2	0	0	0	2	0.7	24	
8	2	0	<b>P</b>	1	0	1	1	1	1	1	1	0	<b>IZS</b>	<b>IZS</b>	1	0	2	2	1	1	0	0	0	1	2	0.8	23	
9	1	0	0	0	1	1	1	1	1	2	2	2	<b>IZS</b>	3	1	1	1	1	1	1	1	0	0	1	0	3	1.0	24
10	0	0	1	0	2	1	1	1	1	1	<b>IZS</b>	1	1	1	1	1	0	1	1	0	0	1	0	2	0.7	24		
11	1	1	1	0	0	17	2	1	2	<b>IZS</b>	1	1	1	0	<b>P</b>	<b>P</b>	<b>45</b>	1	1	5	1	20	1	<b>P</b>	<b>45</b>	5.1	21	
12	1	1	1	0	2	0	3	3	<b>IZS</b>	4	2	19	15	1	2	1	1	0	0	1	1	0	0	0	19	2.5	24	
13	0	0	0	0	0	1	1	<b>IZS</b>	2	1	1	0	1	0	1	0	1	1	1	1	1	1	0	0	2	0.6	24	
14	0	1	0	0	1	1	<b>IZS</b>	1	1	1	1	1	0	1	0	1	1	1	1	1	0	3	0	0	3	0.7	24	
15	0	0	0	1	1	<b>IZS</b>	2	1	1	1	1	0	0	0	1	1	0	1	1	0	1	1	0	0	2	0.6	24	
16	0	1	1	1	<b>IZS</b>	1	1	1	3	1	1	1	1	1	42	1	0	0	0	1	1	1	0	1	42	2.7	24	
17	1	0	0	<b>IZS</b>	1	1	1	<b>P</b>	1	<b>P</b>	<b>C</b>	<b>C</b>	<b>C</b>	1	1	1	1	0	1	0	2	0	0	1	2	0.7	22	
18	1	1	<b>IZS</b>	1	0	1	1	15	1	1	1	1	1	<b>P</b>	<b>P</b>	<b>C</b>	<b>C</b>	1	0	0	0	0	0	0	15	1.3	22	
19	0	<b>IZS</b>	1	0	1	1	1	2	1	1	1	1	5	<b>P</b>	1	1	1	2	0	1	0	2	0	0	5	1.0	23	
20	<b>IZS</b>	1	0	0	0	1	4	13	3	2	2	1	1	2	2	1	0	2	3	0	0	0	0	<b>IZS</b>	13	1.7	24	
21	0	0	0	1	0	0	1	1	1	1	0	0	1	1	0	0	1	0	0	0	0	0	0	<b>IZS</b>	1	0.4	24	
22	0	0	0	0	0	0	0	1	1	1	1	2	0	1	1	0	0	0	0	2	0	<b>IZS</b>	1	0	2	0.5	24	
23	0	0	1	0	0	1	1	1	2	11	1	2	6	1	1	1	0	1	1	1	0	<b>IZS</b>	1	0	11	1.4	24	
24	0	1	0	0	1	2	3	3	4	7	29	24	2	13	2	4	1	2	1	<b>IZS</b>	1	1	0	0	29	4.4	24	
25	0	<b>P</b>	0	0	0	0	1	1	2	1	2	3	3	2	8	4	1	2	<b>IZS</b>	1	0	0	1	1	8	1.5	23	
26	0	1	0	0	0	1	1	1	1	1	0	1	1	1	1	0	1	<b>IZS</b>	1	0	1	<b>P</b>	1	1	1	0.7	23	
27	0	0	0	1	2	0	4	6	<b>C</b>	<b>C</b>	<b>C</b>	<b>C</b>	6	1	2	1	<b>IZS</b>	2	15	1	2	2	1	0	15	2.4	24	
28	1	1	0	1	2	1	0	1	1	0	1	0	5	1	3	<b>IZS</b>	1	18	1	2	3	1	1	1	18	2.0	24	
29	0	0	0	1	1	2	1	0	1	0	1	0	0	4	<b>IZS</b>	1	0	0	0	0	1	0	0	0	4	0.6	24	
30	1	1	1	1	1	1	1	5	<b>C</b>	<b>C</b>	<b>C</b>	<b>C</b>	<b>C</b>	<b>C</b>	<b>C</b>	<b>C</b>	<b>C</b>	1	0	0	0	0	0	0	5	0.9	24	
31	0	0	0	0	18	3	5	3	2	2	16	2	<b>IZS</b>	19	<b>C</b>	<b>C</b>	24	0	0	0	0	0	0	24	4.5	24		
HOURLY MAX	2	1	1	1	18	30	6	15	4	11	29	24	15	19	42	4	45	18	15	5	3	20	1	1				
HOURLY AVG	0.4	0.4	0.3	0.4	1.2	3.2	1.7	2.7	1.5	1.7	3.0	2.4	2.3	2.1	3.1	1.1	3.1	1.4	1.2	0.8	0.8	1.1	0.4	0.2				

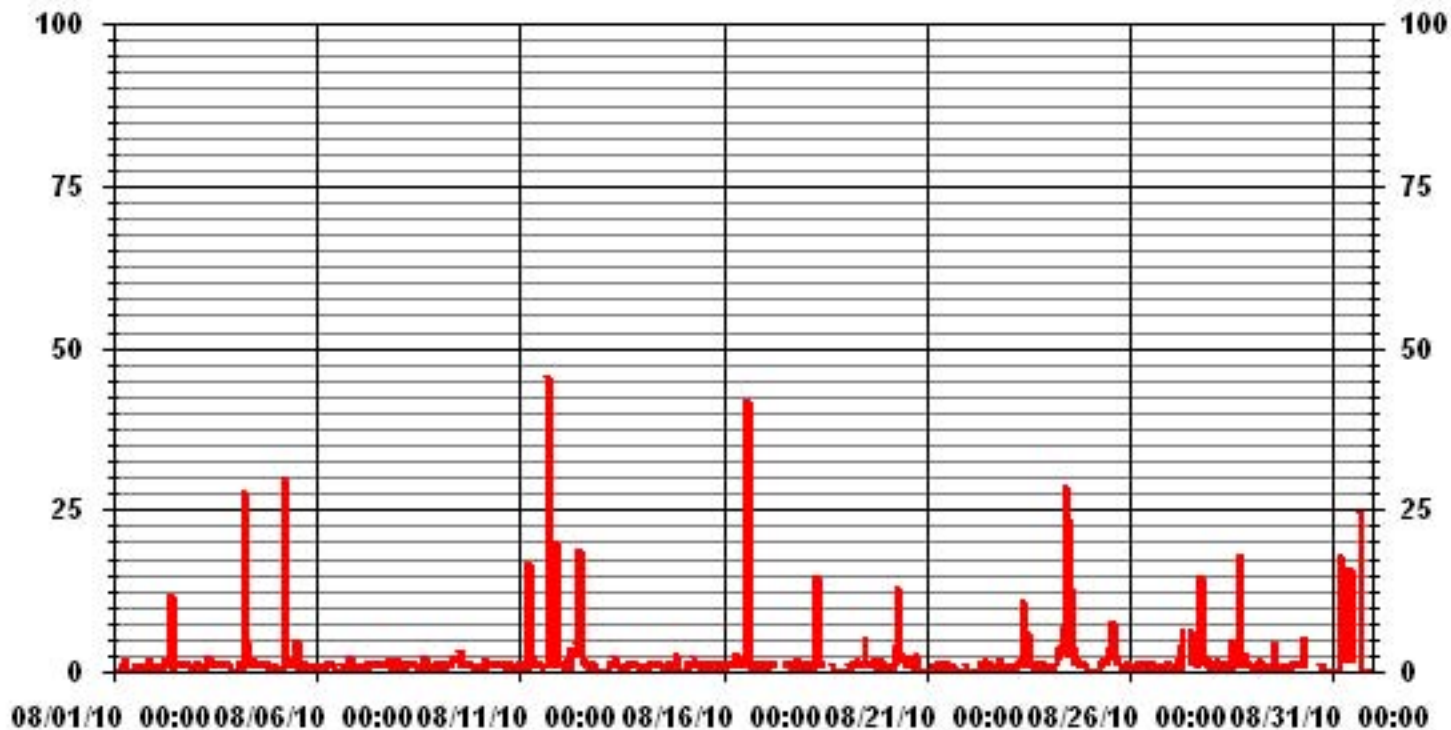
**STATUS FLAG CODES**

S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	- MISSING DATA
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE

**MONTHLY SUMMARY**

NUMBER OF NON-ZERO READINGS:	427					
MAXIMUM INSTANTANEOUS VALUE:	45	PPB	@ HOUR(S)	16	ON DAY(S)	11
IZS CALIBRATION TIME:	31	HRS	OPERATIONAL TIME:	732	HRS	
MONTHLY CALIBRATION TIME:	20	HRS				
STANDARD DEVIATION	3.98					

### 01 Hour Averages





LICA31  
 NO\_ / WDR Joint Frequency Distribution (Percent)

August 2010

Distribution By % Of Samples

Logger Id : 31  
 Site Name : LICA31  
 Parameter : NO\_  
 Units : PPB

Wind Parameter : WDR  
 Instrument Height : 10 Meters

	Direction																
Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 50	6.36	5.49	4.63	8.10	4.48	3.90	2.02	4.48	4.63	6.07	11.57	5.49	11.72	11.28	4.63	5.06	100.00
< 110	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
< 210	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
>= 210	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
Totals	6.36	5.49	4.63	8.10	4.48	3.90	2.02	4.48	4.63	6.07	11.57	5.49	11.72	11.28	4.63	5.06	

Calm : .00 %

Total # Operational Hours : 691

Distribution By Samples

	Direction																
Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 50	44	38	32	56	31	27	14	31	32	42	80	38	81	78	32	35	691
< 110																	
< 210																	
>= 210																	
Totals	44	38	32	56	31	27	14	31	32	42	80	38	81	78	32	35	

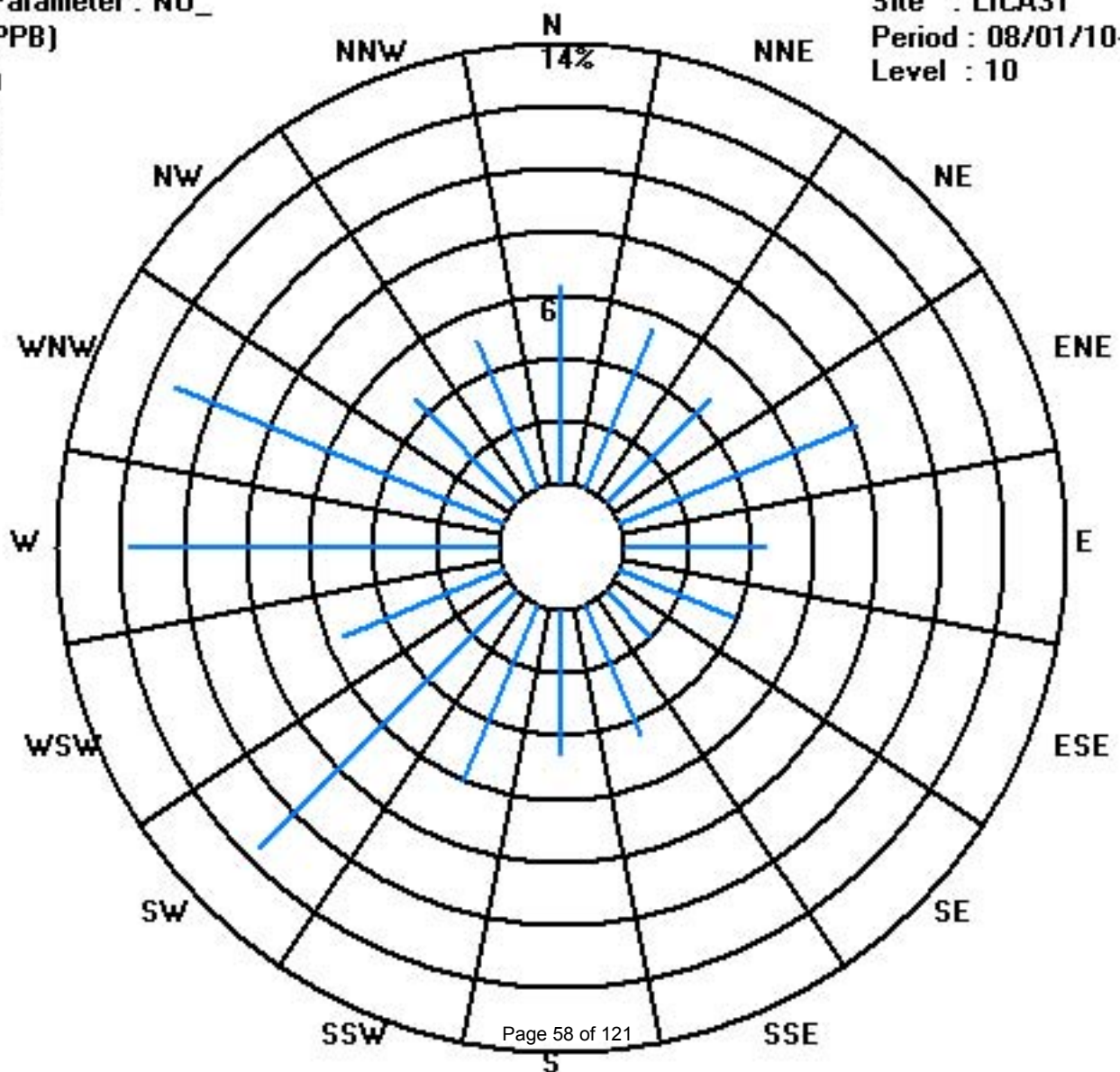
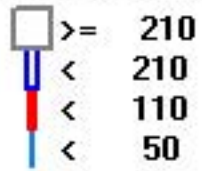
Calm : .00 %

Total # Operational Hours : 691

Class Limits (PPB)

Period : 08/01/10-08/31/10

Level : 10



# Oxides of Nitrogen

# LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - ST. LINA

AUGUST 2010

## OXIDES OF NITROGEN hourly averages in ppb

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR		
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.	
DAY																												
1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	1	0	0	1	0.0	24	
2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0.0	24	
3	0	0	0	0	0	0	1	1	1	1	1	0	1	0	0	0	0	IZS	0	0	0	0	0	0	1	0.3	24	
4	0	0	1	1	0	2	3	2	1	1	1	1	0	0	0	0	IZS	0	0	0	0	0	0	0	3	0.6	24	
5	0	0	0	0	0	2	1	1	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	2	0.2	24	
6	0	0	0	0	0	1	1	0	0	0	0	0	0	0	IZS	0	0	0	0	1	2	1	1	1	2	0.3	24	
7	0	0	1	1	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	1	0.1	24	
8	0	0	0	1	1	1	1	2	1	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	1	2	0.3	24	
9	1	1	0	1	1	1	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	1	1	0.3	24	
10	1	0	0	0	0	0	0	1	1	1	0	IZS	0	0	0	0	0	0	0	0	0	0	0	1	1	0.2	24	
11	0	0	0	1	0	1	1	1	1	IZS	0	0	0	0	0	P	P	5	0	0	3	0	3	1	1	5	0.9	22
12	1	1	1	1	2	1	1	1	IZS	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	2	0.5	24	
13	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24	
14	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24	
15	0	0	0	0	0	IZS	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.0	24	
16	0	0	0	0	IZS	0	0	0	1	0	0	0	0	0	7	0	0	0	0	0	0	0	0	0	7	0.3	24	
17	0	0	0	IZS	0	0	0	0	0	0	C	C	C	C	0	0	0	0	0	0	0	0	0	0	0	0.0	24	
18	0	1	IZS	2	1	1	1	1	2	2	2	1	P	P	C	C	0	0	0	0	0	1	1	0	2	0.8	22	
19	1	IZS	1	1	1	1	1	2	1	1	1	3	8	7	5	3	3	3	2	2	3	6	4	5	8	2.8	24	
20	IZS	2	1	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	1	0	0	2	0	IZS	2	0.4	24	
21	2	2	1	1	2	2	2	2	2	2	2	1	1	1	1	1	1	1	0	0	0	1	IZS	0	2	1.2	24	
22	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	1	1	0.1	24	
23	1	0	0	0	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	IZS	0	0	0	1	0.5	24	
24	0	0	0	0	1	1	2	2	3	4	4	2	1	4	2	3	1	2	2	IZS	1	0	0	0	4	1.5	24	
25	0	0	0	0	0	0	0	0	1	1	1	3	2	1	1	0	1	IZS	IZS	0	1	0	2	0	3	0.7	24	
26	0	0	0	3	2	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	3	0.2	24	
27	0	0	0	0	0	0	0	0	C	C	C	C	0	0	0	0	IZS	0	0	0	1	1	0	0	1	0.1	24	
28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0.0	24	
29	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	1	0	1	0.1	24	
30	0	0	1	1	0	0	0	0	1	C	C	C	C	C	C	C	C	C	0	0	0	1	1	1	1	1	0.4	24
31	1	1	1	1	2	3	5	4	3	4	5	5	IZS	8	1	C	2	0	1	1	1	1	1	1	8	2.4	24	
HOURLY MAX	2	2	1	3	2	3	5	4	3	4	5	5	8	8	7	3	5	3	3	2	3	3	6	4	5			
HOURLY AVG	0.3	0.3	0.3	0.5	0.5	0.6	0.7	0.8	0.7	0.7	0.7	0.7	0.5	0.8	0.7	0.3	0.4	0.2	0.2	0.2	0.3	0.6	0.4	0.4				

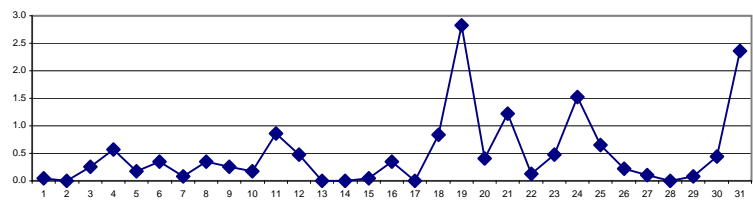
### STATUS FLAG CODES

S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	- MAINTENANCE
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE

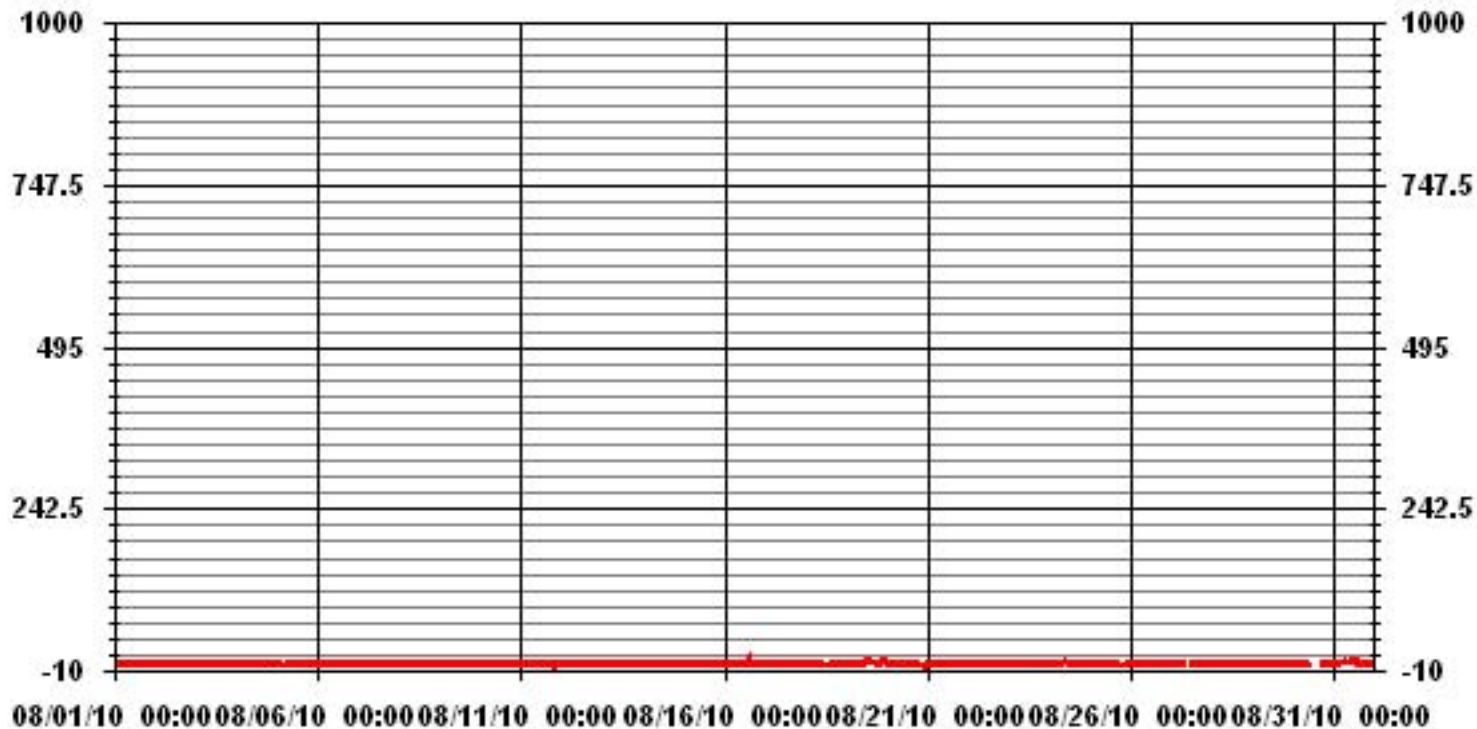
### MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:	204					
MAXIMUM 1-HR AVERAGE:	8	PPB	@ HOUR(S)	12	ON DAY(S)	19
MAXIMUM 24-HR AVERAGE:	2.8	PPB			ON DAY(S)	19
IZS CALIBRATION TIME:	31	HRS	OPERATIONAL TIME:	740	HRS	
MONTHLY CALIBRATION TIME:	18	HRS	AMD OPERATION UPTIME:	99.5	%	
STANDARD DEVIATION:	1.04		MONTHLY AVERAGE:	0.49	PPB	

24 HOUR AVERAGES FOR AUGUST 2010



### 01 Hour Averages



— LICA31 NOX\_ PPB

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - ST. LINA

AUGUST 2010

OXIDES OF NITROGEN MAX instantaneous maximum in ppb

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR		
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.	
DAY																												
1	1	1	0	0	0	0	1	1	0	1	0	0	0	0	0	0	0	0	0	IZS	2	5	2	0	5	0.6	24	
2	0	0	0	0	0	1	2	0	0	0	16	0	0	0	0	0	0	0	IZS	1	1	1	1	1	16	1.0	24	
3	1	1	1	1	1	1	3	3	2	2	3	2	2	2	2	1	1	IZS	1	1	2	1	1	1	3	1.6	24	
4	1	1	1	1	1	32	9	7	2	2	2	2	2	2	1	1	IZS	0	1	0	0	1	0	0	32	3.0	24	
5	1	0	0	0	1	37	3	2	1	1	1	2	10	0	2	IZS	1	1	0	0	0	0	0	0	37	2.7	24	
6	1	1	P	1	1	1	1	1	1	1	1	0	0	0	IZS	0	0	0	0	6	11	2	2	1	11	1.5	23	
7	1	1	1	1	1	0	1	1	1	1	1	0	0	IZS	0	0	0	2	0	6	1	0	0	0	6	0.8	24	
8	3	0	P	2	2	2	3	3	2	1	0	0	IZS	0	0	2	2	0	0	0	0	0	1	3	3	1.2	23	
9	3	2	1	2	3	2	2	1	2	2	2	IZS	4	1	3	0	0	1	0	0	0	1	2	2	4	1.6	24	
10	2	0	0	0	5	0	1	2	2	1	IZS	1	0	1	0	0	0	0	0	0	0	0	0	3	5	0.8	24	
11	1	2	2	2	1	31	3	2	3	IZS	1	0	2	0	P	P	44	1	2	14	1	41	4	P	44	7.9	21	
12	2	2	2	2	5	2	5	3	IZS	6	3	26	25	1	3	0	0	0	0	0	0	0	0	0	26	3.8	24	
13	0	0	0	0	0	0	1	IZS	2	0	0	0	1	0	0	0	1	0	0	1	1	0	0	0	2	0.3	24	
14	0	0	0	0	0	0	IZS	1	0	0	1	1	0	0	0	0	0	0	0	0	3	0	0	0	3	0.3	24	
15	1	0	1	1	1	IZS	1	1	0	1	0	0	0	0	0	0	0	0	2	0	0	0	0	0	2	0.4	24	
16	1	0	1	1	IZS	2	0	0	4	1	0	1	2	1	52	0	0	0	0	0	0	0	0	0	52	2.9	24	
17	0	0	0	IZS	0	0	0	P	0	P	C	C	C	1	0	0	0	0	0	0	6	0	0	0	6	0.4	22	
18	1	1	IZS	3	3	1	1	27	2	2	3	2	P	P	C	C	1	1	1	1	1	1	1	1	27	2.8	22	
19	1	IZS	1	1	3	2	3	4	2	3	2	8	44	P	7	4	4	5	3	4	5	10	5	7	44	5.8	23	
20	IZS	4	2	0	0	2	5	18	4	3	3	0	2	1	2	1	0	2	4	0	1	5	1	IZS	18	2.7	24	
21	2	2	2	2	3	2	3	3	2	2	2	2	2	2	2	1	1	1	1	1	1	2	IZS	0	3	1.8	24	
22	0	0	1	1	0	1	1	1	1	1	1	2	1	1	1	1	1	0	0	3	1	IZS	2	1	3	1.0	24	
23	1	1	1	1	2	2	2	2	4	17	3	13	2	2	1	1	1	1	1	IZS	1	1	1	1	17	2.8	24	
24	1	1	1	1	2	4	4	5	6	10	59	43	3	75	5	9	2	6	4	IZS	2	1	1	1	75	10.7	24	
25	1	P	0	0	0	0	1	2	3	2	3	5	5	2	27	28	1	4	IZS	2	2	0	4	1	28	4.2	23	
26	1	0	2	4	4	1	0	1	0	0	0	0	0	0	0	0	0	IZS	0	1	1	P	0	0	4	0.7	23	
27	0	0	0	0	2	0	7	7	C	C	C	C	10	0	9	0	IZS	2	17	1	3	3	2	1	17	3.4	24	
28	1	1	1	1	2	3	0	1	1	1	1	0	9	1	2	IZS	1	25	1	3	3	1	1	1	25	2.7	24	
29	1	1	1	1	2	3	1	1	1	1	1	0	1	5	IZS	0	0	0	0	0	0	1	1	1	5	1.0	24	
30	0	1	2	2	1	1	1	5	C	C	C	C	C	C	C	C	C	C	1	1	1	2	2	2	2	5	1.6	24
31	2	2	2	3	30	10	11	8	5	6	21	7	IZS	235	C	C	69	1	1	1	1	2	2	2	235	20.0	24	
HOURLY MAX	3	4	2	4	30	37	11	27	6	17	59	43	44	235	52	28	69	25	17	14	11	41	5	7				
HOURLY AVG	1.0	0.9	0.9	1.1	2.5	4.8	2.5	3.9	1.9	2.5	4.8	4.0	5.3	12.3	4.8	2.0	4.6	1.9	1.4	1.7	1.7	2.8	1.2	1.0				

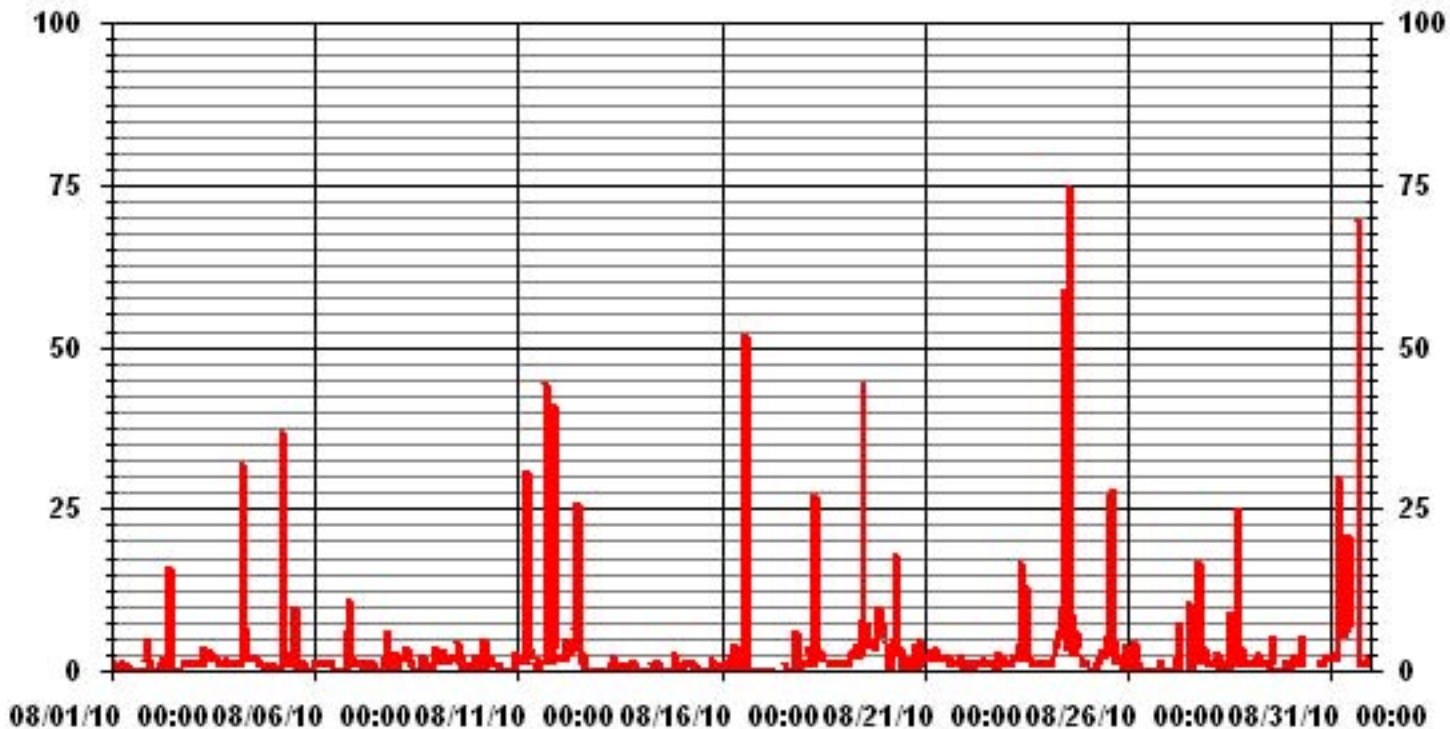
STATUS FLAG CODES

S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	- MISSING DATA
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE

MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:	452
MAXIMUM INSTANTANEOUS VALUE:	235 PPB @ HOUR(S) 8 ON DAY(S) 6
IZS CALIBRATION TIME:	31 HRS
MONTHLY CALIBRATION TIME:	20 HRS
STANDARD DEVIATION:	11.32
OPERATIONAL TIME:	732 HRS

### 01 Hour Averages



— LICA31 NOXMAX PPB

LICA31  
 NOX\_ / WDR Joint Frequency Distribution (Percent)

August 2010

Distribution By % Of Samples

Logger Id : 31  
 Site Name : LICA31  
 Parameter : NOX\_  
 Units : PPB

Wind Parameter : WDR  
 Instrument Height : 10 Meters

	Direction																
Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 50	6.36	5.49	4.63	8.10	4.48	3.90	2.02	4.48	4.63	6.07	11.57	5.49	11.72	11.28	4.63	5.06	100.00
< 110	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
< 210	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
>= 210	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
Totals	6.36	5.49	4.63	8.10	4.48	3.90	2.02	4.48	4.63	6.07	11.57	5.49	11.72	11.28	4.63	5.06	

Calm : .00 %

Total # Operational Hours : 691

Distribution By Samples

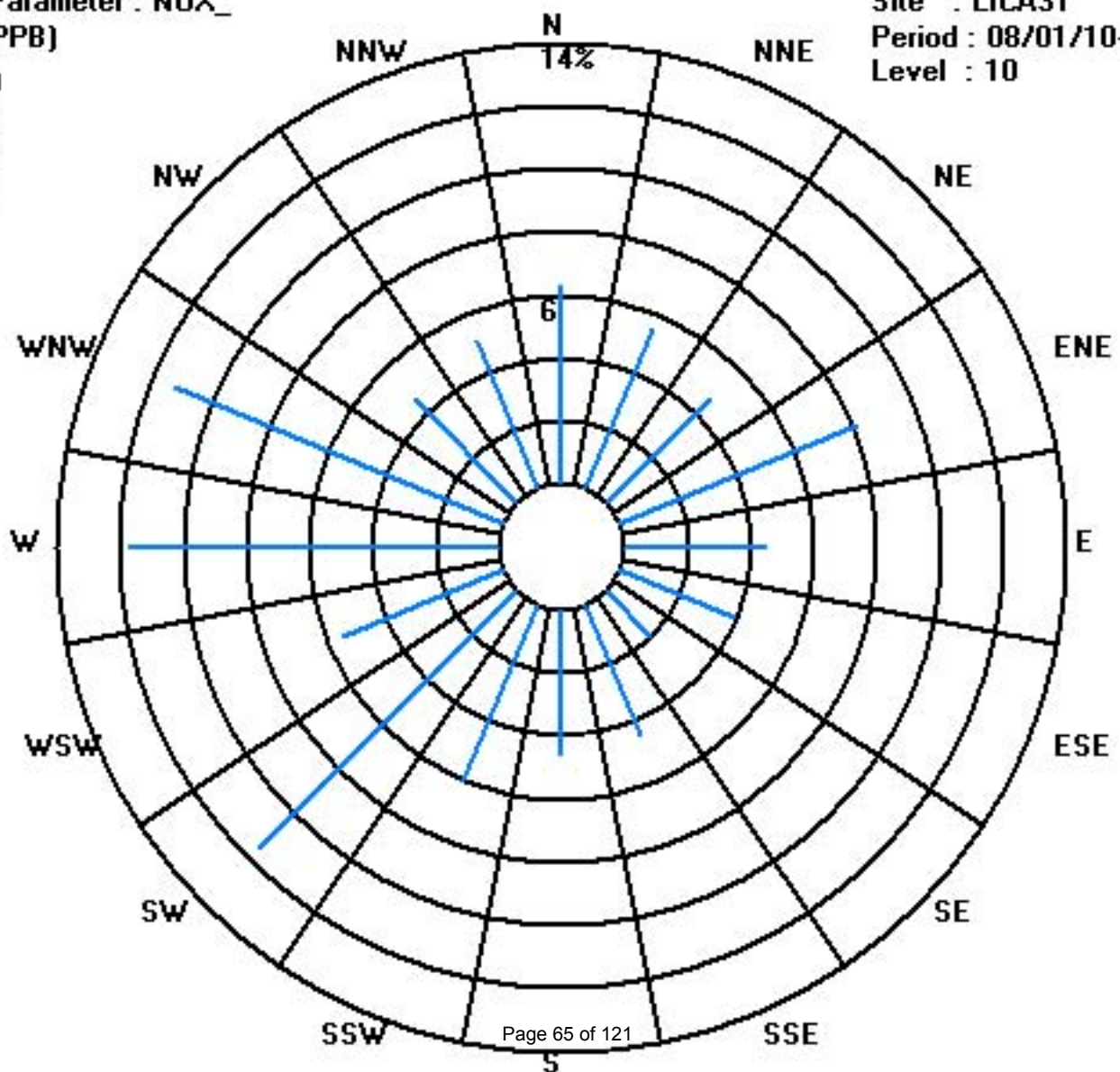
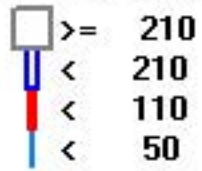
	Direction																
Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 50	44	38	32	56	31	27	14	31	32	42	80	38	81	78	32	35	691
< 110																	
< 210																	
>= 210																	
Totals	44	38	32	56	31	27	14	31	32	42	80	38	81	78	32	35	

Calm : .00 %

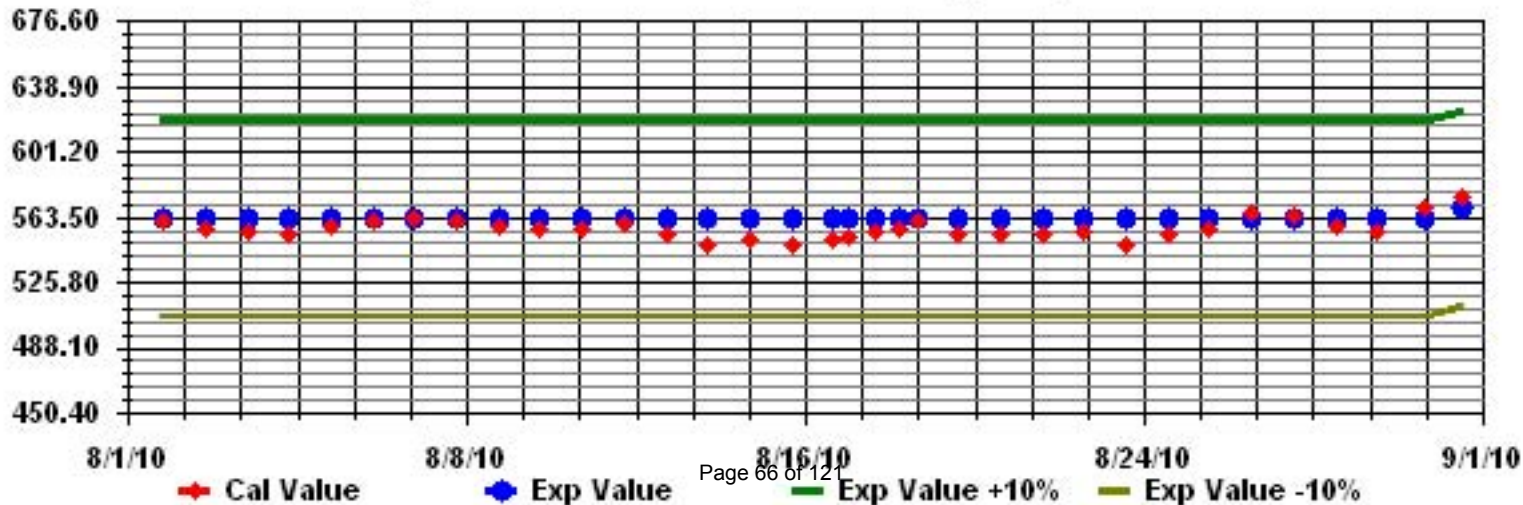
Total # Operational Hours : 691



Class Limits (PPB)



Calibration Graph for Site: LICA31 Parameter: NOX\_ Sequence: NO2 Phase: SPAN



# Particulate Matter 2.5

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - ST. LINA

AUGUST 2010

PARTICULATE MATTER 2.5 (PM2.5) hourly averages in ug/m<sup>3</sup>

MST		0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	24:00	DAILY	24-HOUR		
DAY	DAY	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.		
1																														
2																														
3																														
4																														
5																														
6																														
7																														
8																														
9																														
10																														
11																														
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27																														
28																														
29																														
30																														
31																														
HOURLY MAX																														
HOURLY AVG																														

STATUS FLAG CODES

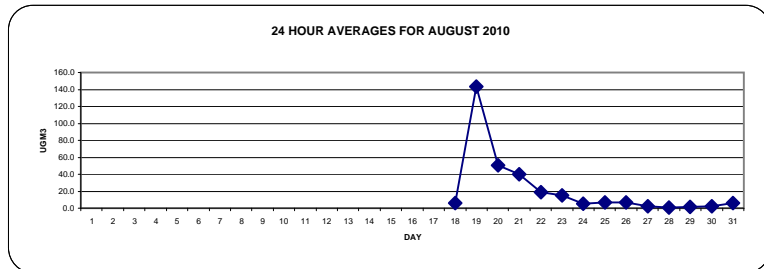
S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	- MISSING DATA
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE

OBJECTIVE LIMIT:

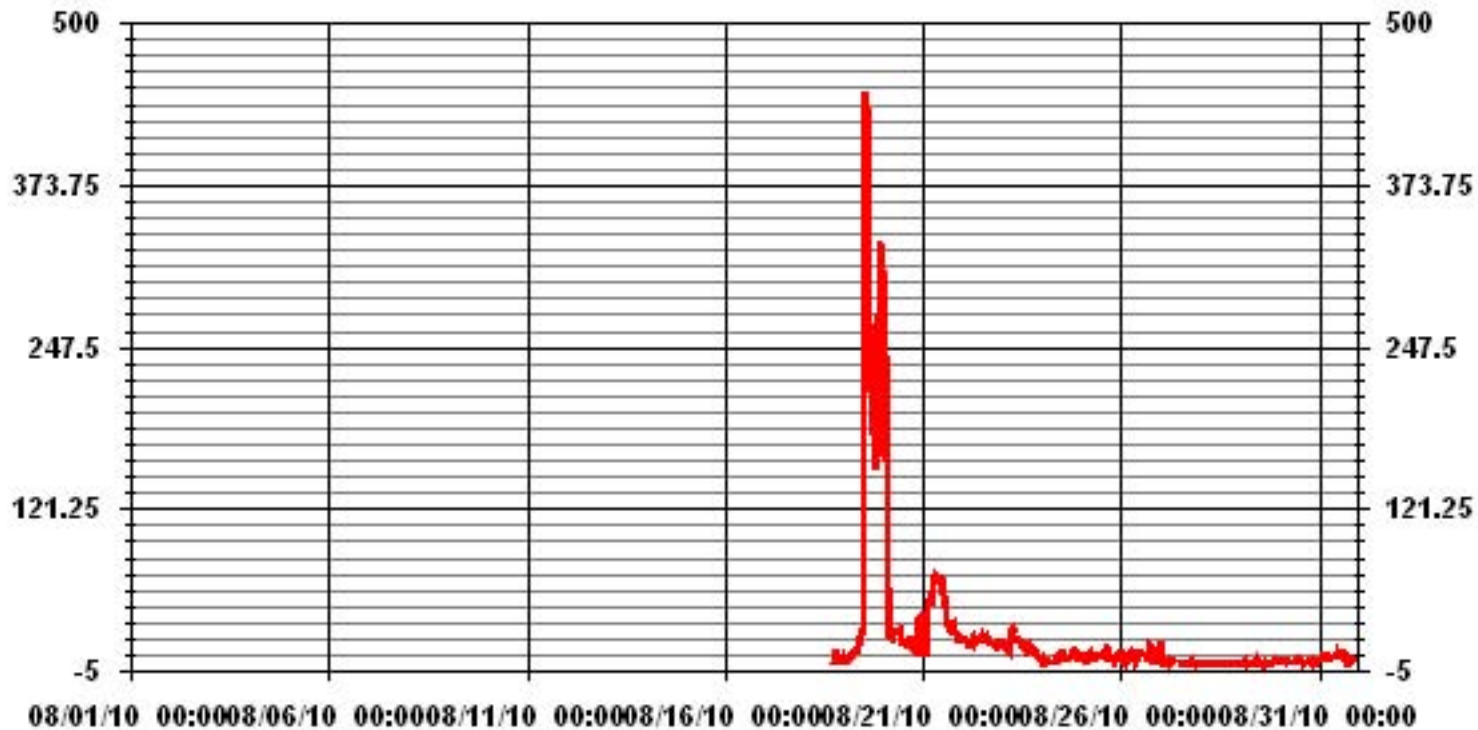
ALBERTA ENVIRONMENT: 1-HR - ug/m<sup>3</sup> 24-HR 30 ug/m<sup>3</sup>

MONTHLY SUMMARY

NUMBER OF 1-HR EXCEEDENCES:	-			
NUMBER OF 24-HR EXCEEDENCES:	3	PROPOSED CANADA WIDE GUIDELINE		
NUMBER OF NON-ZERO READINGS:	290			
MAXIMUM 1-HR AVERAGE:	446.6 UG/M <sup>3</sup>	@ HOUR(S)	13	ON DAY(S) 19
MAXIMUM 24-HR AVERAGE:	143.2 UG/M <sup>3</sup>			ON DAY(S) 19
IZS CALIBRATION TIME:	0 HRS	OPERATIONAL TIME:	319	HRS
MONTHLY CALIBRATION TIME:	7 HRS	AMD OPERATION UPTIME:	99.4	%
STANDARD DEVIATION:	59.70	MONTHLY AVERAGE:	23.13	UG/M <sup>3</sup>



### 01 Hour Averages



— LICA31 PM2 UG/M3

LICA31  
PM2 / WDR Joint Frequency Distribution (Percent)

August 2010

Distribution By % Of Samples

Logger Id : 31  
Site Name : LICA31  
Parameter : PM2  
Units : UG/M3

Wind Parameter : WDR  
Instrument Height : 10 Meters

	Direction																
Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 30.0	3.20	5.44	4.16	7.05	5.76	5.44	2.56	3.84	3.84	5.12	3.84	3.52	15.70	13.78	4.16	1.92	89.42
< 60.0	.32	.64	.00	.32	.00	.00	.00	.00	.32	.00	.00	.00	.96	.96	.00	.00	3.52
< 80.0	.00	.32	.32	.00	.32	.32	.00	.00	.00	.00	.00	.00	.32	.64	.00	.00	2.24
< 120.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
< 240.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.64	.64	.32	.32	.00	.00	1.92
>= 240.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.32	.64	.00	.96	.64	.32	.00	2.88
Totals	3.52	6.41	4.48	7.37	6.08	5.76	2.56	3.84	4.16	5.44	5.12	4.16	18.26	16.34	4.48	1.92	

Calm : .00 %

Total # Operational Hours : 312

Distribution By Samples

	Direction																
Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 30.0	10	17	13	22	18	17	8	12	12	16	12	11	49	43	13	6	279
< 60.0	1	2		1					1				3	3			11
< 80.0		1	1		1	1							1	2			7
< 120.0																	
< 240.0											2	2	1	1			6
>= 240.0										1	2		3	2	1		9
Totals	11	20	14	23	19	18	8	12	13	17	16	13	57	51	14	6	

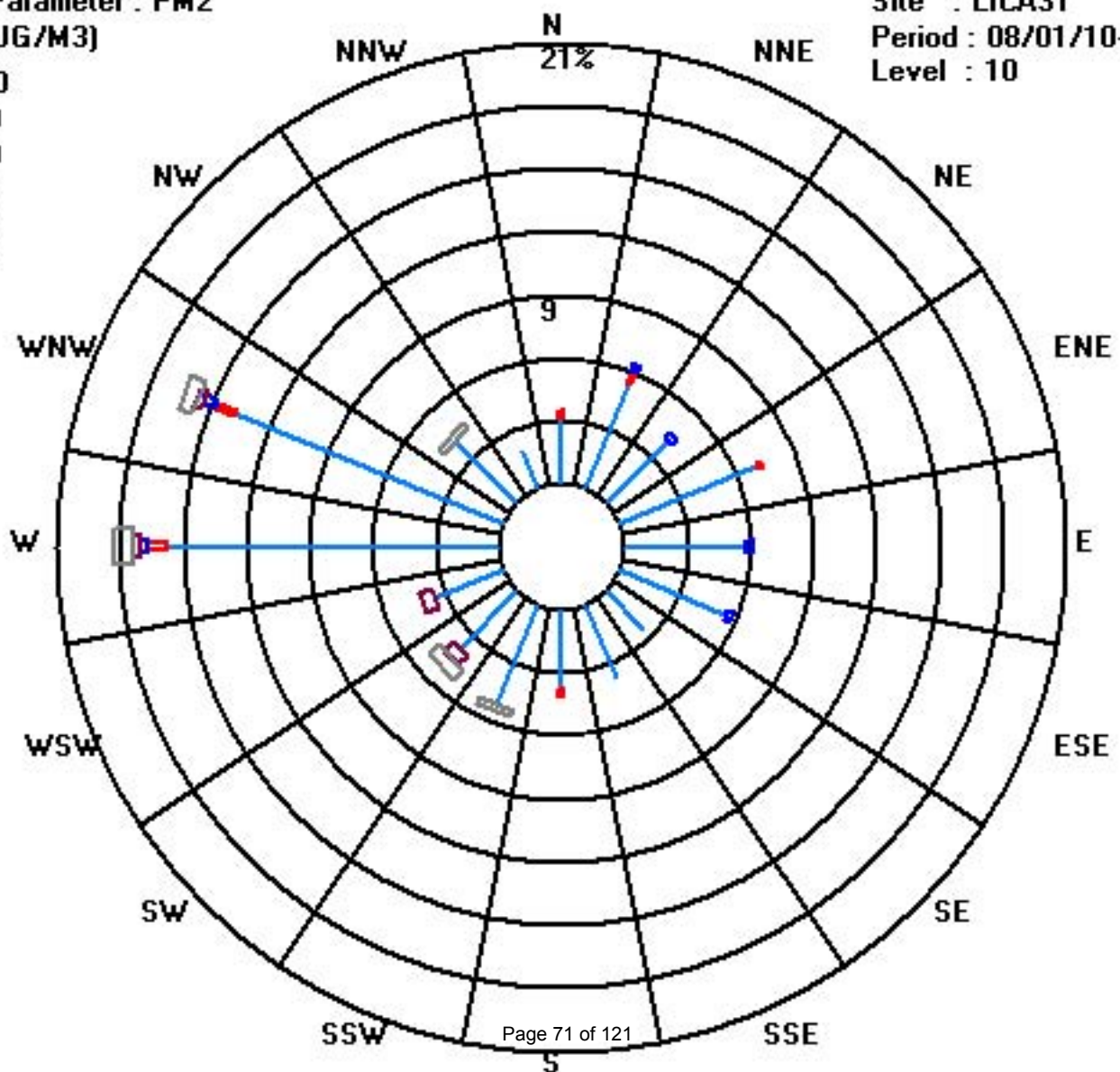
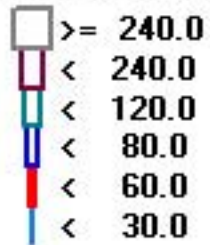
Calm : .00 %

Total # Operational Hours : 312

Class Limits (UG/M3)

Period : 08/01/10-08/31/10

Level : 10



# Temperature



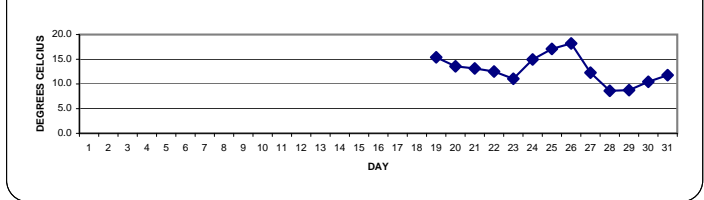
**LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - ST. LINA**  
**AUGUST 2010**  
**AMBIENT TEMPERATURE hourly averages (Degrees C)**

MST		0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	24:00	DAILY MAX.	24-HOUR AVG.	RDGS.
DAY																													
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19																													
20		10.9	10.8	10.1	9.9	9.2	8.5	8.6	10.3	12.8	14.1	15.6	16.7	17.5	M	M	17.6	18.5	18.5	18.1	16.8	14.6	13.6	13	12.2	11	18.5	15.4	10
21		11	11.7	11.2	10.6	10.3	10.4	10.6	11.1	12.6	13.9	15.7	16.3	16.9	17.5	17.7	17.4	17	16	14.3	12.4	11	10.4	9.5	9.8	17.7	13.1	24	
22		9.9	9.5	9.5	8.7	8.7	8.2	8.5	11.1	13.4	13.3	13.7	15.1	15.3	15.5	16	16.2	16.1	15.7	15	13	12.4	12.7	12	10.9	16.2	12.5	24	
23		10.1	10.2	10.4	10.6	10.7	10	9.6	9.7	9.7	9.9	9.9	9.8	10.1	11	13.4	14.1	14.1	14.2	13.9	12.4	11.3	10.5	10	9.7	14.2	11.1	24	
24		9.5	9.1	8.9	8.8	8.2	8.2	9.9	12.4	12.6	14.4	17.9	20.4	20.8	21	21.3	21	21.4	19.8	18	16.8	15.7	15	14.4	13.5	21.4	15.0	24	
25		12.9	12.4	12	11.9	11.9	11.3	11.5	13.9	14.9	16.7	18.7	21.2	22.4	23.2	23.3	23.9	24	22.6	20.1	17.4	16.5	16.2	16	15.4	24.0	17.1	24	
26		14.6	13.9	13.5	13	12.7	12.6	14.1	15.3	16.8	18.2	19.7	21.7	22.8	23.7	24.3	24.7	<b>24.8</b>	23.9	21.6	20	19.3	17.6	14.7	13.4	<b>24.8</b>	<b>18.2</b>	24	
27		12.3	12.1	12.3	12.3	11.7	11.1	11	10.8	11.1	12.2	12.9	13.2	13.4	13.7	14.1	14.6	14.4	14.1	13.6	11.9	10.3	10.3	10.7	10.6	14.6	12.3	24	
28		10.2	9.6	9.6	9.1	7.8	7.4	7	7.4	7.9	8.3	8.1	9.2	10.5	10.4	9.7	10.2	9.9	9.9	8.7	7.7	7.4	7	7	6.6	10.5	8.6	24	
29		6.6	6.6	6.6	6.6	6.7	6.9	7	7.6	8.4	9.1	10.4	10.8	11.5	10.7	10.9	11.2	11	9.9	9.7	8.5	8.3	8.4	8.3	8.1	11.5	8.7	24	
30		8	7.7	7.7	7.8	7.9	7.8	8	8.7	9.5	11.2	14	15.3	14	12.6	13.7	12.1	12.3	12.5	11.8	10.5	9.5	9.2	9.3	9.3	15.3	10.4	24	
31		9.2	8.5	8.2	7.1	6.2	<b>5.6</b>	7	10.1	12.6	15	15.6	16	17	17.5	16.9	17.3	16.7	15.8	13.7	10.5	9.8	8.5	8.9	8.9	17.5	11.8	24	
HOURLY MAX		14.6	13.9	13.5	13.0	12.7	12.6	14.1	15.3	16.8	18.2	19.7	21.7	22.8	23.7	24.3	24.7	24.8	23.9	21.6	20.0	19.3	17.6	16.0	15.4				
HOURLY AVG		10.4	10.2	10.0	9.7	9.3	9.0	9.4	10.7	11.9	13.0	14.4	15.5	16.0	16.2	16.7	16.9	16.8	16.1	14.9	13.1	12.2	11.7	11.2	10.6				

**STATUS FLAG CODES**

S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	- MAINTENANCE
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE

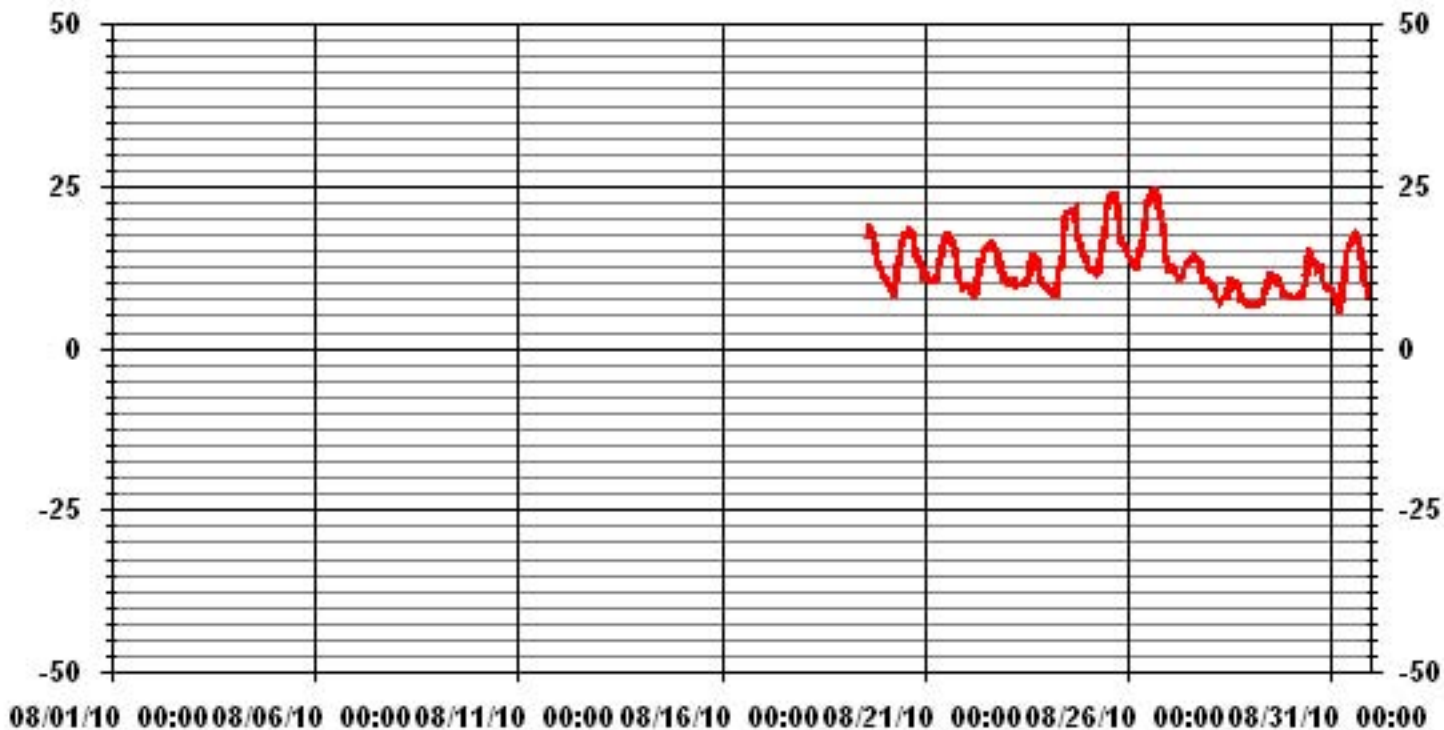
**24 HOUR AVERAGES FOR AUGUST 2010**



**MONTHLY SUMMARY**

MINIMUM 1-HR AVERAGE:	5.6 °C	@ HOUR(S)	5	ON DAY(S)	31
MAXIMUM 1-HR AVERAGE:	24.8 °C	@ HOUR(S)	16	ON DAY(S)	26
MAXIMUM 24-HR AVERAGE:	18.2 °C			ON DAY(S)	26
CALIBRATION TIME:	0	HRS		OPERATIONAL TIME:	298 HRS
STANDARD DEVIATION:	4.20			AMD OPERATION UPTIME:	100.0 %
				MONTHLY AVERAGE:	12.79 °C

### 01 Hour Averages



— LICA31 TPX DGC

# Barometric Pressure

# LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - ST. LINA

AUGUST 2010

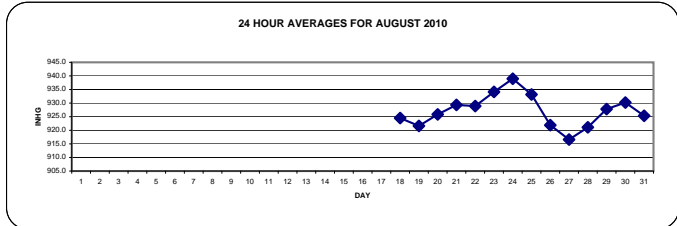
## BAROMETRIC PRESSURE hourly averages (millibar)

MST		0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR		
HOURLY MAX	HOURLY AVG	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.	
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29																													
30																													
31																													
HOURLY MAX																													
HOURLY AVG																													

### STATUS FLAG CODES

S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	- MAINTENANCE
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE

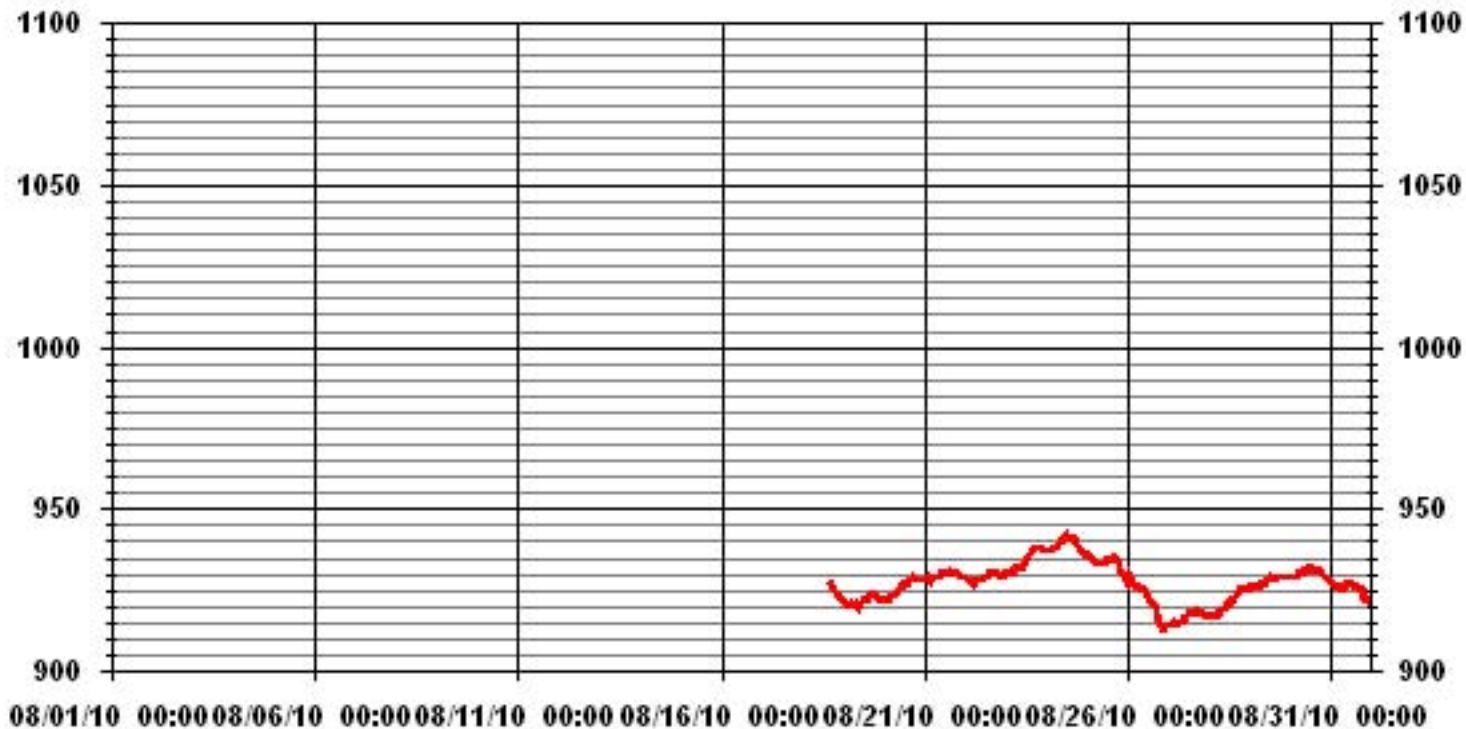
24 HOUR AVERAGES FOR AUGUST 2010



### MONTHLY SUMMARY

MAXIMUM 1-HR AVERAGE:	942	MB	@ HOUR(S)	12	ON DAY(S)	24
MAXIMUM 24-HR AVERAGE:	939.0	MB			ON DAY(S)	24
					VAR-VARIOUS	
CALIBRATION TIME:	0	HRS	OPERATIONAL TIME:	319	HRS	
			AMD OPERATION UPTIME:	99.7	%	
STANDARD DEVIATION:	6.30		MONTHLY AVERAGE:	927	MB	

