

# Lakeland Industry & Community Association

Cold Lake Monitoring Site

Ambient Air Monitoring

Data Report

For

July 2009

Prepared By:



August 27, 2009

# Lakeland Industry & Community Association Ambient Air Monitoring

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# Introduction

The following Ambient Air Monitoring report was prepared for:

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Monitoring Location: Cold Lake  
Data Period: July 2009

The monthly ambient data report:

- Prepared by Lily Lin
- Reviewed by Craig Snider

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

## 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 – July 2009

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	0.03	2	25, 27	9, 8	7.1, 1.5	349(NNW), 262(W)	0.3	25	100.0
TRS (PPB)	-	-	-	-	0.03	9	30	2	1	206(SSW)	0.5	30	100.0
NO <sub>2</sub> (PPB)	212	106	0	0	1.29	8	21, 27	1, 7	5.4, 3.1	246(WSW), 257(WSW)	2.8	27	100.0
NO (PPB)	-	-	-	-	0.22	7	15	5	0.3	16(NNE)	1.2	4	100.0
NO <sub>x</sub> (PPB)	-	-	-	-	1.67	14	27	7	3.1	257(WSW)	3.6	27	100.0
O <sub>3</sub> (PPB)	82	-	0	-	21.67	49	24	15	7.7	221(SW)	30.4	18	100.0
THC (PPM)	-	-	-	-	2.09	3.4	27	6	2.6	236(SW)	2.3	27	100.0
PM 2.5 (UG/M <sup>3</sup> )	-	30	-	0	6.09	23.4	25	3	2.9	245(WSW)	12.9	27	100.0
TEMPERATURE (DEG C)	-	-	-	-	16.09	29.5	25	17	3.5	254(WSW)	22.6	25	100.0
RELATIVE HUMIDITY (%)	-	-	-	-	69.24	99.0	30	16, 17	2.9, 3.9	302(WNW), 285(WNW)	88.1	3	100.0
VECTOR WS (KPH)	-	-	-	-	5.36	20.3	20	10	-	308(NW)	11.3	20	100.0
VECTOR WD (DEGREES)	-	-	-	-	292(WNW)	-	-	-	-	-	-	-	100.0

VAR-VARIOUS

# Monthly Non-Continuous Data Summary

## LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - COLD LAKE

### Passive Ambient Monitoring Network – July 2009

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION PASSIVE NETWORK			
NETWORK MAXIMUM			NETWORK AVERAGE
PARAMETER	STATION	READING (PPB)	READING (PPB)
SO <sub>2</sub>	#14	0.7	0.2
H <sub>2</sub> S	#5	0.80	0.23
NO <sub>2</sub>	#28	2.7	1.1
O <sub>3</sub>	#32	30.6	20.9

Note: SO<sub>2</sub> sample and its duplicate at station #18 were damaged and cannot be tested.

# 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

### Sulphur Dioxide (PPB)

- Analyzer make / model – Thermo 43i

No operational issues observed during the month. The inlet filter was changed before the monthly calibration was started on July 13<sup>th</sup>. An error was made during the monthly calibration; the final span point was missed. The calibration was repeated on July 14<sup>th</sup>. No issue was discovered. Data was corrected using daily zero information.

### Total Reduced Sulphur (PPB)

- Analyzer make / model –TEI 450i
- Converter - CD NOVA CDN 101

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.

### Nitrogen Dioxide (PPB)

- Analyzer make / model - TECO 42C

No operational issues observed during this 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

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.

# General Monthly Summary - Cold Lake

## AQM STATION – LICA – COLD LAKE

### Ozone (PPB)

- Analyzer make / model - TECO 49I

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

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

- Analyzer make / model –TEOM1405F

No operational issues observed during this month. A Teom audit was performed on July 14<sup>th</sup>. The Teom and FDMS filters were replaced. Nine hours of data were invalidated as it was below  $-3.0 \text{ ug/m}^3$ .

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

- System make / model – Met One 50.5

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

### 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.



# General Monthly Summary - Cold Lake

## AQM STATION – LICA – COLD LAKE

### Trailer Temperature (DEGC)

- System make / model - R&R 61

No operational issues observed during the month.

### Datalogger

- System make / model - ESC 8832
- 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. The manifold was cleaned on July 13<sup>th</sup>.

### Air Quality Index (AQI)

The AQI data was adjusted to reflect regular monthly and daily calibrations, maintenance, and downtime. All AQI values recorded in January were within the good range. The highest hourly concentration of PM2.5 was 23.4 UG/M3 and an AQI value of 20 on July 25<sup>th</sup>, hour 3. The highest hourly concentration of Ozone was 49 ppb and an AQI value of 25 on June 24<sup>th</sup>, hour 15.

### Passive Network

The original Cold Lake South site (CASA#22) was put back at clients request.

The St. Lina site (CASA#32) was added.

The SO2 and SO2 duplicate at Frog Lake site (CASA#18) were damaged.

# Continuous Monitoring

# Cold Lake

# Monthly Summaries, Graphs & Wind Roses

# Air Quality Index



# Sulphur Dioxide

# LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - COLD LAKE

JULY 2009

## 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	0	0	0	0	0	IZS	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	IZS	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	IZS	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	IZS	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	IZS	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	IZS	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	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	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	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	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
11	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
12	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
13	IZS	0	0	0	0	0	0	0	0	0	C	C	C	C	0	C	0	0	0	0	0	0	0	IZS	0	0.0	24	
14	0	0	0	0	0	0	0	C	C	C	C	0	0	0	0	0	0	0	0	0	0	0	IZS	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	IZS	0	0	0	0.0	24	
16	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	
17	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
18	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
19	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
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	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
22	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
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	0.0	24
24	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
25	0	0	0	0	0	0	0	1	0	2	1	IZS	1	1	1	1	0	0	0	0	0	0	0	0	0	2	0.3	24
26	0	0	0	0	0	0	0	0	0	0	IZS	1	0	0	0	0	1	1	1	1	1	1	1	1	0	1	0.3	24
27	0	0	0	0	0	0	0	1	2	IZS	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0.2	24
28	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
29	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
30	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
31	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
HOURLY MAX	0	0	0	0	0	0	0	1	2	2	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0			
HOURLY AVG	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0	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

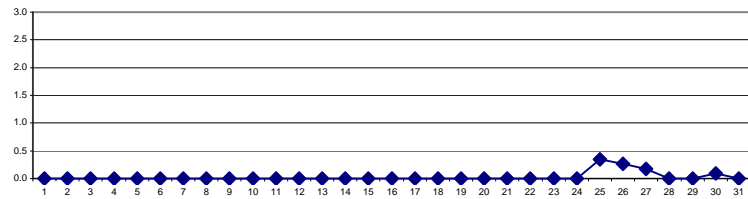
### OBJECTIVE LIMIT:

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

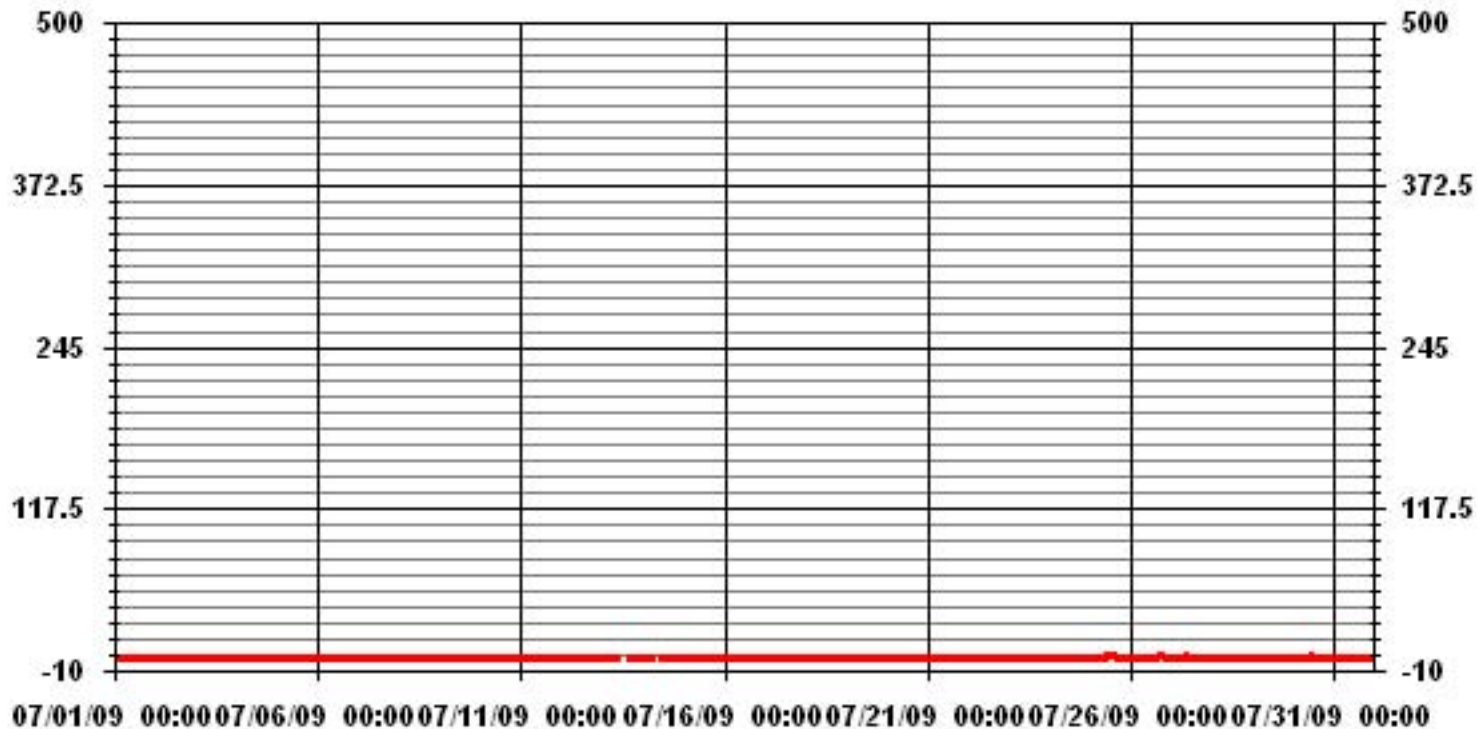
NUMBER OF 1-HR EXCEEDENCES:	0					
NUMBER OF 24-HR EXCEEDENCES:	0					
NUMBER OF NON-ZERO READINGS:	18					
MAXIMUM 1-HR AVERAGE:	2	PPB	@ HOUR(S)	9, 8	ON DAY(S)	25, 27
MAXIMUM 24-HR AVERAGE:	0.3	PPB			ON DAY(S)	25
IZS CALIBRATION TIME:	32	HRS	OPERATIONAL TIME:	744	HRS	
MONTHLY CALIBRATION TIME:	9	HRS	AMD OPERATION UPTIME:	100.0	%	
STANDARD DEVIATION:	0.18		MONTHLY AVERAGE:	0.03	PPB	

24 HOUR AVERAGES FOR JULY 2009





### 01 Hour Averages



— LICA SO2\_ PPB

# LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - COLD LAKE

JULY 2009

## 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 MAX.	24-HOUR AVG.	RDGS.	
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					
DAY																														
1		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	1	0.1	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	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	1	0	0	0	0	0	0	0	0	0	0	0	0	1	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	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	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	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	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	0.0	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	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	0	0.0	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	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	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	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	1	1	2	3	1	0	2	1	1	1	1	1	0	0	0	0	0	0	0	3	0.6	24	
26		0	0	0	0	0	0	0	0	0	1	0	2	0	0	0	1	1	1	1	1	1	1	1	1	0	2	0.4	24	
27		0	0	0	0	0	0	0	3	3	0	1	1	0	1	0	1	1	0	0	0	0	0	0	0	0	3	0.5	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	2	1	1	1	0	0	0	0	0	0	0	0	0	0	0	2	0.2	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	24	
HOURLY MAX		0	0	0	0	0	0	1	3	3	3	2	2	1	1	1	1	1	1	1	1	1	1	1	0	0				
HOURLY AVG		0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.0					

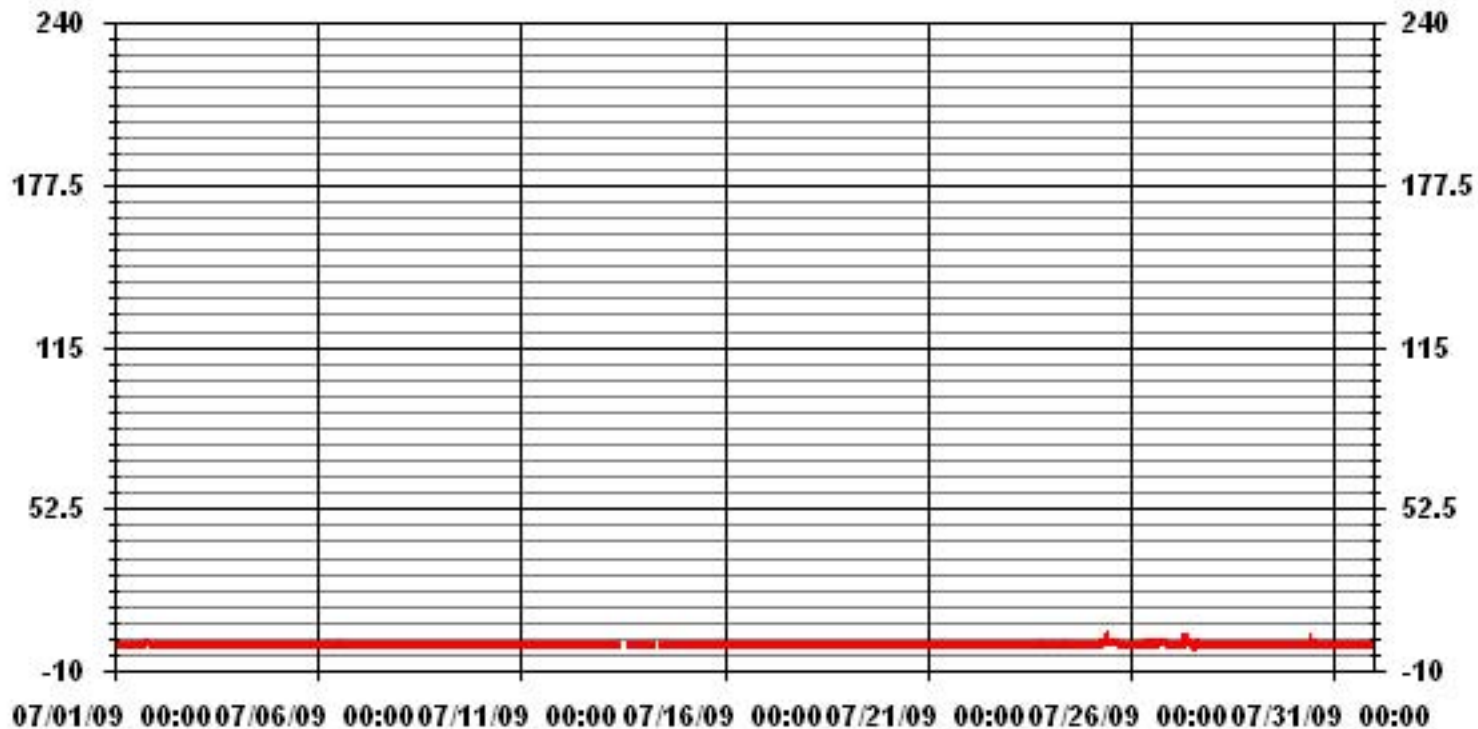
**STATUS FLAG CODES**

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:	36					
MAXIMUM INSTANTANEOUS VALUE:	3	PPB	@ HOUR(S)	VAR	ON DAY(S)	25, 27
IZS CALIBRATION TIME:	32	HRS		OPERATIONAL TIME:	744	HRS
MONTHLY CALIBRATION TIME:	11	HRS				
STANDARD DEVIATION:	0.31					

### 01 Hour Averages



— LICA SO2MAX PPB

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

July 2009

Distribution By % Of Samples

Logger Id : 01  
 Site Name : LICA  
 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	3.69	3.98	1.84	3.41	5.97	7.25	9.10	2.98	4.97	3.98	10.95	13.08	9.10	5.83	6.82	6.97	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	3.69	3.98	1.84	3.41	5.97	7.25	9.10	2.98	4.97	3.98	10.95	13.08	9.10	5.83	6.82	6.97	

Calm : .00 %

Total # Operational Hours : 703

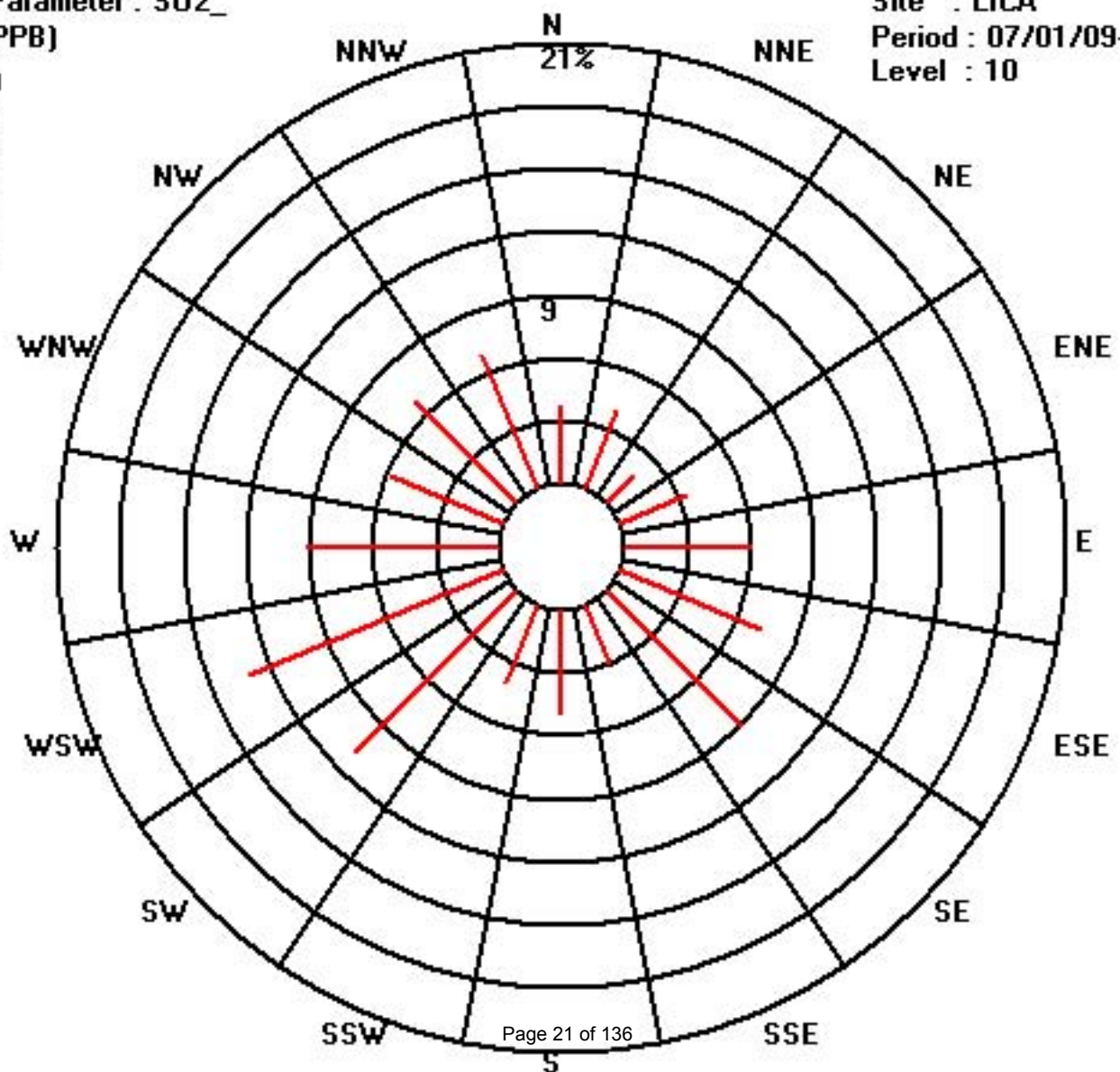
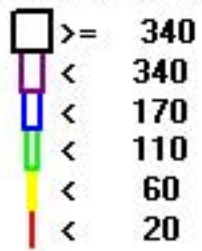
Distribution By Samples

Limit	Direction																Freq
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
< 20	26	28	13	24	42	51	64	21	35	28	77	92	64	41	48	49	703
< 60																	
< 110																	
< 170																	
< 340																	
>= 340																	
Totals	26	28	13	24	42	51	64	21	35	28	77	92	64	41	48	49	

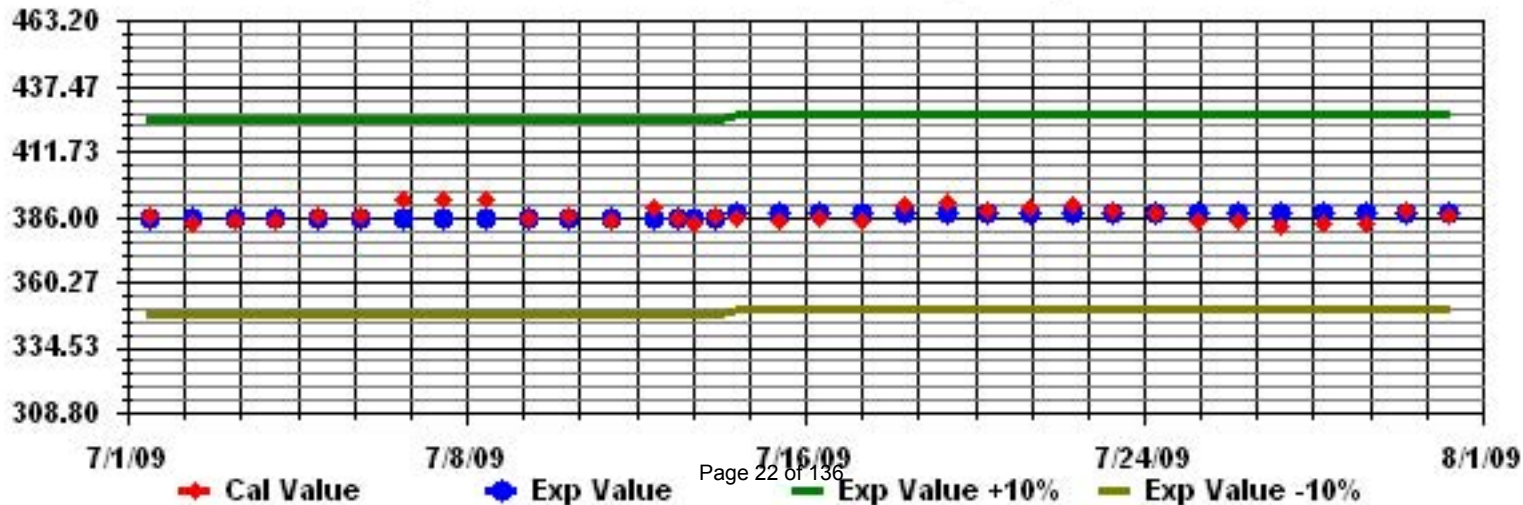
Calm : .00 %

Total # Operational Hours : 703

Class Limits (PPB)



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



# Total Reduced Sulphur

# LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - COLD LAKE

JULY 2009

## 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		
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	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
2	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
3	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
4	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
5	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
6	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
7	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
8	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
9	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
10	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
11	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
12	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
13	IZS	0	0	0	0	0	0	0	C	C	C	C	0	0	0	C	0	0	0	0	0	0	0	0	IZS	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	IZS	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	IZS	0	0	0.0	24
16	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
17	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
18	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
19	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
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	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
22	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
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	0.0	24
24	0	0	0	0	0	0	1	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	1	0.0	24
25	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
26	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
27	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
28	2	2	1	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0.2	24
29	4	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	4	0.3	24	
30	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9	2	9	0.5	24	
31	1	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.0	24	
HOURLY MAX	4	2	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9	2				
HOURLY AVG	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.1				

### 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

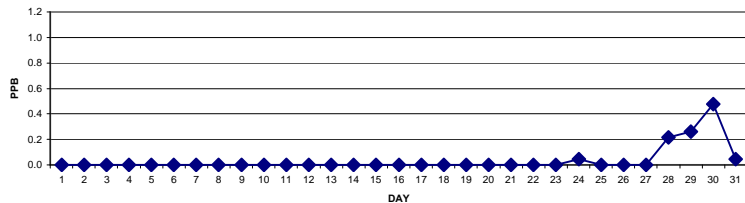
### OBJECTIVE LIMIT:

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

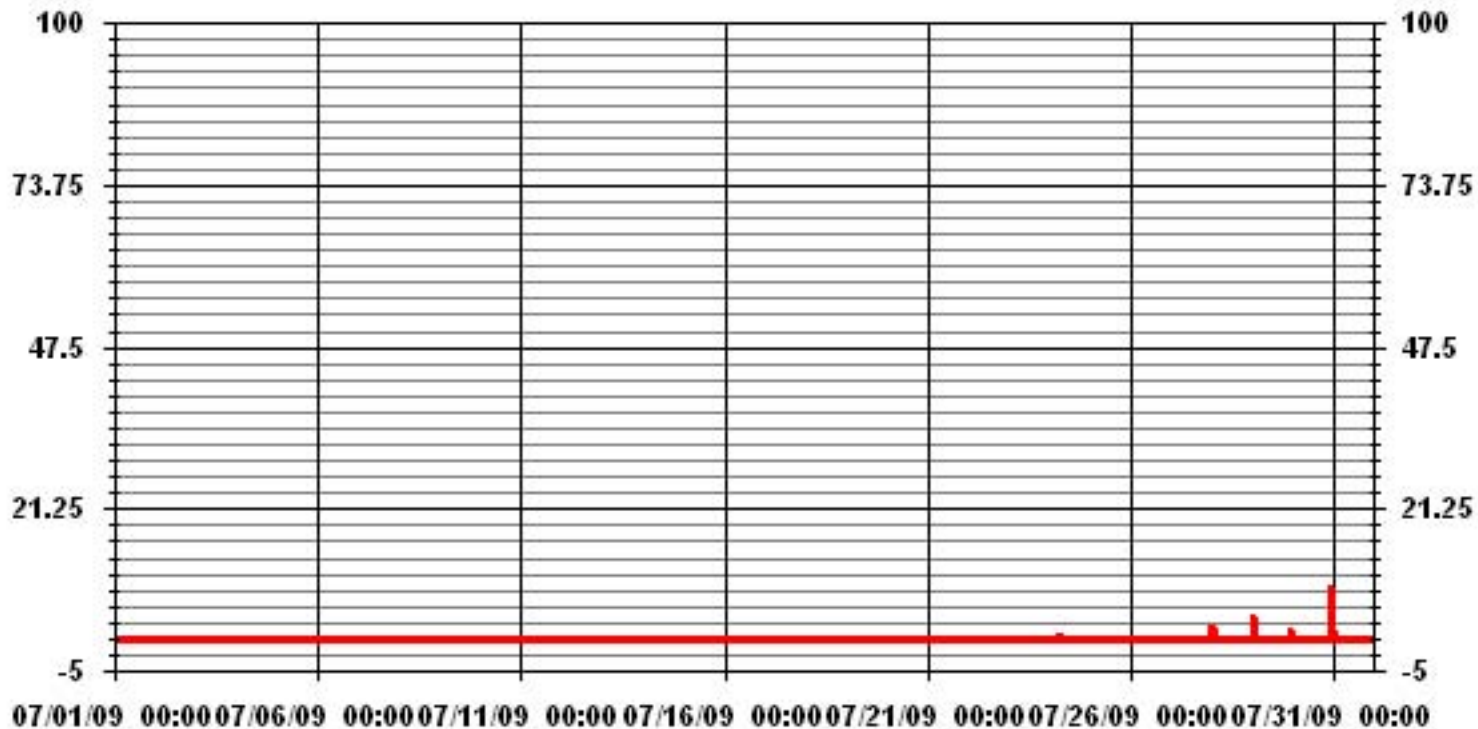
NUMBER OF 1-HR EXCEEDENCES:	0					
NUMBER OF 24-HR EXCEEDENCES:	0					
NUMBER OF NON-ZERO READINGS:	9					
MAXIMUM 1-HR AVERAGE:	9	PPB	@ HOUR(S)	2	ON DAY(S)	30
MAXIMUM 24-HR AVERAGE:	0.5	PPB			ON DAY(S)	30
					VAR-VARIOUS	
IZS CALIBRATION TIME:	32	HRS	OPERATIONAL TIME:	744	HRS	
MONTHLY CALIBRATION TIME:	5	HRS	AMD OPERATION UPTIME:	100.0	%	
STANDARD DEVIATION:	0.40		MONTHLY AVERAGE:	0.03	PPB	

24 HOUR AVERAGES FOR JULY 2009





### 01 Hour Averages



— LICA TRS\_ PPB

# LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - COLD LAKE

JULY 2009

## 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			
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	0	0	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	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	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	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	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	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	0.0	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	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	0	0.0	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	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	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	1	0	0	0	1	1	1	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	1	1	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	24
27	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
28	32	3	2	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
29	44	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	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	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	24
HOURLY MAX	44	3	2	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	5	47	18			
HOURLY AVG	2.8	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.3	2.5	0.8			

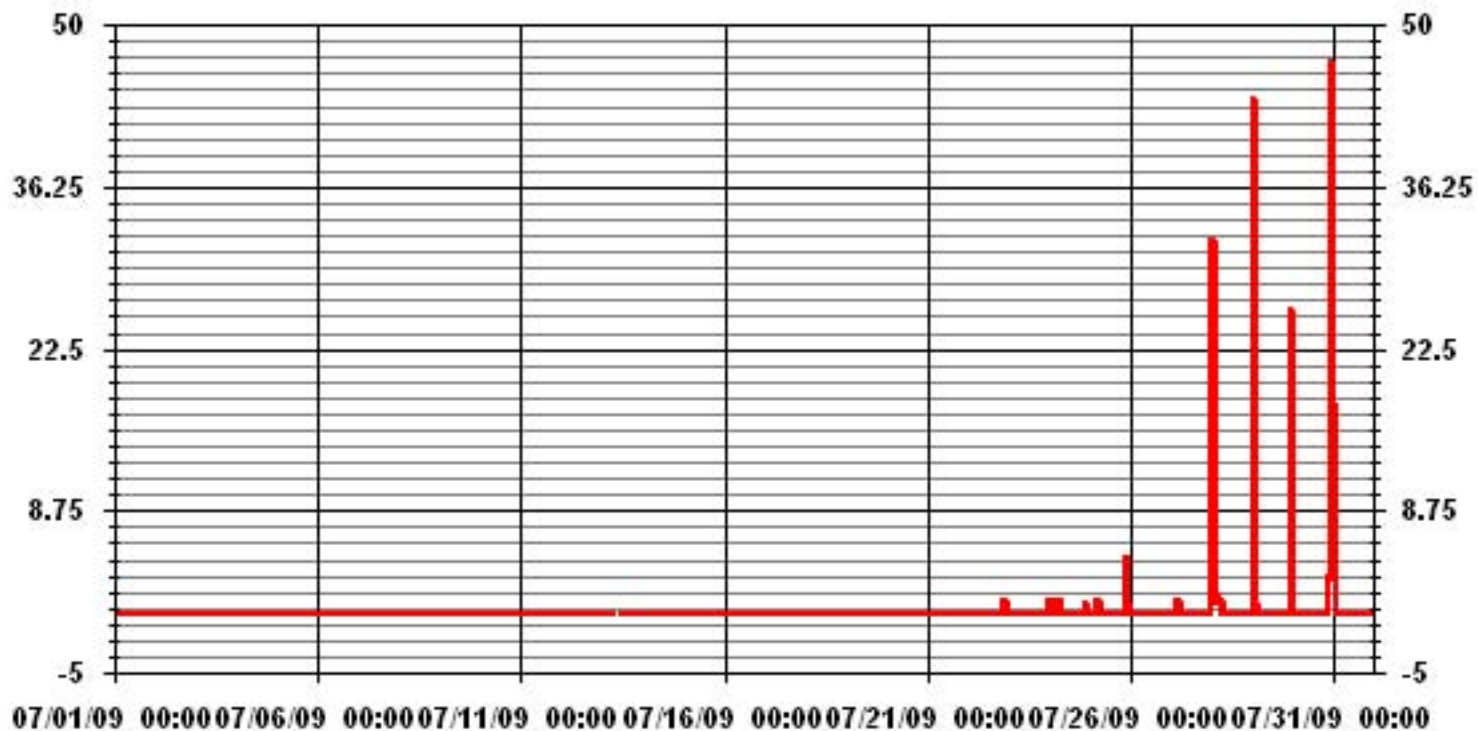
**STATUS FLAG CODES**

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**

NUMBER OF NON-ZERO READINGS:	31					
MAXIMUM INSTANTANEOUS VALUE:	47	PPB	@ HOUR(S)	22	ON DAY(S)	30
	VAR - VARIOUS					
IZS CALIBRATION TIME:	32	HRS	OPERATIONAL TIME:	744	HRS	
MONTHLY CALIBRATION TIME:	6	HRS				
STANDARD DEVIATION:	2.97					

### 01 Hour Averages



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

July 2009

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	3.67	3.96	1.83	3.39	5.94	7.21	9.05	2.97	4.80	3.96	10.89	13.01	8.91	5.94	7.21	6.93	99.71
< 10	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.28	.00	.28
< 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	3.67	3.96	1.83	3.39	5.94	7.21	9.05	2.97	4.80	3.96	10.89	13.01	8.91	5.94	7.49	6.93	

Calm : .00 %

Total # Operational Hours : 707

Distribution By Samples

	Direction																
Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 3	26	28	13	24	42	51	64	21	34	28	77	92	63	42	51	49	705
< 10															2		2
< 50																	
>= 50																	
Totals	26	28	13	24	42	51	64	21	34	28	77	92	63	42	53	49	

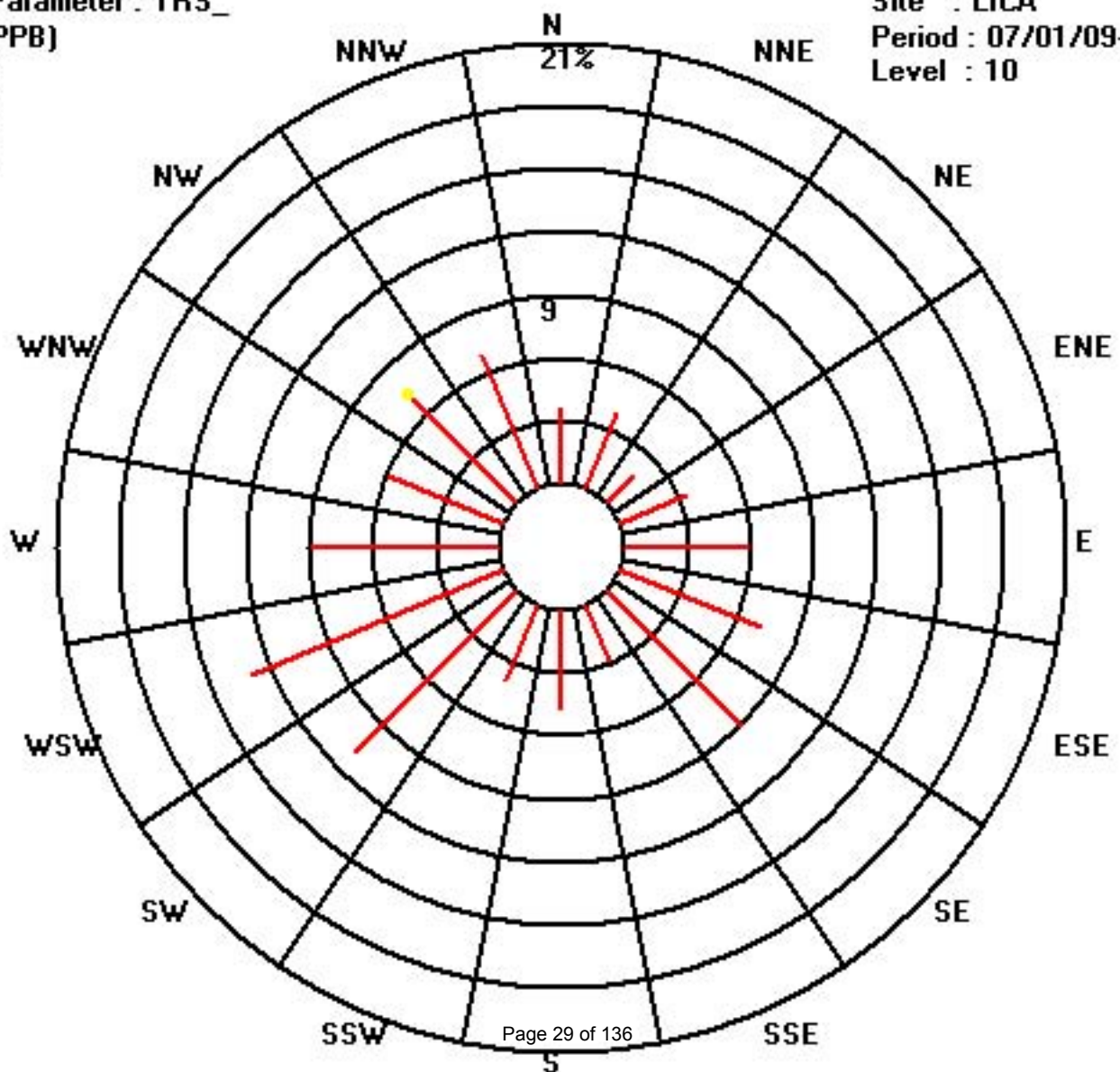
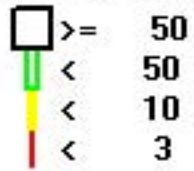
Calm : .00 %

Total # Operational Hours : 707

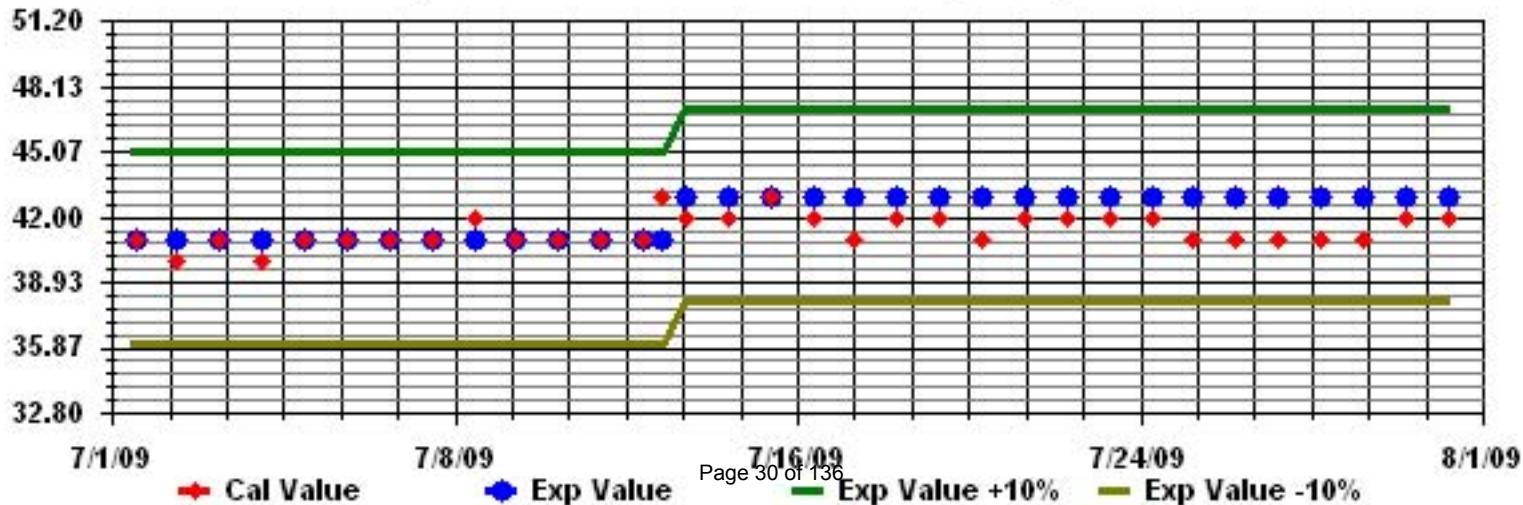
Class Limits (PPB)

Period : 07/01/09-07/31/09

Level : 10



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



# Total Hydrocarbons

## LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - COLD LAKE

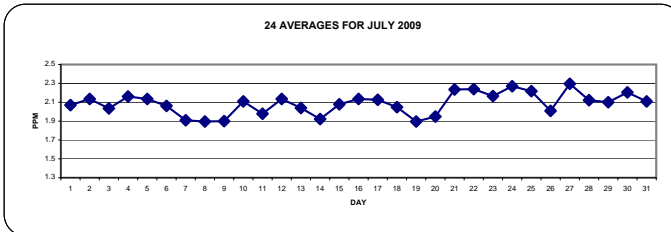
JULY 2009

### 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	2.2	2.3	2.4	2.5	2.4	2.3	2.2	2	2	2	1.9	1.9	IZS	1.9	1.9	1.9	1.9	1.9	2	2	2	2	2	2	2.5	2.1	24		
2	2.1	2.3	2.3	2.6	2.6	2.5	2.2	2.1	2.1	2.1	2.1	IZS	1.9	2	2	2	2	2	2	2	2	2	2.1	2.1	2.6	2.1	24		
3	2.2	2.3	2.5	2.5	2.1	2	2.1	2	2	1.9	IZS	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2	2	2	2.1	2.5	2.0	24		
4	2.1	2.1	2.3	2.4	2.6	2.8	2.7	2.4	2.2	IZS	2	2	2	2	2	1.9	1.9	1.9	1.9	2	2	2.1	2.1	2.2	2.8	2.2	24		
5	2.2	2.2	2.2	2.3	2.4	2.6	2.6	2.2	IZS	2	2	2	2	2	2	2	2	2	2	2	2	2.1	2.2	2.1	2.6	2.1	24		
6	2.2	2.3	2.3	2.2	2.3	2.4	2.3	IZS	2	2	2	1.9	2	2	1.9	1.9	1.9	1.9	1.9	1.9	2	2	2	2	2.4	2.1	24		
7	2	2	1.9	1.9	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	1.9	1.9	1.9	1.9	1.9	2.0	1.9	24		
8	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	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.9	1.9	24		
9	1.8	1.8	1.8	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	2	2	2.1	2.1	1.9	2.1	24		
10	2.4	2.4	2.6	IZS	2.6	2.5	2.2	2.1	2	2	2	2	2	2	1.9	1.9	1.9	1.9	1.9	2	2	2	2.1	2.1	2.6	2.1	24		
11	1.9	1.9	IZS	1.9	1.9	1.9	1.9	1.9	2	2	2	2	2	1.9	1.9	1.9	2	2	2	2	2	2.1	2.2	2.3	2.3	2.0	24		
12	2.4	IZS	2.4	2.4	2.5	2.6	2.4	2.2	2	2	2	2.1	2.1	2	2	2	2	2	2	2	2	2	2	2	2.6	2.1	24		
13	IZS	2	2	2	2.1	2.2	2.1	2	2	2	2.1	2.5	2.2	C	C	C	C	1.9	1.9	1.9	1.9	2	1.9	IZS	2.5	2.0	24		
14	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	1.9	1.9	1.9	1.9	1.9	1.9	2	2	IZS	2.1	2.1	1.9	24		
15	2.1	2.2	2.3	2.3	2.4	2.3	2.1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2.1	IZS	2	2	2.4	2.1	24	
16	2.1	2.1	2.2	2.3	2.4	2.5	2.5	2.4	2.2	2.1	2.1	2.1	2.1	2	2	2	2	2	2	2	2	2	IZS	1.9	2	2.1	2.5	2.1	24
17	2.1	2.1	2.2	2.2	2.2	2.4	2.4	2.3	2.3	2	2	2	2	2	2	2	2	2	2	2	IZS	2.1	2.2	2.2	2.2	2.4	2.1	24	
18	2	2	2	2	2	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.1	2.1	2	2	2	2	IZS	2	2	2	1.9	1.9	2.2	2.0	24	
19	1.9	1.9	1.8	1.9	1.9	2	2	1.9	1.9	1.8	1.8	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	2.0	1.9	2.0	24	
20	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	1.9	IZS	1.9	2	2	2.2	2.3	2.3	1.9	24	
21	2.6	2.8	2.7	2.7	2.6	2.6	2.4	2.4	2.4	2.4	2.1	2	1.9	1.9	1.9	IZS	1.9	1.9	1.9	1.9	1.9	2	2	2.2	2.2	2.8	2.2	24	
22	2.2	2.5	2.6	2.7	2.6	2.6	2.7	2.7	2.6	2.4	2	2	2	2	IZS	1.9	1.9	1.9	1.9	1.9	2	2.1	2.2	2.1	2.7	2.2	24		
23	2.3	2.3	2.4	2.6	2.9	2.8	2.5	2.3	2	1.9	1.9	1.9	1.9	IZS	1.9	1.9	1.9	1.9	2	2	2.1	2.1	2.1	2.2	2.9	2.2	24		
24	2.3	2.3	2.4	2.4	2.5	2.6	2.9	2.8	2.6	2.3	2.2	2.1	IZS	2	2	2	1.9	1.9	2	2.1	2.1	2.2	2.3	2.3	2.9	2.3	24		
25	2.5	2.5	2.5	2.7	2.8	2.7	2.6	2.4	2.2	2	1.9	IZS	1.9	1.9	1.9	2	1.9	1.9	2	2	2.1	2.2	2.2	2.2	2.8	2.2	24		
26	2.1	2.1	2.2	2.1	2	1.9	2	1.9	2	2	IZS	2	1.9	2	2	2	2	2	2	2	2	2	2	2	2.2	2.0	24		
27	2.1	2.3	2.4	2.6	3	3.3	3.4	3	2.6	IZS	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2.1	3.4	2.3	24	
28	2.1	2.3	2.3	2.4	2.6	2.6	2.2	2	IZS	2	2	2	2	2	2	2	2	2	2	2	2	2	2.1	2.1	2.1	2.6	2.1	24	
29	2.2	2.2	2.3	2.1	2.1	2.2	2.2	IZS	1.9	1.9	2	2	2	2	2	2	2	2	2	2	2.1	2.1	2.2	2.4	2.4	2.4	2.1	24	
30	2.4	2.6	2.5	2.8	2.8	2.7	IZS	2.2	2.2	2.2	2.1	2.1	2.1	2	2	1.9	1.9	2.1	2	1.9	2	2.1	2.1	2	2.8	2.2	24		
31	2	2	2.1	2.5	2.7	IZS	2.5	2	2.1	2	1.9	2	1.9	2	2	2	2	2	2	2	2	2	2.3	2.5	2.7	2.1	24		
HOURLY MAX	2.6	2.8	2.7	2.8	3.0	3.3	3.4	3.0	2.6	2.4	2.2	2.5	2.2	2.1	2.1	2.0	2.0	2.1	2.0	2.1	2.1	2.2	2.4	2.5					
HOURLY AVG	2.1	2.2	2.2	2.3	2.4	2.4	2.3	2.2	2.1	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	2.1	2.1					

#### 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
BB	- BELOW BACKGROUND OF 1.5 PPM		

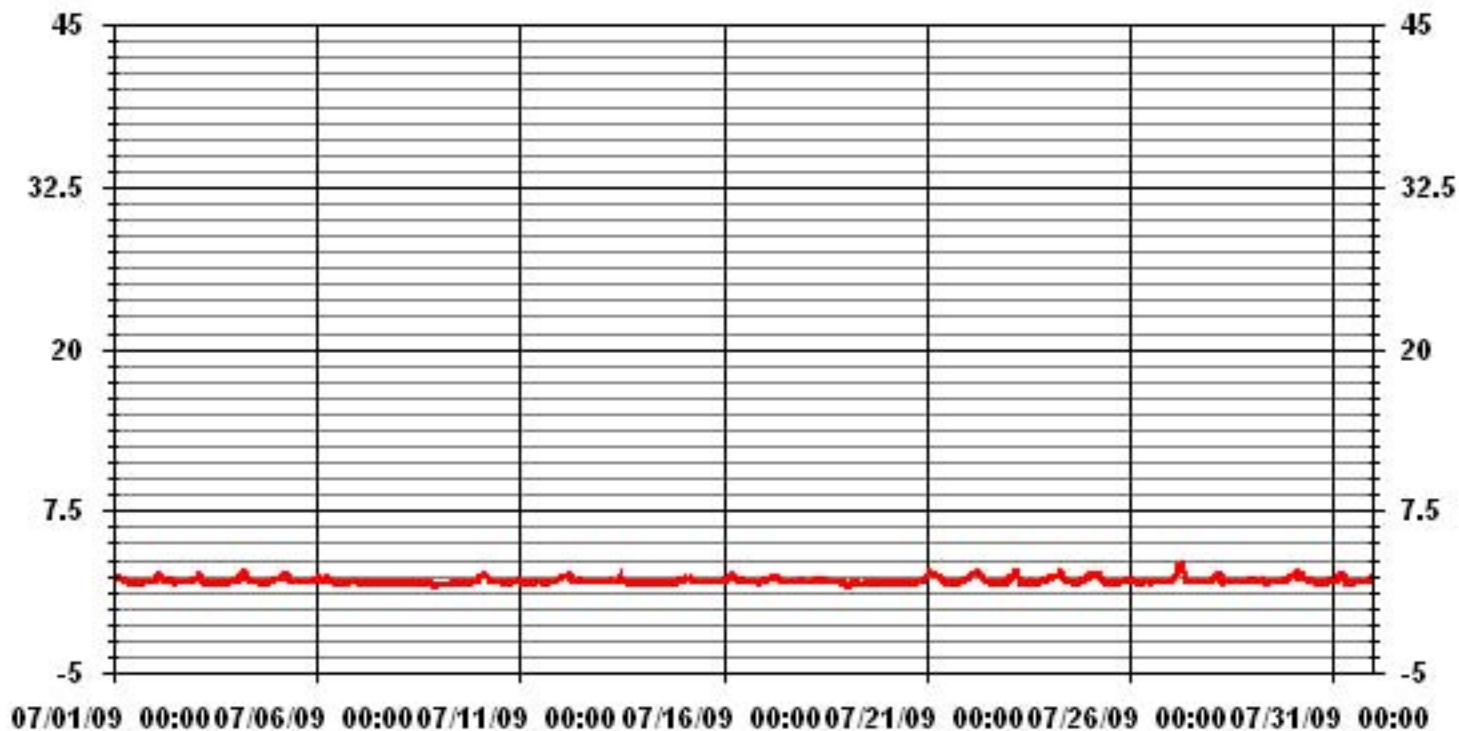


#### MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:	708		
MAXIMUM 1-HR AVERAGE:	3.4 PPM	@ HOUR(S)	6 ON DAY(S)
MAXIMUM 24-HR AVERAGE:	2.3 PPM		27 ON DAY(S)
IZS CALIBRATION TIME:	32 HRS	OPERATIONAL TIME:	744 HRS
MONTHLY CALIBRATION TIME:	4 HRS	AMD OPERATION UPTIME:	100.0 %
STANDARD DEVIATION:	0.23	MONTHLY AVERAGE:	2.09 PPM



### 01 Hour Averages



— LICA THC PPM

# LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - COLD LAKE

JULY 2009

## TOTAL HYDROCARBONS MAX instantaneous maximum in ppr

MST																										DAILY	24-HOUR			
HOURLY MAX	HOURLY AVG	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	MAX.	AVG.	RDGS.	
DAY																														
1		2.3	2.4	2.6	2.6	2.6	2.4	2.3	2.1	2	2	2	2	IZS	2	2	2	2	2	2	2	2	2	2	2	2	2.1	2.6	2.1	24
2		2.3	2.4	2.6	2.7	2.7	2.6	2.4	2.2	2.1	2.2	2.2	IZS	2	2	2	2	2	2	2	2	2.1	2.4	2.1	2.1	2.2	2.7	2.2	24	
3		2.3	2.4	2.6	2.6	2.3	2.1	2.2	2.1	2	2	IZS	1.9	1.9	1.9	2	2	2	2	2	2	2	2.1	2.1	2.1	2.3	2.6	2.1	24	
4		2.3	2.3	2.4	2.6	2.8	2.9	2.9	2.6	2.3	IZS	2	2.1	2	2	2	2	2	2	2	2	2	2.1	2.2	2.4	2.4	2.9	2.3	24	
5		2.3	2.5	2.3	2.6	2.5	2.7	2.7	2.5	IZS	2.1	2	2	2	2	2	2	2	2	2	2.1	2.1	2.1	2.2	2.2	2.2	2.7	2.2	24	
6		2.4	2.5	2.4	2.3	2.5	2.5	2.4	IZS	2.1	2.1	2.1	2	2.6	2	2.1	2	2	2	2	2.1	2	2.1	2.1	2.1	2.1	2.6	2.2	24	
7		2.1	2.1	2	2	2	2	IZS	2	2	2	2	2	2.1	2	1.9	1.9	1.9	2	1.9	1.9	2	2	2	2	1.9	2.1	2.0	24	
8		1.9	2	2	2	2	IZS	1.9	1.9	2	1.9	1.9	1.9	2.1	3	2.3	1.9	2	1.9	1.9	1.9	2.1	2.1	1.9	1.9	1.9	3	2.0	24	
9		1.9	1.9	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	1.9	1.9	1.9	1.9	2.1	2.1	2	2.3	2.3	1.9	24	
10		2.4	2.6	2.7	IZS	2.7	2.7	2.3	2.3	2.1	2	2	2	2	2	2	2	2	2	2	2	2	2.6	2.1	2.1	2.2	2.7	2.2	24	
11		2	2	IZS	1.9	2	2	1.9	2	2	2.1	2.1	2.2	2	2.8	2	2	2	2.1	2	2	2	2	2	2.2	2.2	2.4	2.8	2.1	24
12		2.4	IZS	2.5	2.5	2.5	2.7	2.6	2.3	2.1	2.1	2.1	2.2	2.2	2.1	2	2.2	2	2	2	2	2.1	2.1	2.1	2	2	2.7	2.2	24	
13		IZS	2.1	2.1	2.1	2.1	2.2	2.2	2.1	2.1	2.1	2.2	4.2	2.2	C	C	C	C	C	C	1.9	1.9	2	2	2	IZS	4.2	2.2	24	
14		1.9	1.9	1.9	1.9	2	2	2	2	2	2	2	2	2	2	2.1	2	2	2	2	2	2	2	2	2.1	IZS	2.2	2.2	2.0	24
15		2.2	2.3	2.4	2.4	2.4	2.4	2.3	2.1	2	2	2.1	2	2	2	2	2	2	2	2	2	2.1	2.2	IZS	2.1	2.1	2.4	2.1	24	
16		2.1	2.2	2.2	2.4	2.4	2.6	2.6	2.4	2.4	2.2	2.1	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2	2.1	2	IZS	2	2	2.2	2.6	2.2	24
17		2.2	2.2	2.4	2.3	2.4	2.6	2.6	2.4	2.6	2.1	2	2	2	2	2	2.1	2.1	2.1	2.1	2.1	IZS	2.2	2.2	2.3	2.3	2.6	2.2	24	
18		2.1	2	2	2	2.1	2.1	2.1	2.1	2.1	2.2	2.8	2.2	2.2	2.2	2.1	2.2	2	2.1	IZS	2.1	2.3	2.1	2	2	2.8	2.1	24		
19		1.9	1.9	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	IZS	2	1.9	1.9	1.9	1.9	1.9	2.1	1.9	24	
20		1.9	1.9	1.9	1.9	2	2	2	2	2	2	2	2	2	2	2	2	IZS	2	2	2	2	2.1	2.2	2.2	2.4	2.4	2.0	24	
21		2.7	2.8	2.8	2.8	2.7	2.8	2.5	2.4	2.4	2.4	2.3	2.1	2	1.9	2	IZS	1.9	1.9	2	2	2.1	2.1	2.5	2.3	2.8	2.3	24		
22		2.3	2.7	2.7	2.8	2.7	2.7	2.8	2.8	2.7	2.7	2.2	2	2	2	IZS	2	2	2	2	1.9	2	2	2.2	2.5	2.3	2.8	2.3	24	
23		2.4	2.5	2.5	2.8	3	2.9	2.7	2.4	2.2	2	1.9	1.9	1.9	IZS	2	2	1.9	2	2.1	2.3	2.2	2.2	2.3	2.5	3	2.3	24		
24		2.4	2.4	2.6	2.5	2.6	2.8	3	3	2.7	2.4	2.2	2.2	IZS	2.1	2.1	2.1	2	2	2.1	2.2	2.1	2.7	2.6	2.5	3	2.4	24		
25		2.6	2.6	2.7	2.9	3	2.8	2.7	2.5	2.4	2	2	IZS	2	2	2	2	2	2	2	2.1	2.1	2.9	2.5	2.5	3	2.4	24		
26		2.1	2.2	2.2	2.2	2	2	2	2	2	2	IZS	2	2	2	2	2	2	2	2	2	2	2	2.1	2.4	2.2	2.4	2.1	24	
27		2.2	2.4	2.6	2.9	3.3	3.4	3.5	3.4	2.9	IZS	2.1	2	2	2	2	2.4	2.1	2.1	2.1	2.1	2.1	2	2	2.1	2.1	3.5	2.4	24	
28		2.6	2.5	2.4	2.6	2.9	3	2.4	2.1	IZS	2	2.1	2	2	2	2	2	2	2	2	2	2	2.1	2.1	2.2	2.2	3	2.2	24	
29		2.4	2.5	2.6	2.3	2.2	2.3	2.4	IZS	2	2	2	2	2.1	2.1	2.1	2	3	3.2	2.1	2.2	2.2	2.6	2.6	2.5	3.2	2.3	24		
30		2.5	3.1	2.8	3	3.2	3.1	IZS	2.2	2.3	2.2	2.2	2.2	2.2	2.1	2	2.4	2.1	2.4	2.1	2	2.1	2.3	2.3	2.1	3.2	2.4	24		
31		2.2	2.1	2.5	2.7	2.9	IZS	2.9	2.1	2.2	2.1	2	2.1	2	2.2	2.1	2	2	2	2	2	2.1	2.1	2.1	2.4	2.7	2.9	2.2	24	
HOURLY MAX		3	3	3	3	3	3	4	3	3	3	3	4	3	3	2	2	3	3	2	2	3	3	3	3	3				
HOURLY AVG		2.2	2.3	2.4	2.4	2.5	2.5	2.4	2.3	2.2	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.1	2.0	2.0	2.1	2.2	2.2	2.2	2.2				

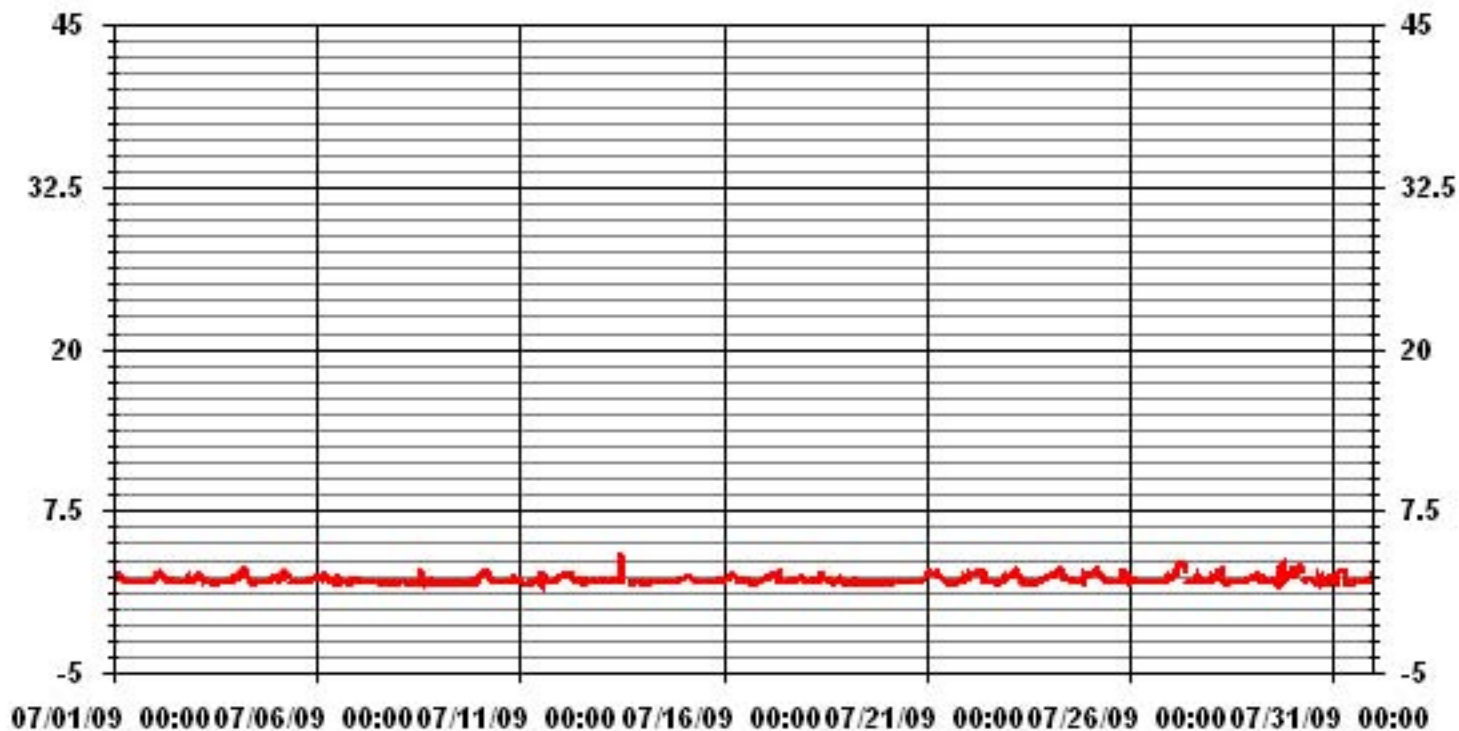
**STATUS FLAG CODES**

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
BB - BELOW BACKGROUND OF 1.5 PPM	

**MONTHLY SUMMARY**

NUMBER OF NON-ZERO READINGS:	707					
MAXIMUM INSTANTANEOUS VALUE:	4.2	PPM	@ HOUR(S)	11	ON DAY(S)	13
IZS CALIBRATION TIME:	32	HRS	OPERATIONAL TIME:	744	HRS	
MONTHLY CALIBRATION TIME:	5	HRS				
STANDARD DEVIATION:	0.29					

### 01 Hour Averages



— LICA THCMAX PPM

LICA  
 THC / WD Joint Frequency Distribution (Percent)

July 2009

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	3.67	3.95	1.83	3.38	5.93	7.20	9.03	2.96	4.94	3.95	10.45	12.85	9.32	5.93	7.20	6.77	99.43
< 10.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.42	.14	.00	.00	.00	.00	.56
< 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	3.67	3.95	1.83	3.38	5.93	7.20	9.03	2.96	4.94	3.95	10.87	12.99	9.32	5.93	7.20	6.77	

Calm : .00 %

Total # Operational Hours : 708

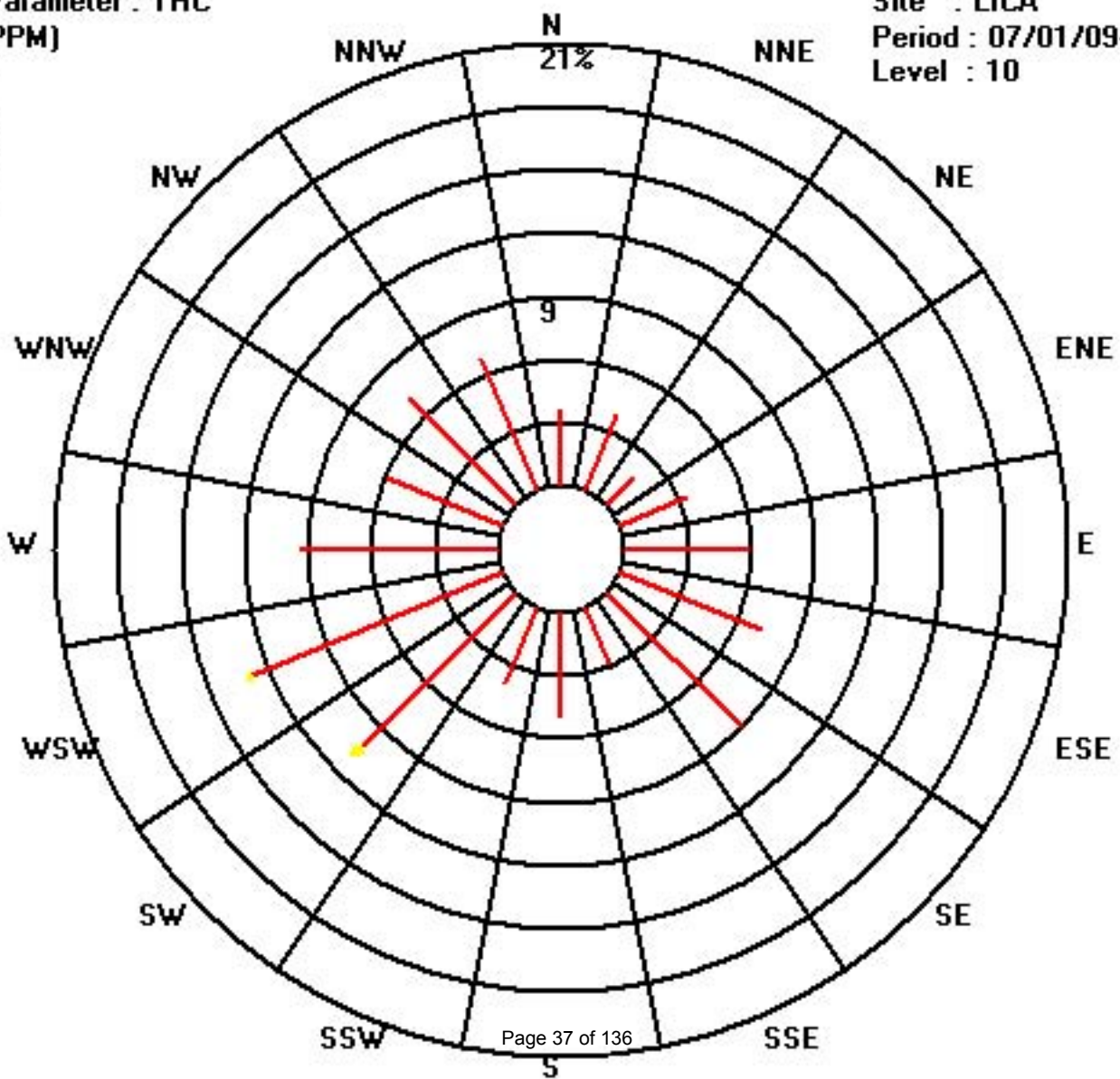
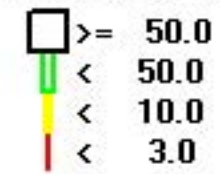
Distribution By Samples

	Direction																
Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 3.0	26	28	13	24	42	51	64	21	35	28	74	91	66	42	51	48	704
< 10.0											3	1					4
< 50.0																	
>= 50.0																	
Totals	26	28	13	24	42	51	64	21	35	28	77	92	66	42	51	48	

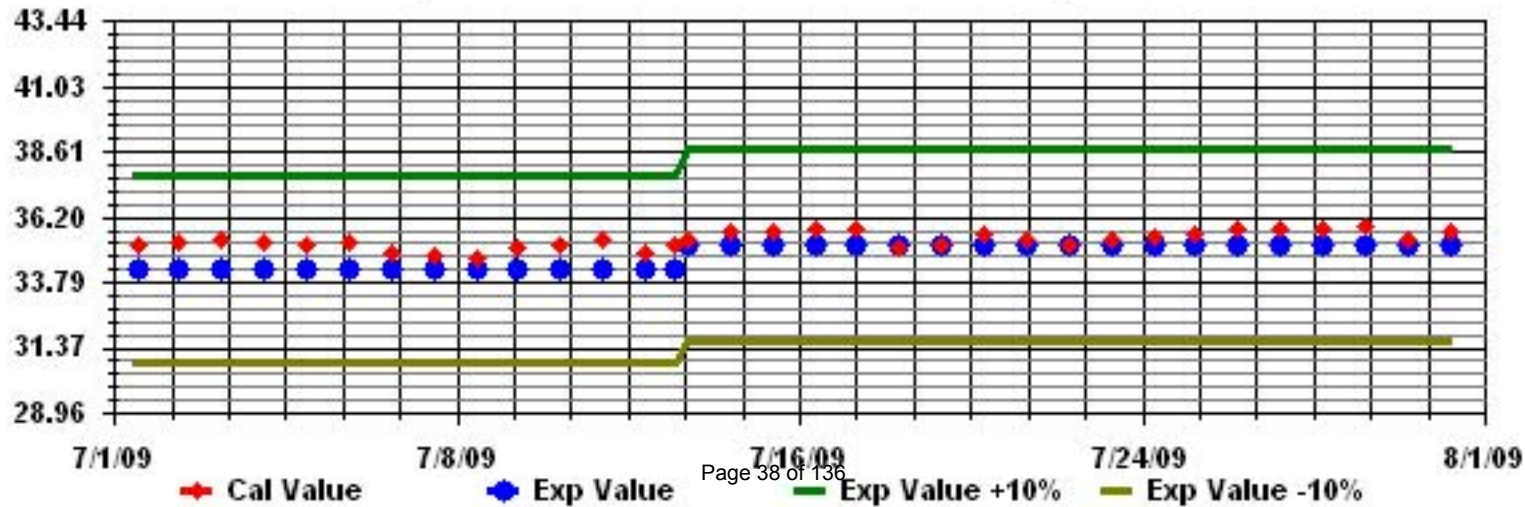
Calm : .00 %

Total # Operational Hours : 708

Class Limits (PPM)



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



# Particulate Matter 2.5

## LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - COLD LAKE

JULY 2009

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

MST

DAY	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.
1	4.6	6.5	6.1	4.3	2.8	2.1	0.8	0.8	2.6	0.2	6.4	1.6	3.2	3.8	0.7	3.3	5.1	3.8	8.2	3.8	8.2	4.4	2.7	2.7	8.2	3.7	24	
2	2.2	3	3.8	0.9	1.6	4.8	2.1	3.7	0.9	1	8.1	7.7	4.5	7.9	7	0	6.3	4.6	4.5	6.5	8.4	3.5	3.7	4.3	8.4	4.2	24	
3	8.1	5.1	5.4	4.7	5.8	5.2	5.7	0	2.4	6	1.2	4.5	3.6	0	0	1.7	0	1.5	0	0	3.7	2.8	0.8	2.6	8.1	3.0	24	
4	5.6	3	3.1	3.8	3.7	2.7	2.4	3.1	4.6	6.8	6.2	7	6.1	10.4	6.8	5.9	1.6	0.1	3.9	3.3	7	5	4.2	5.1	10.4	4.6	24	
5	2.7	6.5	4.5	5.8	6.2	3.5	6.1	7.4	2.2	0.7	0.4	2	3.5	0.5	4	8	5.5	3.3	4.9	3.5	5.9	1.4	5.2	3.3	8.0	NA	24	
6	6	4.9	5.9	4.8	6.4	5.7	3.4	4.2	6.7	6.3	4	4.4	9.7	6.3	1	2.5	5.8	3	2.9	4.5	12.4	10.9	7.3	8.1	NA	NA	24	
7	3.5	2.9	5.1	6	7	5.4	9.3	4.7	9.3	7.4	6.3	0	0	5.6	3.6	7.6	2.3	4.4	4.9	6	7.1	7.6	5.5	7.2	9.3	5.4	24	
8	1.9	2	0.1	5.7	6.6	1.1	0	1.7	5	4.4	0.4	0.5	3.1	9.5	9.3	2.5	4.9	7.3	4.1	5	1.2	1.4	5.2	4.9	9.5	3.7	24	
9	0	2.2	5.3	4.2	2.6	0.9	1.3	2.6	7.8	4.8	3.7	4.9	1.6	0	1.4	0.7	1.8	4.9	3.2	2.5	0.1	2.6	6.1	6.7	7.8	3.0	24	
10	5.7	3.6	4.5	1.3	2.2	0.8	2.3	3	2.5	1.1	3.4	4.6	5.8	3.7	5.8	2.7	3.4	5.1	3.7	2	1	10.1	6.7	8	10.1	3.9	24	
11	8.2	2.6	3.3	0.8	0.4	0	6.8	2.4	1.6	2.3	4.2	0	4.4	4.2	4.9	5.2	3	3.9	9.2	3.3	2.5	5.1	3.5	2.8	9.2	3.5	24	
12	4.2	2.1	5.8	6	1.6	4.4	5.5	2.9	0.8	0.8	6	3.5	5.5	2.8	3.2	1.7	0	4.8	5.8	6.3	8.3	8.7	4.6	4.6	8.7	4.2	24	
13	2.7	0	4.6	1.6	0	0.5	2.4	4.8	1.9	N	C	C	C	C	C	7.7	12.5	11.5	3.6	4.6	2.2	1	8.1	5	12.5	4.2	23	
14	10.6	4.9	0	0.4	9.1	3.3	6.4	10.8	14.8	N	0.9	0.7	1.6	0.5	8.6	9.1	0	2.2	0.7	2.9	8.6	14.6	12.9	15.4	15.4	6.0	23	
15	9.1	6.8	4.3	4.3	5.5	2.5	14.2	2.4	0	1.7	0.3	3.2	4.9	4.6	3.7	7	4.8	5.9	10.2	7.1	7.6	14.5	5.8	0.9	14.5	5.5	24	
16	8.9	8.9	6.8	2	4.8	0	N	0.8	3.3	7.6	1.3	6.8	7.9	6.1	6.1	9.8	9	6.4	8.2	7.6	4	8.1	6.8	6	9.8	6.0	23	
17	0	3.2	5.8	5.6	8.4	0.2	1.5	7.4	8.3	9	6.6	5.1	10.4	7.7	8.5	9.7	8.9	11	14.3	13.4	7.8	14.1	11.8	18.6	18.6	8.2	24	
18	11.9	5.2	8.8	5.3	7.2	8.4	8	2.6	16.1	15.1	10.6	12.3	11	7.4	10.4	13.4	8.9	7.8	16.3	11.3	8.4	9.9	11	17.6	17.6	10.2	24	
19	8.2	6.9	2.9	5.1	7.3	2.9	N	4.5	7.6	9.6	6.7	4.8	3.4	0	0	1.5	0	2.7	5.6	0	0	3.9	4.2	1.7	9.6	3.9	23	
20	1.6	2.5	5	0	1.4	4.4	7.9	0	3.5	6.3	4.4	0	12.7	8.5	N	N	N	N	0	4.8	6.7	7.5	2.3	3.5	12.7	4.2	20	
21	5.2	6.3	4.4	3.5	1.3	0	5	0	6.4	6.9	9.4	10.6	16.8	18	0	5	12	8.5	13.1	16.2	7.5	6.4	4.9	8.4	18.0	7.3	24	
22	3.7	6.4	2.4	3	5.2	2	6.3	6.9	5.5	8.6	8.8	7.4	9	9.1	9.7	7.5	6	5.3	6.1	3.8	3.8	6.6	8.1	3.3	9.7	6.0	24	
23	4.9	3.2	4.9	5.6	6.8	10.9	8.9	6.6	5.1	2.9	5.8	8	10.7	5.3	2.9	4.2	9	8.8	7.7	7	13.8	8.6	8	10.8	13.8	7.1	24	
24	8.2	11.5	7.1	N	0	2.4	4.9	7.7	7.6	10.7	8.5	11.2	6.9	5.6	8.6	8.2	13	11.2	10.2	16.7	12.2	8.7	10.2	8.4	16.7	8.7	23	
25	9.1	4.1	10.2	23.4	15.2	12	4	7.6	10.3	11.8	7	12	12	9.1	11.4	12.8	9.2	9.6	10.6	11	9.1	8.9	6.9	8.9	23.4	10.3	24	
26	10.5	4.7	3.6	6.9	7.5	5.4	5.2	9.8	4.9	4.9	12.2	8	8.1	3.5	0.9	4.8	14	6.3	4.8	9	14.7	15.8	17.3	20.4	20.4	8.5	24	
27	17.1	8.7	14.6	9.5	14.3	12	11	14.2	10.5	12.5	11.6	12.7	14.8	16.7	17.2	10.2	9.6	15.8	15.7	14.9	19	16	7	3.8	19.0	12.9	24	
28	7.4	9.2	8.2	9.6	9.4	6.5	9.9	14.6	14.4	14.3	13.4	16.3	13.2	12	11.3	10.4	17.6	14.4	12.4	17.3	14.7	13.1	12.6	10.6	17.6	12.2	24	
29	11.6	3.2	4.3	4.6	2.5	4.8	0.3	6.7	1.1	0.7	0	1.6	3.4	5.4	3.8	5.8	0	0	9.1	6.2	5.1	9.2	10.8	2	11.6	4.3	24	
30	3	7.3	8.1	10.1	7	4.1	10.1	8.7	9	12.4	9.3	15.6	15.3	15.6	15.9	5.2	7.7	6.9	5.5	2.5	5.4	9.9	8.9	7.4	15.9	8.8	24	
31	4.8	5.4	5.1	3.7	3.3	5.6	5.1	3.8	8.3	7.4	15.9	13.5	12.6	2.7	0	2.7	4.9	3.6	4.2	2.8	0	0	4.3	5.3	15.9	5.2	24	
HOURLY MAX	17	12	15	23	15	12	14	15	16	15	16	16	17	18	17	13	18	16	16	17	19	16	17	20				
HOURLY AVG	6.2	4.9	5.3	5.1	5.3	4.0	5.4	5.0	6.0	6.4	6.1	6.4	7.5	6.4	5.7	5.9	6.2	6.2	6.9	6.6	7.0	7.8	7.0	7.0				

**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

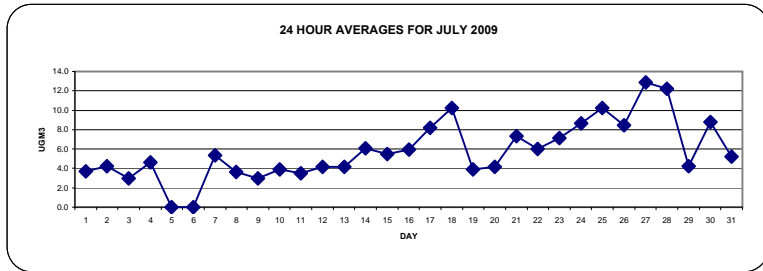
**OBJECTIVE LIMIT:**

**ALBERTA ENVIRONMENT:**

1-HR	-	PPB	24-HR	30	PPB
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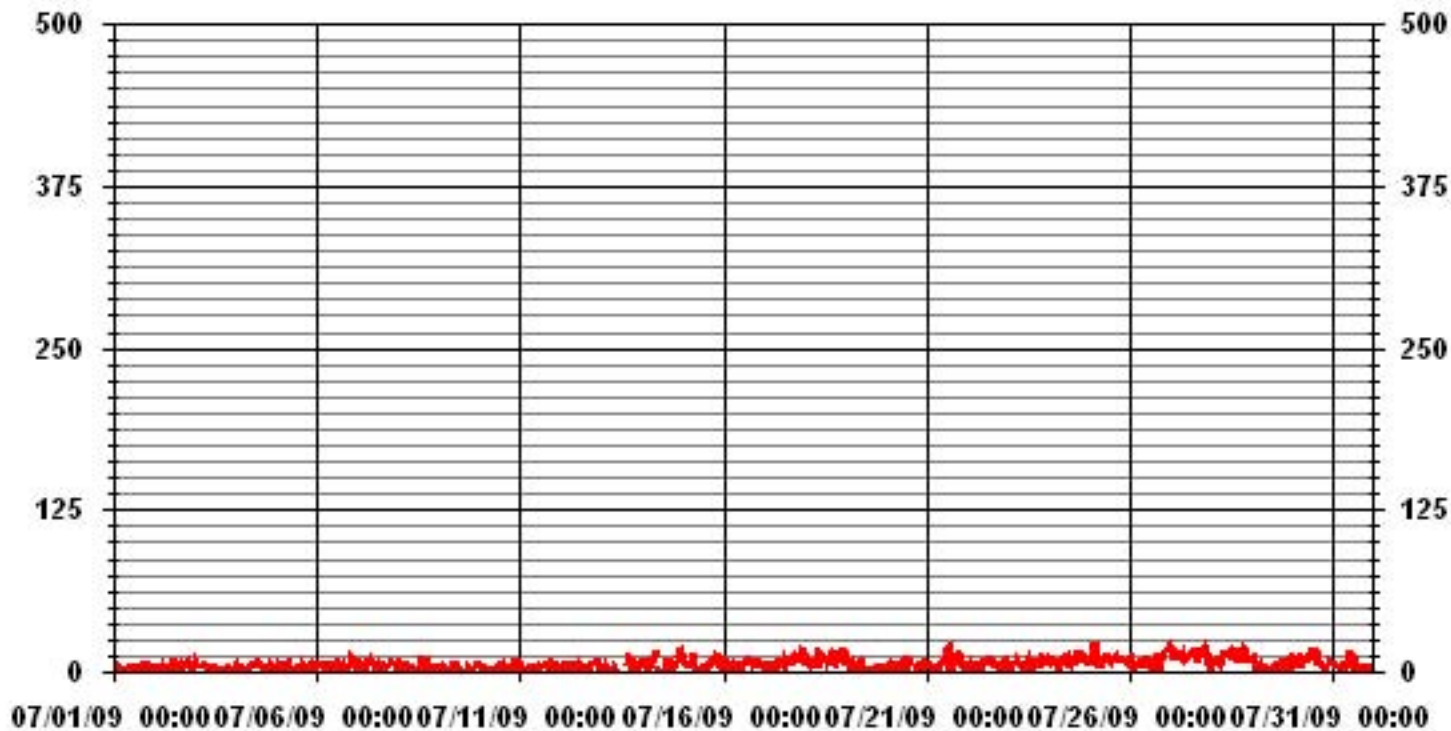
**MONTHLY SUMMARY**

NUMBER OF 1-HR EXCEEDENCES:	-
NUMBER OF 24-HR EXCEEDENCES:	0 PROPOSED CANADA WIDE GUIDELINE
NUMBER OF NON-ZERO READINGS:	689
MAXIMUM 1-HR AVERAGE:	23.4 UG/M <sup>3</sup> @ HOUR(S) 3 ON DAY(S) 25
MAXIMUM 24-HR AVERAGE:	12.9 UG/M <sup>3</sup> ON DAY(S) 27
IZS CALIBRATION TIME:	0 HRS
MONTHLY CALIBRATION TIME:	5 HRS
STANDARD DEVIATION:	4.20
OPERATIONAL TIME:	735 HRS
AMD OPERATION UPTIME:	98.8 %
MONTHLY AVERAGE:	6.09 UG/M <sup>3</sup>





### 01 Hour Averages



— LICA PM2 UG/M3

LICA  
PM2 / WD Joint Frequency Distribution (Percent)

July 2009

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	3.83	3.83	2.05	3.28	6.30	7.12	9.04	2.87	4.79	4.24	10.95	13.01	9.04	5.47	7.12	6.98	100.00
< 60.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
< 80.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
< 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	.00	.00	.00	.00	.00	.00	.00
>= 240.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
Totals	3.83	3.83	2.05	3.28	6.30	7.12	9.04	2.87	4.79	4.24	10.95	13.01	9.04	5.47	7.12	6.98	

Calm : .00 %

Total # Operational Hours : 730

Distribution By Samples

	Direction																
Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 30.0	28	28	15	24	46	52	66	21	35	31	80	95	66	40	52	51	730
< 60.0																	
< 80.0																	
< 120.0																	
< 240.0																	
>= 240.0																	
Totals	28	28	15	24	46	52	66	21	35	31	80	95	66	40	52	51	