### 01 Hour Averages



# Relative Humidity

# LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - ST. LINA

AUGUST 2010

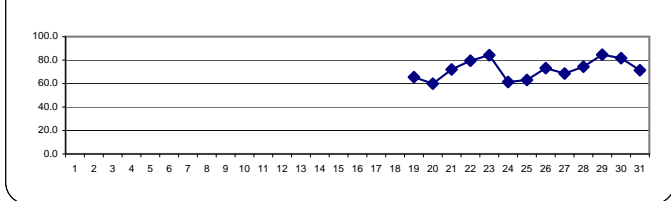
## RELATIVE HUMIDITY hourly averages (%)

MST		0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	DAILY	24-HOUR	
HOUR START	HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.	
DAY																													
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20		78	74	69	64	64	67	69	64	59	57	55	52	50	49	46	46	47	51	56	60	62	60	65	75	78	84	65.5	10
21		75	72	75	78	79	79	78	80	76	71	64	61	59	56	58	60	63	65	70	75	80	83	87	85	87	84	60.0	24
22		85	86	87	89	89	90	90	83	75	76	74	70	70	70	68	67	69	72	74	81	85	83	86	89	90	90	79.5	24
23		90	91	90	89	87	88	89	90	89	89	89	89	88	86	77	74	73	72	74	78	82	84	83	81	91	91	84.3	24
24		79	78	77	75	77	76	71	69	73	71	60	45	41	40	41	42	43	50	55	60	61	61	62	66	79	79	61.4	24
25		69	70	70	68	68	71	71	64	63	61	60	55	53	51	49	45	47	52	62	72	72	72	73	76	76	76	63.1	24
26		81	87	86	89	90	88	82	80	75	70	68	60	58	57	55	55	56	60	67	73	75	78	83	84	90	90	73.2	24
27		86	87	86	83	81	80	80	79	77	70	64	63	60	58	54	53	53	52	55	62	69	66	63	65	87	87	68.6	24
28		68	71	73	73	76	75	76	72	70	70	77	73	65	69	75	71	68	68	76	80	82	84	85	88	88	88	74.4	24
29		89	90	90	90	90	90	90	88	86	83	79	79	73	76	79	77	77	84	83	86	86	88	89	90	90	90	84.7	24
30		90	90	91	91	91	91	91	91	89	78	65	59	65	70	68	77	78	77	81	84	85	86	86	86	91	91	81.7	24
31		84	88	88	89	90	91	88	77	72	63	59	52	49	46	48	49	50	59	67	77	79	84	83	82	91	91	71.4	24
HOURLY MAX		90	91	91	91	91	91	91	91	89	89	89	89	88	86	79	77	78	84	83	86	86	88	89	90				
HOURLY AVG		81.2	82.0	81.8	81.5	81.8	82.2	81.3	78.1	75.3	71.6	67.8	63.2	60.9	60.7	59.2	58.6	59.5	63.0	68.2	73.7	76.3	77.3	78.9	80.8				

### STATUS FLAG CODES

S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	- MAINTENANCE
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE

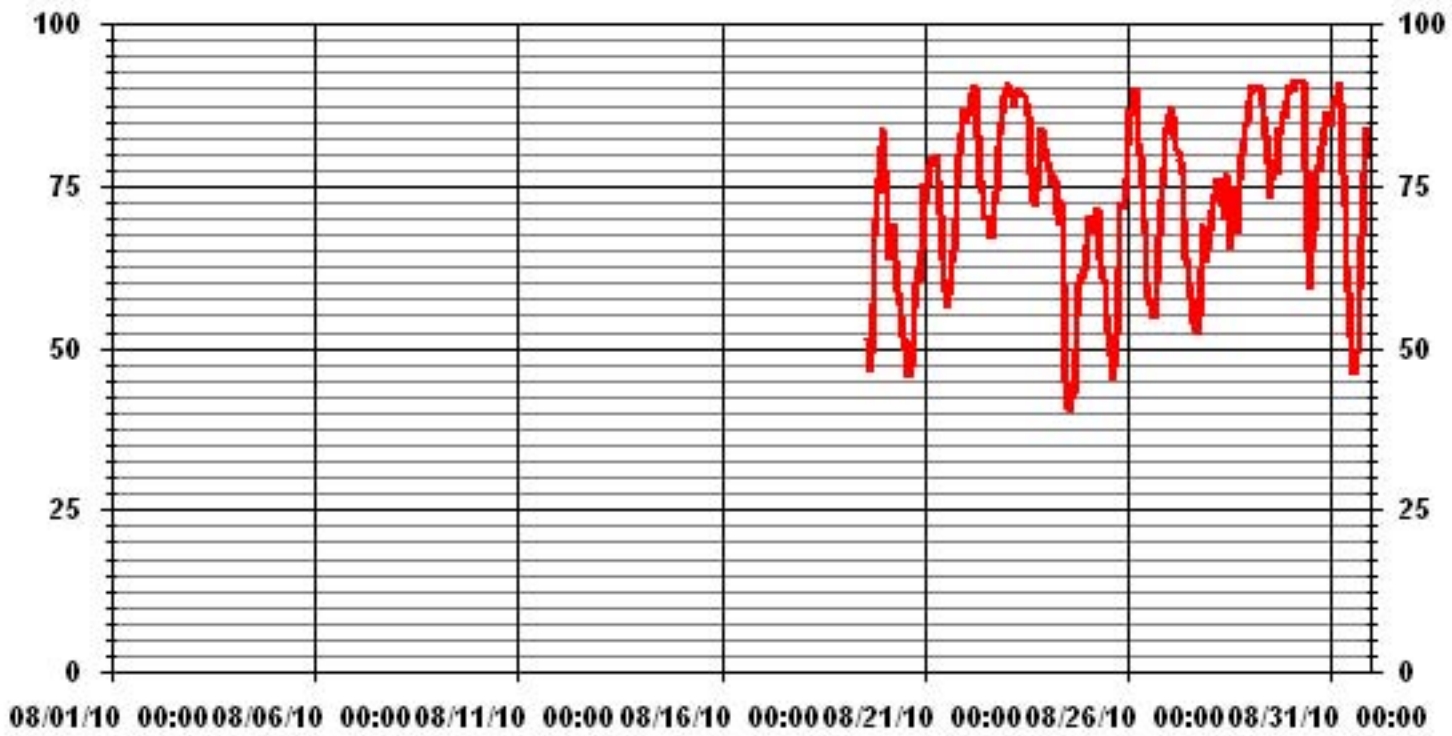
24 HOUR AVERAGES FOR AUGUST 2010



### MONTHLY SUMMARY

MAXIMUM 1-HR AVERAGE:	91	%	@ HOUR(S)	VAR	ON DAY(S)	VAR
MAXIMUM 24-HR AVERAGE:	84.7	%			ON DAY(S)	29
					VAR-VARIOUS	
CALIBRATION TIME:	0	HRS		OPERATIONAL TIME:	298	HRS
				AMD OPERATION UPTIME:	100.0	%
STANDARD DEVIATION:	13.05			MONTHLY AVERAGE:	72.60	%

### 01 Hour Averages





# Precipitation

**LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - ST. LINA**  
**AUGUST 2010**  
**PRECIPITATION hourly averages (mm)**

MST		0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	DAILY			
HOURLY MAX	HOURLY END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	TOTAL	RDGS.		
DAY																														
1																														
2																														
3																														
4																														
5																														
6																														
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17																														
18																														
19		0	0	0	0	0.3	0.5	0.3	1	0.1	0	0	0	0.1	M	M	M	0	0	0	0	0	0	0	0	0	0.0	0.0	8	
20		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	24
21		0	0	0.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	0.5	24	
22		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	24	
23		0	0	0	0	0	1.6	2.5	0.9	1.1	0.5	2.8	2.5	0.4	0	0	0	0	0	0	0	0	0	0	0	0	2.8	12.3	24	
24		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	24	
25		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.2	24	
26		1	0.6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1.0	1.6	24	
27		0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1.0	1.0	24	
28		0	0	0	0	0	0	0	0	0	0.1	0.3	0.1	0	0.4	0.2	0	0	0	0	0	0	0	0	0	0	0.4	1.1	24	
29		0	0	0	0	0.1	0.2	0.6	0	0	0.1	0.3	0	0	0	0.2	0	0	0	0	0	0	0	0	0	0	0.6	1.5	24	
30		0	0	0	0	0	0	0.2	0	0	0	0	0	0	0	0	0.5	0	0	0	0	0	0	0	0	0	0.5	0.7	24	
31		0	0	0	0	0	0.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.1	24	
HOURLY MAX		1.0	0.6	0.5	0.0	0.3	1.6	2.5	1.0	1.1	0.5	2.8	2.5	0.4	0.4	0.2	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2				

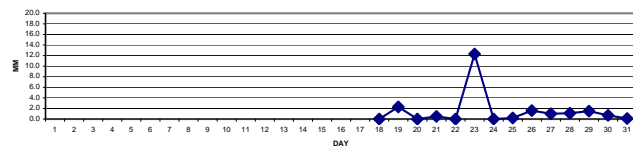
**STATUS FLAG CODES**

S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	- MAINTENANCE
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	MD	-MISSING DATA

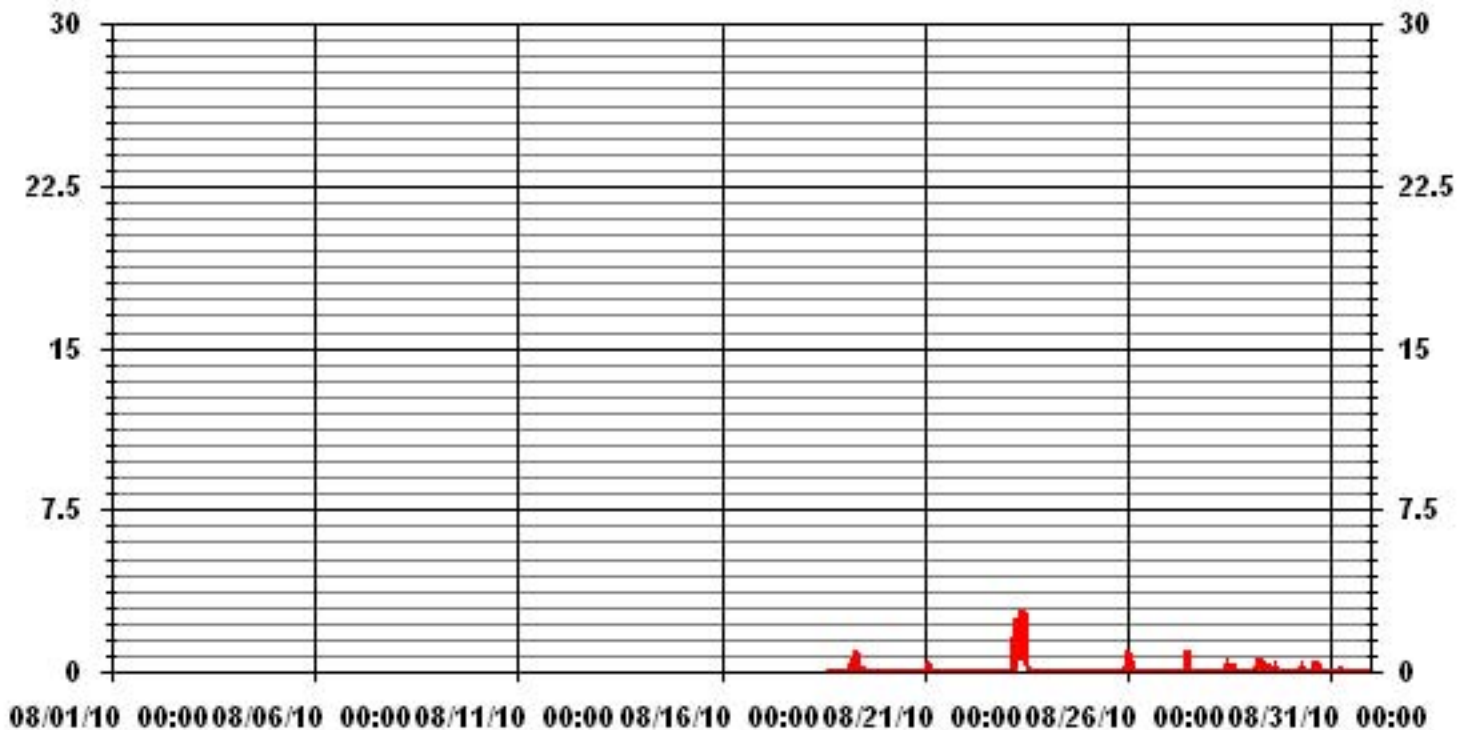
**MONTHLY SUMMARY**

MAXIMUM 1-HR AVERAGE:	2.8	MM	HOUR(S)	10	ON DAY(S)	23
MAXIMUM DAILY TOTAL	12.3	MM			ON DAY(S)	23
MONTHLY TOTAL	21.3	MM				
CALIBRATION TIME:	0	HRS	OPERATIONAL TIME:	320	HRS	
STANDARD DEVIATION:	0.30		AMD OPERATION UPTIME:	100.0	%	
			MONTHLY AVERAGE:	0.07	MM	

**DAILY TOTALS FOR AUGUST 2010**



### 01 Hour Averages



# Vector Wind Speed

# LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - ST. LINA

AUGUST 2010

## WIND SPEED hourly averages (km/hr)

MST		0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR		
HOURLY MAX	HOURLY AVG	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.	
DAY																													
1		13.4	12.4	14.3	14.3	15.1	4.4	3.2	2.9	3.3	4.1	11.1	1.4	7.1	11.1	2.6	1.1	6.6	10.7	6.3	4.5	6	6.6	9.5	8.5	15.1	2.7	24	
2		8.6	10.7	9.9	7.9	10.8	10.6	10.7	10	11.4	12.3	13.6	11.5	12.7	12.8	2	7.6	6.5	7	8.3	11.4	10.1	7.1	7.9	7.4	13.6	3.7	24	
3		8.2	11.5	13.1	11.4	12.7	10.9	7.1	8.9	8.7	11.2	10.5	13.3	14.5	13.5	11.4	12.3	13	13.3	13.3	12.6	12.3	10.4	10.1	9.5	14.5	9	24	
4		9	8.9	9.7	10.8	11.3	11.9	13.7	11.8	5.1	12.8	12.3	7.6	11.3	12.6	12.2	12.7	12.6	9.6	6.9	6.3	7.6	7.5	8.7	8.6	13.7	0.9	24	
5		9.5	9.2	7.4	6.1	6.4	4.4	3.1	4.1	3.6	2.4	4.3	4	4	0.9	8.1	6.6	8.1	4.3	3.9	5.4	6.4	8.2	8.5	9.5	9.5	2.6	24	
6		9.2	8.7	9.3	9.9	9.9	10.2	10.6	9.6	10.5	10.1	6.9	9.4	7	10.2	9.3	11.2	9.3	6.1	8.3	12.8	13.2	11.6	9.8	12.9	13.2	2.6	24	
7		14.4	10.4	12.2	10.8	10.1	8.9	11	10.1	11.3	8.5	10.9	11.6	14.3	13.7	13.7	12	9.3	7.5	5.7	3.9	9.8	8.1	10.2	9.8	14.4	8.8	24	
8		8.1	5	6.4	8.4	7.6	7.9	8.3	8.1	6.8	10.6	11.9	9.9	10.1	10.8	13.3	11.7	5.5	4.4	2.5	13.8	9.6	4.7	5.8	6.8	13.8	1.8	24	
9		6	6.8	8.4	9.2	8.9	10.4	9.1	6.4	3.4	1.8	5	2	7.4	8.2	10.3	11.7	11	12.7	14.5	15.5	15.3	14.1	8.5	9.2	15.5	3.5	24	
10		4.9	4.6	8.2	8.7	4.9	7.6	9.4	11.3	8.6	9.3	6.6	10.7	13	6.9	7.2	11.2	7.2	13.3	10.1	5.1	2.4	6.4	7.2	7.7	13.3	4	24	
11		5.9	2.4	3.5	4.6	3.9	5.4	6.8	3.4	4.3	7.1	4.8	5.1	3.7	6.9	<b>P</b>	<b>P</b>	5.3	8.1	15.1	15	12.7	12.5	12.5	2.4	15.1	2.9	22	
12		6.6	8.6	15.3	12.3	12.3	10.6	8.6	13.4	12.9	13	13	12.5	11.4	6.1	7	8.6	5.9	7	7.6	9.2	12.5	13.2	12	12.3	15.3	8.5	24	
13		9.7	10.6	9.4	9.3	7.8	8.3	6	6	6	5.6	4.2	11.2	13.6	8.1	5.3	6.7	10	11	10	10.6	12.1	9.2	7.1	7.9	13.6	6.5	24	
14		8.6	9.1	9.4	9.7	7.8	7	8.4	9.3	7.2	7.8	9.1	10.4	10.9	11.2	10.8	11.8	9.9	8.4	10.6	12	12.7	12	11.9	6.1	12.7	8.8	24	
15		4.5	2.9	3.1	4.9	2.2	4.7	5.5	8.1	8.7	9.7	10.3	12.2	10.8	10.7	11.7	10.8	10.7	7.8	5.4	4.8	9.1	12.5	14.6	6.8	14.6	3.4	24	
16		5.8	12.2	11.8	10.2	10.3	11.3	11.3	11.2	12.6	10.3	11.7	11.6	11.5	11.3	5.8	8.7	10.5	13.5	18.1	11.5	13.2	4.5	10.1	6.8	18.1	9	24	
17		11.1	13.3	5.2	4.1	6.4	6.1	6.1	6.3	5.9	9.6	11.8	3.6	4.2	9.5	11.2	7.4	13.5	7.6	4.4	4.1	6.6	7	6.7	6.9	13.5	3	24	
18		6.1	5.8	5.4	6.7	6.8	8.3	6.7	5.7	6.9	7.7	14.1	16	<b>P</b>	<b>P</b>	<b>M</b>	7.7	8.3	10.6	10.5	9.3	6.9	6.5	7.2	5.1	16	2.1	21	
19		6	6.4	4	3.7	10.8	10.8	1.6	3.5	12	7.7	6.5	10	11.4	10.4	10.1	10.1	6	5.3	5.8	6.5	5.4	5.9	5.8	6.4	12	3.8	24	
20		8.7	9.2	8.9	10.4	10.9	10.2	7.9	8.9	10.4	13.3	13.7	3.9	6.5	7.5	4.7	6.9	10.5	13.4	15.5	2.4	1.5	2.7	0.8	6.6	15.5	1.5	24	
21		8.2	7.4	8.4	12.3	10.9	11.7	13.4	7.5	8.4	7.3	2.2	7.4	7.8	5.8	6.3	8	8.2	7.1	7.2	8	8.2	8.5	10.9	9.6	13.4	4	24	
22		11.3	5	5.5	7.8	6.4	6.3	4.5	4.1	3.6	6.3	6.7	1	8.5	2.3	1.9	1.1	3.2	3.3	5.3	4.8	5.4	4.6	6.4	7.9	11.3	2.8	24	
23		8.2	9.3	10.5	12.6	12.9	14.2	14.4	13.2	14.2	13.9	14.4	16.8	14.8	15.6	15.9	14	16.1	15.1	9.7	8.5	9.1	6	10.3	10.9	16.8	12.3	24	
24		10.2	11	11.1	10.7	10.8	8.6	7.1	5.7	5	7	6.2	2.3	10.5	10.9	8.7	9.1	12.4	13.8	4.9	6.7	7.4	8.5	10.1	10	13.8	3.8	24	
25		9.6	9.3	9.5	10.2	11.8	12.8	11.5	11.5	11.8	9.7	10.9	10.6	9.6	10.4	10.9	12.5	5.1	4	4.9	6.8	8	8.6	10.2	11.5	12.8	5.6	24	
26		13.9	13.6	13.4	15.7	16.9	13.8	11	14.7	16.7	19.3	17.9	17.8	16.2	19.1	19.5	19.5	17.4	14.5	17	17.9	13.7	20.5	14.5	13	20.5	10.8	24	
27		15.7	15	19.9	17.9	20.5	20	21.6	23.4	24	24	26.9	27.6	28.5	29.6	28.8	28.1	<b>30.4</b>	25.4	22.2	17.8	15.8	15.6	23.8	23.6	<b>30.4</b>	<b>22.3</b>	24	
28		25.4	24.2	24.3	18.9	18.1	16.6	17.9	20	18.3	19	16	19.5	19.1	16.6	13.7	14	15.3	12.3	12.1	10.7	12.1	12.9	13	13.7	25.4	15.4	24	
29		13.4	13.4	11.4	10.7	5.3	4.7	0.8	5.8	6.3	5.2	1.6	3.3	8.8	12.2	8.1	14.1	12.9	14.4	13.7	13.7	12.9	13.2	11.8	14.6	14.6	6	24	
30		14.2	13.6	13.9	13.7	16.3	17.3	20.9	1.1	7.6	15.3	8.3	1	4.2	2.9	4.3	10.1	2.6	3.2	3.7	5	6.7	6.8	6.1	5.6	20.9	4.1	24	
31		4.2	2.6	8	7.6	5.8	5.2	4.4	5.3	3.3	5.3	6.7	7	6.9	6	7.1	8.4	3.4	2.6	5.4	6.2	6.7	6.2	6.8	7.2	8.4	2.4	24	
HOURLY MAX		25.4	24.2	24.3	18.9	20.5	20.0	21.6	23.4	24.0	24.0	26.9	27.6	28.5	29.6	28.8	28.1	30.4	25.4	22.2	17.9	15.8	20.5	23.8	23.6				
HOURLY AVG		9.6	9.5	10.0	10.0	10.1	9.7	9.1	8.8	9.0	9.9	10.0	9.4	10.7	10.5	9.7	10.5	9.9	9.6	9.3	9.1	9.4	9.1	9.6	9.2				

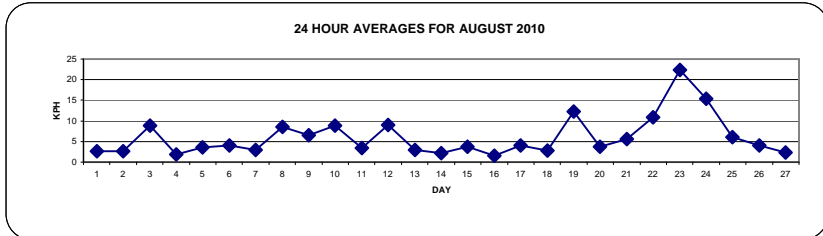
### STATUS FLAG CODES

S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	- MAINTENANCE
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE

LAST CALIBRATION: February 3, 2009

### MONTHLY SUMMARY

MAXIMUM 1-HR AVERAGE:	30.4	KPH	@ HOUR(S)	16	ON DAY(S)	27
MAXIMUM 24-HR AVERAGE:	22.3	KPH			ON DAY(S)	27
CALMS (≤ 0 KPH)	0.27	%	OPERATIONAL TIME:	739	HRS	
MONTHLY CALIBRATION TIME:	0	HRS	AMD OPERATION UPTIME	99.3	%	
STANDARD DEVIATION	4.64		MONTHLY AVERAGE	9.65	KPH	





LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - ST. LINA

AUGUST 2010

VECTOR WIND SPEED MAX instantaneous maximum in km/hr

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.
DAY																									
1	18.2	17.2	19.7	20.1	19.2	19.9	6.5	7.4	8.7	14.2	24.7	22	25.1	22.7	23.1	6.1	22.3	20.7	20.7	16.8	11.1	10.5	34.7	23	34.7
2	18.6	22.9	20.7	18.1	22	22.5	26.5	27.1	30.4	27.1	28.4	32.3	31.7	28.6	23.8	22.5	21.4	24	21.4	17.7	17	18.8	16.4	17.9	32.3
3	16.6	18.6	27.7	37.8	36.8	33.7	23.4	24.2	26	30.6	28.8	31.7	44.9	38.5	32.8	30.2	30.8	32.6	19.9	18.8	18.8	18.1	16.8	16.1	44.9
4	16.6	17.2	16.8	18.4	19.2	19.2	18.8	19.6	20.3	21	23.4	64.6	21.8	24	22.5	23.1	20.7	20.3	15.7	12	14.6	14	16.4	15.7	64.6
5	18.3	18.3	14.4	13.6	12.4	7.6	9.8	10.9	12.9	13.1	23	24.7	23.3	21.6	20.5	19.4	20.7	15.5	12.9	8.5	11.1	13.7	13.7	22.7	24.7
6	23.1	15.5	P	17.7	19.9	24	25.5	29.9	28.6	35.4	44	36	39.8	32.6	36.3	28.4	26.2	32.8	29.3	19.2	19	17.9	22.3	22.7	44
7	22	21.7	21.2	22	20.9	16.4	20.5	17.9	18.8	16.8	23.6	24	31.2	33.2	31	32.6	22.1	18.5	13.5	8.9	19.9	25.3	24	29.3	33.2
8	22.7	17.9	P	24.5	15.1	13.1	18.8	16.4	17.7	27.1	28.9	28	23.6	19	19.4	21.8	17.2	11	10.9	20.9	21	7.2	8.5	9.6	28.9
9	10.2	11.2	12.4	12.6	18.8	23.8	20.1	16.6	20.4	13.7	24.9	25.1	27.5	25.5	23.8	24.7	26.2	20.1	19.4	18.1	20.1	20.7	12.9	16.4	27.5
10	58.8	26.6	29.5	25.6	20.1	16.1	23.6	24	20.1	23.6	30.6	26.4	22	25.8	179.1	30	23.4	28.4	28.4	12	12.9	13.7	14.6	13.5	179.1
11	10.2	7.4	5.7	8.1	7.8	7.9	12.7	11.1	21.8	23.1	23.4	23.6	18.1	32.8	P	P	16.1	21.4	21.4	17.7	17.2	17	17.7	P	32.8
12	10.7	18.8	18.1	22.5	22.9	22.9	21.8	21.7	22.9	22.3	23.6	34.5	38.9	53.8	42.4	47.7	45.7	36.1	35.4	33.4	22.3	24.3	28.2	26.9	53.8
13	26.6	21.6	29.7	26.2	32.6	31.3	36.7	35	36.3	43.9	43.1	40	36.3	42.8	43.1	35.6	33.2	23.8	31	29.1	21.4	26.2	32.8	31.9	43.9
14	28.2	28.8	21.2	24.5	36.9	29.7	33.7	28.2	36.1	32.8	31.5	35.8	40.4	37.8	40.9	35	34.3	31.9	27.3	19.5	18.1	17.9	19.4	10.2	40.9
15	9.1	5	5.5	9.8	5.9	10.2	11.6	19.6	22.7	29.1	32.6	36.5	35	33	31.5	35	40	26.9	19	11.1	18.1	18.6	18.6	18.3	40
16	16.6	16.1	17.9	20.7	18.6	17	19.3	21.2	22.3	22	21.2	22.3	21.4	24.9	21.9	19.9	20.3	45.9	52.2	24.2	22	19.7	19.9	22.7	52.2
17	25.5	23.8	20.3	11.1	14	16.6	18.6	P	18.4	P	22	22	20.7	24	24	23.1	21.4	22.5	12.7	8.3	8.9	10.2	10.7	13.1	25.5
18	12.4	9.2	8.3	9.4	10.7	12.7	14.6	14.4	15.9	18.6	29.9	31.5	P	P	M	M	30.8	24.9	23.4	20.8	31.9	28.6	28	27.1	31.9
19	27.5	27.5	28	29.9	22.3	20.8	20.7	25.8	19.9	20.5	15.7	36.3	28.6	P	26.4	23.6	20.7	9.8	8.5	9.1	8.1	8.7	8.3	9.4	36.3
20	17	17.9	16.8	19	21.4	22.3	15.9	23.8	21.6	28.2	30.6	23.6	18.6	20.3	25.3	19.7	18.6	18.8	19.4	21.2	3.2	5.4	7.7	11.6	30.6
21	14.8	16.1	21.2	22.5	17.5	16	18.6	18.6	16.6	17	19.4	21.2	20.4	20.5	24.7	21.2	20.1	19.6	19.9	19.9	19.2	17.7	18.3	17.7	24.7
22	18.3	19.2	14.9	14	15.1	11.6	10.9	9.1	22.3	24.5	24.5	21.8	21.8	9.1	9.1	7.8	8.1	12.7	12.7	7.8	10.2	8.5	15.3	19	24.5
23	17.9	21	24.9	29.9	29.1	34.1	34.8	29.6	32.6	32.8	36.1	45.9	33.7	39.6	34.5	39.1	39.4	38.3	30.2	17.7	16.4	17.7	17.5	20.8	45.9
24	17.9	17.9	19.9	18.2	16.1	14.9	10.9	9.1	10.2	13.5	14.4	19.9	20.9	26	26.2	17.5	20.5	20.3	18.6	9.6	11.3	12.4	15.3	14.8	26.2
25	22.9	P	13.7	16.8	24.9	27.1	25.3	29.1	29.3	24.5	25.1	21	21.8	21.4	25.2	21.2	20.1	16.8	9.6	11.1	12	15.7	18.3	23.8	29.3
26	41.1	30.2	26	30.2	45.7	43.1	40.9	29.5	47	44.6	40.9	39.6	37.6	38.7	45.2	41.3	36.5	34.3	37.4	36.7	48.1	P	56	34.5	56
27	44.2	35.2	45.5	48.4	47.9	39.8	43.7	44.2	52	53.1	54.7	58.8	57.3	67.3	66.2	60.3	72.4	55.8	48.8	26.9	21	34.5	44.2	44.2	72.4
28	50	48.1	50.7	56.4	45.3	49.9	45.7	51.8	50.9	48.8	47.7	50.3	43.1	40.7	33.2	41.1	34.5	28.2	25.8	21	22.3	22.3	21.6	19.7	56.4
29	19.9	19.4	18.8	19.2	14.4	21.2	19	17.7	19	20.3	21.2	21	20.8	19.2	20.5	20.5	21	20.1	19.4	17.7	17.2	18.1	19	18.8	21.2
30	18.6	19.2	18.1	18.8	19.7	23.6	35.2	36.1	36.3	35	23.4	24.3	20.7	19.9	20.3	20.3	20.1	11.1	8.3	8.9	13.7	10	9.8	10	36.3
31	9.6	6.8	14.8	16.4	12	9.1	8.7	10.3	7.6	14.2	20.8	26.6	24.2	29.1	26	21.2	12	7.4	24.7	11.1	12.9	10.7	11.8	12.2	29.1
PEAK	58.8	48.1	50.7	56.4	47.9	49.9	45.7	51.8	52.0	53.1	54.7	64.6	57.3	67.3	179.1	60.3	72.4	55.8	52.2	36.7	48.1	34.5	56.0	44.2	

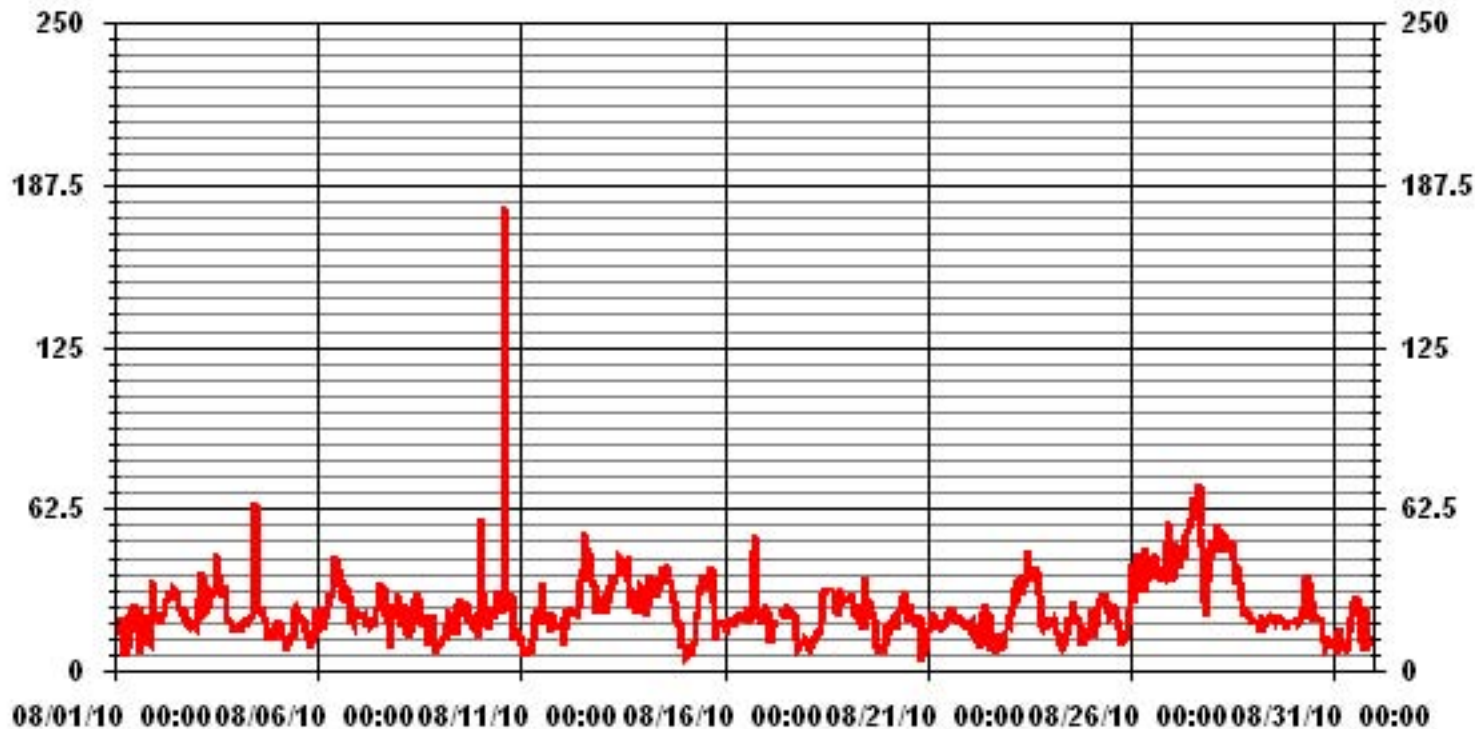
STATUS FLAG CODES

S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	- MISSING DATA
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE

MONTHLY SUMMARY

MAXIMUM INSTANTANEOUS READING	179.1	KPH	@ HOUR(S)	14
			ON DAY(S)	10

### 01 Hour Averages





LICA31  
WSP / WDR Joint Frequency Distribution (Percent)

August 2010

Distribution By % Of Samples

Logger Id : 31  
Site Name : LICA31  
Parameter : WSP  
Units : KPH

Wind Parameter : WDR  
Instrument Height : 10 Meters

	Direction																
Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 6.0	1.48	1.48	1.21	.54	.54	.81	.40	1.21	1.48	1.89	2.70	1.08	.54	1.21	1.48	1.48	19.62
< 12.0	3.92	2.57	2.84	4.46	2.84	1.89	1.48	3.11	2.84	2.57	6.22	3.11	6.35	5.54	1.89	2.16	53.85
< 20.0	.94	1.35	.94	2.84	1.08	.94	.13	.13	.40	1.62	2.43	1.62	3.65	2.70	1.08	1.21	23.13
< 29.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	1.35	1.48	.00	.00	2.84
< 39.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.27	.00	.00	.00	.27
>= 39.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
Totals	6.35	5.41	5.00	7.84	4.46	3.65	2.02	4.46	4.73	6.08	11.36	5.81	12.17	10.96	4.46	4.87	

Calm : .27 %

Total # Operational Hours : 739

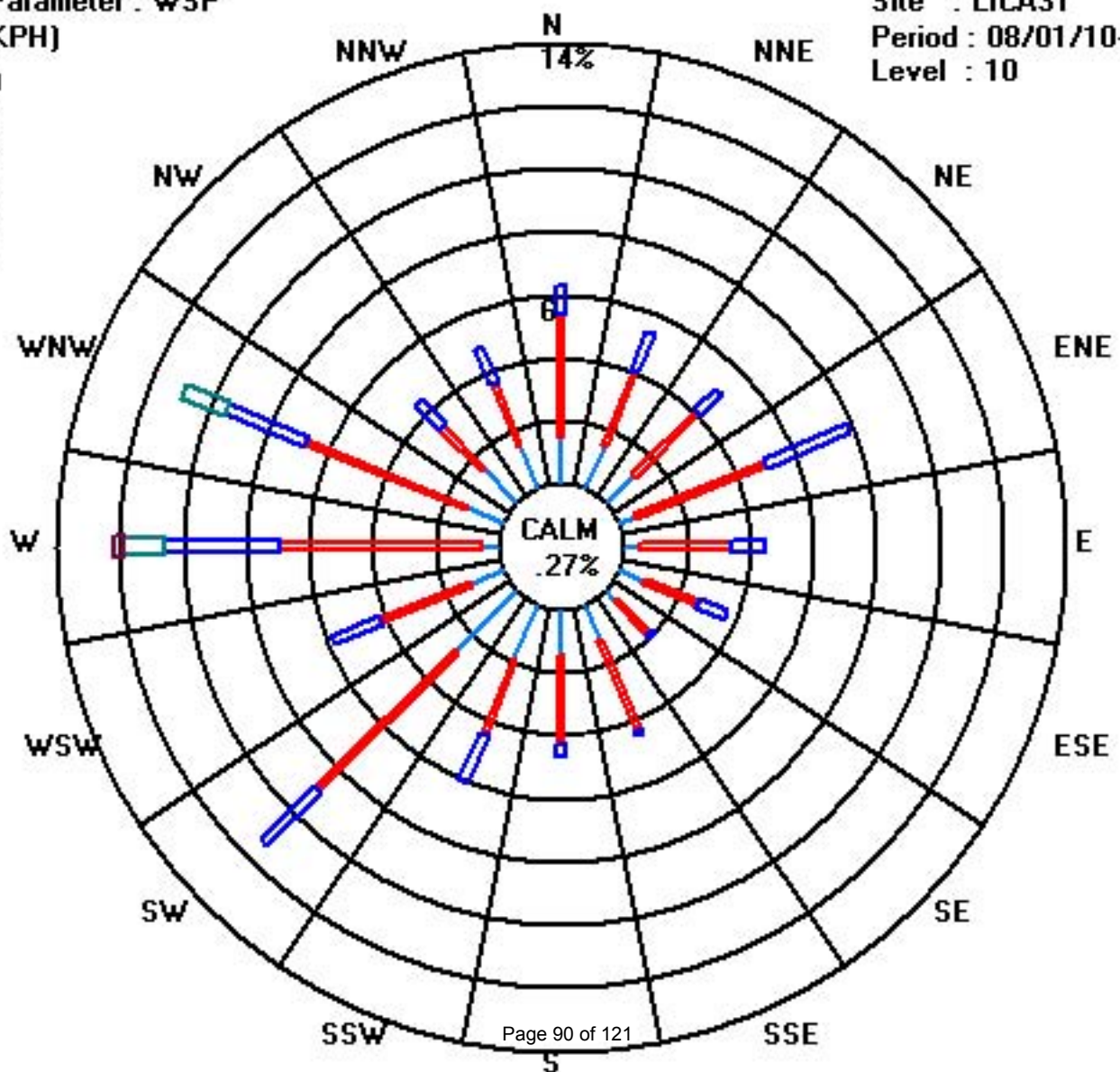
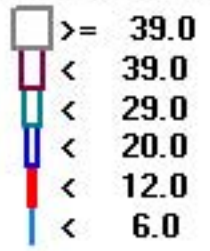
Distribution By Samples

	Direction																
Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 6.0	11	11	9	4	4	6	3	9	11	14	20	8	4	9	11	11	145
< 12.0	29	19	21	33	21	14	11	23	21	19	46	23	47	41	14	16	398
< 20.0	7	10	7	21	8	7	1	1	3	12	18	12	27	20	8	9	171
< 29.0													10	11			21
< 39.0													2				2
>= 39.0																	
Totals	47	40	37	58	33	27	15	33	35	45	84	43	90	81	33	36	

Calm : .27 %

Total # Operational Hours : 739

Class Limits (KPH)



# Vector Wind Direction

# LAKELAND INDUSTRY & COMMUNITY ASSOCIATION -ST. LINA

JULY 2010

## WIND DIRECTION hourly averages in degrees

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	24-HOUR	24-HOUR AVG	RDGS.
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	AVG.	QUADRANT	
DAY																											
1	82	67	71	75	73	87	259	284	230	222	356	4	88	86	324	131	180	97	120	210	215	218	270	303	82	E	24
2	306	291	291	285	293	301	303	305	298	224	233	280	281	286	320	54	53	62	61	81	73	74	78	77	309	NW	24
3	72	64	54	355	343	342	331	327	324	322	339	44	31	25	25	36	45	54	69	63	61	73	69	73	31	NNE	24
4	75	73	66	57	52	53	62	66	43	77	63	18	209	215	221	217	208	224	294	276	283	280	274	284	59	ENE	24
5	287	290	296	287	272	290	288	224	241	186	339	316	104	131	232	228	229	192	157	150	139	142	156	157	226	SW	24
6	160	166	159	158	163	160	166	167	156	147	64	62	61	55	53	49	34	22	347	340	354	3	301	218	99	E	24
7	211	250	270	287	287	264	251	251	251	240	260	270	256	251	266	264	278	274	262	215	340	246	182	171	255	WSW	24
8	320	353	177	199	214	221	218	246	279	313	62	47	74	84	96	113	256	258	298	175	184	221	227	216	187	S	24
9	211	223	238	233	259	302	324	332	29	243	173	6	167	114	351	349	344	24	24	23	31	36	70	81	4	N	24
10	172	300	20	50	7	21	60	89	106	143	168	340	332	321	336	47	76	111	112	153	168	57	91	96	63	ENE	24
11	93	112	169	219	261	251	235	212	233	246	105	344	322	239	<b>P</b>	<b>P</b>	202	341	353	344	353	342	348	216	317	NW	22
12	208	309	330	322	216	199	236	209	215	210	230	234	252	275	243	261	235	228	218	211	212	221	229	222	234	SW	24
13	217	208	231	219	222	220	221	220	228	283	261	341	343	327	226	228	226	225	242	223	218	225	223	225	236	SW	24
14	219	221	218	217	212	224	221	215	217	212	224	238	240	256	257	241	247	231	212	189	198	181	191	300	221	SW	24
15	304	283	207	213	93	177	222	278	319	32	351	356	7	25	39	33	329	7	4	26	271	245	245	183	330	NNW	24
16	2	1	353	352	354	0	2	3	353	358	3	3	357	4	55	278	270	317	336	310	296	338	60	336	346	NNW	24
17	313	298	347	341	349	22	26	14	33	274	254	199	246	1	5	6	0	342	184	194	177	177	192	199	321	NW	24
18	192	191	186	178	172	155	154	154	137	132	220	208	<b>P</b>	<b>P</b>	<b>M</b>	116	35	34	23	29	29	12	9	353	131	SE	21
19	7	359	6	332	194	169	105	327	13	350	280	298	319	290	276	289	285	251	231	235	246	228	224	209	281	W	24
20	262	276	267	273	269	263	255	277	286	272	273	70	109	82	93	98	84	83	85	204	178	170	75	63	271	W	24
21	94	123	254	19	12	10	13	40	109	95	285	296	303	303	276	293	285	274	278	278	280	291	297	298	321	NW	24
22	295	317	46	59	59	49	66	33	17	353	42	50	178	31	305	352	6	347	334	319	321	323	288	305	356	N	24
23	293	298	302	302	302	298	299	296	298	299	305	297	300	306	307	309	301	297	294	281	272	290	268	272	296	WNW	24
24	276	272	277	275	270	263	255	227	217	224	234	145	108	122	141	111	110	107	159	179	166	164	169	168	190	S	24
25	175	178	173	166	164	162	172	198	215	204	134	123	95	73	67	75	64	352	38	50	59	73	85	81	128	SE	24
26	12	45	63	70	85	83	131	125	108	78	74	68	66	68	67	66	64	84	115	121	109	287	268	257	78	ENE	24
27	260	280	289	267	272	287	286	287	286	279	279	279	278	277	275	276	277	279	292	314	321	295	287	289	282	W	24
28	287	288	283	267	258	255	272	275	268	265	251	266	259	251	252	240	240	234	224	221	225	212	211	205	255	WSW	24
29	206	203	203	210	314	330	116	13	14	161	120	343	287	86	299	278	290	279	280	282	281	279	279	<b>273</b>	270	W	24
30	277	282	282	273	270	272	274	24	111	271	264	163	29	40	27	269	50	42	49	61	83	86	96	171	281	W	24
31	204	201	171	188	207	211	194	218	214	234	135	147	138	161	133	94	158	118	15	33	42	26	48	50	141	SE	24
HOURLY AVG	320	359	353	355	354	342	331	332	353	358	356	356	357	327	351	352	344	352	353	344	354	342	348	353			

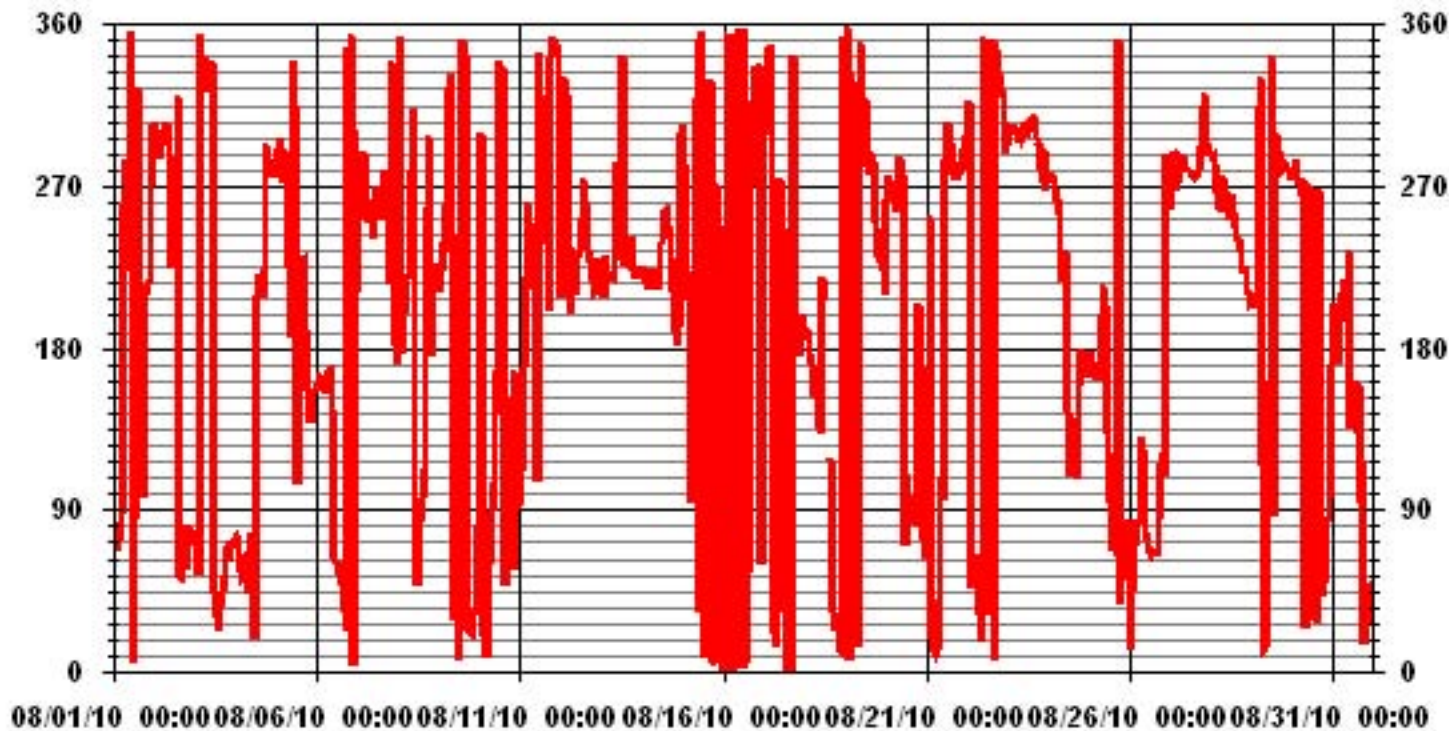
**STATUS FLAG CODES**

S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	- MAINTENANCE
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE

LAST CALIBRATION:	February 3, 2009
DECLINATION :	19 DEGREES FROM MAGNETIC NORTH

MONTHLY CALIBRATION TIME:	0 HRS	OPERATIONAL TIME:	739 HRS
STANDARD DEVIATION	102.85	AMD OPERATION UPTIME	99.3 %
		MONTHLY AVERAGE	283 DEG

### 01 Hour Averages



— LICA31 WDR DEG

# Standard Deviation Wind Direction

# LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - ST.LINA

AUGUST 2010

## STANDARD DEVIATION WIND DIRECTION (STDWDIR) hourly averages in degrees

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00
DAY																								
1	5	8	8	9	10	33	17	27	24	25	45	73	59	40	61	38	35	46	32	13	7	6	17	14
2	12	14	14	13	14	14	16	19	29	26	30	30	29	18	34	39	44	40	29	11	15	28	23	25
3	22	13	32	36	21	16	19	16	22	20	26	34	33	43	50	42	35	32	11	10	10	11	11	12
4	15	16	14	13	12	11	11	28	36	17	28	32	24	24	37	27	21	28	15	10	12	11	11	11
5	12	11	13	10	9	11	17	17	28	49	53	62	54	53	23	26	20	23	13	6	6	8	9	11
6	12	9	8	10	11	12	12	14	16	28	46	35	46	32	36	26	26	41	30	9	8	7	29	36
7	16	38	12	14	13	8	7	7	12	17	19	22	19	17	19	23	22	18	13	12	23	35	12	39
8	19	20	8	18	13	9	15	15	23	20	33	44	36	18	9	33	19	17	21	46	23	10	5	4
9	8	7	7	7	11	18	15	18	48	61	66	61	52	55	29	26	27	16	26	3	9	23	7	9
10	24	28	15	16	25	16	13	15	16	21	49	25	23	68	49	18	21	15	15	15	25	12	10	10
11	11	23	11	13	17	6	8	20	46	64	77	42	31	20	<b>P</b>	<b>P</b>	24	45	19	2	5	5	5	8
12	8	22	3	33	34	27	45	21	35	29	32	25	35	58	50	45	51	44	35	32	18	18	23	20
13	24	18	29	27	34	31	46	45	47	64	66	43	23	49	56	42	28	25	31	23	18	29	39	34
14	30	27	23	23	35	41	34	29	44	39	40	36	36	36	39	30	35	37	23	10	7	8	23	9
15	8	7	15	11	44	11	13	17	26	58	57	52	50	49	30	38	52	33	18	9	28	8	5	24
16	34	4	6	9	9	7	17	10	11	23	20	24	21	23	34	42	14	19	25	21	30	73	55	73
17	51	30	27	16	16	16	20	21	28	49	19	59	54	25	43	59	29	45	19	13	5	8	6	9
18	10	9	7	7	8	8	12	17	15	17	32	35	<b>P</b>	<b>P</b>	44	40	30	19	14	16	30	31	25	38
19	30	30	46	54	39	26	55	28	13	29	16	16	15	<b>P</b>	18	18	18	12	6	5	4	5	9	6
20	11	12	11	11	11	10	9	15	19	17	20	59	40	39	56	36	18	11	2	17	9	10	35	7
21	8	15	23	21	10	9	11	26	17	18	56	38	39	49	46	34	30	36	31	25	21	24	12	16
22	12	28	14	10	12	10	13	18	50	67	64	65	38	52	41	57	25	25	15	8	11	14	19	14
23	13	16	16	16	16	17	16	16	17	17	16	17	16	16	16	18	16	17	17	13	9	26	7	10
24	10	9	10	9	8	6	6	9	16	13	20	53	31	30	49	18	13	28	21	6	7	5	7	6
25	8	9	6	7	9	10	11	17	17	19	37	20	22	24	30	19	33	22	11	9	8	9	12	15
26	17	13	12	13	14	26	32	24	38	35	36	22	24	30	27	25	31	43	36	22	57	21	29	29
27	33	37	23	40	34	31	28	23	20	28	24	24	23	23	25	26	22	28	19	12	11	12	11	12
28	18	20	25	38	36	38	39	35	38	32	36	34	33	34	42	33	30	42	42	52	43	35	<b>29</b>	16
29	29	23	46	41	17	16	33	39	53	51	35	47	59	14	37	16	16	9	7	5	5	5	8	4
30	3	4	5	5	3	7	18	50	78	23	60	70	59	28	52	44	36	23	14	10	9	8	10	11
31	15	16	7	11	12	9	11	14	24	26	60	68	57	73	66	60	25	28	22	9	10	9	8	8

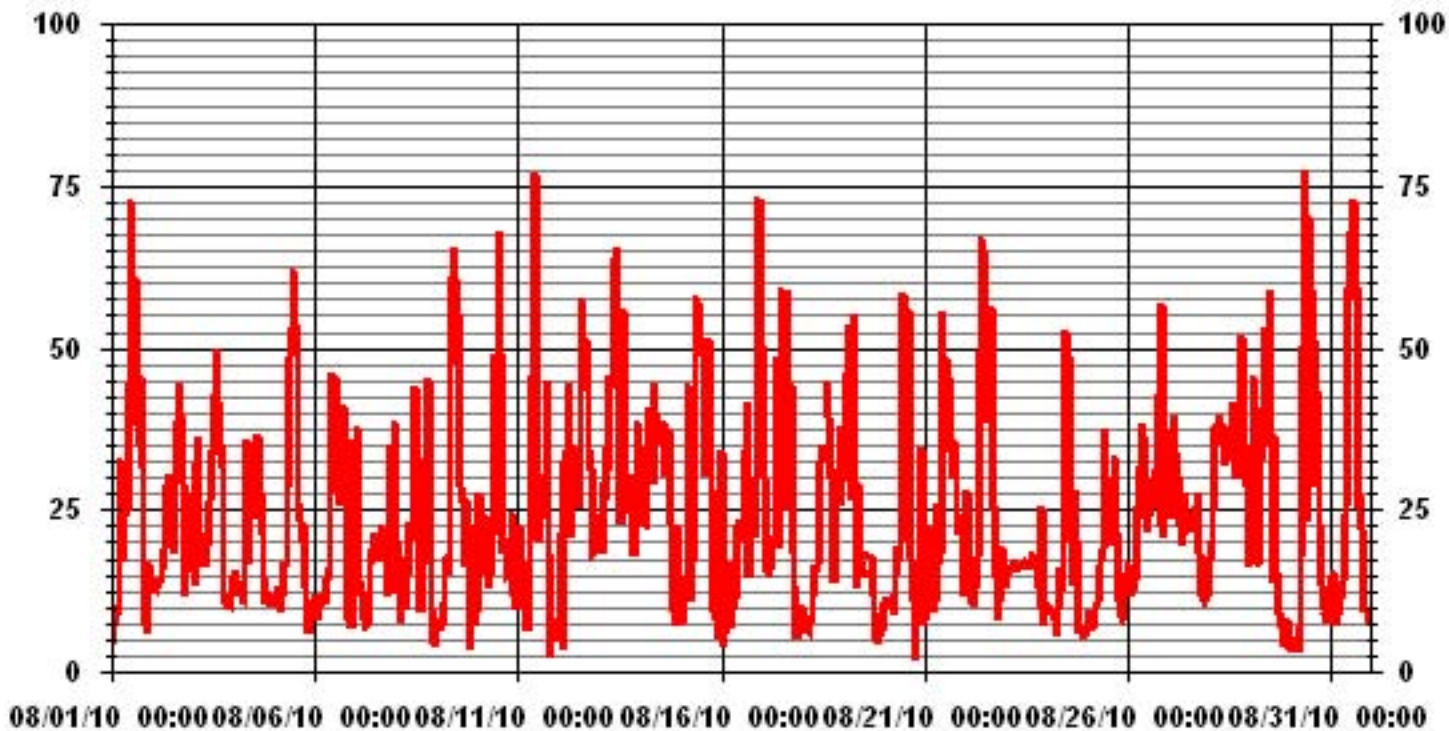
### STATUS FLAG CODES

S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	- MISSING DATA
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE

LAST CALIBRATION: February 3, 2009

CALIBRATION TIME: 0 HRS OPERATIONAL TIME: 739 HRS

### 01 Hour Averages





# Calibration Reports

# Sulphur Dioxide

### SO<sub>2</sub> Calibration Report

#### Station Information

Calibration Date	August 31, 2010	Previous Calibration	July 20, 2010
Company	LAKELAND INDUSTRY & COMMUNITY ASSOCIATION		
Plant / Location	ST. LINA		
Start Time (MST)	11:26	End Time (MST)	15:41
Reason:	Monthly Calibration		
Barometric Pressure	727 mmHg	Station Temperature	22 Deg C
Cal Gas	51.4 ppm	Cal Gas Expiry date	August 2, 2012
DAS Output Voltage	0 - 1 Volts		

#### Equipment Information

Analyzer Make / Model:	API 100E	S/N :	468	Method:	Fluorescent
Converter Make / Model:	-	S/N :	-		
Calibrator Make / Model:	API 700	S/N :	831	Method:	Dilution
DAS Make / Model:	ESC 8832	S/N :	AO717		
Flow Meter:	API 700	S/N :	831		

#### Analyzer Settings

Before Calibration		After Calibration	
Concentration Range	0 - 1000 ppb	0 - 1000 ppb	
Sample Flow / Box Temp	553 ccm 31.6 Deg C	551 ccm 31.4 Deg C	
HVPS / Lamp Setting	529 2529	529 2528.4	
PMT / RxCell Temp	7.8 Deg C 50 Deg C	7.8 Deg C 50 Deg C	
Converter / IZS Temp	NA Deg C 40 Deg C	NA Deg C 40 Deg C	
Offset / Slope	62.7 1.155	62.7 1.101	

#### Calibration Data

Dilution Flow Rate	Source Gas Flow Rate	Calculated Concentration	Indicated Conc. (DAS)	Correction Factor
4998	0	0	0	N/A
4926	71.9	739	775	0.9541
4926	71.9	739	740	0.9992
4962	38.3	394	394	0.9992
4983	16.3	168	168	0.9975
4999	0	0	0	N/A
Sum of Least Squares				0.9992
New Correction Factor				0.9992

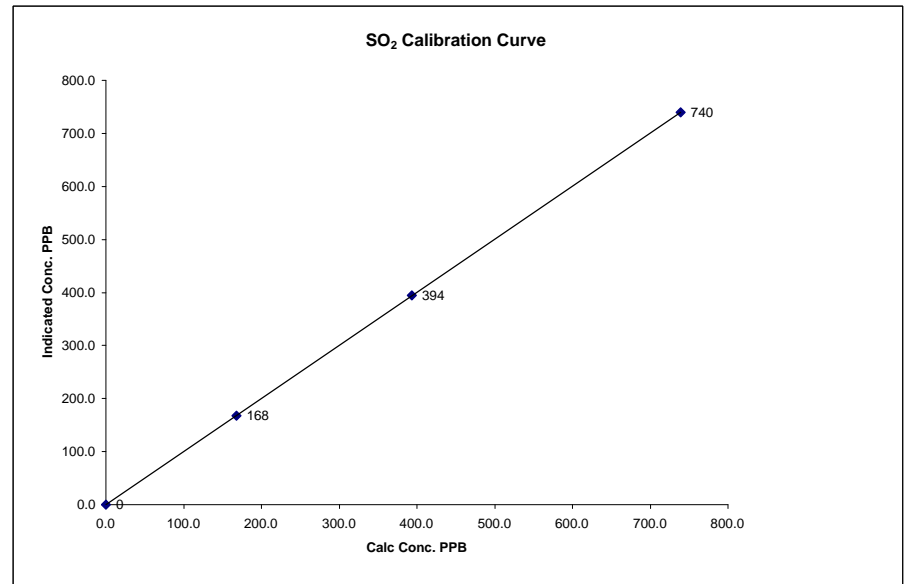
	Before Calibration	After Calibration
Auto Zero	0.6	1.1
Auto Span	371	356
Sample Lines Connected		YES
Percent Change from Previous Calibration		3.2%