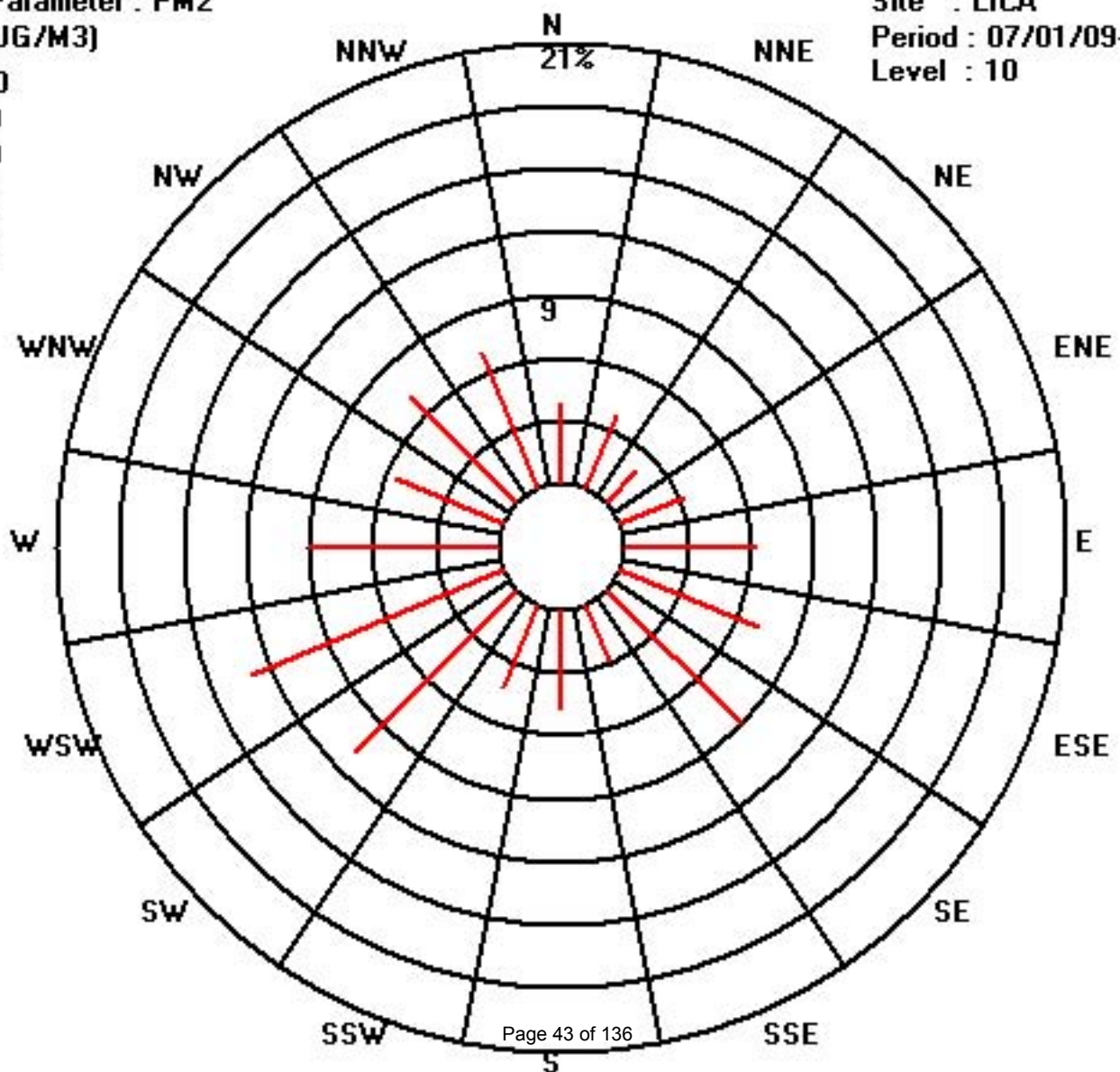
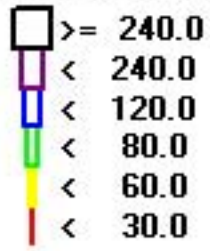
Calm : .00 %

Total # Operational Hours : 730

Class Limits (UG/M3)

Period : 07/01/09-07/31/09

Level : 10



# Nitrogen Dioxide

# LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - COLD LAKE

JULY 2009

## 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	24-HOUR		
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	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	3	3	2	3	4	4	2	1	0	0	0	0	IZS	0	0	0	0	0	1	2	2	1	2	2	4	1.4	24	
2	2	2	2	3	3	4	2	1	1	1	1	IZS	0	0	0	0	0	0	0	0	4	2	2	3	4	1.4	24	
3	3	3	5	3	2	3	2	1	1	1	IZS	0	0	0	0	0	0	1	1	1	1	2	1	1	5	1.4	24	
4	1	1	1	2	1	2	2	2	2	IZS	0	3	0	1	2	1	0	1	2	2	2	2	2	3	3	1.5	24	
5	3	2	2	2	3	3	4	2	IZS	1	1	1	0	0	0	0	0	0	1	1	2	3	2	1	4	1.5	24	
6	1	1	1	1	1	2	4	IZS	1	1	3	1	0	1	0	1	1	1	1	2	3	2	2	1	4	1.4	24	
7	1	0	0	0	0	1	IZS	1	1	1	1	3	1	1	1	1	1	1	1	1	1	1	1	1	3	0.9	24	
8	0	1	1	1	1	IZS	2	1	1	1	1	1	0	0	1	1	1	1	1	1	2	1	0	0	2	0.9	24	
9	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	3	1	2	3	0.3	24	
10	3	2	4	IZS	4	3	3	2	1	0	0	0	0	0	0	0	0	0	1	1	3	3	2	1	4	1.4	24	
11	0	0	IZS	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	1	3	3	3	0.4	24	
12	2	IZS	2	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	1	2	2	1	0	2	0.7	24	
13	IZS	1	1	1	1	1	2	1	C	C	C	C	C	C	C	C	2	0	0	0	0	1	1	IZS	2	0.9	24	
14	0	0	0	0	0	1	1	2	0	1	1	1	0	1	0	0	0	0	0	0	1	2	IZS	2	2	0.6	24	
15	2	2	2	1	1	2	2	0	0	0	0	0	0	0	0	0	0	0	1	1	3	IZS	1	0	3	0.8	24	
16	0	1	1	1	1	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	IZS	1	2	2	2	1.1	24	
17	2	2	2	2	2	2	6	5	3	1	1	1	1	1	1	1	2	1	2	IZS	4	5	4	4	6	2.4	24	
18	0	0	1	0	0	1	1	1	1	1	2	1	1	1	1	1	1	1	IZS	2	1	1	1	1	2	0.9	24	
19	1	1	1	1	2	2	1	1	0	0	0	0	0	0	0	0	0	0	IZS	1	0	0	0	0	2	0.5	24	
20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	1	2	3	3	4	5	5	0.8	24	
21	7	8	4	3	2	4	3	2	2	2	1	1	0	0	0	IZS	0	0	0	1	5	3	2	3	8	2.3	24	
22	2	1	1	1	1	1	3	6	4	3	2	2	2	1	IZS	2	2	1	0	1	1	2	1	2	6	1.8	24	
23	3	3	3	4	4	5	4	3	1	1	0	0	0	IZS	0	0	0	0	1	2	5	4	3	3	5	2.1	24	
24	4	3	2	1	1	1	3	4	7	4	3	1	IZS	1	1	1	1	0	1	2	3	3	4	4	7	2.4	24	
25	4	4	3	3	3	4	5	5	2	1	0	IZS	1	1	0	1	0	0	1	1	2	3	2	2	5	2.1	24	
26	0	1	1	1	0	0	0	0	0	0	IZS	1	0	0	0	0	0	0	1	1	2	1	1	2	0.4	24		
27	1	1	2	4	5	7	7	8	6	IZS	2	1	1	1	1	2	3	2	1	6	1	0	1	1	8	2.8	24	
28	1	1	1	1	1	1	2	1	IZS	1	1	0	0	0	0	0	0	0	1	0	1	1	2	1	2	0.7	24	
29	0	0	0	0	1	1	1	IZS	0	0	0	0	0	0	0	1	1	1	1	1	2	3	4	2	2	4	0.9	24
30	2	2	2	3	3	3	IZS	3	3	3	3	3	3	2	1	3	2	2	1	0	1	2	1	0	3	2.1	24	
31	0	0	0	1	2	IZS	3	1	1	0	0	1	0	0	0	0	0	0	2	5	3	2	2	5	1.0	24		
HOURLY MAX	7	8	5	4	5	7	7	8	7	4	3	3	3	2	2	3	3	2	2	6	5	5	4	5				
HOURLY AVG	1.6	1.5	1.6	1.5	1.7	2.1	2.3	1.9	1.4	0.9	0.9	0.8	0.4	0.5	0.3	0.6	0.6	0.5	0.7	1.2	2.2	2.1	1.8	1.8				

### STATUS FLAG CODES

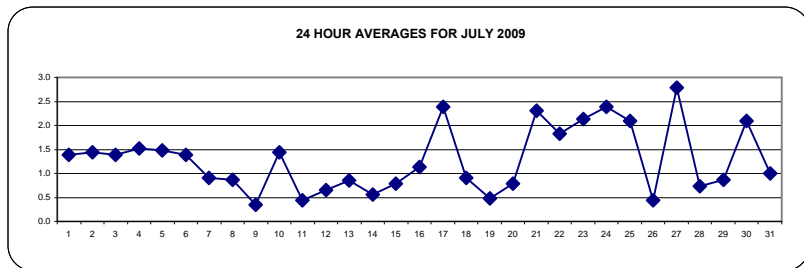
S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	- MISSING DATA
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE

### OBJECTIVE LIMIT:

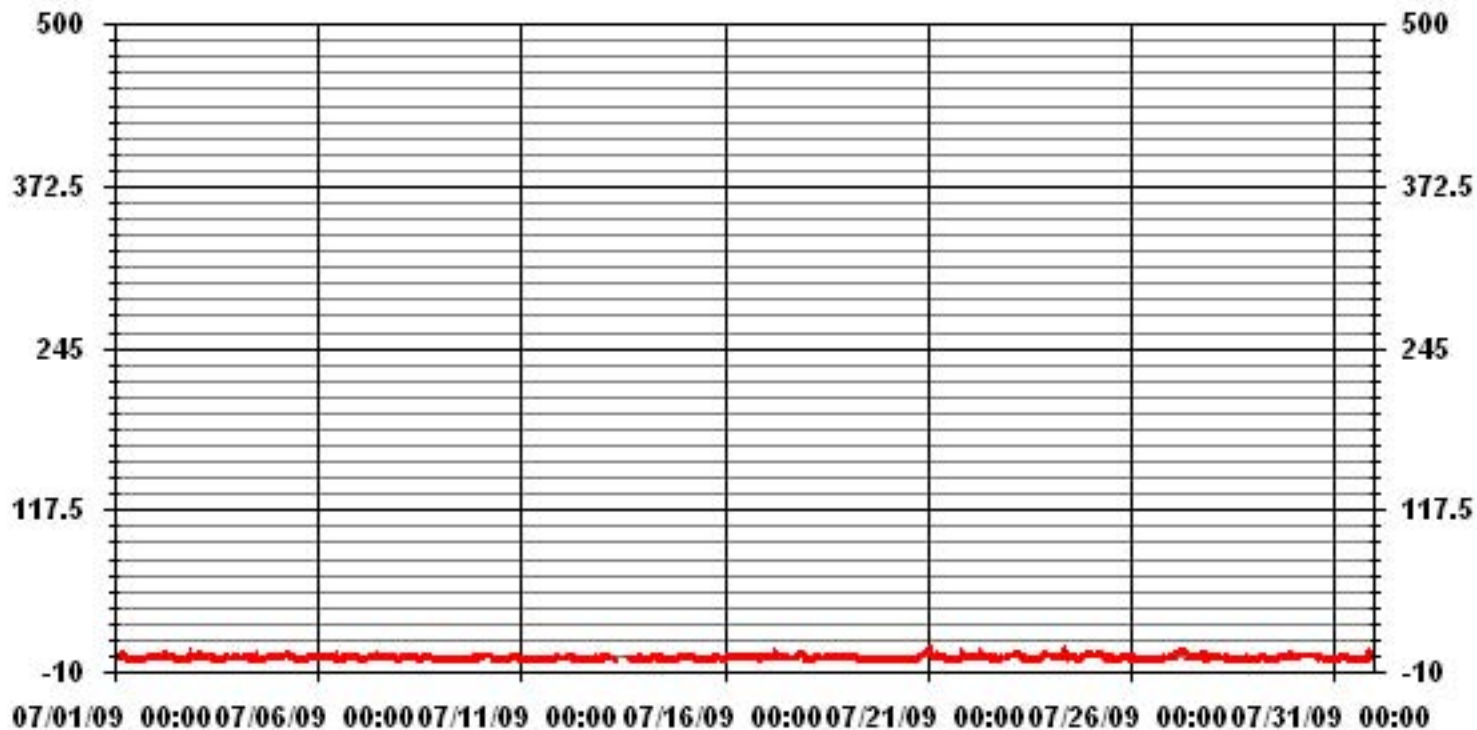
ALBERTA ENVIRONMENT:	1-HR	212	PPB	24-HR	106	PPB
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### MONTHLY SUMMARY

NUMBER OF 1-HR EXCEEDENCES:	0
NUMBER OF 24-HR EXCEEDENCES:	0
NUMBER OF NON-ZERO READINGS:	472
MAXIMUM 1-HR AVERAGE:	8 PPB @ HOUR(S) 1, 7 ON DAY(S) 21, 27
MAXIMUM 24-HR AVERAGE:	2.8 PPB ON DAY(S) 27
IZS CALIBRATION TIME:	32 HRS
MONTHLY CALIBRATION TIME:	8 HRS
STANDARD DEVIATION:	1.37
OPERATIONAL TIME:	744 HRS
AMD OPERATION UPTIME:	100.0 %
MONTHLY AVERAGE:	1.29 PPB



### 01 Hour Averages



— LICA H02\_ PPB

# LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - COLD LAKE

JULY 2009

## 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	4	2	5	5	4	4	2	1	2	1	1	IZS	0	1	0	1	1	2	4	4	3	3	2	5	2.4	24
2	3	3	4	4	4	5	3	2	1	1	1	IZS	1	1	1	1	0	0	1	10	4	3	6	10	2.6	24	
3	4	4	6	6	15	10	4	3	2	4	IZS	1	0	3	3	2	2	1	18	3	3	3	2	18	4.4	24	
4	2	1	2	3	2	2	3	3	3	IZS	2	101	1	13	43	1	1	2	3	3	5	4	3	4	101	9.0	24
5	5	4	3	3	5	4	4	4	IZS	2	1	1	1	1	1	0	1	1	2	2	5	25	3	3	25	3.5	24
6	1	1	1	2	3	3	6	IZS	2	10	12	8	1	4	17	5	4	4	7	4	6	9	4	3	17	5.1	24
7	1	1	1	1	1	5	IZS	2	2	2	2	2	6	4	5	2	2	3	3	2	2	4	2	1	6	2.4	24
8	1	2	1	2	4	IZS	3	2	2	3	3	1	1	9	8	2	3	2	2	4	5	7	1	1	9	3.0	24
9	0	0	0	0	IZS	1	0	3	0	1	0	1	2	1	7	1	1	1	0	0	4	6	3	4	7	1.6	24
10	3	4	6	IZS	8	6	4	2	1	1	2	0	1	0	1	6	3	1	1	2	16	8	2	2	16	3.5	24
11	1	2	IZS	1	3	3	1	1	1	1	1	1	1	28	1	0	2	1	0	1	2	2	5	3	28	2.7	24
12	3	IZS	2	2	2	5	1	1	1	9	2	1	1	1	1	2	1	1	4	3	3	1	6	9	2.3	24	
13	IZS	1	1	1	3	2	4	C	C	C	C	C	C	C	C	14	1	0	0	0	0	2	1	IZS	14	2.3	24
14	1	0	0	1	1	1	11	7	1	2	2	1	1	2	1	0	1	5	1	2	4	4	IZS	3	11	2.3	24
15	3	2	2	2	2	4	7	1	0	8	1	1	1	3	2	4	2	1	3	2	5	IZS	2	1	8	2.6	24
16	1	1	1	1	2	4	2	4	16	10	4	7	2	3	15	2	2	1	2	1	IZS	2	3	2	16	3.8	24
17	3	3	3	3	3	4	9	6	7	2	3	2	2	4	2	3	9	6	9	IZS	13	7	9	5	13	5.1	24
18	1	1	10	1	1	8	2	2	3	1	36	1	4	2	1	1	4	3	IZS	4	11	3	1	2	36	4.5	24
19	2	2	1	3	4	3	3	1	1	0	0	0	0	0	1	1	1	1	IZS	1	1	1	1	1	4	1.3	24
20	1	0	0	0	0	1	1	0	3	0	0	0	3	0	0	0	IZS	1	2	2	7	7	7	8	8	1.9	24
21	9	9	5	4	3	5	4	3	3	3	2	1	1	1	1	IZS	1	1	1	5	8	4	3	3	9	3.5	24
22	3	2	2	2	2	3	5	8	6	4	4	4	4	3	IZS	5	4	2	1	3	2	3	2	3	8	3.3	24
23	4	6	4	6	5	6	7	5	3	3	1	1	0	IZS	1	1	5	5	6	16	8	6	5	4	16	4.7	24
24	6	4	3	2	2	4	5	9	6	5	7	IZS	1	3	3	2	1	2	3	7	5	6	5	9	4.0	24	
25	5	4	4	4	4	5	6	6	4	1	1	IZS	2	1	1	1	1	1	3	2	17	11	3	4	17	4.0	24
26	1	2	1	1	2	1	0	1	1	2	IZS	1	0	1	0	1	1	1	1	4	4	7	3	2	7	1.7	24
27	1	2	2	6	7	9	9	9	9	IZS	3	1	2	2	2	5	9	8	3	39	2	2	4	2	39	6.0	24
28	2	1	1	1	3	2	3	3	IZS	1	3	1	1	1	0	1	1	2	5	1	1	4	3	2	5	1.9	24
29	1	1	1	1	2	3	3	IZS	2	6	2	1	3	1	2	9	9	5	2	5	5	43	3	3	43	4.9	24
30	2	3	3	5	4	4	IZS	6	5	6	4	3	4	2	2	16	4	2	2	2	3	4	2	1	16	3.9	24
31	0	0	0	1	3	IZS	4	2	2	1	1	1	8	3	3	1	1	1	1	7	11	5	4	2	11	2.7	24
HOURLY MAX	9	9	10	6	15	10	11	9	16	10	36	101	8	28	43	16	14	8	9	39	17	43	9	8			
HOURLY AVG	2.5	2.3	2.4	2.5	3.5	4.0	4.0	3.4	3.3	3.3	3.5	5.5	1.9	3.3	4.2	2.6	3.1	2.2	2.2	4.8	5.8	6.6	3.2	3.0			

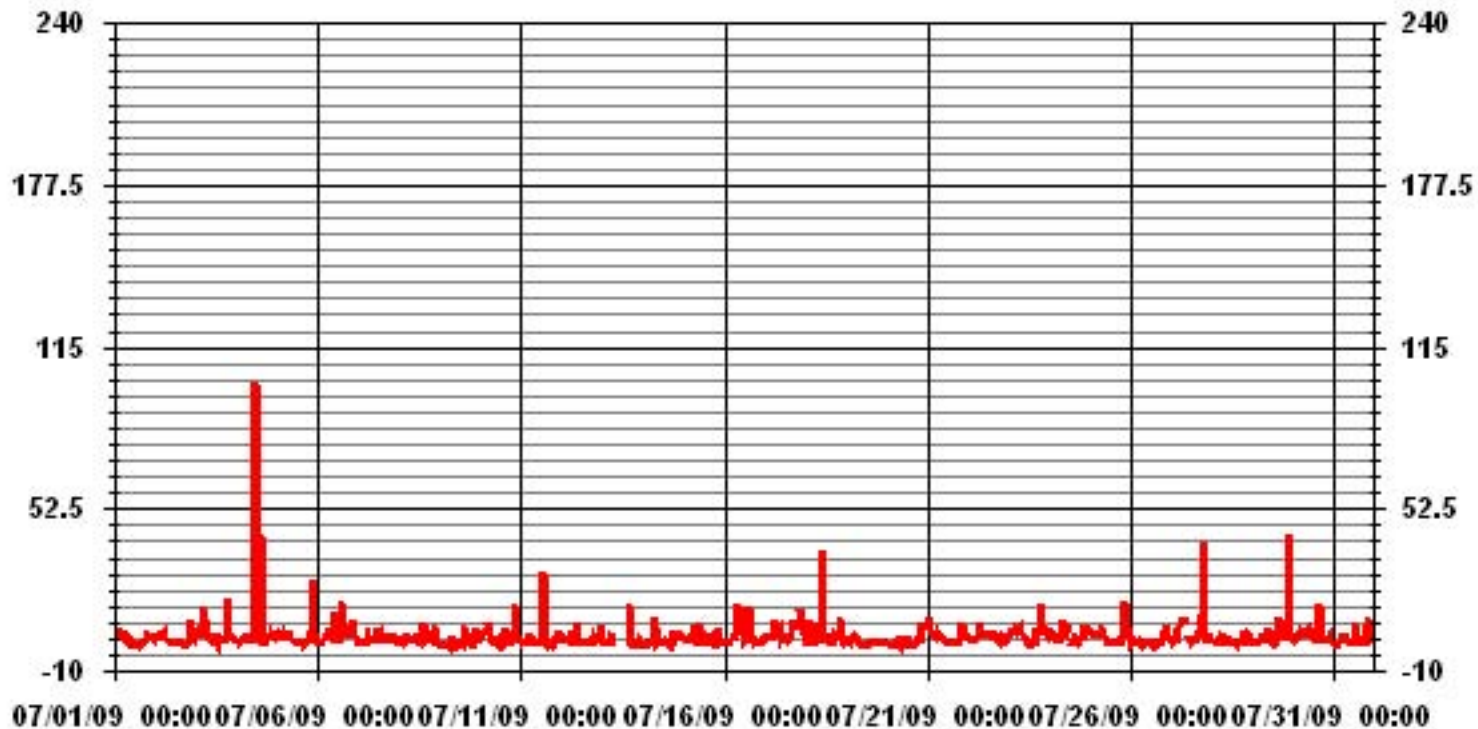
**STATUS FLAG CODES**

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:	654					
MAXIMUM INSTANTANEOUS VALUE:	101	PPB	@ HOUR(S)	11	ON DAY(S)	4
IZS CALIBRATION TIME:	32	HRS	OPERATIONAL TIME:	744	HRS	
MONTHLY CALIBRATION TIME:	9	HRS				
STANDARD DEVIATION	5.55					

### 01 Hour Averages



— LICA NO2MAX PPB



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

July 2009

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	3.69	3.97	1.84	3.40	5.96	7.24	9.09	2.98	4.82	3.97	10.93	13.06	8.94	5.82	7.38	6.81	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	3.69	3.97	1.84	3.40	5.96	7.24	9.09	2.98	4.82	3.97	10.93	13.06	8.94	5.82	7.38	6.81	

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	26	28	13	24	42	51	64	21	34	28	77	92	63	41	52	48	704
< 110																	
< 210																	
>= 210																	
Totals	26	28	13	24	42	51	64	21	34	28	77	92	63	41	52	48	

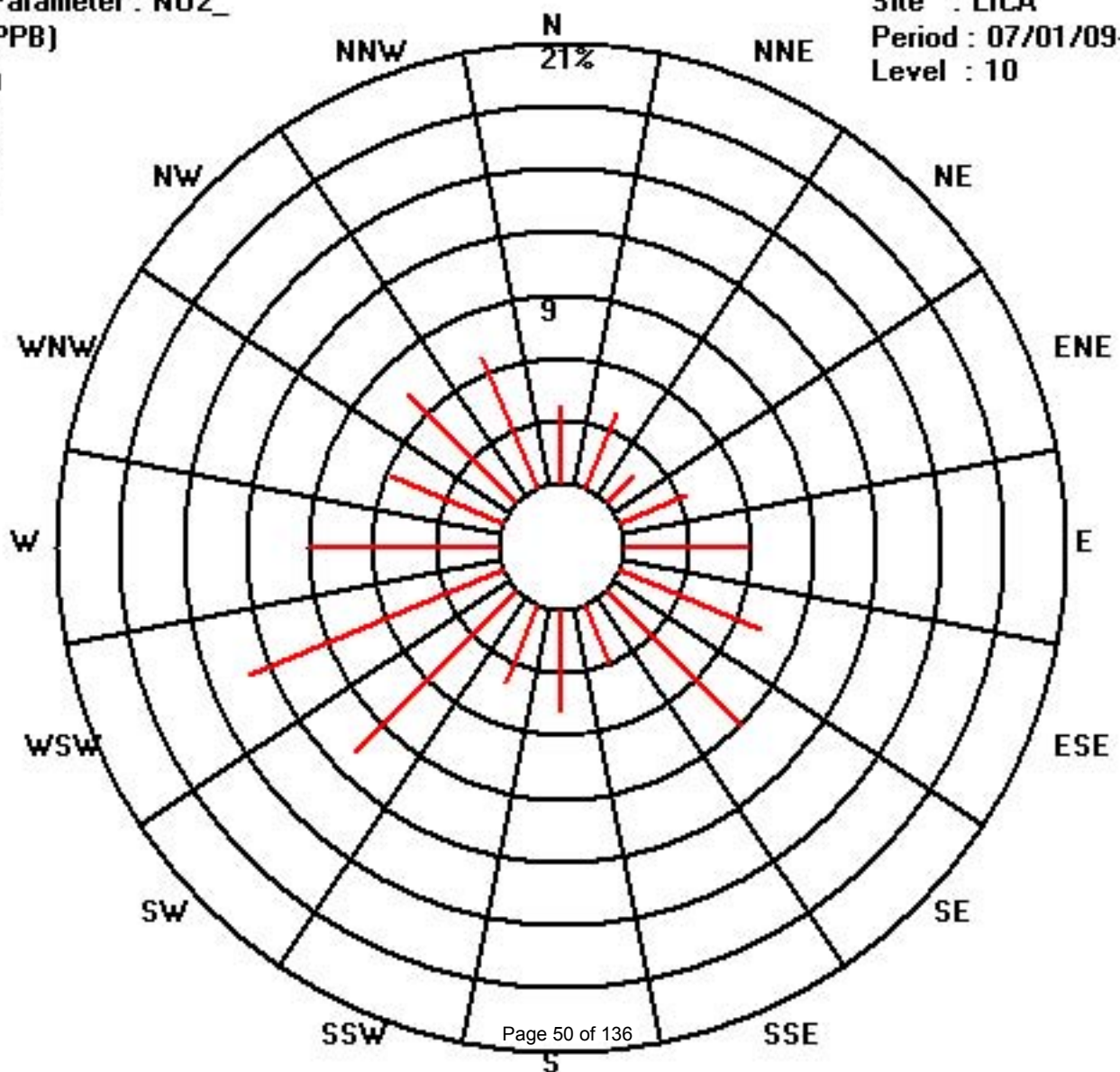
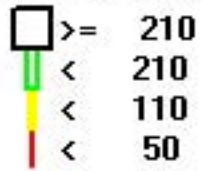
Calm : .00 %

Total # Operational Hours : 704

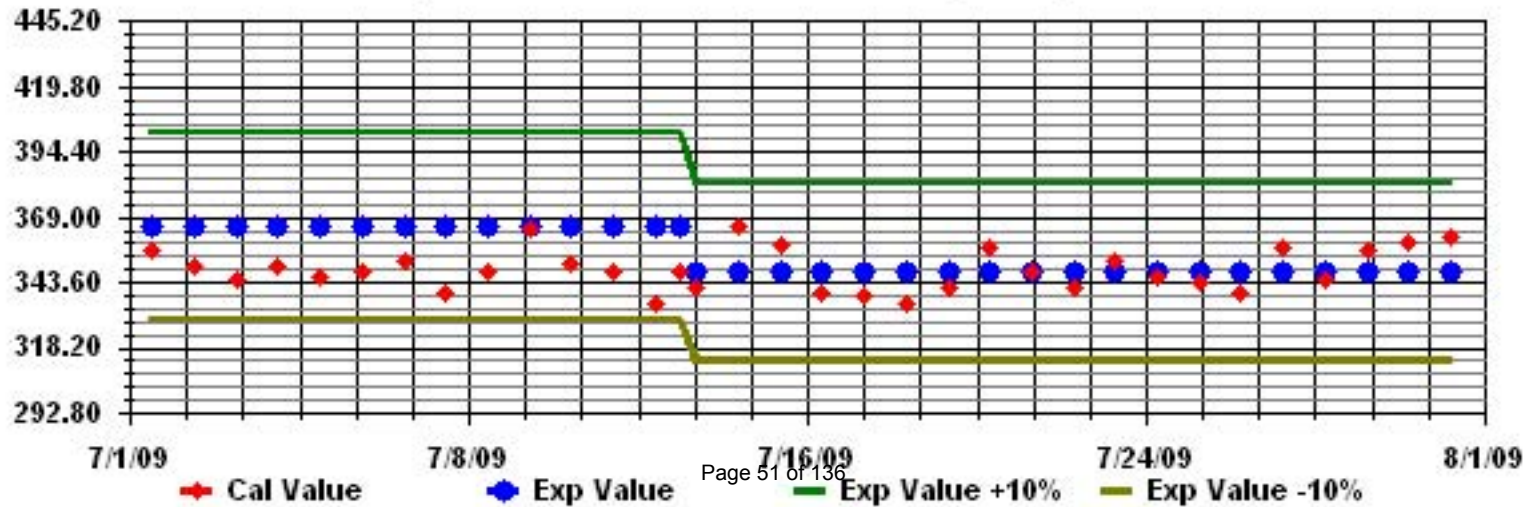
Class Limits (PPB)

Period : 07/01/09-07/31/09

Level : 10



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



# Nitric Oxide

# LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - COLD LAKE

JULY 2009

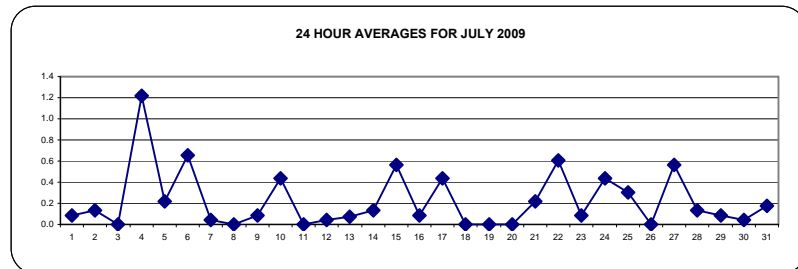
NITRIC OXIDE hourly averages in ppb

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	1	1	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	1	0.1	24
2	0	0	0	0	0	1	1	1	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.1	24
3	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
4	1	1	2	4	2	3	3	2	1	IZS	0	5	0	0	4	0	0	0	0	0	0	0	0	0	0	5	1.2	24
5	0	0	0	0	1	1	1	1	IZS	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0.2	24	
6	0	0	0	0	2	4	4	IZS	0	0	3	2	0	0	0	0	0	0	0	0	0	0	0	0	4	0.7	24	
7	0	0	0	0	0	0	IZS	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0.0	24	
8	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	
9	0	0	0	0	IZS	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0.1	24	
10	0	0	0	IZS	2	4	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0.4	24	
11	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	
12	0	IZS	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	
13	IZS	0	0	0	0	0	0	0	C	C	C	C	C	C	C	C	1	0	0	0	0	0	0	0	IZS	1	0.1	24
14	0	0	0	0	0	0	1	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0.1	24
15	0	0	0	0	2	7	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	0.6	24	
16	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	
17	0	0	0	0	0	2	4	3	1	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	4	0.4	24	
18	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	
19	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	
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	24	
21	0	0	0	0	0	1	2	1	1	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	2	0.2	24	
22	0	0	0	0	1	2	4	4	2	1	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	4	0.6	24	
23	0	0	0	0	0	0	1	1	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	1	0.1	24	
24	0	0	0	0	1	3	2	2	2	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	3	0.4	24	
25	0	0	0	0	0	1	3	2	0	0	0	IZS	0	0	0	0	0	0	0	0	0	1	0	0	3	0.3	24	
26	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	
27	0	0	0	0	0	1	3	5	3	IZS	0	0	0	0	0	0	0	0	0	1	0	0	0	0	5	0.6	24	
28	0	0	0	0	1	1	1	0	IZS	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	1	1	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.1	24	
30	0	0	0	0	0	0	IZS	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.0	24	
31	0	0	0	0	0	IZS	3	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	3	0.2	24	
HOURLY MAX	1	1	2	4	2	7	4	5	3	1	3	5	0	0	4	0	1	0	0	1	1	1	0	0				
HOURLY AVG	0.0	0.0	0.1	0.1	0.4	1.2	1.4	0.9	0.4	0.0	0.2	0.3	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0				

**STATUS FLAG CODES**

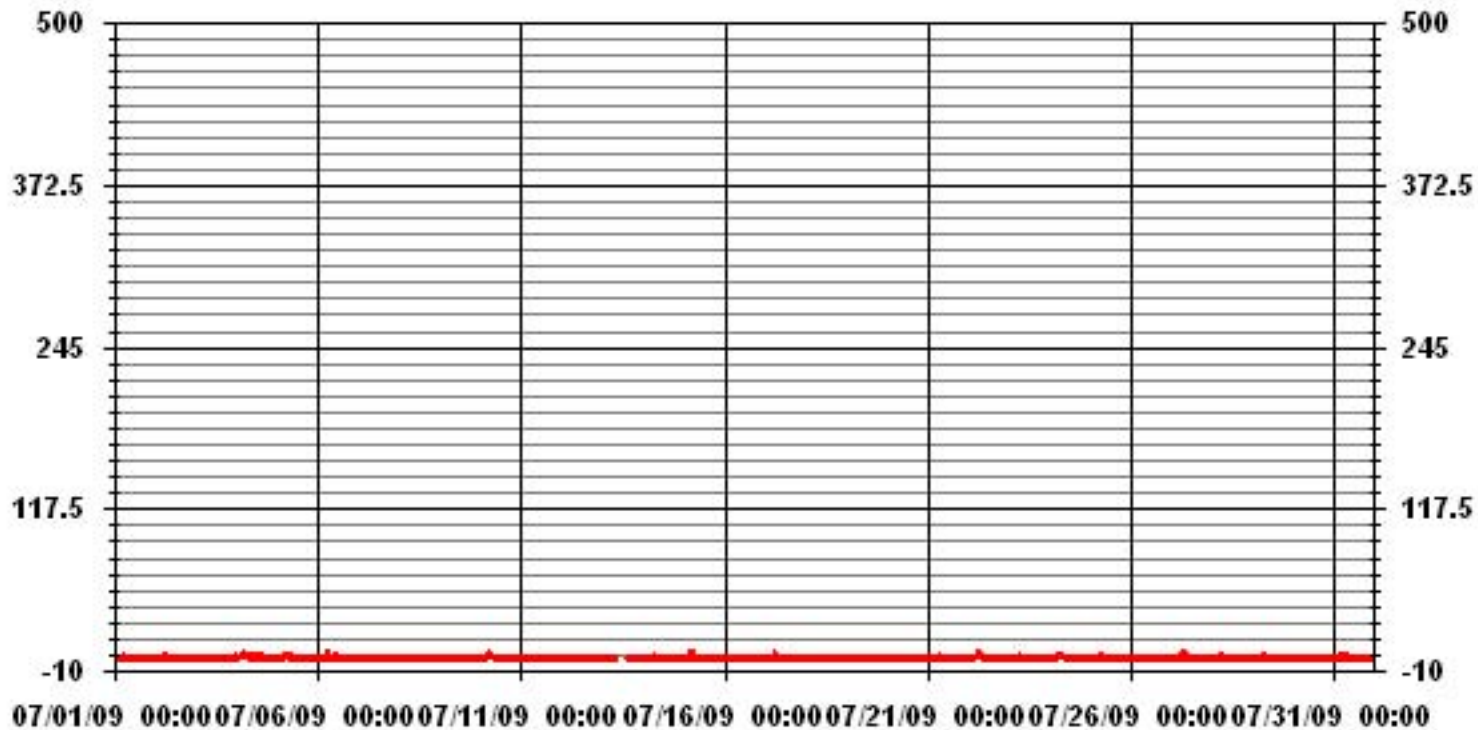
S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	- MISSING DATA
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE



**MONTHLY SUMMARY**

NUMBER OF NON-ZERO READINGS:	81
MAXIMUM 1-HR AVERAGE:	7 PPB @ HOUR(S) 5 ON DAY(S) 15
MAXIMUM 24-HR AVERAGE:	1.2 PPB ON DAY(S) 4
IZS CALIBRATION TIME:	32 HRS
MONTHLY CALIBRATION TIME:	8 HRS
OPERATIONAL TIME:	744 HRS
AMT OPERATION UPTIME:	100.0 %
STANDARD DEVIATION:	0.75
MONTHLY AVERAGE:	0.22 PPB

### 01 Hour Averages



— LICA NO<sub>2</sub> PPB

# LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - COLD LAKE

JULY 2009

## 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	1	1	1	2	1	0	1	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	2	0.3	24
2	1	1	1	0	1	1	1	2	1	0	2	IZS	0	0	0	0	0	0	0	0	10	0	0	1	10	1.0	24	
3	0	1	0	0	7	2	1	0	0	1	IZS	0	0	0	2	1	3	3	4	22	0	1	0	1	22	2.1	24	
4	2	2	4	9	3	7	3	3	3	IZS	0	129	0	6	38	0	0	0	1	0	0	0	0	0	129	9.1	24	
5	0	0	1	2	1	1	2	1	IZS	0	0	1	0	0	0	0	0	0	0	0	0	0	27	1	0	27	1.6	24
6	0	0	0	2	5	5	10	IZS	0	7	9	13	4	3	13	1	7	16	4	2	15	2	1	0	16	5.2	24	
7	0	0	0	0	0	1	IZS	8	0	0	0	8	8	8	0	0	0	12	0	0	0	2	0	0	12	2.0	24	
8	0	0	0	0	6	IZS	2	6	4	3	1	0	0	8	6	0	1	0	0	4	1	10	0	0	10	2.3	24	
9	0	0	0	0	IZS	0	0	0	42	0	0	0	1	0	15	0	0	0	0	0	0	0	0	0	42	2.5	24	
10	0	0	0	IZS	18	12	3	2	1	0	0	0	0	0	0	4	0	0	0	0	10	7	0	0	18	2.5	24	
11	0	0	IZS	0	1	0	0	1	4	0	0	0	0	12	0	0	0	0	0	0	0	0	0	0	12	0.8	24	
12	0	IZS	0	0	1	8	1	0	0	1	1	0	1	1	1	0	0	0	0	1	0	2	0	21	21	1.7	24	
13	IZS	0	0	0	0	0	1	C	C	C	C	C	C	C	C	C	11	0	0	0	0	0	0	IZS	11	0.9	24	
14	0	0	0	0	0	0	12	9	0	0	32	0	0	1	0	0	0	3	0	0	0	1	IZS	0	32	2.5	24	
15	1	1	1	1	5	14	13	1	0	0	3	0	1	4	4	1	0	0	3	0	0	IZS	0	0	14	2.3	24	
16	0	0	0	0	1	6	1	16	21	5	0	0	0	1	6	0	0	0	0	0	IZS	0	1	0	21	2.5	24	
17	0	0	0	0	1	3	8	5	3	0	4	2	0	0	6	3	6	1	4	IZS	2	0	9	0	9	2.5	24	
18	0	0	7	0	0	4	1	0	0	0	12	0	0	0	0	0	4	11	IZS	2	6	0	0	0	12	2.0	24	
19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	IZS	0	0	0	0	0	0	1	0.0	24	
20	0	0	0	0	0	0	0	0	2	0	0	0	2	0	0	0	IZS	0	0	0	0	0	0	0	2	0.2	24	
21	0	0	0	1	0	2	3	2	1	1	1	0	0	0	0	IZS	0	0	0	0	0	0	0	0	3	0.5	24	
22	0	1	0	1	1	4	15	6	4	1	0	0	1	0	IZS	1	0	0	0	0	0	0	0	0	15	1.5	24	
23	0	0	0	0	0	1	2	2	1	1	0	0	0	IZS	0	0	2	5	17	7	0	0	18	0	18	2.4	24	
24	1	1	1	1	2	9	4	3	3	3	0	7	IZS	0	1	5	1	0	0	0	0	0	0	0	9	1.8	24	
25	0	0	0	1	1	2	3	3	1	0	0	IZS	0	0	0	0	0	0	0	0	35	15	0	0	35	2.7	24	
26	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0.0	24	
27	0	0	0	0	1	3	4	7	6	IZS	0	0	0	0	0	1	7	3	3	17	0	1	0	0	17	2.3	24	
28	0	0	1	1	2	2	1	IZS	0	3	0	0	0	0	0	0	1	5	0	0	0	0	0	0	5	0.8	24	
29	0	0	0	0	1	3	3	IZS	1	2	1	0	4	1	5	3	6	1	2	1	0	12	0	0	12	2.0	24	
30	0	0	0	0	0	0	IZS	8	4	3	1	2	0	0	0	5	1	0	0	0	0	0	0	0	8	1.0	24	
31	0	0	0	0	2	IZS	7	1	4	1	0	0	5	1	0	0	0	0	0	4	4	0	0	7	1.3	24		
HOURLY MAX	2	2	7	9	18	14	15	16	42	7	32	129	8	12	38	5	11	16	17	22	35	27	18	21				
HOURLY AVG	0.2	0.2	0.5	0.7	2.0	3.1	3.6	3.1	3.8	1.1	2.5	5.8	1.0	1.6	3.3	0.9	1.7	1.9	1.4	2.0	2.8	2.7	1.0	0.8				

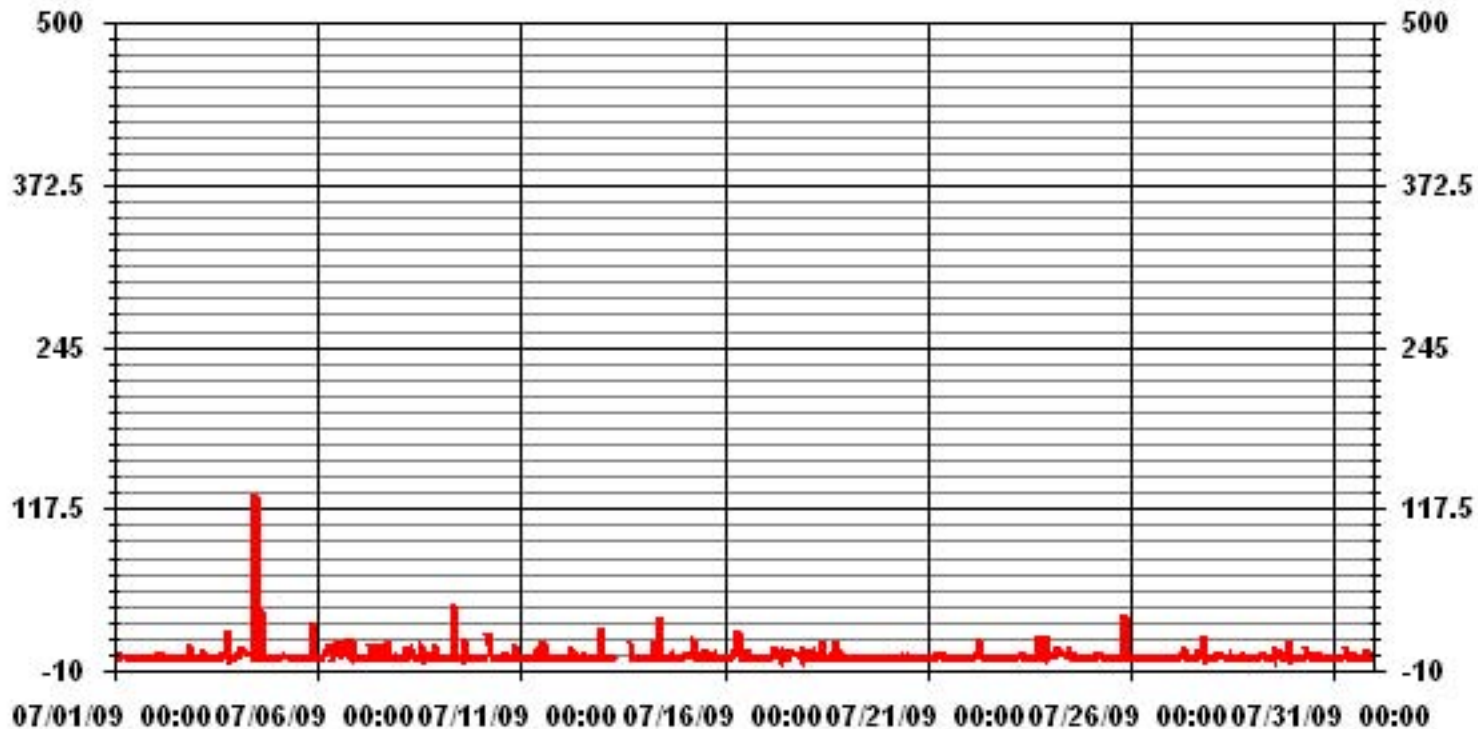
**STATUS FLAG CODES**

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**

NUMBER OF NON-ZERO READINGS:	272					
MAXIMUM INSTANTANEOUS VALUE:	129	PPB	@ HOUR(S)	11	ON DAY(S)	4
IZS CALIBRATION TIME:	32	HRS	OPERATIONAL TIME:	744	HRS	
MONTHLY CALIBRATION TIME:	9	HRS				
STANDARD DEVIATION	6.46					

### 01 Hour Averages



— LICA    — NOMAX    — PPB



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

July 2009

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	3.69	3.97	1.84	3.40	5.96	7.24	9.09	2.98	4.82	3.97	10.93	13.06	8.94	5.82	7.38	6.81	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	3.69	3.97	1.84	3.40	5.96	7.24	9.09	2.98	4.82	3.97	10.93	13.06	8.94	5.82	7.38	6.81	

Calm : .00 %

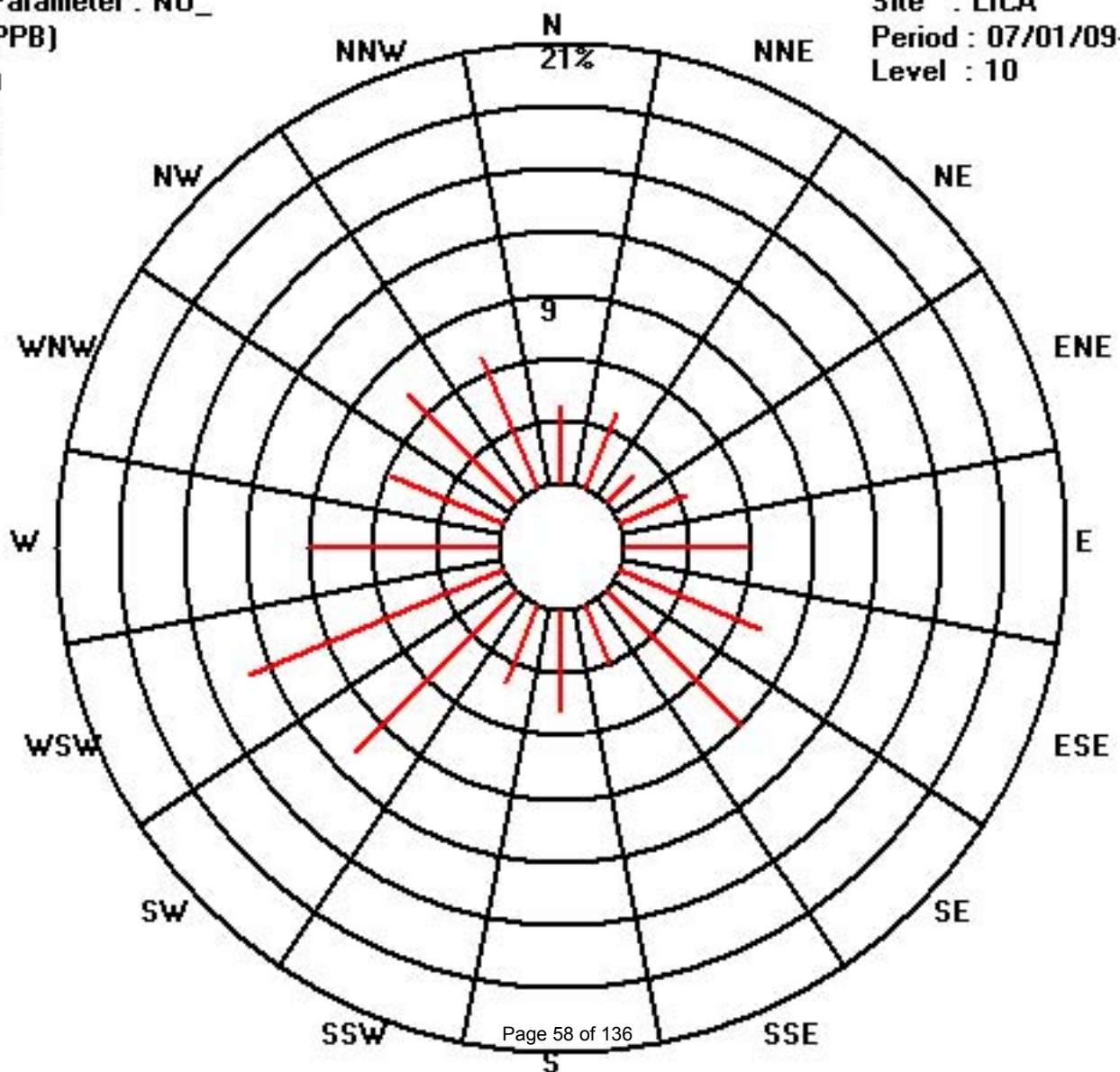
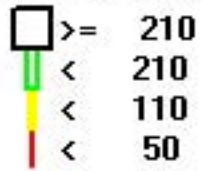
Total # Operational Hours : 704

Distribution By Samples

	Direction																
Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 50	26	28	13	24	42	51	64	21	34	28	77	92	63	41	52	48	704
< 110																	
< 210																	
>= 210																	
Totals	26	28	13	24	42	51	64	21	34	28	77	92	63	41	52	48	

Calm : .00 %

Total # Operational Hours : 704



# Oxides of Nitrogen

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - COLD LAKE

JULY 2009

OXIDES OF NITROGEN 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	1	3	3	2	3	4	5	3	1	1	1	0	0	IZS	0	0	0	0	1	1	2	2	1	2	2	5	1.6	24
2	2	2	2	3	3	4	5	4	3	2	1	1	IZS	0	0	0	0	0	0	0	0	5	2	2	4	5	1.9	24
3	3	3	4	5	3	2	3	2	1	1	1	IZS	1	0	0	0	0	1	1	1	2	1	2	2	2	5	1.7	24
4	4	2	2	3	6	3	5	6	5	3	IZS	1	7	0	1	6	1	0	1	2	2	2	2	2	3	7	2.8	24
5	5	3	2	2	2	4	4	6	4	IZS	1	1	1	0	0	0	0	0	0	1	1	2	4	2	1	6	1.8	24
6	6	1	1	1	1	3	6	9	IZS	1	2	6	4	1	1	1	1	1	2	2	3	4	2	2	1	9	2.4	24
7	7	1	0	0	0	1	1	IZS	2	1	1	1	4	2	2	1	1	1	2	2	2	2	1	1	1	4	1.3	24
8	8	1	1	1	1	2	IZS	2	1	1	1	1	1	1	1	2	1	2	2	1	2	2	2	0	0	2	1.3	24
9	9	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	1	3	1	2	3	0.4	24
10	10	3	2	4	IZS	6	7	6	4	1	1	0	0	0	0	0	0	0	0	1	1	4	3	2	1	7	2.0	24
11	11	0	0	IZS	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	1	1	2	3	3	3	0.5	24
12	12	2	IZS	2	1	1	3	2	1	0	0	0	0	0	0	0	0	0	0	0	1	2	2	1	1	3	0.8	24
13	13	IZS	1	1	1	1	2	2	1	C	C	C	C	C	C	C	C	3	0	0	0	0	1	1	IZS	3	1.0	24
14	14	0	0	0	0	0	1	3	3	1	1	1	1	1	1	0	0	0	1	0	0	1	2	IZS	2	3	0.8	24
15	15	2	2	2	1	4	10	7	1	0	0	0	1	0	1	0	0	0	1	1	3	IZS	1	0	10	1.6	24	
16	16	0	1	1	1	1	3	2	2	2	1	1	1	1	1	1	1	1	1	1	1	IZS	1	2	2	3	1.3	24
17	17	2	2	2	2	3	5	10	8	4	1	1	1	1	1	1	2	3	1	2	IZS	5	5	5	4	10	3.1	24
18	18	0	0	1	0	0	1	1	1	1	1	2	1	1	1	1	1	1	1	IZS	2	1	1	1	1	2	0.9	24
19	19	1	0	0	1	2	2	1	1	0	0	0	0	0	0	0	0	1	IZS	1	0	0	0	0	0	2	0.4	24
20	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	1	2	3	3	4	6	6	0.8	24
21	21	7	8	4	3	3	5	6	4	4	3	1	1	0	0	0	IZS	0	0	1	1	5	3	2	3	8	2.8	24
22	22	2	2	1	2	3	4	8	10	7	4	3	3	2	1	IZS	2	2	1	0	1	1	2	1	2	10	2.8	24
23	23	3	3	3	4	4	5	6	4	2	1	0	0	0	IZS	0	0	1	1	2	3	5	4	3	3	6	2.5	24
24	24	4	3	2	2	2	5	6	6	9	4	3	1	IZS	1	1	1	1	0	1	2	3	4	4	4	9	3.0	24
25	25	4	4	3	3	4	5	8	7	2	1	0	IZS	1	1	0	1	0	0	0	1	3	3	2	2	8	2.4	24
26	26	0	1	1	1	0	0	0	0	0	1	IZS	1	0	0	0	0	0	0	0	1	1	2	1	1	2	0.5	24
27	27	1	1	2	4	5	9	11	14	10	IZS	2	1	1	1	1	2	3	2	2	7	1	0	2	1	14	3.6	24
28	28	1	1	1	1	3	2	3	1	IZS	1	1	0	0	0	0	0	0	0	1	0	0	1	2	1	3	0.9	24
29	29	0	0	0	0	1	3	3	IZS	0	1	0	0	0	0	1	1	1	1	1	2	3	5	2	2	5	1.2	24
30	30	2	2	2	3	3	3	IZS	4	4	4	4	3	3	2	1	3	2	2	1	0	1	2	1	0	4	2.3	24
31	31	0	0	0	1	2	IZS	6	2	1	0	0	1	0	0	0	0	0	0	1	2	6	3	3	2	6	1.3	24
HOURLY MAX		7	8	5	6	6	10	11	14	10	4	6	7	3	2	6	3	3	2	2	7	6	5	5	6			
HOURLY AVG		1.7	1.6	1.6	1.7	2.4	3.6	4.2	3.1	2.1	1.2	1.1	1.2	0.5	0.6	0.7	0.6	0.8	0.7	0.9	1.4	2.3	2.3	1.9	1.9			

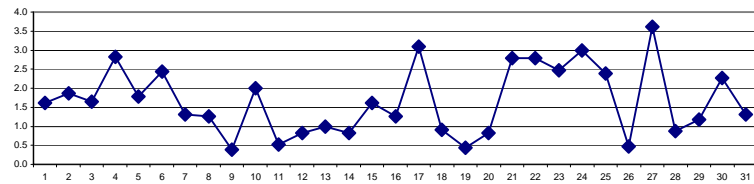
STATUS FLAG CODES

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

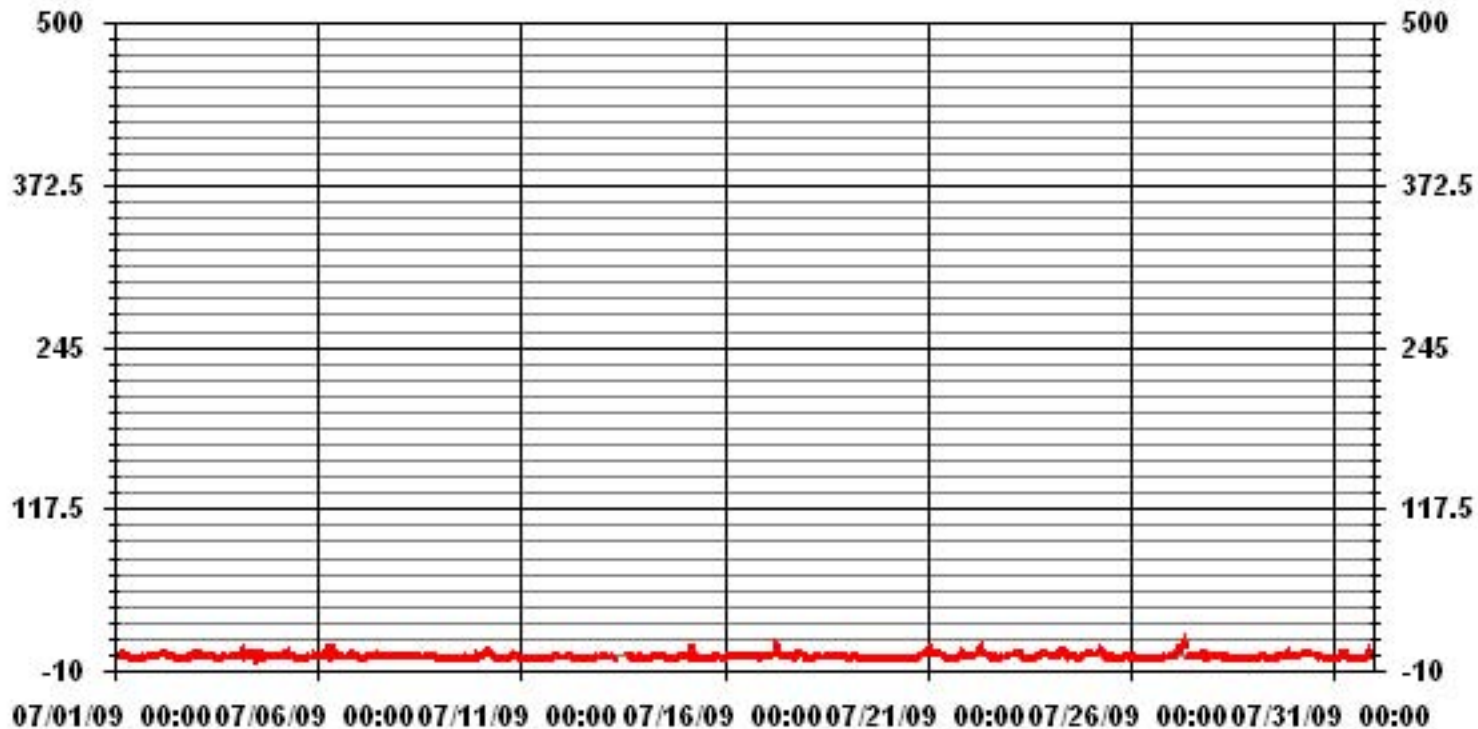
MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:	498					
MAXIMUM 1-HR AVERAGE:	14	PPB	@ HOUR(S)	7	ON DAY(S)	27
MAXIMUM 24-HR AVERAGE:	3.6	PPB			ON DAY(S)	27
IZS CALIBRATION TIME:	32	HRS	OPERATIONAL TIME:	744	HRS	
MONTHLY CALIBRATION TIME:	8	HRS	AMD OPERATION UPTIME:	100.0	%	
STANDARD DEVIATION:	1.90		MONTHLY AVERAGE:	1.67	PPB	

24 HOUR AVERAGES FOR JULY 2009



### 01 Hour Averages



— LICA NOX\_ PPB

# LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - COLD LAKE

JULY 2009

## 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	4	4	3	6	6	6	6	3	1	3	1	1	IZS	1	1	1	2	1	2	4	4	3	3	3	6	3.0	24	
2	5	3	4	4	6	7	5	5	2	2	2	IZS	1	1	1	1	1	1	0	2	20	4	4	8	20	3.9	24	
3	5	5	6	6	22	12	5	3	2	5	IZS	1	1	3	3	3	4	5	5	40	3	4	3	3	40	6.5	24	
4	4	4	7	13	6	9	7	7	6	IZS	2	144	1	20	67	1	1	2	5	3	5	4	3	5	144	14.2	24	
5	5	4	3	6	7	6	6	5	IZS	2	1	2	1	1	1	1	1	2	2	3	5	52	4	4	52	5.4	24	
6	2	1	2	5	7	9	17	IZS	3	15	21	21	4	5	22	6	10	16	12	5	16	12	5	3	22	9.5	24	
7	2	1	1	2	1	6	IZS	5	2	3	3	8	6	10	3	2	2	7	3	3	3	6	2	2	10	3.6	24	
8	1	2	2	2	10	IZS	5	4	4	6	4	2	2	14	12	2	5	3	3	7	6	17	1	1	17	5.0	24	
9	0	0	0	1	IZS	1	1	3	2	1	1	2	3	1	19	1	1	1	0	0	4	6	3	4	19	2.4	24	
10	4	4	7	IZS	26	19	7	5	3	2	2	1	1	1	1	11	3	1	1	2	27	12	3	2	27	6.3	24	
11	1	2	IZS	1	4	4	1	3	4	2	1	1	1	40	1	1	3	1	0	1	2	3	6	4	40	3.8	24	
12	3	IZS	2	2	3	13	2	2	1	11	3	2	3	3	2	1	2	1	1	5	3	6	2	16	16	3.9	24	
13	IZS	1	1	1	4	2	6	C	C	C	C	C	C	C	C	C	25	1	0	0	1	3	1	IZS	25	3.5	24	
14	1	0	0	1	1	1	20	16	1	2	4	2	1	4	1	1	1	8	1	2	4	4	IZS	4	20	3.5	24	
15	4	4	3	2	8	17	20	3	1	9	3	1	2	5	3	6	2	1	5	3	5	IZS	2	1	20	4.8	24	
16	2	1	1	1	3	10	3	18	38	12	5	7	2	4	21	2	3	1	2	1	IZS	2	5	2	38	6.3	24	
17	3	3	3	3	5	9	18	12	10	3	6	3	2	4	2	4	16	8	13	IZS	15	7	18	6	18	7.5	24	
18	1	1	17	1	1	12	4	3	4	1	49	1	5	2	1	2	7	6	IZS	4	18	3	1	2	49	6.3	24	
19	2	2	1	3	4	4	3	2	1	1	0	0	1	1	1	1	3	IZS	1	1	1	1	1	1	4	1.6	24	
20	1	0	0	0	0	1	1	1	5	0	0	0	5	0	0	0	IZS	1	2	3	7	8	7	9	9	2.2	24	
21	9	9	5	5	4	7	7	5	5	4	3	1	1	1	2	IZS	1	1	1	5	9	4	3	4	9	4.2	24	
22	3	3	2	2	4	8	14	14	11	6	5	4	5	4	IZS	6	4	2	1	3	3	3	2	3	14	4.9	24	
23	4	6	4	6	6	7	10	7	4	4	1	1	0	IZS	1	1	7	11	17	24	8	6	11	4	24	6.5	24	
24	7	5	3	3	4	11	7	7	12	10	6	9	IZS	1	4	7	4	1	2	3	7	5	6	5	12	5.6	24	
25	5	5	4	5	6	7	10	9	5	1	1	IZS	2	1	2	2	1	1	3	3	46	25	3	4	46	6.6	24	
26	1	2	1	1	2	1	0	1	1	2	IZS	1	0	1	0	1	1	1	1	5	6	7	3	2	7	1.8	24	
27	1	2	2	6	8	12	12	16	15	IZS	4	2	3	2	2	6	15	11	4	57	3	2	5	2	57	8.3	24	
28	2	2	2	3	5	5	5	3	IZS	2	6	1	2	1	1	1	2	4	8	1	1	4	4	3	8	3.0	24	
29	2	2	2	2	2	7	6	IZS	2	8	3	1	6	1	7	12	16	7	5	6	5	55	3	3	55	7.1	24	
30	3	3	4	5	4	4	IZS	12	10	10	5	5	5	2	2	19	6	3	2	2	3	4	2	2	19	5.1	24	
31	1	1	1	2	5	IZS	10	3	6	2	1	2	12	4	4	1	1	1	1	10	15	5	5	3	15	4.2	24	
HOURLY MAX	9	9	17	13	26	19	20	18	38	15	49	144	12	40	67	19	25	16	17	57	46	55	18	16				
HOURLY AVG	2.9	2.7	3.1	3.3	5.8	7.5	7.5	6.3	5.8	4.6	5.1	8.1	2.8	4.8	6.4	3.6	5.0	3.7	3.4	6.9	8.5	9.2	4.0	3.8				

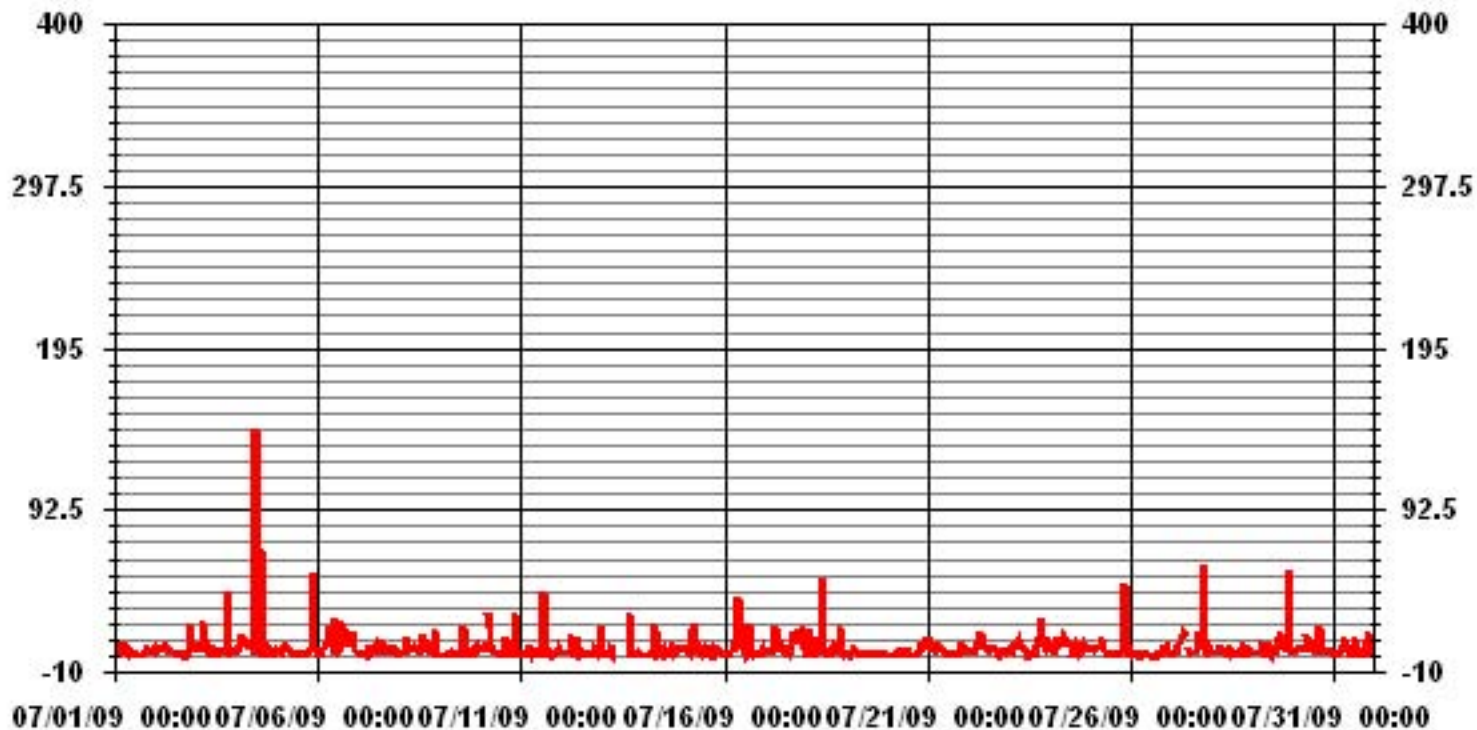
### STATUS FLAG CODES

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

NUMBER OF NON-ZERO READINGS:	676
MAXIMUM INSTANTANEOUS VALUE:	144 PPB @ HOUR(S) 11 ON DAY(S) 4
IZS CALIBRATION TIME:	32 HRS
MONTHLY CALIBRATION TIME:	9 HRS
STANDARD DEVIATION	8.61
OPERATIONAL TIME:	744 HRS

### 01 Hour Averages



— LICA NOXMAX PPB

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

July 2009

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	3.69	3.97	1.84	3.40	5.96	7.24	9.09	2.98	4.82	3.97	10.93	13.06	8.94	5.82	7.38	6.81	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	3.69	3.97	1.84	3.40	5.96	7.24	9.09	2.98	4.82	3.97	10.93	13.06	8.94	5.82	7.38	6.81	

Calm : .00 %

Total # Operational Hours : 704

Distribution By Samples

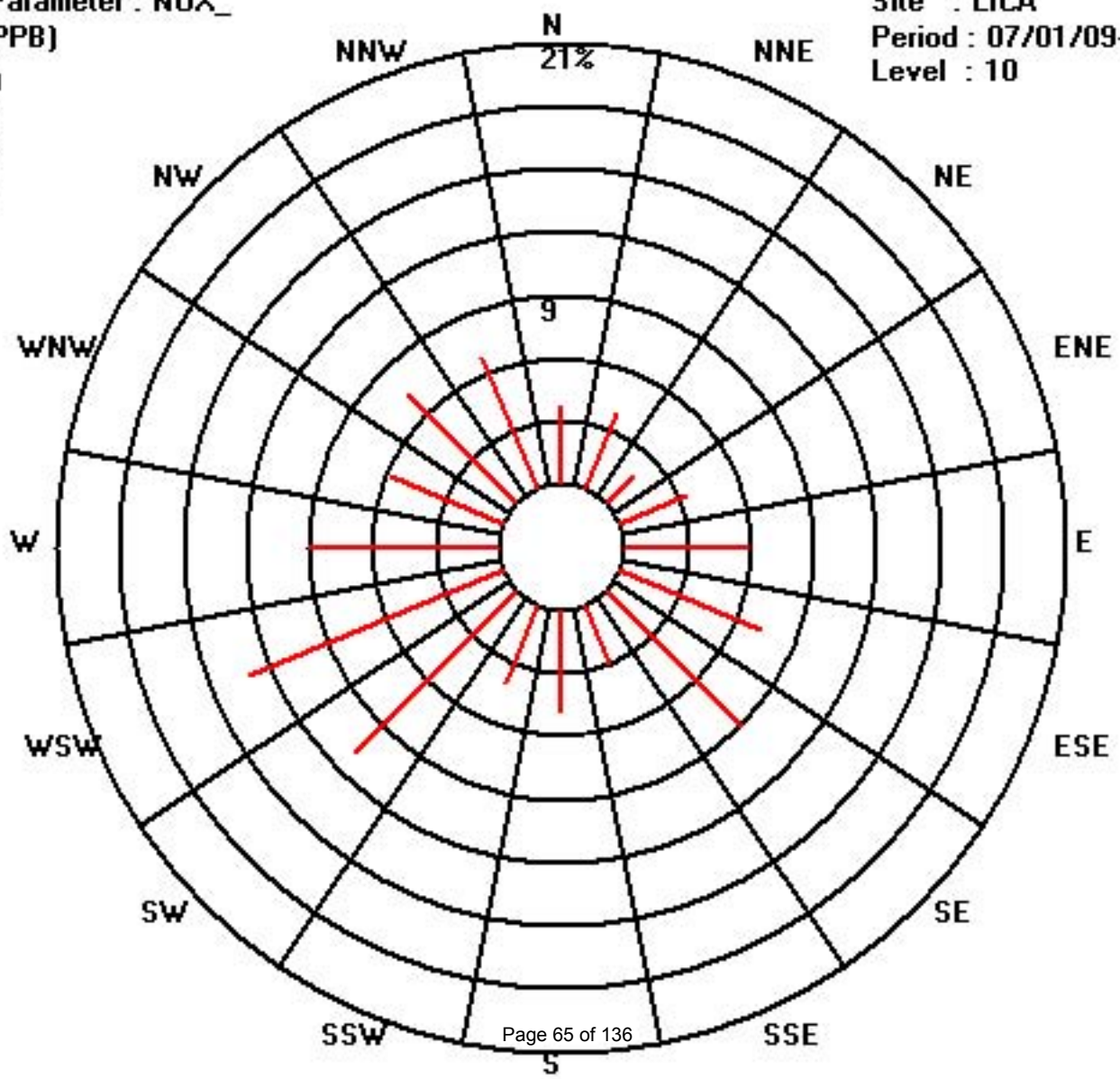
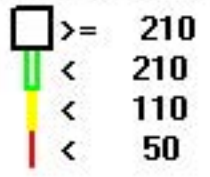
	Direction																
Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 50	26	28	13	24	42	51	64	21	34	28	77	92	63	41	52	48	704
< 110																	
< 210																	
>= 210																	
Totals	26	28	13	24	42	51	64	21	34	28	77	92	63	41	52	48	

Calm : .00 %

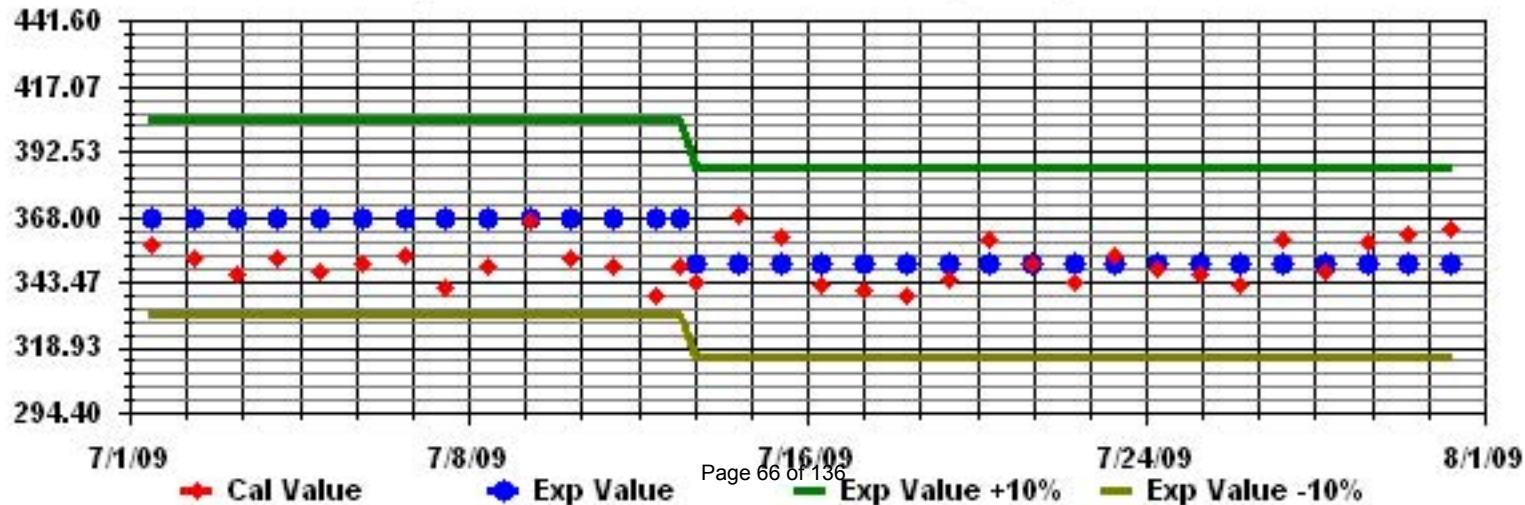
Total # Operational Hours : 704



Class Limits (PPB)



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



# Ozone

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - COLD LAKE

JULY 2009

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	
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	15	10	5	9	13	15	17	21	23	25	25	25	IZS	28	29	31	32	33	31	29	25	19	15	10	33	21.1	24
2	6	4	4	7	8	8	11	14	15	17	23	IZS	25	29	32	34	34	35	33	30	13	12	8	4	35	17.7	24
3	3	2	15	19	21	20	21	24	28	27	IZS	26	29	29	31	29	28	28	27	23	10	3	2	1	31	19.4	24
4	0	0	0	0	0	2	7	12	19	IZS	29	30	33	32	31	32	33	33	32	29	20	12	8	7	33	17.4	24
5	6	3	2	1	2	7	10	16	IZS	31	34	35	35	36	36	37	36	34	31	31	19	10	11	13	37	20.7	24
6	11	6	4	3	1	1	9	IZS	32	33	30	28	29	29	30	30	30	29	28	25	21	25	25	24	33	21.0	24
7	23	23	23	24	24	23	IZS	22	22	23	21	18	19	21	22	23	23	21	19	18	17	17	19	21	24	21.1	24
8	21	20	19	17	16	IZS	20	21	24	27	29	28	30	30	24	20	21	25	28	25	22	21	26	25	30	23.4	24
9	32	32	28	22	IZS	23	25	24	24	23	20	17	18	18	17	18	20	24	27	25	21	16	17	13	32	21.9	24
10	8	3	4	IZS	2	4	9	13	18	24	27	28	30	31	32	32	34	36	35	27	17	14	16	22	36	20.3	24
11	38	36	IZS	33	33	31	31	32	32	32	32	33	34	35	34	32	33	32	32	29	19	10	10	14	38	29.4	24
12	6	IZS	2	2	1	7	18	20	30	30	31	32	34	33	32	33	32	31	31	31	26	24	26	25	34	23.3	24
13	IZS	23	19	20	17	16	16	20	21	23	27	34	34	37	C	C	C	35	33	29	26	23	23	IZS	37	25.1	24
14	25	25	24	21	20	20	20	19	19	20	22	24	26	26	27	28	29	29	31	31	23	8	IZS	3	31	22.6	24
15	2	0	0	0	0	1	14	19	22	24	27	30	31	33	33	35	36	38	36	30	17	IZS	21	18	38	20.3	24
16	17	15	12	9	4	11	18	19	25	31	35	37	37	37	39	42	44	40	38	40	IZS	32	31	20	44	27.5	24
17	12	9	6	4	2	4	11	19	29	35	35	34	35	39	37	36	36	35	31	IZS	17	7	7	8	39	21.2	24
18	21	21	20	19	18	17	19	20	23	27	32	43	41	44	44	43	44	40	IZS	31	29	27	41	35	44	30.4	24
19	31	26	25	19	22	25	22	22	30	31	36	37	36	28	22	20	17	IZS	18	19	18	17	17	17	37	24.1	24
20	18	16	15	14	14	15	14	17	18	19	23	25	26	26	28	28	IZS	28	26	23	19	12	12	7	28	19.3	24
21	6	6	8	3	4	6	8	13	18	24	29	30	28	29	31	IZS	31	30	28	25	16	8	7	2	31	17.0	24
22	1	1	1	0	0	1	3	7	17	29	36	41	42	40	IZS	36	38	34	35	33	26	17	11	9	42	19.9	24
23	8	9	13	12	9	12	16	22	29	37	36	35	36	IZS	36	36	35	32	29	24	11	8	7	3	37	21.5	24
24	2	1	1	1	0	1	7	17	32	42	45	41	IZS	43	46	49	42	40	38	21	13	12	9	14	49	22.5	24
25	12	7	5	3	2	5	10	19	30	32	30	IZS	40	34	31	34	28	26	23	17	13	10	8	15	40	18.9	24
26	19	15	14	12	17	18	17	18	21	26	IZS	36	33	36	39	42	43	38	39	38	37	29	17	14	43	26.9	24
27	11	7	5	5	5	8	11	15	21	IZS	38	36	36	36	35	32	30	30	26	22	30	28	18	10	38	21.5	24
28	7	3	2	1	0	3	9	15	IZS	25	29	31	32	32	33	35	35	37	40	34	28	19	12	11	40	20.6	24
29	14	8	7	7	4	3	9	IZS	24	26	28	28	29	30	32	33	35	35	32	25	17	14	12	6	35	19.9	24
30	7	6	4	4	4	10	IZS	17	15	15	29	39	40	38	37	31	23	20	20	21	15	6	8	12	40	18.3	24
31	9	6	4	2	1	IZS	8	16	19	23	26	30	30	34	34	36	36	34	32	20	6	5	3	3	36	18.1	24
HOURLY MAX	38	36	28	33	33	31	31	32	32	42	45	43	42	44	46	49	44	40	40	40	37	32	41	35			
HOURLY AVG	13.0	11.4	9.7	9.8	8.8	10.9	14.1	18.4	23.4	26.9	29.8	31.4	32.0	32.4	32.2	32.7	32.3	32.1	30.3	26.8	19.7	15.5	14.9	12.9			

STATUS FLAG CODES

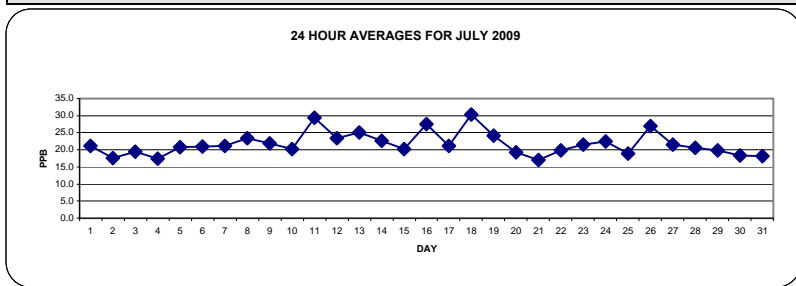
S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	- MISSING DATA
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE

OBJECTIVE LIMIT:

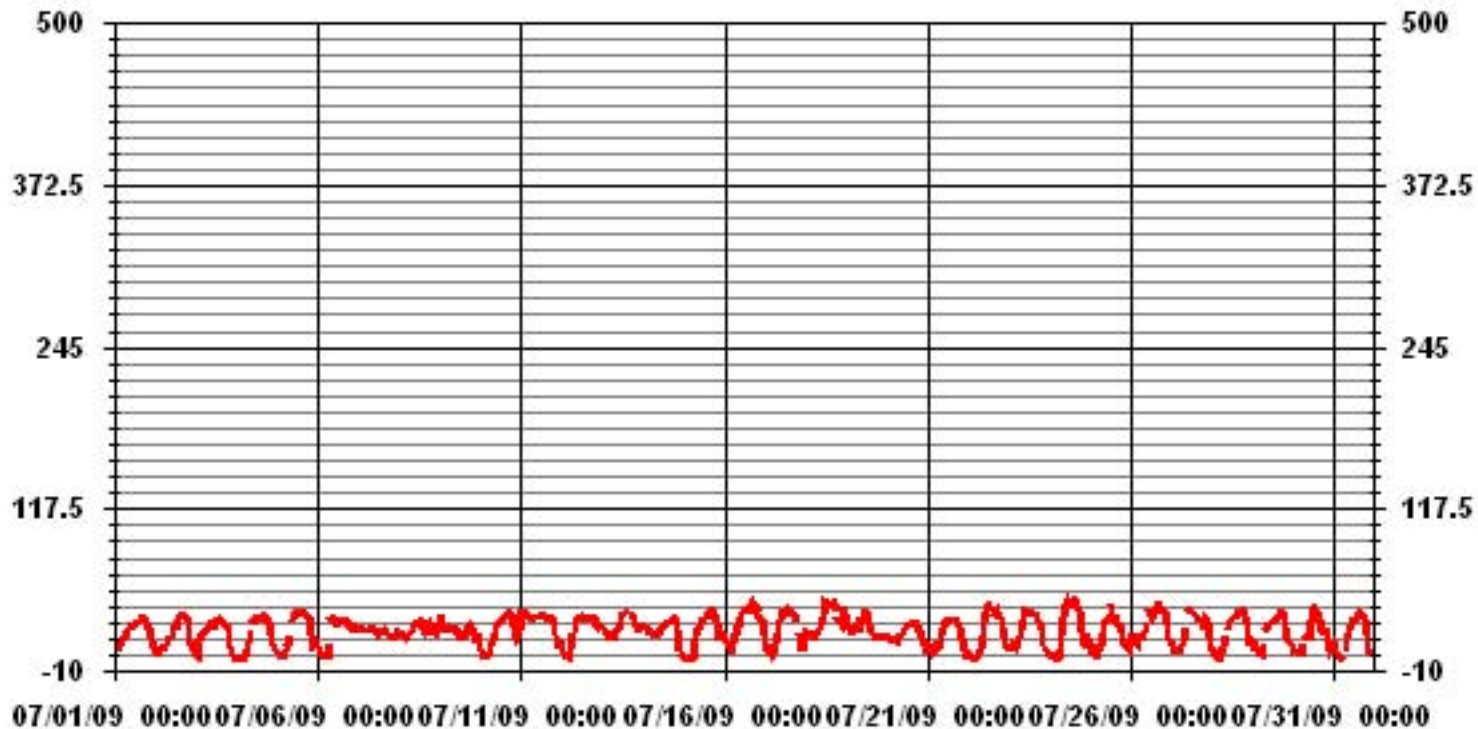
ALBERTA ENVIRONMENT: 1-HR 82 PPB

MONTHLY SUMMARY

NUMBER OF 1-HR EXCEEDENCES:	0				
NUMBER OF NON-ZERO READINGS:	696				
MAXIMUM 1-HR AVERAGE:	49	PPB	@ HOUR(S)	15	ON DAY(S) 24
MAXIMUM 24-HR AVERAGE:	30.4	PPB			ON DAY(S) 18
					VAR-VARIOUS
IZS CALIBRATION TIME:	32	HRS	OPERATIONAL TIME:	744	HRS
MONTHLY CALIBRATION TIME:	3	HRS	AMD OPERATION UPTIME	100.0	%
STANDARD DEVIATION	11.47		MONTHLY AVERAGE	21.67	PPB