Calibration Performed by: Ting Xu

### SO<sub>2</sub> Calibration Curve

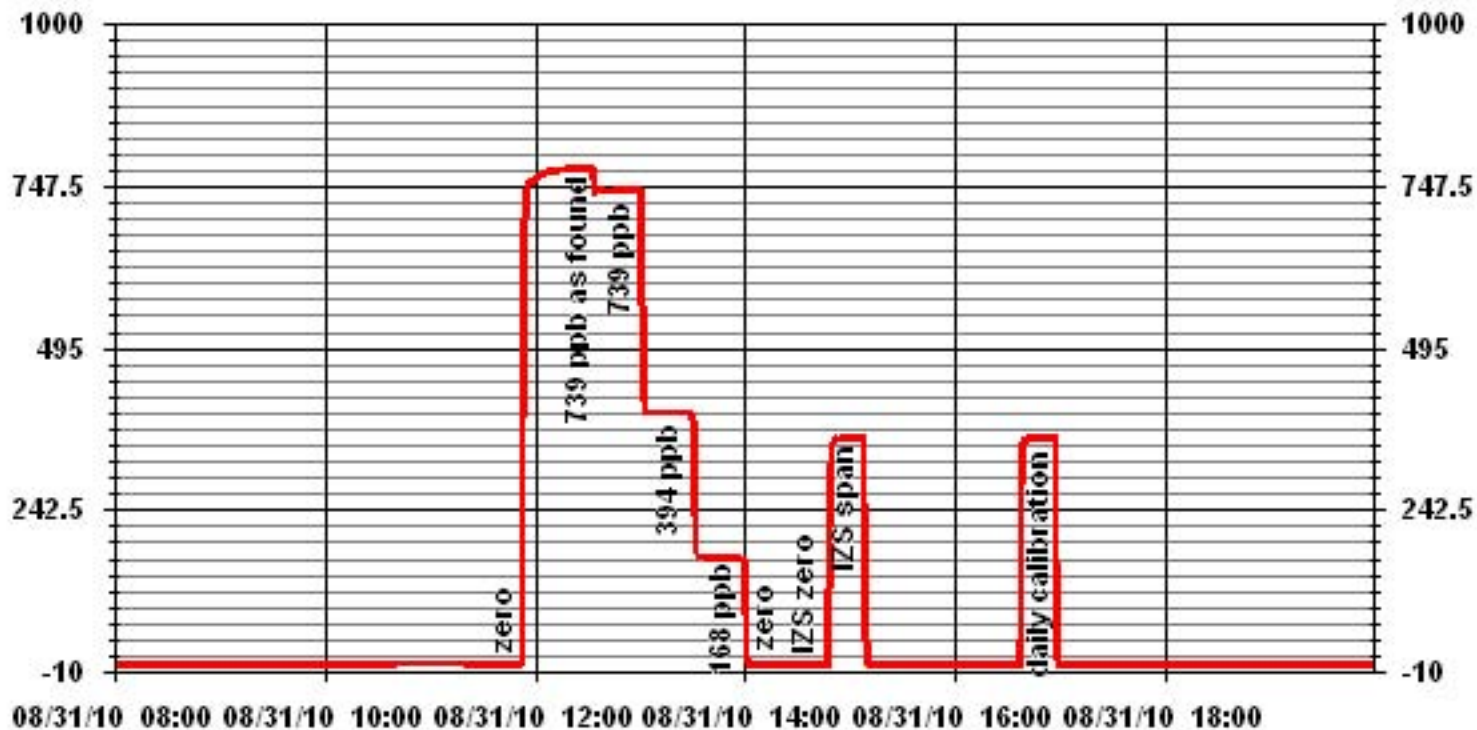
Calibration Date	August 31, 2010
Company	LAKELAND INDUSTRY & COMMUNITY ASSOCIATION
Plant / Location	ST. LINA
Start Time (MST)	11:26
End Time (MST)	15:41

Calculated Conc. ppb	Indicated Response ppb	Correction Factor	Correlation Coefficient Slope (≥ 0.995) (0.85 to 1.15)	Intercept (± 3% F.S.)
0	0	n/a		1.000000
168	168	0.9975		1.000608
394	394	0.9992		0.119845
739	740	0.9992		



Notes:

### 01 Minute Averages



# Hydrogen Sulphide

## H<sub>2</sub>S Calibration Report

### Station Information

Calibration Date	August 30, 2010		Previous Calibration	July 20, 2010	
Company	LAKELAND INDUSTRY & COMMUNITY ASSOCIATION				
Plant / Location	ST.LINA				
Start Time (MST)	8:56	End Time (MST)	12:34		
Reason:	Monthly Calibration				
Barometric Pressure	933	mmHg	Station Temperature	22	Deg C
Cal Gas	10.8	ppm	Cal Gas Expiry date	06/22/2010	
DAS Output Voltage	0 - 1 Volts				

### Equipment Information

Analyzer Make / Model:	API 101E	S/N :	510	Method:	Fluorescent
Converter Make / Model:	Internal	S/N :	N/A		
Calibrator Make / Model:	API 700	S/N :	831	Method:	Dilution
DAS Make / Model:	ESC 8832	S/N :	AO717		
Flow Meter:	API 700	S/N :	831		

### Analyzer Settings

		Before Calibration		After Calibration	
Concentration Range		0 - 100		ppb	
Sample Flow / Box Temp	546	ccm	33	Deg C	543
HVPS / Lamp Setting	534		2546.4		534
PMT / RxCell Temp	8.4	Deg C	50	Deg C	8.4
Converter / IZS Temp	315.5	Deg C	45	Deg C	315.1
Offset / Slope	60.9		0.87		62.9
					0.879

### Calibration Data

Dilution Flow Rate	Source Gas Flow Rate	Calculated Concentration	Indicated Conc. (DAS)	Correction Factor
4998	0	0	1	N/A
4999	0	0	0	N/A
4961	37	80	80	0.9994
4982	18.5	40	40	0.9989
4988	10.6	23	23	0.9958
4998	0	0	0	N/A
Sum of Least Squares				0.9991
New Correction Factor				0.9994

### Before Calibration

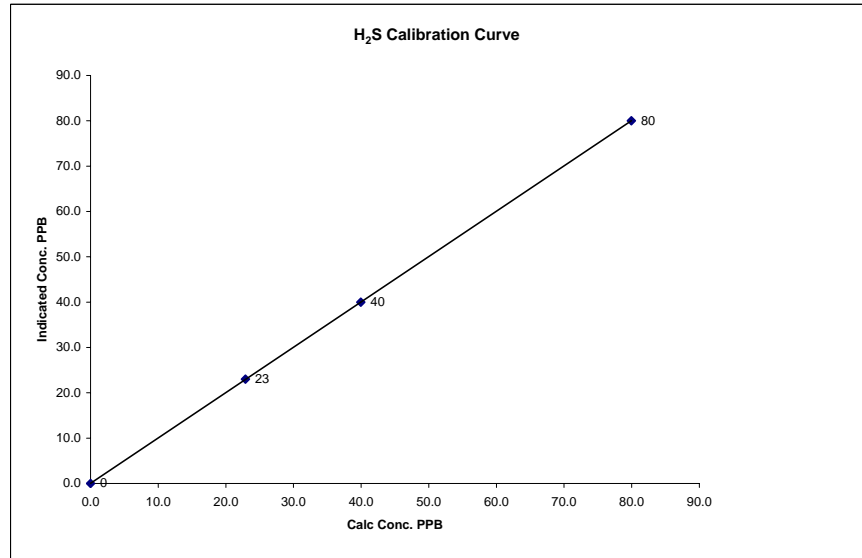
Auto Zero	1.3	After Calibration	0.4
Auto Span	54		53
Sample Lines Connected			YES
Percent Change from Previous Calibration			0.0%

Calibration Performed by: Ting Xu

## H<sub>2</sub>S Calibration Curve

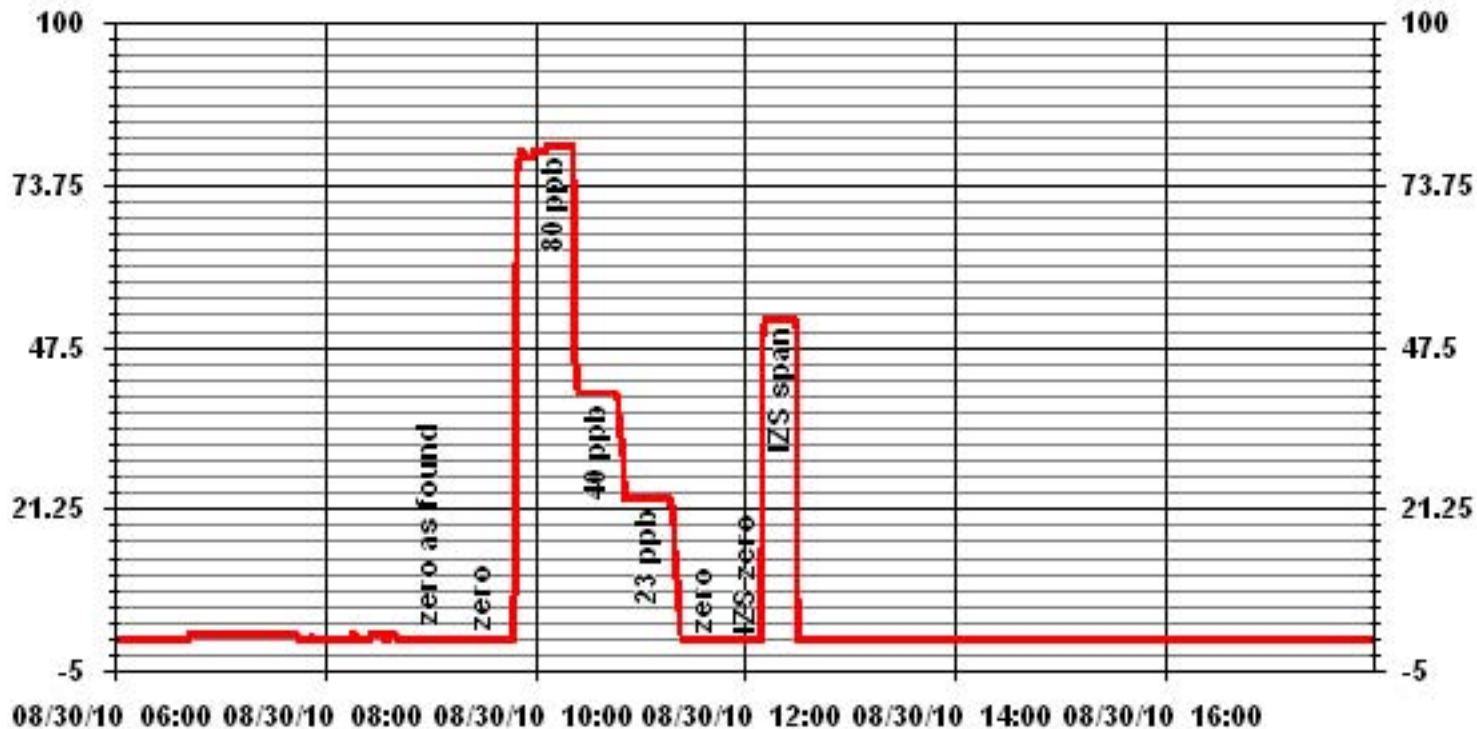
Calibration Date	August 30, 2010		
Company	LAKELAND INDUSTRY & COMMUNITY ASSOCIATION		
Plant / Location	ST.LINA		
Start Time (MST)	8:56	End Time (MST)	12:34

Calculated Conc. ppb	Indicated Response ppb	Correction Factor	Correlation Coefficient Slope	( $\geq 0.995$ )	(0.85 to 1.15)	( $\pm 3\%$ F.S.)
0	0	n/a	Intercept	0.999999	1.000311	0.036288
23	23	0.9958				
40	40	0.9989				
80	80	0.9994				



Notes:

### 01 Minute Averages



# Total Hydrocarbons



### THC Calibration Report

Station Information			
Calibration Date:	August 30, 2010	Previous Calibration	July 21, 2010
Company:	LAKELAND INDUSTRY & COMMUNITY ASSOCIATION		
Plant / Location:	ST. LINA		
:	(MST) 13:02	End Time	(MST) 17:04
Reason:	Monthly Calibration		
Barometric Pressure:	931 mmHg	Station Temperature:	23 Deg C
Calibrator:	API 700	S/N:	831
Cal Gas Concentration:	207 Prop/ 602 Meth/1171.25 THC	ppm	Cal Gas Expiry Date: August 21, 2011
DAS make & Model:	ESC 8832	S/N :	AO717
Output Voltage Range:	0 - 10	VDC	

### Analyzer Information

Make / Model	TECO 51C	S/N :	77021-384	Method	Flame Ionization
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### Analyzer Settings

	Before Calibration		After Calibration	
Concentration Range	0 -50	ppm	0 - 50	ppm
Sample Pressure	6.9	psi	6.9	psi
Hydrogen Pressure	8	psi	8	psi
Air Pressure	21	psi	21	psi

### Calibration Data

Dilution Flow	Source Gas Flow	Calculated Concentration	Indicated Concentration	Correction Factor
1999	0	0.0	0.1	N/A
1999	0.0	0.0	0.0	N/A
1999	70.0	39.6	39.5	1.0032
1999	70.0	39.6	40.0	0.9907
1999	35.0	20.2	22.9	0.8801
1999	20.0	11.6	11.4	1.0177
1999	0	0.0	0.0	N/A
Correction Factor:				0.9907

Previous Calibration Correction Factor:	0.9982
Current Correction Factor Before Span Adjust:	0.9907
Percent Change:	0.76%

### IZS Calibration Data

	Before Calibration	After Calibration
Auto Zero	0.0	0.0
Auto Span	35.7	36.2
Sample Lines Connected		YES

### Cylinder Pressures

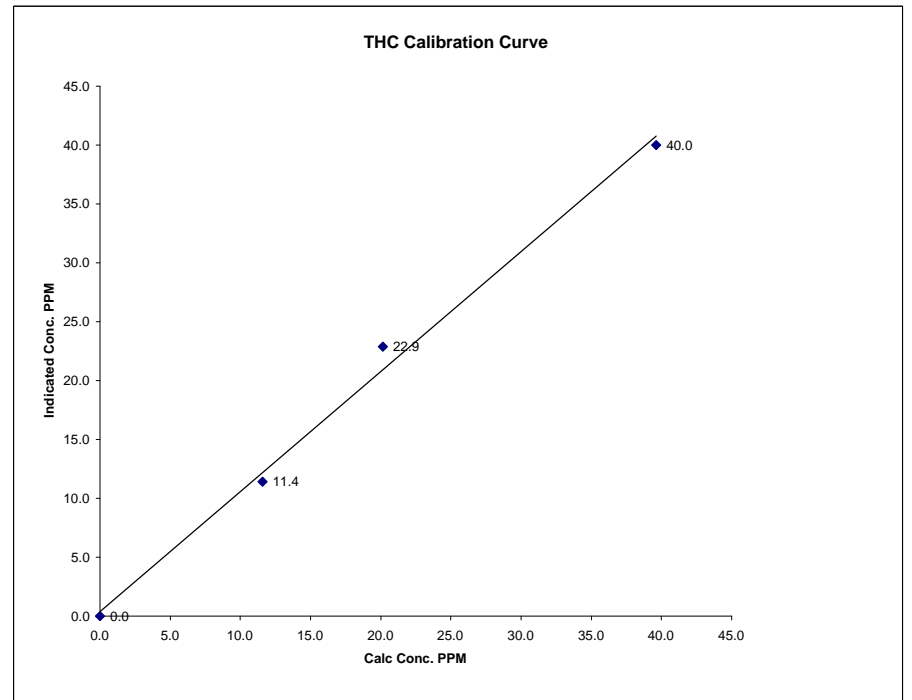
Span	400	psi	
Hydrogen	1900	psi	
Zero Air	31	psi	Unlimited API 701

Calibration Performed by: Ting Xu

### THC Calibration Curve

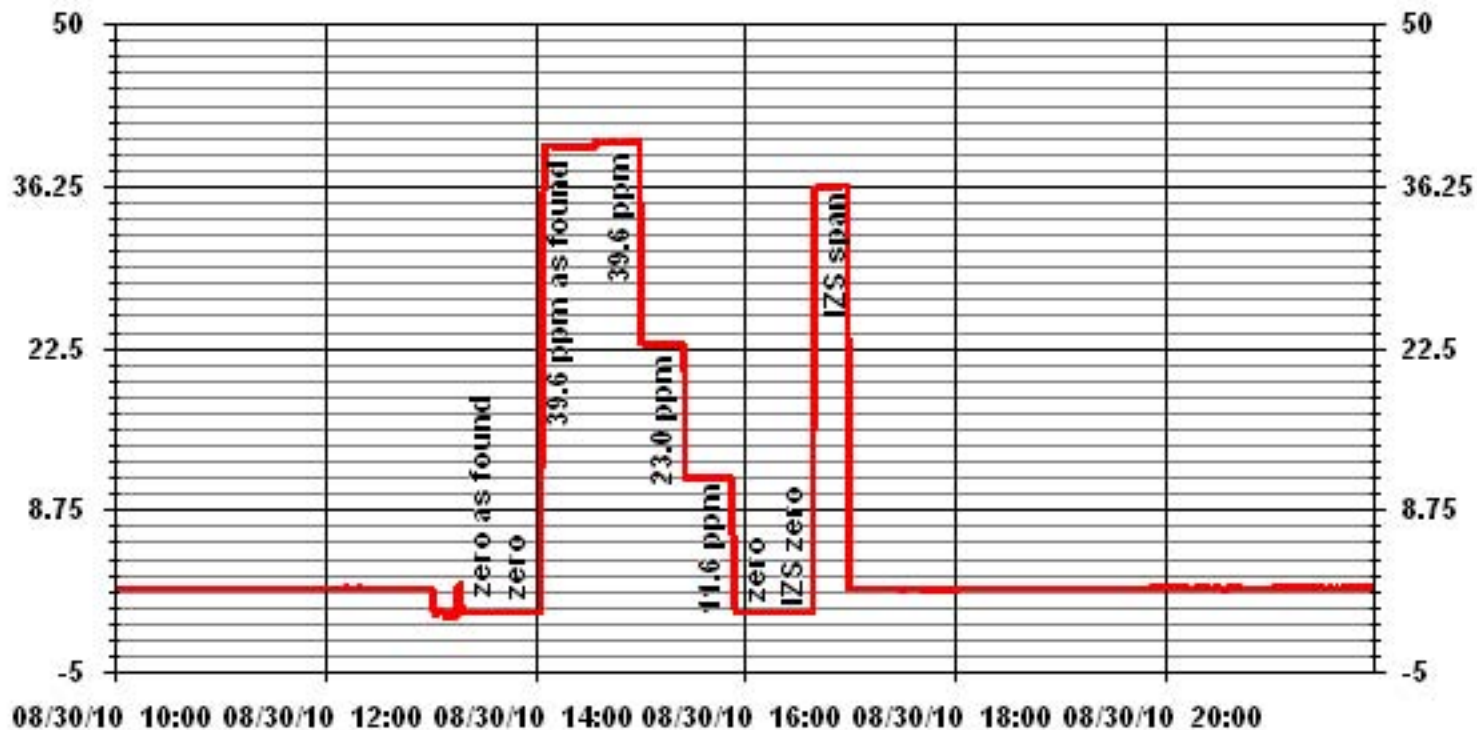
Calibration Date	August 30, 2010		
Company	LAKELAND INDUSTRY & COMMUNITY ASSOCIATION		
Plant / Location	ST. LINA		
Start Time (MST)	13:02	End Time (MST)	17:04

Calculated Conc. ppm	Indicated Response ppm	Correction Factor	Correlation Coefficient Slope	(≥ 0.995) (0.85 to 1.15)	0.993941
0.0	0.0		Intercept	(± 3% F.S.)	0.393825
11.6	11.4	1.0177			
20.2	22.9	0.8801			
39.6	40.0	0.9907			



Notes: Flame temp 175.

### 01 Minute Averages



# Nitrogen Dioxide

**NOx - NO- NO2 Calibration Report**

**Station Information**

Calibration Date	August 30, 2010	Previous Calibration	July 21, 2010
Company	LICA	Plant/Location	St. Lina
Start Time (MST)	8:56	End Time (MST)	16:57
Reason:	Monthly Calibration	Other	
Barometric Pressure	933 mmHg	Station Temperature	22 Deg C
Cal Gas Concentration	NOx 52.2 ppm	NO 52 ppm	Cal Gas Expiry date 02-Aug-12
DAS Output Voltage	0 - 1	Chart Rec. Output	NA Volts

**Equipment Information**

Analyzer Make / Model:	API 100E	S/N :	593	Method:	Chemiluminescent
Calibrator Make / Model:	Envionics 6100	S/N:	4760		
DAS Make / Model:	ESC 8832	S/N :	AO 717		
Chart Recorder Make / Model:	NA	S/N:	NA		
Flow Meter:	Envionics 6100	S/N :	4760		

**Analyzer Settings**

Before Calibration				After Calibration			
Concentration Range	0-1000			ppb			
Sample Flow/Conv. Temp	476 ccm	314 Deg C		472 ccm	314.4 Deg C		
Ozone Flow / Vacuum	73 ccm	3.9 "Hg-A		73 ccm	3.9 "Hg-A		
HVPS / A ZERO	646 Volts	17.9 MV		646 Volts	17.9 MV		
Rx/ Temp / PMT Temp	50.0 Deg C	6.9 Deg C		50.0 Deg C	6.8 Deg C		
Box Temp / IZS Temp	30.8 Deg C	45.0 Deg C		30.7 Deg C	45.1 Deg C		
Offset	2.5 NOx	-0.2 NO		0.5 NOx	0.4 NO		
Slope	1.170 NOx	1.167 NO		1.209 NOx	1.201 NO		
NO2 COEF / Conv Efficiency	NA NO2	0.993		NA NO2	0.993		

**Dilution Calibration Data**

Dilution Air Flow Rate	Source Flow Rate	O3 Set Point	Calculated Concentration			Indicated Concentration			Correction Factor	
			NOx	NO	NO2	NOx	NO	NO2	NOx	NO
4995	0.0	----	0	0	0	-1	1	-2	----	----
4995	0.0	----	0	0	0	0	0	0	----	----
4923	71.9	----	751	749	----	728	729	-1	1.0321	1.0268
4923	71.9	----	751	749	----	752	749	3	0.9992	0.9994
4960	33.6	----	351	350	----	351	349	2	1.0007	1.0025
4979	16.3	----	170	170	----	170	169	1	1.0020	1.0040
4995	0.0	----	0	0	0	0	0	0	----	----

**Gas Phase Titration Calibration Data**

Dilution Air Flow Rate	Source Flow Rate	O3 Set Point	Calculated Concentration			Indicated Concentration			NO2 Correction Factor	NO2 Conv Efficiency
			NOx	NO	NO2	NOx	NO	NO2		
4923	71.9	----	751	749	----	753	750	3	----	----
4923	71.9	550	751	----	511	754	242	511	1.0000	100.00%
4923	71.9	300	751	----	281	754	472	282	0.9965	100.36%
4923	71.9	100	751	----	95	753	658	95	1.0000	100.00%

Linearity OK?	Yes	No	Sum of Least Squares	NOx= 1.000	NO= 1.000	NO2= 0.999
			Correction Factors:	NOx= 0.9992	NO= 0.9994	NO2= 1.0000
				Average Converter Efficiency= 100.12%		

	Before Calibration				After Calibration			
Auto Zero	-0.9 NOx	-1.2 NO2			0.4 NOx	-0.7 NO2		
Auto Span	556 NOx	540 NO2			569 NOx	557 NO2		
	Sample Lines Connected				YES			

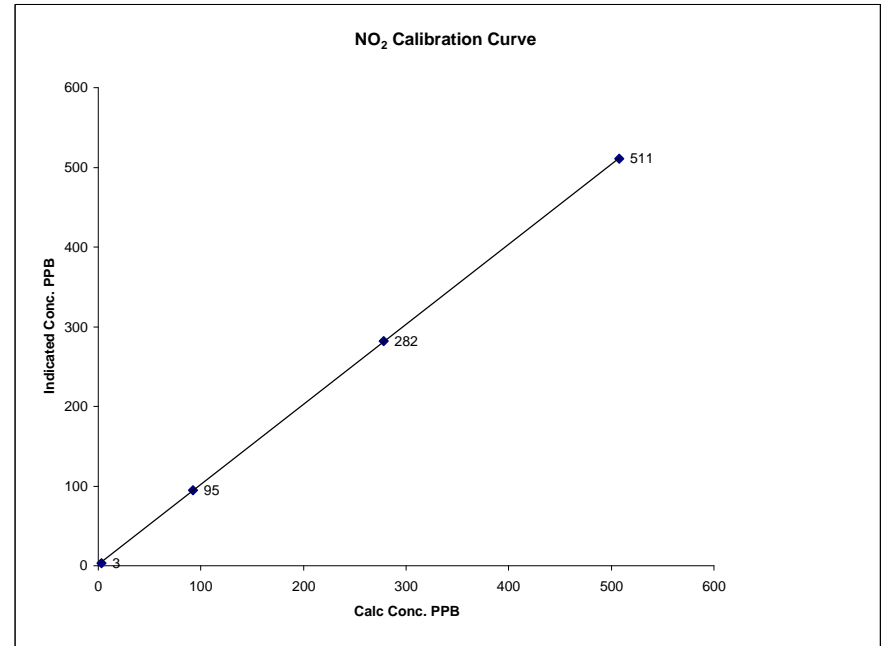
Notes Additional GPT point done for ozone calibration. O3 set point 450, NO=331, NO2=423  
The as found point NO2 reading was high, considered the beginning of the gas flow wasn't clean. Abort the cal, and restarted the cal again.

Calibration Performed by: Ting Xu

**NO2 Calibration Curve**

Calibration Date	August 30, 2010	<b>LICA</b>	
Company		<b>St. Lina</b>	
Plant / Location			
Start Time (MST)	8:56	End Time (MST)	16:57

Calculated Conc. ppb	Indicated Response ppb	Correction Factor	Correlation Coefficient Slope	(≥ 0.995) (0.85 to 1.15) (± 3% F.S.)	0.999963
3	3	N/A	Intercept		1.004737
92	95	0.9684			1.45669
278	282	0.9858			
508	511	0.9941			

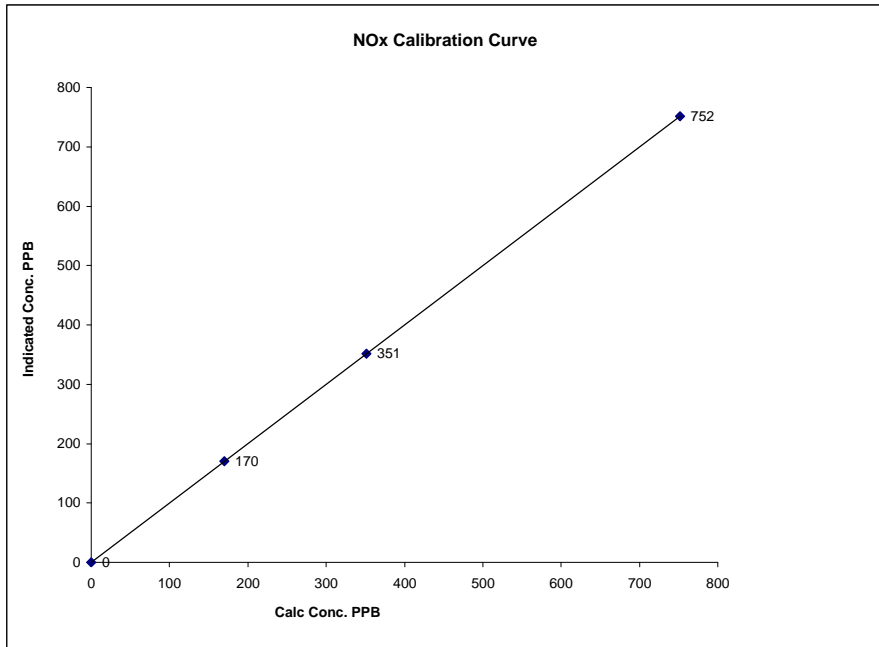


Notes:

### NOx Calibration Curve

Calibration Date August 30, 2010  
 Company LICA  
 Plant / Location St. Lina  
 Start Time (MST) 8:56 End Time (MST) 16:57

Calculated Conc. ppb	Indicated Response ppb	Correction Factor	Correlation Coefficient	(≥ 0.995)	0.999999
0	0	N/A	Slope	(0.85 to 1.15)	1.000963
170	170	1.0020	Intercept	(± 3% F.S.)	-0.29842
351	351	1.0007			
751	752	0.9992			

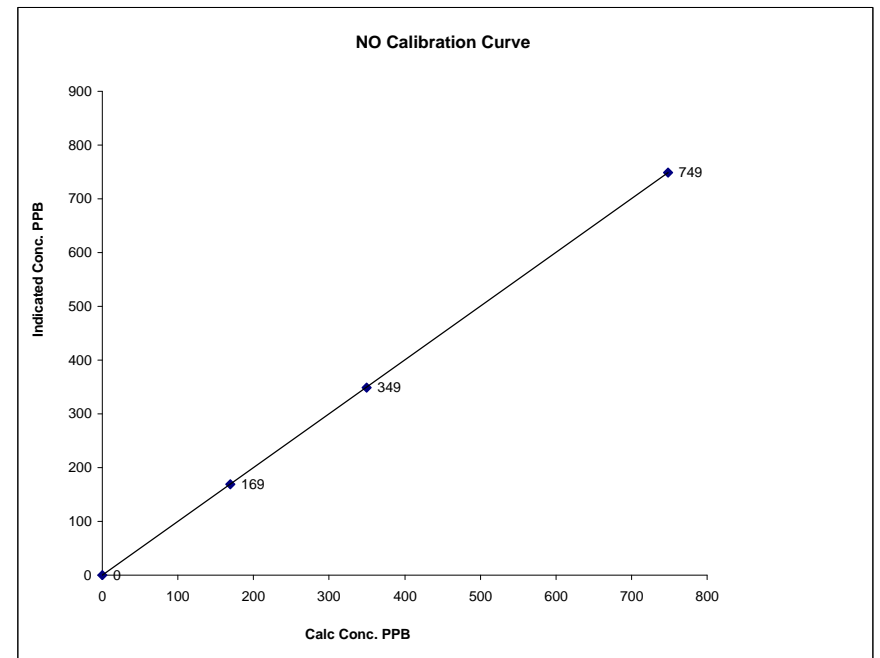


Notes:

### NO Calibration Curve

Calibration Date August 30, 2010  
 Company LICA  
 Plant / Location St. Lina  
 Start Time (MST) 8:56 End Time (MST) 16:57

Calculated Conc. ppb	Indicated Response ppb	Correction Factor	Correlation Coefficient	(≥ 0.995)	0.999997
0	0	N/A	Slope	(0.85 to 1.15)	1.002233
170	169	1.0040	Intercept	(± 3% F.S.)	-2.0854
350	349	1.0025			
749	749	0.9994			



Notes:



# Ozone

### O<sub>3</sub> Calibration Report

#### Station Information

Calibration Date	August 31, 2010	Previous Calibration	July 21, 2010
Company	Lakeland Industry & Community Association		
Plant / Location	St. Lina		
Start Time (MST)	11:26	End Time (MST)	15:13
Reason:	Monthly Calibration		
Barometric Pressure	927 mm Hg	Station Temperature	24 Deg C
DAS Output Voltage	0 - 10 Volts		

#### Equipment Information

Analyzer Make / Model:	Thermo 49i	S/N :	1002240371	Method:	Fluorescent
Calibrator Make / Model:	EnviroNics 6100	S/N :	4760	Method:	GPT
DAS Make / Model:	ESC 8832	S/N :	AO 717		

#### Analyzer Settings

	Before Calibration		After Calibration	
	0 - 500 ccm		ppb	
Concentration Range	735 ccm	726 ccm	732 ccm	723 ccm
Cell A Flow / Cell B Flow	687.1 mmHg		684 mmHg	
Pressure	53.7 Deg C		53.8 Deg C	
Bench Temp	67.9 Deg C	30.7 Deg C	67.9 Deg C	30.7 Deg C
O3 Lamp / Box Temp	-0.2		0.989	
Offset / Slope	1.103		-0.2	

#### Calibration Data

Dilution Flow Rate	Ozone Set Point	Calculated Concentration	Indicated Conc. (DAS)	Correction Factor
4995	0	0	0	N/A
4995	450	419	426	0.9836
4995	450	419	420	0.9976
4995	300	278	281	0.9893
4995	100	92	94	0.9787
4995	0	0	0	N/A
Sum of Least Squares				N/A
New Correction Factor				0.9976

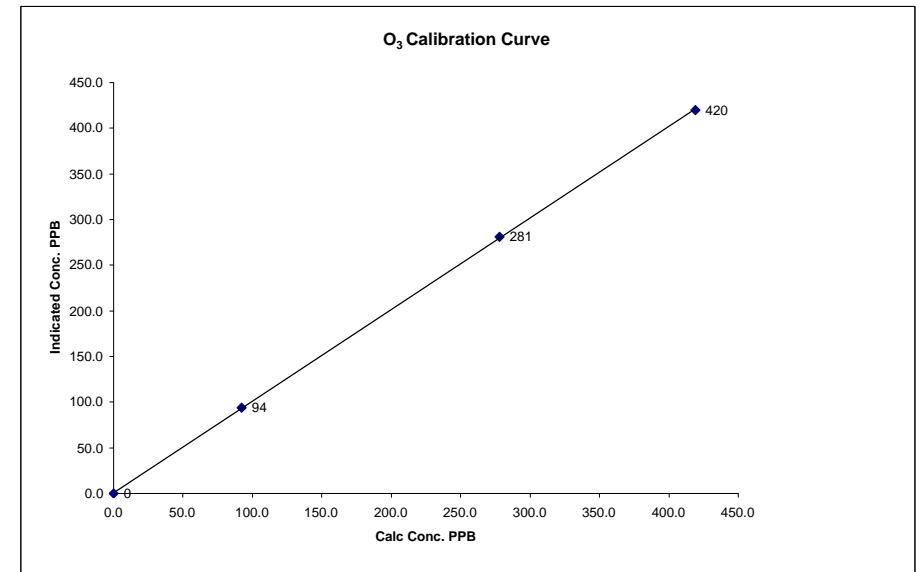
	Before Calibration	After Calibration
Auto Zero	0.2	0.1
Auto Span	336	330
Sample Lines Connected		YES
Percent Change from Previous Calibration		1.4%

Calibration Performed by: Ting Xu

### O<sub>3</sub> Calibration Curve

Calibration Date	August 31, 2010		
Company	Lakeland Industry & Community Association		
Plant / Location	St. Lina		
Start Time (MST)	11:26	End Time (MST)	15:13

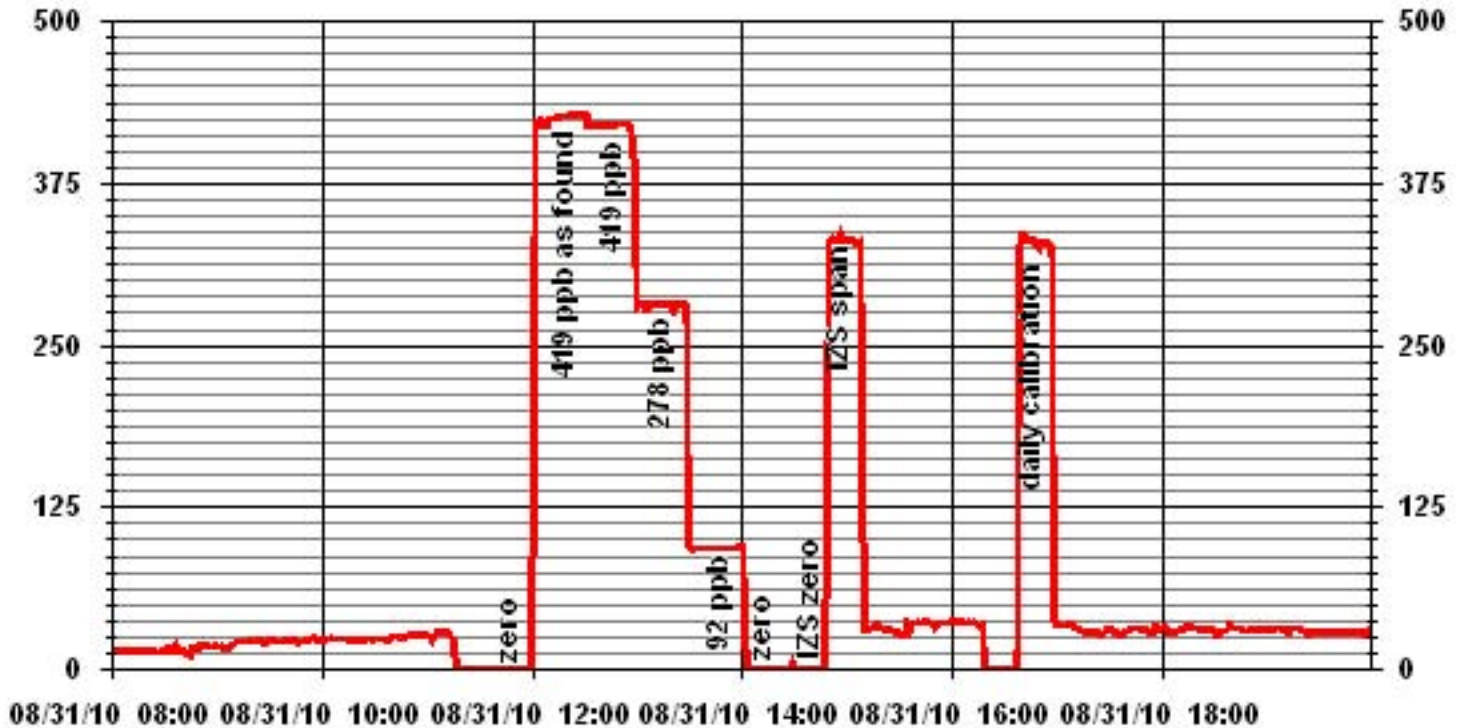
Calculated Conc. ppb	Indicated Response ppb	Correction Factor	Correlation Coefficient Slope (≥ 0.995) (0.85 to 1.15)	Intercept (± 3% F.S.)	
0	0	n/a			0.999959
92	94	0.9787			1.002399
278	281	0.9893			
419	420	0.9976			1.026841



Notes:



### 01 Minute Averages



# Particulate Matter 2.5

# TEOM® 1405F Audit

**Station**  
 Date: August 18, 2010  
 Station Name: Lica St. Lina (CASA # 31)  
 Location: St. Lina Station  
 Operator: LICA

**Audit Transfer Standard**  
 Make/Model: Bios DC-2  
 Serial Number: 1193  
 Cell s/n: 2272  
 Thermometer s/n:

**Sampler**  
 Make/Model: Thermo Scientific Series 1405F  
 Unit #: NA  
 Unit s/n: 1405A208301003  
 Firmware Ver.: 1.52  
 Parameter: PM 2.5 (with FDMS)

**Set-up and current Sampler readings**  
 F-Main Set Pt (l/min): 3.00  
 F-Aux Set Pt (l/min): 13.67  
 Filter Load (%): 17.0%  
 K<sub>o</sub> Factor: 13125.0  
 Temp (°C): 18.6  
 Press (ATM): 0.917

### Conversion from mmHg or "Hg to ATM (Atmospheres)

$$\text{ATM} = (\text{mmHg}) \times (1.316 \times 10^{-3}) \quad \text{or} \quad \text{ATM} = (\text{"Hg}) \times (3.34207 \times 10^{-2})$$

**Note: Tolerances are noted as BOLD in Brackets**

### Audit

<b>Status</b>			
Noise <b>&lt;0.10ug</b>	0.004	Warnings	None
Pump Vacuum <b>&lt;0.40atm</b>	0.27	Pump Gauge (inHg)	-20
<b>Temperature/Pressure</b>			
Measured Temp ( <b>± 2 °C</b> )	18.5	<b>Δ °C</b>	0.1
Measured Press ( <b>± 0.01atm</b> )	0.916	<b>Δ ATM</b>	0.001
<b>Flow Audit</b>			
Indicated Main Flow (l/min)	3.00	Main Flow Drift ( <b>±10.0%</b> )	0.33%
Measured Main Flow (l/min)	2.99	Flow Adjusted to Measured?	Yes
Indicated Bypass Flow (l/min)	13.67	Bypass Flow Drift ( <b>±10.0%</b> )	0.66%
Measured Bypass Flow (l/min)	13.58	Flow Adjusted to Measured?	Yes
<b>Leak Check</b>		<b>Instrument Setup</b>	
Main ( <b>&lt; 0.15 l/min</b> )	Base -0.3, Ref - 0.3	Flow Control = Active	
Aux ( <b>&lt; 0.6 l/min</b> )	Base 0.4, Ref 0.2	Report Conditions = Standard (25.0 C and 1atm)	
<b>K<sub>o</sub> Factor</b>			
Measured	NA		
K <sub>o</sub> Difference ( <b>± 2.5%</b> )	NA		

**Start Time:** 15:30                      **Finish Time:** 16:35

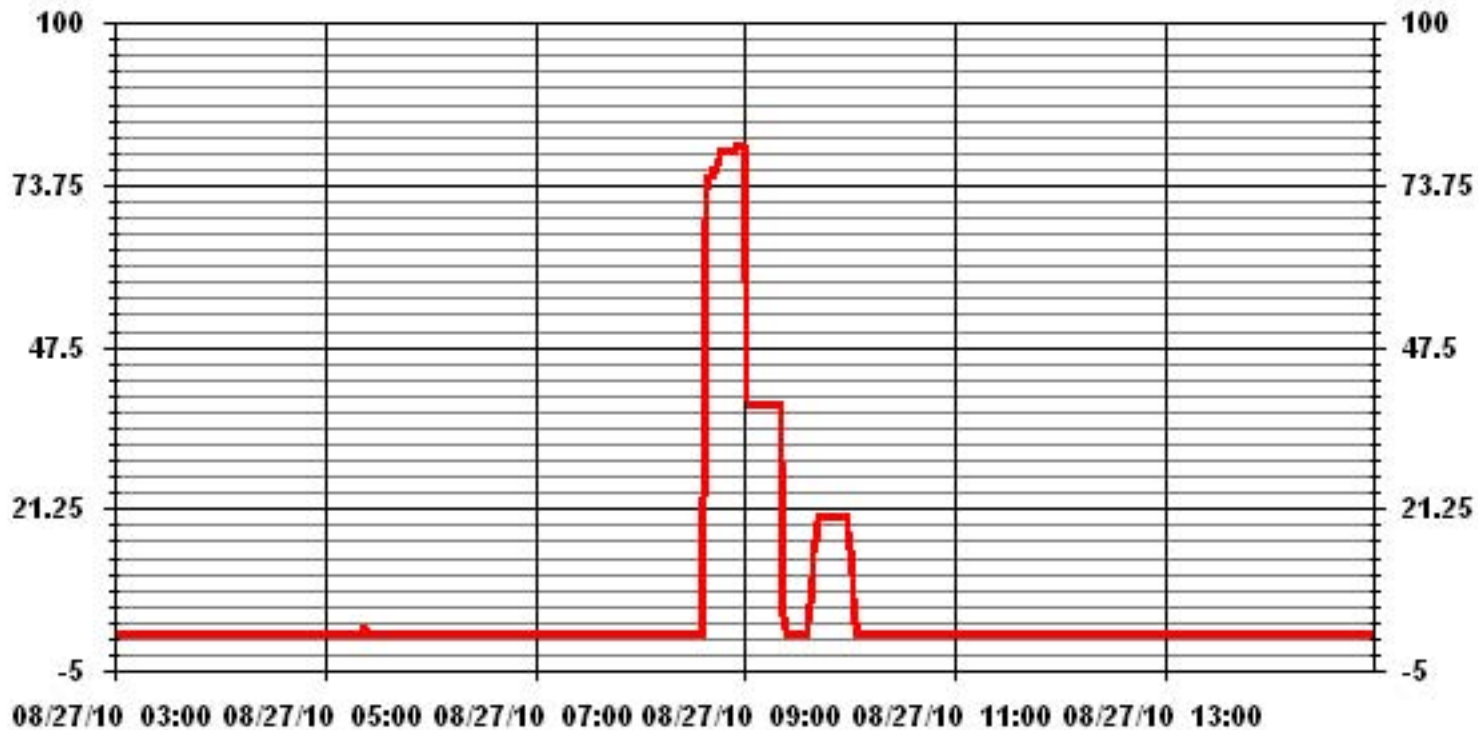
**Sample Inlet Cleaned:** Yes                      **New Filters Installed:** Yes  
**New Filter Loading %:** 17.0%

**Comments:** - Instillation audit; teom installed yesterday and today. Prior to audit flows, temp, pressure, and analog output calibrations were performed. Leak check done following installation.

**Auditor/s:** Shea Beaton

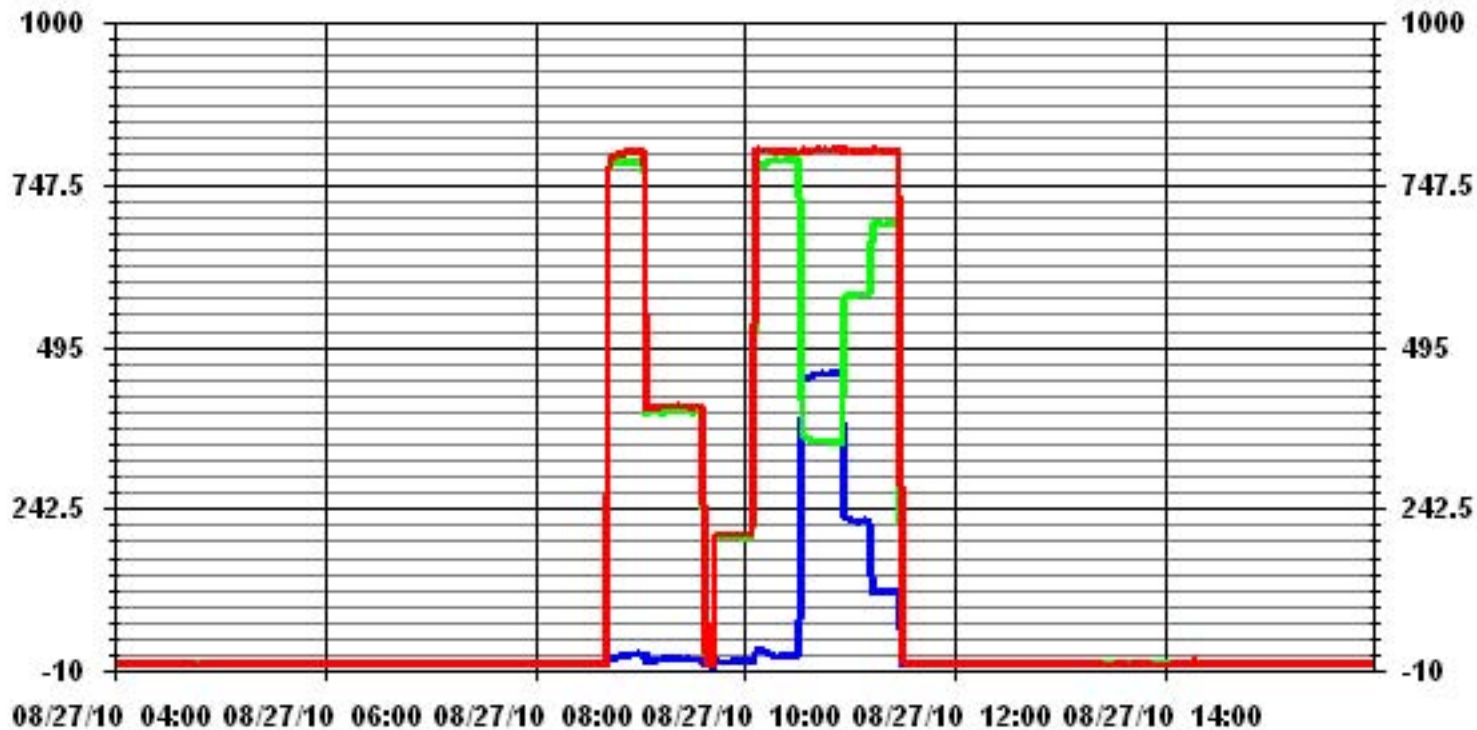
# **AE Audit Results**

### 01 Minute Averages



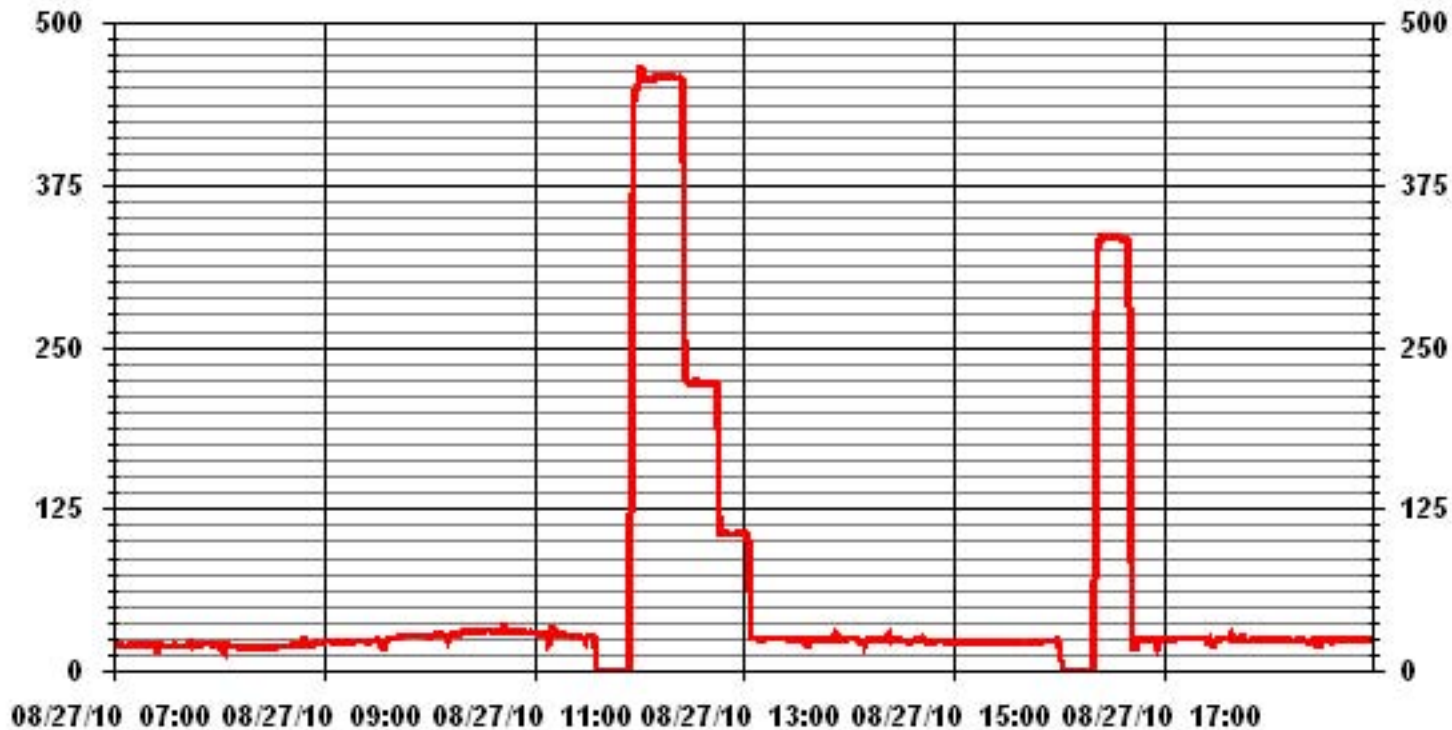
— LICA31 H2S\_ PPB

### 01 Minute Averages



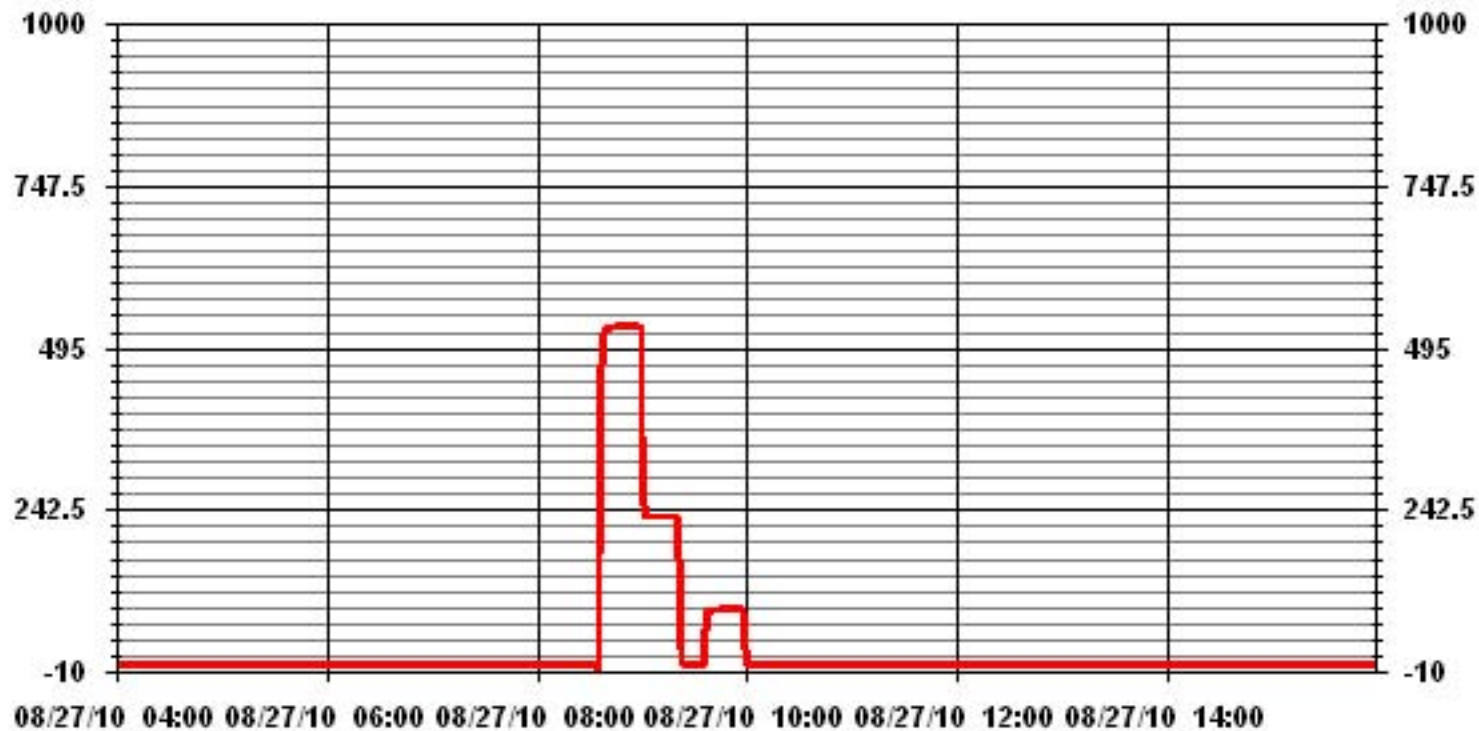
— LICA31 NOX\_ PPB    — LICA31 NO\_ PPB    — LICA31 NO2\_ PPB

### 01 Minute Averages



— LICA31 03\_ PPB

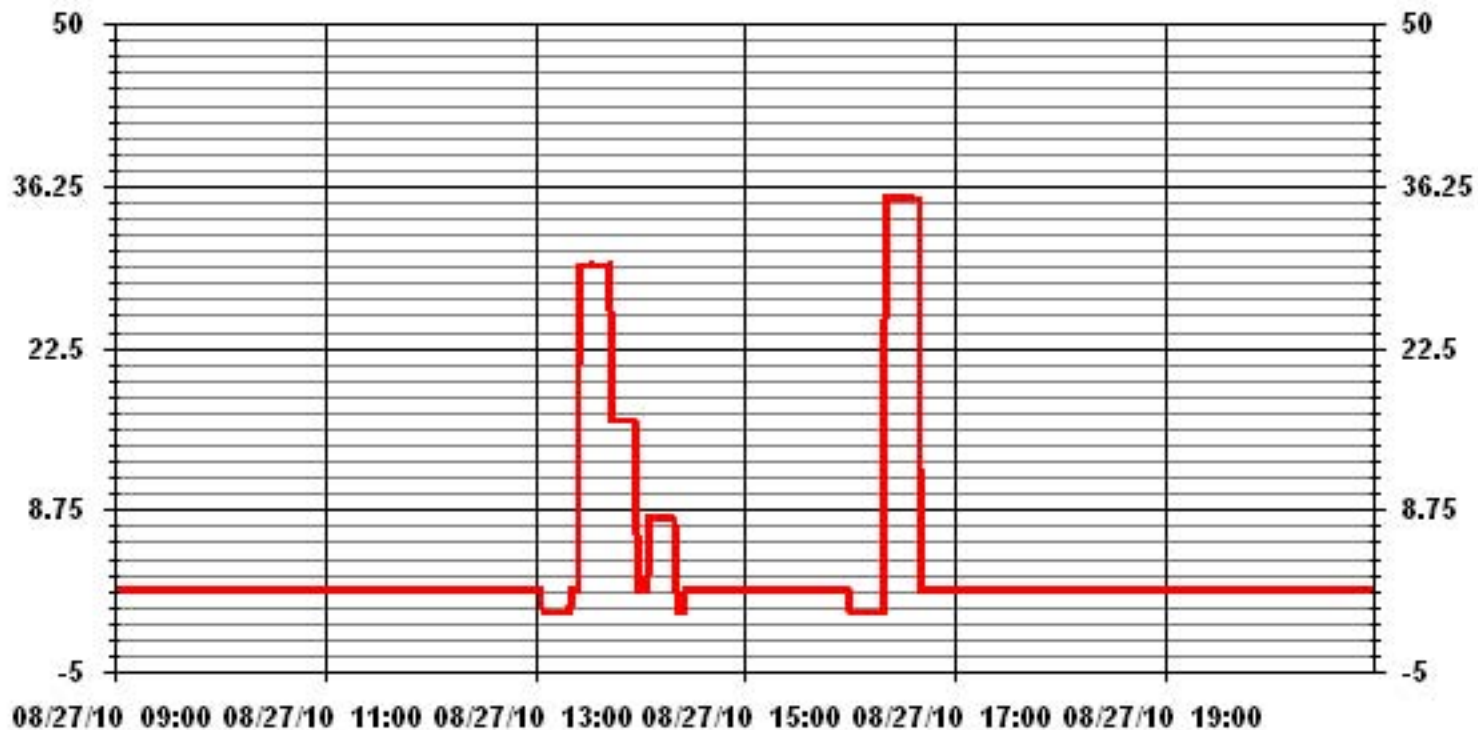
### 01 Minute Averages



— LICA31 SO2\_ PPB



### 01 Minute Averages



— LICA31 THC PPM

# Lakeland Industry & Community Association

Portable / Devon Wellsite 13-16-62-5 W4M Monitoring Site

Ambient Air Monitoring Data Report

For

August 2010

Prepared By:



*Driven by Service and Science*

September 15, 2010

# Lakeland Industry & Community Association Portable / Devon Wellsite 13-16-62-5 W4M Ambient Air Monitoring

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# Introduction

The following Ambient Air Monitoring report was prepared for:

Mr. Mike Bisaga  
**Lakeland Industry & Community Association**  
Box 8237  
5107W – 50 Street  
Bonnyville, Alberta  
T9N 2J5

Monitoring Location: Portable / Devon Wellsite 13-16-62-5 W4M  
Data Period: May 2010

The monthly ambient data report:

- Prepared by Lily Lin
- Reviewed by Craig Snider

The 6-days analytical report for VOCs and PAHs:  
Authorized by Petro Oh

## Calibration Procedure

The following calibration procedure applies to all calibrations conducted at the Lakeland Industry & Community Association Air Monitoring Station.

Calibration gas concentrations are generated using a dynamic mass flow controlled calibrator. EPA Protocol one gases are diluted with zero air generated on site. The Mass Flow Controllers in the calibrator are referenced using an NIST traceable flow meter once per month. All listed flows are reported as corrected to Standard Temperature and Pressure (STP).

Generated zero gas is introduced to the analyzer first. Three concentrations of calibration gas are then generated in order to introduce points at approximately 50-80%, 25-40% & 10-20% of the analyzer's full-scale range. An auto zero and span are then performed to validate the daily zero and span values recorded to the next multi-point calibration.

All indicated concentrations are taken from the ESC data logger used to collect the data for monthly reporting.

Conformance of each calibration to Alberta Environment regulations is outlined in the individual calibration reports. The slope and correlation coefficient are derived from the calculated and indicated analyzer responses. The percent change is calculated using the previous calibration correction factor and the current correction factor before adjustment. The calibration conforms to the procedure outlined in the *Air Monitoring Directive, Appendix A-10, Section 1.6*.

# MONTHLY CONTINUOUS DATA SUMMARY

## LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - PORTABLE

### Continuous Ambient Monitoring – August 2010

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION PORTABEL / DEVON WELLSITE 13-16-62-5 W4M SITE						MAXIMUM VALUES							OPERATIONAL TIME (PERCENT)
						OBJECTIVES				EXCEEDENCES		MONTHLY AVERAGE	
PARAMETER	1-HR	24-HR	1-HR	24-HR	READING	DAY	HOUR	WIND SPEED (KPH)	WIND DIRECTION (DEGREES)	READING	DAY		
SO <sub>2</sub> (PPB)	172	57	0	0	0.04	3	1	8	1.7	166(SSE)	0.2	VAR	100.0
H <sub>2</sub> S (PPB)	10	3	-	-	0.15	4	12	0	1.1	112(ESE)	4	12	100.0
THC (PPM)	-	-	-	-	2.30	17.0	25	2	2.4	58(ENE)	3.5	25	98.7
NO <sub>2</sub> (PPB)	212	106	0	0	1.16	7	VAR	VAR	VAR	VAR	2.5	19	100.0
NO (PPB)	-	-	-	-	0.33	12	1	5, 7	5.9, 2.9	226(SW), 27(NNE)	2.1	1	100.0
NO <sub>x</sub> (PPB)	-	-	-	-	1.57	19	1	5	5.9	226(SW)	4.7	1	100.0
O <sub>3</sub> (PPB)	82	-	0	-	18.76	54	6	12	17.5	137(SE)	29.3	6	100.0
PM 2.5 (UG/M <sup>3</sup> )	-	30	-	2	10.65	353.1	19	14	11.4	273(W)	94.5	19	98.9
VECTOR WS (KPH)	-	-	-	-	8.08	29.5	26	10	-	102(E)	18.9	26	100.0
VECTOR WD (DEGREES)	-	-	-	-	282(W)	-	-	-	-	-	-	-	100.0

VAR-VARIOUS

# General Monthly Summary

## Equipment Operation

The following summary outlines the analyzer performance. Any non-conformances, problems or maintenance performed are detailed at the end of each section.

### AQM STATION – LICA – PORTABLE

**A trailer audit was performed by Alberta Environment on August 26<sup>th</sup>.**

#### Sulphur Dioxide (PPB)

- Analyzer make / model – API 100E, S/N: 467

No operational issue observed during this month. The inlet filter was replaced before the monthly calibration was started.

Data was corrected using daily zero information.

#### Hydrogen Sulphide (PPB)

- Analyzer make / model – API 101E, S/N: 509
- Converter - Internal

No operational issues observed during the month. The inlet filter was replaced before the monthly calibration was started.

Data was corrected using daily zero information.