### 01 Hour Averages



— LICA 03\_ PPB

# LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - COLD LAKE

JULY 2009

## 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	19	14	10	14	15	17	19	23	25	26	26	26	<b>IZS</b>	30	30	33	34	35	35	34	31	21	19	16	35	24.0	24
2	8	7	8	9	10	9	14	16	16	20	28	<b>IZS</b>	28	33	33	36	36	37	36	33	21	15	12	6	37	20.5	24
3	8	4	20	20	26	25	23	26	30	30	<b>IZS</b>	28	31	31	33	31	30	29	29	28	19	7	4	4	33	22.4	24
4	1	1	1	0	1	5	9	15	23	<b>IZS</b>	31	34	35	35	34	33	35	34	34	33	26	15	12	11	35	19.9	24
5	10	5	5	4	4	8	15	19	<b>IZS</b>	33	36	36	37	37	38	39	39	37	36	35	29	15	19	18	39	24.1	24
6	17	9	7	5	2	3	18	<b>IZS</b>	34	36	34	30	31	30	31	32	31	31	30	28	24	26	26	25	36	23.5	24
7	24	25	24	25	25	24	<b>IZS</b>	23	24	24	22	21	22	23	25	24	25	23	21	19	18	19	20	22	25	22.7	24
8	23	21	20	18	17	<b>IZS</b>	21	26	29	29	31	31	32	31	28	22	23	29	31	27	26	24	27	29	32	25.9	24
9	35	35	30	24	<b>IZS</b>	24	27	26	25	25	23	19	21	21	18	20	22	29	28	27	25	18	18	18	35	24.3	24
10	11	5	6	<b>IZS</b>	4	7	12	16	21	26	29	30	32	33	33	33	36	38	37	33	21	19	23	35	38	23.5	24
11	43	37	<b>IZS</b>	35	35	33	33	34	33	34	34	36	36	34	34	33	33	32	28	14	16	17	43	31.9	24		
12	12	<b>IZS</b>	4	3	1	16	20	24	33	31	33	35	35	34	33	34	34	33	33	33	28	25	27	26	35	25.5	24
13	<b>IZS</b>	24	23	22	20	18	20	21	23	26	34	37	39	<b>C</b>	<b>C</b>	<b>C</b>	<b>C</b>	<b>C</b>	35	32	27	24	24	<b>IZS</b>	39	26.4	24
14	26	26	26	23	21	21	21	20	21	22	24	27	28	27	28	30	31	31	34	33	29	14	<b>IZS</b>	5	34	24.7	24
15	4	1	0	1	0	2	23	21	25	26	30	32	33	35	35	37	39	40	40	35	23	<b>IZS</b>	24	22	40	23.0	24
16	19	18	16	13	8	17	20	20	29	34	37	39	38	38	41	45	46	42	40	42	<b>IZS</b>	35	33	27	46	30.3	24
17	18	12	10	6	4	8	13	23	36	36	36	36	38	41	40	39	38	39	35	<b>IZS</b>	25	13	13	18	41	25.1	24
18	22	22	22	20	18	19	21	21	27	31	36	47	44	45	46	46	46	43	<b>IZS</b>	33	31	38	43	37	47	33.0	24
19	36	28	26	24	24	26	23	28	32	34	39	39	39	38	24	24	18	<b>IZS</b>	19	20	19	21	24	19	39	27.1	24
20	19	17	16	14	16	16	15	20	19	22	25	27	28	28	29	29	<b>IZS</b>	29	28	24	22	17	15	10	29	21.1	24
21	8	9	9	8	6	7	10	16	21	29	31	31	29	31	33	<b>IZS</b>	33	32	30	28	23	11	10	4	33	19.5	24
22	2	3	3	2	2	4	11	11	21	36	40	45	45	43	<b>IZS</b>	40	41	39	37	37	30	22	15	13	45	23.6	24
23	11	12	16	14	13	14	19	26	33	39	38	37	38	<b>IZS</b>	39	38	37	35	32	30	18	11	11	7	39	24.7	24
24	4	2	3	3	1	2	12	25	39	46	50	45	<b>IZS</b>	46	50	<b>51</b>	49	42	41	34	20	17	15	19	<b>51</b>	26.8	24
25	18	13	9	4	3	8	14	26	33	34	33	<b>IZS</b>	42	41	34	35	35	27	27	24	17	15	11	20	42	22.7	24
26	20	18	15	15	18	19	18	20	23	34	<b>IZS</b>	41	36	38	42	44	44	43	41	40	38	36	22	20	44	29.8	24
27	17	10	7	9	8	10	14	17	26	<b>IZS</b>	41	39	38	38	38	36	34	32	30	28	33	33	24	16	41	25.1	24
28	14	5	5	2	1	10	12	18	<b>IZS</b>	27	33	33	33	33	35	36	37	40	42	38	31	27	15	15	42	23.6	24
29	19	16	12	12	8	5	12	<b>IZS</b>	27	29	30	30	30	32	34	36	37	38	36	29	22	20	17	10	38	23.5	24
30	11	11	6	8	7	15	<b>IZS</b>	19	18	18	38	43	44	44	38	38	26	23	22	24	24	12	13	13	44	22.4	24
31	11	9	6	4	3	<b>IZS</b>	14	18	22	27	29	33	33	36	37	38	38	36	35	32	11	7	6	7	38	21.4	24
HOURLY MAX	43	37	30	35	35	33	33	34	39	46	50	47	45	46	50	51	49	43	42	42	38	38	43	37			
HOURLY AVG	16.3	14.0	12.2	12.0	10.7	13.5	17.3	21.3	26.5	29.8	32.8	34.0	34.3	34.8	34.3	34.9	34.4	32.9	30.8	24.6	19.7	18.6	17.0				

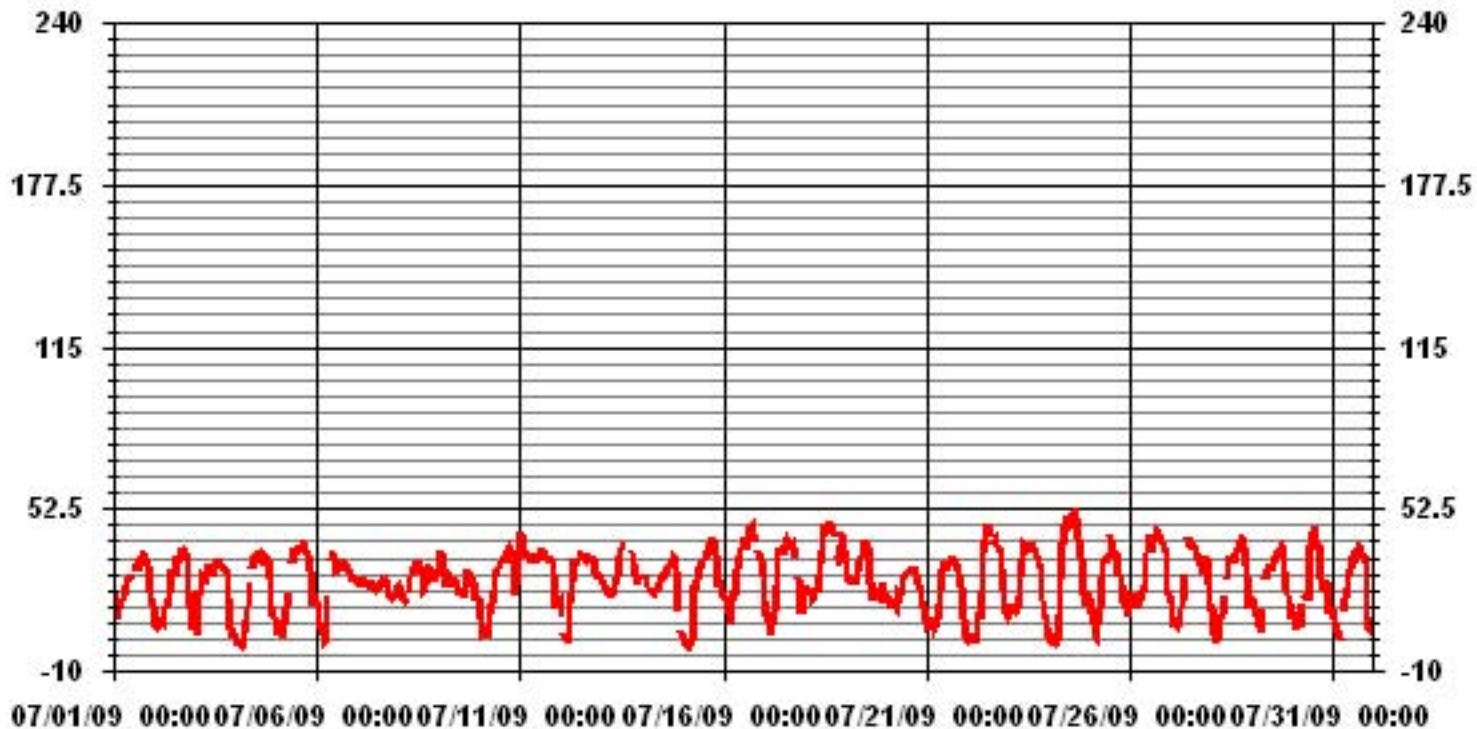
**STATUS FLAG CODES**

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:	704					
MAXIMUM INSTANTANEOUS VALUE:	51	PPB	@ HOUR(S)	15	ON DAY(S)	24
IZS CALIBRATION TIME:	32	HRS	OPERATIONAL TIME:	744		HRS
MONTHLY CALIBRATION TIME:	5 HRS					
STANDARD DEVIATION	11.38					

### 01 Hour Averages



— LICA O3MAX PPB

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

July 2009

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	3.66	3.94	1.83	3.38	5.92	7.19	9.02	2.96	4.93	3.94	10.86	12.97	9.30	5.92	7.33	6.77	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	3.66	3.94	1.83	3.38	5.92	7.19	9.02	2.96	4.93	3.94	10.86	12.97	9.30	5.92	7.33	6.77	

Calm : .00 %

Total # Operational Hours : 709

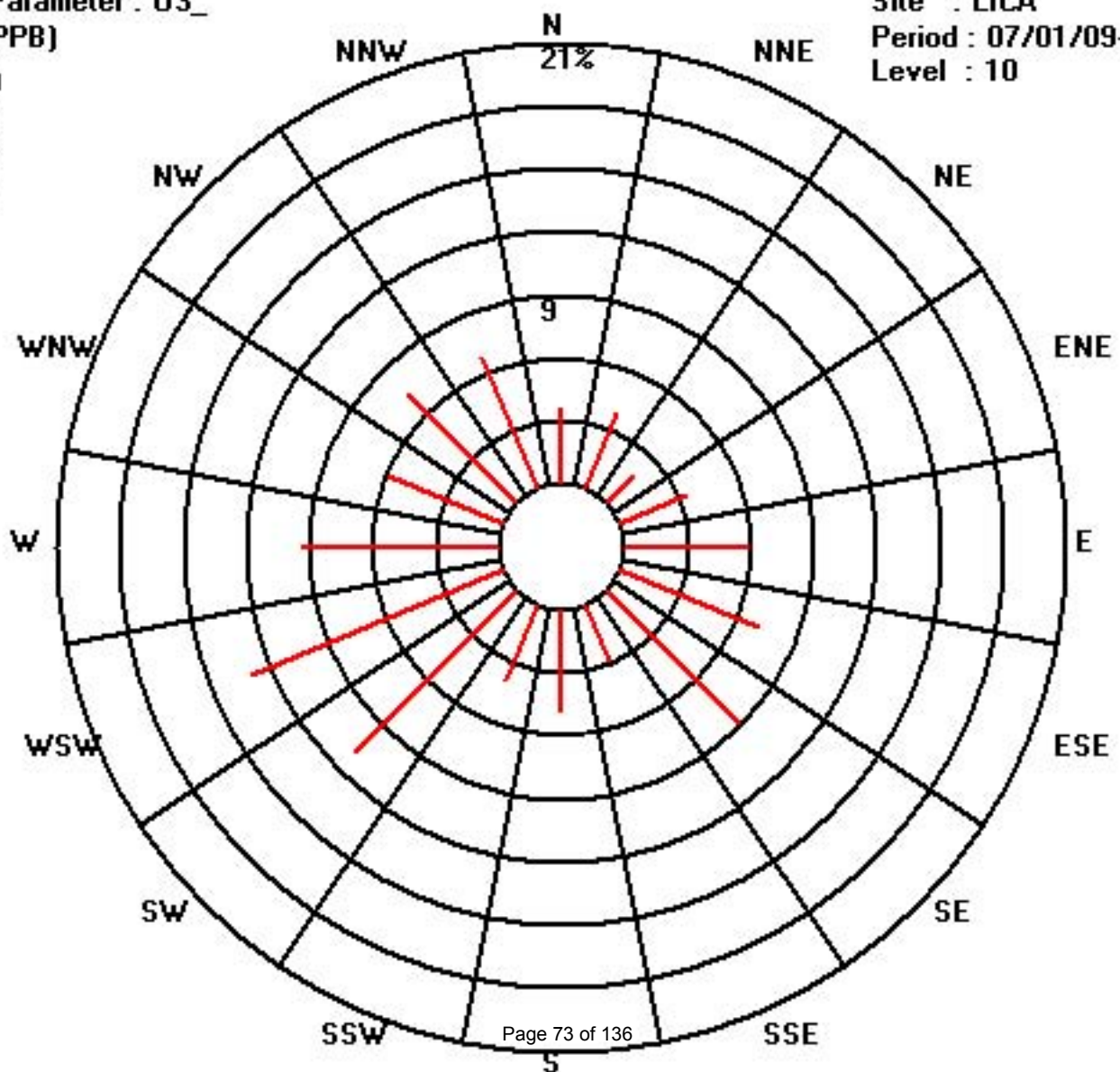
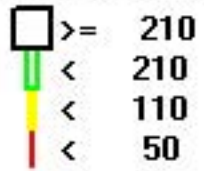
Distribution By Samples

	Direction																
Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 50	26	28	13	24	42	51	64	21	35	28	77	92	66	42	52	48	709
< 110																	
< 210																	
>= 210																	
Totals	26	28	13	24	42	51	64	21	35	28	77	92	66	42	52	48	

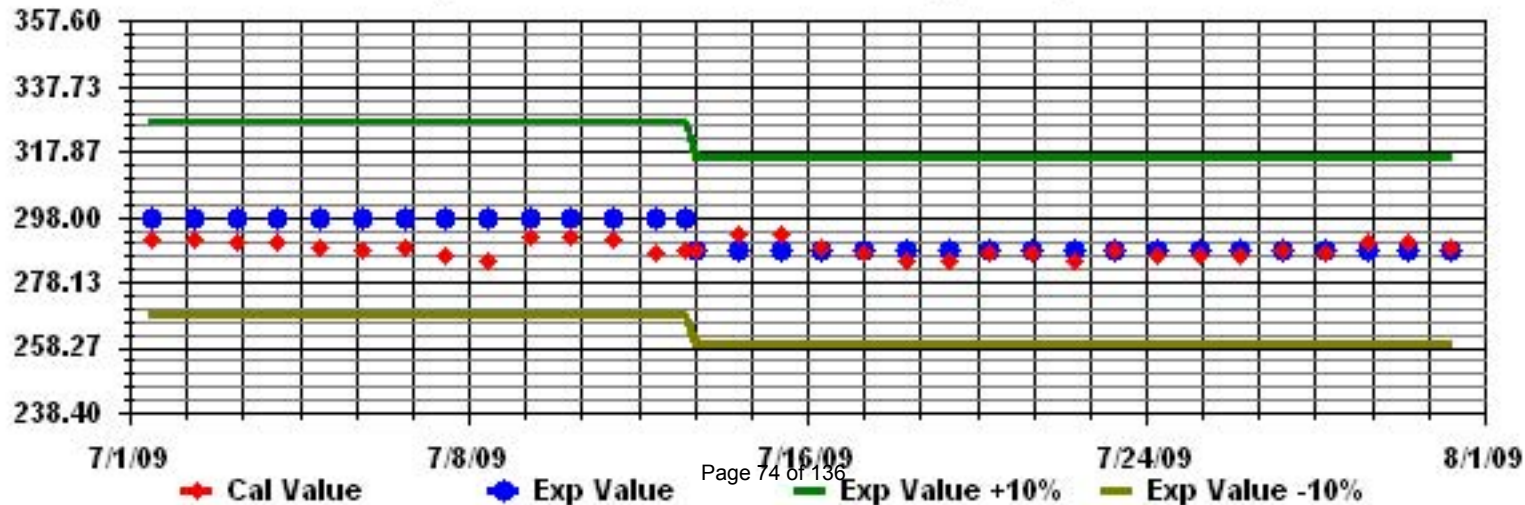
Calm : .00 %

Total # Operational Hours : 709





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



# Ambient Temperature

**LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - COLD LAKE**

JULY 2009

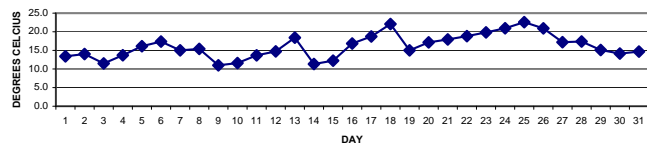
**AMBIENT TEMPERATURE** hourly averages (Degrees C)

MST																										DAILY	24-HOUR	
HOURLY 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	MAX.	AVG.	RDGS.
DAY																												
1	7.5	5.9	4.6	4.6	5.7	7.9	10.3	12.6	14.3	15.4	16.1	16.7	17.7	18.8	19.2	19.7	19.6	18.9	17.1	15.7	13.4	11.7	9.2	19.7	13.4	24		
2	7.5	6.7	6.1	6.7	6.9	8.7	11.2	12.9	14.2	15.5	16.5	17.4	18	19.1	20	20.4	20.4	20.6	20.1	20.1	15.3	12.1	10.3	9.6	20.6	14.0	24	
3	9	9.1	11.7	11.3	10.9	10.9	10.6	10.6	10.2	10.8	11.4	10.9	10.6	11.5	13.3	14.4	14.6	14.8	14.6	14.3	12.4	10.5	9.2	8	14.8	11.5	24	
4	6.9	6.2	5.6	5.1	4.8	7.3	10.4	14	16.6	18	18.6	19.2	19.3	19.1	19.2	19.1	19.1	17.6	15.7	15.1	14.3	13.3	12.4	11.7	19.3	13.7	24	
5	10.9	9.4	8.2	7.6	8.8	10.5	12.4	14.4	17	18.2	19.1	20	20.5	21.2	21.6	21.8	22.3	21.6	20.8	20.5	17.7	15.2	14.2	12.9	22.3	16.1	24	
6	11.5	10	9	8.2	7.9	10.2	14.6	17.2	18.9	20	21	21.6	22	21.9	22.6	22.7	22.6	22.3	22	20.5	19	17.9	16.9	16.3	22.7	17.4	24	
7	15.3	15.1	15.1	14.9	14.8	14.8	15.3	15.9	16.5	17	15.8	15.3	15.7	15.6	14.9	14.9	13.8	13.8	14.2	14.6	14.8	14.7	13.9	13.6	17.0	15.0	24	
8	13.3	13.1	13	12.8	12.9	13.2	13.7	14.1	15.3	16	16.6	16.9	18.4	18.9	17.6	17.2	16.9	17.7	18.4	16.3	15.2	14.4	14.2	13.5	18.9	15.4	24	
9	13.3	13	12.7	13	13	12.9	13.6	13.5	12.7	12.1	11.8	11.8	11.9	10.4	8.9	9.4	10.2	11.4	11.1	10.2	8.5	6.9	5.9	5.3	13.6	11.0	24	
10	5	4	4.2	3.6	3	5	7.3	9.7	11.9	13.4	14.4	15	15.7	16.4	16.9	17.5	17.5	17.3	16.7	15.6	12.9	11.7	11.7	11.9	17.5	11.6	24	
11	10.5	9.9	9.2	8.8	8.6	8.8	10.1	11.5	12.6	13.6	14.9	16.1	16.2	17.4	18.3	19	19.1	19.4	18.9	17.9	15.1	11.3	10.2	10.5	19.4	13.7	24	
12	8.5	7.3	6.4	5.7	5.4	8.2	10.7	12.7	14.7	15.7	17.1	17.8	18.7	19.5	20.1	20.4	20.5	20	20	18.9	17.3	16.4	16	15.3	20.5	14.7	24	
13	15	14.7	14.4	14.2	14	13.8	15	16.5	18.5	19.4	20.5	22	22.1	22	22.7	23.3	22.9	22.6	21.2	20.1	19	17.3	15.8	15	23.3	18.4	24	
14	13.6	13	12.5	11.8	10.8	10.5	10.4	10.5	11	11.3	11	10.9	11	11.2	11.6	12.4	14.1	14.6	15.2	14.6	12	7.6	5.8	4.6	15.2	11.3	24	
15	3.8	3.1	2.5	<b>2.4</b>	2.9	5.7	9.9	10.9	12.2	13.8	14.9	16.2	16.8	18	18.3	18.8	19.3	19.3	19.1	17.5	14.2	11.9	11.8	10.5	19.3	12.2	24	
16	9.7	8.8	7.6	6.2	6	9.1	12.2	14.9	17.7	19.7	21	22.3	23.2	23.9	24.1	24.5	24.3	22.9	21.6	21	18.2	16.1	15.4	13.7	24.5	16.8	24	
17	12.2	11.3	10.6	9.8	9.3	11.5	15.2	17.8	19.8	20.6	22	23.3	24.4	25.4	25.3	24.9	24.5	25.1	24.5	23	20.4	17.5	16	15.2	25.4	18.7	24	
18	17.5	17.1	16.4	15.7	15.4	15.9	16.9	18.2	20.3	22.7	24.9	26.5	25.8	27.2	28.1	28.5	29	28.7	28.1	26.2	24.1	21.4	19.2	16	29.0	22.1	24	
19	16	15.6	15	14.2	13.8	13.9	14.5	15.4	16	16.8	17.7	18.2	18	13.8	13.6	13.4	14	14.4	14.8	14.9	14.4	14.2	14.1	18.2	15.0	24		
20	13.5	13	12.6	12.7	13	13.3	13.8	15.6	17.1	18.4	19.1	19.8	20.8	21.5	22.1	22	21.5	21.6	21.5	20.5	17.8	14.7	13.7	12.1	22.1	17.2	24	
21	11.7	11.6	11	9.5	9.2	10.8	13.1	15.6	17.8	19.9	21.9	23	23.7	24.1	24.7	24.7	24.7	24.8	24.3	22.7	19.3	15.5	14	12.9	24.8	17.9	24	
22	12	11.3	10.8	10.2	9.8	11.2	14.4	16.1	18.5	21.4	22.7	24.5	24.9	25.1	25	25.6	25.3	24.8	23.6	22.3	20.7	18.3	17	16.4	25.6	18.8	24	
23	15.8	15.3	15.2	14.4	13.5	14.9	17.1	19.2	21.1	22.3	23.2	23.6	24.5	24.6	24.2	25.5	25.7	24.7	24.4	23.7	19.4	16	14.3	13.2	25.7	19.8	24	
24	12.5	11.6	10.8	10.4	10	12	15.9	19.5	21.7	24.2	25.3	26.2	26.8	27.7	28.2	28.5	29	29.3	29.4	26.7	21.9	19.4	17.7	17.7	29.4	20.9	24	
25	17.5	15.6	14	13.4	13.3	15.1	18	20.5	23.7	24.9	25.7	26.8	27.8	28.6	29	28.5	29.3	<b>29.5</b>	29	25.4	23.3	21.7	20.2	20.9	<b>29.5</b>	<b>22.6</b>	24	
26	20	18.9	18.8	17.7	17.6	17.9	18.6	20.1	21.6	22.9	24.3	25.2	25.6	25.4	25.5	25.4	25	24.8	23.7	21.7	19.3	16.9	13.4	11.7	25.6	20.9	24	
27	10.5	9.6	8.9	9	9	10.6	13.5	16.6	18.8	20.6	21.9	22.8	23.1	23.2	23.4	22.5	22.5	21.7	20.9	19.9	18.6	16.1	14.9	14.1	23.4	17.2	24	
28	14.2	13.9	13.9	13.3	12.1	12.2	14.4	16.3	17.9	19.1	20.6	21.3	22	21.7	22.5	22.9	22.6	22.2	21	19.7	17	14.2	11.6	10.4	22.9	17.4	24	
29	10.2	9.1	8.2	8.1	6.8	7.9	12.2	15.4	16.4	17.2	18.1	18.7	19.5	20.3	21	21.1	21.2	21.1	20.1	18.5	15.5	13.4	11.7	10.5	21.2	15.1	24	
30	9.9	9.5	9	9.1	9.1	10.4	12.7	14	14.3	14.8	17.7	19.9	20.6	21.5	22.5	14.3	13.6	14.6	16.2	15.6	13.9	13.1	11.8	11.3	22.5	14.1	24	
31	10.2	9	8	7.2	6.6	7.4	10.7	13.7	15.7	16.5	17.6	17.8	18.7	19.8	20.6	21	21.2	21.4	21.7	19.4	14.6	12.2	10.8	10.2	21.7	14.7	24	
HOURLY MAX	20.0	18.9	18.8	17.7	17.6	17.9	18.6	20.5	23.7	24.9	25.7	26.8	27.8	28.6	29.0	28.5	29.3	29.5	29.4	26.7	24.1	21.7	20.2	20.9				
HOURLY AVG	11.8	11.0	10.5	10.1	9.8	11.0	13.2	15.0	16.6	17.8	18.8	19.6	20.1	20.5	20.8	20.8	20.8	20.7	20.4	19.2	16.8	14.7	13.4	12.5				

**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

**24 HOUR AVERAGES FOR JULY 2009**

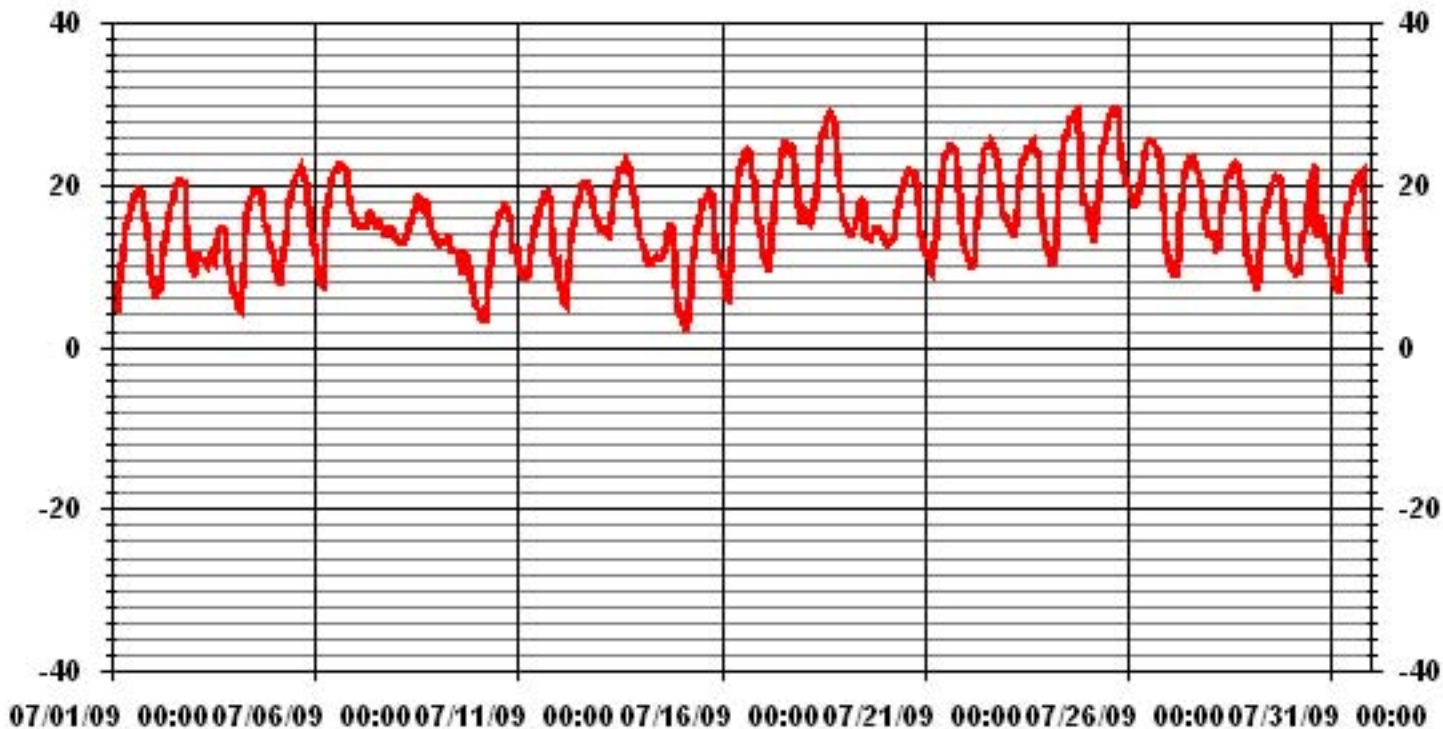


**MONTHLY SUMMARY**

MINIMUM 1-HR AVERAGE:	2.4 °C	@ HOUR(S)	3	ON DAY(S)	15
MAXIMUM 1-HR AVERAGE:	29.5 °C	@ HOUR(S)	17	ON DAY(S)	25
MAXIMUM 24-HR AVERAGE:	22.6 °C			ON DAY(S)	25
VAR-VARIOUS					
CALIBRATION TIME:	0 HRS	OPERATIONAL TIME:	744 HRS		
		AMD OPERATION UPTIME:	100.0 %		
STANDARD DEVIATION:	5.57	MONTHLY AVERAGE:	16.09 °C		

\* Outside detection limits of sensor.

### 01 Hour Averages



# Relative Humidity

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - COLD LAKE

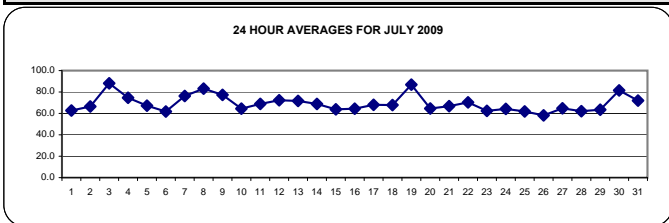
JULY 2009

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		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	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		89.0	92.0	94.0	93.0	90.0	81.0	75.0	66.0	58.0	54.0	51.0	49.0	46.0	41.0	39.0	37.0	36.0	40.0	44.0	49.0	56.0	66.0	74.0	85.0	94.0	62.7	24				
2		91.0	94.0	94.0	93.0	92.0	87.0	80.0	74.0	69.0	63.0	57.0	53.0	50.0	44.0	41.0	38.0	38.0	36.0	38.0	42.0	69.0	79.0	85.0	88.0	94.0	66.5	24				
3		90.0	91.0	80.0	90.0	96.0	97.0	97.0	97.0	95.0	94.0	89.0	91.0	92.0	89.0	81.0	75.0	74.0	73.0	74.0	75.0	89.0	95.0	95.0	96.0	97.0	88.1	24				
4		96.0	96.0	96.0	96.0	96.0	96.0	90.0	80.0	69.0	59.0	53.0	49.0	49.0	51.0	53.0	59.0	54.0	59.0	66.0	73.0	79.0	87.0	92.0	93.0	96.0	74.6	24				
5		94.0	95.0	95.0	96.0	96.0	94.0	89.0	79.0	66.0	59.0	53.0	49.0	45.0	42.0	40.0	38.0	37.0	39.0	45.0	48.0	68.0	79.0	82.0	85.0	96.0	67.2	24				
6		89.0	93.0	94.0	94.0	94.0	89.0	79.0	72.0	66.0	61.0	52.0	45.0	41.0	42.0	39.0	37.0	37.0	39.0	40.0	48.0	55.0	56.0	59.0	61.0	94.0	61.8	24				
7		65.0	64.0	64.0	65.0	65.0	64.0	65.0	65.0	64.0	62.0	73.0	79.0	77.0	78.0	81.0	82.0	90.0	92.0	90.0	88.0	88.0	88.0	90.0	92.0	92.0	76.3	24				
8		92.0	94.0	95.0	96.0	96.0	94.0	92.0	90.0	83.0	79.0	76.0	75.0	70.0	68.0	75.0	81.0	80.0	74.0	67.0	77.0	82.0	87.0	84.0	88.0	96.0	83.1	24				
9		83.0	84.0	87.0	87.0	84.0	84.0	78.0	77.0	78.0	78.0	76.0	72.0	70.0	77.0	86.0	85.0	74.0	62.0	56.0	59.0	69.0	79.0	83.0	87.0	87.0	77.3	24				
10		90.0	93.0	94.0	94.0	94.0	88.0	82.0	74.0	67.0	55.0	44.0	42.0	39.0	39.0	39.0	37.0	37.0	39.0	44.0	56.0	70.0	75.0	74.0	73.0	94.0	64.5	24				
11		77.0	83.0	92.0	93.0	93.0	92.0	86.0	76.0	70.0	65.0	60.0	57.0	56.0	53.0	49.0	45.0	41.0	43.0	43.0	51.0	68.0	86.0	88.0	86.0	93.0	68.9	24				
12		92.0	94.0	94.0	94.0	94.0	88.0	84.0	77.0	65.0	62.0	57.0	57.0	56.0	54.0	55.0	55.0	57.0	60.0	61.0	66.0	75.0	78.0	79.0	81.0	94.0	72.3	24				
13		82.0	83.0	86.0	86.0	89.0	93.0	89.0	82.0	76.0	74.0	68.0	64.0	65.0	64.0	59.0	56.0	57.0	54.0	56.0	58.0	62.0	70.0	75.0	72.0	93.0	71.7	24				
14		71.0	71.0	71.0	72.0	75.0	73.0	75.0	75.0	72.0	70.0	68.0	68.0	65.0	65.0	64.0	61.0	54.0	52.0	48.0	50.0	64.0	86.0	90.0	92.0	92.0	68.8	24				
15		92.0	92.0	93.0	94.0	93.0	85.0	76.0	75.0	67.0	59.0	53.0	47.0	44.0	39.0	39.0	35.0	35.0	36.0	39.0	49.0	68.0	74.0	71.0	94.0	63.8	24					
16		80.0	82.0	86.0	91.0	90.0	81.0	74.0	68.0	60.0	53.0	50.0	48.0	45.0	44.0	43.0	42.0	45.0	52.0	57.0	64.0	73.0	75.0	85.0	91.0	64.4	24					
17		90.0	91.0	93.0	93.0	93.0	87.0	78.0	72.0	63.0	58.0	53.0	51.0	47.0	43.0	44.0	45.0	47.0	46.0	52.0	60.0	72.0	83.0	86.0	86.0	93.0	68.0	24				
18		76.0	75.0	77.0	82.0	84.0	84.0	81.0	78.0	73.0	66.0	61.0	52.0	JULY	51.0	50.0	50.0	47.0	50.0	54.0	63.0	68.0	75.0	73.0	89.0	89.0	67.8	24				
19		89.0	94.0	94.0	96.0	96.0	92.0	91.0	85.0	80.0	75.0	68.0	62.0	62.0	88.0	89.0	90.0	93.0	92.0	92.0	91.0	91.0	93.0	92.0	90.0	96.0	86.9	24				
20		88.0	90.0	91.0	91.0	87.0	85.0	83.0	74.0	68.0	61.0	54.0	48.0	43.0	41.0	38.0	38.0	40.0	42.0	43.0	50.0	59.0	74.0	77.0	85.0	91.0	64.6	24				
21		86.0	87.0	90.0	93.0	94.0	92.0	87.0	78.0	70.0	63.0	54.0	49.0	44.0	42.0	39.0	38.0	37.0	39.0	42.0	49.0	65.0	84.0	90.0	91.0	94.0	66.8	24				
22		92.0	93.0	94.0	94.0	94.0	92.0	87.0	83.0	72.0	64.0	58.0	51.0	53.0	52.0	55.0	53.0	51.0	52.0	44.0	48.0	59.0	77.0	84.0	85.0	94.0	70.3	24				
23		87.0	86.0	83.0	85.0	89.0	83.0	75.0	67.0	59.0	47.0	44.0	41.0	36.0	34.0	38.0	35.0	36.0	40.0	45.0	52.0	73.0	84.0	87.0	91.0	62.4	24					
24		91.0	93.0	94.0	94.0	94.0	88.0	81.0	71.0	61.0	51.0	47.0	46.0	45.0	39.0	38.0	38.0	33.0	32.0	36.0	56.0	74.0	79.0	83.0	77.0	94.0	64.2	24				
25		77.0	86.0	92.0	93.0	93.0	86.0	77.0	69.0	56.0	49.0	44.0	40.0	37.0	36.0	35.0	37.0	36.0	37.0	42.0	61.0	70.0	76.0	81.0	74.0	93.0	61.8	24				
26		75.0	82.0	81.0	83.0	85.0	83.0	83.0	71.0	62.0	55.0	47.0	39.0	34.0	33.0	31.0	30.0	31.0	33.0	39.0	45.0	51.0	61.0	78.0	84.0	85.0	58.2	24				
27		88.0	89.0	91.0	92.0	92.0	86.0	77.0	67.0	59.0	53.0	45.0	41.0	40.0	39.0	38.0	40.0	40.0	46.0	52.0	58.0	59.0	78.0	90.0	94.0	94.0	64.8	24				
28		94.0	96.0	96.0	96.0	96.0	93.0	83.0	77.0	65.0	53.0	41.0	36.0	35.0	36.0	33.0	30.0	32.0	32.0	43.0	47.0	54.0	64.0	77.0	80.0	96.0	62.0	24				
29		82.0	86.0	90.0	90.0	93.0	90.0	81.0	66.0	56.0	49.0	44.0	42.0	40.0	37.0	36.0	37.0	38.0	40.0	46.0	57.0	70.0	78.0	86.0	89.0	93.0	63.5	24				
30		90.0	91.0	91.0	91.0	90.0	85.0	77.0	73.0	75.0	75.0	61.0	55.0	56.0	55.0	52.0	91.0	99.0	99.0	92.0	84.0	89.0	95.0	96.0	93.0	99.0	81.5	24				
31		95.0	95.0	96.0	97.0	97.0	97.0	90.0	78.0	70.0	63.0	56.0	55.0	51.0	47.0	43.0	42.0	44.0	44.0	47.0	61.0	83.0	89.0	93.0	94.0	97.0	72.0	24				
HOURLY MAX		96.0	96.0	96.0	97.0	97.0	97.0	97.0	97.0	95.0	94.0	89.0	91.0	92.0	89.0	89.0	91.0	99.0	99.0	99.0	92.0	91.0	91.0	95.0	96.0	96.0						
HOURLY AVG		86.2	88.2	89.3	90.5	90.8	87.4	82.0	75.4	68.2	62.2	56.8	53.4	51.2	50.4	49.7	50.2	50.0	50.8	52.8	59.0	69.8	79.0	82.9	85.3							

STATUS FLAG CODES

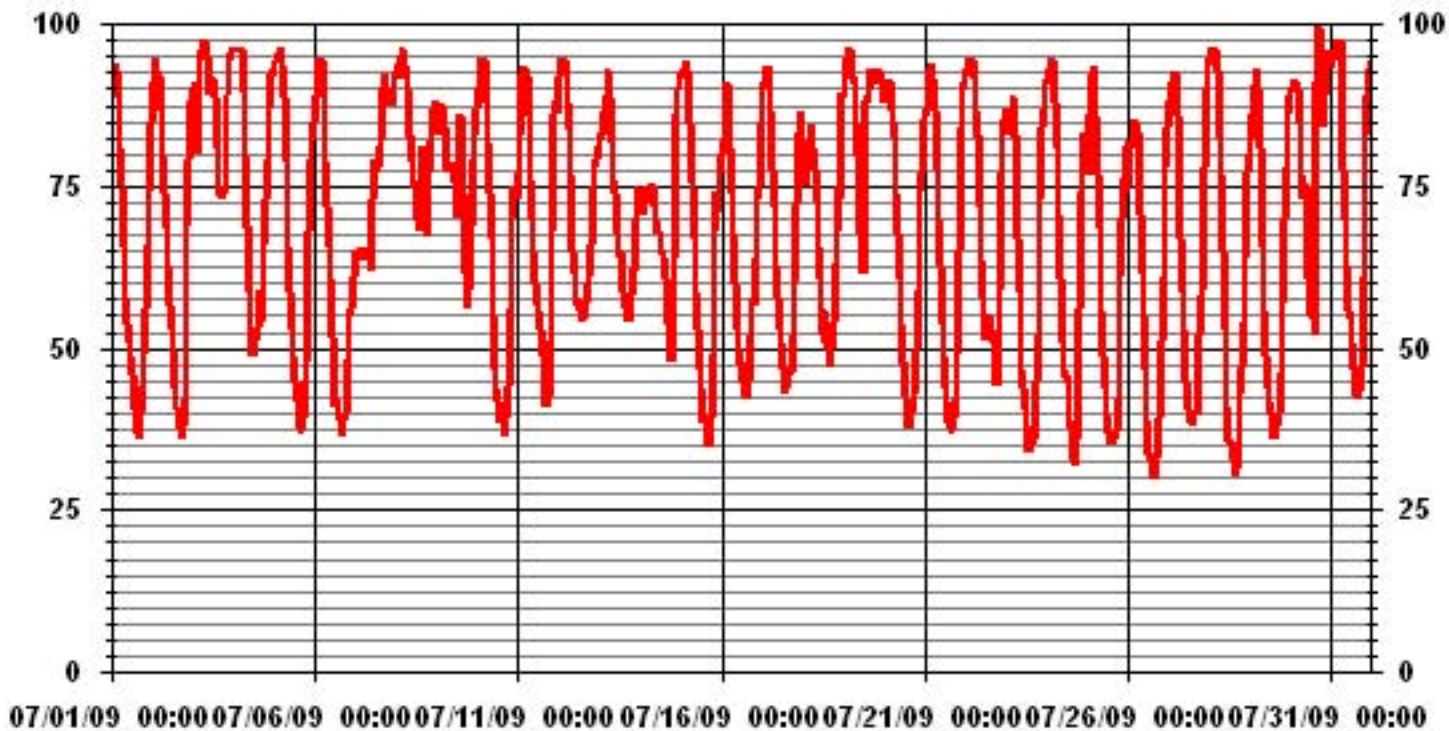
S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	- MISSING DATA
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE



MONTHLY SUMMARY

MAXIMUM 1-HR AVERAGE:	99.0 %	@ HOUR(S)	16, 17	ON DAY(S)	30
MAXIMUM 24-HR AVERAGE:	88.1 %			ON DAY(S)	3
CALIBRATION TIME:	0 HRS	OPERATIONAL TIME:		744 HRS	
STANDARD DEVIATION:	19.65	AMD OPERATION UPTIME:		100.0 %	
		MONTHLY AVERAGE:		69.24 %	