#### Nitrogen Dioxide (PPB)

- Analyzer make / model – API 200E, S/N: 593

No operational issue observed during the month. The inlet filter was replaced before the monthly calibration was started.

Data was corrected using daily zero information.

# General Monthly Summary

## AQM STATION – LICA – PORTABLE

### Ozone (PPB)

- Analyzer make / model –Thermo 49i, S/N: 1002240372

No operational issues observed during the month. The inlet filter was changed before the monthly calibration was started. Data was corrected using daily zero information.

### THC (PPM)

- Analyzer make / model – TECO 51C, S/N: 04366-09739

No operational issues observed during the month. The analyzer failed on August 31<sup>st</sup> at 15:00 due to the H2 gas to be run out. The H2 gas cylinder was replaced on August 1<sup>st</sup>, and the analyzer was re-lit. 7 hours of data were invalidated this month. The inlet filter was replaced before the monthly calibration was started on August 10<sup>th</sup>. The CH4 gas cylinder was changed and the expected value of calibration was adjusted on August 19<sup>th</sup>. Data was corrected using daily zero information.

### Particulate Matter 2.5 (ug/m<sup>3</sup>)

- Analyzer make / model –TEOM 1405F, S/N: 1405A207691003

The Teom unit was working well throughout the month. A routine audit with leak check was performed on August 19<sup>th</sup>. Data was corrected using Alberta air quality guideline for PM2.5 analyzer. If the data was between 0 to –3, the data was corrected to 0. If the data was below –3, the data was invalidated. 8 hours of data were invalidated as they were below – 3.0 ug/m<sup>3</sup>. The new Teom 1405F unit output provides hourly average, but no instantaneous output. As a result, no hourly maximum value is recorded. There were two 24-hour average readings above guidelines; reading of 94.5ug/m<sup>3</sup> on August 19<sup>th</sup>, and 32.6 ug/m<sup>3</sup> on August 20<sup>th</sup>. The contraventions were reported to AENV on August 20<sup>th</sup>. The AENV Ref# is 239388.



# General Monthly Summary

## AQM STATION – LICA – PORTABLE

### Vector Wind Speed (KPH) & Vector Wind Direction (DEG)

- System make / model – RM Young 5103VK, S/N: 41334

No operational issues observed during the month. The wind system is reported as vector wind speed and vector wind direction.

### Datalogger

- System make / model - ESC 8832, S/N: AO717
- Software make / version - ESC v 5.51a

The ESC 8832 is connected to a modem with DSL for continuous connection with the base computer.

### Trailer

No issue was observed this month. The manifold was cleaned on August 10<sup>th</sup>.

### Air Quality Index (AQI)

The AQI data was adjusted to reflect regular monthly and daily calibrations, maintenance, and downtime. 5 hours of very poor, 4 hours of poor, and 11 hours of fair AQI values recorded in August 2010, and they were all due to PM2.5. The highest hourly concentration of PM2.5 was 353.1ug/m3 and an AQI value of 185, hour 14 on August 19<sup>th</sup>. The highest hourly concentration of Ozone was 45 ppb and an AQI value of 23 on August 1<sup>st</sup>, hour 14 and 15 and August 6<sup>th</sup>, hour of 17.

# General Monthly Summary

## AQM STATION – LICA – PORTABLE

### **Volatile Organics (VOCs)**

The volatile organics were sampled from August 6<sup>th</sup> to August 30<sup>th</sup>. The sampler was programmed to run for 24 hours, and, every 6 days per sample cycle. The values for the VOCs in this report were reported as ug/m<sup>3</sup> in 3 significant figures. No VOCs lab result is included for August in this report as the data is not available when the monthly report is completed. The results for August will be included in the monthly report next month. The lab result for July is also not available when the monthly report is completed. It will be included in the monthly report next month.

### **Polycyclic Aromatic Hydrocarbons (PAHs)**

The PAHs were sampled from August 6<sup>th</sup> to August 30<sup>th</sup>. The sampler was programmed to run for 24 hours, and, every 6 days per sample cycle. The values for the PAHs in this report were reported as ng/m<sup>3</sup>. No PAHs lab result for August is included in this report as the data is not available when the monthly report is completed. The results for August will be included in the monthly report next month. The lab result for July is also not available when the monthly report is completed. It will be included in the monthly report next month.

# Continuous Monitoring

# Monthly Summaries, Graphs & Wind Roses

# Air Quality Index

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION -PORTABLESITE

AUGUST 2010

AIR QUALITY INDEX (AQI)

MST		0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY
DAY	PEAK	0:00-1:00	1:00-2:00	2:00-3:00	3:00-4:00	4:00-5:00	5:00-6:00	6:00-7:00	7:00-8:00	8:00-9:00	9:00-10:00	10:00-11:00	11:00-12:00	12:00-13:00	13:00-14:00	14:00-15:00	15:00-16:00	16:00-17:00	17:00-18:00	18:00-19:00	19:00-20:00	20:00-21:00	21:00-22:00	22:00-23:00	0:00-1:00	MAX
1		13	15	11	7	5	6	7	8	18	17	-	20	21	22	23	23	22	22	21	17	13	17	13	10	23
2		8	11	9	8	9	12	10	11	11	-	14	16	16	17	16	16	16	15	15	12	-	9	8	8	17
3		7	6	9	11	10	11	6	7	-	13	15	16	18	20	19	20	20	19	16	13	9	8	6	3	20
4		3	2	2	3	2	2	2	-	8	13	16	17	17	17	18	17	16	14	13	16	15	15	14	17	15
5		21	20	21	21	17	15	-	16	16	12	13	15	15	16	16	16	16	15	12	14	14	15	16	17	19
6		12	13	10	16	8	-	17	22	28	-	-	-	-	-	-	-	-	23	20	17	13	9	12	28	
7		9	13	12	11	-	15	20	19	22	27	24	19	18	16	15	14	13	12	10	6	8	10	13	27	
8		13	8	10	-	15	16	20	17	16	20	20	18	18	16	13	11	14	11	10	7	7	10	4	3	20
9		7	5	-	2	4	4	5	6	8	13	15	17	-	-	-	-	-	18	17	15	12	10	9	6	19
10		6	-	6	6	8	9	8	10	9	11	13	15	-	15	15	14	11	14	16	17	14	8	9	6	17
11		3	4	2	2	2	2	4	6	10	13	17	17	18	20	18	23	21	18	16	12	11	6	5	-	23
12		3	2	2	2	3	1	1	5	11	10	12	14	15	12	11	13	16	15	13	11	10	11	-	9	16
13		8	7	9	9	7	6	7	9	10	10	11	12	11	13	13	13	12	12	10	10	-	9	8	13	
14		9	8	8	7	8	8	7	8	9	12	12	11	11	12	12	12	12	11	9	-	7	4	3	12	
15		2	1	1	2	5	1	1	2	4	10	12	12	13	14	14	14	14	13	-	7	5	3	2	14	
16		3	2	2	2	1	3	5	4	5	9	13	15	15	15	15	13	14	-	10	8	7	8	8	15	
17		7	6	7	7	8	8	8	9	10	12	15	16	16	17	17	18	18	-	14	11	7	5	4	3	18
18		2	2	1	1	4	5	4	6	7	9	11	13	13	15	15	-	13	11	7	6	6	5	5	15	
19		4	4	6	6	3	1	2	8	8	-	-	48	172	185	-	93	39	38	44	60	82	95	120	185	
20		157	106	35	23	17	14	18	20	17	12	13	13	13	-	14	14	13	12	8	6	7	5	6	157	
21		4	3	6	3	6	11	15	14	13	16	32	33	29	-	22	27	22	20	15	17	16	17	16	15	33
22		13	11	12	16	13	14	15	16	17	15	18	18	-	17	18	13	18	17	16	10	15	13	14	10	18
23		11	9	9	7	7	6	7	7	9	9	10	-	10	11	11	12	12	14	12	12	10	10	8	9	14
24		7	6	8	4	3	3	5	6	7	9	-	12	13	14	15	16	18	16	12	9	6	6	6	6	18
25		6	6	6	4	8	8	8	9	10	-	15	17	18	20	21	20	19	19	15	12	5	4	4	5	21
26		8	11	8	9	7	8	8	10	-	-	-	-	-	-	16	16	15	14	13	12	13	14	14	19	19
27		15	12	12	12	13	-	12	-	15	12	11	14	13	12	12	12	11	11	10	9	9	10	9	10	15
28		10	9	9	9	10	11	-	11	11	12	-	-	-	12	12	12	11	10	10	9	9	8	8	6	13
29		5	5	4	4	3	-	5	6	7	8	10	10	10	10	10	9	9	9	8	7	6	5	4	3	10
30		3	3	4	3	-	4	4	5	6	7	8	9	10	10	11	11	10	8	5	2	2	2	2	2	11
31		-	1	2	-	10	6	-	2	7	10	14	15	17	19	20	20	18	16	14	13	11	8	7	6	20
PEAK		157	106	35	23	17	16	20	22	28	27	32	33	48	172	185	27	93	39	38	44	60	82	95	120	

STATUS FLAG CODES

NA - NOT APPLICABLE

V - VARIOUS

AQI CLASS	OZONE (O <sub>3</sub> )					PARTICULATE MATTER 2.5 (PM <sub>2.5</sub> )					NITROGEN DIOXIDE (NO <sub>2</sub> )					SULPHUR DIOXIDE (SO <sub>2</sub> )					FREQUENCY	
	HRS	%	MAX AQI	HR	DAY	HRS	%	MAX AQI	HR	DAY	HRS	%	MAX AQI	HR	DAY	HRS	%	MAX AQI	HR	DAY	HRS	%
VERY POOR (101-255)	0	0.0%	-	-	-	5	0.7%	185	14	19	0	0.0%	-	-	-	0	0.0%	-	-	-	5	0.7%
POOR (51-100)	0	0.0%	-	-	-	4	0.5%	-	-	-	0	0.0%	-	-	-	0	0.0%	-	-	-	4	0.5%
FAIR (26-50)	0	0.0%	-	-	-	11	1.5%	-	-	-	0	0.0%	-	-	-	0	0.0%	-	-	-	11	1.5%
GOOD (1-25)	452	60.8%	23	VAR	1,6	212	28.5%	-	-	-	0	0.0%	-	-	-	0	0.0%	-	-	-	664	89.2%
OVERALL	452	60.8%	-	-	-	232	31.2%	-	-	-	0	0.0%	-	-	-	0	0.0%	-	-	-	684	91.9%
UNAVAILABLE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	60	8.1%

# Sulphur Dioxide

# LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - PORTABLE SITE

AUGUST 2010

SULPHUR DIOXIDE (SO<sub>2</sub>) hourly averages in ppb

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	RDGS.
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	MAX.	AVG.		
DAY																											
1	0	0	0	0	0	0	0	0	3	2	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0.2	24
2	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
3	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	1	1	1	1	0	0	0	0	0	1	0.2	24
4	0	0	0	0	0	0	0	IZS	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0.1	24
5	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	0.1	24
6	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
7	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
8	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
9	0	0	IZS	0	0	0	0	0	0	0	0	0	C	C	C	C	C	0	0	0	0	0	0	0	0	0.0	24
10	0	IZS	0	0	0	0	0	0	0	0	0	0	C	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
11	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0.0	24
12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0.0	24
14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0.0	24
15	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	1	0.0	24
16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0.0	24
17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0.0	24
18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0.0	24
19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0.0	24
20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0.0	24
21	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0.0	24
22	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	1	1	1	1	0	0	0	1	0	0	1	0.2	24
23	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
24	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	1	1	0	0	0	0	0	0	1	0.1	24
25	0	0	0	0	0	0	0	0	0	IZS	0	0	1	0	1	0	0	0	0	0	0	0	0	0	1	0.1	24
26	0	0	0	0	0	0	0	0	IZS	C	C	C	C	0	0	0	0	0	0	0	0	0	1	1	1	0.1	24
27	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
28	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
29	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
30	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
31	0	0	0	IZS	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1	0.1	24
HOURLY MAX	0	0	0	0	0	0	0	0	3	2	1	1	1	1	1	1	1	1	1	1	0	1	1	1			
HOURLY AVG	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.1			

STATUS FLAG CODES

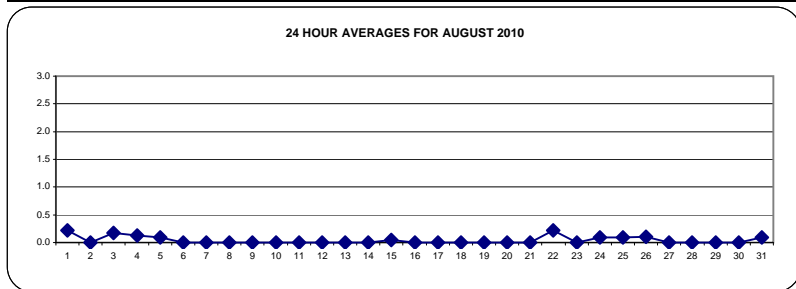
S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	- MAINTENANCE
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE

OBJECTIVE LIMIT:

ALBERTA ENVIRONMENT:	1-HR	172	PPB	24-HR	57	PPB
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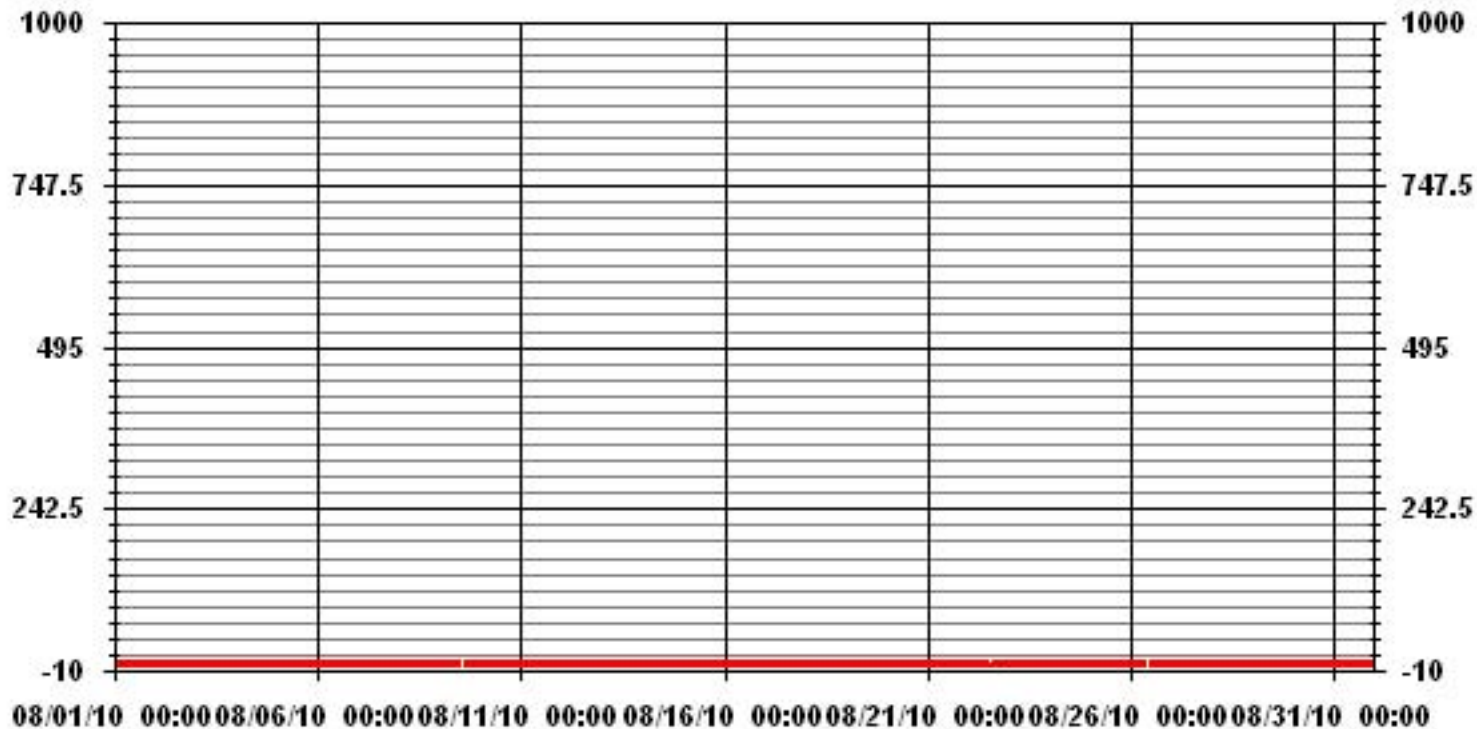
MONTHLY SUMMARY

NUMBER OF 1-HR EXCEEDENCES:	0		
NUMBER OF 24-HR EXCEEDENCES:	0		
NUMBER OF NON-ZERO READINGS:	25		
MAXIMUM 1-HR AVERAGE:	3 PPB @ HOUR(S) 8 ON DAY(S) 1		
MAXIMUM 24-HR AVERAGE:	0.2 PPB ON DAY(S) VAR		
IZS CALIBRATION TIME:	32 HRS	OPERATIONAL TIME:	744 HRS
MONTHLY CALIBRATION TIME:	10 HRS	AMD OPERATION UPTIME:	100.0 %
STANDARD DEVIATION:	0.22	MONTHLY AVERAGE:	0.04 PPB





### 01 Hour Averages



— LICA33 SO2\_ PPB

# LAKELAND INDUSTRY & COMMUNITY ASSOCIATION -PORTABLE SITE

AUGUST 2010

## SULPHUR DIOXIDE MAX instantaneous maximum in ppt

MST		0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	24:00	DAILY	24-HOUR	RDGS.																						
		1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.																								
DAY																																																			
1		1	1	1	1	1	1	1	2	4	4	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0.7	24																						
2		0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24																						
3		0	0	0	0	0	0	0	0	IZS	1	1	1	1	1	2	2	2	2	2	1	1	1	1	1	1	2	0.8	24																						
4		1	1	1	1	1	1	1	IZS	1	3	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	3	1.2	24																						
5		1	1	1	1	1	1	IZS	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	2	1.0	24																							
6		1	1	1	1	1	IZS	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	24																						
7		1	1	1	1	IZS	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	24																						
8		1	1	1	IZS	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	24																						
9		1	1	IZS	1	1	1	1	1	1	1	1	1	C	C	C	C	1	1	1	1	1	1	1	1	1	1	1.0	24																						
10		1	IZS	1	1	1	1	1	1	1	1	1	1	C	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	24																						
11		IZS	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	IZS	1	1.0	24																						
12		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	24																						
13		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	IZS	1	1	1.0	24																						
14		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	IZS	1	0	0	1	0.9	24																						
15		0	1	1	1	0	1	1	1	1	2	2	1	1	1	1	1	1	1	1	1	IZS	1	1	1	1	2	1.0	24																						
16		1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	2	2	1	IZS	0	0	0	0	0	0	2	0.8	24																						
17		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	1	1	1	1	1	1	1	1	0.3	24																						
18		1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	IZS	0	1	0	0	1	0	1	0	1	2	0.9	24																						
19		0	0	1	1	1	0	0	1	1	1	1	1	1	1	1	IZS	1	1	1	1	1	1	1	1	1	1	0.8	24																						
20		1	0	1	1	0	1	0	0	1	0	0	0	1	0	IZS	0	0	0	0	0	0	1	0	0	1	0.3	24																							
21		0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0.0	24																							
22		0	0	0	0	0	0	0	0	0	1	1	0	IZS	1	2	2	2	2	2	1	2	1	2	1	1	2	0.8	24																						
23		2	1	1	1	1	1	1	1	1	1	1	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0.5	24																						
24		0	0	0	0	0	0	0	0	0	0	IZS	1	1	1	1	1	2	2	1	1	1	1	1	1	1	2	0.7	24																						
25		1	1	1	1	1	1	1	1	2	IZS	1	1	2	2	2	1	1	1	1	1	1	1	1	1	1	2	1.2	24																						
26		1	1	1	1	1	1	1	1	IZS	C	C	C	1	1	1	1	1	2	2	1	2	1	2	1	1	2	1.2	24																						
27		1	1	1	1	1	1	1	IZS	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	24																						
28		1	1	1	1	1	1	IZS	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	24																						
29		1	1	1	1	1	IZS	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	24																						
30		1	1	1	1	IZS	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1.0	24																						
31		1	1	1	IZS	1	1	1	1	1	1	1	2	2	2	2	1	1	1	1	1	1	1	1	1	1	2	1.1	24																						
HOURLY MAX		2	1	1	1	1	1	1	2	4	4	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	1	1																							
HOURLY AVG		0.8	0.7	0.8	0.8	0.7	0.8	0.7	0.8	1.0	1.1	0.9	0.8	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.8	0.8	0.9	0.7	0.8																									

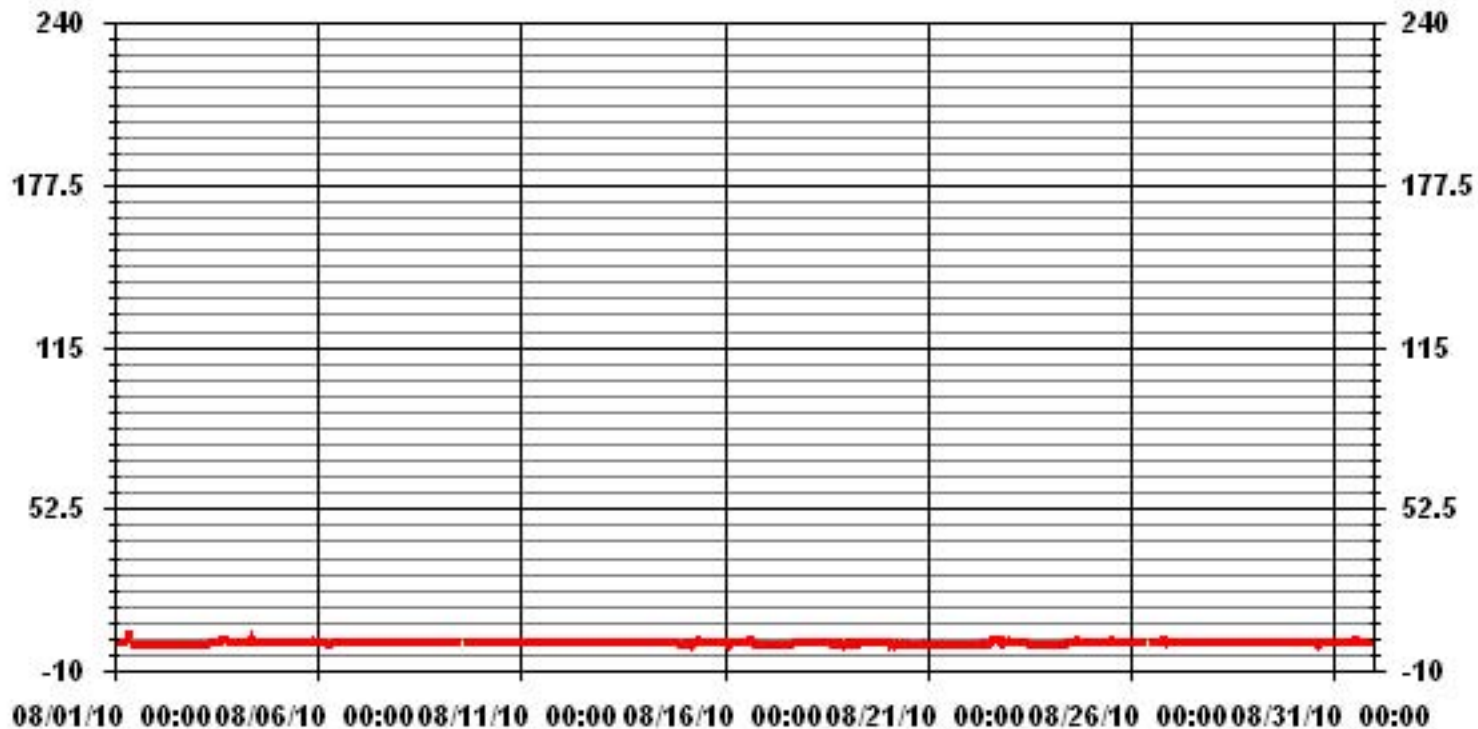
**STATUS FLAG CODES**

S - OUT OF SERVICE	IZS - IZS - DAILY ZERO/SPAN CHECK
N - INVALID DATA	M - MAINTENANCE
D - INSTRUMENT DRIFT	P - POWER FAILURE
C - CALIBRATION	NA - NOT APPLICABLE

**MONTHLY SUMMARY**

NUMBER OF NON-ZERO READINGS:	549					
MAXIMUM INSTANTANEOUS VALUE:	4	PPB	@ HOUR(S)	8, 9	ON DAY(S)	1
IZS CALIBRATION TIME:	32	HRS	OPERATIONAL TIME:	744	HRS	
MONTHLY CALIBRATION TIME:	10	HRS				
STANDARD DEVIATION:	0.52					

### 01 Hour Averages



— LICA33 SO2MAX PPB

LICA33  
 SO2\_ / WDR Joint Frequency Distribution (Percent)

August 2010

Distribution By % Of Samples

Logger Id : 33  
 Site Name : LICA33  
 Parameter : SO2\_  
 Units : PPB

Wind Parameter : WDR  
 Instrument Height : 10 Meters

	Direction																
Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 20	2.27	3.41	4.55	5.41	6.69	4.55	6.12	5.98	2.56	2.42	8.97	8.40	13.10	12.53	8.40	4.55	100.00
< 60	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
< 110	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
< 170	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
< 340	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
>= 340	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
Totals	2.27	3.41	4.55	5.41	6.69	4.55	6.12	5.98	2.56	2.42	8.97	8.40	13.10	12.53	8.40	4.55	

Calm : .00 %

Total # Operational Hours : 702

Distribution By Samples

	Direction																
Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 20	16	24	32	38	47	32	43	42	18	17	63	59	92	88	59	32	702
< 60																	
< 110																	
< 170																	
< 340																	
>= 340																	
Totals	16	24	32	38	47	32	43	42	18	17	63	59	92	88	59	32	

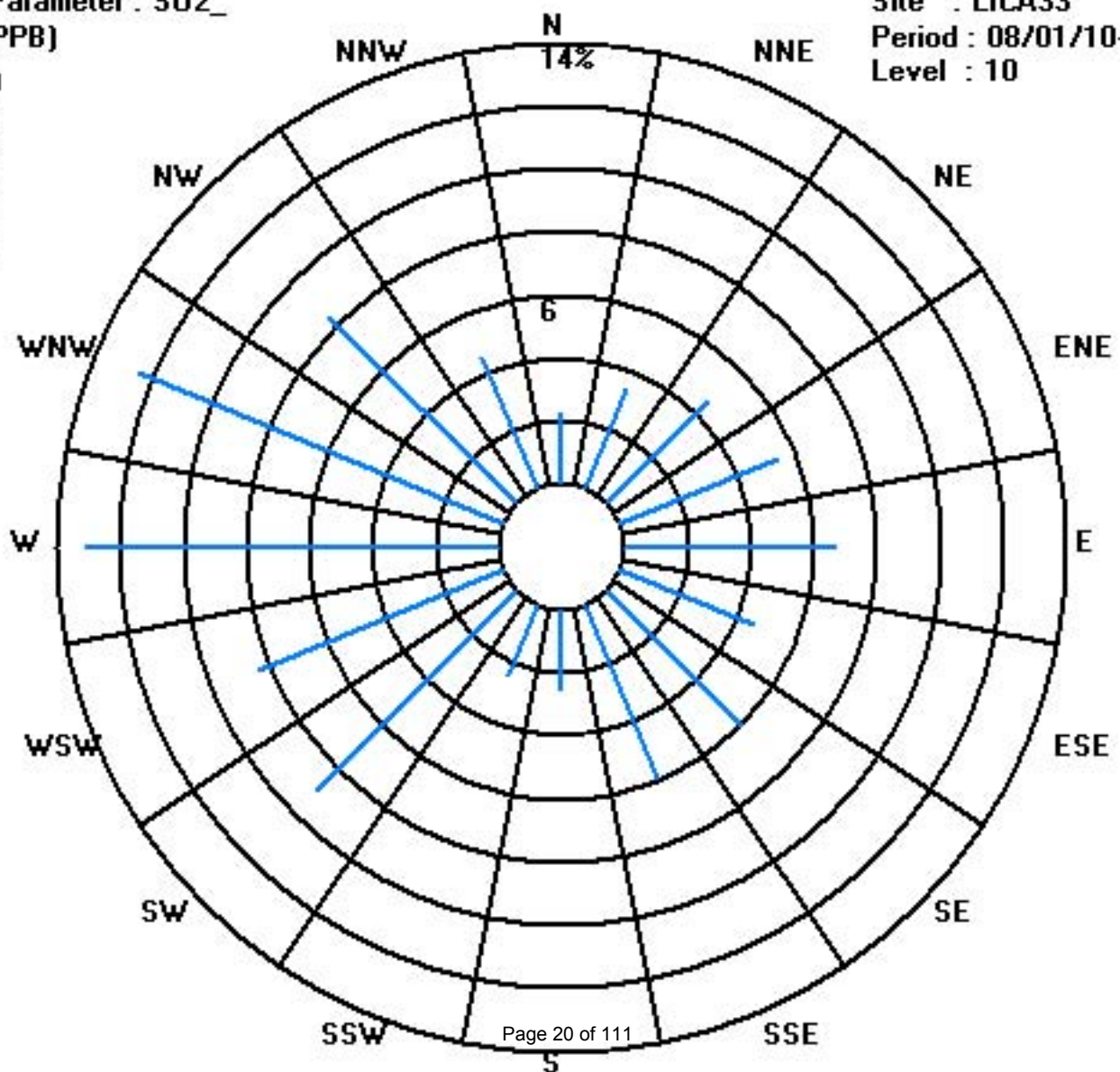
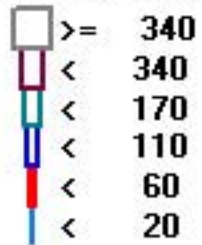
Calm : .00 %

Total # Operational Hours : 702

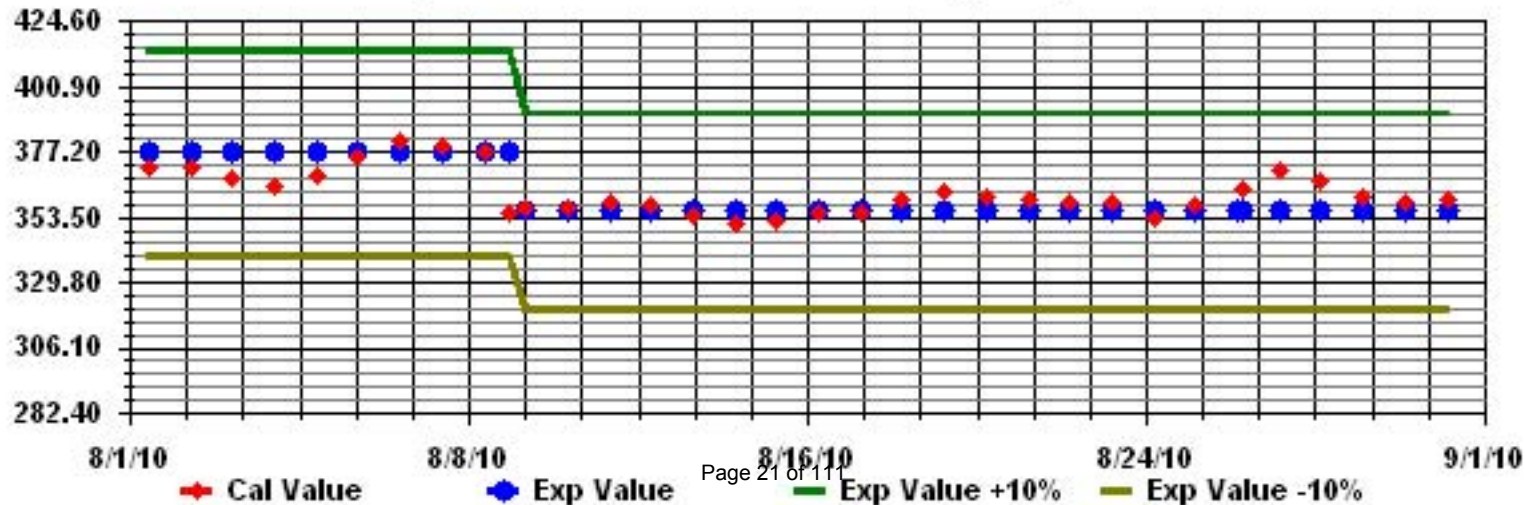
Class Limits (PPB)

Period : 08/01/10-08/31/10

Level : 10



Calibration Graph for Site: LICA33 Parameter: S02\_ Sequence: S02 Phase: SPAll



# Hydrogen Sulphide

## LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - PORTABLE

AUGUST 2010

HYDROGEN SULPHIDE (H<sub>2</sub>S) hourly averages in ppb

MST		0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY 24-HOUR			
DAY	HOURLY MAX	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.	
1		0	0	0	0	1	1	1	1	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	2	2	0.3	24	
2		0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
3		0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
4		0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.0	24
5		0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	1	0.1	24	
6		1	1	1	1	1	IZS	1	1	1	C	C	C	C	0	0	0	0	0	0	0	0	0	0	0	1	0.4	24	
7		0	1	1	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0.1	24	
8		0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24	
9		0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24	
10		0	IZS	0	1	1	0	0	0	0	0	0	0	C	0	0	0	0	0	0	0	0	0	0	0	1	0.1	24	
11		IZS	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	IZS	1	0.2	24	
12		4	2	1	1	2	3	1	1	1	0	0	0	0	1	0	0	0	1	0	0	0	0	IZS	0	4	0.8	24	
13		1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	1	0.0	24
14		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0.0	24	
15		0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	1	0.0	24
16		0	0	0	0	1	2	3	2	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	3	0.3	24
17		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	1	1	0.0	24
18		2	1	0	1	0	1	1	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	1	1	1	2	0.4	24	
19		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	IZS	0	0	0	0	0	0	0	0	0	1	0.7	24
20		0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0.0	24
21		0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
22		0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
23		0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
24		0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
25		0	0	0	1	0	1	1	1	1	IZS	1	1	1	1	1	0	0	0	0	0	0	1	2	1	2	0.6	24	
26		1	1	1	1	1	1	1	1	IZS	C	C	C	C	0	0	0	0	0	0	0	0	0	0	0	1	0.4	24	
27		0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
28		0	0	0	1	1	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.1	24
29		0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
30		0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
31		0	0	0	1	IZS	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.1	24	
HOURLY MAX		4	2	1	1	2	3	3	2	1	1	1	1	1	1	1	0	0	1	0	1	0	1	2	2				
HOURLY AVG		0.3	0.2	0.2	0.3	0.3	0.4	0.4	0.3	0.2	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.2				

**STATUS FLAG CODES**

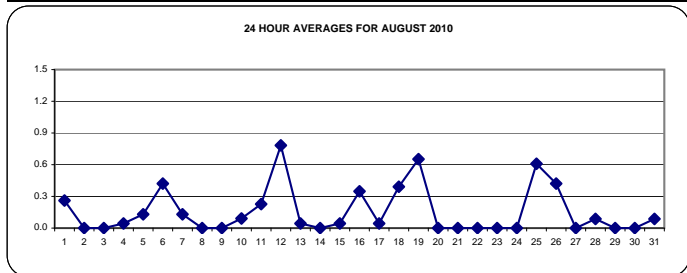
S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	- MAINTENANCE
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE

**OBJECTIVE LIMIT:**

**ALBERTA ENVIRONMENT:** 1-HR 10 PPB 24-HR 3 PPB

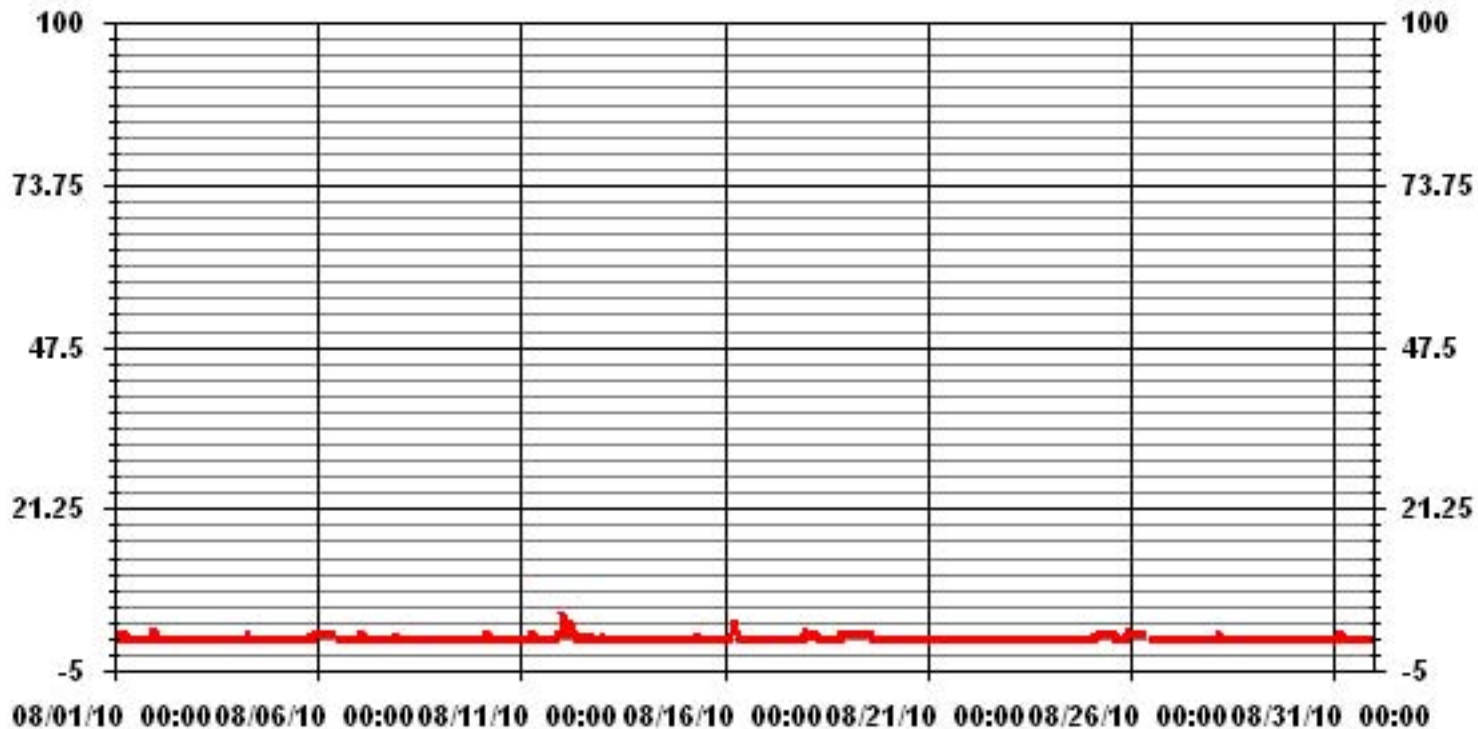
**MONTHLY SUMMARY**

NUMBER OF 1-HR EXCEEDENCES:	0				
NUMBER OF 24-HR EXCEEDENCES:	0				
NUMBER OF NON-ZERO READINGS:	93				
MAXIMUM 1-HR AVERAGE:	4	PPB	@ HOUR(S)	0	ON DAY(S) 12
MAXIMUM 24-HR AVERAGE:	0.8	PPB			ON DAY(S) 12
					VAR-VARIOUS
IZS CALIBRATION TIME:	32	HRS	OPERATIONAL TIME:	744	HRS
MONTHLY CALIBRATION TIME:	9	HRS	AMD OPERATION UPTIME:	100.0	%
STANDARD DEVIATION:	0.43		MONTHLY AVERAGE:	0.15	PPB





### 01 Hour Averages



— LICA33 H2S\_ PPB

# LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - PORTABLE SITE

AUGUST 2010

## HYDROGEN SULPHIDE MAX instantaneous maximum in ppb

MST		0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY 24-HOUR			
HOUR START		1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.	
HOUR END		1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.	
DAY																													
1		0	1	1	1	1	1	1	1	1	1	IZS	0	0	0	0	0	0	0	0	0	0	0	4	5	5	0.8	24	
2		0	0	0	0	0	0	0	0	0	IZS	1	1	0	19	1	0	1	1	0	1	0	1	0	1	19	1.2	24	
3		1	1	1	1	1	1	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.3	24
4		0	0	1	1	0	1	1	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0.2	24
5		1	1	1	0	0	0	IZS	1	0	1	0	0	0	0	0	1	1	1	1	1	1	1	2	1	2	0.6	24	
6		2	2	2	1	1	IZS	1	1	C	C	C	C	C	0	0	0	0	0	0	0	0	0	0	0	0	2	0.6	24
7		2	2	2	1	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	0	2	0.4	24	
8		0	0	0	IZS	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0.1	24	
9		0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
10		0	IZS	0	2	2	1	1	1	0	1	1	1	C	0	0	0	1	0	0	1	1	1	1	1	0	2	0.7	24
11	IZS	0	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	1	1	1	1	1	1	2	IZS	2	0.8	24
12		6	3	2	1	3	7	2	1	1	1	1	1	1	1	1	0	1	1	1	1	0	0	IZS	0	7	1.6	24	
13		1	1	1	1	0	1	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	IZS	0	1	1	0.3	24
14		0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1	0	1	0	1	0	IZS	0	0	0	1	0.2	24
15		0	1	1	0	0	0	1	0	1	0	0	0	1	0	0	1	0	1	1	IZS	1	0	0	0	0	1	0.4	24
16		0	0	0	0	3	3	4	3	2	1	1	0	1	1	1	1	1	0	IZS	1	0	0	0	0	4	1.0	24	
17		0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	1	0	IZS	0	0	0	0	2	2	2	0.3	24	
18		4	2	0	5	1	2	2	0	0	0	0	0	0	0	0	0	IZS	1	1	1	1	1	1	1	1	5	1.0	24
19		1	1	1	1	1	1	1	1	1	2	2	1	1	1	1	IZS	0	0	0	0	0	0	0	0	0	2	0.7	24
20		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0.0	24
21		2	0	0	1	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	2	0.1	24
22		0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
23		1	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	1	0.0	24
24		0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	1	1	1	0	0	0	1	1	1	1	0.3	24
25		1	1	1	1	2	2	1	2	1	IZS	1	1	2	1	1	1	1	1	1	1	1	1	1	2	2	2	1.3	24
26		1	2	1	1	1	1	1	1	IZS	C	C	C	C	0	1	1	0	0	0	1	1	1	1	1	1	2	0.8	24
27		1	0	0	0	0	0	0	IZS	0	1	1	0	0	1	1	1	1	1	1	1	0	1	1	1	1	1	0.6	24
28		1	0	1	1	1	1	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.2	24
29		0	0	0	0	0	IZS	0	0	0	0	0	1	3	0	0	0	0	0	0	0	0	0	0	0	0	3	0.2	24
30		0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	0.1	24
31		0	1	3	IZS	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0.2	24	
HOURLY MAX		6	3	3	5	3	7	4	3	2	2	2	1	3	19	1	1	1	1	1	1	1	1	4	5				
HOURLY AVG		0.8	0.6	0.7	0.7	0.7	0.8	0.6	0.4	0.3	0.4	0.4	0.3	0.4	0.9	0.3	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.7	0.6			

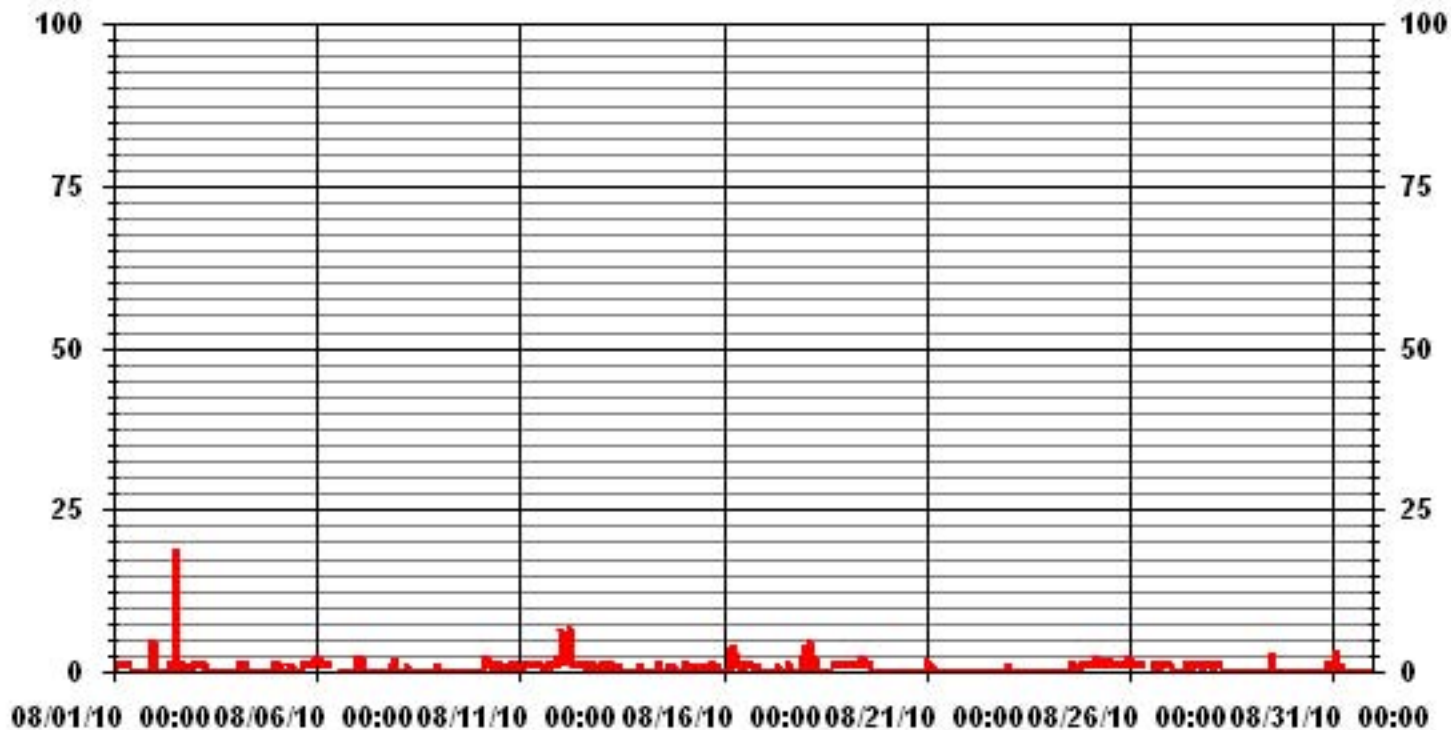
**STATUS FLAG CODES**

S - OUT OF SERVICE	IZS - IZS - DAILY ZERO/SPAN CHECK
N - INVALID DATA	M - MAINTENANCE
D - INSTRUMENT DRIFT	P - POWER FAILURE
C - CALIBRATION	NA - NOT APPLICABLE

**MONTHLY SUMMARY**

NUMBER OF NON-ZERO READINGS:	250					
MAXIMUM INSTANTANEOUS VALUE:	19	PPB	@ HOUR(S)	13	ON DAY(S)	2
VAR - VARIOUS						
IZS CALIBRATION TIME:	32	HRS	OPERATIONAL TIME:	744	HRS	
MONTHLY CALIBRATION TIME:	11	HRS				
STANDARD DEVIATION:	1.04					

### 01 Hour Averages



LICA33  
H2S\_ / WDR Joint Frequency Distribution (Percent)

August 2010

Distribution By % Of Samples

Logger Id : 33  
Site Name : LICA33  
Parameter : H2S\_  
Units : PPB

Wind Parameter : WDR  
Instrument Height : 10 Meters

	Direction																
Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 3	2.27	3.41	4.55	5.40	6.54	4.40	5.97	5.68	2.98	2.56	8.81	8.39	13.08	12.51	8.39	4.55	99.57
< 10	.00	.00	.00	.00	.14	.14	.00	.00	.00	.00	.14	.00	.00	.00	.00	.00	.42
< 50	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
>= 50	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
Totals	2.27	3.41	4.55	5.40	6.68	4.55	5.97	5.68	2.98	2.56	8.96	8.39	13.08	12.51	8.39	4.55	

Calm : .00 %

Total # Operational Hours : 703

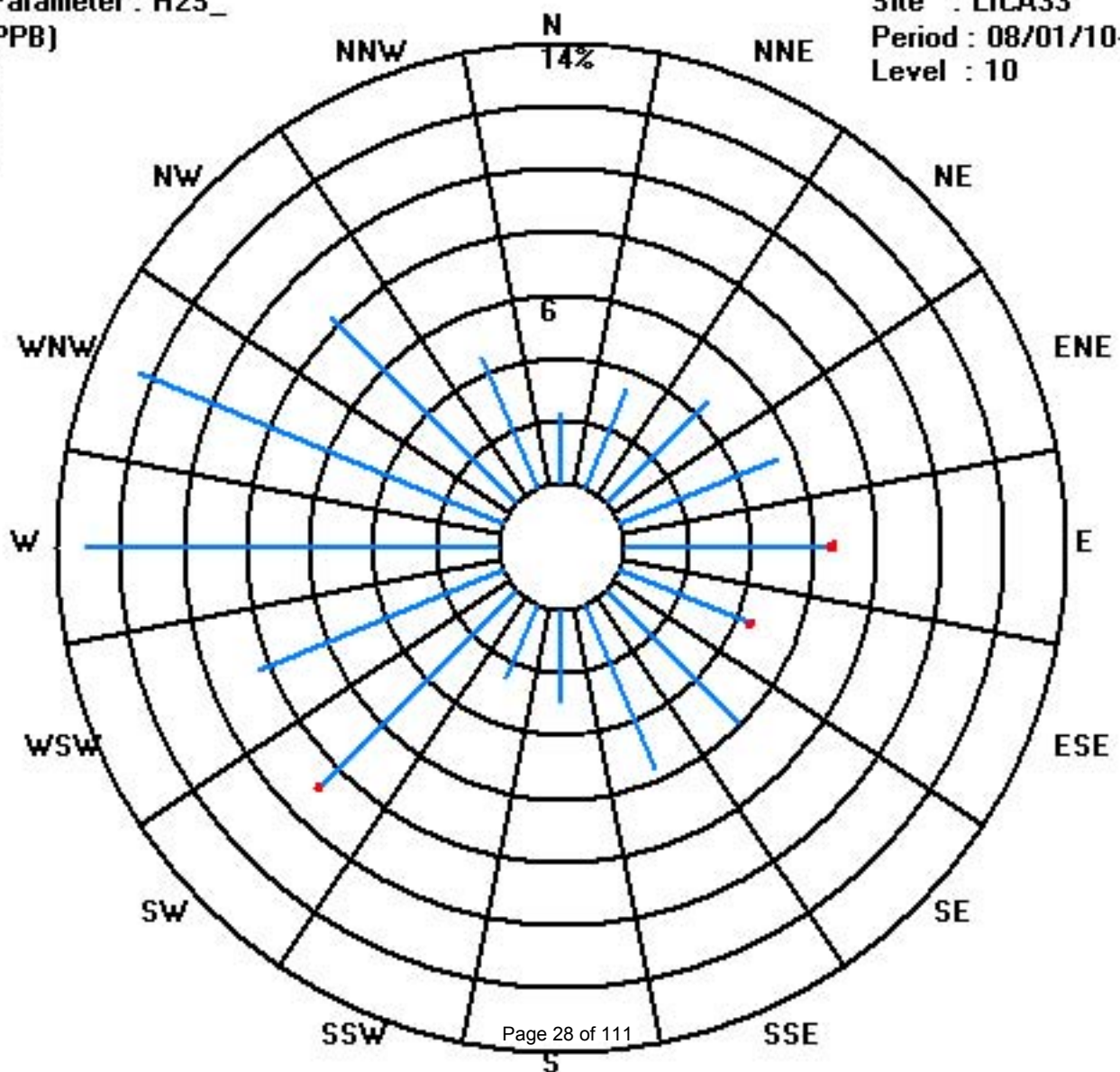
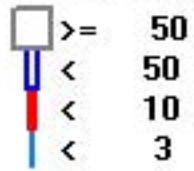
Distribution By Samples

	Direction																
Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 3	16	24	32	38	46	31	42	40	21	18	62	59	92	88	59	32	700
< 10					1	1					1						3
< 50																	
>= 50																	
Totals	16	24	32	38	47	32	42	40	21	18	63	59	92	88	59	32	

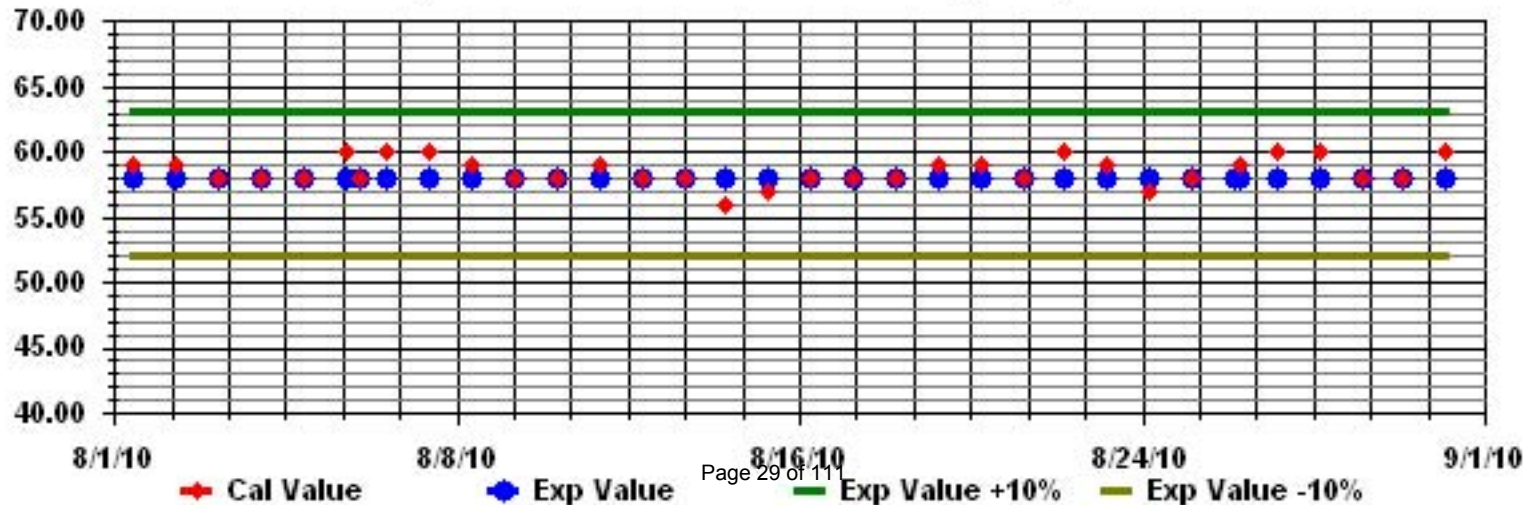
Calm : .00 %

Total # Operational Hours : 703

Class Limits (PPB)



Calibration Graph for Site: LICA33 Parameter: H2S\_ Sequence: H2S Phase: SPAll



# Particulate Matter 2.5

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - PORTABLE SITE

AUGUST 2010

PARTICULATE MATTER 2.5 (PM2.5) hourly averages in ug/m<sup>3</sup>

MST		0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	23:00	DAILY	24-HOUR			
HOUR START	HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.			
DAY																															
1		16.1	17.6	13.1	8.6	6.1	6.6	8.6	10.1	21.6	20.6	12.1	13.7	13.1	16.6	13.6	18.6	14.1	14.6	19.6	11.6	9.6	20.1	15.1	12.1	21.6	13.9	24			
2		9.1	12.6	9.1	5.6	8.6	14.1	8.1	7.7	10.1	9.1	10.6	12.6	10.6	5.6	6.1	4.1	0.6	0	2.6	2.6	N	4.6	2.6	7.2	14.1	7.1	23			
3		0	4.1	3.6	5.6	10.1	9.1	1.1	8.6	7.2	1.6	4.1	0.6	0.1	3.6	6.6	5.6	4.1	0	2.6	0.1	2.2	3.1	3.6	4.1	10.1	3.8	24			
4		3.1	1.1	1.1	3.1	2.6	2.6	2.6	4.6	6.1	6.1	5.6	10.1	4.1	0	4.7	1.2	6.7	6.2	9	19.1	17.6	17.4	16.6	20.6	20.6	7.2	24			
5		25.5	24.2	24.6	25.1	20.6	17.6	22.6	19.6	19.2	11.2	9	5.5	6.5	7.7	8.6	9.7	8.1	10.1	12.5	16.7	17.1	18.4	18.6	20.1	25.5	15.8	24			
6		14.5	16	12.3	18.7	9.6	9	20.1	25.8	33.4	29.1	26.9	27.5	29.1	26.7	23.6	21.8	18.7	17.6	15.6	11.4	15.7	14.4	11.3	14.9	33.4	19.3	24			
7		8.7	15.1	14.1	12.9	19.3	17.9	24.2	23.2	26.4	32.6	28.5	23.3	15.8	15.9	15	12.3	7.4	7.5	10.6	6.4	5.3	9.8	12.1	10.6	32.6	15.6	24			
8		11.2	6.4	12.1	12.4	18	19.1	23.8	20.8	19.7	24	24.1	21.8	20.4	15.9	13.6	8.8	7.1	6.9	3.6	2	3.6	12.1	3.4	2.3	24.1	13.0	24			
9		8.1	6.4	3.9	1	4.4	3.4	6.5	5.9	6.6	6.4	6.1	7.4	0.8	4.4	1.2	9.1	8.6	5.2	4.9	3.4	0	0	10.3	5.6	10.3	5.0	24			
10		7.6	2.8	6.4	6.2	2.7	6.1	8.1	5.2	3.8	0.5	4.5	1.6	6.7	0.9	6.4	3.1	2.2	2.1	5	0	0	0.1	0.2	2	8.1	3.5	24			
11		0	3.9	4.5	2.9	2.2	2.7	1.5	6.8	3	5.5	5.4	4.5	5.1	5.6	0.6	0.6	5.7	1.3	1.4	13.6	10.8	4.5	0.2	5.8	13.6	4.1	24			
12		4	0.7	2.1	2.1	3.8	0.6	0	6.3	13.6	6.4	3.9	7	0.1	5	1.7	6.6	4.6	0	2.6	1.7	6.1	4.1	0.8	5.6	13.6	3.7	24			
13		6.1	4.1	6.1	4.6	2.6	7.1	5.6	7.1	11.1	8.1	7.6	11.6	10.6	7.1	14.1	16.1	4.1	0	0	1.1	4.6	6.6	6.1	5.1	16.1	6.6	24			
14		2.6	4.1	1.6	3.6	3.6	7.1	0	2.6	10.6	7.6	6.6	7.1	0.1	1.1	3.6	1.6	1.1	2.1	0.6	1.6	0	0.6	2.1	3.6	10.6	3.1	24			
15		2.1	1.1	0	0	5.6	1.1	1.1	2.1	0	2.1	4.6	6.6	4.6	5.1	4.1	2.1	6.6	3.6	4.6	2.1	1.6	4.1	4.1	1.6	6.6	2.9	24			
16		3.6	2.6	2.1	2.1	1.1	4.1	5.6	5.1	2.1	3.6	3.6	1.6	0.6	3.6	4.1	5.1	2.1	0.6	1.1	0.6	0	5.6	9.1	1.1	9.1	3.0	24			
17		1.6	3.1	0.1	0	2.1	2.1	3.1	2.6	3.1	0	2.1	1.1	2.6	8.1	0	2.1	0.1	0	2.1	0	8.1	1.1	5.1	4.1	8.1	2.3	24			
18		1.1	2.6	1.1	0.6	4.6	5.6	3.6	6.6	2.1	2.6	6.1	2.6	3.6	2.6	4.1	7.1	0.1	3.1	5.1	3.1	5.1	5.1	5.1	0	5.6	7.1	3.5	24		
19		2.6	4.6	7.1	5.1	4.1	1.1	1.1	9.1	9.1	10.1	C	C	75.6	327.6	353.1	292.6	165.6	56.1	55.1	67.1	98.6	143.1	169.1	220.6	353.1	94.5	24			
20		296.1	192.6	49.1	27.6	20.6	16.6	21.1	23.6	20.1	10.1	8.1	13.6	4.1	6.1	9.1	8.6	13.1	11.1	3.6	3.1	5.1	8.1	5.6	6.6	296.1	32.6	24			
21		5.1	3.6	6.6	3.1	6.6	13.1	17.6	16.6	16.1	19.1	41.6	44.6	35.6	29.1	26.1	31.6	26.1	24.1	17.6	20.1	18.6	20.6	19.6	17.6	44.6	20.0	24			
22		15.6	12.6	14.6	19.6	15.1	16.6	18.1	18.6	20.1	18.1	21.1	21.1	17.1	20.6	22.1	15.6	21.6	20.1	19.1	12.1	18.1	15.1	16.6	12.1	22.1	17.6	24			
23		13.1	10.6	11.1	8.1	4.6	5.6	6.1	5.1	5.1	10.1	8.6	6.1	9.6	12.6	13.1	11.1	9.1	17.1	14.6	11.1	10.1	8.6	7.1	11.1	17.1	9.6	24			
24		8.1	7.1	9.1	2.1	4.1	4.1	4.6	5.1	3.1	3.6	1.1	3.1	8.1	2.6	3.6	5.6	5.1	4.1	8.6	11.1	5.6	7.6	6.6	7.1	11.1	5.5	24			
25		7.1	7.1	6.6	4.6	9.1	9.1	9.6	10.6	7.1	13.1	2.6	10.1	5.6	7.6	8.6	7.7	3.6	3.6	6.1	4.1	4.1	4.6	2.1	6.1	13.1	6.7	24			
26		3.1	12.6	9.6	10.6	2.6	6.6	7.1	10.6	C	C	6.6	0	0.6	4.1	4.1	13.1	3.1	6.6	4.6	8.1	3.6	5.6	3.1	2.1	13.1	5.8	24			
27		0.6	2.6	7.1	0	1.6	N	0.1	0	1.1	0	2.1	0.1	0	1.6	3.6	2.6	1.1	0	4.6	1.6	0.6	2.1	1.6	0.6	7.1	1.5	23			
28		1.1	0.1	0	1.1	0	0	N	0	0	0	N	N	N	0	0	0	1.6	0.1	0	0.7	2.1	0.6	0.6	0.1	2.1	0.4	20			
29		3.6	2.1	0	4.6	2.6	0	6.1	0	0.1	1.6	0	0	1.1	4.6	0	0	0	1.1	0.6	0	0	0.1	0.1	6.1	1.2	24				
30		0.1	3.1	0	0.6	0	1.6	0	1.1	7.1	3.6	0.7	0	0.6	3.6	0.6	2.1	2.6	1.6	3.6	0.1	1.6	2.6	0.6	2.6	7.1	1.7	24			
31		N	1.1	2.6	5.1	11.6	6.6	N	0.6	3.6	1.6	5.1	4.1	6.1	3.1	0	7.1	0	0	2.1	4.1	3.1	4.1	4.6	2.1	11.6	3.6	22			
HOURLY MAX		296	193	49	28	21	19	24	26	33	33	42	45	76	328	353	293	166	56	55	67	99	143	169	221						
HOURLY AVG		16.0	12.5	7.8	6.7	6.8	7.2	8.2	8.8	9.7	8.9	9.3	9.3	10.0	18.0	18.6	17.2	11.4	7.3	7.9	7.8	9.3	11.4	11.6	13.6						