### 01 Hour Averages





# Vector Wind Speed

## LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - COLD LAKE

JULY 2009

### 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		
HR 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.	
DAY																												
1	3.6	1.4	1.1	4	3.8	3.5	5	6.2	7.3	8.4	8.3	8.1	7.6	10	9.6	7.4	7.2	4	2.7	3.5	6.4	3.6	2	1.3	10	4.8	24	
2	1.3	1.4	3.1	4.3	3.9	4.7	5.1	5.3	8.1	7.7	8.1	6.5	4.4	7.2	8.1	8.3	7.1	7.2	5.6	2.4	0.8	1	0.3	0.2	8.3	4.3	24	
3	0.3	0.2	5.1	5.6	2.2	0.7	6.5	4.2	9.2	7	6.9	8.9	10.4	6.6	6.6	6.4	4.1	4.6	4.2	2.3	0.4	0.9	0.7	0.5	10.4	3.1	24	
4	1	0.2	0.1	0.4	0.4	0.6	1.6	1	1.3	2.8	4.1	3.4	4.9	8.3	9.3	8.8	7.9	2.2	4.6	3.1	1.1	0.7	1.1	2.9	9.3	2.3	24	
5	1	0.8	0.6	0.3	0.5	1.8	1.5	0.6	1.4	2.3	3.2	4.2	4.1	6.7	6.3	7.1	5.6	2.1	3.6	4.2	2.6	0.6	2.8	1.5	7.1	2.7	24	
6	0.7	0.4	0.7	1.3	0.5	0.3	2.1	4.2	4.2	7.8	9.1	9.8	9.1	9.7	10.7	11	10.3	9	8	6.2	4.7	5	4.2	4.1	11.0	5.5	24	
7	4.1	7	10.1	10	11.6	11.3	12.9	12.8	13.6	13.4	8.6	7.3	8.9	9.6	9.8	9.8	13.8	12.1	9.4	7.8	7.8	7.1	5.7	6.3	13.8	9.6	24	
8	6.6	4.7	5.4	4.9	4.4	4.6	4.2	5.5	5.2	5.9	6.2	3.5	6	8.2	6.4	3.2	3.4	1.2	0.8	3.6	2.5	3.4	3.6	3.8	8.2	4.5	24	
9	6	5.6	5.5	6.8	10.2	10.6	13.3	15.3	14.3	15	15.9	15.3	13.5	16.2	13.1	10.1	11.2	10.4	10.7	7.3	5.5	4.1	5	4.3	16.2	10.2	24	
10	2.7	2.3	3.1	3.6	0.8	1.3	4	4.2	5	7	8.1	7.5	6.6	7.5	6	7.2	7.1	5.7	3.7	1.6	1.5	2.7	3.3	1	8.1	4.3	24	
11	9	4.4	6.3	5.3	6.6	4.5	6.1	5.9	7	4.9	2.3	4.1	1	1.4	1.7	3.9	3.8	5.7	5.4	4.3	1.7	0.6	2.5	2.9	9.0	4.2	24	
12	0.8	0.7	0.5	0.7	0.8	2.6	6.3	5.3	5.7	5.9	8.4	8.7	9.2	10.5	8.4	9.7	9.4	7.3	8.5	5.9	4.1	3.5	9.2	9.4	10.5	5.9	24	
13	9.3	6.8	0.6	4.6	2.4	0.8	4.8	6.4	2.7	2.4	3.9	2.8	8.3	6.7	7.5	7.3	8.2	10.9	11.7	11.3	11.8	12	11.7	14.8	14.8	7.1	24	
14	14.7	12.3	11.5	13.5	15	14.8	12.9	13.5	14.8	15.9	14.9	16.3	15.8	14.5	12.9	11.9	8.1	6.4	6.6	5	2.1	1	0.4	16.3	10.7	24		
15	0.5	0.6	0.3	0.4	0.1	0.3	3.7	4.8	6.2	3.9	2.7	2.8	1.3	3.1	2.1	3.9	2.3	3	2.8	3.9	4.2	5.5	5.4	5.1	6.2	2.9	24	
16	2.8	2.8	1.1	0.2	0.7	2.2	6	6.3	8.4	9.6	10.7	10.2	9.3	7.3	7.4	7.8	6.2	4.2	5.6	6.6	3.3	2.5	2.4	1.1	10.7	5.2	24	
17	0.2	0.5	0.3	0.4	1.3	0.3	1.2	2.3	3.9	5.2	5.3	3.7	3.1	3	5	5.6	4.5	5.9	5.3	1.8	0.9	1.4	2.3	5.9	2.8	24		
18	8.5	6.7	7.3	6	5.1	4.4	7.3	9.7	7.6	5.5	5.7	5.6	5.3	7	5.4	8.9	7.4	8.2	6.3	4.5	5.2	6.7	11.4	11.2	11.4	7.0	24	
19	6.7	7.1	9.3	4.5	5.8	8.7	12.3	11.5	13.1	11.1	13.4	14.2	12.5	11.7	12.7	12.9	11.8	11.7	10	10.1	10.2	9.2	9.6	10.7	14.2	10.5	24	
20	8.2	8.4	8.2	9.4	8.8	11.4	8.3	11.7	13.6	16	<b>20.3</b>	19.7	18.6	18.6	18.7	16.6	14.8	11.6	7.2	4.5	4.1	4.4	4.8	4	<b>20.3</b>	<b>11.3</b>	24	
21	4.6	5.4	3.4	1.9	2.8	5.1	5.1	6.2	7.7	7.1	8.1	9.5	8.8	10.5	9.9	9.8	9.2	8.6	6.6	5	1.2	1	0.1	0.7	10.5	5.8	24	
22	0.8	0.9	0.6	0.3	0.9	0.6	0.4	1.5	3.4	4.8	7.1	1.7	2.3	4.7	4.5	7.9	7.6	8.8	7.3	4.3	2.1	1.2	1.9	2.5	8.8	3.3	24	
23	2.4	2.5	5	4.5	3.3	4.5	5.3	4.2	7.8	9.9	9.4	10.1	9.5	10.1	7.8	8.6	7.2	6.9	4	1.5	0.5	0.8	0.5	0.1	10.1	5.3	24	
24	0.2	0.7	1.1	0.4	0.3	0.7	1.1	0.9	1.4	1	2.2	3.6	5.3	6.2	7.2	7.7	8.4	7.3	3.2	1.5	1.7	3.4	1.1	4.2	8.4	3.0	24	
25	2	0.5	2.4	2.9	2.2	3.3	3	2.7	2.6	7.1	6.5	4.2	2.2	7	3.4	4.2	4	3.5	2.3	1.6	1.3	0.1	1.3	4.1	7.1	3.1	24	
26	2.9	2.6	2	2.8	3.6	4.1	5.2	6.1	6.7	7	7.5	12.8	14.8	13.5	14.1	12.6	13.8	11.2	7.8	5.7	5.4	2.1	0.8	0.8	14.8	6.9	24	
27	0.9	0.7	1.2	2.3	2.9	3.2	2.6	3.1	1.5	1.8	6.5	5.8	3.7	3.2	3.2	5.7	4.5	5.4	2.5	4.6	6.2	2.7	1.5	0.3	6.5	3.2	24	
28	0.5	1.2	0.5	1	1.3	1.4	1.9	4.7	4.3	6.4	7.1	6.8	6.2	5.5	9.2	11.6	10.8	10.8	8.7	5.5	4.1	2.4	0.6	0.6	11.6	4.7	24	
29	3.3	0.2	0.6	1.4	2	2.1	1.6	6.2	5.7	5.5	5.6	5.3	4.8	4.9	4.1	5	5.5	4.7	2.5	1.5	1	0.8	0.7	6.2	3.3	24		
30	1.5	1	1	1.1	1.7	3.1	5	3.1	1	1.7	5.2	4.8	4.9	2.8	3.1	8.2	2.9	3.9	5.3	4.9	1.7	0.7	2.6	4.2	8.2	3.1	24	
31	3.5	2.1	2.5	1.4	2.2	1.3	2.3	1.7	0.9	3.7	2.8	3.7	5.9	7.1	8.3	6.3	5.2	4	3	1.4	1	0.6	0.2	0.3	8.3	3.0	24	
HOURLY MAX	14.7	12.3	11.5	13.5	15.0	14.8	13.3	15.3	14.8	16.0	20.3	19.7	18.6	18.6	18.7	16.6	14.8	12.1	11.7	11.3	11.8	12.0	11.7	14.8				
HOURLY AVG	3.6	3.0	3.2	3.4	3.5	3.8	5.1	5.7	6.3	6.9	7.6	7.4	7.4	8.0	7.8	8.2	7.5	6.7	5.8	4.6	3.5	2.9	3.2	3.4				

#### STATUS FLAG CODES

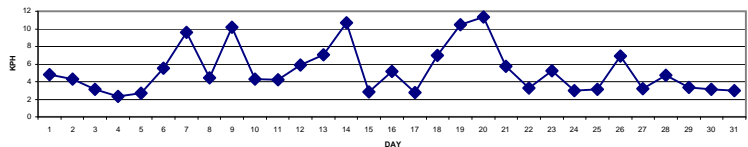
S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	- MISSING DATA
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE

LAST CALIBRATION: November 5, 2008

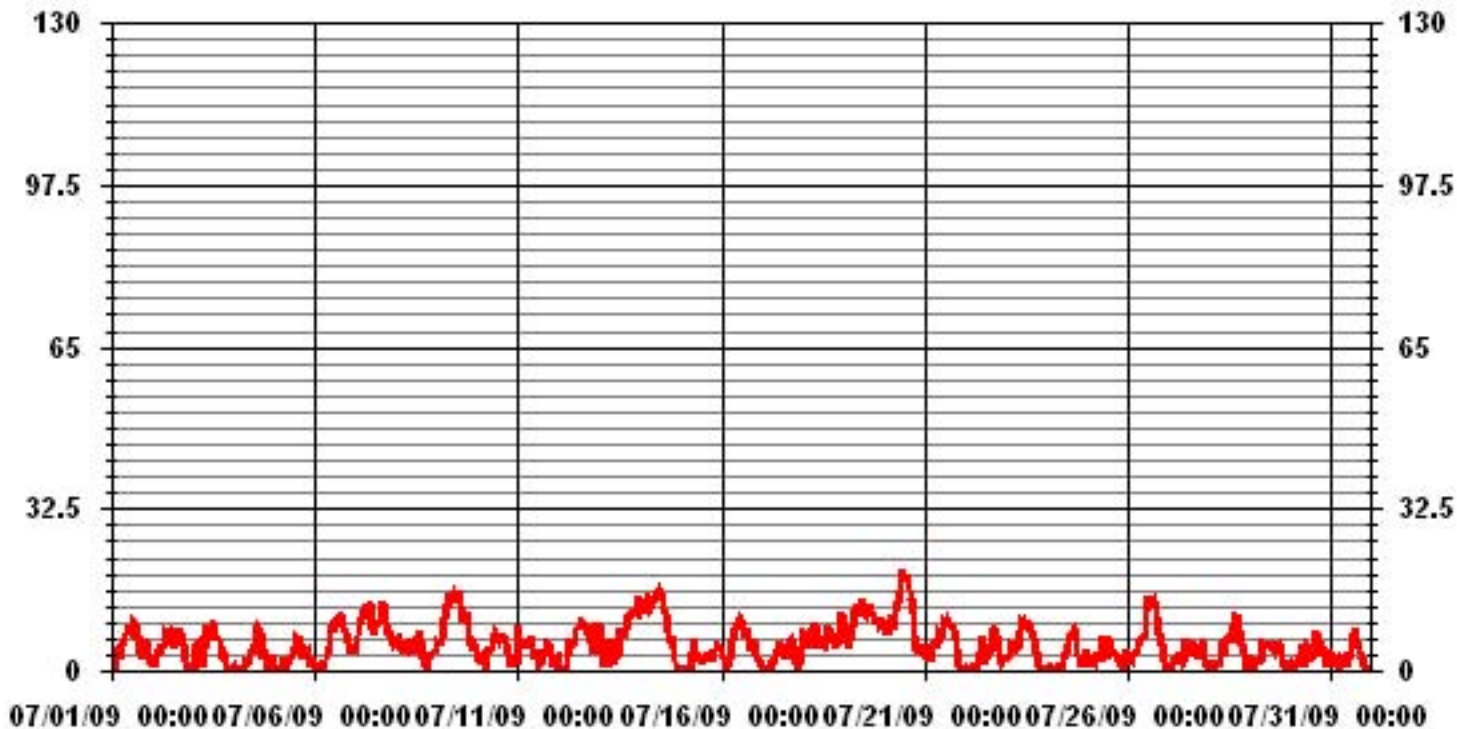
#### MONTHLY SUMMARY

MAXIMUM 1-HR AVERAGE:	20.3	KPH	@ HOUR(S)	10	ON DAY(S)	20
MAXIMUM 24-HR AVERAGE:	11.3	KPH			ON DAY(S)	20
CALMS ( $\leq 0$ KPH)	3.36	%				
MONTHLY CALIBRATION TIME:	0	HRS	OPERATIONAL TIME:	744	HRS	
STANDARD DEVIATION:	3.96		AMD OPERATION UPTIME:	100.0	%	
			MONTHLY AVERAGE:	5.36	KPH	

24 HOUR AVERAGES FOR JULY 2009



### 01 Hour Averages



— LICA WSP KPH

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - COLD LAKE

JULY 2009

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		10.3	3.5	3.9	6.2	5.9	6.3	9.3	9.9	11.9	13.9	16	14.8	13.6	15.9	15.6	14.7	13.9	12.3	10.6	7.2	17.2	8.2	4.9	4.3	17.2	
2		3.2	3.4	5.5	5.5	5.4	7.3	7.8	10	14.4	12.5	14.6	14.4	9.5	17.6	14.5	16.4	13.1	15.5	12.8	4	1.9	3.4	1.7	2.4	17.6	
3		2.8	3.3	14.5	10.9	9.3	4.9	9.7	9.5	15.6	13.8	10.4	13.6	15.6	11.5	13.4	11.7	8.9	8.3	7.4	5.5	2.3	3.4	3.9	3.5	15.6	
4		3.4	2.2	2.4	2.7	3.3	2.8	4.1	3.8	7.1	9.2	10	10.7	10.7	15.9	15.4	16	13.3	10.7	7.1	14.3	3.6	3.1	3.6	5	16	
5		6.1	3.3	3	5.2	3.6	4.4	3.9	2.6	8.2	7.7	9.9	12	10.5	13.5	12.1	15	11.9	8.4	6.3	8.5	5.2	2.5	6.3	4.6	15	
6		3.1	2.6	3.2	3.5	4.9	2.9	5.9	8.8	8	14.8	15.5	16.9	16.6	16.2	16.8	20.5	17.5	20	13	13	7.8	8.1	6.6	6.3	20.5	
7		5.8	14.8	14.2	15.6	16.5	18.1	19.8	22.2	20.9	21	15.7	12.7	17.7	16.8	13.9	16.1	22.1	18.1	15.7	12.4	11.7	10.7	8.7	12.2	22.2	
8		11.5	8.2	9.8	7.8	8.1	8.7	7.3	10.1	10.1	12.4	10.6	10.8	10.5	12.8	12.7	8.5	5.6	7	10.1	8.5	4.8	7.6	7	7.9	12.8	
9		8.2	8.2	9.1	13	15.2	15.5	22.6	23.3	20.2	23.2	25.4	23	21.9	22.3	22.7	15.3	19.3	15.2	16.6	10.4	8.5	5.4	7.3	6.5	25.4	
10		5.9	4.5	5	5.2	4.5	4.7	7.2	6.8	10	13.9	15.1	12.7	16.1	15	15.2	14.4	11.9	11	7	3.4	5.8	5.1	7	9.8	16.1	
11		16.5	8.7	13.4	8.4	12.6	12.5	10.7	10.4	13	13.1	8.3	9.9	8.5	9.3	8.7	11	9.8	11.4	10.8	6.5	5.6	1.2	5	5.3	16.5	
12		2.6	2.1	1.3	1.6	1.9	5.6	11.3	9.3	12.3	11.9	15.8	16.1	19.7	20.6	19.2	18.6	14.9	12.8	14.2	10	6	6.4	13.8	12.5	20.6	
13		12.7	10.3	8.1	14.8	7.8	6.5	7.8	9.6	10.2	5.9	9.4	8.5	13.5	11.4	14.1	15.8	15.8	18.4	18.3	20.7	15.8	19.6	18.5	23.5	23.5	
14		21.8	21.2	18.2	20.4	20.2	21.6	21.1	21.1	22.8	24.1	19.9	24.7	22.6	20.3	22.2	17.8	15.2	10.9	11.7	8.2	4.2	4.6	3.3	2.9	24.7	
15		3.1	3.1	4	3.7	2.3	3.2	9.6	8.2	10.1	9.1	9.3	10.3	9.7	9.8	11.2	11.5	9	8.3	7.3	6.3	6.5	7.2	7.6	7.1	11.5	
16		5.5	4.7	2.9	1.7	2.9	7	10.6	12.1	12.7	17.8	18.2	17.8	17.7	13.3	14.5	19.5	11.8	8.1	17.3	11.9	7.4	5	6.1	5.8	19.5	
17		2.7	2.6	4.7	3.1	3.9	4.1	3.8	5.2	9	9.6	9.2	9.6	8.9	10.6	10.9	11.1	10.4	7.3	9.8	6.9	5.5	2.2	4	6.8	11.1	
18		11.5	10.4	11.6	9.3	9.5	8.5	11.6	15.1	15.8	11.9	11.8	11.8	15.2	15.6	12.1	15.3	13.7	13.9	12	8.7	9.7	19.1	46.4	24.5	46.4	
19		18.3	18.7	22.1	14.9	9.4	12.9	18.4	17.7	22.8	18.4	18.3	20	20.7	17.6	26.2	20.7	17.7	18.4	14.7	13.2	15.2	15.1	17.7	17.5	26.2	
20		13	13.8	13	14	18.1	21.3	16.8	24.2	21.3	26.6	26.3	29.3	28.6	27.5	27.8	28.2	22	18.5	16.2	6.8	5.6	5.7	6.7	6.2	29.3	
21		6	6.6	5.9	5.9	4.9	8.4	9	9.3	14.2	12.3	14.3	16.3	15.6	16.9	16.9	16	17.1	15.4	10.9	8.5	6	2.4	2.9	2.1	17.1	
22		1.4	2.7	2.7	2	4.2	1.6	2	5.1	7.6	9.1	15.4	6.9	7.7	10.1	7.8	12.9	13.1	14.1	16.8	8.1	8.5	4.2	4.3	4.4	16.8	
23		4	4.1	7.5	6.1	6.2	6.5	8.4	7.7	15.7	16	16.6	18.8	17.4	16.9	11.9	14.1	14	12.9	7.8	6.4	2.5	3.1	1.5	3.9	18.8	
24		4.1	2.8	6.3	2.7	1.8	3.5	3.2	2.9	6	5	7	10.6	12.1	12.8	12.4	14	15.3	12.8	8.1	4.7	3.2	5.4	5.2	6.5	15.3	
25		3.8	4.1	4.2	5.6	4	5.2	5.8	6.3	8.3	11.6	13.2	10.6	11.1	14.4	11.5	10.2	10.2	7.3	5.6	5.6	3.4	2.4	3	8.9	14.4	
26		5.7	7.4	6.6	5.5	7.1	8.5	8.7	9.8	9.9	12.4	20.3	19.3	23.1	20.7	25.8	20	22.2	18.9	15	8.5	8.1	5.2	2.7	3	25.8	
27		3.8	2.6	3.5	6	5.5	4.5	4.7	6.1	5.7	7.7	13.5	13.5	9.1	9.6	5.7	9.9	8.2	12.2	4.9	10.4	11.6	9.8	4.2	4.3	13.5	
28		3.3	2.8	2.9	4.5	3.1	2.6	4.1	8	9.1	11.2	11.8	14.4	12	14	15.8	18.7	19.9	18.2	12.4	8.9	6.3	5.7	2.6	3.1	19.9	
29		5.9	5.2	2.3	3.2	3.9	3.7	3.7	9.3	10.6	10.5	11.8	12	13.1	10.3	11.4	10.9	10.3	8.6	6.8	4.5	3.3	2.9	3.7	2	13.1	
30		3.4	3.3	2.8	3.9	3	5.5	7.8	7.9	4	3.5	10.4	9.5	8.6	10.3	7.8	38.6	6.2	7	8.7	9.5	5.1	4.3	4.7	5.8	38.6	
31		6.1	4	4.5	3.4	4.4	2.9	5	4.6	7.3	8.5	10.3	12.7	9.1	13.2	14.1	17.7	11.4	10	8.3	3.5	2.1	1.8	2.8	1.9	17.7	
PEAK		21.8	21.2	22.1	20.4	20.2	21.6	22.6	24.2	22.8	26.6	26.3	29.3	28.6	27.5	27.8	38.6	22.2	20.0	18.3	20.7	17.2	19.6	46.4	24.5		

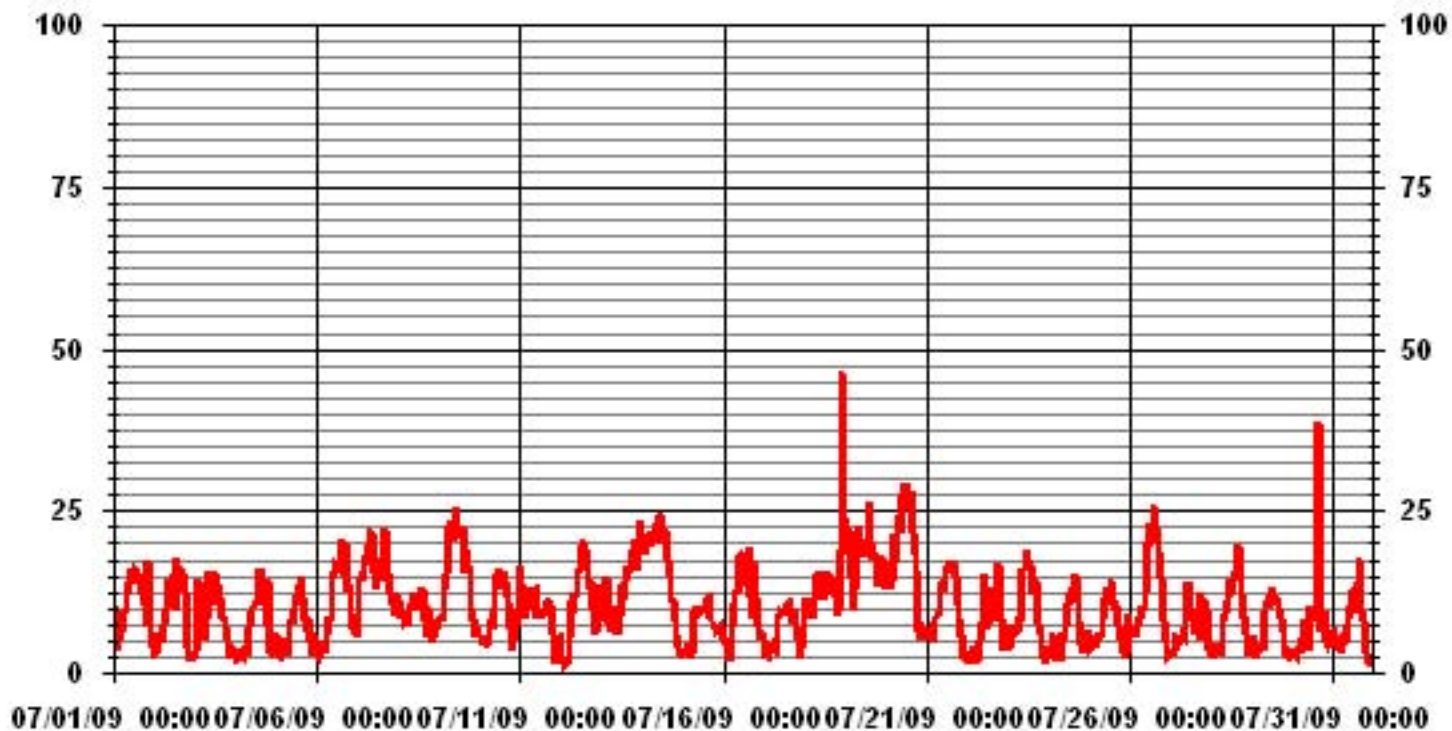
STATUS FLAG CODES

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

MONTHLY SUMMARY

MAXIMUM INSTANTANEOUS READING	46.4	KPH	@ HOUR(S)	22
			ON DAY(S)	18

### 01 Hour Averages



— LICA WSMAX KPH

LICA  
WSP / WD Joint Frequency Distribution (Percent)

July 2009

Distribution By % Of Samples

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

Wind Parameter : WD  
Instrument Height : 10 Meters

Limit	Direction																Freq
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
< 6.0	1.61	2.68	1.47	2.41	2.82	4.43	4.97	2.01	4.16	3.89	8.19	9.40	3.49	3.09	2.55	1.34	58.60
< 12.0	1.88	.80	.53	.53	2.41	2.28	3.76	.53	.13	.13	2.28	2.95	4.83	2.28	2.41	3.09	30.91
< 20.0	.13	.00	.00	.00	.80	.00	.00	.00	.00	.00	.00	.13	.80	.40	2.41	2.28	6.98
< 29.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.13	.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	3.62	3.49	2.01	2.95	6.04	6.72	8.73	2.55	4.30	4.03	10.48	12.50	9.13	5.77	7.52	6.72	

Calm : 3.36 %

Total # Operational Hours : 744

Distribution By Samples

Limit	Direction																Freq
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
< 6.0	12	20	11	18	21	33	37	15	31	29	61	70	26	23	19	10	436
< 12.0	14	6	4	4	18	17	28	4	1	1	17	22	36	17	18	23	230
< 20.0	1				6							1	6	3	18	17	52
< 29.0															1		1
< 39.0																	
>= 39.0																	
Totals	27	26	15	22	45	50	65	19	32	30	78	93	68	43	56	50	

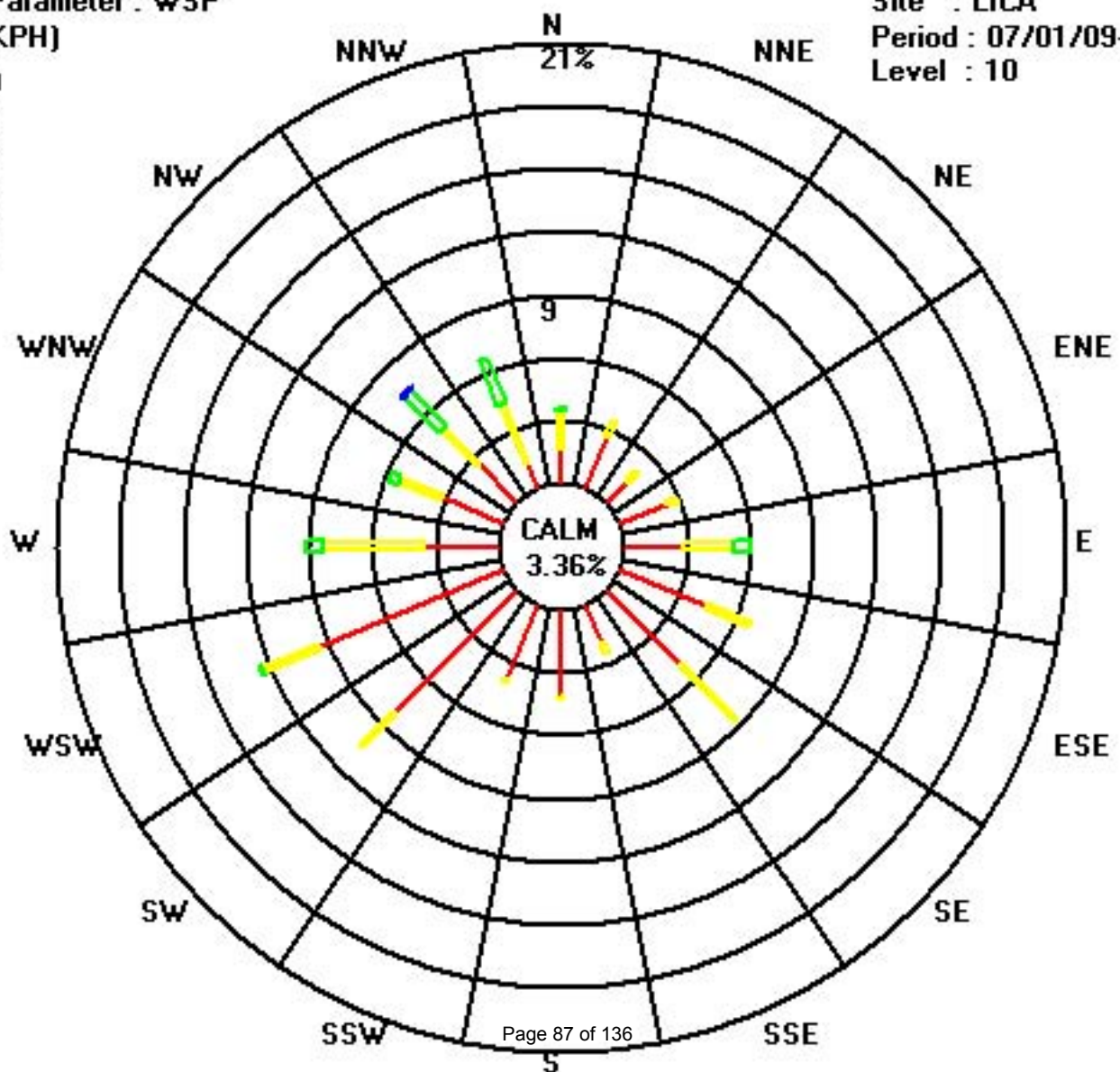
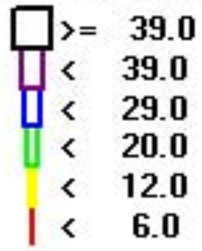
Calm : 3.36 %

Total # Operational Hours : 744

Class Limits (KPH)

Period : 07/01/09-07/31/09

Level : 10



# Vector Wind Direction



# LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - COLD LAKE

JULY 2009

## 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	246	170	181	243	232	229	231	236	253	248	241	246	242	234	235	234	236	229	210	204	300	293	161	205	239	WSW	24	
2	249	245	231	233	233	234	237	250	247	257	267	263	281	267	252	268	272	287	302	272	171	176	136	161	258	WSW	24	
3	20	171	254	242	202	67	324	313	310	344	334	332	328	340	350	6	27	33	36	68	228	192	216	244	332	NNW	24	
4	204	116	242	137	94	175	283	290	236	249	231	232	229	221	229	231	230	313	18	312	177	237	252	257	240	WSW	24	
5	244	223	134	226	180	218	242	298	94	270	261	251	229	234	259	258	260	297	125	123	149	84	139	130	227	SW	24	
6	235	116	67	227	209	71	59	94	109	119	109	105	96	99	115	93	86	103	105	95	70	73	68	64	97	E	24	
7	67	81	89	83	83	83	89	90	91	89	110	87	78	73	72	69	80	84	84	86	86	93	90	84	97	E	24	
8	120	76	98	92	83	77	110	121	109	109	118	22	356	48	109	246	247	310	67	22	26	28	12	322	76	ENE	24	
9	346	339	333	326	328	332	345	335	334	332	318	327	326	322	323	317	318	320	316	308	297	261	254	251	323	NW	24	
10	248	234	240	240	231	223	230	245	243	261	249	257	256	244	244	233	227	224	220	157	139	132	129	40	236	SW	24	
11	17	71	48	105	116	106	105	104	120	114	91	45	357	4	240	239	216	235	226	231	211	162	198	209	121	ESE	24	
12	159	118	92	93	107	121	130	145	161	178	145	144	140	138	145	136	138	138	136	133	121	93	126	127	137	SE	24	
13	125	126	158	126	133	142	122	127	191	261	262	271	288	304	331	302	322	329	335	332	331	338	343	336	329	NNW	24	
14	335	349	353	345	326	329	327	325	316	313	312	324	321	318	324	327	356	24	352	343	324	186	202	184	329	NNW	24	
15	119	110	223	248	120	16	107	131	135	120	101	106	124	243	183	161	193	194	183	137	138	138	136	132	140	SE	24	
16	140	129	137	1	79	112	128	138	135	138	136	141	148	177	162	156	163	187	193	204	193	201	213	242	155	SSE	24	
17	265	152	143	142	225	337	245	276	22	23	27	16	128	160	104	106	73	125	126	136	100	105	45	100	91	E	24	
18	120	123	125	115	118	116	124	132	134	135	135	189	178	141	155	128	120	94	80	97	126	8	339	14	115	ESE	24	
19	234	313	330	235	248	248	250	263	269	279	267	267	269	255	278	260	262	259	263	262	260	274	269	286	266	W	24	
20	282	268	265	261	279	293	285	291	290	298	308	308	312	304	305	299	307	300	302	278	258	243	245	233	293	WNW	24	
21	240	246	240	232	225	237	236	248	255	253	259	267	265	261	266	264	267	265	264	254	216	171	72	157	255	WSW	24	
22	110	220	149	191	194	81	280	288	226	223	230	288	184	221	224	239	255	268	282	280	323	256	241	232	246	WSW	24	
23	248	244	239	239	251	245	248	273	299	305	307	302	305	318	308	280	300	292	297	298	118	184	101	199	288	WNW	24	
24	99	218	219	59	155	236	208	246	244	177	186	206	196	218	229	221	271	294	289	193	188	230	215	244	232	SW	24	
25	247	173	225	245	253	251	236	245	326	349	355	359	335	272	299	106	277	254	245	185	192	63	235	13	289	WNW	24	
26	28	116	97	21	16	18	348	3	342	323	326	336	340	334	330	331	332	340	352	356	352	326	212	190	342	NNW	24	
27	192	186	206	238	231	232	236	257	262	253	277	298	330	6	32	68	72	44	9	45	51	353	67	335	348	NNW	24	
28	247	272	203	265	234	303	314	340	4	16	31	25	357	359	336	335	339	336	7	350	325	321	41	261	347	NNW	24	
29	321	251	37	329	217	228	293	35	34	12	27	46	47	87	123	116	129	147	138	139	133	172	205	149	79	ENE	24	
30	191	231	206	240	238	229	236	271	188	183	241	271	271	308	276	9	302	285	319	352	339	303	321	325	286	WNW	24	
31	307	272	252	254	237	219	296	311	181	346	288	300	285	262	254	264	274	246	262	229	141	129	187	240	271	W	24	
HOURLY AVG	346	349	353	345	328	337	348	340	342	349	355	359	357	359	350	335	356	340	352	356	352	353	343	336				

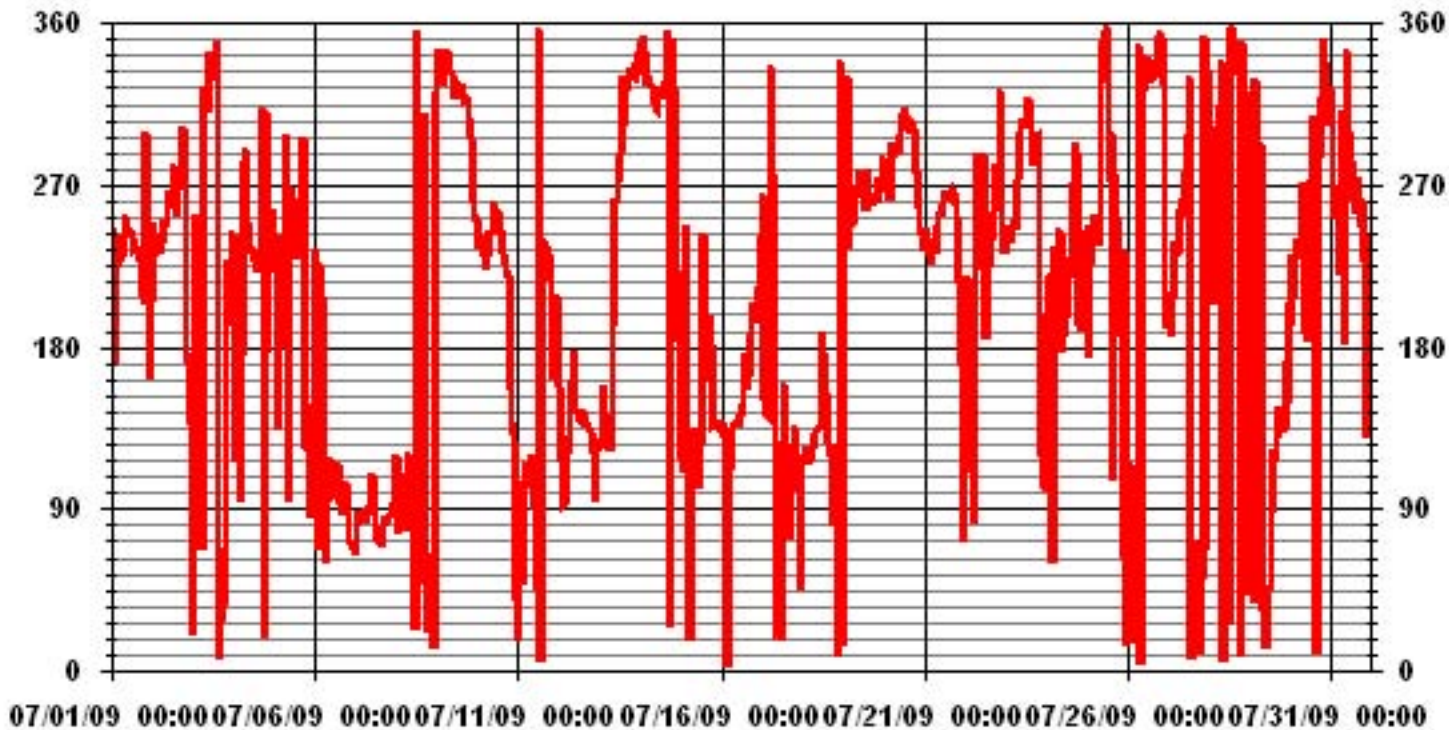
### STATUS FLAG CODES

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	93.31	AMD OPERATION UPTIME	100.0 %
		MONTHLY AVERAGE	292 DEG

### 01 Hour Averages



— LICA WDR DEG

# Standard Deviation Wind Direction

# LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - COLD LAKE

JULY 2009

## 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	27	37	15	14	18	21	26	26	26	30	26	29	26	27	35	27	24	33	21	23	45	38	36
2	42	32	15	11	14	17	21	30	26	29	28	32	43	36	29	26	25	25	19	17	26	45	55	70
3	58	44	25	20	51	42	13	28	21	23	18	17	18	20	28	26	39	23	24	32	72	38	52	63
4	47	65	50	47	39	57	43	53	76	51	47	48	40	25	25	25	26	25	21	44	37	52	40	25
5	37	50	53	65	55	26	41	62	73	62	56	46	49	33	32	28	31	34	20	22	17	37	18	51
6	45	48	54	51	52	76	37	28	30	26	26	26	26	24	24	25	25	22	22	20	18	18	16	15
7	15	18	18	18	19	18	20	21	21	20	22	21	21	21	20	21	19	18	19	17	18	20	21	21
8	19	20	21	19	23	21	23	19	25	26	22	39	29	23	22	46	20	57	40	25	20	22	26	17
9	18	17	16	17	16	18	20	19	18	18	18	18	22	14	16	16	16	18	16	13	11	13	12	13
10	18	11	13	13	47	56	23	30	33	29	27	30	30	33	33	28	27	22	25	28	26	15	18	47
11	22	23	21	20	18	23	24	25	25	45	60	58	60	49	60	44	42	28	24	19	29	39	29	20
12	26	50	53	31	25	16	19	34	42	38	35	32	29	24	37	22	25	24	20	13	15	19	15	13
13	13	15	63	36	61	59	18	21	43	36	34	55	24	28	29	25	20	18	23	16	17	18	18	17
14	18	19	19	20	16	16	18	20	17	16	16	18	16	17	18	18	27	26	22	17	29	54	41	54
15	59	45	78	69	64	58	46	28	26	48	70	48	56	67	49	62	60	48	28	10	11	9	14	11
16	27	19	45	67	39	51	17	25	22	24	23	27	35	41	40	37	37	35	32	32	38	33	42	45
17	61	63	52	79	36	55	51	37	47	28	31	51	38	52	51	27	25	20	18	8	39	39	32	22
18	16	15	15	19	19	19	15	14	44	43	30	34	27	29	43	17	21	23	22	20	31	27	38	21
19	49	43	21	45	19	16	19	21	21	24	21	23	28	20	21	19	20	19	21	19	19	22	20	19
20	19	20	20	19	19	18	20	19	20	18	16	17	18	18	16	19	18	18	16	16	13	8	10	8
21	12	11	22	50	11	16	20	21	21	23	24	26	26	24	25	22	24	21	19	16	29	16	51	31
22	21	45	48	77	35	42	48	52	41	25	23	67	46	34	30	23	21	20	19	16	31	31	41	22
23	14	13	12	12	17	15	16	27	18	21	29	25	26	23	18	28	27	17	16	38	50	39	65	46
24	68	69	49	45	64	52	37	54	59	70	63	52	39	32	32	27	25	21	20	30	14	13	35	12
25	29	46	16	12	18	12	21	26	41	25	37	55	55	35	44	37	44	31	26	24	35	58	45	38
26	27	40	36	27	30	24	20	23	18	22	29	23	23	20	20	20	19	20	27	19	17	35	34	49
27	34	41	30	29	18	14	25	29	51	62	31	44	51	48	37	22	19	20	24	18	20	45	32	44
28	42	33	54	54	32	17	26	19	32	25	28	37	40	32	27	25	23	18	21	17	12	27	65	40
29	19	60	37	36	25	15	48	22	27	39	40	43	42	42	39	50	34	29	15	23	44	59	59	49
30	38	43	30	31	23	22	19	35	63	42	32	36	24	47	46	36	27	22	17	19	43	44	21	13
31	15	18	18	53	16	23	20	56	71	49	49	51	33	27	24	32	27	31	27	26	30	41	66	87

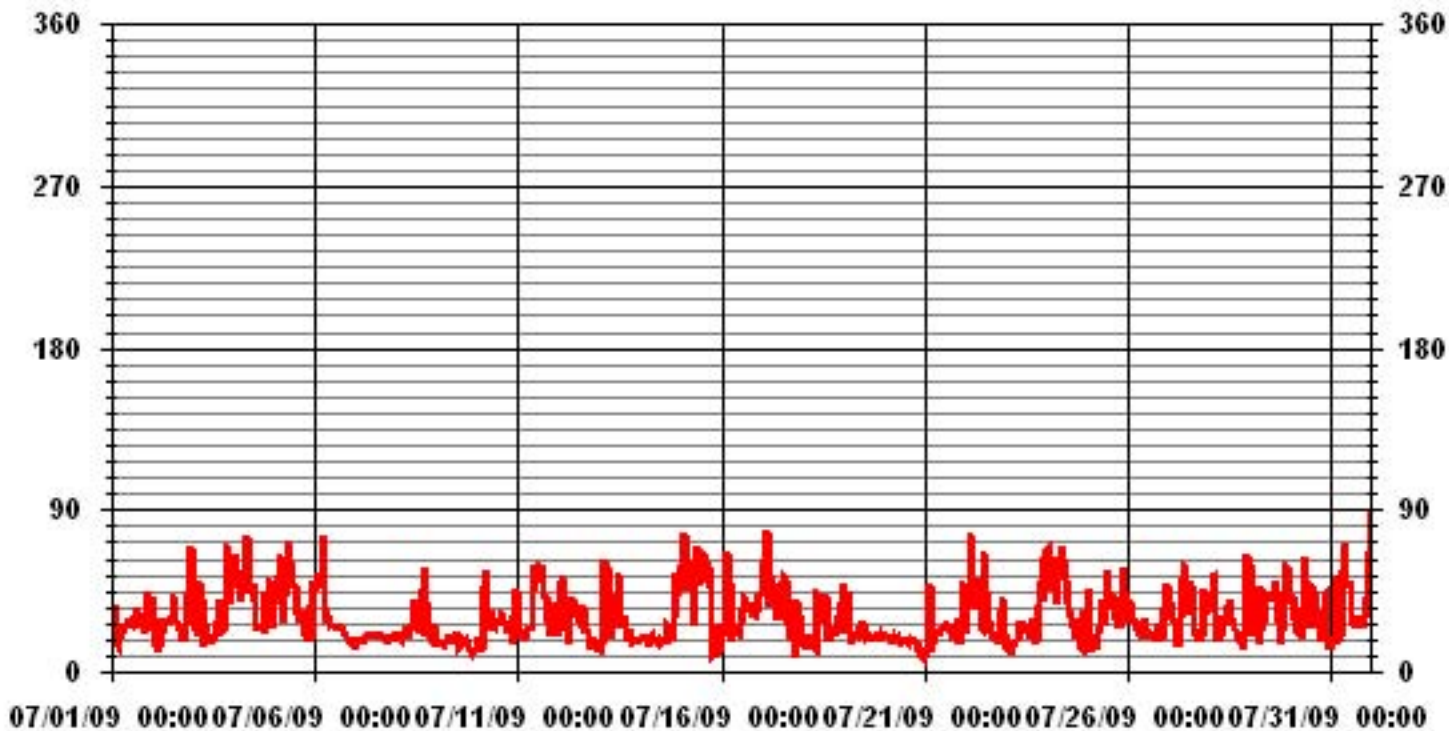
**STATUS FLAG CODES**

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



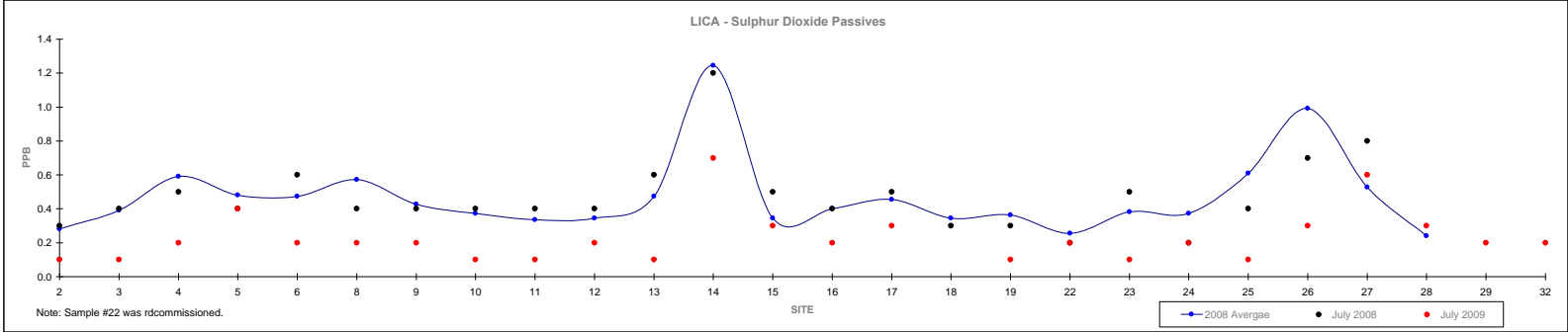
— LICA STDWDIR DEG

# Non-Continuous Monitoring

### Passive Summary Results for July 2009

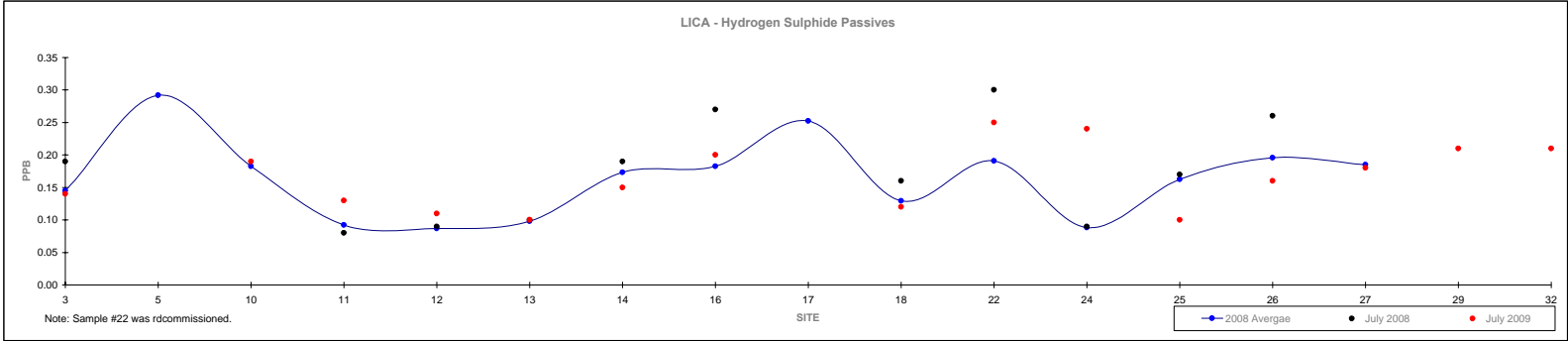
Lakeland Industry & Community Association

	Sulphur Dioxide ppb																													July 2009	Site
	2	3	4	5	6	8	9	10	11	12	13	14	15	16	17	18	19	22	23	24	25	26	27	28	29	Reading	Site				
Mean	0.3	0.4	0.6	0.5	0.5	0.6	0.4	0.4	0.3	0.3	0.5	1.2	0.3	0.4	0.5	0.3	0.4	0.4	0.3	0.4	0.4	0.6	1.0	0.5	0.2	0.2	-				
Minimum	0.1	0.1	0.2	0.3	0.2	0.3	0.1	0.1	0.1	0.1	0.1	0.7	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.4	0.6	0.3	0.1	<0.1	#11, #23				
Maximum	0.3	0.4	0.5	0.4	0.6	1.4	1.3	1.1	1.0	1.0	1.3	2.1	1.0	1.3	1.2	1.2	1.2	0.8	0.8	1.1	1.3	1.3	1.9	1.1	0.5	0.7	#14				



### Passive Summary Results for July 2009 Lakeland Industry & Community Association

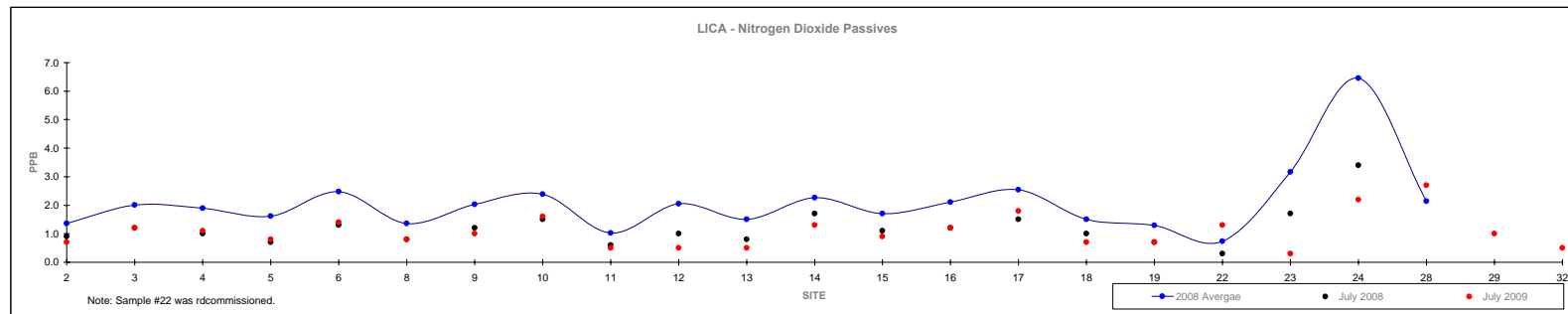
	Hydrogen Sulphide ppb															July 2009		
	3	5	10	11	12	13	14	16	17	18	22	24	25	26	27	29	Reading	Site
<b>Mean</b>	0.1	0.3	0.2	0.1	0.1	0.1	0.2	0.2	0.3	0.1	0.2	0.2	0.1	0.2	0.2	0.2	0.23	-
<b>Minimum</b>	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.10	#25
<b>Maximum</b>	0.3	1.0	0.5	0.2	0.2	0.2	0.3	0.4	0.5	0.2	0.3	0.4	0.2	0.3	0.3	0.3	0.80	#5





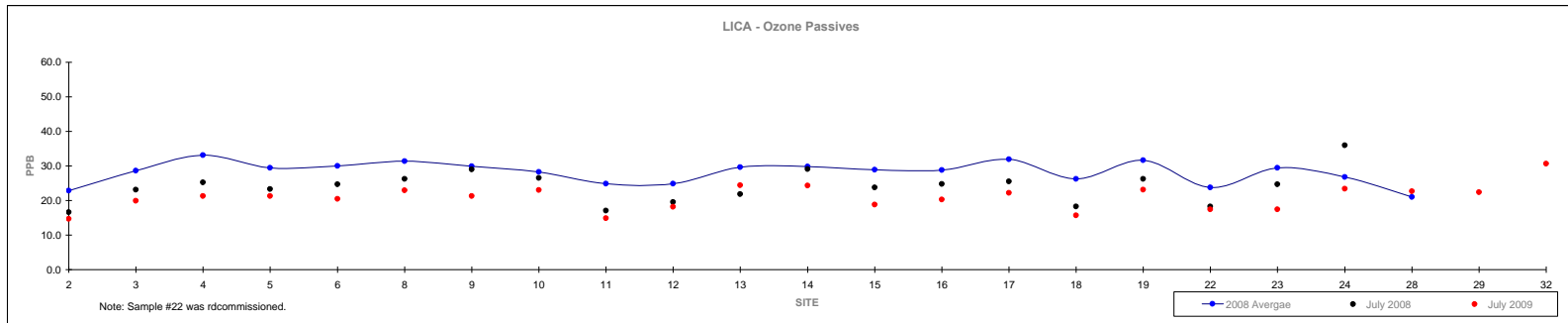
### Passive Summary Results for July 2009 Lakeland Industry & Community Association

	Nitrogen Dioxide ppb																													July 2009	
	2	3	4	5	6	8	9	10	11	12	13	14	15	16	17	18	19	22	23	24	28	29	Reading	Site							
<b>Mean</b>	1.4	2.0	1.9	1.6	2.5	1.4	2.0	2.4	1.0	2.0	1.5	2.3	1.7	2.1	2.5	1.5	1.3	2.8	0.7	3.2	6.5	2.1	1.1	-							
<b>Minimum</b>	0.5	0.9	0.4	0.6	1.2	0.6	1.0	1.1	0.3	0.9	0.5	1.1	0.8	1.1	0.9	0.8	0.4	0.9	0.2	1.7	3.1	1.2	0.3	#23							
<b>Maximum</b>	2.9	4.3	4.8	4.3	4.8	2.9	4.4	5.5	2.3	6.0	3.4	3.8	4.4	4.4	5.1	3.2	3.2	6.8	2.8	6.6	13.2	3.5	2.7	#28							



### Passive Summary Results for July 2009 Lakeland Industry & Community Association

	1	2	3	4	5	7	8	9	10	11	2008 12	13	14	15	16	17	18	19	20	21	25	26	July 2009 Reading	Site
<b>Mean</b>	22.9	28.6	33.1	29.5	30.0	31.4	29.9	28.3	24.9	24.9	29.6	29.8	28.9	28.8	32.0	26.2	31.7	26.2	23.8	29.5	26.8	21.0	20.9	-
<b>Minimum</b>	12.8	17.8	20.8	17.8	18.2	18.5	19.3	16.3	12.6	14.1	17.2	17.8	16.9	18.8	16.6	13.7	20.9	15.7	13.4	17.7	15.5	17.7	14.7	#2
<b>Maximum</b>	39.1	47.6	54.5	46.9	47.6	47.2	45.4	44.3	40.1	41.9	48.2	43.9	50.3	47.7	52.9	45.4	46.8	40.4	36.9	51.1	45.9	26.8	30.6	#2 #32



# Calibration Reports

## Cold Lake

# Sulphur Dioxide

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

#### Station Information

Calibration Date	July 13, 2009	Previous Calibration	June 4, 2009
Company	Lakeland Community and Industry Association		
Plant / Location	LICA 1 - Cold Lake South		
Start Time (MST)	10:35	End Time (MST)	14:13
Reason:	Monthly Calibration		
Barometric Pressure	710 mmHg	Station Temperature	22 Deg C
Cal Gas	52.2 ppm	Cal Gas Expiry date	12/19/2010
DAS Output Voltage	0 - 10 Volts		

#### Equipment Information

Analyzer Make / Model:	Thermon 43i	S/N :	806528242	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 :	263		
Flow Meter:	API 700	S/N :	831		

#### Analyzer Settings

Before Calibration		After Calibration	
Concentration Range	0 - 500 ppb		
Sample Flow / Box Temp	446 ccm, 27.7 Deg C	444 ccm, 27.6 Deg C	
HVPS / Lamp Setting	-631, 747	-631, 747	
PMT / RxCell Temp	OK Deg C, 44.9 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, 1.049	5, 1.032	

#### Calibration Data

Dilution Flow Rate	Source Gas Flow Rate	Calculated Concentration	Indicated Conc. (DAS)	Correction Factor
4999	0	0	0	N/A
4962	38.3	400	405	0.9872
4962	38.3	400	402	0.9946
4974	23.9	250	250	0.9985
4998	0	0	0	N/A
Sum of Least Squares				0.5770
New Correction Factor				0.9872

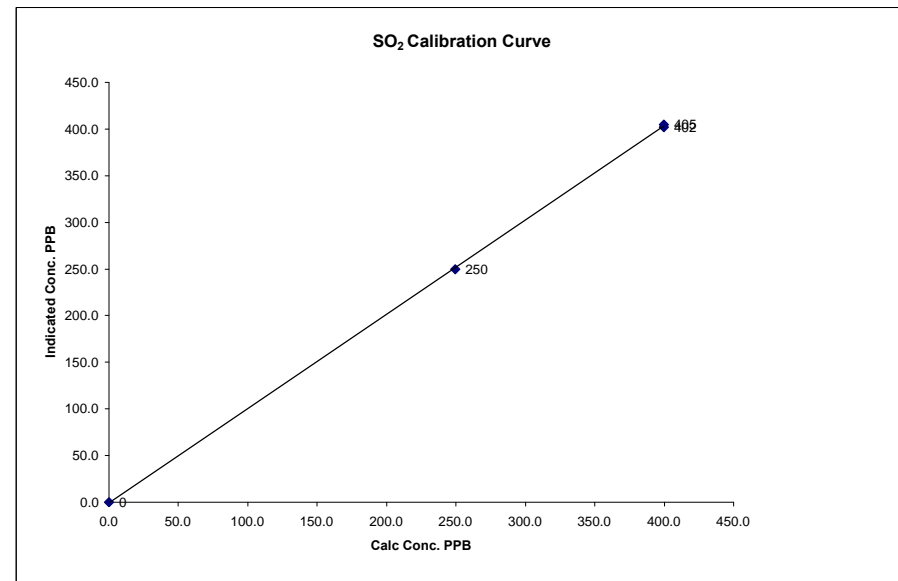
	Before Calibration	After Calibration
Auto Zero	-0.1	0.0
Auto Span	390.0	386.0
Sample Lines Connected		YES
Percent Change from Previous Calibration		0.5%

Calibration Performed by: Shea Beaton

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

Calibration Date	July 13, 2009
Company	Lakeland Community and Industry Association
Plant / Location	LICA 1 - Cold Lake South
Start Time (MST)	10:35
End Time (MST)	14:13

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	0.999933	1.009411
250	250	0.9985		-0.538016
400	402	0.9946		
400	405	0.9872		



Notes:

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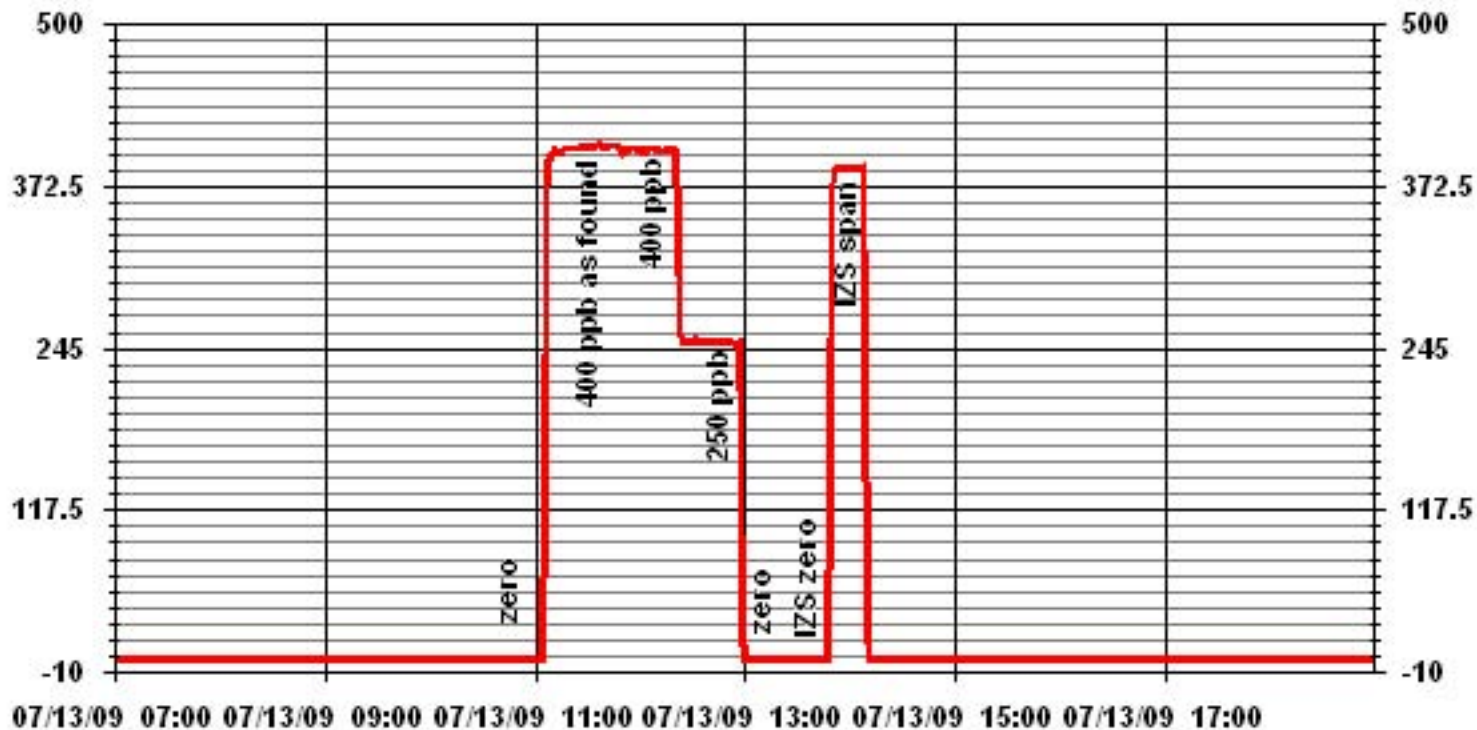


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### 01 Minute Averages



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

#### Station Information

Calibration Date	July 14, 2009	Previous Calibration	June 4, 2009
Company	Lakeland Community and Industry Association		
Plant / Location	LICA 1 - Cold Lake South		
Start Time (MST)	6:58	End Time (MST)	10:30
Reason:	Re-Calibration		
Barometric Pressure	710 mmHg	Station Temperature	22 Deg C
Cal Gas	52.2 ppm	Cal Gas Expiry date	12/19/2010
DAS Output Voltage	0 - 10 Volts		

#### Equipment Information

Analyzer Make / Model:	Thermon 43i	S/N :	806528242	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 :	263		
Flow Meter:	API 700	S/N :	831		

#### Analyzer Settings

Before Calibration				After Calibration			
Concentration Range	0 - 500			ppb			
Sample Flow / Box Temp	447 ccm	28.3 Deg C		448 ccm	29.1 Deg C		
HVPS / Lamp Setting	-631	748		-631	746		
PMT / RxCell Temp	OK Deg C	45.0 Deg C		OK Deg C	44.9 Deg C		
Converter / IZS Temp	NA Deg C	45.0 Deg C		NA Deg C	45.0 Deg C		
Offset / Slope	5	1.049		5	1.041		

#### Calibration Data

Dilution Flow Rate	Source Gas Flow Rate	Calculated Concentration	Indicated Conc. (DAS)	Correction Factor
	0	0	0	N/A
4962	38.3	400	395	1.0122
4962	38.3	400	400	0.9996
4974	23.9	250	249	1.0025
4983	14.4	150	149	1.0095
4998	0	0	0	N/A
Sum of Least Squares				1.0012
New Correction Factor				0.9996

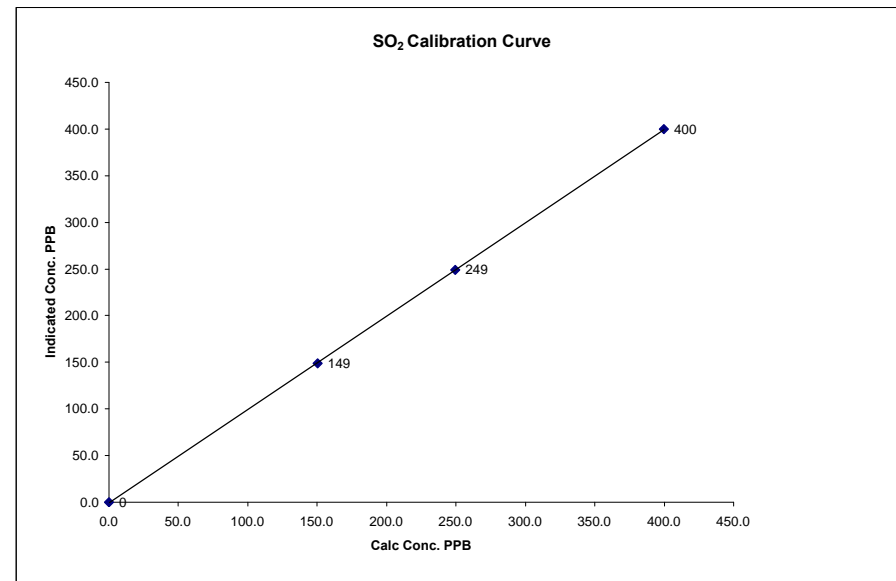
	Before Calibration	After Calibration
Auto Zero	0.1	0.1
Auto Span	385.0	388.0
Sample Lines Connected		YES
Percent Change from Previous Calibration		-1.7%

Calibration Performed by: Shea Beaton

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

Calibration Date	July 14, 2009
Company	Lakeland Community and Industry Association
Plant / Location	LICA 1 - Cold Lake South
Start Time (MST)	6:58
End Time (MST)	10:30

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	0.999983	1.000868
150	149	1.0095		-0.639269
250	249	1.0025		
400	400	0.9996		



Notes:

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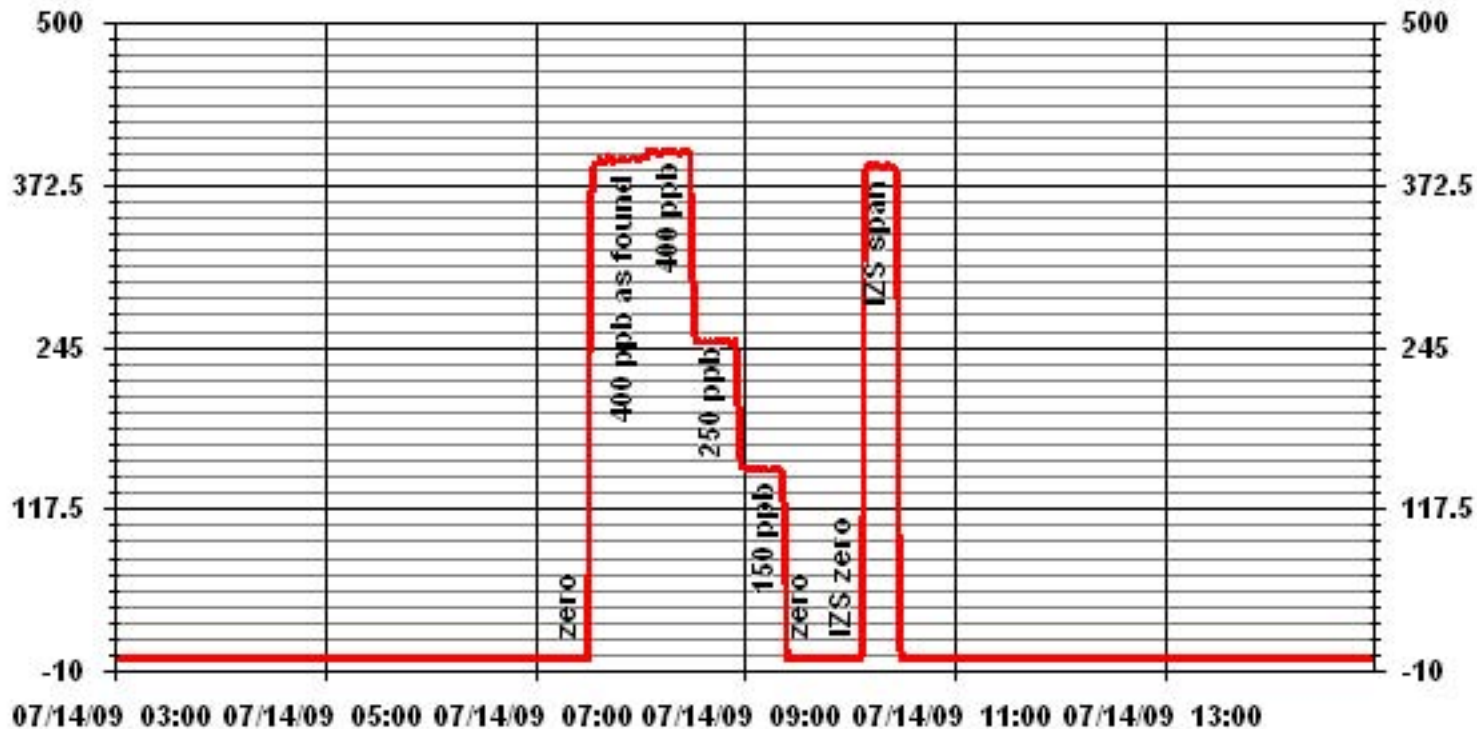


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### 01 Minute Averages



— LICA SO2\_ PPB



# Total Reduced Sulphur

**TRS Calibration Report  
Station Information**

Calibration Date	July 13, 2009	Previous Calibration	June 4, 2009
Company	Lakeland Industry & Community Association		
Plant / Location	LICA 1 - Cold Lake South		
Start Time (MST)	10:52	End Time (MST)	11:25
Reason:	Monthly Calibration		
Barometric Pressure	710 mm Hg	Station Temperature	23 Deg C
Cal Gas	10.6 ppm	Cal Gas Expiry date	April 3, 2009
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 :	263		
Flow Meter:	API 700	S/N :	831		

**Analyzer Settings**

Before Calibration				After Calibration			
Concentration Range	0 - 100 ppb						
Sample Flow / Box Temp	364 ccm	30.9 Deg C		360 ccm	31.4 Deg C		
HVPS / Lamp Setting	-622.7	754		-622.7	759		
PMT / RxCell Temp	OK Deg C	45.0 Deg C		OK Deg C	45.1 Deg C		
Converter / IZS Temp	850 Deg C	45.0 Deg C		849 Deg C	45.0 Deg C		
Offset / Slope	11.5	1.196		11.7	1.222		

**Calibration Data**

Dilution Flow Rate	Source Gas Flow Rate	Calculated Concentration	Indicated Conc. (DAS)	Correction Factor
4999	0	0	0	N/A
4962	37.7	80	78	1.0247
4962	37.7	80	81	0.9868
4979	21.2	45	45	0.9987
4988	11.8	25	25	1.0007
4999	0	0	0	N/A
Sum of Least Squares				0.9904
New Correction Factor				0.9868

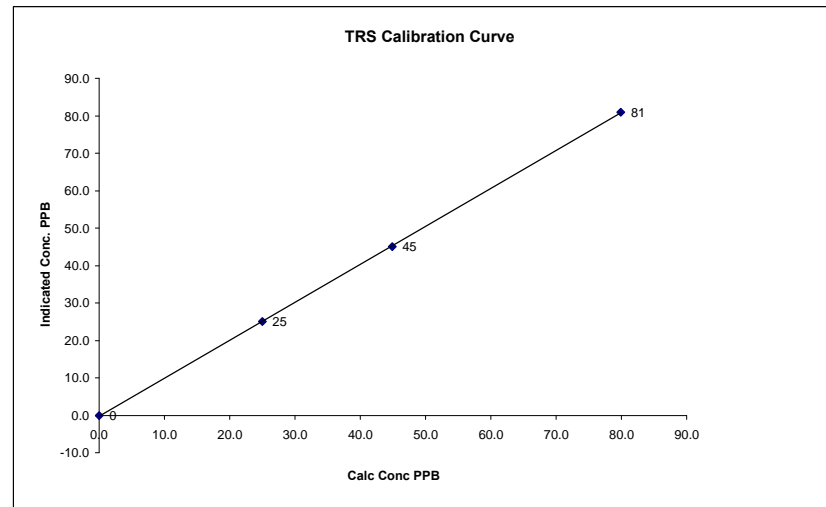
	Before Calibration	After Calibration
Auto Zero	-0.2	0.0
Auto Span	41.0	43.0
Sample Lines Connected		YES
Percent Change from Previous Calibration		-2.5%

Calibration Performed by: Shea Beaton

**TRS Calibration Curve**

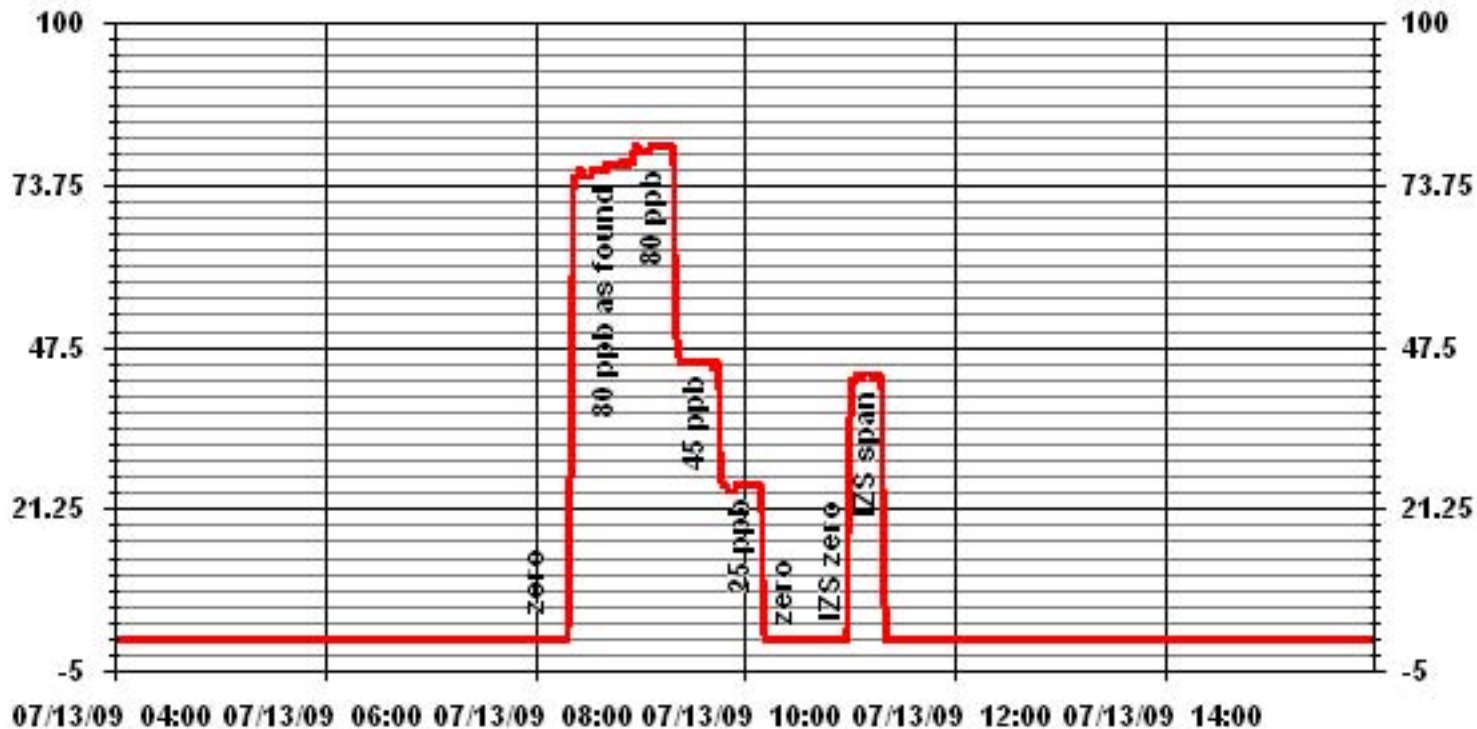
Calibration Date	July 13, 2009
Company	Lakeland Industry & Community Association
Plant / Location	LICA 1 - Cold Lake South
Start Time (MST)	10:52
End Time (MST)	11:25

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.)	0.999937
25	25	1.0007			1.013496
45	45	0.9987			-0.227707
80	81	0.9868			



Notes: \_\_\_\_\_  
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### 01 Minute Averages



# Total Hydrocarbons

### THC Calibration Report

#### Station Information

Calibration Date:	July 13, 2009	Previous Calibration	June 4, 2009
Company:	Lakeland Industry and Community Association		
Plant / Location:	LICA1/Cold Lake		
Start Time (MST)	13:30	End Time (MST)	17:10
Reason:	Monthly Calibration		
Barometric Pressure:	710 mmHg	Station Temperature:	22 Deg C
Calibrator:	API 700	S/N:	831
Cal Gas Concentration:	299Prop/1019Meth	ppm	Cal Gas Expiry Date: 8/11/2011
DAS make & Model:	ESC 8832	S/N :	263
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	6.9 psi	6.9 psi
Hydrogen Pressure	8 psi	8 psi
Air Pressure	19.5 psi	19.5 psi

#### Calibration Data

Dilution Flow	Source Gas Flow	Calculated Concentration	Indicated Concentration	Correction Factor	
3020	0	0.0	0.0	N/A	
3022	66.5	39.6	39.1	1.0139	
3022	66.5	39.6	39.6	1.0011	
3026	35.8	21.5	21.1	1.0203	
3017	20.4	12.4	12.0	1.0305	
3004	0	0.0	0.0	N/A	
				Correction Factor:	1.0011

#### Percent Change

Previous Calibration Correction Factor:	0.9975
Current Correction Factor Before Span Adjust:	1.0139
Percent Change:	-1.6%

#### IZS Calibration Data

	Before Calibration	After Calibration
Auto Zero	0.0	0.0
Auto Span	35.0	35.2
Sample Lines Connected		YES

#### Cylinder Pressures

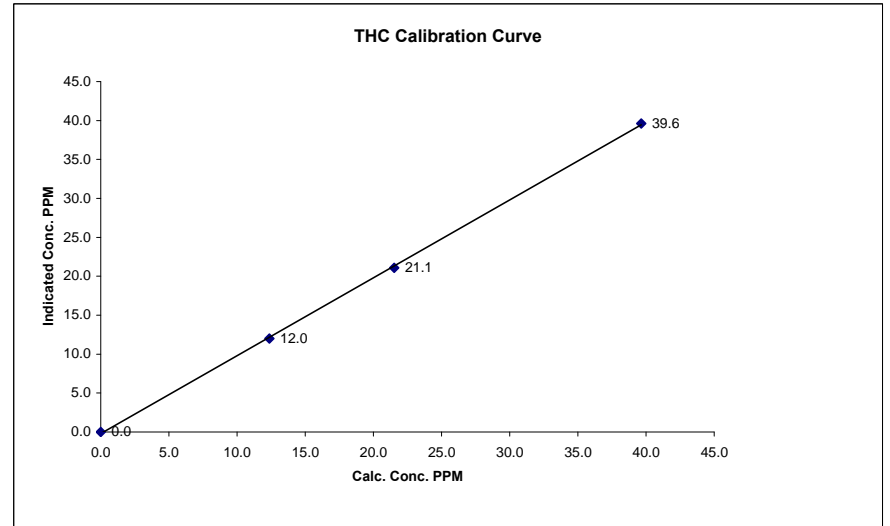
Span	200 psi
Hydrogen	550 psi
Zero Air	unlimited psi Maxxam-owned API 701 zero air supply with catalytic oxidizer

Calibration Performed by: Shea Beaton

### THC Calibration Curve

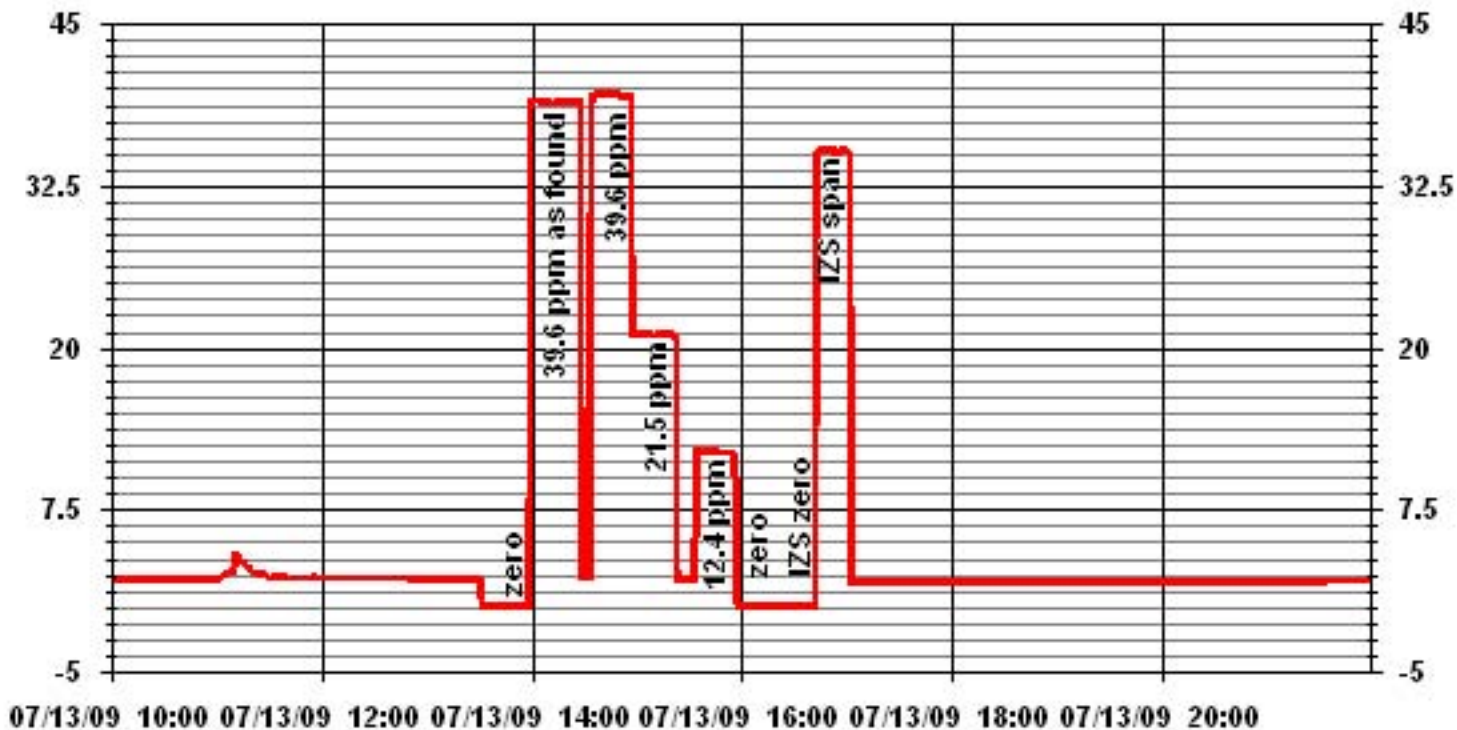
Calibration Date	July 13, 2009
Company	Lakeland Industry and Community Association
Plant / Location	LICA1/Cold Lake
Start Time (MST)	13:30
End Time (MST)	17:10

Calculated Conc. ppm	Indicated Response ppm	Correction Factor	Correlation Coefficient Slope	(≥ 0.995)	0.999828
0.0	0.0		Intercept	(± 3% F.S.)	-0.207861
12.4	12.0	1.0305			
21.5	21.1	1.0203			
39.6	39.6	1.0011			



Notes:

### 01 Minute Averages



# Particulate Matter 2.5

# TEOM® 1405F Audit

	<b><u>Station</u></b>		<b><u>Audit Transfer Standard</u></b>
Date:	July 13, 2009	Make/Model:	Bios DC2
Station Name:	LICA 1	Serial Number:	1193
Location:	Cold Lake South	Cell s/n:	2272
Operator:	LICA	Thermometer s/n:	2178

	<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 (%)	44%
Firmware Ver.	1.22	K <sub>o</sub> Factor	14578.0
Parameter	PM 2.5 (with FDMS)	Temp (°C)	19.4
		Press (ATM)	0.929

### 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>	0.008	Warnings	None
Pump Vacuum	0.35		
<b>Temperature/Pressure</b>			
Measured Temp ( <b>± 2 °C</b> )	19.4	<b>Δ °C</b>	0.0
Measured Press ( <b>± 0.01atm</b> )	0.934	<b>ΔATM</b>	-0.005
<b>Flow Audit</b>			
Indicated Main Flow (l/min)	3.00	Main Flow Drift ( <b>±10.0%</b> )	4.78%
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> )	4.29%
Measured Bypass Flow (l/min)	13.64	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; 0.15 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:** 10:05                      **Finish Time:** 11:45

**Sample Inlet Cleaned:** Yes                      **New Filters Installed:** NO  
**New Filter Loading %:** 28.3%

**Comments:** Flows were adjusted to the audit values, inlet was cleaned, both the Teom and FDMS filters were replaced. Allowed some time for the unit to stabilize.