STATUS FLAG CODES

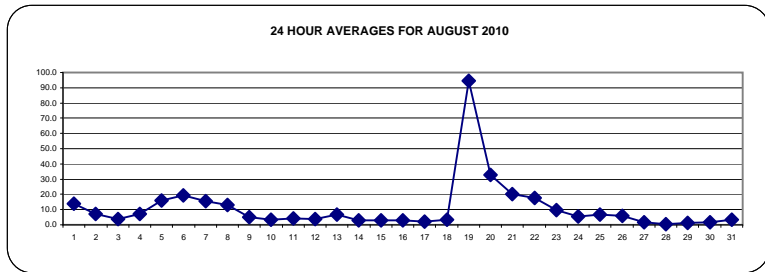
S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	- MISSING DATA
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE

OBJECTIVE LIMIT:

ALBERTA ENVIRONMENT:	1-HR	-	PPB	24-HR	30	PPB
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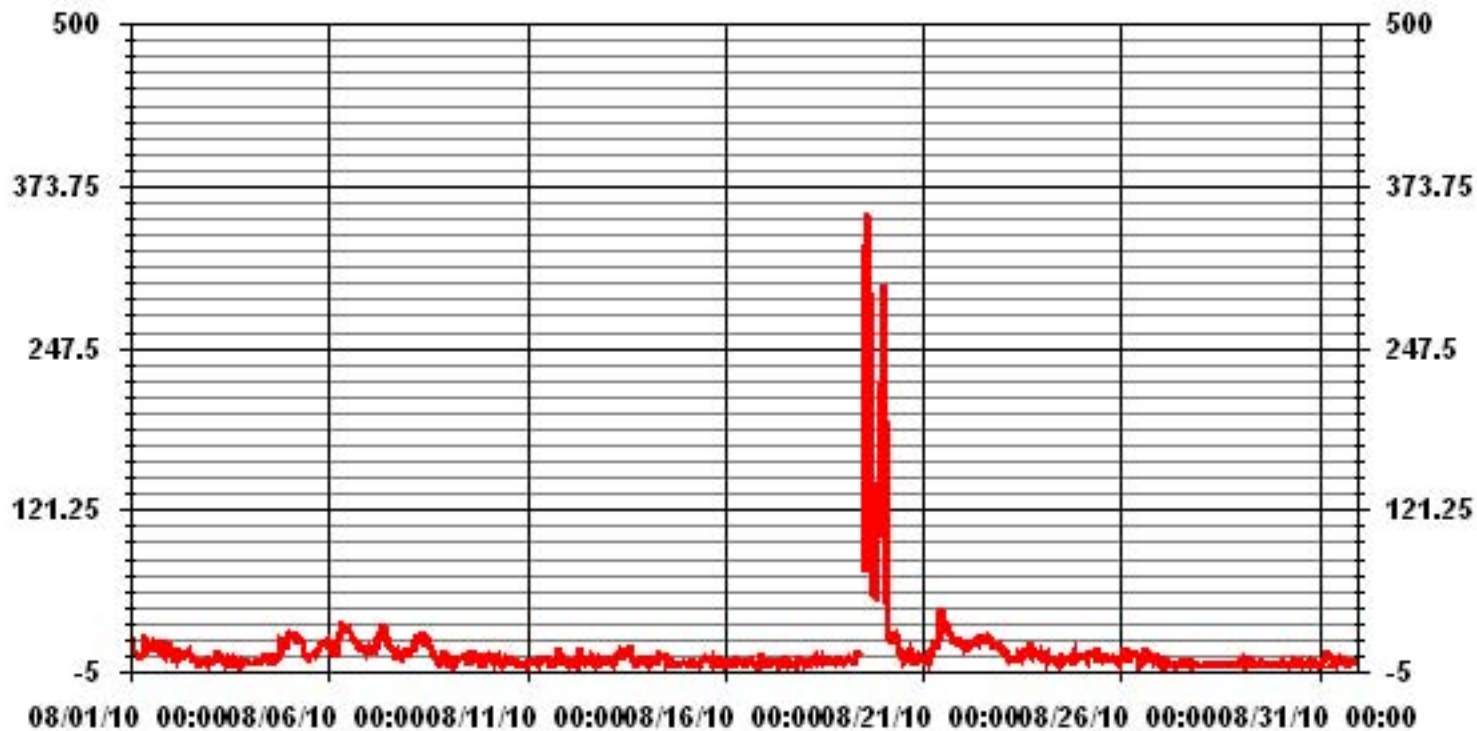
MONTHLY SUMMARY

NUMBER OF 1-HR EXCEEDENCES:	-				
NUMBER OF 24-HR EXCEEDENCES:	2	PROPOSED CANADA WIDE GUIDELINE			
NUMBER OF NON-ZERO READINGS:	673				
MAXIMUM 1-HR AVERAGE:	353.1 UG/M <sup>3</sup>	@ HOUR(S)	14	ON DAY(S)	19
MAXIMUM 24-HR AVERAGE:	94.5 UG/M <sup>3</sup>			ON DAY(S)	19
IZS CALIBRATION TIME:	0 HRS	OPERATIONAL TIME:	736 HRS		
MONTHLY CALIBRATION TIME:	4 HRS	AMD OPERATION UPTIME:	98.9 %		
STANDARD DEVIATION:	28.35	MONTHLY AVERAGE:	10.65 UG/M <sup>3</sup>		





### 01 Hour Averages



— LICA33 PM2 UG/M3

LICA33  
 PM2 / WDR Joint Frequency Distribution (Percent)

August 2010

Distribution By % Of Samples

Logger Id : 33  
 Site Name : LICA33  
 Parameter : PM2  
 Units : UG/M3

Wind Parameter : WDR  
 Instrument Height : 10 Meters

Limit	Direction																Freq
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
< 30.0	2.18	3.27	4.91	5.32	6.28	4.64	5.87	6.14	2.86	2.73	7.92	8.06	12.02	11.88	8.33	4.64	97.13
< 60.0	.00	.00	.00	.13	.40	.00	.13	.00	.00	.00	.13	.00	.40	.00	.00	.00	1.22
< 80.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.13	.00	.00	.13	.00	.00	.27
< 120.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.13	.00	.00	.00	.00	.00	.13
< 240.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.40	.13	.00	.13	.00	.00	.68
>= 240.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.13	.00	.40	.00	.00	.00	.54
Totals	2.18	3.27	4.91	5.46	6.69	4.64	6.01	6.14	2.86	2.73	8.87	8.19	12.84	12.15	8.33	4.64	

Calm : .00 %

Total # Operational Hours : 732

Distribution By Samples

Limit	Direction																Freq
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
< 30.0	16	24	36	39	46	34	43	45	21	20	58	59	88	87	61	34	711
< 60.0				1	3		1				1		3				9
< 80.0											1			1			2
< 120.0											1						1
< 240.0											3	1		1			5
>= 240.0											1		3				4
Totals	16	24	36	40	49	34	44	45	21	20	65	60	94	89	61	34	

Calm : .00 %

Total # Operational Hours : 732



# Nitrogen Dioxide

# LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - PORTABLE SITE

AUGUST 2010

## NITROGEN DIOXIDE hourly averages in ppb

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR			
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.		
DAY																													
1	3	4	3	5	7	6	4	5	6	3	IZS	0	0	0	0	0	0	0	1	0	1	2	2	2	7	2.3	24		
2	2	1	1	1	2	2	1	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	2	1	2	0.6	24		
3	1	1	1	0	0	1	1	1	IZS	0	0	0	0	0	0	0	0	0	1	1	4	2	5	3	5	1.0	24		
4	5	4	6	5	5	3	4	IZS	3	1	1	0	0	0	0	0	0	0	0	0	0	1	2	2	6	1.8	24		
5	3	3	4	4	2	3	IZS	1	1	0	0	0	0	0	0	0	0	0	1	5	4	2	3	3	5	1.7	24		
6	2	2	3	3	3	IZS	2	2	1	C	C	C	C	C	C	C	C	0	0	0	1	1	1	2	3	1.5	24		
7	3	2	2	2	IZS	3	3	4	2	2	1	0	0	0	1	1	2	0	0	0	3	2	1	0	4	1.5	24		
8	0	1	2	IZS	0	1	4	3	2	1	1	1	0	2	2	4	0	0	0	1	1	1	1	2	4	1.3	24		
9	1	2	IZS	2	1	2	6	2	3	1	0	0	0	0	0	0	0	0	0	0	2	2	6	6	6	1.6	24		
10	4	IZS	3	4	4	2	3	2	3	2	1	2	C	0	0	1	2	1	0	0	1	4	1	2	4	1.9	24		
11	IZS	4	3	2	3	3	3	3	2	1	1	0	0	0	0	1	1	1	1	2	3	3	2	IZS	4	1.7	24		
12	4	3	2	2	2	2	4	4	5	5	2	1	0	0	0	0	0	0	0	0	0	0	0	IZS	0	5	1.6	24	
13	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	1	0.1	24
14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	IZS	1	1	3	3	0.3	24	
15	3	7	4	3	3	2	2	3	3	1	0	0	0	0	0	0	0	1	0	IZS	1	1	1	1	1	7	1.6	24	
16	1	1	1	1	2	3	3	4	4	1	0	0	0	0	0	0	1	1	IZS	0	1	2	1	0	4	1.2	24		
17	1	2	1	1	2	3	2	1	1	0	0	0	0	0	0	0	0	0	IZS	0	1	2	2	0	1	3	0.9	24	
18	2	3	3	3	2	3	2	2	1	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	1	3	1.0	24	
19	2	1	1	1	2	3	2	2	3	2	2	1	3	5	5	IZS	1	1	1	3	7	5	3	2	7	2.5	24		
20	2	2	1	0	0	2	1	2	0	0	0	0	0	0	IZS	0	0	0	0	1	2	2	3	3	3	0.9	24		
21	3	2	2	3	3	2	3	2	2	1	1	0	0	IZS	0	0	0	0	0	0	1	2	2	0	3	1.3	24		
22	1	0	0	1	1	2	1	0	0	0	0	0	IZS	0	1	1	3	1	1	0	0	1	2	2	3	0.8	24		
23	2	2	2	1	0	1	0	1	1	1	0	IZS	0	0	0	0	0	0	0	0	0	0	1	1	3	3	0.7	24	
24	2	3	2	2	2	3	1	0	0	1	IZS	1	0	0	0	0	0	0	0	1	2	2	2	2	3	1.1	24		
25	1	1	2	4	2	1	1	1	1	IZS	1	0	0	1	1	0	0	0	1	1	2	2	4	5	5	1.4	24		
26	3	3	2	1	0	0	0	0	IZS	C	C	C	C	C	0	0	0	0	0	0	0	0	0	0	3	0.5	24		
27	1	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0.1	24		
28	0	1	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0.1	24		
29	2	2	2	2	3	IZS	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	3	0.8	24		
30	2	1	1	2	IZS	1	1	1	0	0	0	0	0	0	0	0	0	0	1	2	4	1	1	1	4	0.8	24		
31	1	1	4	IZS	2	2	1	2	4	1	1	0	0	0	0	0	0	0	1	2	2	2	2	4	4	1.4	24		
HOURLY MAX	5	7	6	5	7	6	6	5	6	5	2	2	3	5	5	4	3	1	1	5	7	5	6	6					
HOURLY AVG	1.9	2.0	1.9	1.9	1.9	2.0	2.0	1.7	1.7	0.9	0.4	0.2	0.1	0.3	0.3	0.2	0.3	0.2	0.3	0.7	1.5	1.5	1.7	1.8					

### STATUS FLAG CODES

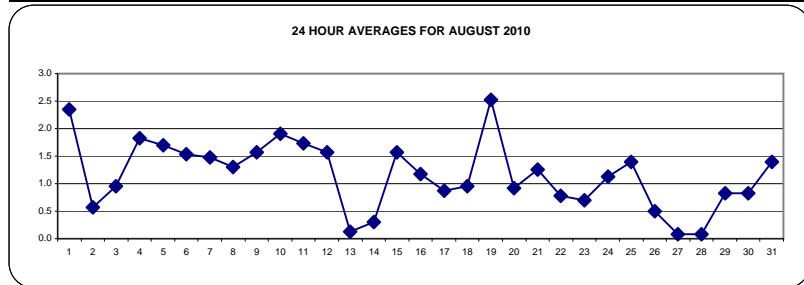
S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	- MAINTENANCE
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE

### OBJECTIVE LIMIT:

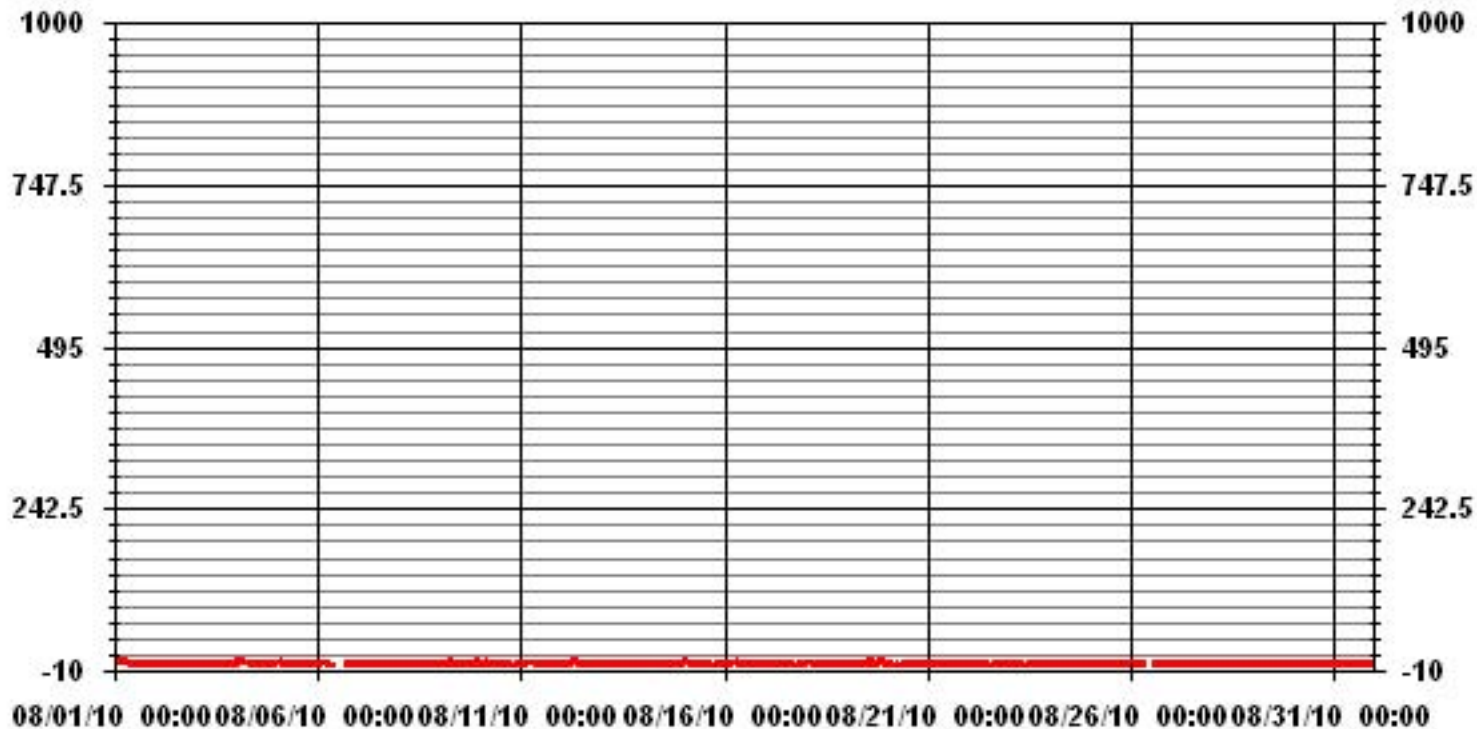
ALBERTA ENVIRONMENT:	1-HR	212	PPB	24-HR	106	PPB
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### MONTHLY SUMMARY

NUMBER OF 1-HR EXCEEDENCES:	0
NUMBER OF 24-HR EXCEEDENCES:	0
NUMBER OF NON-ZERO READINGS:	380
MAXIMUM 1-HR AVERAGE:	7 PPB @ HOUR(S) VAR ON DAY(S) VAR
MAXIMUM 24-HR AVERAGE:	2.5 PPB ON DAY(S) VAR
IZS CALIBRATION TIME:	32 HRS OPERATIONAL TIME: 744 HRS
MONTHLY CALIBRATION TIME:	14 HRS AMD OPERATION UPTIME: 100.0 %
STANDARD DEVIATION:	1.41 MONTHLY AVERAGE: 1.16 PPB



### 01 Hour Averages



— LICA33 NO2\_ PPB

# LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - PORTABLE SITE

AUGUST 2010

## NITROGEN DIOXIDE MAX instantaneous maximum in ppb

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR		
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.	
DAY																												
1	4	5	4	8	9	8	7	7	8	5	IZS	18	1	0	1	1	0	1	4	1	2	2	4	3	18	4.5	24	
2	2	2	2	2	3	3	1	1	0	IZS	0	0	0	0	0	0	0	0	1	1	1	1	3	2	3	1.1	24	
3	2	2	2	2	1	2	1	2	IZS	1	0	1	0	0	0	0	0	1	3	3	8	5	7	7	8	2.2	24	
4	6	5	8	7	8	5	7	IZS	6	2	2	7	0	0	0	0	0	1	1	1	2	3	4	8	3.3	24		
5	4	4	6	5	4	4	IZS	4	2	1	0	1	2	7	1	1	2	1	4	8	7	3	3	3	8	3.3	24	
6	3	4	4	5	4	IZS	3	3	C	C	C	C	C	C	C	C	C	0	1	1	1	1	3	6	6	2.8	24	
7	7	2	3	3	IZS	4	4	5	3	4	3	2	1	1	3	3	4	4	1	1	8	5	3	1	8	3.3	24	
8	0	4	3	IZS	1	4	11	7	5	2	2	2	1	7	17	16	0	0	1	2	2	2	2	4	17	4.1	24	
9	3	3	IZS	3	2	4	12	3	4	2	1	1	0	1	0	1	1	0	1	1	3	5	11	10	12	3.1	24	
10	5	IZS	5	6	6	4	4	4	4	3	3	12	C	1	2	3	4	4	2	1	2	9	4	4	12	4.2	24	
11	IZS	8	7	4	4	4	3	5	5	2	1	1	1	1	1	2	3	2	3	4	3	3	IZS	8	3.1	24		
12	6	5	3	3	3	3	6	7	8	9	4	5	1	1	0	1	0	0	1	1	1	1	IZS	0	9	3.0	24	
13	1	1	1	1	1	2	2	1	1	1	1	0	0	1	0	0	0	1	1	1	1	1	IZS	0	0	2	0.8	24
14	0	0	0	1	1	1	1	1	1	0	0	0	0	0	0	1	0	1	0	1	6	IZS	8	2	5	8	1.3	24
15	5	9	6	5	6	3	5	4	5	2	1	1	1	1	0	0	1	2	1	IZS	2	1	1	2	9	2.8	24	
16	2	1	2	4	6	3	4	5	5	2	1	0	0	0	0	1	3	3	IZS	2	4	4	3	1	6	2.4	24	
17	2	4	3	3	3	5	4	1	1	1	0	0	0	0	0	0	0	IZS	0	6	5	5	1	2	6	2.0	24	
18	4	4	5	5	3	4	4	3	2	1	1	0	0	1	1	1	IZS	0	0	1	1	1	1	3	5	2.0	24	
19	4	2	1	1	4	5	4	4	6	3	2	2	4	6	6	IZS	3	1	5	7	11	9	4	3	11	4.2	24	
20	4	3	2	1	1	4	3	5	2	0	0	0	0	0	IZS	0	0	0	1	3	4	3	7	6	7	2.1	24	
21	5	3	3	4	4	3	8	3	3	2	2	1	1	IZS	1	1	0	1	1	0	2	5	5	2	8	2.6	24	
22	4	2	1	4	2	5	3	0	0	0	0	0	IZS	1	2	2	5	2	2	1	1	4	4	5	5	2.2	24	
23	4	3	2	2	1	1	1	1	1	1	1	1	IZS	0	0	0	0	0	1	1	1	2	2	6	6	1.3	24	
24	4	4	2	3	3	4	2	1	1	2	IZS	2	1	1	0	0	1	1	1	2	2	3	3	2	4	2.0	24	
25	2	2	5	6	3	2	2	2	1	IZS	1	1	1	1	1	1	1	1	1	3	3	4	7	8	8	2.6	24	
26	4	4	5	3	2	0	1	1	IZS	C	C	C	C	C	C	0	0	0	1	1	1	1	1	2	1	5	1.6	24
27	2	1	1	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	3	4	2	1	2	4	0.7	24	
28	1	2	2	0	0	0	IZS	0	0	1	0	6	0	0	0	0	4	0	0	0	0	0	0	2	6	0.8	24	
29	3	3	4	3	4	IZS	3	2	2	1	1	0	0	1	1	1	1	0	0	2	2	5	5	5	5	2.1	24	
30	6	4	2	3	IZS	2	2	2	1	0	0	0	1	0	2	2	1	1	3	8	8	2	2	2	8	2.3	24	
31	2	3	7	IZS	4	3	2	20	19	2	1	1	1	1	1	1	2	3	3	4	3	3	8	20	4.1	24		
HOURLY MAX	7	9	8	8	9	8	12	20	19	9	4	18	4	7	17	16	5	4	5	8	11	9	11	10				
HOURLY AVG	3.4	3.3	3.4	3.3	3.2	3.2	3.8	3.6	3.4	1.9	1.0	2.3	0.6	1.2	1.4	1.3	1.2	1.0	1.4	2.5	3.2	3.4	3.3	3.6				

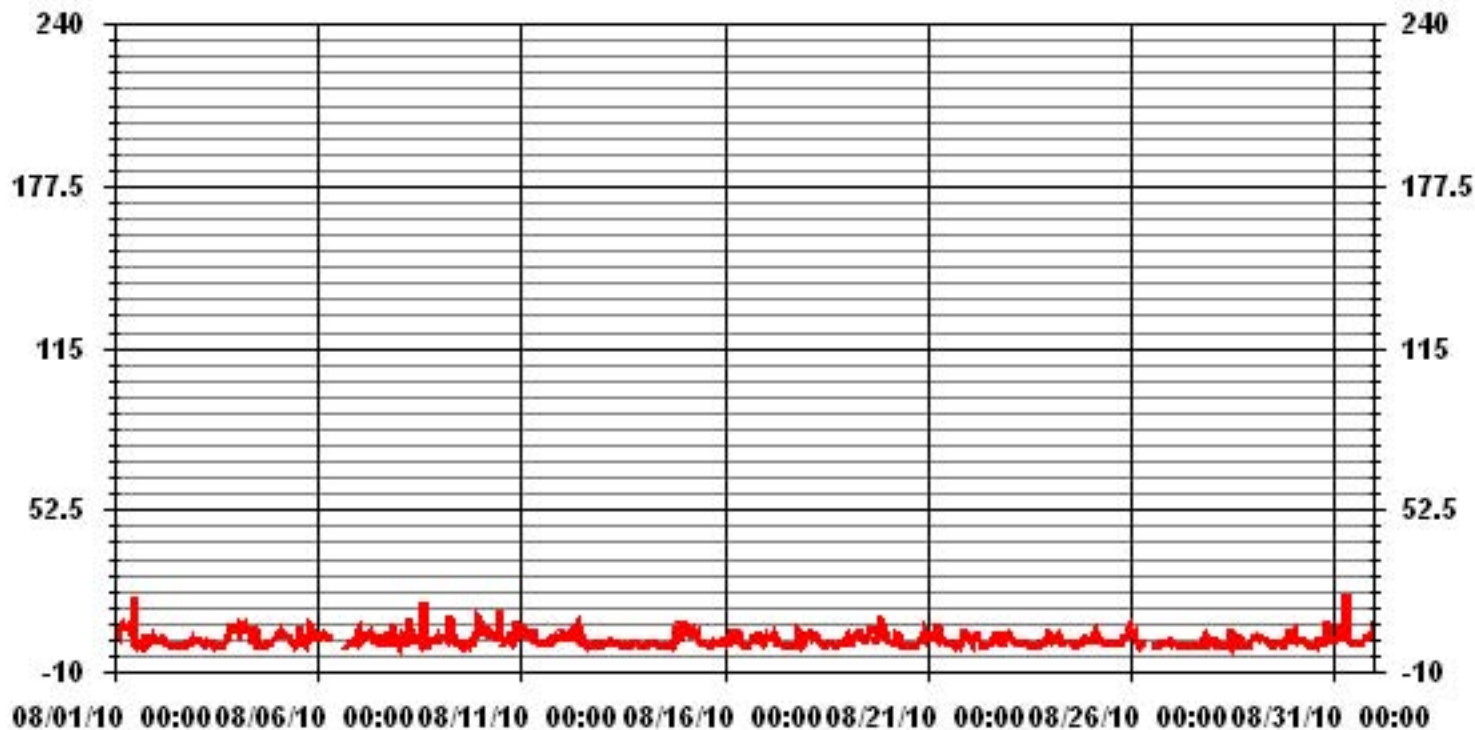
**STATUS FLAG CODES**

S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	-MAINTENANCE
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE

**MONTHLY SUMMARY**

NUMBER OF NON-ZERO READINGS:	559					
MAXIMUM INSTANTANEOUS VALUE:	20	PPB	@ HOUR(S)	7	ON DAY(S)	31
IZS CALIBRATION TIME:	32	HRS	OPERATIONAL TIME:	744	HRS	
MONTHLY CALIBRATION TIME:	15	HRS				
STANDARD DEVIATION	2.61					

### 01 Hour Averages



— LICA33 HO2MAX PPB



LICA33  
 NO2\_ / WDR Joint Frequency Distribution (Percent)

August 2010

Distribution By % Of Samples

Logger Id : 33  
 Site Name : LICA33  
 Parameter : NO2\_  
 Units : PPB

Wind Parameter : WDR  
 Instrument Height : 10 Meters

	Direction																
Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 50	2.29	3.43	4.58	5.44	6.73	4.44	5.58	5.58	3.00	2.57	9.02	8.45	13.18	12.60	8.45	4.58	100.00
< 110	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
< 210	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
>= 210	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
Totals	2.29	3.43	4.58	5.44	6.73	4.44	5.58	5.58	3.00	2.57	9.02	8.45	13.18	12.60	8.45	4.58	

Calm : .00 %

Total # Operational Hours : 698

Distribution By Samples

	Direction																
Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 50	16	24	32	38	47	31	39	39	21	18	63	59	92	88	59	32	698
< 110																	
< 210																	
>= 210																	
Totals	16	24	32	38	47	31	39	39	21	18	63	59	92	88	59	32	

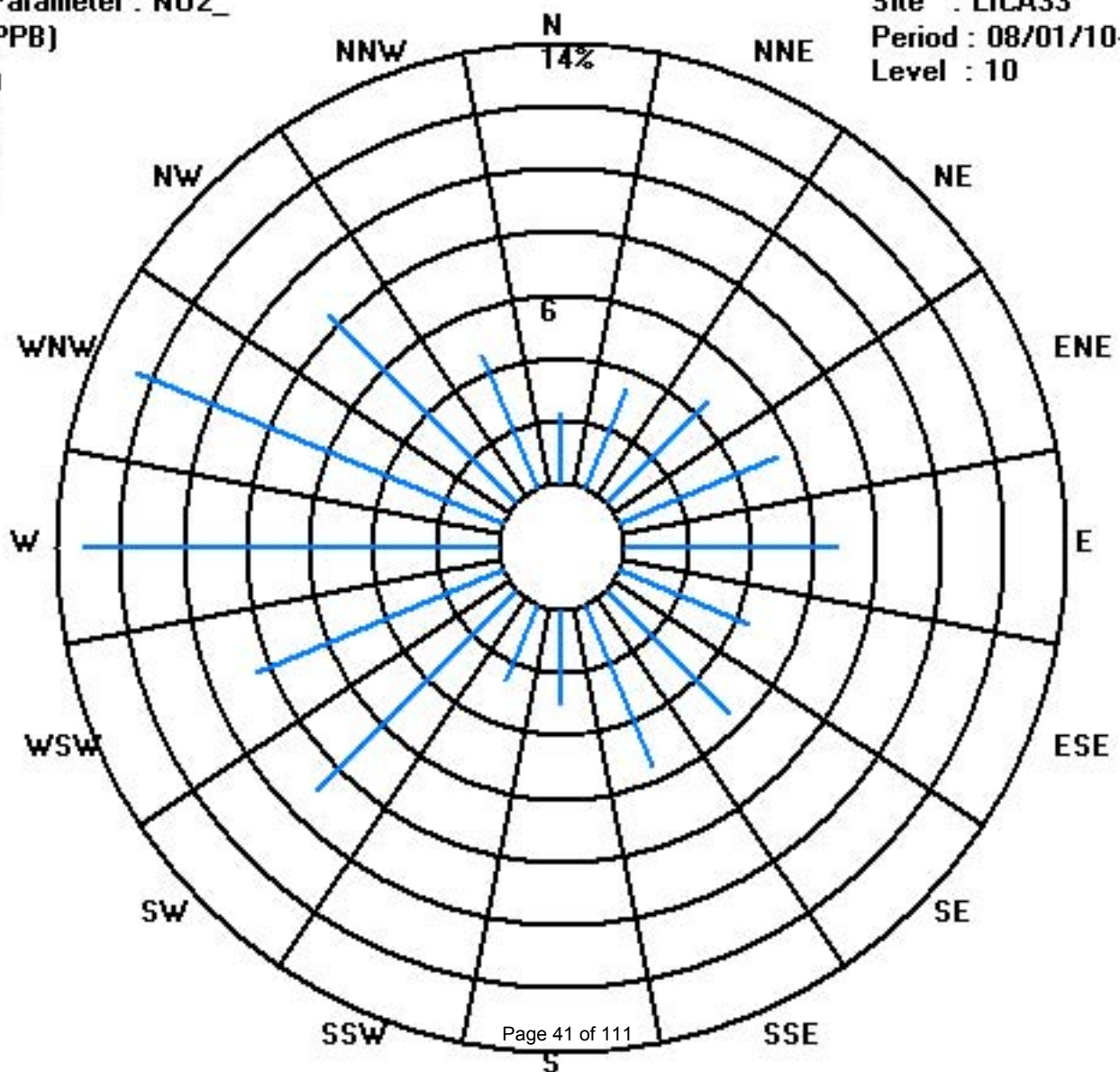
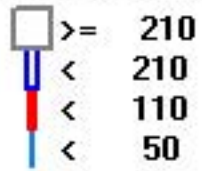
Calm : .00 %

Total # Operational Hours : 698

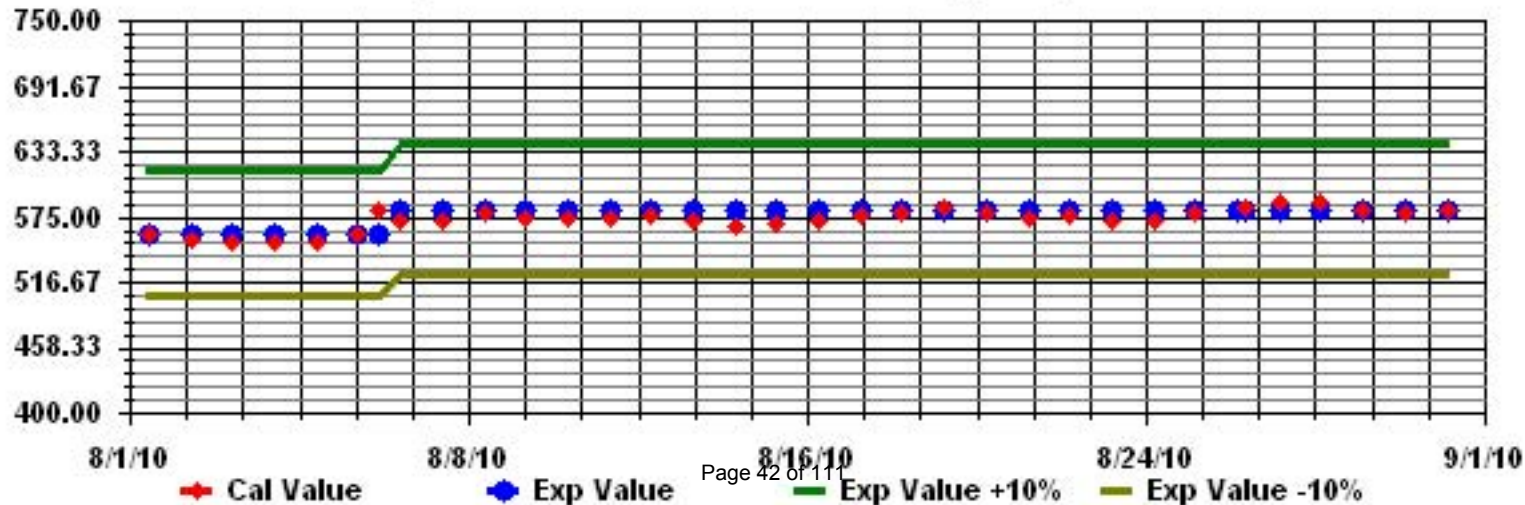
Class Limits (PPB)

Period : 08/01/10-08/31/10

Level : 10



Calibration Graph for Site: LICA33 Parameter: NO2\_ Sequence: NO2 Phase: SPAN



# Nitric Oxide

# LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - PORTABLE SITE

AUGUST 2010

NITRIC OXIDE hourly averages in ppb

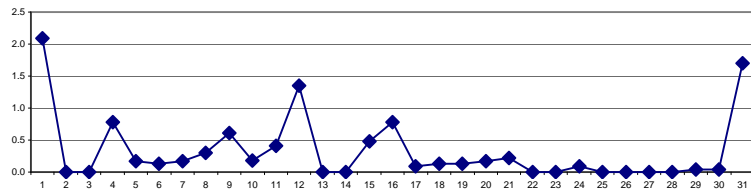
MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY 24-HOUR			
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.	
DAY																												
1	0	0	1	1	8	12	8	12	3	1	IZS	2	0	0	0	0	0	0	0	0	0	0	0	0	0	12	2.1	24
2	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
3	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
4	0	0	0	0	1	3	10	IZS	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	0.8	24
5	0	0	0	0	0	1	IZS	1	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	1	0.2	24	
6	0	0	0	0	0	IZS	1	1	0	C	C	C	C	C	C	C	C	0	0	0	0	0	0	0	1	0.1	24	
7	0	0	0	0	IZS	0	0	1	1	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	2	0.2	24	
8	0	0	0	IZS	0	0	1	0	0	0	0	0	0	1	2	3	0	0	0	0	0	0	0	0	0	3	0.3	24
9	0	0	IZS	1	0	0	9	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9	0.6	24	
10	0	IZS	0	0	0	0	0	0	1	0	0	3	C	0	0	0	0	0	0	0	0	0	0	0	3	0.2	24	
11	IZS	1	1	1	1	1	1	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	2	0.4	24
12	2	1	1	3	3	3	7	4	2	3	1	1	0	0	0	0	0	0	0	0	0	0	0	0	IZS	7	1.3	24
13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24	
14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24	
15	0	0	0	0	0	0	2	4	4	1	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	4	0.5	24	
16	0	0	0	1	2	2	4	5	3	1	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	5	0.8	24	
17	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	1	0.1	24	
18	0	0	0	1	0	0	1	1	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	1	0.1	24	
19	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	1	0.1	24	
20	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	1	1	2	0.2	24
21	1	0	1	0	0	0	0	0	2	1	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	2	0.2	24	
22	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0.0	24	
23	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0.0	24	
24	0	0	0	0	0	0	0	1	1	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.1	24	
25	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24	
26	0	0	0	0	0	0	0	0	0	IZS	C	C	C	C	C	0	0	0	0	0	0	0	0	0	0	0.0	24	
27	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24	
28	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24	
29	0	0	0	0	0	IZS	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.0	24	
30	1	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.0	24	
31	0	2	10	IZS	4	4	5	7	6	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	1.7	24	
HOURLY MAX	2	2	10	3	8	12	10	12	6	3	1	3	0	1	2	3	2	0	0	1	1	0	1	1				
HOURLY AVG	0.1	0.1	0.5	0.3	0.7	0.9	1.8	1.6	1.1	0.3	0.0	0.2	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0				

### STATUS FLAG CODES

S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	- MAINTENANCE
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE

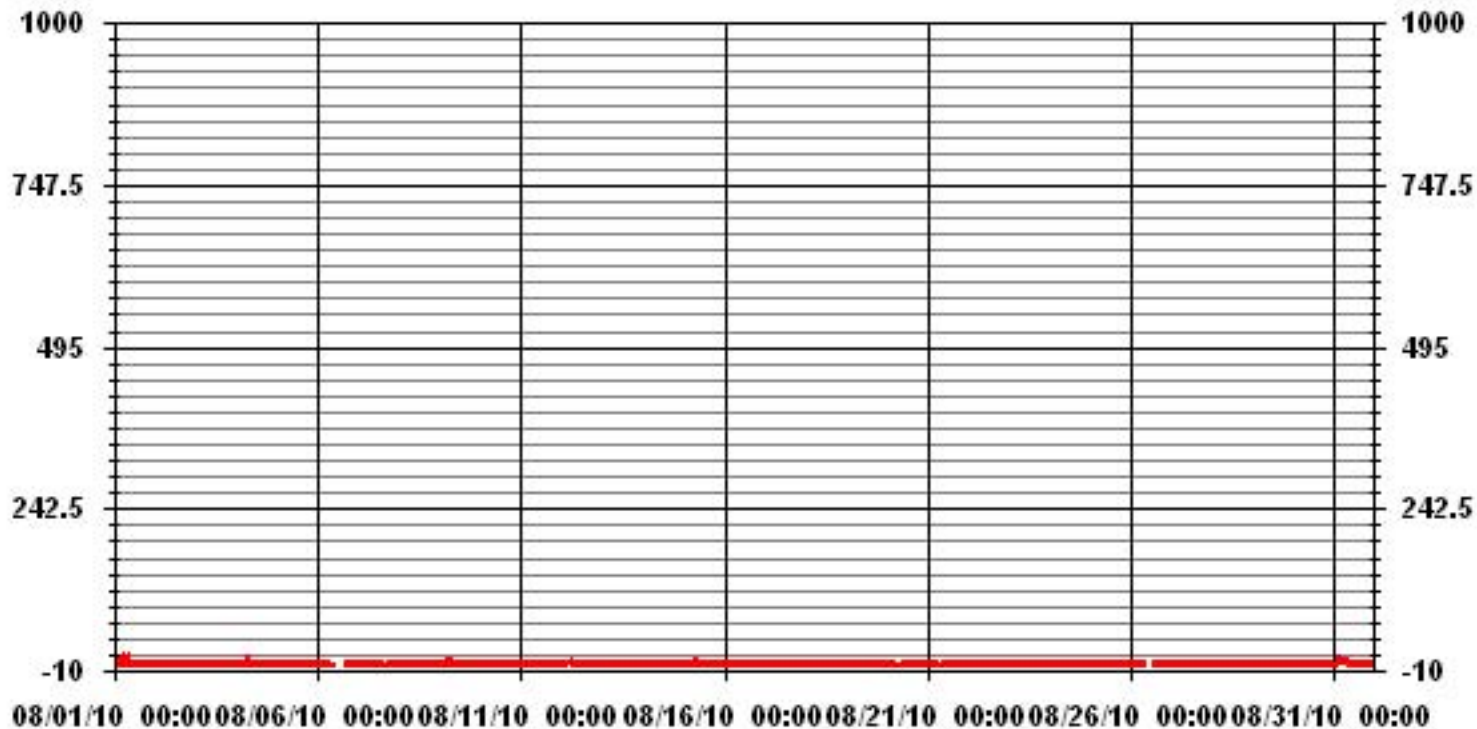
24 HOUR AVERAGES FOR AUGUST 2010



### MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:	91
MAXIMUM 1-HR AVERAGE:	12 PPB @ HOUR(S) 5, 7 ON DAY(S) 1
MAXIMUM 24-HR AVERAGE:	2.1 PPB ON DAY(S) 1
IZS CALIBRATION TIME:	32 HRS
MONTHLY CALIBRATION TIME:	14 HRS
STANDARD DEVIATION:	1.25
OPERATIONAL TIME:	744 HRS
AMD OPERATION UPTIME:	100.0 %
MONTHLY AVERAGE:	0.33 PPB

### 01 Hour Averages



# LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - PORTABLE SITE

AUGUST 2010

**NITRIC OXIDE MAX** instantaneous maximum in ppb

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	DAILY MAX.	24-HOUR AVG.	RDGS.
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00				
DAY																												
1	1	2	2	5	16	19	13	16	5	3	IZS	47	0	0	0	0	0	0	0	0	0	0	1	2	47	5.7	24	
2	0	0	0	0	0	0	0	0	0	IZS	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	1	0.1	24
3	0	0	0	0	0	0	1	1	IZS	1	0	1	0	0	0	0	0	0	0	0	0	3	0	0	3	0.3	24	
4	0	1	0	1	2	7	14	IZS	7	2	1	9	0	0	0	0	0	0	0	0	0	0	0	0	14	1.9	24	
5	0	0	0	0	1	2	IZS	5	1	1	1	0	1	8	0	1	2	0	1	2	2	2	1	1	8	1.4	24	
6	0	1	0	0	0	IZS	2	2	C	C	C	C	C	C	C	C	0	0	0	0	0	0	0	2	0.4	24		
7	0	0	0	0	IZS	2	1	3	2	2	1	1	1	1	2	2	4	2	0	0	0	1	0	0	4	1.1	24	
8	0	0	0	IZS	0	0	3	2	1	0	0	0	4	19	23	0	0	0	0	0	0	0	1	0	23	2.3	24	
9	0	1	IZS	2	2	2	37	3	4	2	0	0	0	1	0	0	0	0	0	0	0	0	0	1	37	2.4	24	
10	0	IZS	0	0	0	0	0	1	1	1	2	20	C	2	0	0	0	0	0	0	0	1	0	0	20	1.3	24	
11	IZS	3	3	3	4	2	2	3	3	1	1	0	0	0	0	0	1	1	0	0	1	1	1	IZS	4	1.3	24	
12	4	2	2	5	5	5	13	9	6	8	2	3	0	0	0	0	1	0	0	0	0	0	0	IZS	13	2.8	24	
13	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	1	0.1	24
14	0	0	0	0	0	0	1	1	1	1	0	0	0	0	0	0	1	0	0	1	IZS	1	6	1	6	0.6	24	
15	1	1	1	0	1	1	8	7	8	4	1	1	0	0	0	0	1	1	IZS	0	0	1	1	8	1.7	24		
16	0	1	1	10	11	3	9	8	5	1	1	0	0	0	0	0	0	0	IZS	0	0	0	0	0	11	2.2	24	
17	0	0	0	0	0	1	2	1	1	1	0	0	0	0	0	0	0	IZS	0	3	1	0	0	0	3	0.4	24	
18	0	0	3	4	0	1	1	1	1	1	1	0	0	0	0	0	IZS	0	0	0	0	0	0	0	4	0.6	24	
19	0	0	0	0	2	1	3	5	8	0	1	1	0	0	IZS	0	0	1	0	0	0	0	0	0	8	1.0	24	
20	0	0	0	0	0	0	2	5	1	0	0	0	1	0	IZS	0	0	0	1	0	1	1	7	6	7	1.1	24	
21	1	1	2	0	0	0	3	1	3	2	1	0	0	IZS	0	0	0	0	0	0	0	1	1	0	3	0.7	24	
22	0	0	0	0	0	1	0	0	0	0	0	0	IZS	0	0	0	1	0	0	0	0	0	0	1	1	1	0.2	24
23	0	0	0	0	0	0	0	0	1	0	0	IZS	1	0	0	0	0	0	0	0	0	0	0	0	1	0.1	24	
24	0	0	0	0	0	1	1	1	1	1	IZS	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0.3	24	
25	0	0	0	3	0	0	1	1	1	IZS	1	1	0	0	0	0	0	0	0	0	0	1	1	1	3	0.5	24	
26	0	0	0	1	0	0	0	0	IZS	C	C	C	C	C	1	0	0	0	0	0	0	0	0	0	1	0.1	24	
27	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24	
28	0	0	0	0	0	0	IZS	1	0	8	1	7	0	1	0	1	11	0	0	0	0	0	0	0	11	1.3	24	
29	0	0	0	0	0	IZS	1	2	1	1	1	1	0	1	1	1	1	0	0	0	0	1	2	2	2	0.7	24	
30	3	2	1	0	IZS	0	1	1	1	1	1	1	1	0	2	1	1	0	1	5	2	0	1	0	5	1.1	24	
31	1	4	21	IZS	5	5	6	31	32	3	1	0	0	1	0	0	0	1	0	0	0	0	0	32	4.8	24		
HOURLY MAX	4	4	21	10	16	19	37	31	32	8	2	47	1	8	19	23	11	2	1	5	2	3	7	6				
HOURLY AVG	0.4	0.6	1.2	1.2	1.7	1.8	4.3	3.8	3.4	1.7	0.7	3.4	0.2	0.7	0.9	1.0	0.8	0.1	0.3	0.4	0.2	0.4	0.8	0.5				

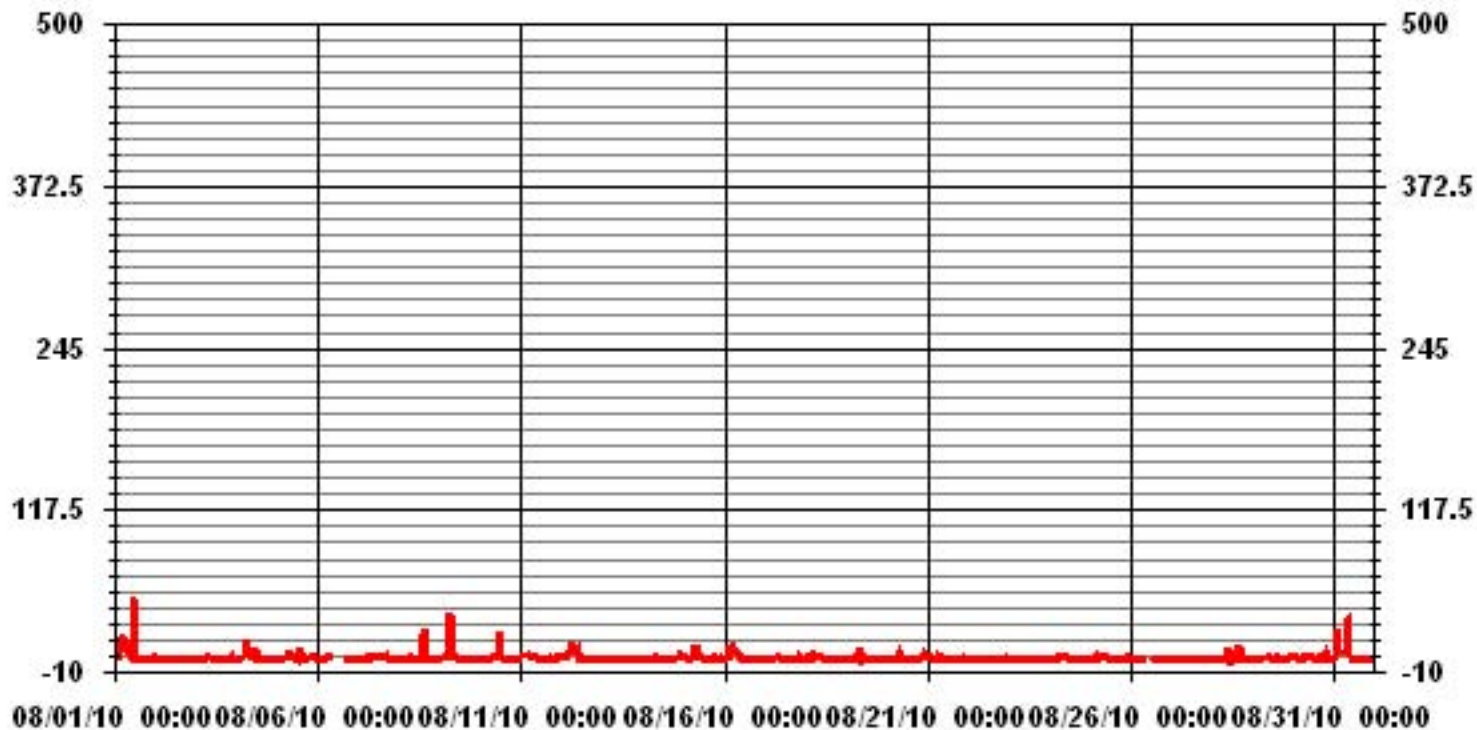
**STATUS FLAG CODES**

S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	-MAINTENANCE
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE

**MONTHLY SUMMARY**

NUMBER OF NON-ZERO READINGS:	264					
MAXIMUM INSTANTANEOUS VALUE:	47	PPB	@ HOUR(S)	11	ON DAY(S)	1
IZS CALIBRATION TIME:	32	HRS	OPERATIONAL TIME:	744	HRS	
MONTHLY CALIBRATION TIME:	15	HRS				
STANDARD DEVIATION	3.78					

### 01 Hour Averages





LICA33  
 NO\_ / WDR Joint Frequency Distribution (Percent)

August 2010

Distribution By % Of Samples

Logger Id : 33  
 Site Name : LICA33  
 Parameter : NO\_  
 Units : PPB

Wind Parameter : WDR  
 Instrument Height : 10 Meters

	Direction																
Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 50	2.29	3.43	4.58	5.44	6.73	4.44	5.58	5.58	3.00	2.57	9.02	8.45	13.18	12.60	8.45	4.58	100.00
< 110	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
< 210	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
>= 210	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
Totals	2.29	3.43	4.58	5.44	6.73	4.44	5.58	5.58	3.00	2.57	9.02	8.45	13.18	12.60	8.45	4.58	

Calm : .00 %

Total # Operational Hours : 698

Distribution By Samples

	Direction																
Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 50	16	24	32	38	47	31	39	39	21	18	63	59	92	88	59	32	698
< 110																	
< 210																	
>= 210																	
Totals	16	24	32	38	47	31	39	39	21	18	63	59	92	88	59	32	

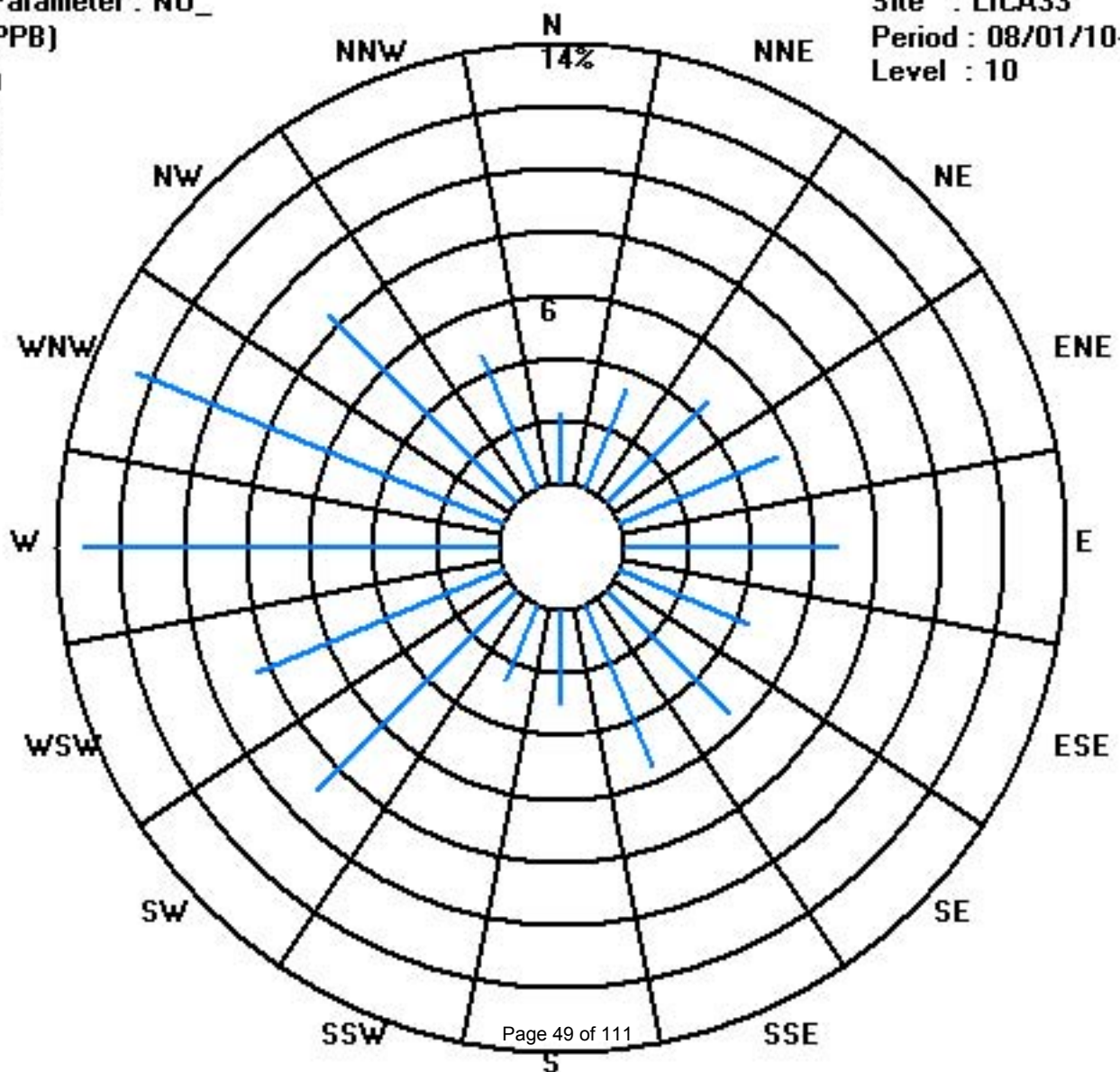
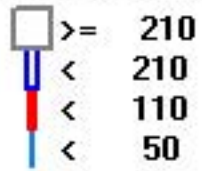
Calm : .00 %

Total # Operational Hours : 698

Class Limits (PPB)

Period : 08/01/10-08/31/10

Level : 10



# Oxides of Nitrogen

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - PORTABLE SITE

AUGUST 2010

OXIDES OF NITROGEN hourly averages in ppb

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR		
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.	
DAY																												
1	3	4	4	7	16	19	12	18	10	4	IZS	2	0	0	0	0	0	1	0	0	2	2	3	19	4.7	24		
2	1	1	1	1	2	2	1	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	2	1	2	0.5	24	
3	1	1	1	0	0	0	1	2	IZS	0	0	0	0	0	0	0	0	1	1	4	3	5	3	5	1.0	24		
4	5	4	6	6	6	7	15	IZS	6	2	1	0	0	0	0	0	0	0	0	0	1	2	2	15	2.7	24		
5	3	3	4	4	2	4	IZS	3	1	0	0	0	0	0	0	0	0	1	6	4	2	3	3	6	1.9	24		
6	2	2	3	3	3	IZS	4	3	2	C	C	C	C	C	C	C	C	0	0	0	0	0	1	4	1.5	24		
7	2	1	1	1	IZS	3	4	6	3	3	1	1	0	0	2	1	4	0	0	0	3	3	1	0	6	1.7	24	
8	0	1	2	IZS	0	2	5	4	2	1	1	1	1	3	4	8	0	0	0	1	1	1	1	2	8	1.8	24	
9	2	2	IZS	3	2	3	15	4	5	1	0	0	0	0	0	0	0	0	0	0	2	2	6	6	15	2.3	24	
10	4	IZS	3	4	4	2	3	3	4	3	2	5	C	0	0	1	2	1	0	0	1	4	2	2	5	2.3	24	
11	IZS	5	4	4	4	4	4	6	3	1	1	1	0	0	0	0	1	2	1	2	3	3	2	IZS	6	2.3	24	
12	6	4	3	5	5	6	12	9	7	8	3	2	0	0	0	0	0	0	0	0	0	0	IZS	0	12	3.0	24	
13	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	1	0.1	24
14	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	2	IZS	1	2	3	3	0.4	24	
15	4	7	4	3	4	3	5	7	7	3	1	1	0	0	0	0	0	1	1	IZS	1	1	1	1	7	2.4	24	
16	2	1	1	3	4	5	8	10	7	2	1	0	0	0	0	0	1	1	IZS	0	1	2	1	0	10	2.2	24	
17	0	2	1	1	2	3	3	2	2	1	0	0	0	0	0	0	0	0	IZS	0	1	2	2	0	1	3	1.0	24
18	2	3	3	4	2	3	3	3	2	1	0	0	0	0	0	0	IZS	0	0	0	0	0	0	1	4	1.2	24	
19	2	1	0	0	2	3	3	3	5	2	2	2	3	5	5	IZS	2	0	1	3	7	5	2	2	7	2.6	24	
20	2	2	1	0	0	2	1	4	1	0	0	0	0	0	IZS	0	0	0	0	1	2	2	4	4	4	1.1	24	
21	4	2	3	3	3	2	4	3	4	2	1	0	0	IZS	0	0	0	0	0	0	1	2	2	0	4	1.6	24	
22	1	0	0	1	1	2	1	0	0	0	0	0	IZS	0	1	1	3	1	1	0	0	1	2	2	3	0.8	24	
23	2	2	1	1	0	0	0	1	1	1	0	0	IZS	0	0	0	0	0	0	0	0	1	1	3	3	0.6	24	
24	2	3	2	2	2	3	1	1	1	1	IZS	1	0	0	0	0	0	0	0	1	2	2	2	2	3	1.2	24	
25	1	1	2	4	2	1	2	1	1	IZS	1	1	1	1	1	0	0	0	0	1	2	3	4	5	5	1.5	24	
26	2	3	2	1	0	0	0	0	IZS	C	C	C	C	C	C	0	0	0	0	0	0	0	0	0	3	0.4	24	
27	1	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0.1	24	
28	0	1	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0.1	24	
29	2	2	2	2	3	IZS	3	2	1	1	0	0	0	0	0	0	0	0	0	0	0	1	1	3	3	1.0	24	
30	3	2	1	2	IZS	2	2	1	1	0	0	0	0	0	0	0	0	0	1	2	5	1	1	1	5	1.1	24	
31	1	4	15	IZS	6	5	6	10	10	3	1	0	0	1	0	0	0	0	1	1	2	2	2	4	15	3.2	24	
HOURLY MAX	6	7	15	7	16	19	15	18	10	8	3	5	3	5	5	8	4	2	1	6	7	5	6	6				
HOURLY AVG	2.0	2.1	2.3	2.2	2.6	3.0	4.1	3.7	3.0	1.5	0.6	0.6	0.2	0.4	0.4	0.4	0.4	0.2	0.3	0.7	1.5	1.6	1.7	1.9				

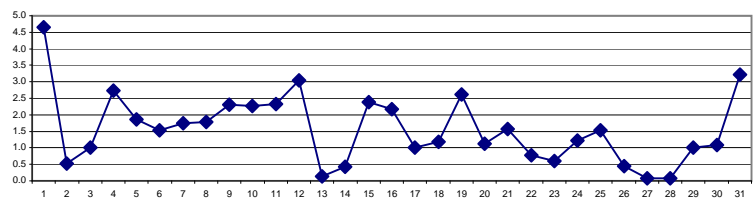
STATUS FLAG CODES

S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	- MAINTENANCE
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE

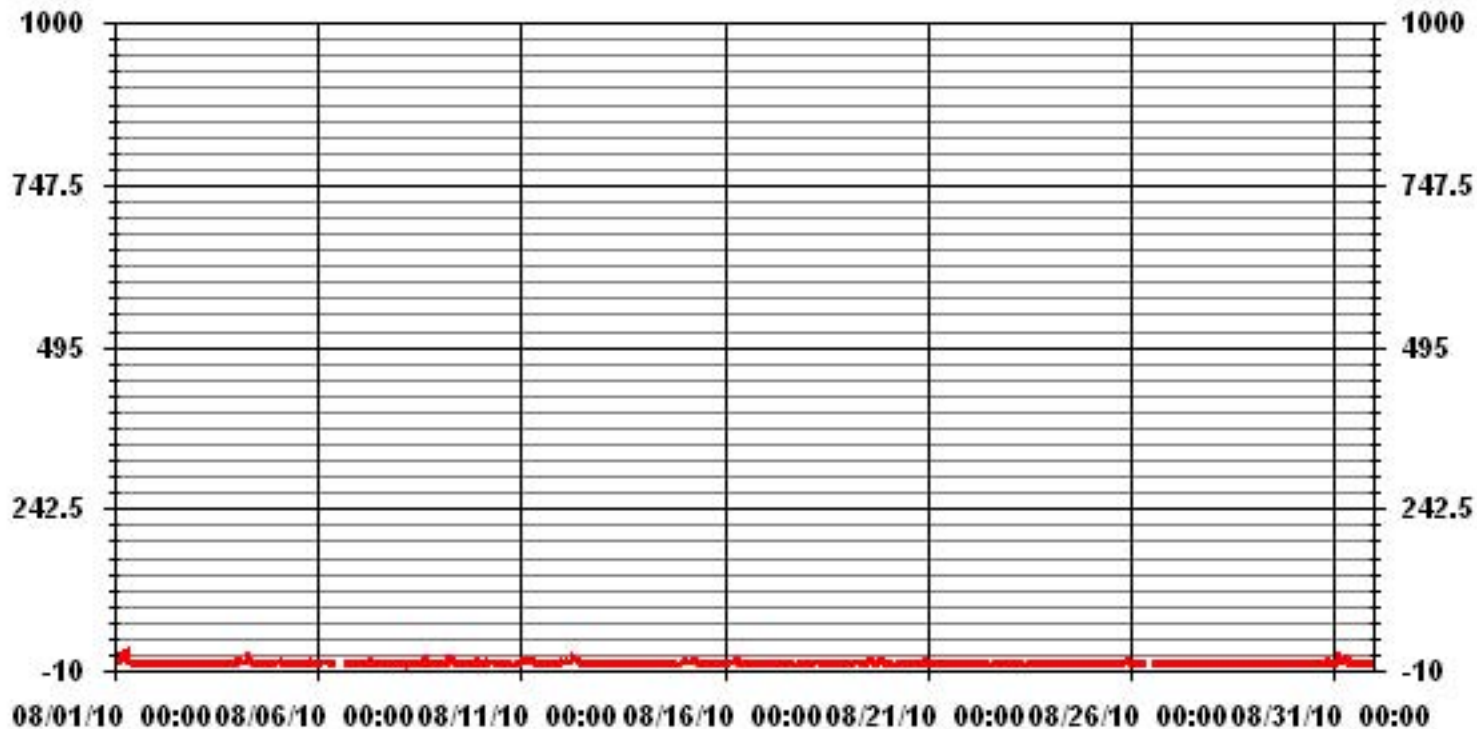
MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:	389					
MAXIMUM 1-HR AVERAGE:	19	PPB	@ HOUR(S)	5	ON DAY(S)	1
MAXIMUM 24-HR AVERAGE:	4.7	PPB			ON DAY(S)	1
IZS CALIBRATION TIME:	32	HRS	OPERATIONAL TIME:	744	HRS	
MONTHLY CALIBRATION TIME:	14	HRS	AMD OPERATION UPTIME:	100.0	%	
STANDARD DEVIATION:	2.36		MONTHLY AVERAGE:	1.57	PPB	

24 HOUR AVERAGES FOR AUGUST 2010



### 01 Hour Averages



— LICA33 NOX\_ PPB

# LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - PORTABLE SITE

AUGUST 2010

## OXIDES OF NITROGEN MAX instantaneous maximum in ppb

MST		0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	23:00	DAILY	24-HOUR	
DAY	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.		
1	4	5	5	12	24	27	17	22	13	8	IZS	53	1	0	0	1	0	0	4	1	2	2	4	5	53	9.1	24		
2	2	1	2	2	3	3	2	1	0	IZS	0	0	0	1	0	0	0	0	1	0	1	1	3	2	3	1.1	24		
3	2	2	2	2	0	2	2	2	IZS	2	0	2	0	0	0	0	1	3	3	8	8	7	7	8	2.4	24			
4	6	5	8	8	8	10	19	IZS	13	4	2	16	0	0	0	0	0	1	1	1	2	2	3	19	4.7	24			
5	4	4	6	5	5	5	IZS	9	3	2	1	1	2	14	1	1	3	2	5	10	8	4	4	4	14	4.5	24		
6	4	4	4	5	4	IZS	4	5	C	C	C	C	C	C	C	C	0	0	0	0	1	2	5	5	2.7	24			
7	7	1	2	1	IZS	6	5	8	5	5	3	2	2	2	2	6	5	8	6	0	1	8	6	3	1	8	4.0	24	
8	0	3	2	IZS	1	4	14	8	6	2	2	2	1	11	36	39	0	0	1	3	2	2	2	4	39	6.3	24		
9	4	3	IZS	4	3	5	45	7	7	4	1	1	0	1	1	1	0	0	0	1	2	5	11	11	45	5.1	24		
10	5	IZS	5	6	6	4	4	4	5	4	4	27	C	1	1	3	4	4	2	0	2	9	4	4	27	4.9	24		
11	IZS	11	8	5	7	5	5	8	7	2	2	1	1	1	1	1	1	4	2	3	4	4	3	IZS	11	3.9	24		
12	8	6	5	8	7	8	19	14	13	17	7	7	1	1	0	0	0	0	1	1	1	1	IZS	0	19	5.4	24		
13	1	1	0	1	1	2	2	1	1	1	2	1	0	1	0	0	0	1	1	1	1	1	IZS	1	0	2	0.9	24	
14	0	0	0	1	1	1	1	1	1	1	0	0	0	0	0	0	2	0	2	6	IZS	9	8	6	9	1.7	24		
15	5	10	7	5	6	4	13	11	12	6	2	1	1	1	0	1	1	2	2	IZS	2	1	2	2	13	4.2	24		
16	2	2	2	14	16	6	14	12	10	3	1	1	0	0	0	1	3	3	IZS	2	4	5	3	1	16	4.6	24		
17	2	4	3	3	3	5	6	2	2	2	1	0	0	0	0	0	0	IZS	0	9	7	5	1	2	9	2.5	24		
18	4	3	7	8	2	5	5	3	3	1	1	0	0	1	1	0	IZS	0	0	1	1	1	1	3	8	2.2	24		
19	5	2	1	1	5	6	7	8	13	4	3	2	3	6	6	IZS	4	1	5	7	12	10	4	3	13	5.1	24		
20	4	3	1	1	1	4	5	10	2	0	0	0	1	0	IZS	0	0	1	2	3	4	4	13	12	13	3.1	24		
21	6	4	6	4	4	3	11	3	6	4	3	1	1	IZS	1	1	0	1	1	0	2	5	6	2	11	3.3	24		
22	4	2	1	3	2	5	3	1	0	0	0	0	IZS	1	2	1	6	2	2	1	1	4	4	7	7	2.3	24		
23	4	3	2	2	1	1	1	1	2	1	1	IZS	1	1	0	0	0	0	1	0	1	2	2	6	6	1.4	24		
24	4	4	2	3	3	5	2	2	2	2	IZS	3	1	1	0	0	1	1	1	2	2	3	3	2	5	2.1	24		
25	2	2	5	9	3	2	2	2	2	IZS	2	1	1	1	1	1	1	1	1	3	3	5	7	9	9	2.9	24		
26	4	4	5	3	2	0	2	1	IZS	C	C	C	C	C	C	0	0	0	1	1	0	1	1	2	1	5	1.6	24	
27	2	1	1	0	0	0	0	IZS	0	0	0	0	0	0	0	0	1	0	0	3	4	2	1	1	4	0.7	24		
28	1	2	2	0	0	0	IZS	0	0	2	1	8	0	0	0	1	16	0	0	0	0	0	0	2	16	1.5	24		
29	3	3	3	3	4	IZS	4	4	3	2	1	1	0	1	1	1	1	0	0	2	2	6	7	7	7	2.6	24		
30	9	5	3	3	IZS	3	3	2	1	1	1	1	1	0	5	3	2	0	3	12	10	2	2	1	12	3.2	24		
31	3	7	27	IZS	8	7	8	52	50	5	2	1	1	2	1	1	1	2	3	3	3	3	3	9	52	8.8	24		
HOURLY MAX	9	11	27	14	24	27	45	52	50	17	7	53	3	14	36	39	16	6	5	12	12	10	13	12					
HOURLY AVG	3.7	3.6	4.2	4.2	4.5	4.8	7.8	7.0	6.5	3.1	1.6	4.8	0.7	1.7	2.2	2.1	1.9	1.1	1.5	2.6	3.3	3.8	3.8	4.1					

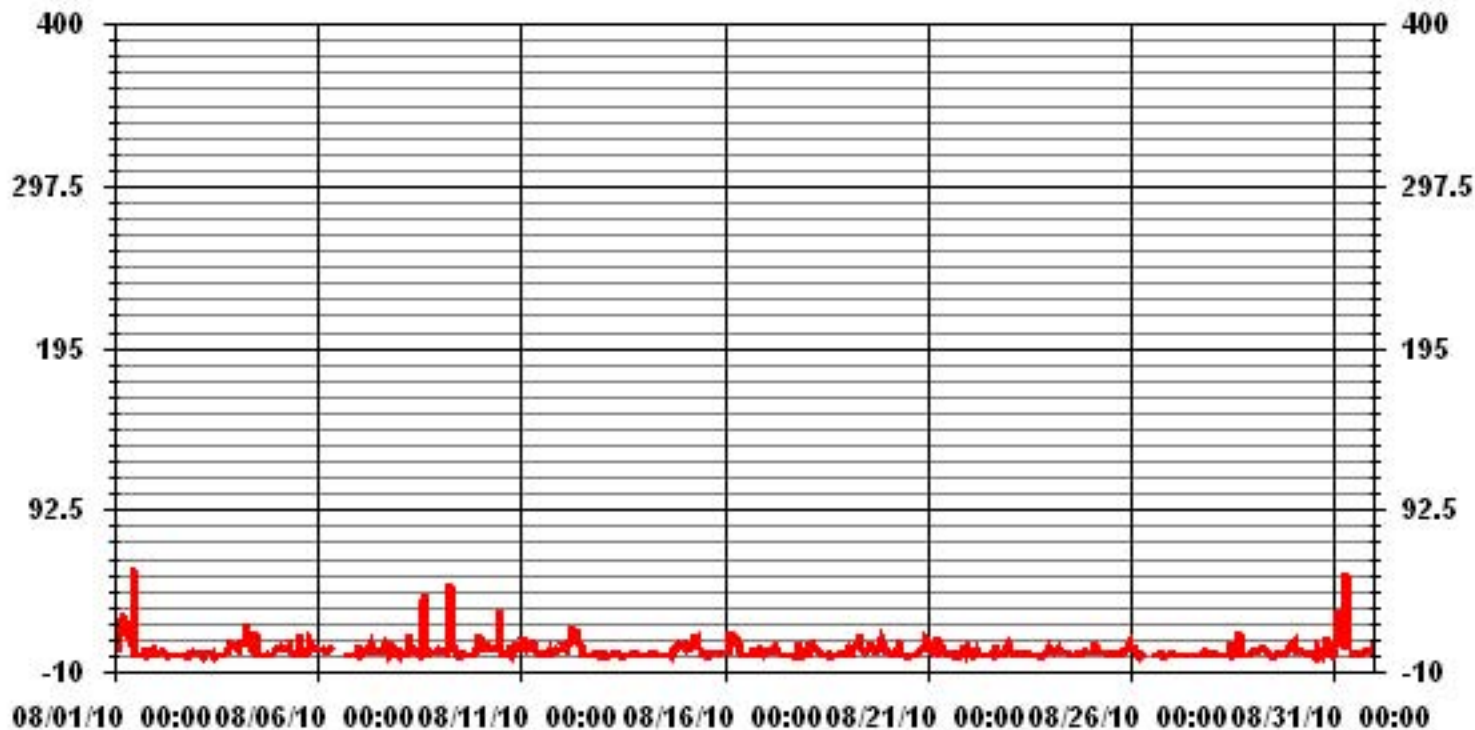
### STATUS FLAG CODES

S - OUT OF SERVICE	IZS - IZS - DAILY ZERO/SPAN CHECK
N - INVALID DATA	M - MAINTENANCE
D - INSTRUMENT DRIFT	P - POWER FAILURE
C - CALIBRATION	NA - NOT APPLICABLE

### MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:	564					
MAXIMUM INSTANTANEOUS VALUE:	53	PPB	@ HOUR(S)	11	ON DAY(S)	1
IZS CALIBRATION TIME:	32	HRS	OPERATIONAL TIME:	744 HRS		
MONTHLY CALIBRATION TIME:	15	HRS				
STANDARD DEVIATION	5.49					

### 01 Hour Averages



— LICA33 NOXMAX PPB

LICA33  
 NOX\_ / WDR Joint Frequency Distribution (Percent)

August 2010

Distribution By % Of Samples

Logger Id : 33  
 Site Name : LICA33  
 Parameter : NOX\_  
 Units : PPB

Wind Parameter : WDR  
 Instrument Height : 10 Meters

	Direction																
Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 50	2.29	3.43	4.58	5.44	6.73	4.44	5.58	5.58	3.00	2.57	9.02	8.45	13.18	12.60	8.45	4.58	100.00
< 110	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
< 210	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
>= 210	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
Totals	2.29	3.43	4.58	5.44	6.73	4.44	5.58	5.58	3.00	2.57	9.02	8.45	13.18	12.60	8.45	4.58	

Calm : .00 %

Total # Operational Hours : 698

Distribution By Samples

	Direction																
Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 50	16	24	32	38	47	31	39	39	21	18	63	59	92	88	59	32	698
< 110																	
< 210																	
>= 210																	
Totals	16	24	32	38	47	31	39	39	21	18	63	59	92	88	59	32	

Calm : .00 %

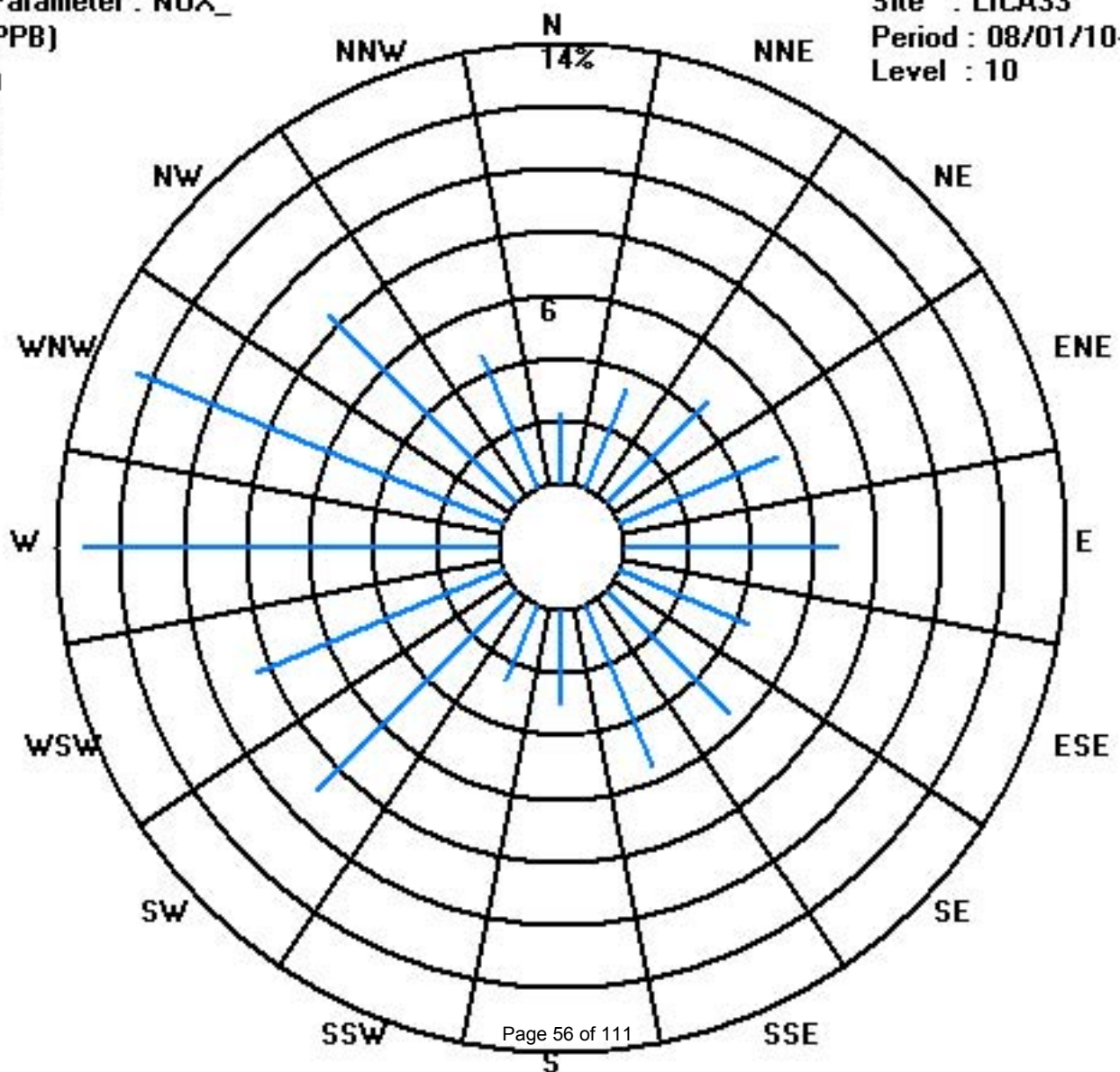
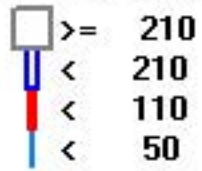
Total # Operational Hours : 698



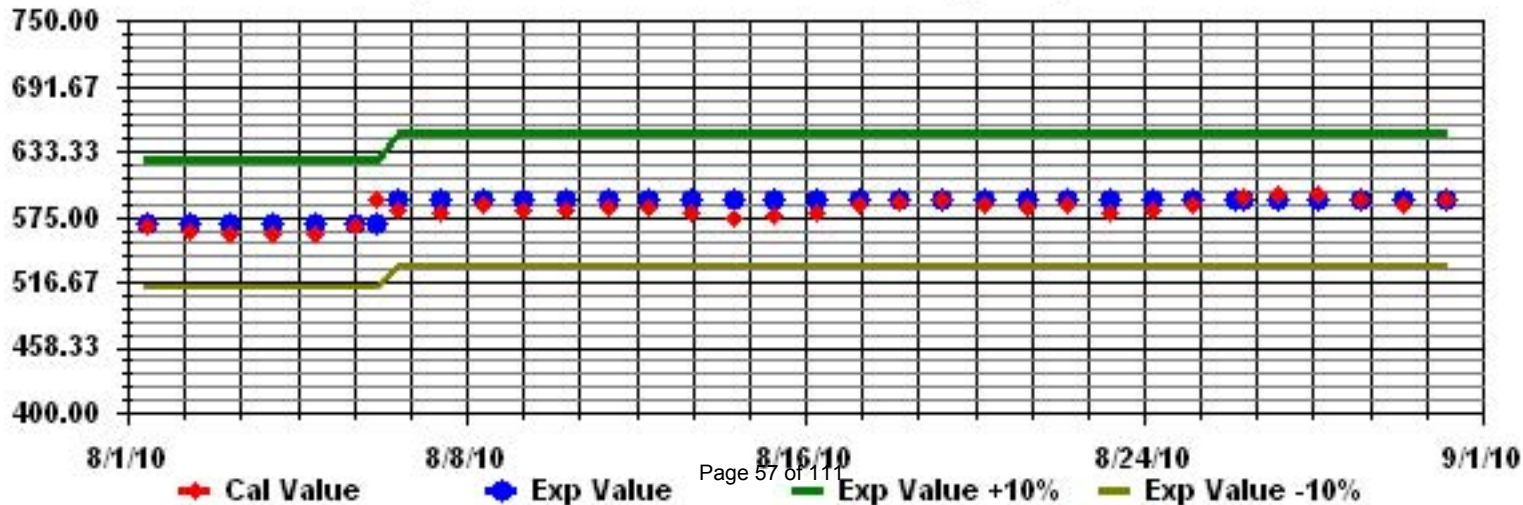
Class Limits (PPB)

Period : 08/01/10-08/31/10

Level : 10



Calibration Graph for Site: LICA33 Parameter: NOX\_ Sequence: NO2 Phase: SPAN



# Ozone

## LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - PORTABLE SITE

AUGUST 2010

### OZONE (O<sub>3</sub>) hourly averages in ppb

MST

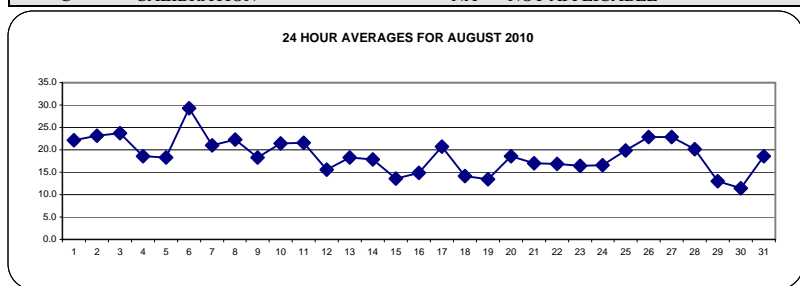
HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	RDGS.	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.		
DAY																												
1	7	4	2	1	0	1	3	6	23	28	IZS	39	42	43	45	45	44	44	41	34	25	15	11	7	45	22.2	24	
2	15	12	17	15	17	20	20	21	21	IZS	27	32	32	33	32	32	32	30	29	24	21	18	16	15	33	23.1	24	
3	13	12	17	21	20	21	12	10	IZS	26	29	31	36	39	38	39	39	38	32	25	17	15	11	4	39	23.7	24	
4	5	3	3	1	0	1	1	1	IZS	15	25	31	33	33	33	35	34	31	28	25	21	20	18	15	15	35	18.5	24
5	14	13	8	7	5	5	IZS	14	22	24	26	29	30	31	31	31	31	29	23	15	9	10	8	6	31	18.3	24	
6	6	5	5	6	4	IZS	8	17	33	43	48	53	54	52	48	45	44	45	40	34	26	26	16	16	54	29.3	24	
7	17	18	11	9	IZS	7	8	13	22	31	36	38	35	32	29	27	25	26	24	20	12	7	10	25	38	21.0	24	
8	25	15	12	IZS	28	24	19	20	26	35	38	36	36	31	26	22	27	21	19	14	13	13	8	5	38	22.3	24	
9	4	3	IZS	3	5	7	8	12	15	25	30	33	C	C	C	C	37	36	34	29	23	19	13	11	37	18.3	24	
10	12	IZS	12	12	16	18	16	19	17	21	25	29	C	30	30	27	22	27	32	33	27	16	18	11	33	21.4	24	
11	IZS	4	2	3	2	3	7	11	19	26	34	34	36	39	36	45	41	36	32	23	21	12	10	IZS	45	21.6	24	
12	2	3	2	1	0	1	2	5	10	19	23	27	29	24	21	25	31	29	26	21	19	21	IZS	18	31	15.6	24	
13	15	14	18	17	14	12	12	13	14	19	19	21	24	21	26	26	23	24	19	19	19	IZS	17	16	26	18.3	24	
14	17	16	15	13	15	16	13	15	18	23	24	22	22	22	23	24	23	23	21	18	IZS	13	8	6	24	17.8	24	
15	2	2	2	3	2	1	2	3	7	20	23	24	26	28	27	27	28	28	25	IZS	14	9	4	4	28	13.5	24	
16	3	1	3	1	0	0	1	3	10	18	25	29	30	30	29	29	26	27	IZS	19	16	13	14	16	30	14.9	24	
17	14	12	13	14	16	15	16	17	20	24	29	31	32	34	34	35	35	IZS	28	21	13	10	8	5	35	20.7	24	
18	4	3	1	2	5	5	7	9	13	18	22	25	26	26	29	29	IZS	26	21	14	11	11	10	9	29	14.2	24	
19	7	8	9	11	5	2	3	4	3	6	12	16	14	19	23	IZS	35	35	24	19	14	14	14	12	35	13.4	24	
20	13	16	23	22	19	14	15	16	21	24	25	26	26	26	IZS	27	27	26	23	16	11	6	3	1	27	18.5	24	
21	0	1	1	3	6	9	8	7	6	12	27	32	31	IZS	35	38	31	28	25	23	19	14	17	19	38	17.0	24	
22	18	19	20	16	9	9	12	17	22	24	22	22	IZS	25	25	25	23	23	17	13	10	6	6	5	25	16.9	24	
23	4	6	8	9	13	12	13	14	18	18	19	IZS	19	20	21	23	24	26	24	23	20	19	15	10	26	16.4	24	
24	8	7	7	7	6	6	10	12	14	18	IZS	23	26	27	29	31	36	32	24	12	12	12	11	11	36	16.6	24	
25	8	7	5	4	4	7	10	17	20	IZS	29	33	36	39	41	40	38	37	29	23	10	6	7	8	41	19.9	24	
26	15	14	12	14	14	15	16	19	IZS	24	26	C	C	C	31	31	29	28	26	24	26	27	28	37	37	22.8	24	
27	29	24	24	24	25	24	24	IZS	29	24	22	27	26	24	23	23	21	21	20	18	17	19	18	20	29	22.9	24	
28	19	17	17	18	19	22	IZS	22	22	24	25	25	25	24	24	23	21	20	19	17	17	15	16	12	25	20.1	24	
29	10	10	8	6	5	IZS	7	11	13	16	19	19	20	19	19	18	17	18	16	13	12	10	8	6	20	13.0	24	
30	6	5	7	6	IZS	7	7	9	12	13	15	18	19	20	19	21	21	20	16	10	4	3	3	1	21	11.4	24	
31	0	0	0	IZS	0	0	1	3	13	20	27	30	34	38	40	39	36	31	28	26	21	16	14	11	40	18.6	24	
HOURLY MAX	29	24	24	24	28	24	24	22	33	43	48	53	54	52	48	45	44	45	41	34	27	27	28	37				
HOURLY AVG	10.4	9.1	9.5	9.3	9.4	9.8	9.7	12.4	17.2	22.3	26.1	28.9	29.6	29.6	30.0	30.4	29.9	28.7	25.4	20.7	16.6	13.8	11.9	11.4				

#### STATUS FLAG CODES

S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	- MISSING DATA
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE

OBJECTIVE LIMIT:

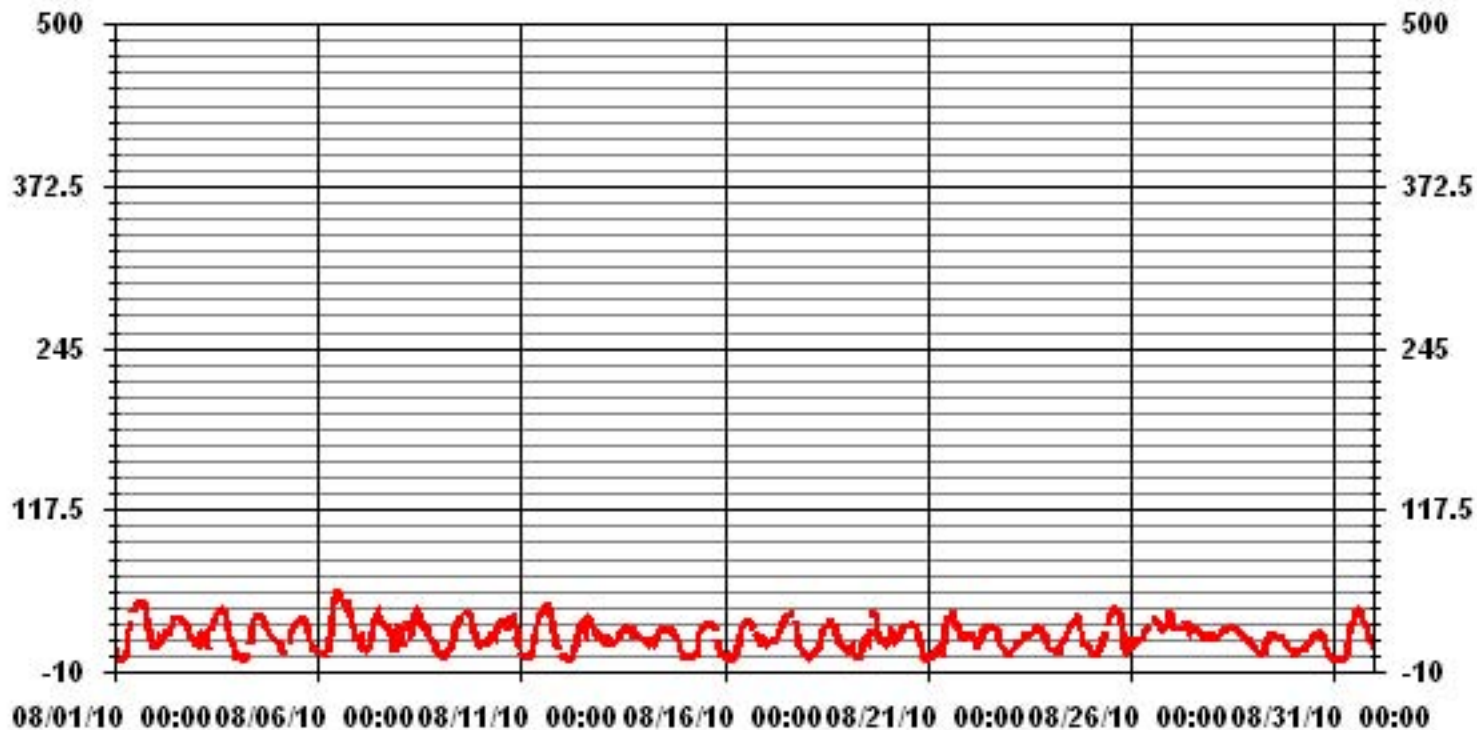
ALBERTA ENVIRONMENT: 1-HR 82 PPB



#### MONTHLY SUMMARY

NUMBER OF 1-HR EXCEEDENCES:	0				
NUMBER OF NON-ZERO READINGS:	693				
MAXIMUM 1-HR AVERAGE:	54	PPB	@ HOUR(S)	12	ON DAY(S) 6
MAXIMUM 24-HR AVERAGE:	29.3	PPB			ON DAY(S) 6
					VAR-VARIOUS
IZS CALIBRATION TIME:	32	HRS	OPERATIONAL TIME:	744 HRS	
MONTHLY CALIBRATION TIME:	8	HRS	AMD OPERATION UPTIME	100.0 %	
STANDARD DEVIATION	10.82		MONTHLY AVERAGE	18.76 PPB	

### 01 Hour Averages



— LICA33\_03\_ PPB

# LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - PORTABLE SITE

AUGUST 2010

**OZONE MAX** instantaneous maximum in ppb

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	11	10	6	2	0	2	4	17	35	34	IZS	44	44	44	46	47	46	46	46	40	31	22	18	17	47	26.6	24
2	17	16	21	18	19	22	21	23	23	IZS	29	35	34	35	35	34	31	30	27	23	19	18	17	35	25.3	24	
3	14	13	21	22	22	26	15	11	IZS	28	30	35	39	44	40	40	40	40	37	29	26	17	16	8	44	26.7	24
4	6	4	5	3	1	1	2	IZS	21	29	33	34	34	34	36	36	33	30	27	24	21	19	17	17	36	20.3	24
5	16	15	13	10	8	7	IZS	22	24	26	28	30	32	33	33	31	32	33	27	20	19	19	12	10	33	21.7	24
6	8	6	9	8	5	IZS	13	25	42	46	51	56	57	55	51	47	47	44	37	29	31	21	23	57	33.0	24	
7	24	23	20	13	IZS	11	12	19	28	35	39	41	37	33	31	29	27	27	26	24	18	13	23	30	41	25.3	24
8	29	23	15	IZS	33	29	24	23	32	39	39	39	37	37	30	28	30	23	21	16	15	16	12	9	39	26.0	24
9	7	7	IZS	8	8	9	13	14	21	29	31	36	C	C	C	C	41	41	40	35	31	23	18	15	41	22.5	24
10	14	IZS	16	16	19	21	20	23	22	22	31	32	C	32	33	31	27	34	35	36	32	23	21	17	36	25.3	24
11	IZS	9	6	8	6	6	9	13	23	34	38	36	38	41	40	48	45	38	35	32	29	20	18	IZS	48	26.0	24
12	6	6	7	7	2	3	5	12	17	24	25	32	33	26	26	30	32	31	28	23	21	22	IZS	19	33	19.0	24
13	17	16	19	20	14	13	14	14	18	20	20	24	26	23	28	28	25	29	21	22	22	IZS	18	17	29	20.3	24
14	18	17	16	14	18	18	13	17	20	25	27	24	24	24	24	25	24	24	23	21	IZS	18	14	12	27	20.0	24
15	4	4	5	4	3	2	4	5	11	24	24	26	28	30	29	29	30	29	28	IZS	19	13	8	7	30	15.9	24
16	6	3	6	4	2	1	2	5	18	22	28	31	31	31	30	31	29	33	IZS	20	18	16	16	17	33	17.4	24
17	16	13	15	16	17	17	17	20	21	28	31	34	34	35	35	36	36	IZS	32	25	18	19	11	8	36	23.2	24
18	6	5	2	6	8	7	10	11	16	20	24	27	28	28	30	30	IZS	29	23	18	14	13	12	11	30	16.4	24
19	9	10	11	12	6	4	6	5	7	8	15	19	17	24	27	IZS	38	37	31	22	16	15	15	14	38	16.0	24
20	18	23	24	23	21	16	16	19	24	25	26	26	26	27	IZS	28	27	28	26	20	16	10	5	3	28	20.7	24
21	1	3	5	6	7	15	16	7	7	22	32	33	32	IZS	39	43	32	29	27	25	21	19	20	20	43	20.0	24
22	20	21	21	19	14	14	14	21	24	25	24	24	IZS	26	26	25	24	24	21	17	12	9	8	8	26	19.2	24
23	5	9	9	11	15	14	14	17	21	20	20	IZS	21	22	22	24	26	27	27	26	22	20	18	13	27	18.4	24
24	10	8	8	8	7	9	12	13	16	21	IZS	26	28	29	31	36	37	37	31	17	15	15	13	14	37	19.2	24
25	12	9	8	7	7	9	13	20	21	IZS	31	36	38	41	43	42	40	40	33	27	22	14	11	17	43	23.5	24
26	18	16	15	16	15	16	18	21	IZS	25	27	C	C	C	33	32	30	29	28	26	27	28	38	39	39	24.9	24
27	34	25	26	25	26	25	27	IZS	32	30	25	28	28	26	23	23	22	22	21	20	20	21	20	21	34	24.8	24
28	20	19	18	20	20	23	IZS	23	23	26	26	26	26	24	24	22	21	21	19	17	16	18	16	26	21.5	24	
29	11	10	10	7	6	IZS	10	12	15	19	20	20	21	20	20	20	19	19	19	17	15	12	10	9	21	14.8	24
30	8	7	7	8	IZS	8	8	10	13	15	16	20	20	21	22	23	23	22	20	17	7	6	5	5	23	13.5	24
31	1	0	0	IZS	0	0	2	8	16	23	32	32	37	41	42	40	40	38	36	31	25	19	17	16	42	21.6	24
HOURLY MAX	34	25	26	25	33	29	27	25	42	46	51	56	57	55	51	48	47	47	46	40	32	31	38	39			
HOURLY AVG	12.9	11.7	12.1	11.8	11.3	12.0	12.2	15.5	21.1	25.7	28.3	31.2	31.5	31.7	32.0	32.4	31.9	31.3	28.8	24.4	20.7	17.6	15.7	15.0			

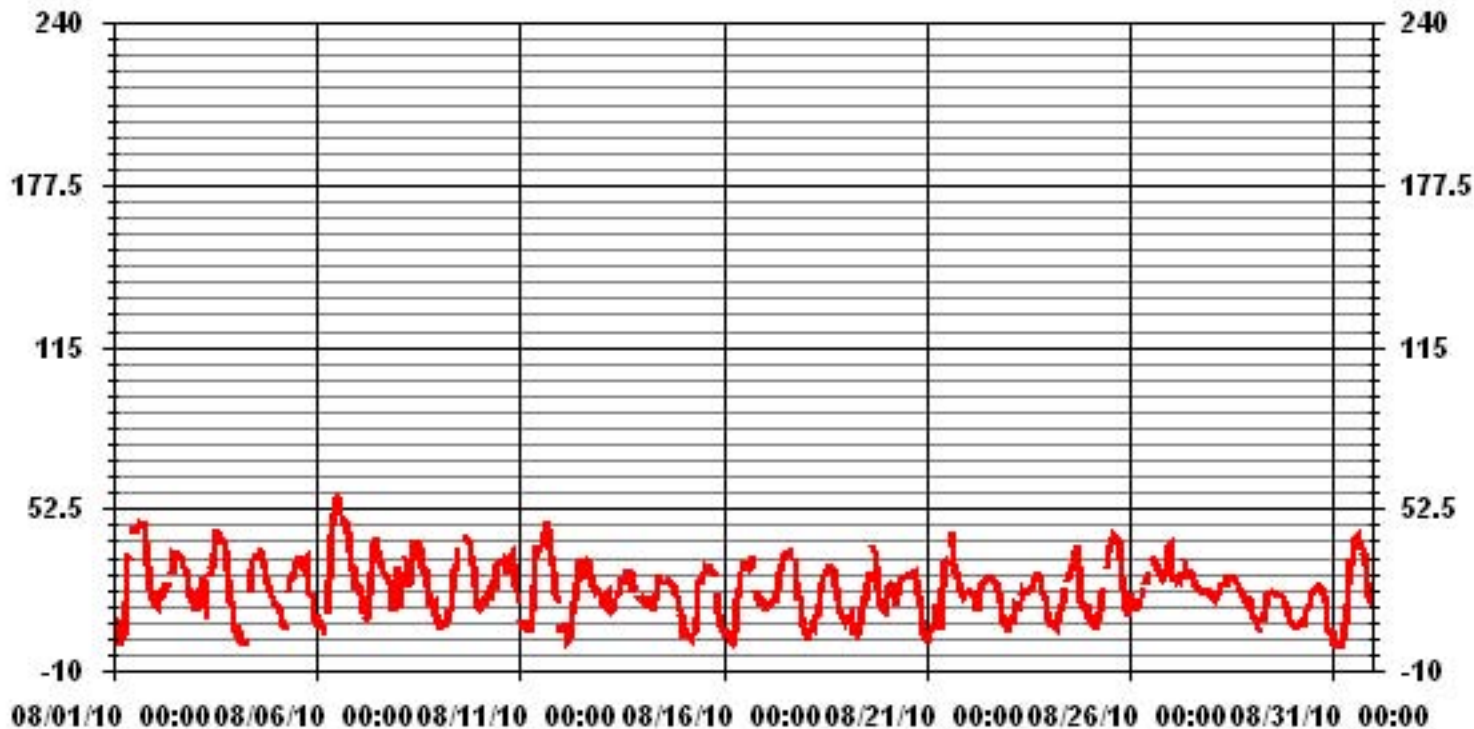
**STATUS FLAG CODES**

S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	-MAINTENANCE
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE

**MONTHLY SUMMARY**

NUMBER OF NON-ZERO READINGS:	699					
MAXIMUM INSTANTANEOUS VALUE:	57	PPB	@ HOUR(S)	12	ON DAY(S)	6
IZS CALIBRATION TIME:	32	HRS	OPERATIONAL TIME:	744	HRS	
MONTHLY CALIBRATION TIME:	8	HRS				
STANDARD DEVIATION	10.89					

### 01 Hour Averages



— LICA33 O3MAX PPB

LICA33  
 O3\_ / WDR Joint Frequency Distribution (Percent)

August 2010

Distribution By % Of Samples

Logger Id : 33  
 Site Name : LICA33  
 Parameter : O3\_  
 Units : PPB

Wind Parameter : WDR  
 Instrument Height : 10 Meters

	Direction																
Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 50	2.27	3.40	4.54	5.39	6.81	4.54	5.96	5.82	2.55	2.41	8.94	8.38	13.06	12.50	8.38	4.54	99.57
< 110	.00	.00	.00	.00	.00	.00	.14	.28	.00	.00	.00	.00	.00	.00	.00	.00	.42
< 210	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
>= 210	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
Totals	2.27	3.40	4.54	5.39	6.81	4.54	6.10	6.10	2.55	2.41	8.94	8.38	13.06	12.50	8.38	4.54	

Calm : .00 %

Total # Operational Hours : 704

Distribution By Samples

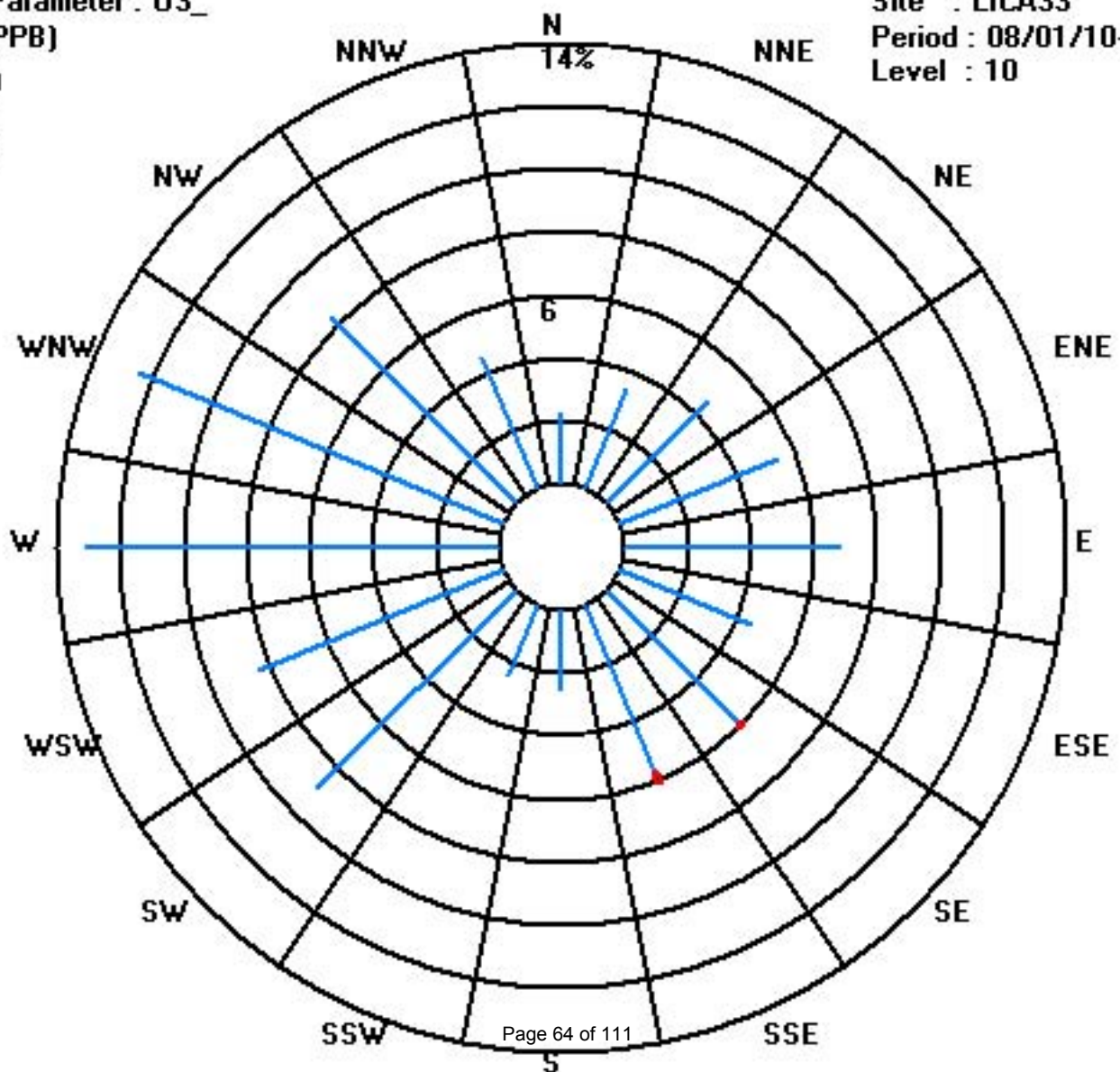
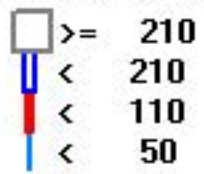
	Direction																
Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 50	16	24	32	38	48	32	42	41	18	17	63	59	92	88	59	32	701
< 110							1	2									3
< 210																	
>= 210																	
Totals	16	24	32	38	48	32	43	43	18	17	63	59	92	88	59	32	

Calm : .00 %

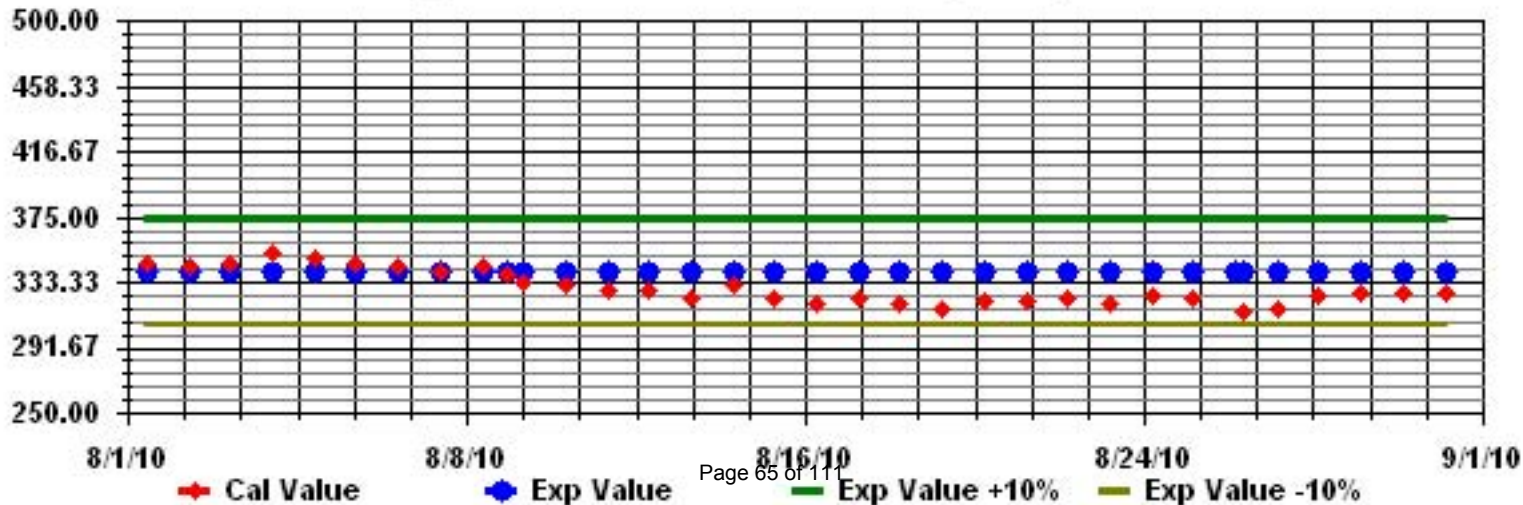
Total # Operational Hours : 704



Class Limits (PPB)



Calibration Graph for Site: LICA33 Parameter: 03\_ Sequence: 03 Phase: SPAN



# Total Hydrocarbons

## LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - PORTABLE SITE

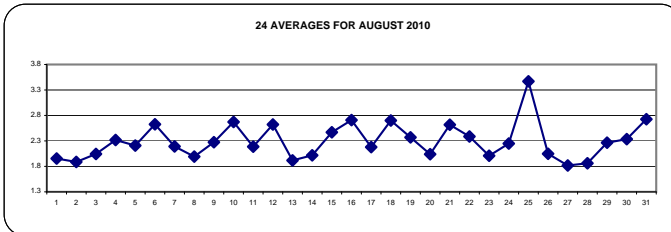
AUGUST 2010

### TOTAL HYDROCARBONS (THC) hourly averages in ppm

MST		0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
DAY	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.	
1	N	N	N	N	N	N	N	M	M	M	IZS	1.7	1.9	1.9	1.8	1.9	1.8	1.7	1.7	1.8	1.8	1.8	2.3	3.3	3.3	2.0	14	
2	2	1.9	1.9	2.1	2.1	2	1.9	1.8	1.8	IZS	1.8	1.8	1.9	1.8	1.8	1.8	1.8	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.1	1.9	24
3	2	2.1	2	1.9	1.9	2	2	2	IZS	2	1.9	1.9	1.9	1.9	2	1.9	1.9	2	2	2.3	2.2	2.5	2.8	2.8	2.0	2.0	24	
4	2.7	2.8	2.8	2.9	3	3.1	3.8	IZS	2.5	2.2	2.1	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.9	2.2	2.4	3.8	2.3	24	
5	2.5	2.5	2.5	2.5	2.6	2.2	IZS	2.1	2.1	1.9	1.9	2	1.9	2	2	1.9	1.9	1.9	1.9	1.9	2.5	2.4	2.8	2.9	2.9	2.2	24	
6	3.1	4.1	3.9	4.1	4.7	IZS	3.9	3.1	2.5	2.3	2.2	2	2	2.1	2	1.9	1.9	1.8	1.9	1.9	2	2	2.2	2.8	4.7	2.6	24	
7	2.9	2.5	2.6	2.3	IZS	3.7	2.8	2.5	2.1	2	2	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.9	2.1	2.6	1.8	3.7	2.2	24	
8	1.8	1.9	2.1	IZS	1.8	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2	2	2.6	3.1	3.1	2.0	24	
9	2.2	2.8	IZS	2.8	2.4	2.1	2	2.2	2.4	2.1	2	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2	2.6	2.7	3.5	3.5	3.5	2.3	24	
10	3.4	IZS	2.7	2.9	2.6	2.3	2.2	2.2	C	C	C	C	C	2.9	3.3	3.2	2.7	2	1.8	1.8	2.1	4.9	2.6	2.5	4.9	2.7	24	
11	IZS	3	3.3	2.3	2.6	2.5	2.4	2.3	2.2	2.1	2	2	2	1.9	1.8	1.8	1.8	1.8	1.8	2	2.2	2.3	IZS	3.3	3.3	2.2	24	
12	4.4	3.2	2.7	3.4	3.7	4.5	5.3	3	2.7	2.8	2.4	2	1.8	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.9	1.9	IZS	1.8	5.3	2.6	24	
13	1.9	1.9	1.9	1.9	2	2	2	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2	1.9	1.9	1.9	IZS	1.9	1.9	2.0	1.9	24	
14	1.9	2	2	2	2	2	2	2	2	2	2	1.9	1.9	1.9	1.9	1.9	1.9	2	2	2.1	2.2	IZS	2.1	2.2	2.5	2.0	24	
15	2.6	2.6	3.2	2.4	2.4	2.5	3.1	3.1	3.3	2.4	2.1	2	2.2	2	2.4	2	2.1	2.3	2.4	IZS	2.1	2.6	2.6	2.4	3.3	2.5	24	
16	2.3	3	2.4	2.5	4.2	4.3	4.4	4.6	3.4	2.6	2.3	2.4	2.2	2.1	2.1	2.3	2.6	2.2	IZS	2.1	2	2.2	2.1	2	4.6	2.7	24	
17	2	2.3	2.2	2	2.1	2.3	2.5	2.7	2	2	2	2	1.9	1.9	1.9	1.9	1.9	1.9	IZS	1.9	1.9	2	2.2	3.1	3.4	2.2	24	
18	3.7	3.7	3.5	3.9	3.1	3.1	3.4	2.8	2.4	2.3	2.2	2.1	2.1	2.2	2.3	2.1	IZS	1.9	2.1	2.3	2.7	2.6	2.5	3.1	3.9	2.7	24	
19	3.2	2.9	3.2	2.4	3	3.2	2.7	2.5	2.4	2.3	2.1	2.1	2.4	2.3	2.2	IZS	1.9	1.8	1.9	1.9	2	2	2	2.1	3.2	2.4	24	
20	2.1	2	1.9	1.9	1.9	1.9	1.9	2	1.9	1.9	1.8	1.9	1.8	IZS	1.8	1.9	1.9	1.9	1.9	2.3	2.1	3.1	3.2	3.2	2.0	24		
21	4.1	3.3	3.6	3.1	2.7	2.6	3.1	3.3	2.8	2.8	2.3	2.3	2.1	IZS	2	2	2.1	2.1	2.2	2.3	2.5	2.8	2.1	2	4.1	2.6	24	
22	2.6	2.4	2.2	2.6	2.1	2.9	2.3	2.2	2.1	2.1	2.1	2.2	IZS	2.1	2.2	2.1	2.9	2.5	3.4	2.1	2.2	2.4	2.8	2.4	3.4	2.4	24	
23	2.3	2.2	2.1	2.1	2	2	2	2.1	2	2	1.9	IZS	1.9	1.9	1.9	1.9	1.9	1.9	2	1.9	2	2	2.1	2.1	2.3	2.0	24	
24	2.2	2.2	2.2	2.2	2.3	2.2	2.1	2.1	2	2	IZS	1.9	2	2	2.1	2	2	2	2.1	2.5	2.9	2.8	2.8	3.1	3.1	2.2	24	
25	3.1	6.1	17	4.2	4.2	3.9	3.9	2.4	2.4	IZS	2.2	2.1	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2	2.4	3.5	3.9	3.2	17.0	3.5	24	
26	2.4	2.4	2.5	2.3	2.4	2.1	2.2	2.3	IZS	2	2	2	1.9	C	C	1.9	1.9	1.9	1.8	1.8	1.8	1.9	1.8	1.7	2.5	2.0	24	
27	1.8	1.7	1.7	1.7	1.7	1.7	1.7	IZS	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.9	1.9	1.8	1.9	1.9	1.9	1.9	1.9	1.9	1.8	24	
28	1.9	1.9	1.9	1.9	1.9	1.9	IZS	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	2	2	2	2.0	1.9	24	
29	2	2.1	2.1	2.1	2.3	IZS	2.2	2.1	1.9	1.9	1.9	1.9	1.9	1.9	2.2	2.1	2	4	2.3	2.7	2.2	3.2	2.7	2.4	4.0	2.3	24	
30	2	2.3	2.4	2.7	IZS	5.5	4.4	4.3	2.4	2.3	2.4	2.3	2.1	2.2	2.2	2.1	2	2.1	2.4	2.7	2.4	2.4	2.3	2.9	2.9	2.3	24	
31	3.1	3.4	4.3	IZS	5.5	4.4	4.3	3.5	2.2	2.1	1.9	1.9	1.9	1.9	1.8	1.8	1.9	2.1	2	2.1	2.2	2.5	3	2.9	5.5	2.7	24	
HOURLY MAX	4.4	6.1	17.0	4.2	5.5	4.5	5.3	4.6	3.4	2.8	2.4	2.4	2.4	2.9	3.3	3.2	2.9	4.0	3.4	2.7	2.9	4.9	3.9	3.4				
HOURLY AVG	2.6	2.7	3.1	2.5	2.7	2.6	2.7	2.5	2.3	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.4	2.5	2.5				

#### STATUS FLAG CODES

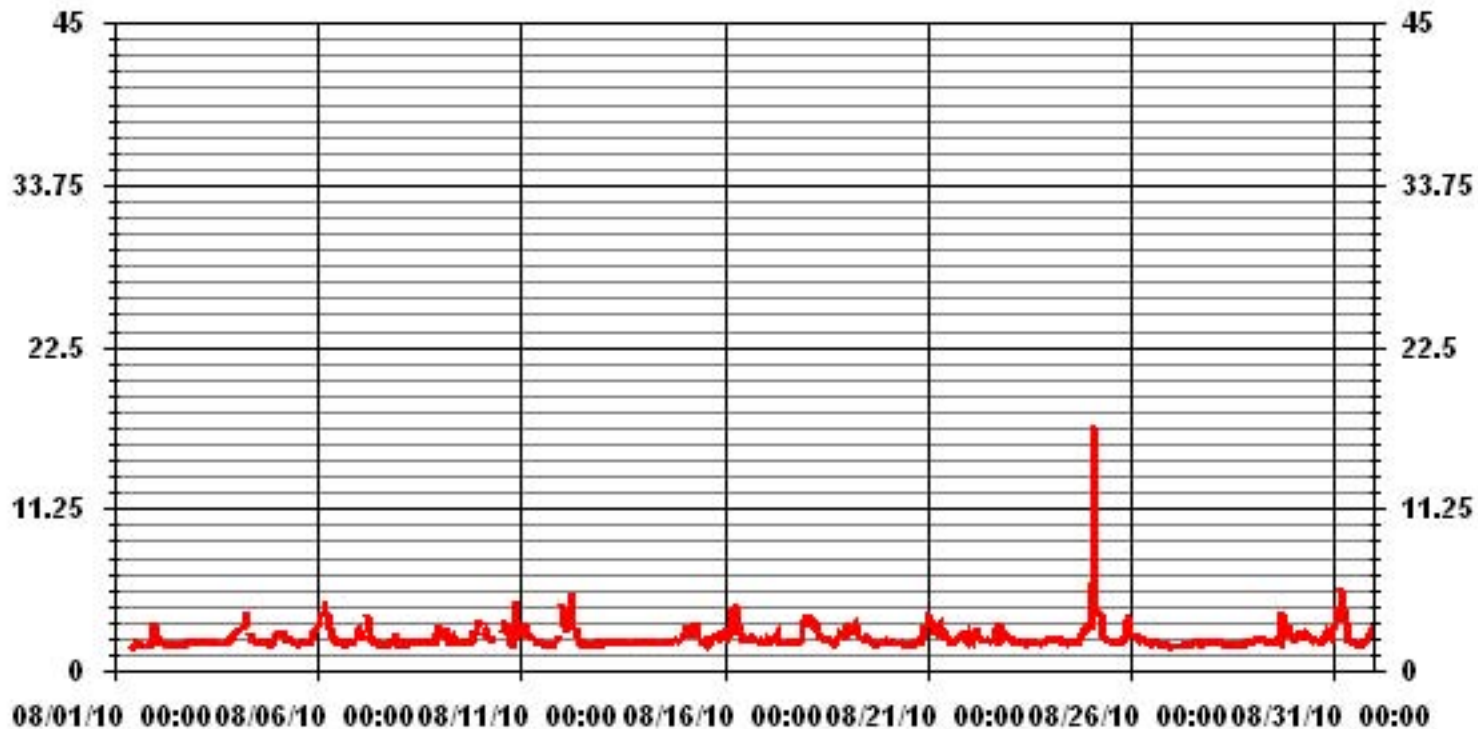
S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	- MAINTENANCE
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE
BB	- BELOW BACKGROUND OF 1.5 PPM		



#### MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:	695					
MAXIMUM 1-HR AVERAGE:	17.0	PPM	@ HOUR(S)	2	ON DAY(S)	25
MAXIMUM 24-HR AVERAGE:	3.5	PPM			ON DAY(S)	25
IZS CALIBRATION TIME:	32	HRS	OPERATIONAL TIME:	734	HRS	
MONTHLY CALIBRATION TIME:	7	HRS	AMD OPERATION UPTIME:	98.7	%	
STANDARD DEVIATION:	0.82		MONTHLY AVERAGE:	2.30	PPM	

### 01 Hour Averages



— LICA33 THC PPM

# LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - PORTABLE SITE

AUGUST 2010

## TOTAL HYDROCARBONS MAX instantaneous maximum in ppm

MST		0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR		
DAY	HR START	HR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
1	N	N	N	N	N	N	N	N	M	M	M	IZS	1.8	6.3	9.8	2.6	3.4	2.2	1.8	1.8	1.8	1.9	2	7.8	5.2	9.8	3.7	14	
2	2.2	4.2	2	2.2	2.2	2.1	2	2.3	2	2	IZS	1.8	1.9	2	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2	2	1.9	4.2	2.1	24	
3	2	2.2	2.2	2.1	2	2.3	2	2	IZS	2	2.1	2.1	2.1	2	2	2	2	2.1	2	2.1	3.1	2.4	2.7	7.3	7.3	7.3	2.4	24	
4	2.9	2.8	3	3	3.3	3.4	4	IZS	3	2.3	2.3	2	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.1	2.4	2.5	4	2.4	24	
5	2.6	2.7	2.7	7.1	10.9	2.7	IZS	2.4	2.4	2.1	2.2	4.5	2	2.8	2	2	1.9	1.9	1.9	1.9	1.9	9.2	10.8	6.5	9.5	10.9	4.1	24	
6	8.6	18.4	10.9	11.4	13.2	IZS	8.6	4.6	3.5	2.4	2.3	2.1	2.2	2.1	2.1	2	2	1.9	1.9	1.9	2	2	5.3	4.9	8.2	18.4	5.3	24	
7	5.5	2.8	5.1	2.5	IZS	14.6	3	2.8	2.2	2.2	2.1	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2	2	2.1	5.3	5.7	1.9	14.6	3.3	24	
8	3.3	2	2.1	IZS	1.9	2.1	2	2	2	1.9	2	2.2	1.9	2	2	1.9	1.9	1.9	2.5	2	2.1	2.1	14	9.1	14	2.9	24		
9	3.4	13.1	IZS	10.4	9.5	2.3	2.2	3.5	3.6	2.8	2.3	2	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.2	7.9	3.3	12.9	10.4	13.1	4.6	24		
10	12.1	IZS	3.3	3.7	3.8	4.2	2.8	3.3	C	C	C	C	C	7.7	12	11.7	14.2	6.2	1.9	1.9	1.9	2.5	19.5	10	21	21	7.9	24	
11	IZS	5.2	21.8	7.3	16.3	2.8	2.4	2.4	4.1	2.3	3.4	2.9	3.4	3	3.1	1.8	3.8	1.9	1.9	1.9	2.8	6.3	3.8	IZS	21.8	4.8	24		
12	12.5	3.7	3.3	8.6	10.6	11.7	14.1	5.2	5.7	3.2	2.5	2.4	1.9	1.9	2.2	1.8	1.8	1.9	1.9	1.9	1.9	1.9	1.9	IZS	1.9	14.1	4.5	24	
13	1.9	2	1.9	2	2	2	2	1.9	2	2.1	2.2	1.9	2	1.9	1.9	2.1	2	2.2	2	2.5	2.2	IZS	2	2	2.5	2.0	24		
14	2	2	2	2.1	2.1	2	2	2.1	2	2	2.2	2	2	2	2	2	2.1	2.2	2.1	2.4	3.1	IZS	2.2	2.4	2.7	3.1	2.2	24	
15	3.1	2.7	9.7	5	2.5	4.6	6.7	6.4	5.9	4.2	3.7	2.6	5	3.3	9.9	5.3	4.2	4.6	7.1	IZS	2.2	8.8	9.7	12.1	12.1	5.6	24		
16	5.9	9.1	9.4	3.6	10.4	10	10.8	8.6	5.3	3.9	2.9	3.1	2.5	2.6	2.2	2.4	3.9	5	IZS	5.2	2.1	2.4	2.3	2.2	10.8	5.0	24		
17	2.5	2.6	2.7	2.7	2.4	2.9	19.9	18.3	3.8	3.3	3.4	2.8	2.3	2	2	2.5	2.4	IZS	1.9	2	3.2	6.7	7.1	7.8	19.9	4.7	24		
18	6.8	11.8	7.4	6.9	5.1	6.8	5.5	4.8	2.5	2.6	2.3	2.1	2.2	2.3	2.3	2.2	IZS	2	2.3	5	5.3	4.6	5.3	8.3	11.8	4.6	24		
19	6.3	6.2	6.5	4.5	7.2	7.3	5.2	5.1	3.2	M	M	2.3	3.1	2.3	2.3	IZS	2	1.9	2	2	2.1	2.1	2.1	2.1	2.1	7.3	3.7	22	
20	2.2	2.1	1.9	1.9	1.9	2	2	2.1	2	1.9	1.9	1.9	1.9	1.9	IZS	1.9	1.9	1.9	1.9	1.9	2.1	5.1	2.7	7.4	9.5	9.5	2.7	24	
21	10.6	7.5	6.1	4.6	2.9	4.5	7	7	8.1	4.5	3.7	3.7	3.2	IZS	3.3	3	3	2.9	2.8	3.6	4.7	7.8	3.4	2.6	10.6	4.8	24		
22	8	6.6	3.3	9.9	4.1	5.3	5.5	3.5	3.6	3.4	3.1	3.8	IZS	3.3	4.5	6.3	23.4	18.4	24.1	6.8	3.4	3.2	8.3	3.3	24.1	7.2	24		
23	2.5	2.3	2.2	2.2	2	2	2.1	2.1	2.1	2.1	2	IZS	1.9	2	2	1.9	1.9	1.9	2.1	2	2.1	2.1	2.1	2.1	2.1	2.5	2.1	24	
24	2.2	2.2	2.2	2.3	2.4	2.2	2.1	2.1	2.1	3.1	IZS	2	2	2	4.1	3.1	2	2.1	2.6	3.5	7.2	3.1	2.9	10.5	10.5	3.0	24		
25	7.7	37.8	54.1	9.7	9.9	8.4	8.1	2.7	2.4	IZS	2.3	2.1	2	1.9	1.9	2	2	2	2	2.1	8.9	45.5	15.1	5.6	54.1	10.3	24		
26	4.3	3.4	4.3	3.5	3.3	2.8	3.3	3.3	IZS	2.4	2.3	2.4	2.3	C	C	C	2.3	2.4	2.3	2.8	2.2	2.4	2	1.8	4.3	2.8	24		
27	1.9	1.8	1.7	1.7	1.7	1.7	1.7	IZS	1.8	1.8	1.8	1.9	1.8	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	24	
28	1.9	1.9	1.9	1.9	1.9	1.9	IZS	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.8	1.9	1.9	2	2	2.1	2.1	1.9	24		
29	2.1	2.2	2.1	2.2	2.4	IZS	2.3	2.3	2.1	2.7	3.5	3.1	2.9	2	4.4	3.9	4.5	21	6.5	8.1	7.4	7.7	7	6.8	21	4.7	24		
30	2.8	7.4	7	7.7	IZS	4.8	5.1	4.7	3.9	4.6	5.7	3.6	5	4.1	3.7	5.3	2.1	2.8	6.8	11.7	7.3	7.7	9.5	10.6	11.7	5.8	24		
31	14.3	21.9	8.8	IZS	31.4	8.6	6.9	6.1	2.5	2.4	2.1	2.6	2	1.9	1.9	1.9	2.6	6.5	4.5	3.4	5.6	5.1	7.4	9.4	31.4	6.9	24		
HOURLY MAX	14	38	54	11	31	15	20	18	8	5	6	5	6	10	12	12	23	21	24	12	9	46	15	21					
HOURLY AVG	5.0	6.6	6.6	4.7	6.0	4.6	5.0	4.1	3.2	2.7	2.6	2.5	2.5	2.5	2.7	3.0	2.9	3.5	3.7	3.4	3.1	3.8	6.0	5.8	6.1				

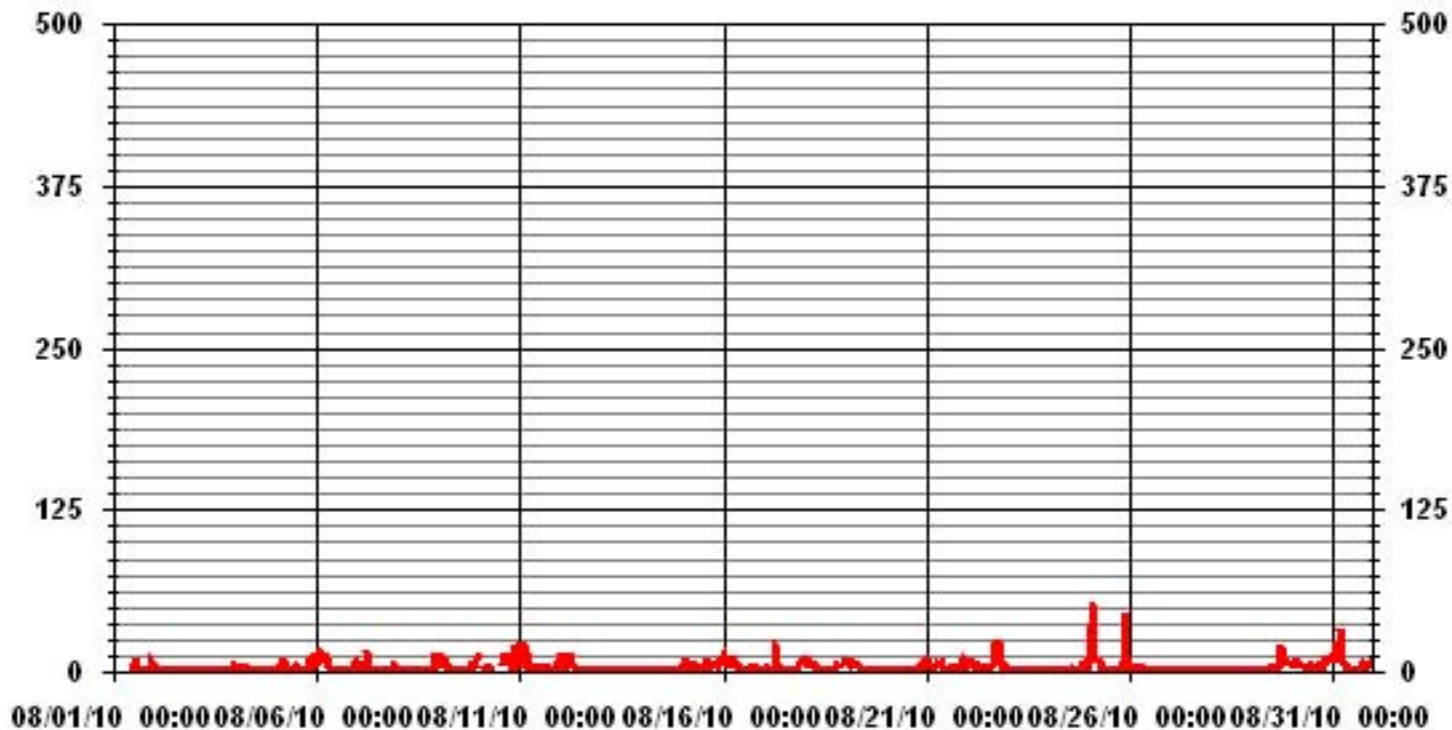
**STATUS FLAG CODES**

S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	-MAINTENANCE
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE

**MONTHLY SUMMARY**

NUMBER OF NON-ZERO READINGS:	692					
MAXIMUM INSTANTANEOUS VALUE:	54.1	PPB	@ HOUR(S)	2	ON DAY(S)	25
IZS CALIBRATION TIME:	32	HRS	OPERATIONAL TIME:	732	HRS	
MONTHLY CALIBRATION TIME:	8	HRS				
STANDARD DEVIATION	4.54					

### 01 Hour Averages



— LICA33 THCMAX PPM

LICA33  
 THC / WDR Joint Frequency Distribution (Percent)

August 2010

Distribution By % Of Samples

Logger Id : 33  
 Site Name : LICA33  
 Parameter : THC  
 Units : PPM

Wind Parameter : WDR  
 Instrument Height : 10 Meters

	Direction																
Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 3.0	2.01	2.58	3.45	3.88	4.74	2.87	4.17	5.46	2.58	2.44	8.77	7.48	12.80	12.23	8.20	4.46	88.20
< 10.0	.28	.71	1.15	1.29	1.87	1.72	2.01	.43	.43	.14	.14	.71	.28	.14	.14	.14	11.65
< 50.0	.00	.00	.00	.14	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.14
>= 50.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
Totals	2.30	3.30	4.60	5.32	6.61	4.60	6.18	5.89	3.02	2.58	8.92	8.20	13.09	12.37	8.34	4.60	

Calm : .00 %

Total # Operational Hours : 695

Distribution By Samples

	Direction																
Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 3.0	14	18	24	27	33	20	29	38	18	17	61	52	89	85	57	31	613
< 10.0	2	5	8	9	13	12	14	3	3	1	1	5	2	1	1	1	81
< 50.0				1													1
>= 50.0																	
Totals	16	23	32	37	46	32	43	41	21	18	62	57	91	86	58	32	

Calm : .00 %

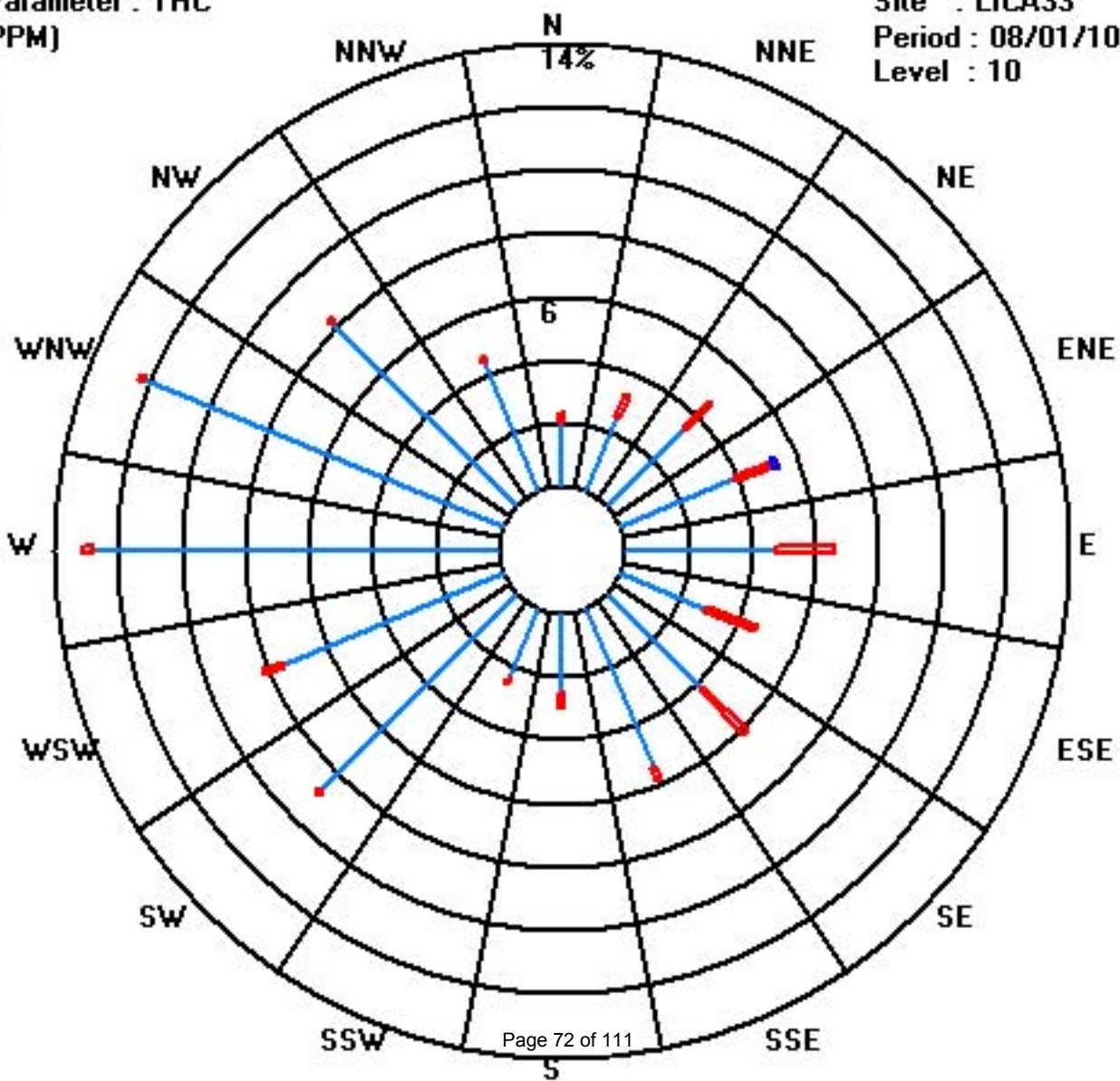
Total # Operational Hours : 695



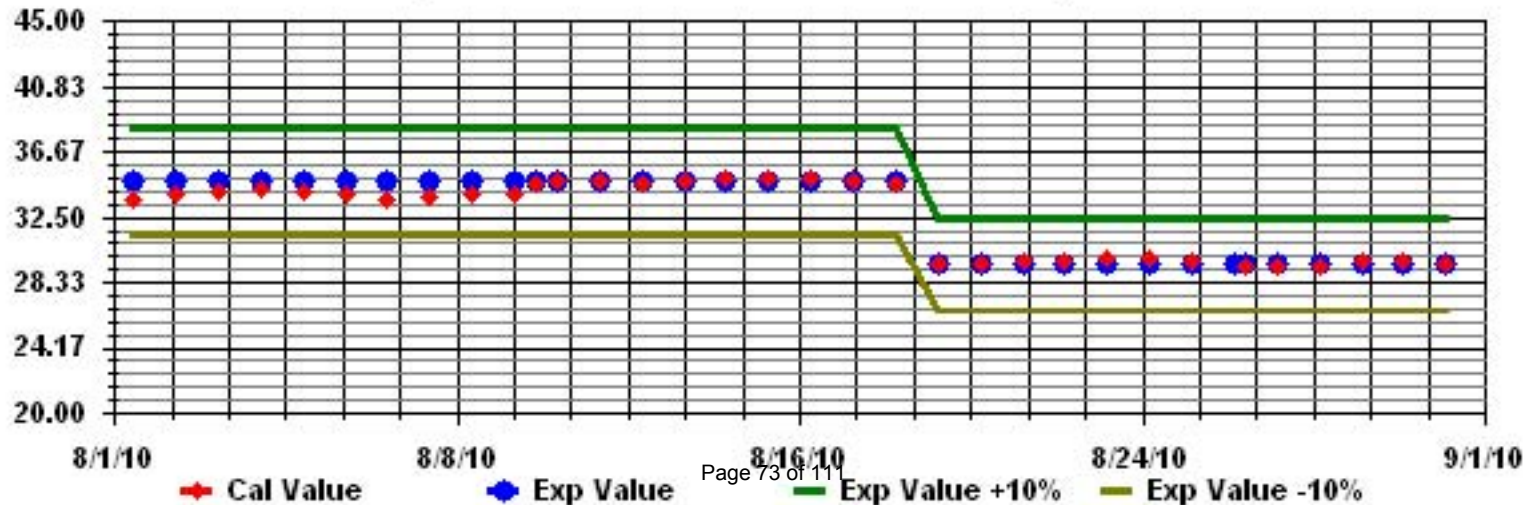
Class Limits (PPM)

Period : 08/01/10-08/31/10

Level : 10



Calibration Graph for Site: LICA33 Parameter: THC Sequence: THC Phase: SPAll



# Vector Wind Speed

# LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - PORTABLE SITE

AUGUST 2010

## VECTOR WIND SPEED (WS) hourly averages (km/hr)

MST		0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR		
HOURLY MAX	HOURLY AVG	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.	
DAY																													
1		3.4	1.9	3	4.4	3.5	5.9	2.2	2.9	1.7	3.5	3.4	4.6	3.1	3.1	1.1	4.9	5.6	3.5	3.4	3.2	3.7	3.7	1.6	1.6	5.9	1.6	24	
2		6.4	5	7.9	9.5	5.8	6.8	12.8	17.3	15.9	14.6	14.8	14.9	17.3	15.2	15.9	14.3	15	16.7	13.3	9.9	6.8	7.2	10.6	7.5	17.3	11.1	24	
3		10.8	8.7	9.7	10.3	10.6	11.2	12.3	10.3	10	13.5	13.8	12.3	12	14.1	14.2	13.6	13.1	10.5	7.6	6.2	4	6.1	4.9	2.2	14.2	9.6	24	
4		3.8	2.6	3	3	3.2	4.2	3.7	5.3	6.8	8	11.9	11.9	13.7	12.9	16.1	14.5	12.8	11.2	10	4.9	5.1	6.1	7.3	5.8	16.1	7.6	24	
5		7.5	3.7	6.3	4	2.8	5.2	4	3.4	1.4	2.4	3.8	3.6	5.5	6	5.3	5.1	3.5	7.5	6.3	4.4	1.2	2.9	3.9	3.7	7.5	4.3	24	
6		3.6	3.7	3.5	3.3	4.4	5.8	6	7.8	8.4	10.9	11.5	15.4	17.5	13.2	16.9	17.6	15.4	10.1	7.1	7.1	8	4.1	2	3.2	17.6	8.6	24	
7		6	4.2	0.9	4.8	6	3.1	3.3	6.1	5.5	6.2	7.7	9.5	10.3	12.7	13.8	12.3	12.1	9.5	4.5	1.8	5	2.7	4.5	9.1	13.8	6.7	24	
8		3.5	4.9	4.8	7.3	12.3	4.8	2.1	5.1	6.4	7.6	5.9	4.9	4.6	8.9	11.5	8.5	12.3	6.7	5.3	5.8	5.7	7.4	1.8	0.7	12.3	6.2	24	
9		3.9	2	1.4	2.4	5.5	5.4	5.7	3.2	2.1	2.9	5.2	6.1	6.3	9.4	7.9	7.8	7.7	6.2	5.4	5.2	3.7	3.8	3.6	3.6	9.4	4.9	24	
10		4.2	5	5.1	5	10.5	9.8	10.3	10.9	3.3	9.1	7.8	10	13.3	12.7	9.1	5.4	4.8	11.4	10.4	1.9	7.9	5.5	5.7	0.8	13.3	7.5	24	
11		2.5	0.9	0.8	1	0.9	1.7	1.3	2.1	1.8	1.4	5.4	7.9	4.7	3.5	6.2	11.8	5.8	4	5.5	3.1	5.3	2.6	1.5	1.9	11.8	3.5	24	
12		1.1	1.7	2.4	1.3	1	0.9	1.3	6.1	1.9	6.9	3.2	5.1	8.7	4.7	10.3	14.7	16.8	13.6	11.6	11.8	12.8	12	13.9	13.8	16.8	7.4	24	
13		12.4	8.7	7.4	7.6	8.6	8.3	11.4	10.2	12.8	13	12.2	14.8	17	18.6	18.1	15.2	15.9	12.9	11.1	10.3	7.4	10.1	10.3	11.3	18.6	11.9	24	
14		10.9	10.9	9.5	7.9	10.1	11.6	13.3	12.2	14.2	14.7	15.8	13.1	16.2	16.9	17.1	17.1	13.7	15.1	7.2	5.9	5	4.7	5.6	4.9	17.1	11.4	24	
15		3.1	4.8	1	2.7	2.3	1.5	3.4	3.1	6.3	6.9	5.3	5.8	4	2.6	5.7	9.6	9.7	7	4.9	2	5.3	1.9	0.4	1.3	9.7	4.2	24	
16		2.2	0.2	3	0.6	1.3	2.7	3.9	5.6	6.6	9.4	7.2	8.3	8.4	9.3	10.4	9.4	8.1	11.5	12.4	7	3.5	6.3	9	7.8	12.4	6.4	24	
17		6.8	5.6	6.6	7.4	9.2	7.2	6.2	6	3.2	1.3	2.1	2	3.4	4.7	3.9	3	6.1	5.4	5.8	2.4	2.8	1.2	1.2	1.5	9.2	4.4	24	
18		2.8	1.2	2.5	3	4.7	3.8	4.6	6.8	8.5	9.2	13.2	13.4	13.4	11.4	12.6	14.2	15.2	12.9	10.5	7.8	7.9	8.3	6.5	6.4	15.2	8.4	24	
19		7.5	7.8	7.2	3.9	5.3	2	6.8	1.4	5.8	9	2.2	10.9	14.5	12.7	11.4	11	15.1	9.5	6.3	6.9	8.4	9.7	10.1	9.4	15.1	8.1	24	
20		8.5	7.4	9.8	7.6	6.6	7.1	7.4	8.7	15.6	19.6	16.7	15.6	15.2	14.2	14	12.7	10	10.6	6.7	2.8	2.1	1.4	2	0.8	19.6	9.3	24	
21		1	0.4	2.2	6.2	8.7	2.5	2	6.5	5.2	7.5	12.1	14.1	16.1	15.7	16.1	16.7	18.5	17.4	15.7	12	7.1	7	8.6	7.4	18.5	9.4	24	
22		6.2	8.9	9.6	5.3	0.5	5.5	4.8	6.6	10.3	8.9	7.5	6.2	2.6	4.8	2.8	2.2	1.5	1.2	1.4	1.8	0.8	2.7	2.7	4.7	10.3	4.6	24	
23		5.3	8.5	9.7	11.5	11.9	11.2	13.4	13.4	16.1	16.5	17.2	14.1	16.3	19.3	19.9	18.2	20.3	20.6	16.8	12	12.8	10.1	10.9	10.8	20.6	14.0	24	
24		8.8	8.6	7.8	6.7	4.4	6.1	5.4	3.8	1.3	3.1	5.5	4.6	4.9	4.7	1.7	2.7	5.3	5.2	3.8	4.5	4.4	4.8	4.1	3.1	8.8	4.8	24	
25		5	3	2.4	3.2	3.8	6.5	4.6	6.4	7.9	6	9.3	11.9	12.3	10.1	8.4	9.3	9.7	7.2	6.1	2.9	0.4	1.3	3.6	4.8	12.3	6.1	24	
26		3.8	9.2	9.8	12.2	13.8	18	11.9	16.8	21.9	27.6	<b>29.5</b>	27.8	25	23.4	25.5	25.1	24.7	22.9	19.5	17.6	24.8	16.1	12.7	14.8	<b>29.5</b>	<b>18.9</b>	24	
27		14	13	17.4	18.5	15.5	15.1	15	18.8	18.3	17.9	15.3	20.6	20.4	20.7	21.8	21.8	17.7	17	9.6	8.9	10.9	12.6	13.5	16.9	21.8	16.3	24	
28		12.2	13.5	13.7	12.4	16	21.8	13.8	15.7	16.4	21.3	20.3	22.1	23	21.9	20.8	19.9	15.8	15.9	14.8	11.5	13	9.9	8.6	5.1	23.0	15.8	24	
29		5.7	6.3	3.5	4.7	5.6	4.4	4.5	6.1	6.5	8.4	9.4	6.4	6	7.8	7.6	4.2	1.2	7.6	4.7	3.5	5.1	5.3	5.1	5.5	9.4	5.6	24	
30		5	4.3	6.2	5.6	4.6	6.5	6.9	7	6.3	7.5	4.9	2.5	3.3	5.7	9.3	5.7	9.7	6.3	3.5	2.9	1.2	0.8	2.4	1.2	9.7	5.0	24	
31		1.1	0.9	1.6	1.7	1.2	1.5	1.7	1.6	3.4	2.4	5.2	3.9	4.4	6.2	9.8	8.2	3.9	3.6	0.8	7.4	7.4	4.5	3.1	3	9.8	3.7	24	
HOURLY MAX		14.0	13.5	17.4	18.5	16.0	21.8	15.0	18.8	21.9	27.6	29.5	27.8	25.0	23.4	25.5	25.1	24.7	22.9	19.5	17.6	24.8	16.1	13.9	16.9				
HOURLY AVG		5.8	5.4	5.8	6.0	6.5	6.7	6.6	7.7	8.1	9.6	9.8	10.5	11.1	11.2	11.8	11.5	11.2	10.3	8.1	6.3	6.4	5.9	5.9	5.6				

### STATUS FLAG CODES

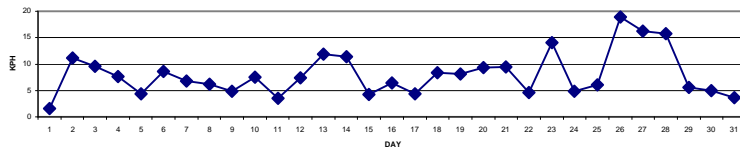
S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	- MISSING DATA
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE

LAST CALIBRATION: September 24, 2009

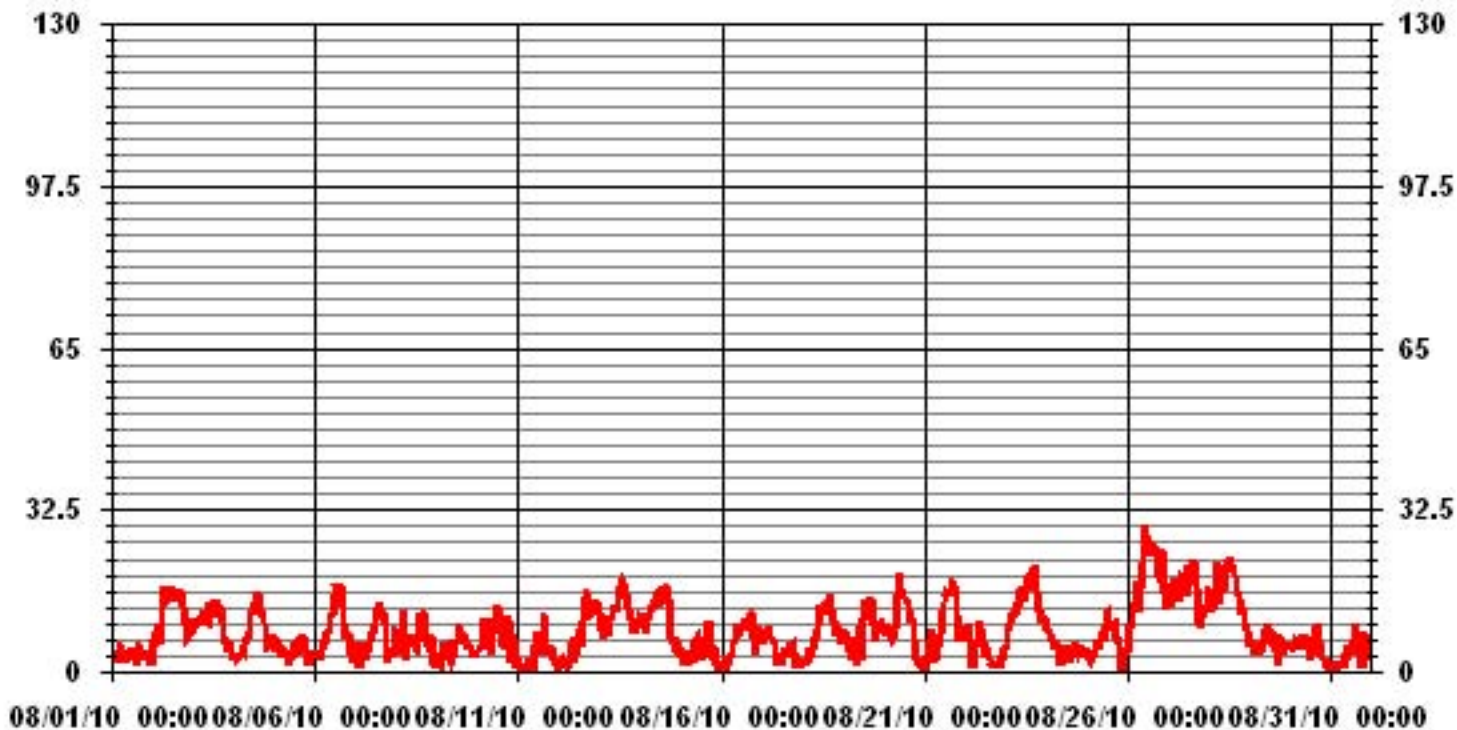
### MONTHLY SUMMARY

MAXIMUM 1-HR AVERAGE:	29.5	KPH	@ HOUR(S)	10	ON DAY(S)	26
MAXIMUM 24-HR AVERAGE:	18.9	KPH			ON DAY(S)	26
CALMS (≤ 0 KPH)	0.13	%	OPERATIONAL TIME:	744	HRS	
MONTHLY CALIBRATION TIME:	0	HRS	AMD OPERATION UPTIME	100.0	%	
STANDARD DEVIATION:	5.43		MONTHLY AVERAGE	8.08	KPH	

24 HOUR AVERAGES FOR AUGUST 2010



### 01 Hour Averages



— LICA33 WSP KPH

**LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - PORTABLE SITE**

AUGUST 2010

**VECTOR WIND SPEED MAX instantaneous maximum in km/hr**

MST	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY
HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	MAX.
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	
DAY																									
1	6.4	6.4	6.1	7.7	6.9	11.4	6.5	7.8	6.1	8.7	11.1	14.3	14.1	13	9.1	9.8	10.3	8	6.9	7	7.1	5.8	4.9	8.1	14.3
2	11.7	10.1	17	16.1	13.2	15.3	20.2	30.5	29	26.6	27.6	30.1	29.6	31.4	31.7	28.6	30	29.9	24.9	21.5	15.6	15.9	19.4	16.5	31.7
3	16.8	14.2	20.2	20.5	20.9	25.8	20.9	18.6	22.9	28	27.8	23.4	28	28.3	29.6	28.2	29.2	20.6	15.1	9.9	10.1	8	7.9	8.2	29.6
4	7	5	6.9	4.8	5.5	5.4	7.4	9.5	10.9	17.5	22.8	25.2	24.9	24.6	26.1	26.8	23.5	22.4	20.5	9.3	10.4	12	11	9.9	26.8
5	11.9	7	9.1	12.9	6.1	8	7.6	7.3	5.7	8.8	14.4	13.7	16.4	19.9	20.8	10.9	11.4	13.9	10.2	8.6	4.5	5.3	6.6	5.6	20.8
6	5.2	6	5.7	6.3	6.2	8.5	9.7	12	15.4	20.3	21	27.6	29	23.5	30	28.3	25.7	19.8	15.5	13.7	13	8.1	9.2	8.1	30
7	12.6	10.1	8	12.6	14.3	8.3	8.4	12.3	16.2	13.6	19	21.1	24	28.4	29	24.8	26.3	21.4	11.7	5	7.5	7.5	23.2	23.3	29
8	10.4	15	20.3	22.2	26.5	14.8	5.8	11.6	13.8	15.3	14.2	13.4	14.9	18.7	20.4	21.2	24.4	14.4	10.8	8.2	7.7	10.2	6.5	3.6	26.5
9	7.5	7.1	5.7	15.7	11.1	12	10.8	10.5	8	8.8	11.1	17.8	16.8	27.2	21.6	19.9	16.5	15.6	13.4	7.6	6.2	6.2	6.3	7.6	27.2
10	7.4	9.5	19.4	17.7	19.4	18.5	20.2	26.1	7.2	13.9	16.3	22.7	20	22.9	18.8	13.3	7.9	27.4	22.1	25.6	14.5	9.6	11.9	3.8	27.4
11	6.5	5	4.4	6	6.1	6.8	4.8	5.4	7.2	8.9	14.5	15.2	12.4	12.2	43.6	44.1	17.5	8.9	10	7.5	9.7	10.2	5.9	6.1	44.1
12	5.2	5.7	5.1	4.5	6	6.4	6.2	13.6	15.3	16.1	10.5	15.5	32.7	13.2	34.6	30.7	33.9	31.1	26.1	20.3	22.4	23.5	25.7	23.5	34.6
13	20	16	16.5	14.2	16.8	15.9	22	19.5	29.8	29.1	26.1	28.8	32.3	38.4	35.2	30.5	32.5	42.6	25.8	23.4	19.8	20	19.8	22.2	42.6
14	21.4	21	18.6	14.9	20.1	23.2	20.4	28.1	27.7	28.1	33.6	27.9	29.9	36.6	35.4	38.3	32.6	33.4	15.8	10.7	10.5	8.3	6.7	6.1	38.3
15	5.9	6.7	3.9	7.1	5.6	5.2	7.7	11.1	11.8	14.4	15.7	16.4	13.9	26.5	22.7	24.9	30.2	12.4	12.6	8.2	8.3	5.9	3	5.2	30.2
16	6.1	3.1	6.3	5.7	5.1	5.8	6.4	9	9.7	16.5	16.8	17.4	17.4	19.1	19.7	15.9	20.7	33.5	23.1	17	7.5	13.1	16.5	15.8	33.5
17	15	10.8	12.1	13.7	16.1	15.1	10.5	10.8	9.5	8.4	9.5	9.2	9.2	14.1	15.6	11.9	16.7	11.3	11.9	6.2	5	4.7	4.2	4.3	16.7
18	5.6	4	4.6	5.5	9	8	7.9	10.8	14	17.8	25.8	29.5	25.6	22	24	23.6	25.6	22.3	14.8	10.4	11.2	12.5	10.3	9.2	29.5
19	14	12.6	11.8	11.1	13.4	8.9	18.7	19.7	21.6	24	29.2	19.2	28.5	23	24.3	25.5	26.1	22.5	9.5	9.8	12	14.2	12.8	13	29.2
20	14.3	23.6	22	18.2	16.9	13.7	16.5	21.7	27.6	36.1	33	29.6	31.5	28	48.5	32.9	20	21.2	15.4	7.8	4.6	6.9	4.7	3.2	48.5
21	4	3.5	13.1	11.4	12.7	14.9	10.4	10.7	9.8	13.7	20.9	21.8	24.2	26.1	26.3	25.2	26.8	24.8	25.4	20	13.1	10.9	16.4	11	26.8
22	10.5	15	15.4	11	3	10.1	8.1	16	19.9	17.1	19.1	13.3	11.8	10.1	8.1	6.1	6.9	4.5	5.3	4.7	5.4	10.6	6.7	8.1	19.9
23	8.7	17.7	17.2	17.9	21.2	19.6	23.9	24.2	29.6	27.5	29	25.3	30.1	33.5	34.5	34	33.6	41	29.1	25	23.7	18.7	16.7	18.9	41
24	17.2	16.3	12.9	10.5	9.2	10.7	10.6	9.5	6.7	8.7	10.5	12.8	11.6	9.4	12.3	16.9	15.8	9.5	6.1	6.8	6.4	6.5	6.5	7.5	17.2
25	7.4	6.5	4.2	6.7	8	9.9	7.2	13.7	16.8	16.3	20.9	29.3	22.6	20.5	19.7	18.8	17.2	15.7	9.2	7.4	4	5.1	7.8	20	29.3
26	19.8	15.2	15.8	18.9	20.6	29.5	24.7	26.6	38.2	42.1	41.4	40.6	38.3	35.5	37	37.2	35.4	34.9	35.1	30.2	37.4	33.4	33.6	32.6	42.1
27	28.4	32.5	40	38.2	47.1	41.6	41	40.9	50.7	41.3	46.3	49.3	50.9	48.9	50.6	48.9	<b>53.8</b>	40.9	23.1	19.9	27.2	28	28.1	31	<b>53.8</b>
28	26.4	24.2	24.3	32.2	36.4	42.3	31.5	37.3	41.9	44	44.9	43.2	43.3	42.6	36.3	36	33.8	29.2	26.6	18.9	20.7	17.4	17.9	9.3	44.9
29	11.7	11.1	7.4	8.9	9.3	9.4	8.3	12.4	11	16.5	17.4	15	20.5	15.7	15.6	14	6.1	15	12.8	7.6	8.2	8.4	7.6	7.7	20.5
30	7.4	6.6	10.8	9.6	7.9	9.8	9.4	10.6	10.8	11.1	10.7	10.1	11.4	18.1	14.9	11.4	15.3	11.5	7.7	6	5.2	3.4	5.4	5.1	18.1
31	5.8	5.7	5.1	5	6	5.1	5.5	6.6	8.6	13.4	13.8	14.6	12.7	17.9	23	27.5	12.5	6.5	25.1	15.5	10.7	7.6	7.5	6.6	27.5
PEAK	28.4	32.5	40.0	38.2	47.1	42.3	41.0	40.9	50.7	44.0	46.3	49.3	50.9	48.9	50.6	48.9	53.8	42.6	35.1	30.2	37.4	33.4	33.6	32.6	

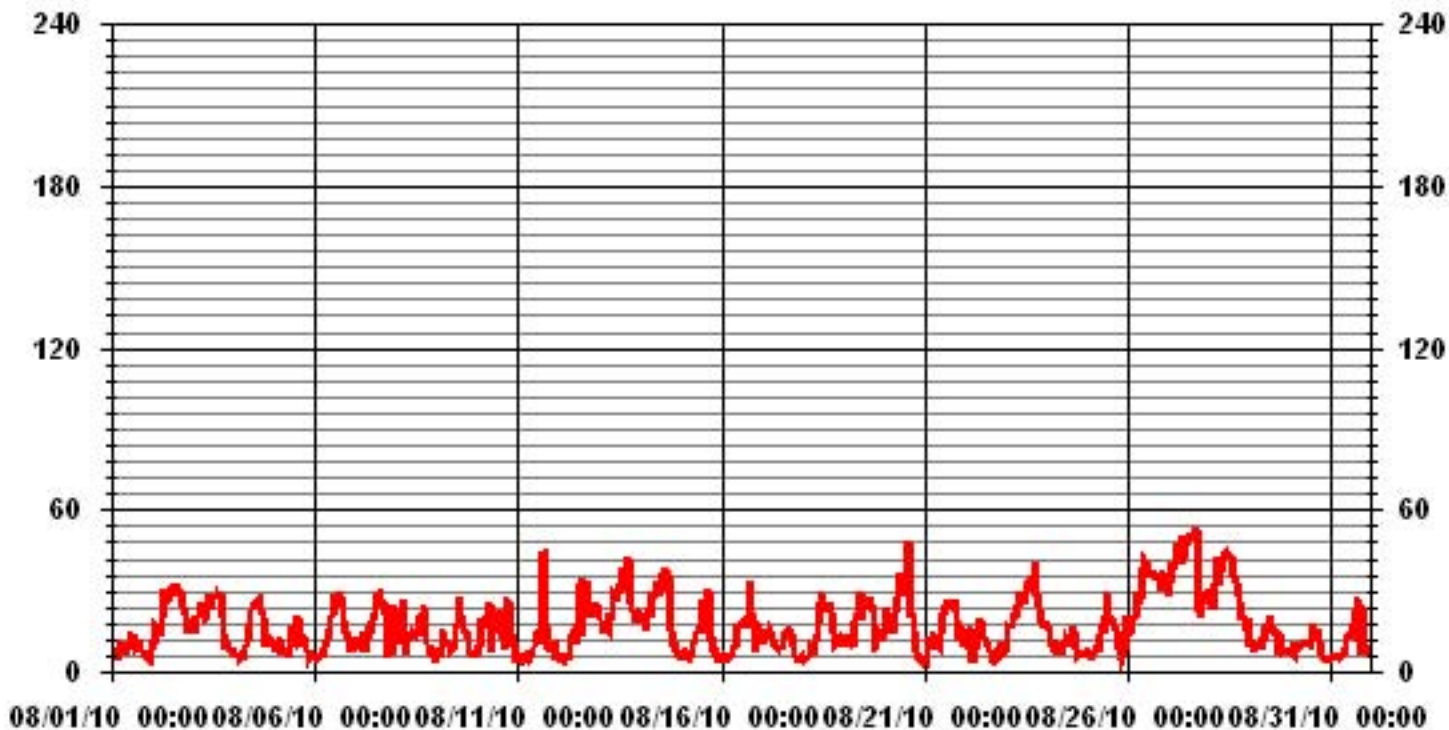
**STATUS FLAG CODES**

S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	- MAINTENANCE
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE

**MONTHLY SUMMARY**

MAXIMUM INSTANTANEOUS READING	53.8	KPH	@ HOUR(S)	16
			ON DAY(S)	27

### 01 Hour Averages



— LICA33 WSMAX KPH

LICA33  
WSP / WDR Joint Frequency Distribution (Percent)

August 2010

Distribution By % Of Samples

Logger Id : 33  
Site Name : LICA33  
Parameter : WSP  
Units : KPH

Wind Parameter : WDR  
Instrument Height : 10 Meters

		Direction																
Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq	
< 6.0	.94	2.15	3.36	2.68	2.41	2.01	3.22	3.09	2.01	2.01	5.51	4.43	3.09	3.49	1.34	1.61	43.41	
< 12.0	1.20	1.07	1.34	2.01	2.41	1.34	1.61	2.28	.80	.67	2.82	2.15	5.24	2.82	3.49	1.47	32.79	
< 20.0	.00	.00	.13	.67	1.20	.67	1.07	.67	.00	.00	.40	1.61	3.76	5.24	3.49	1.47	20.43	
< 29.0	.00	.00	.00	.00	.80	.53	.00	.00	.00	.00	.00	.13	1.07	.67	.00	.00	3.22	
< 39.0	.00	.00	.00	.00	.00	.13	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.13	
>= 39.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	
Totals	2.15	3.22	4.83	5.37	6.85	4.70	5.91	6.04	2.82	2.68	8.73	8.33	13.17	12.23	8.33	4.56		

Calm : .00 %

Total # Operational Hours : 744

Distribution By Samples

		Direction																
Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq	
< 6.0	7	16	25	20	18	15	24	23	15	15	41	33	23	26	10	12	323	
< 12.0	9	8	10	15	18	10	12	17	6	5	21	16	39	21	26	11	244	
< 20.0			1	5	9	5	8	5			3	12	28	39	26	11	152	
< 29.0					6	4						1	8	5			24	
< 39.0						1											1	
>= 39.0																		
Totals	16	24	36	40	51	35	44	45	21	20	65	62	98	91	62	34		

Calm : .00 %

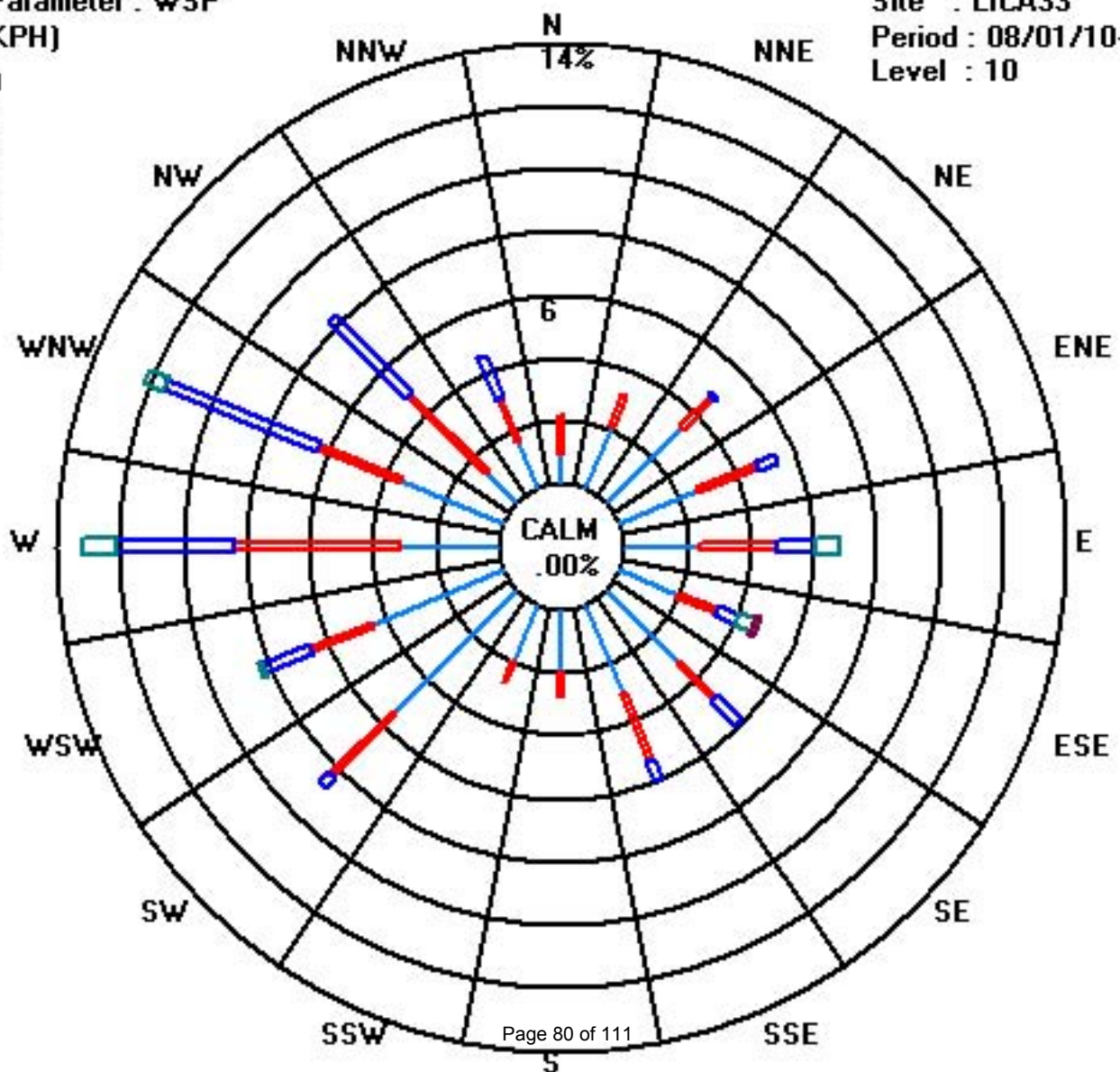
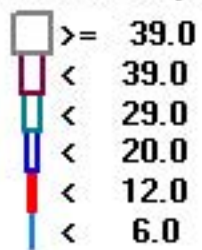
Total # Operational Hours : 744



Class Limits (KPH)

Period : 08/01/10-08/31/10

Level : 10



# Vector Wind Direction

# LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - PORTABLE SITE

AUGUST 2010

## VECTOR WIND DIRECTION (WD) hourly averages in degrees

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	24-HOUR	24-HOUR AVG	RDGS.
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	AVG.	QUADRANT	
DAY																											
1	287	310	278	284	250	226	255	27	166	147	201	230	286	321	180	27	145	187	216	184	210	244	180	209	227	SW	24
2	219	217	247	283	267	269	284	298	292	297	305	298	286	284	280	279	276	281	279	277	258	261	273	263	280	W	24
3	279	280	323	332	328	321	294	299	314	333	337	320	328	330	318	309	307	314	299	292	304	276	289	296	312	NW	24
4	247	277	245	275	277	245	257	277	288	283	290	292	292	289	292	295	284	275	276	252	255	270	281	280	281	W	24
5	284	289	229	227	226	234	247	272	347	291	272	253	257	231	291	300	272	233	224	224	172	140	145	158	246	WSW	24
6	131	91	69	80	85	74	78	96	129	152	153	147	137	153	143	139	135	149	155	152	142	154	141	24	133	SE	24
7	140	210	233	255	267	33	211	236	259	260	244	243	261	253	256	268	264	274	265	260	218	161	251	294	253	WSW	24
8	282	249	249	219	222	232	283	227	202	205	217	183	194	231	228	249	276	272	252	231	224	227	170	137	232	SW	24
9	243	258	208	209	219	225	244	299	42	155	163	164	189	207	191	179	163	160	165	136	115	94	62	85	179	S	24
10	79	34	321	328	22	51	20	71	68	89	104	100	93	69	70	35	9	233	187	234	19	57	84	105	62	ENE	24
11	250	349	141	234	253	311	187	221	155	209	150	134	138	132	211	211	228	237	215	170	173	170	152	49	188	S	24
12	112	189	205	154	160	214	18	268	329	281	286	273	321	299	310	311	326	324	313	300	297	306	305	299	304	WNW	24
13	296	315	326	306	311	314	323	324	324	332	331	325	329	324	323	326	326	341	313	324	313	317	322	320	322	NW	24
14	317	317	317	309	313	314	297	310	312	316	321	316	313	311	312	326	337	332	341	333	336	310	292	286	316	NW	24
15	286	235	248	222	270	286	96	27	49	73	37	22	69	303	21	328	28	64	57	158	219	262	49	243	20	NNE	24
16	221	52	222	58	122	109	87	91	105	108	148	141	151	162	165	152	108	21	38	35	355	338	355	358	93	E	24
17	2	345	340	340	337	339	345	9	19	23	92	149	221	212	193	216	219	241	224	214	223	155	131	139	309	NW	24
18	128	125	41	130	171	141	113	124	134	139	144	152	152	157	153	141	135	132	121	114	109	107	104	84	133	SE	24
19	99	100	108	147	11	161	59	300	234	143	245	296	282	279	273	275	283	273	229	236	232	226	226	224	251	WSW	24
20	235	254	264	258	255	243	246	268	279	281	282	274	285	274	277	271	276	275	273	264	311	288	334	131	271	W	24
21	45	63	289	131	141	158	47	83	50	64	86	73	89	91	91	94	99	96	102	105	97	63	48	39	89	E	24
22	64	85	95	86	2	32	30	47	91	66	71	70	48	29	36	344	350	49	55	130	159	341	342	314	57	ENE	24
23	283	296	300	285	273	276	291	282	298	285	294	300	295	288	292	292	287	296	292	293	282	274	277	273	288	WNW	24
24	275	268	279	283	262	240	245	250	205	201	225	236	236	230	111	180	211	154	133	119	135	138	143	139	224	SW	24
25	123	111	58	92	110	125	111	150	165	155	177	215	224	242	283	291	303	291	281	257	80	75	110	41	206	SSW	24
26	65	358	77	73	108	113	39	68	89	98	102	107	113	107	104	101	96	95	81	78	91	106	327	306	91	E	24
27	283	259	244	273	261	261	258	267	265	255	258	266	260	255	260	263	262	278	250	246	246	241	230	241	258	WSW	24
28	240	238	238	253	259	274	264	265	265	270	266	279	284	283	296	295	291	286	283	280	281	282	281	259	273	W	24
29	271	276	260	261	288	283	313	347	3	27	37	85	46	11	64	27	337	31	39	69	80	59	49	48	16	NNE	24
30	42	48	79	89	72	82	81	83	92	72	55	59	58	106	96	53	5	7	36	78	90	160	220	353	66	ENE	24
31	318	140	72	332	252	251	116	169	219	238	228	266	283	258	218	171	151	92	76	20	37	12	22	34	235	SW	24
HOURLY AVG	318	358	340	340	337	339	345	347	347	333	337	325	329	330	323	344	350	341	341	333	355	341	355	358			

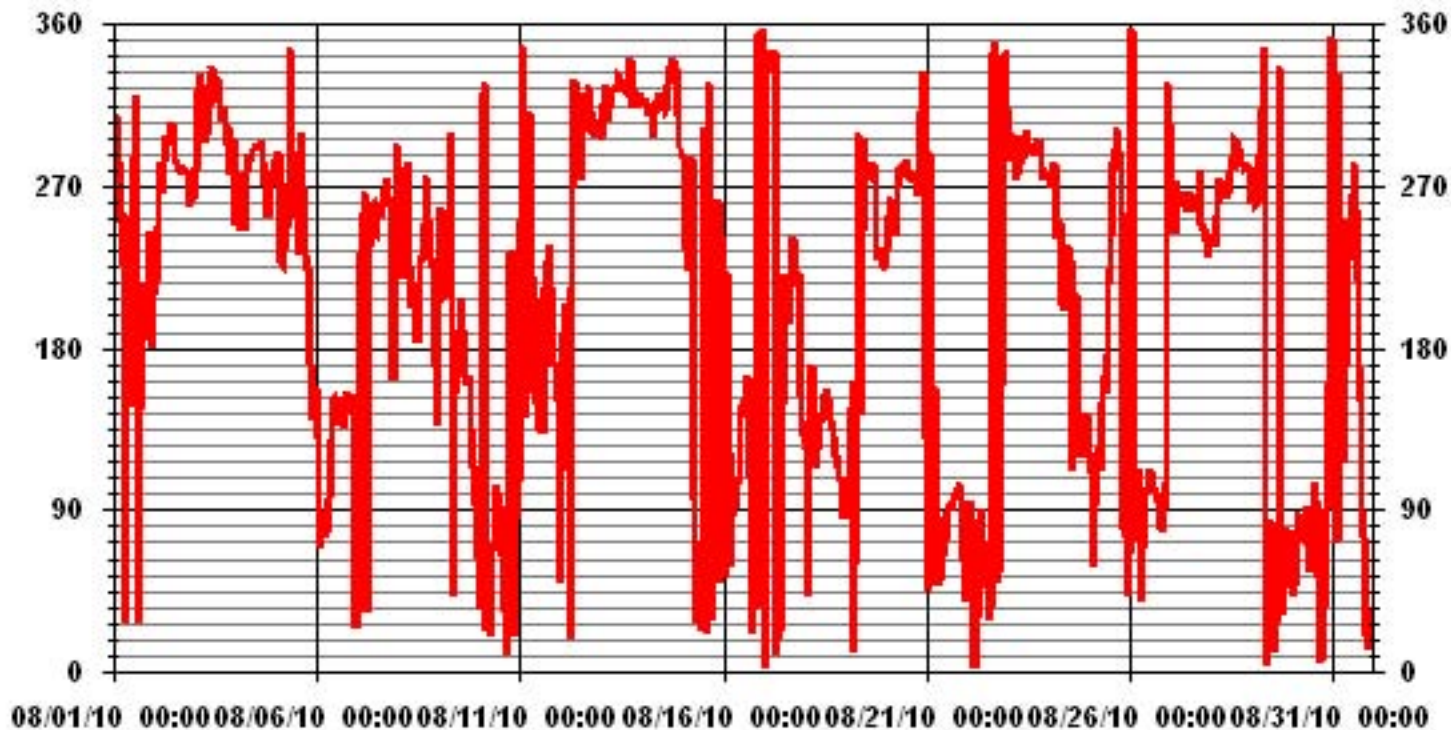
**STATUS FLAG CODES**

S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	- MAINTENANCE
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE

LAST CALIBRATION:	September 24, 2009
DECLINATION :	19 DEGREES FROM MAGNETIC NORTH

MONTHLY CALIBRATION TIME:	0 HRS	OPERATIONAL TIME:	744 HRS
STANDARD DEVIATION	96.40	AMD OPERATION UPTIME	100.0 %
		MONTHLY AVERAGE	282 DEG

### 01 Hour Averages



— LICA33 WDR DEG

# Standard Deviation Wind Direction

# LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - PORTABLE SITE

AUGUST 2010

## STANDARD DEVIATION WIND DIRECTION (STDWDIR) hourly averages in degrees

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00
DAY																								
1	31	45	13	15	30	7	19	37	48	44	39	44	46	52	41	28	18	22	17	16	12	8	29	40
2	16	18	14	9	19	17	9	12	12	13	14	18	13	17	19	18	17	13	13	17	19	17	13	19
3	11	12	15	14	14	13	8	10	14	17	15	14	23	20	19	16	17	16	10	9	12	5	10	29
4	21	23	18	11	9	7	11	14	13	17	17	19	17	18	15	13	16	15	14	19	19	16	7	7
5	9	11	10	16	14	8	19	24	56	38	42	45	39	43	29	24	40	14	8	11	23	16	8	16
6	8	5	7	27	9	5	8	10	16	15	16	15	13	15	13	11	11	14	16	13	6	34	18	23
7	20	24	26	18	19	26	23	16	24	27	24	22	27	22	21	20	21	18	20	15	5	35	33	17
8	26	18	16	19	11	27	37	11	20	22	31	35	32	20	11	17	13	18	15	7	7	5	33	25
9	9	28	34	32	16	20	17	26	42	39	22	25	23	26	27	20	15	15	13	6	10	9	10	11
10	9	18	40	30	17	30	15	15	29	11	38	28	13	13	15	15	11	49	15	18	10	8	10	59
11	37	38	32	42	39	28	31	31	35	55	22	16	40	44	41	22	41	26	16	16	11	22	24	42
12	31	26	16	38	41	44	37	22	43	19	29	30	24	27	23	12	14	14	13	11	9	12	12	10
13	9	12	14	12	12	13	12	13	14	14	14	14	15	14	15	14	14	16	12	15	13	12	13	13
14	12	12	12	11	12	13	10	15	15	16	15	15	17	16	18	16	15	14	16	12	11	12	5	5
15	8	7	30	17	25	56	28	54	14	28	31	35	53	45	32	17	18	14	14	19	7	46	64	20
16	20	50	47	42	16	16	13	10	10	12	22	20	18	18	15	14	16	20	11	15	19	14	14	13
17	13	12	12	13	11	13	13	17	48	53	60	46	36	49	36	49	27	21	12	17	36	41	30	34
18	15	15	19	9	12	17	10	9	9	13	14	14	14	15	15	11	10	9	6	4	5	5	6	8
19	6	6	8	33	39	58	44	46	40	36	32	10	12	13	17	17	12	16	7	6	6	6	3	4
20	14	17	20	21	18	15	18	20	13	13	18	20	22	19	18	19	18	14	12	32	14	17	37	38
21	31	43	35	19	8	44	36	11	12	13	14	13	11	13	13	11	10	7	7	6	7	6	8	9
22	10	8	7	20	35	9	10	14	17	20	20	27	54	25	33	30	52	43	46	28	48	36	28	10
23	13	11	11	9	15	14	9	12	12	10	10	11	10	10	10	11	10	11	9	12	10	11	9	12
24	14	17	9	18	17	14	16	26	44	36	17	22	19	20	53	49	25	11	7	6	9	4	5	16
25	7	23	7	16	15	8	7	16	14	34	23	20	17	21	26	18	13	12	9	19	24	23	26	44
26	37	14	14	11	6	7	18	9	8	8	8	9	10	11	10	8	7	7	7	7	7	34	15	15
27	20	20	16	17	22	22	21	20	21	19	21	20	21	19	19	19	20	16	17	16	15	12	8	13
28	13	12	13	19	20	14	22	21	20	18	19	17	15	15	12	12	12	12	10	11	9	11	10	15
29	19	16	18	16	9	11	12	14	13	19	14	19	39	16	27	24	63	17	19	17	8	5	6	6
30	6	7	6	11	8	7	8	9	17	10	14	48	40	31	13	14	13	10	11	15	31	33	27	42
31	35	59	23	34	35	33	27	32	27	49	29	42	41	27	22	27	16	14	55	17	8	13	16	20

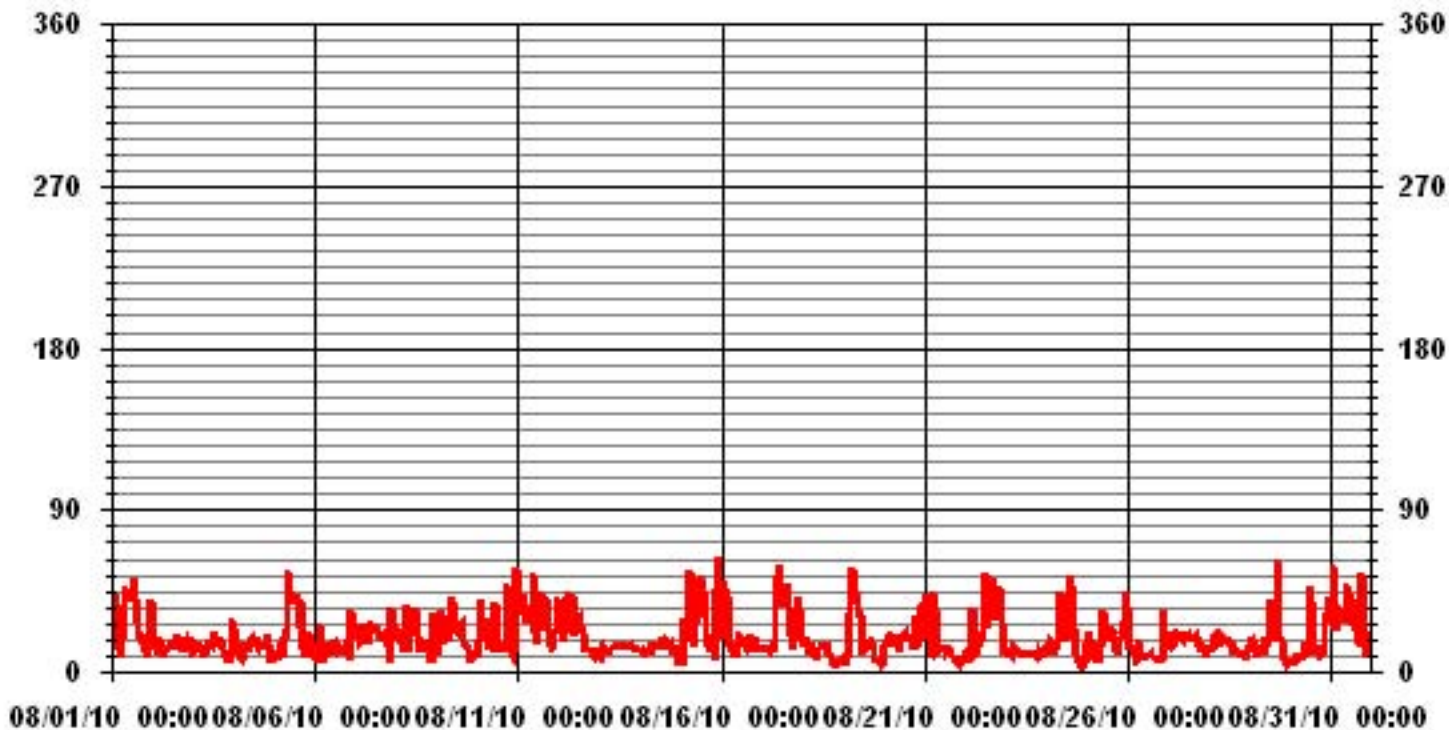
### STATUS FLAG CODES

S - OUT OF SERVICE	IZS - IZS - DAILY ZERO/SPAN CHECK
N - INVALID DATA	M - MAINTENANCE
D - INSTRUMENT DRIFT	P - POWER FAILURE
C - CALIBRATION	NA - NOT APPLICABLE

LAST CALIBRATION: September 24, 2009

CALIBRATION TIME: 0 HRS      OPERATIONAL TIME: 744 HRS

### 01 Hour Averages



— LICA33 STDWDIR DEG

# Calibration Reports



# Sulphur Dioxide

### SO<sub>2</sub> Calibration Report

#### Station Information

Calibration Date	August 9, 2010	Previous Calibration	July 4, 2010
Company	Lakeland Community and Industry Association		
Plant / Location	Portable / Devon Wellsite 13-16-62-5 W4M		
Start Time (MST)	12:21	End Time (MST)	16:36
Reason:	As Found		
Barometric Pressure	NA mmHg	Station Temperature	24 Deg C
Cal Gas	52.2 ppm	Cal Gas Expiry date	19/12/2010
DAS Output Voltage	0 - 10 Volts		

#### Equipment Information

Analyzer Make / Model:	API 100E	S/N :	467	Method:	UV absorbtion
Converter Make / Model:	-	S/N :	-		
Calibrator Make / Model:	API 700	S/N :	831	Method:	Dilution
DAS Make / Model:	ESC 8832	S/N :	AO 717		
Flow Meter:	API 700	S/N :	831		

#### Analyzer Settings

Before Calibration				After Calibration			
Concentration Range	0 - 500			ppb			
Sample Flow / Box Temp	606 ccm	31.9 Deg C		600 ccm	31.7 Deg C		
HVPS / Lamp Setting	604	2688		604	2687		
PMT / RxCell Temp	8.1 Deg C	50.0 Deg C		8.1 Deg C	50.0 Deg C		
Converter / IZS Temp	NA Deg C	45.0 Deg C		NA Deg C	45.0 Deg C		
Offset / Slope	58.8	0.983		62.2	0.942		

#### Calibration Data

Dilution Flow Rate	Source Gas Flow Rate	Calculated Concentration	Indicated Conc. (DAS)	Correction Factor
4998	0	0	2	N/A
4998	0	0	0	N/A
4925	71.9	751	785	0.9568
4925	71.9	751	752	0.9988
4962	38.3	400	399	1.0021
4982	16.3	170	169	1.0073
4998	0	0	0	N/A
Sum of Least Squares				0.9998
New Correction Factor				0.9988

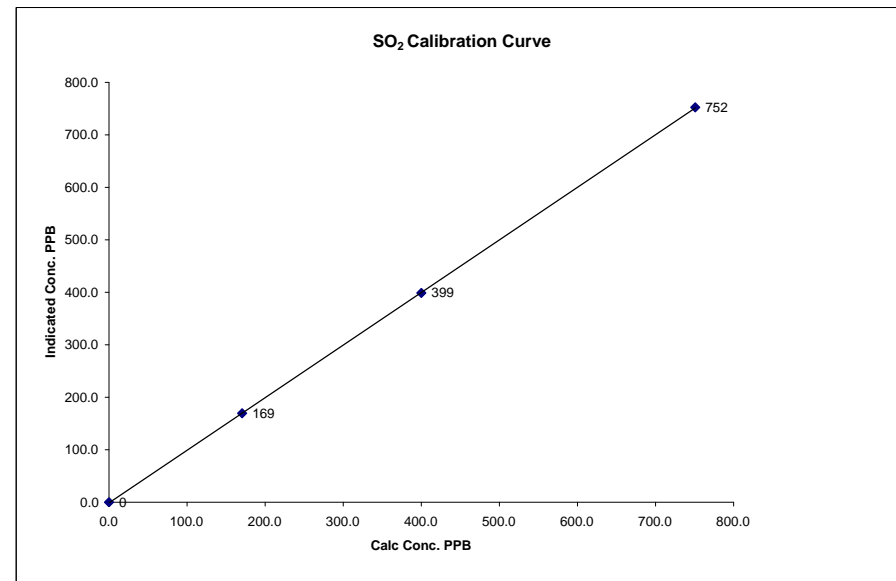
	Before Calibration	After Calibration
Auto Zero	2.5	0.7
Auto Span	378	356
Sample Lines Connected		YES
Percent Change from Previous Calibration		1.1%

Calibration Performed by: Ting Xu

### SO<sub>2</sub> Calibration Curve

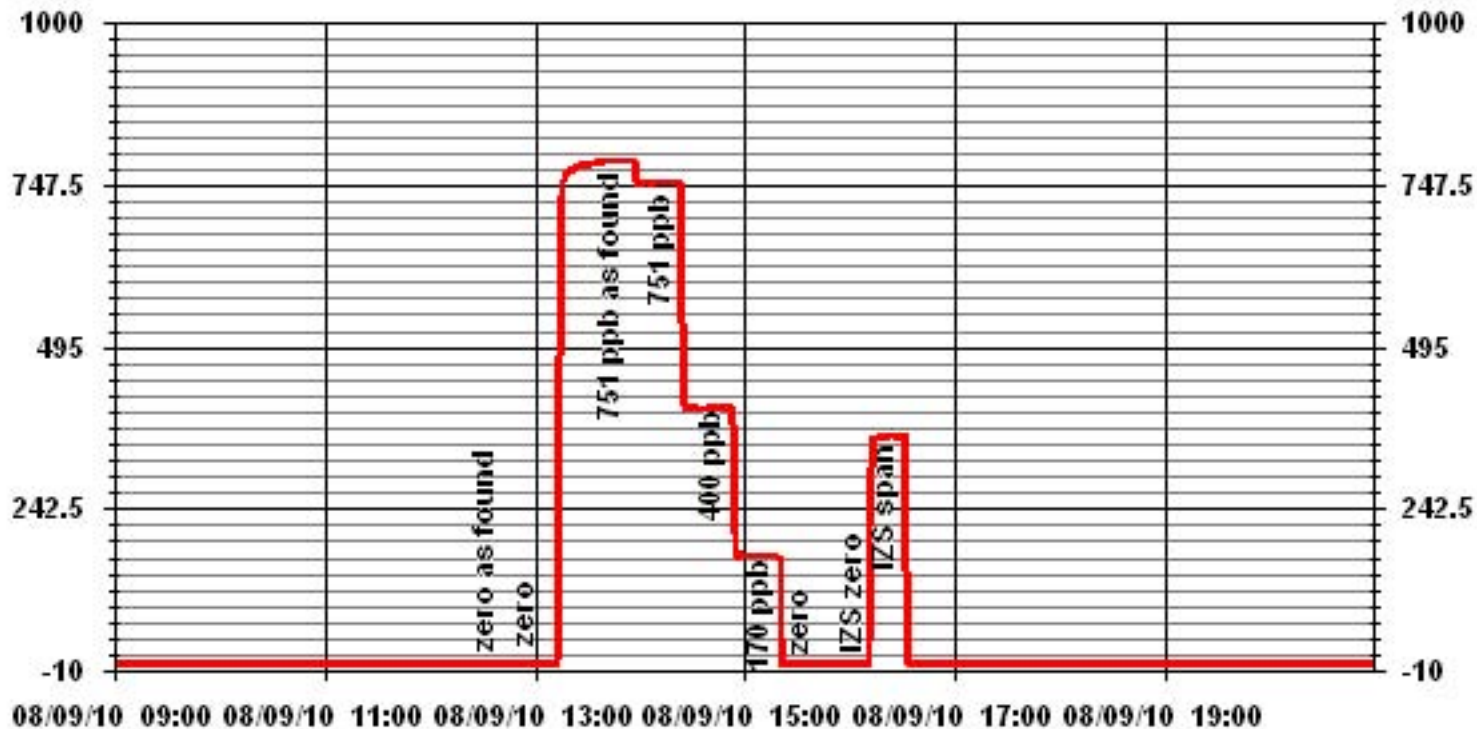
Calibration Date	August 9, 2010
Company	Lakeland Community and Industry Association
Plant / Location	Portable / Devon Wellsite 13-16-62-5 W4M
Start Time (MST)	12:21
End Time (MST)	16:36

Calculated Conc. ppb	Indicated Response ppb	Correction Factor	Correlation Coefficient Slope (≥ 0.995) (0.85 to 1.15)	Intercept (± 3% F.S.)
0	0	n/a	0.999994	1.001634
170	169	1.0073		-0.829510
400	399	1.0021		
751	752	0.9988		



Notes:

### 01 Minute Averages



# Hydrogen Sulphide

## H<sub>2</sub>S Calibration Report

### Station Information

Calibration Date	August 6, 2010	Previous Calibration	July 6, 2010
Company	<b>LAKELAND INDUSTRY &amp; COMMUNITY ASSOCIATION</b>		
Plant / Location	<b>Portable/ Devon Wellsite 13-16-62-5-W4M</b>		
Start Time (MST)	9:05	End Time (MST)	13:11
Reason:	Monthly Calibration		
Barometric Pressure	NA mmHg	Station Temperature	23 Deg C
Cal Gas	10.8 ppm	Cal Gas Expiry date	06/22/2010
DAS Output Voltage	0 - 1 Volts		

### Equipment Information

Analyzer Make / Model:	API 101E	S/N :	509	Method:	Fluorescent
Converter Make / Model:	Internal	S/N :	N/A		
Calibrator Make / Model:	API 700	S/N :	831	Method:	Dilution
DAS Make / Model:	ESC 8832	S/N :	AO717		
Flow Meter:	API 700	S/N :	831		

### Analyzer Settings

		Before Calibration		After Calibration	
Concentration Range		0 - 100		ppb	
Sample Flow / Box Temp	542 ccm	32.6 Deg C	540 ccm	31.1 Deg C	
HVPS / Lamp Setting	528	2465	528	2467	
PMT / RxCell Temp	7.9 Deg C	50 Deg C	7.9 Deg C	50 Deg C	
Converter / IZS Temp	314.3 Deg C	45 Deg C	315.8 Deg C	45 Deg C	
Offset / Slope	47.5	1.006	48.4	0.986	

### Calibration Data

Dilution Flow Rate	Source Gas Flow Rate	Calculated Concentration	Indicated Conc. (DAS)	Correction Factor
4999	0	0	1	N/A
4999	0	0	0	N/A
4963	37	80	82	0.9746
4963	37	80	80	1.0000
4983	18	39	40	0.9718
4988	10.6	23	23	0.9958
4998	0	0	0	N/A
Sum of Least Squares				0.9938
New Correction Factor				1.0000

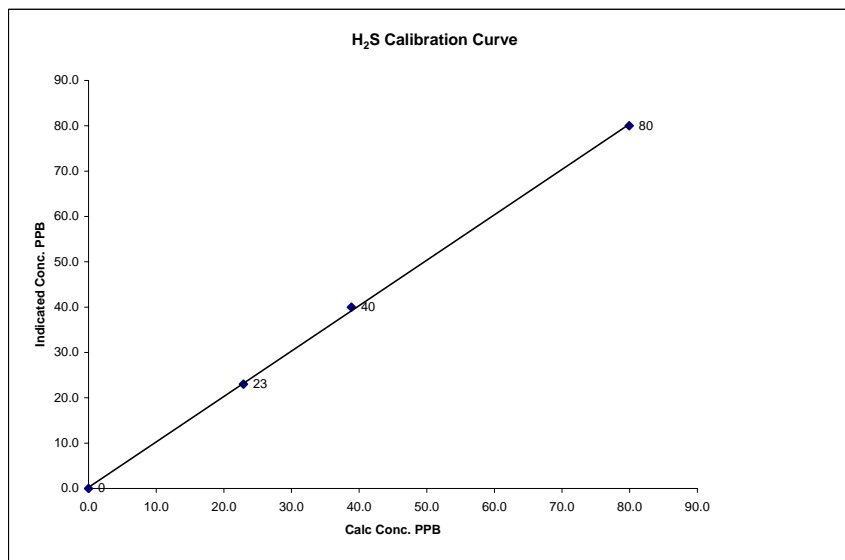
		Before Calibration	After Calibration
Auto Zero		1.2	0.9
Auto Span		60	58
Sample Lines Connected			YES
Percent Change from Previous Calibration			2.6%

Calibration Performed by: Ting Xu

## H<sub>2</sub>S Calibration Curve

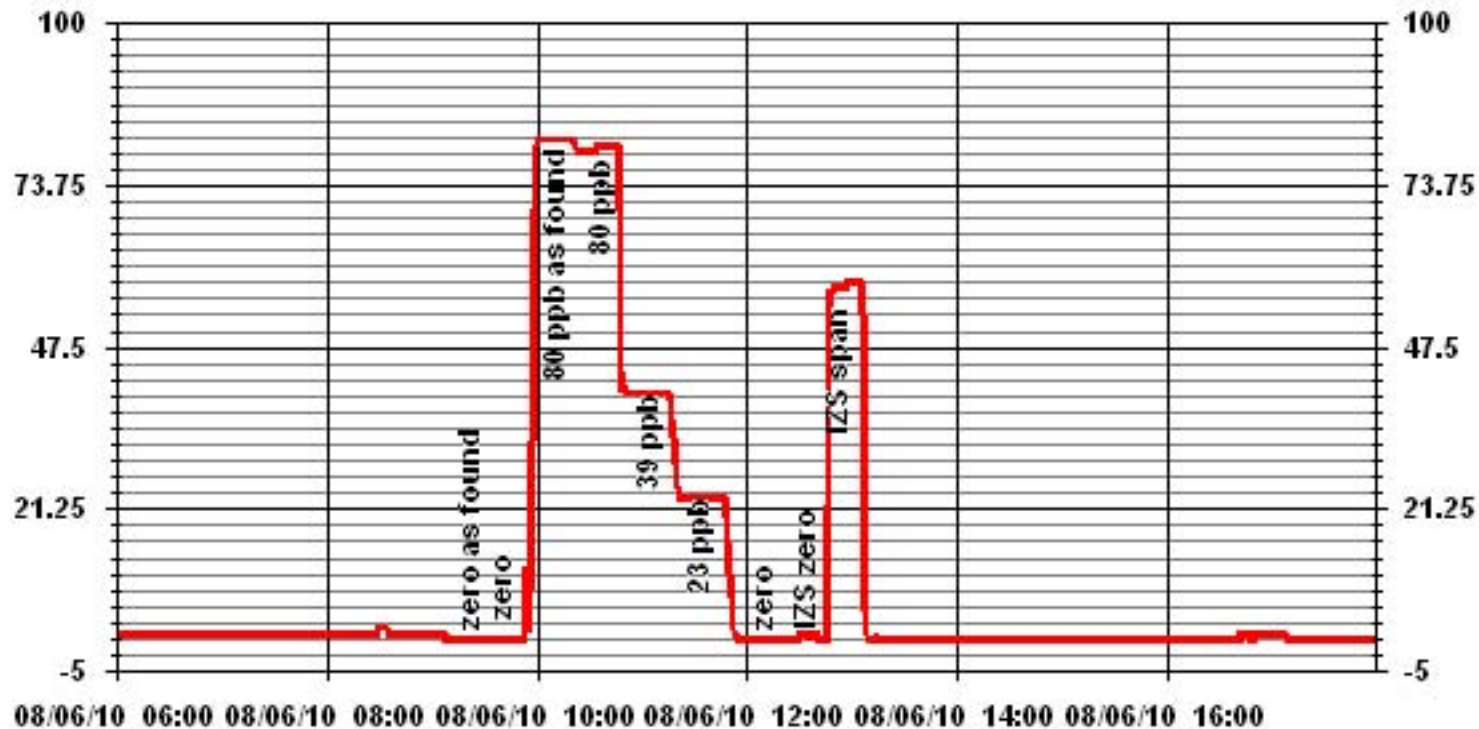
Calibration Date	August 6, 2010
Company	<b>LAKELAND INDUSTRY &amp; COMMUNITY ASSOCIATION</b>
Plant / Location	<b>Portable/ Devon Wellsite 13-16-62-5-W4M</b>
Start Time (MST)	9:05
End Time (MST)	13:11

Calculated Conc. ppb	Indicated Response ppb	Correction Factor	Correlation Coefficient Slope	(≥ 0.995) (0.85 to 1.15)	0.999751
0	0	n/a	Intercept	(± 3% F.S.)	0.261529
23	23	0.9958			
39	40	0.9718			
80	80	0.9990			



Notes:

### 01 Minute Averages



# Particulate Matter 2.5

**TEOM 1405F Audit**

	<b><u>Station</u></b>		<b><u>Audit Transfer Standard</u></b>
Date:	August 9, 2010	Make/Model:	Bios DC-2
Station Name:	Lica Portable (CASA # 33)	Serial Number:	1193
Location:	Devon Wellsite 13-16-62-5 W4M	Cell s/n:	2272
Operator:	LICA	Thermometer s/n:	TOTAL IMM 96-3470

	<b><u>Sampler</u></b>		<b><u>Set-up and current Sampler readings</u></b>
Make/Model	Thermo Scientific Series 1405F	F-Main Set Pt (l/min)	3.00
Unit #	NA	F-Aux Set Pt (l/min)	13.67
Unit s/n	1405A207691003	Filter Load (%)	40.3%
Firmware Ver.	1.51	K <sub>o</sub> Factor	15634.0
Parameter	PM 2.5 (with FDMS)	Temp (°C)	15.0
		Press (ATM)	0.927

**Conversion from mmHg or "Hg to ATM (Atmospheres)**

ATM = (mmHg) X (1.316 X 10<sup>-3</sup>)    or    ATM = ("Hg) X (3.34207 X 10<sup>-2</sup>)

**Note: Tolerances are noted as BOLD in Brackets**

**Audit**

<b>Status</b>			
Noise <b>&lt;0.10ug</b>	0.003	Warnings	None
Pump Vacuum <b>&lt;0.40atm</b>	0.32	Pump Gauge (inHg)	-20
<b>Temperature/Pressure</b>			
Measured Temp ( <b>± 2 °C</b> )	14.5	D °C	0.5
Measured Press ( <b>± 0.01atm</b> )	0.925	DATM	0.002
<b>Flow Audit</b>			
Indicated Main Flow (l/min)	3.00	Main Flow Drift ( <b>±10.0%</b> )	1.47%
Measured Main Flow (l/min)	3.02	Flow Adjusted to Measured?	Yes
Indicated Bypass Flow (l/min)	13.65	Bypass Flow Drift ( <b>±10.0%</b> )	0.72%
Measured Bypass Flow (l/min)	13.72	Flow Adjusted to Measured?	Yes
<b>Leak Check</b>		<b>Instrument Setup</b>	
Main ( <b>&lt; 0.15 l/min</b> )	Base -0.01 Ref -0.02	Flow Control = Active	
Aux ( <b>&lt; 0.6 l/min</b> )	Base 0.00 Ref -0.01	Report Conditions = Standard (25.0 C and 1atm)	
<b>K<sub>o</sub> Factor</b>			
Measured	NA		
K <sub>o</sub> Difference ( <b>± 2.5%</b> )	NA		

**Start Time:** 10:02      **Finish Time:** 11:00

**Sample Inlet Cleaned:** Yes      **New Filters Installed:** Yes  
**New Filter Loading %:** 16.5%

**Comments:** \_\_\_\_\_

**Auditor/s:** Ting Xu



# Nitrogen Dioxide

**NOx - NO- NO<sub>2</sub> Calibration Report**

**Station Information**

Calibration Date	August 6, 2010	Previous Calibration	July 12, 2010
Company	LICA	Plant/Location	Portable/ 13-16-62-5W4M
Start Time (MST)	9:05	End Time (MST)	16:46
Reason:	Monthly Calibration	Other	
Barometric Pressure	NA mmHg	Station Temperature	23 Deg C
Cal Gas Concentration	NOx 51.8 ppm	NO 51.6 ppm	Cal Gas Expiry date 19-Dec-10
DAS Output Voltage	0 - 1	Chart Rec. Output	NA Volts

**Equipment Information**

Analyzer Make / Model:	API 200E	S/N :	593	Method:	Chemiluminescent
Calibrator Make / Model:	EnviroNics 2000	S/N:	1991		
DAS Make / Model:	ESC 8832	S/N :	AO 717		
Chart Recorder Make / Model:	NA	S/N:	NA		
Flow Meter:	EnviroNics 2000	S/N :	1991		

**Analyzer Settings**

Before Calibration				After Calibration			
Concentration Range			0-1000	ppb			
Sample Flow/Conv. Temp	470	ccm	314.6	Deg C	467	ccm	314.3
Ozone Flow / Vacuum	78	ccm	4.9	"Hg-A	78	ccm	4.8
HVPS / A ZERO	634	Volts	5.6	MV	634	Volts	5.3
Rx/ Temp / PMT Temp	50.0	Deg C	6.7	Deg C	50.0	Deg C	6.7
Box Temp / IZS Temp	32.9	Deg C	45.3	Deg C	32	Deg C	45.3
Offset	0.9	NOx	-0.2	NO	0.9	NOx	-0.2
Slope	1.107	NOx	1.092	NO	1.128	NOx	1.115
NO <sub>2</sub> COEF / Conv Efficiency	NA	NO <sub>2</sub>	0.996		NA	NO <sub>2</sub>	0.996

**Dilution Calibration Data**

Dilution Air Flow Rate	Source Flow Rate	O3 Set Point	Calculated Concentration			Indicated Concentration			Correction Factor	
			NOx	NO	NO <sub>2</sub>	NOx	NO	NO <sub>2</sub>	NOx	NO
3004	0.0	----	0	0	0	-1	0	0	----	----
2963	43.7	----	753	750	----	738	735	4	1.0188	1.0204
2963	43.7	----	753	750	----	753	750	3	0.9985	1.0000
2990	23.3	----	401	399	----	397	395	3	1.0064	1.0101
2998	11.7	----	201	201	----	197	197	0	1.0170	1.0182
3004	0.0	----	0	0	0	0	1	-1	----	----

**Gas Phase Titration Calibration Data**

Dilution Air Flow Rate	Source Flow Rate	O3 Set Point	Calculated Concentration			Indicated Concentration			NO <sub>2</sub> Correction Factor	NO <sub>2</sub> Conv Efficiency
			NOx	NO	NO <sub>2</sub>	NOx	NO	NO <sub>2</sub>		
2957	43.6	----	753	750	----	754	750	4	----	----
2957	43.6	600	753	----	530	754	224	529	1.0019	99.81%
2957	43.6	250	753	----	228	756	526	230	0.9913	100.89%
2957	43.6	140	753	----	125	756	629	127	0.9843	101.65%

Linearity	Sum of Least Squares	NOx= 1.003	NO= 1.003	NO <sub>2</sub> = 0.999
OK?	Correction Factors:	NOx= 0.9985	NO= 1.0000	NO <sub>2</sub> = 1.0019
	Average Converter Efficiency=	100.79%		

	Before Calibration				After Calibration			
Auto Zero	-0.4	NOx	0.5	NO <sub>2</sub>	1.0	NOx	-0.1	NO <sub>2</sub>
Auto Span	567	NOx	559	NO <sub>2</sub>	591	NOx	582	NO <sub>2</sub>
	Sample Lines Connected				YES			

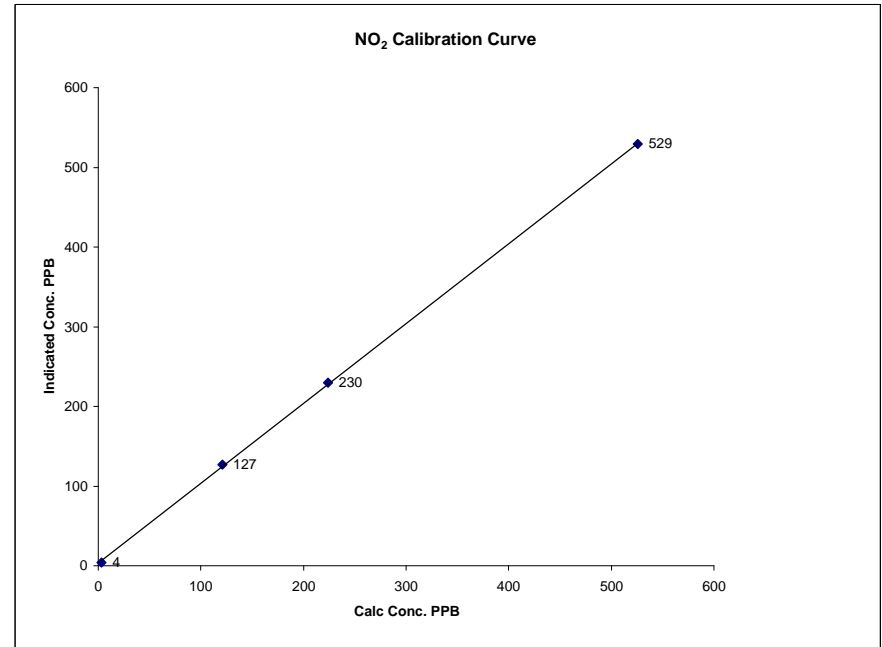
Notes Additional point done for ozone cal (O3 set point= 420), NOx=756, NO=384, NO<sub>2</sub>=372.

Calibration Performed by: Ting Xu

**NO<sub>2</sub> Calibration Curve**

Calibration Date	August 6, 2010	Company	LICA
Plant / Location	Portable/ 13-16-62-5W4M	Start Time (MST)	9:05
End Time (MST)	16:46		

Calculated Conc.	Indicated Response	Correction Factor	Correlation Coefficient	(≥ 0.995)	
ppb	ppb		Slope	(0.85 to 1.15)	0.999882
3	4	N/A	Intercept	(± 3% F.S.)	1.001030
121	127	0.9528			3.77502
224	230	0.9739			
526	529	0.9943			

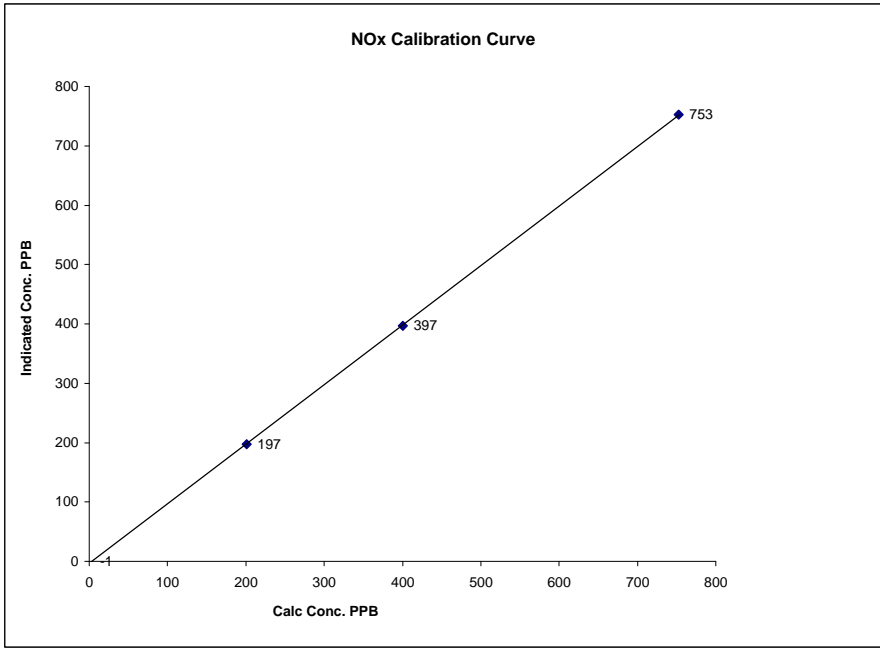


Notes: During the GPT, the gas flow stopped when O3 was added. The zero air supply was also failed. redo the GPT.

### NOx Calibration Curve

Calibration Date August 6, 2010  
 Company LICA  
 Plant / Location Portable/ 13-16-62-5W4M  
 Start Time (MST) 9:05 End Time (MST) 16:46

Calculated Conc. ppb	Indicated Response ppb	Correction Factor	Correlation Coefficient	(≥ 0.995)	0.999963
0	-1	N/A	Slope	(0.85 to 1.15)	1.002502
201	197	1.0222	Intercept	(± 3% F.S.)	-3.04198
401	397	1.0089			
753	753	0.9998			

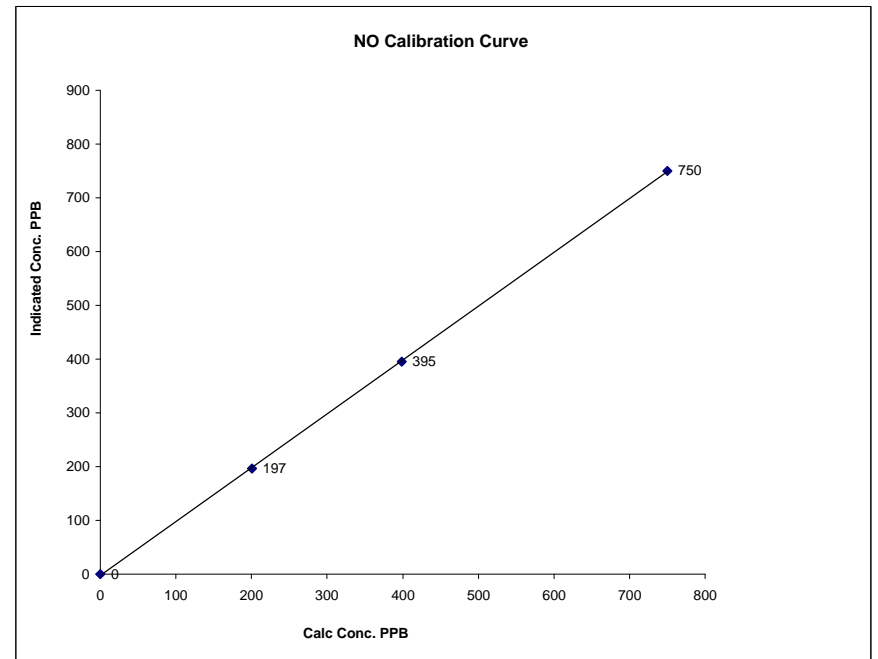


Notes:

### NO Calibration Curve

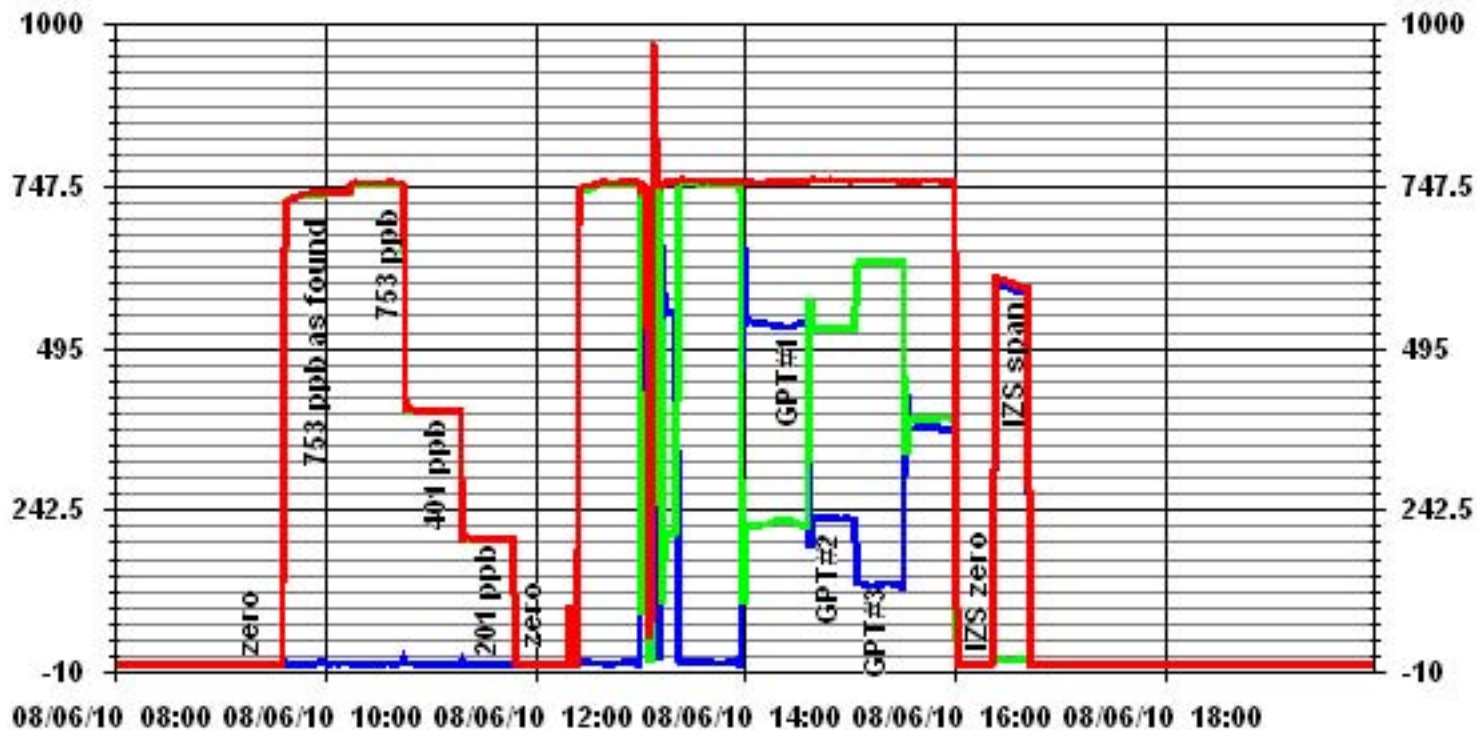
Calibration Date August 6, 2010  
 Company LICA  
 Plant / Location Portable/ 13-16-62-5W4M  
 Start Time (MST) 9:05 End Time (MST) 16:46

Calculated Conc. ppb	Indicated Response ppb	Correction Factor	Correlation Coefficient	(≥ 0.995)	0.999953
0	0	N/A	Slope	(0.85 to 1.15)	1.007163
201	197	1.0182	Intercept	(± 3% F.S.)	-8.5680
399	395	1.0101			
750	750	1.0000			



Notes:

### 01 Minute Averages



— LICA33 NOX\_ PPB    
 — LICA33 NO\_ PPB    
 — LICA33 NO2\_ PPB

# Ozone

### O<sub>3</sub> Calibration Report

#### Station Information

Calibration Date	August 9, 2010	Previous Calibration	July 13, 2010
Company	Lakeland Industry & Community Association		
Plant / Location	Portable / Devon Wellsite 13-16-62-5 W4M		
Start Time (MST)	12:21	End Time (MST)	15:54
Reason:	Monthly Calibration		
Barometric Pressure	NA mm Hg	Station Temperature	24 Deg C
DAS Output Voltage	0 - 10 Volts		

#### Equipment Information

Analyzer Make / Model:	Thermo 49i	S/N :	1002240372	Method:	Photometric
Calibrator Make / Model:	EnviroNics 2000	S/N :	1991	Method:	GPT
DAS Make / Model:	ESC 8832	S/N :	AO717		

#### Analyzer Settings

	Before Calibration		After Calibration	
Concentration Range	0 - 500			
Cell A Flow / Cell B Flow	758 ccm	761 ccm	756 ccm	760 Deg C
Pressure	698 mmHg		697 mmHg	
Bench Lamp Temp	54.1 Deg C		54.1 Deg C	
O3 Lamp / Box Temp	68.2 Deg C	31.9 Deg C	68.2 Deg C	31.8 Deg C
Offset/Slop	0	1.038	0	1.005

#### Calibration Data

Dilution Flow Rate	Ozone Set Point	Calculated Concentration	Indicated Conc. (DAS)	Correction Factor
3004	0	0	0	N/A
3000	420	366	384	0.9531
2999	420	366	367	0.9973
3002	250	224	223	1.0045
3004	140	121	121	1.0000
3004	0	0	0	N/A
Sum of Least Squares				N/A
New Correction Factor				0.9973

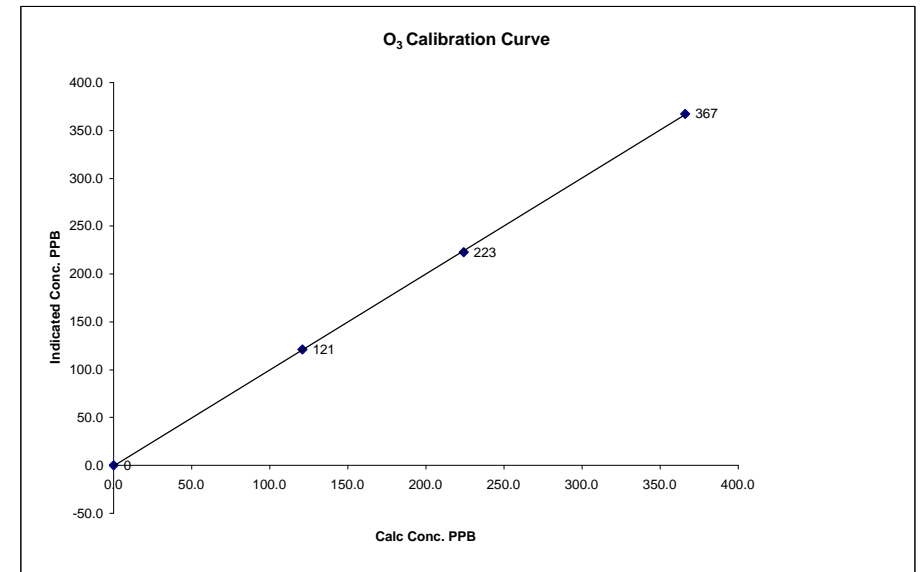
	Before Calibration	After Calibration
Auto Zero	-0.1	0.0
Auto Span	343	340
Sample Lines Connected		YES
Percent Change from Previous Calibration		4.4%

Calibration Performed by: Ting Xu

### O<sub>3</sub> Calibration Curve

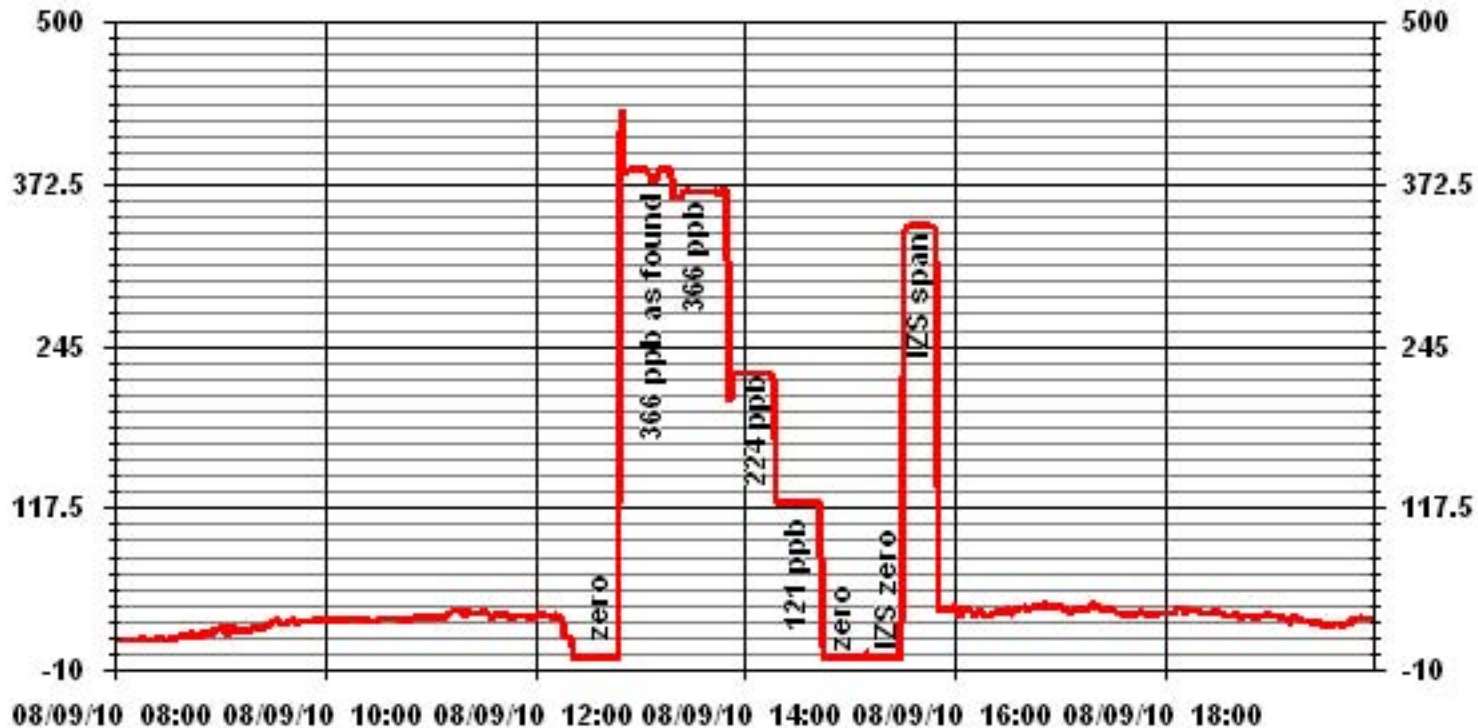
Calibration Date	August 9, 2010		
Company	Lakeland Industry & Community Association		
Plant / Location	Portable / Devon Wellsite 13-16-62-5 W4M		
Start Time (MST)	12:21	End Time (MST)	15:54

Calculated Conc. ppb	Indicated Response ppb	Correction Factor	Correlation Coefficient Slope	(≥ 0.995)	0.999976
0	0	n/a	Intercept	(0.85 to 1.15)	1.001962
121	121	1.0000			
224	223	1.0045			
366	367	0.9973		(± 3% F.S.)	-0.348661



Notes:

### 01 Minute Averages



# Total Hydrocarbons



### THC Calibration Report

#### Station Information

Calibration Date:	August 10, 2010	Previous Calibration	July 7, 2010
Company:	Lakeland Industry and Community Association		
Plant / Location:	Portable Station Devon Wellsite 13-16-62-5W4M		
Start Time (MST)	8:41	End Time (MST)	12:31
Reason:	Monthly Calibration		
Barometric Pressure:	NA mmHg	Station Temperature:	24 Deg C
Calibrator:	API 700	S/N:	831
Cal Gas Concentration:	207Prop/602Meth/1171.25THC ppm	Cal Gas Expiry Date:	9/21/2011
DAS make & Model:	ESC 8832	S/N :	AO717
Output Voltage Range:	0 - 10 VDC		

#### Analyzer Information

Make / Model	TECO 51C	S/N :	04366-09739	Method	Flame Ionization
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#### Analyzer Settings

	Before Calibration	After Calibration
Concentration Range	0 - 50 ppm	0 - 50 ppm
Sample Pressure	6.8 psi	6.8 psi
Hydrogen Pressure	8 psi	8 psi
Air Pressure	21 psi	21 psi

#### Calibration Data

Dilution Flow	Source Gas Flow	Calculated Concentration	Indicated Concentration	Correction Factor
1999	0	0.0	0.3	N/A
1999	0	0.0	0.0	N/A
1999	70.0	39.6	39.2	1.0109
1999	70.0	39.6	40.0	0.9907
1999	35.0	20.2	20.1	1.0027
1999	20.0	11.6	11.5	1.0089
2000	0	0.0	0.0	N/A
Correction Factor:				0.9907

#### Percent Change

Previous Calibration Correction Factor:	0.9863
Current Correction Factor Before Span Adjust:	1.0109
Percent Change:	-2.4%

#### IZS Calibration Data

	Before Calibration	After Calibration
Auto Zero	0.3	0.0
Auto Span	34.1	34.8
Sample Lines Connected		YES

#### Cylinder Pressures

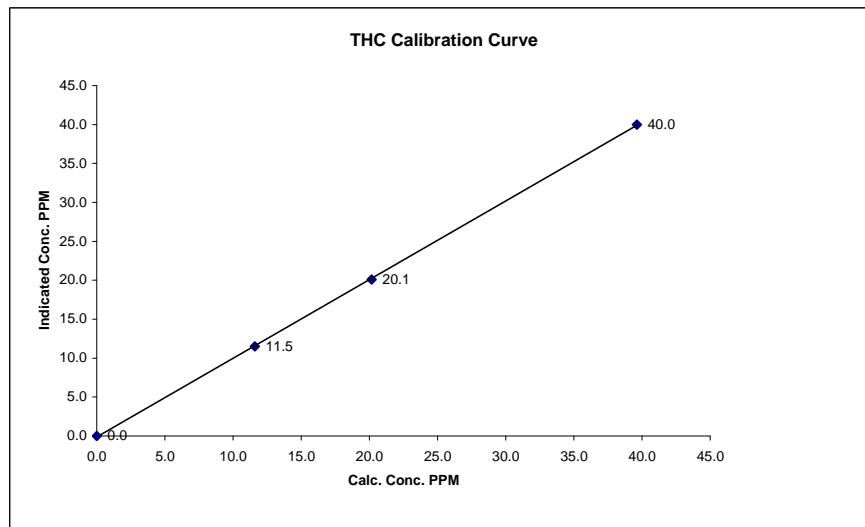
Span	400 psi
Hydrogen	1800 psi
Zero Air	30 psi Using API 700

Calibration Performed by: Ting Xu

### THC Calibration Curve

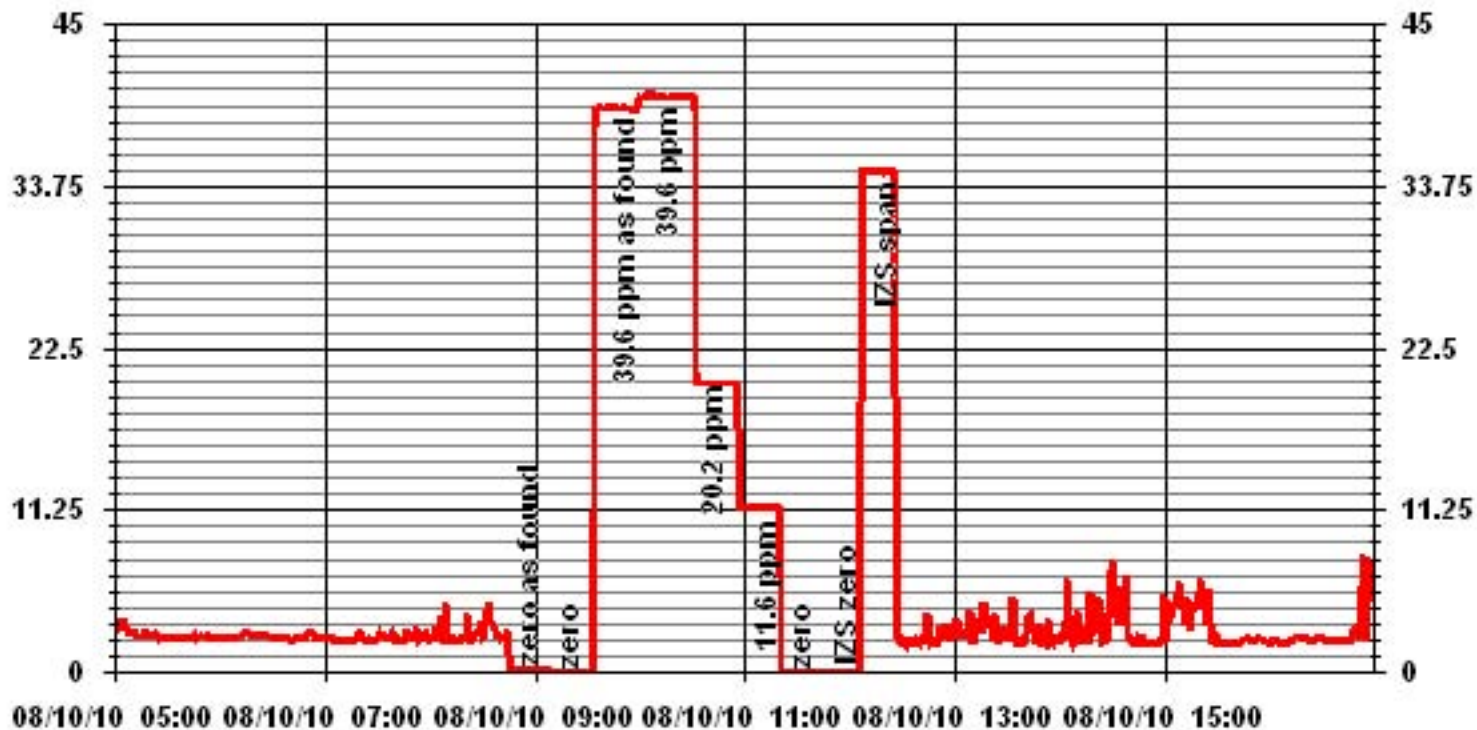
Calibration Date	August 10, 2010
Company	Lakeland Industry and Community Association
Plant / Location	Portable Station Devon Wellsite 13-16-62-5W4M
Start Time (MST)	8:41
End Time (MST)	12:31

Calculated Conc. ppm	Indicated Response ppm	Correction Factor	Correlation Coefficient Slope	(≥ 0.995)	0.999939
0.0	0.0		Intercept	(0.85 to 1.15)	1.010327
11.6	11.5	1.0089		(± 3% F.S.)	-0.130084
20.2	20.1	1.0027			
39.6	40.0	0.9907			



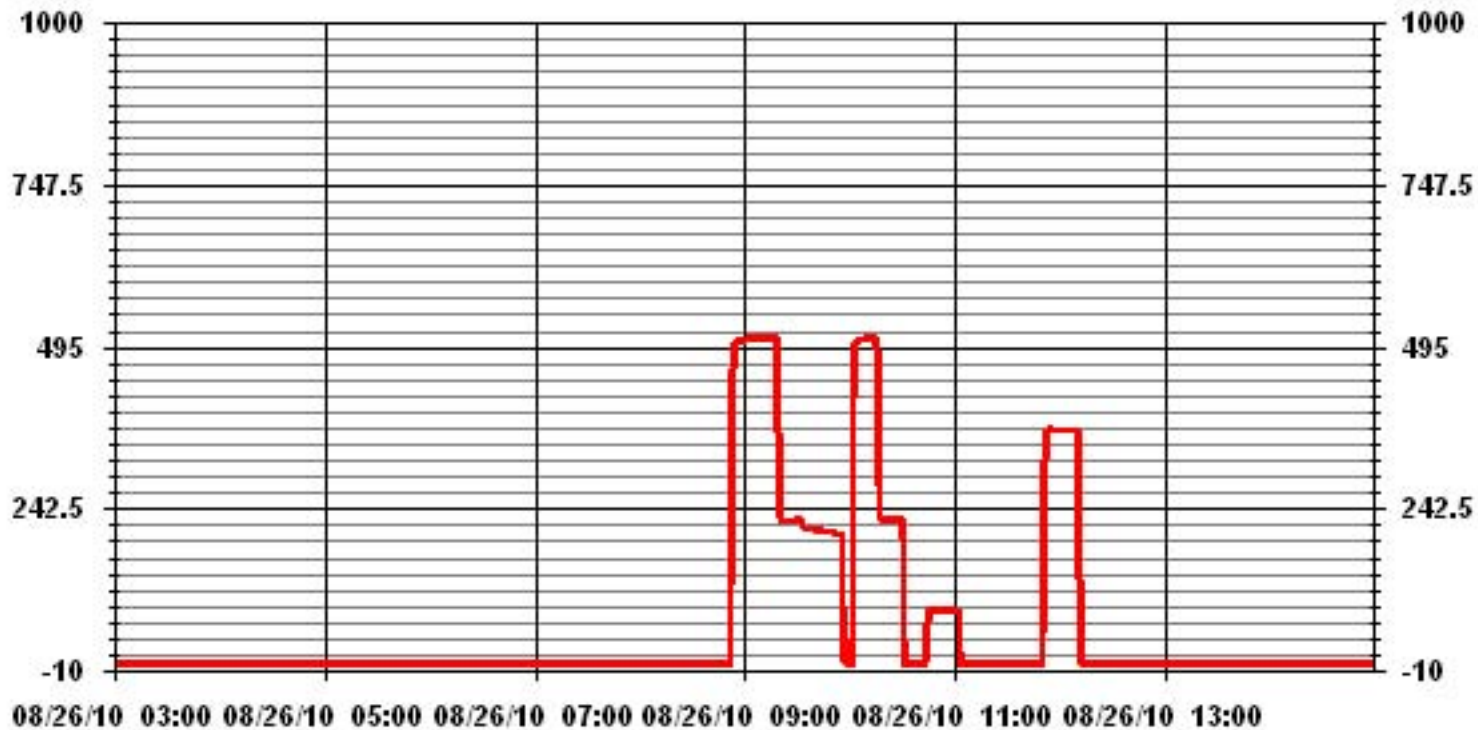
Notes:

### 01 Minute Averages

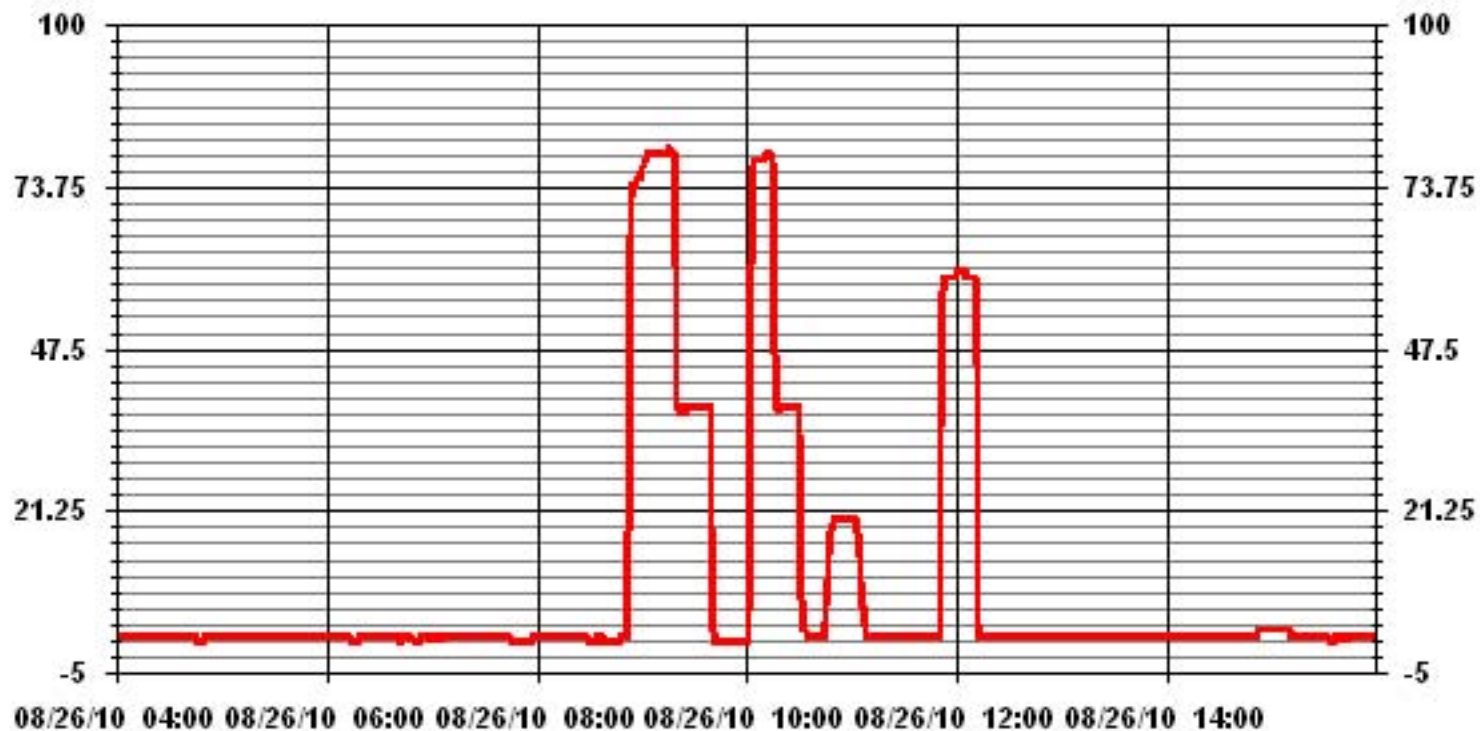


# **Alberta Environment Audit results**

### 01 Minute Averages

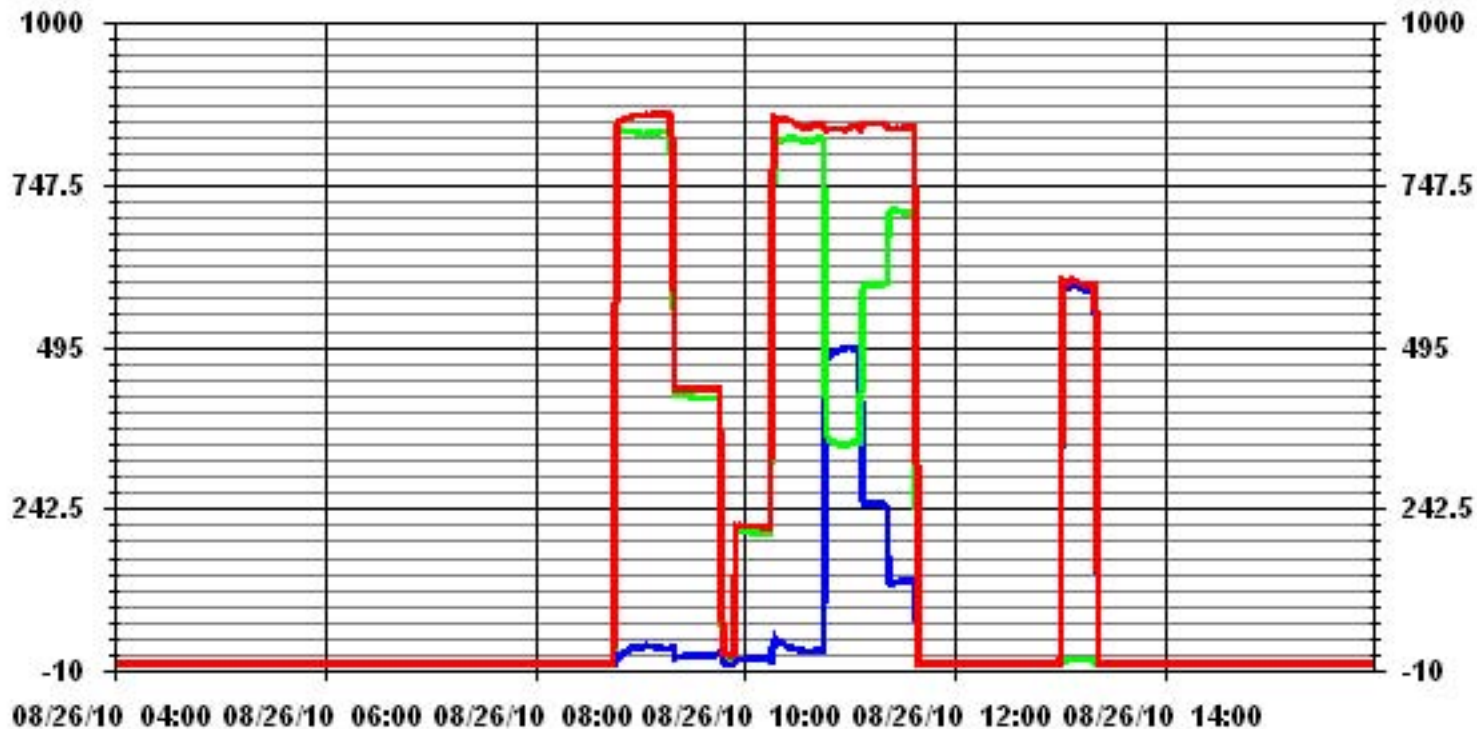


### 01 Minute Averages



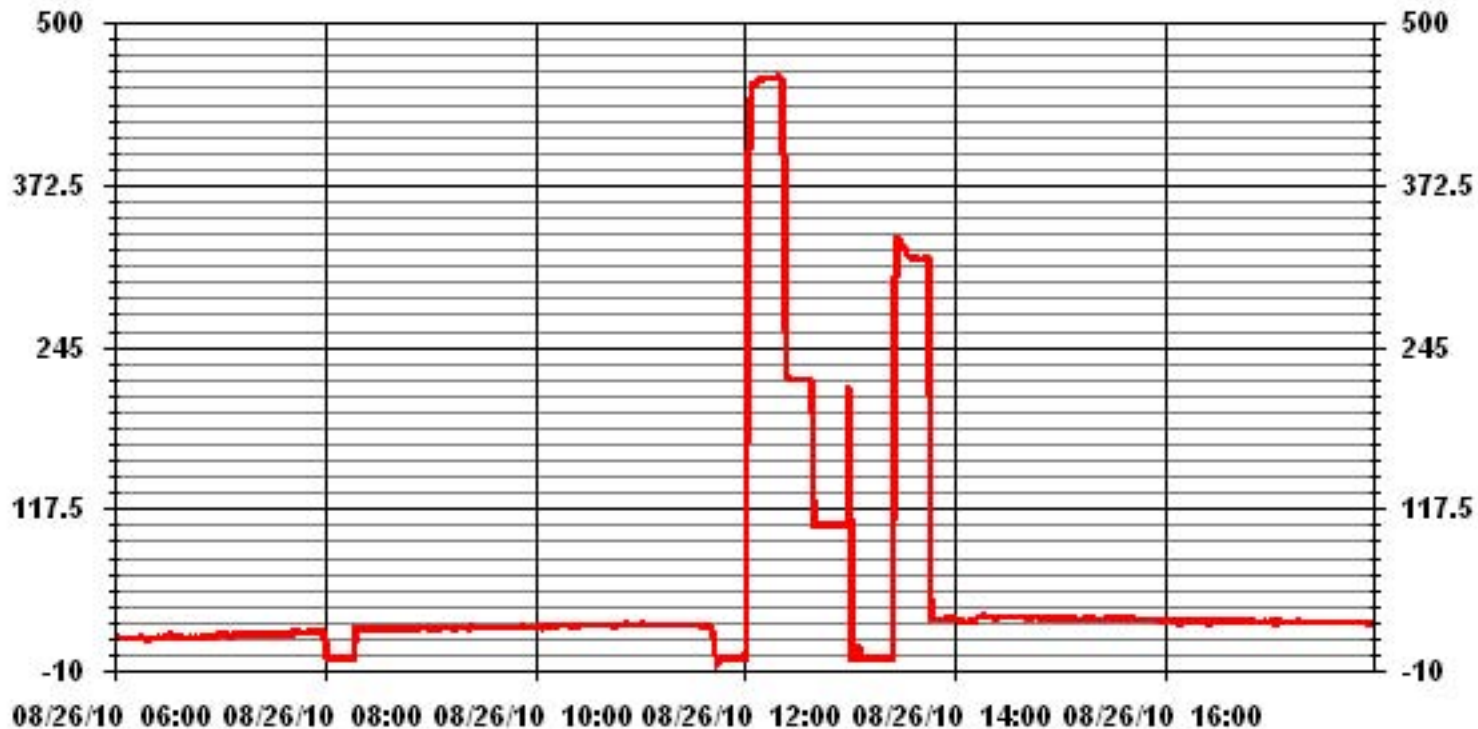
— LICA33 H2S\_ PPB

### 01 Minute Averages



— LICA33 NOX\_ PPB    — LICA33 NO\_ PPB    — LICA33 NO2\_ PPB

### 01 Minute Averages



### 01 Minute Averages