**Auditor/s:** Shea Beaton



# Nitrogen Dioxide

### NOx - NO- NO2 Calibration Report

#### Station Information

Calibration Date	0713/2009		Previous Calibration	June 4, 2009	
Company	Lakeland Ind & Comm. Assoc.		Plant/Location	LICA 1 - Cold Lake South	
Start Time (MST)	7:55	End Time (MST)	14:36		
Reason:	Monthly Calibration				
Barometric Pressure	710 mmHg	Station Temperature	23.0 Deg C		
Cal Gas Concentration	NOx 51.8 ppm	NO 51.6 ppm	Cal Gas Expiry date	12/19/2010	
DAS Output Voltage	0 - 1 Volts	Chart Rec. Output	NA	Volts	

#### Equipment Information

Analyzer Make / Model:	TECO 42C	S/N :	42-7408-716	Method:	Chemiluminescent
Calibrator Make / Model:	EnviroNics 2000	S/N:	1991		
DAS Make / Model:	ESC 8832	S/N :	263		
Flow Meter:	EnviroNics 2000	S/N :	1991		

#### Analyzer Settings

		Before Calibration			After Calibration		
Concentration Range		0 - 1000			ppb		
Sample Flow/Conv. Temp	709 ccm	317 Deg C	708	317	Deg C		
Ozone Flow / Vacuum	OK ccm	184.6 mmHg	OK	183.6	ccm	mmHg	
HVPS	-820	Volts	-821	Volts			
Rx/ Temp / PMT Temp	49.9 Deg C	-2.5 Deg C	49.4	-2.5	Deg C	Deg C	
Box Temp / IZS Temp	27.5 Deg C	OK Deg C	27.3	OK	Deg C	Deg C	
Offset	3.8 NOx	3.6 NO	3.9	3.6	NOx	NO	
Slope	1.005 NOx	0.957 NO	1.005	0.971	NOx	NO	

#### Gas Phase Titration Calibration Data

Dilution Air Flow Rate	Source Flow Rate	O3 Set Point	Calculated Concentration		Indicated Concentration			Correction Factor	
			NOx	NO	NOx	NO	NO2	NOx	NO
5006.0	0.0	N/A	0	0	0	0	0	N/A	N/A
4969.0	38.8	N/A	401	400	395	394	1	1.0161	1.0147
4972.0	38.8	N/A	401	400	401	400	1	1.0003	0.9989
4991.0	24.3	N/A	251	250	251	250	1	0.9999	1.0000
4996.0	14.6	N/A	151	150	150	150	0	1.0062	1.0024
5007.0	0.0	N/A	0	0	0	0	0	N/A	N/A
Converter Efficiency									
4977.0	38.9	N/A	402	400	401	400	1	N/A	
4975.0	38.9	300	402	400	400	136	264	100%	
4974.0	38.9	200	402	400	401	214	187	100%	
4975.0	38.9	100	402	400	402	308	93	100%	
4975.0	38.9	N/A	402	400	402	401	1	N/A	
5012.0	0	N/A	0	0	0	0	0	N/A	N/A

Linearity OK?	Yes	No	Sum of Least Squares	1.0007	0.9995
Flows Checked on-site?	Yes	No	New Correction Factor	1.0003	0.9989
			Average Converter Efficiency	100%	

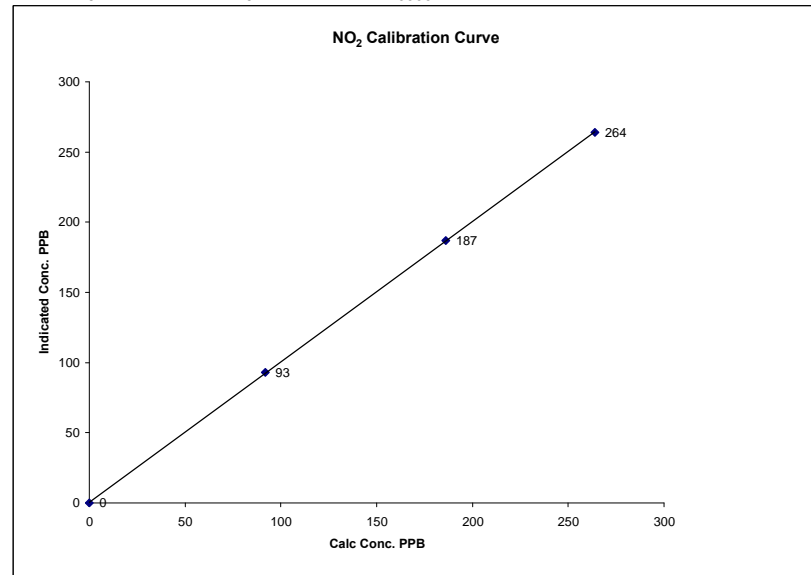
		Before Calibration			After Calibration		
Auto Zero	0.1 NOx	0.2 NO2	0.1 NOx	0.3 NO2			
Auto Span	338.0 NOx	336.0 NO2	351.0 NOx	348.0 NO2			
Sample Lines Connected	YES						
Percent Change from Previous Calibration	NOx	-1.6%	NO	-1.6%			

Calibration Performed by: Shea Beaton

### NO2 Calibration Curve

Calibration Date	0713/2009	
Company	Lakeland Ind & Comm. Assoc.	
Plant / Location	LICA 1 - Cold Lake South	
Start Time (MST)	7:55	End Time (MST) 14:36

Calculated Conc. ppb	Indicated Response ppb	Correction Factor	Correlation Coefficient (≥ 0.995)	
0	0	N/A	Slope (0.85 to 1.15)	0.999975
92	93	0.9892	Intercept (± 3% F.S.)	1.000178
186	187	0.9947		0.47587
264	264	1.0000		

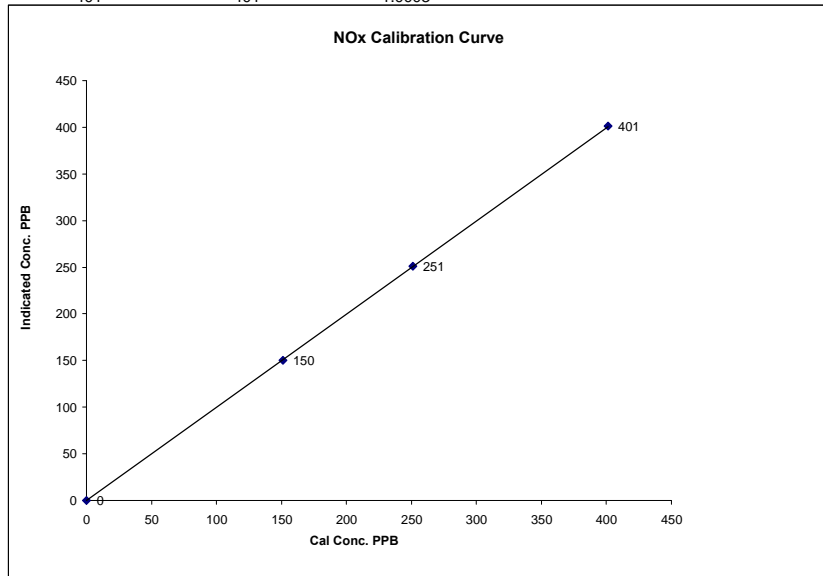


Notes: \_\_\_\_\_  
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### NOx Calibration Curve

Calibration Date 0713/2009  
 Company Lakeland Ind & Comm. Assoc.  
 Plant / Location LICA 1 - Cold Lake South  
 Start Time (MST) 7:55 End Time (MST) 14:36

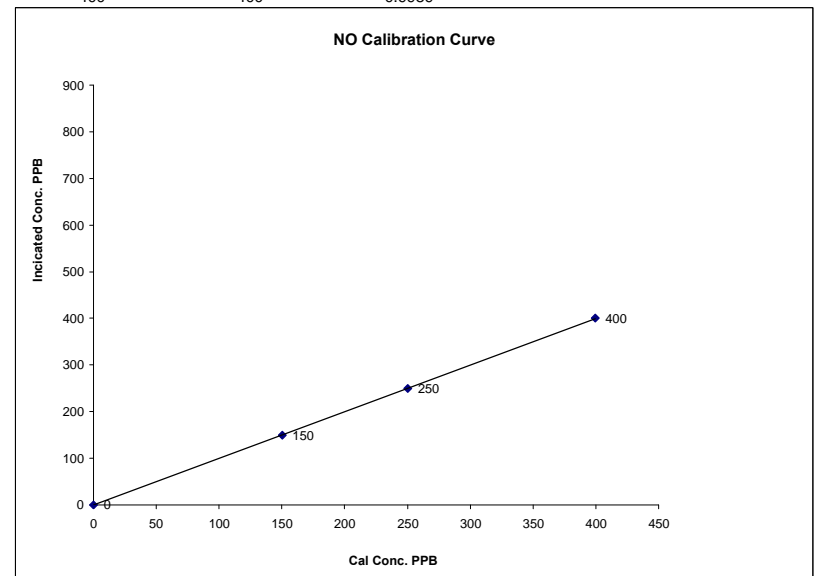
Calculated Conc.	Indicated Response	Correction Factor	Correlation Coefficient	(≥ 0.995)	0.999993
ppb	ppb		Slope	(0.85 to 1.15)	1.000319
0	0	N/A	Intercept	(± 3% F.S.)	-0.31849
151	150	1.0062			
251	251	0.9999			
401	401	1.0003			



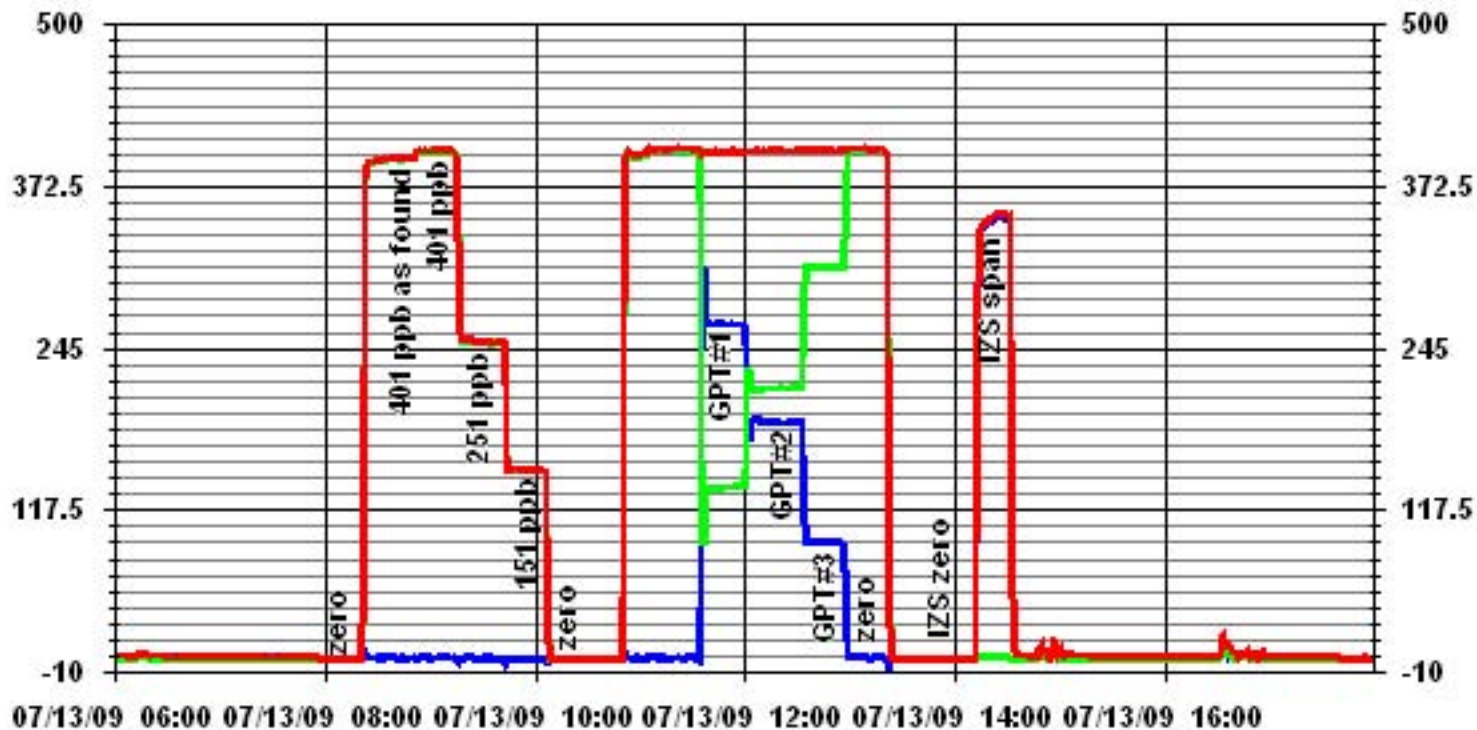
### NO Calibration Curve

Calibration Date 0713/2009  
 Company Lakeland Ind & Comm. Assoc.  
 Plant / Location LICA 1 - Cold Lake South  
 Start Time (MST) 7:55 End Time (MST) 14:36

Calculated Conc.	Indicated Response	Correction Factor	Correlation Coefficient	(≥ 0.995)	0.999998
ppb	ppb		Slope	(0.85 to 1.15)	1.003200
0	0	N/A	Intercept	(± 3% F.S.)	-0.7767
150	150	1.0024			
250	250	1.0000			
400	400	0.9989			



### 01 Minute Averages



— LICA NOx\_ PPB    
 — LICA NO\_ PPB    
 — LICA NO2\_ PPB

# Ozone

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

#### Station Information

Calibration Date	July 13, 2009	Previous Calibration	June 4, 2009
Company	Lakeland Industry & Community Association		
Plant / Location	LICA 1 - Cold Lake South		
Start Time (MST)	14:00	End Time (MST)	17:10
Reason:	Monthly Calibration		
Barometric Pressure	710 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:	EnviroNics 2000	S/N :	1991	Method:	GPT
DAS Make / Model:	ESC 8832	S/N :	263		

#### Analyzer Settings

	Before Calibration		After Calibration	
Concentration Range	0 - 500 ppb			
Bench Temp/ Pressure	27.5 Deg C		28.3 Deg C	
O <sub>3</sub> Set Level	29%		29%	
Bench Lamp/O <sub>3</sub> Lamp				
Sample Flow A/B	0.739 LPM	0.752 LPM	0.736 LPM	0.75 LPM
Offset / Slope	0.7	1.063	0.7	1.063

#### Calibration Data

Dilution Flow Rate	Ozone Set Point	Calculated Concentration	Indicated Conc. (DAS)	Correction Factor
5001	0	0	0	N/A
4998	400	377	379	0.9947
4998	200	188	190	0.9895
4999	100	90	92	0.9783
5006	0	0	0	N/A
Sum of Least Squares				N/A
New Correction Factor				0.9947

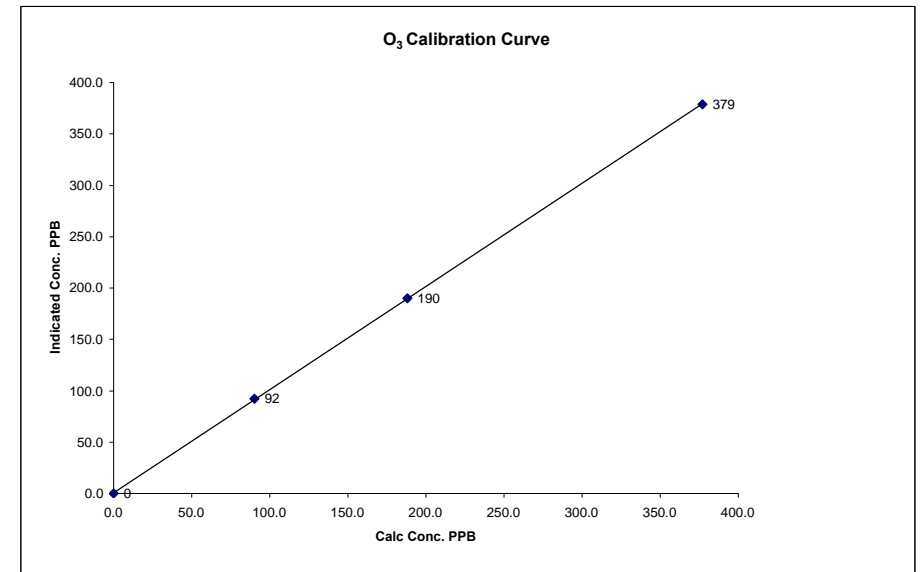
	Before Calibration	After Calibration
Auto Zero	0.2	0.3
Auto Span	288.0	288.0
Sample Lines Connected	YES	
Percent Change from Previous Calibration	0.5%	

Calibration Performed by: Shea Beaton

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

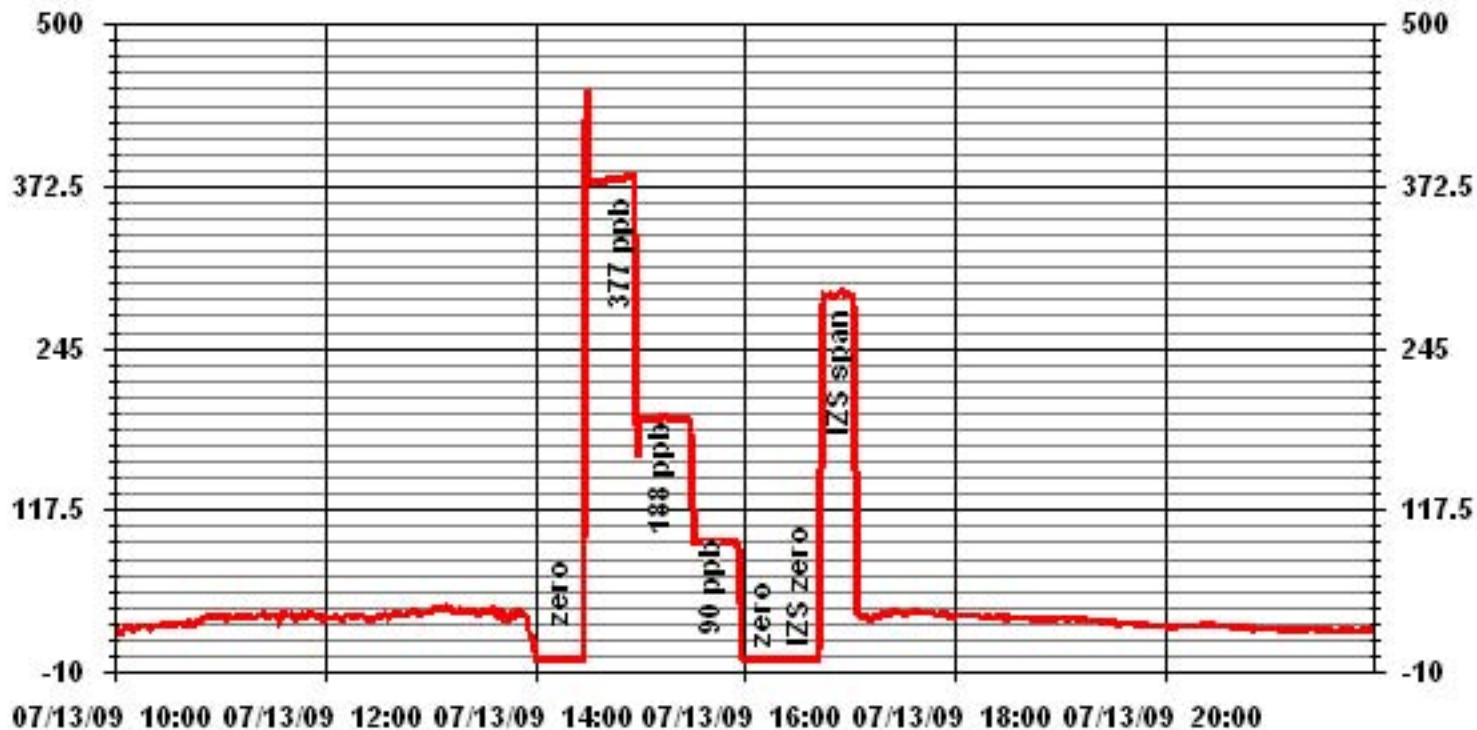
Calibration Date	July 13, 2009		
Company	Lakeland Industry & Community Association		
Plant / Location	LICA 1 - Cold Lake South		
Start Time (MST)	14:00	End Time (MST)	17:10

Calculated Conc. ppb	Indicated Response ppb	Correction Factor	Correlation Coefficient Slope (≥ 0.995)	Intercept (± 3% F.S.)	
0	0	n/a			0.999979
90	92	0.9783			1.004182
188	190	0.9895			
377	379	0.9947			0.815241



Notes: Bench Temp=53.5C, O<sub>3</sub> lamp temp=67.7C.

### 01 Minute Averages



# Passive Bubble Maps

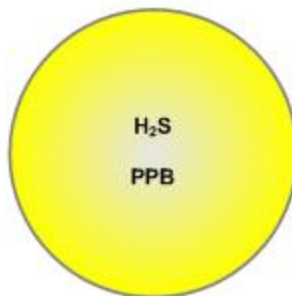


# Lakeland Industry & Community Association H<sub>2</sub>S Passive Bubble Map

JULY 2009

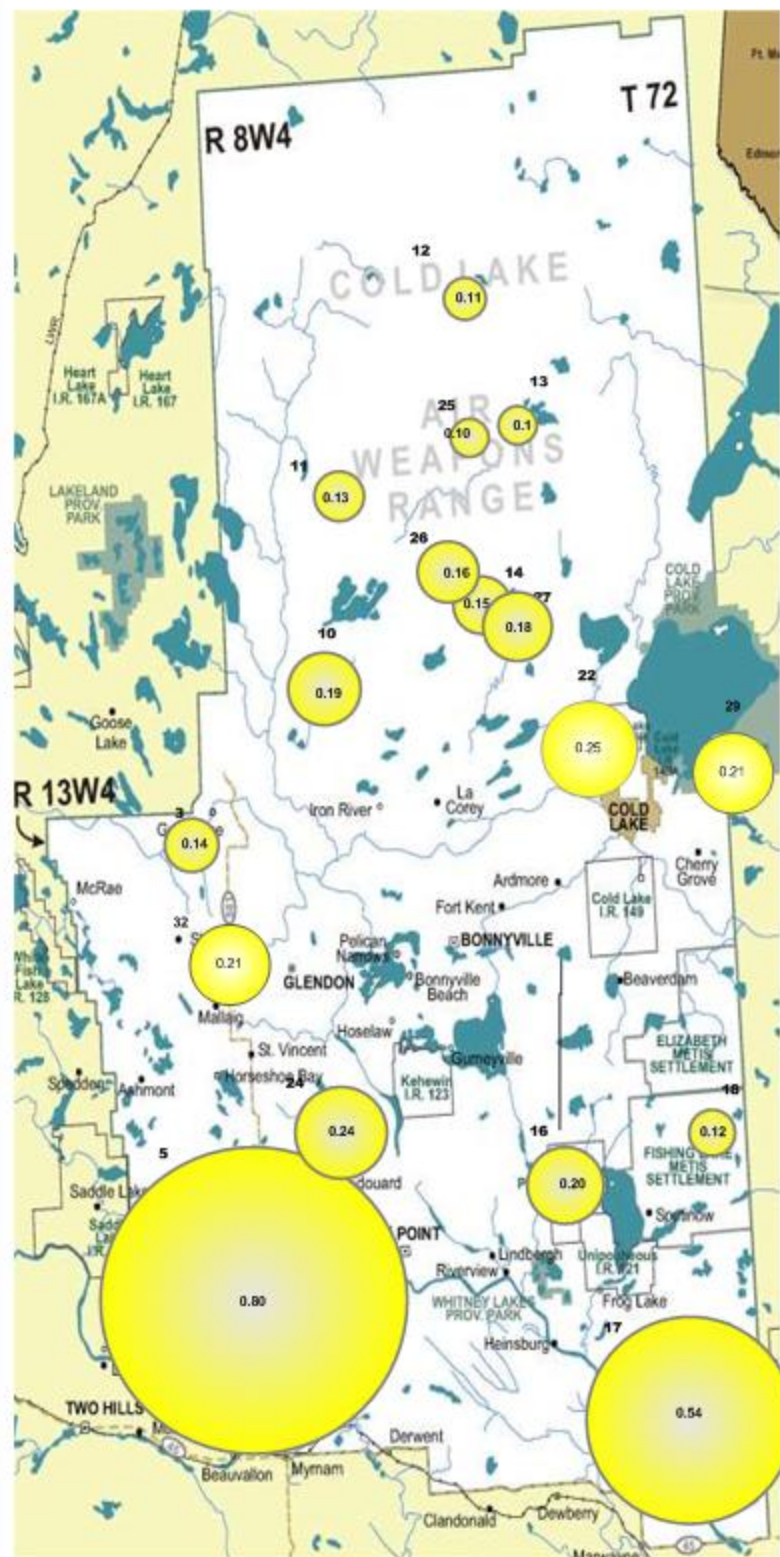
## PASSIVE STATIONS

		DUPLICATE
3 – Therien	0.14 PPB	NA
5 – Lake Eliza	0.82 PPB	0.78 PPB
10 – La Corey	0.19 PPB	0.19 PPB
11 – Wolf Lake	0.13 PPB	NA
12 – Foster Creek	0.11 PPB	0.11 PPB
13 – Primrose	0.10 PPB	NA
14 – Maskwa	0.13 PPB	0.17 PPB
16 – Frog Lake	0.20 PPB	NA
17 – Clear Range	0.54 PPB	0.53 PPB
18 – Fishing Lake	0.12 PPB	NA
22 – Cold Lake South	0.25 PPB	NA
24 – Fort George	0.24 PPB	0.24 PPB
25 – Burnt Lake	0.10 PPB	NA
26 – Mahihkan	0.16 PPB	0.15 PPB
27 – Mahkeses	0.18 PPB	NA
29 – Cold Lake South 2	0.21 PPB	0.20 PPB
32 – St. Lina	0.21 PPB	NA



## Summary

Minimum : 0.10 PPB – Burnt Lake  
Maximum: 0.80 PPB –Lake Eliza  
Average: 0.23 PPB \*Includes Duplicates

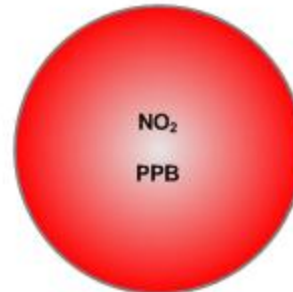


# Lakeland Industry & Community Association NO<sub>2</sub> Passive Bubble Map

JULY 2009

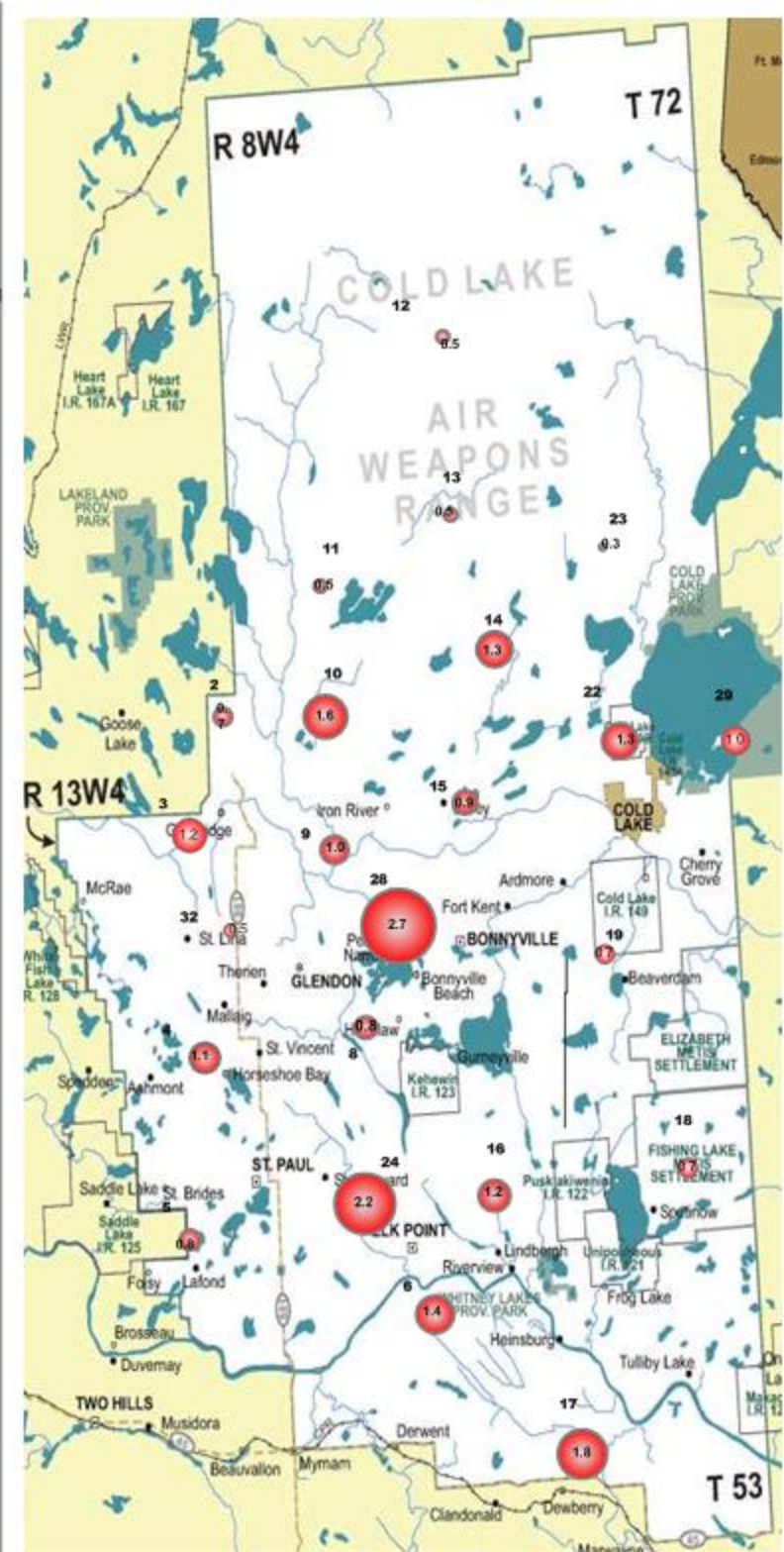
## PASSIVE STATIONS

		DUPLICATE
2 – Sand River	0.7 PPB	NA
3 – Therien	1.3 PPB	1.1 PPB
4 – Flat Lake	1.1 PPB	NA
5 – Lake Eliza	0.8 PPB	0.8 PPB
6 – Telegraph Creek	1.4 PPB	NA
8 – Muriel-Kehewin	0.8 PPB	0.8 PPB
9 – Dupre	1.0 PPB	NA
10 – La Corey	1.6 PPB	1.6 PPB
11 – Wolf Lake	0.5 PPB	NA
12 – Foster Creek	0.5 PPB	0.5 PPB
13 – Primrose	0.5 PPB	NA
14 – Maskwa	1.2 PPB	1.4 PPB
15 – Ardmore	0.9 PPB	NA
16 – Frog Lake	1.1 PPB	1.2 PPB
17 – Clear Range	1.8 PPB	NA
18 – Fishing Lake	0.6 PPB	0.8 PPB
19 – Beaverdam	0.7 PPB	NA
22 – Cold Lake South	1.3 PPB	NA
23 – Medley-Martineau	0.3 PPB	0.3 PPB
24 – Fort George	2.2 PPB	NA
28 – Town of Bonnyville	2.7 PPB	2.6 PPB
29 – Cold Lake South 2	1.0 PPB	NA
32 – St. Lina	0.5 PPB	NA



## Summary

Minimum : 0.3 PPB – Medley-Martineau  
 Maximum: 2.7 PPB – Town of Bonnyville  
 Average: 1.1 PPB \*Includes Duplicates

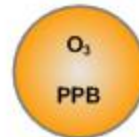


# Lakeland Industry & Community Association O<sub>3</sub> Passive Bubble Map

JULY 2009

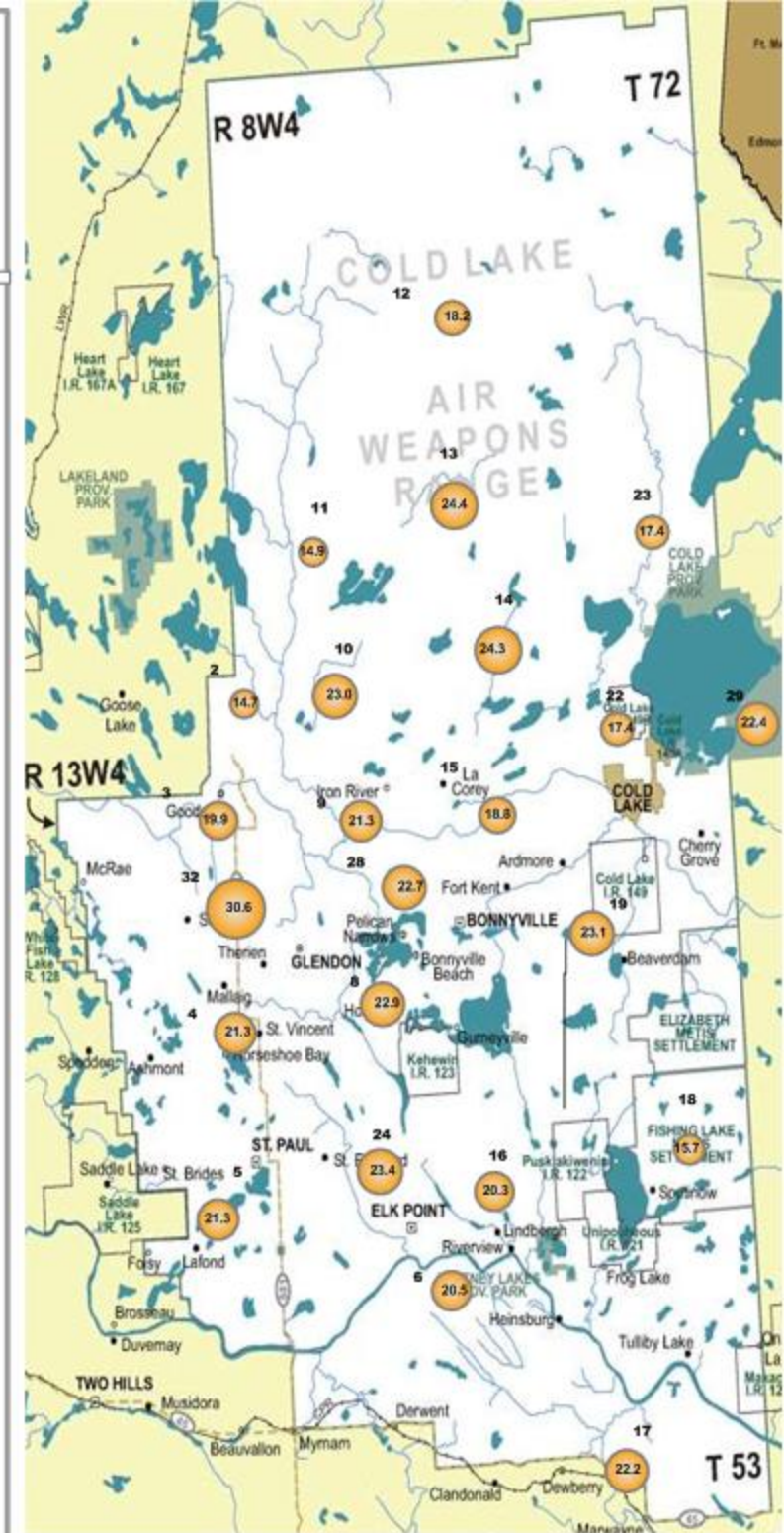
## PASSIVE STATIONS

		DUPLICATE
2 – Sand River	14.7 PPB	NA
3 – Therien	21.8 PPB	18.0 PPB
4 – Flat Lake	21.3 PPB	NA
5 – Lake Eliza	22.2 PPB	20.3 PPB
6 – Telegraph Creek	20.5 PPB	NA
8 – Muriel-Kehewin	22.6 PPB	23.2 PPB
9 – Dupre	21.3 PPB	NA
10 – La Corey	24.7 PPB	21.3 PPB
11 – Wolf Lake	14.9 PPB	NA
12 – Foster Creek	18.6 PPB	17.8 PPB
13 – Primrose	24.4 PPB	NA
14 – Maskwa	24.1 PPB	24.5 PPB
15 – Ardmore	18.8 PPB	NA
16 – Frog Lake	20.5 PPB	20.0 PPB
17 – Clear Range	22.2 PPB	NA
18 – Fishing Lake	16.5 PPB	14.8 PPB
19 – Beaverdam	23.1 PPB	NA
22 – Cold Lake South	17.4 PPB	NA
23 – Medley-Martineau	16.7 PPB	18.1 PPB
24 – Fort George	23.4 PPB	NA
28 – Town of Bonnyville	21.4 PPB	24.0 PPB
29 – Cold Lake South 2	22.4 PPB	NA
32 – St. Lina	30.6 PPB	NA



## Summary

Minimum : 14.7 PPB –Sand River  
 Maximum: 30.6 PPB –St. Lina  
 Average: 20.9 PPB \*Includes Duplicates



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

JULY 2009

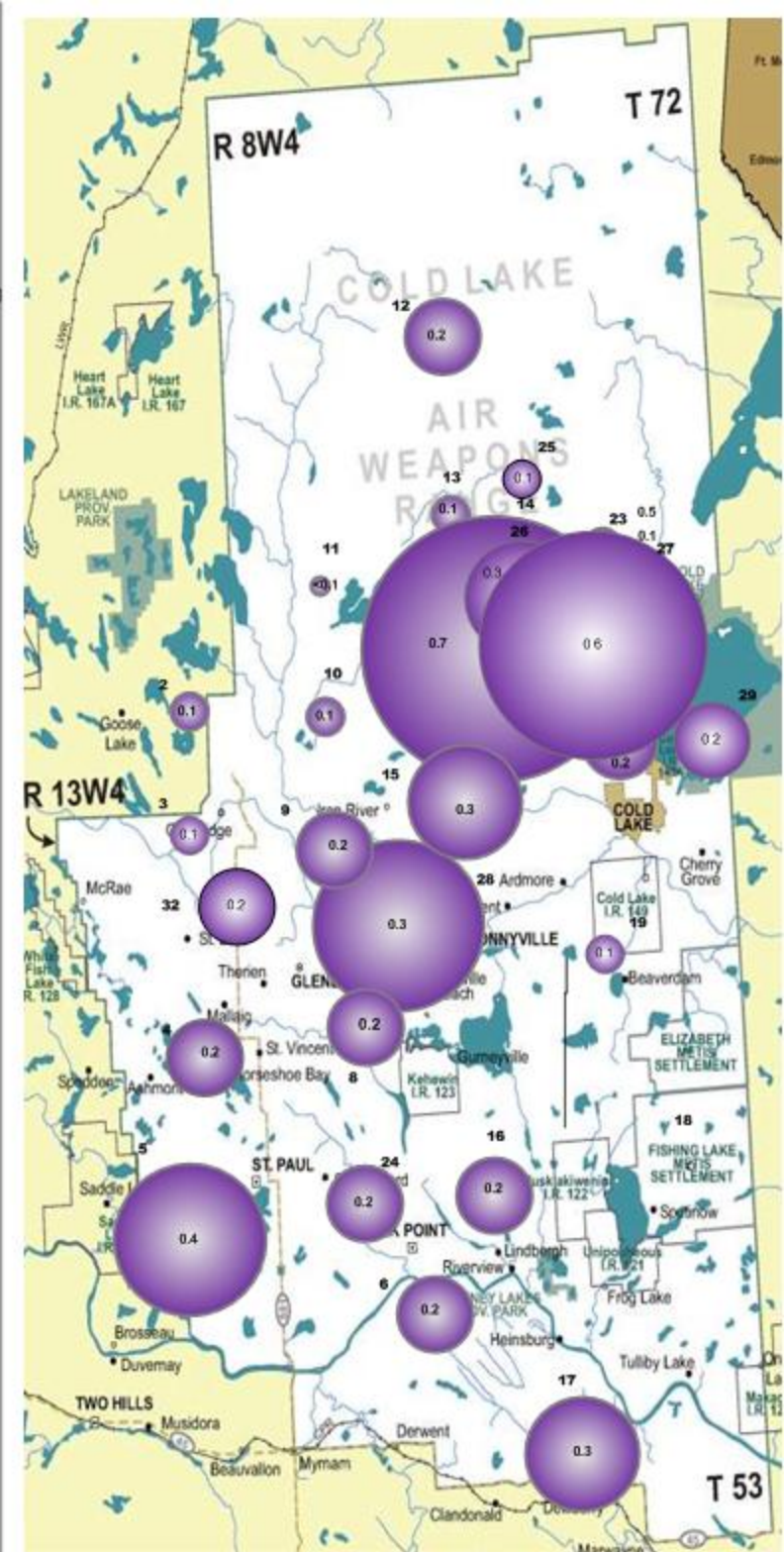
## PASSIVE STATIONS

		DUPLICATE
2 – Sand River	0.1 PPB	NA
3 – Therien	0.1 PPB	0.1 PPB
4 – Flat Lake	0.2 PPB	NA
5 – Lake Eliza	0.4 PPB	0.3 PPB
6 – Telegraph Creek	0.2 PPB	NA
8 – Muriel-Kehewin	0.2 PPB	0.2 PPB
9 – Dupre	0.2 PPB	NA
10 – La Corey	0.1 PPB	0.1 PPB
11 – Wolf Lake	< 0.1 PPB	NA
12 – Foster Creek	0.2 PPB	0.2 PPB
13 – Primrose	0.1 PPB	NA
14 – Maskwa	0.7 PPB	0.7 PPB
15 – Ardmore	0.3 PPB	NA
16 – Frog Lake	0.2 PPB	0.1 PPB
17 – Clear Range	0.3 PPB	NA
18 – Fishing Lake	DAMAGED	DAMAGED
19 – Beaverdam	0.1 PPB	NA
22 – Cold Lake South	0.2 PPB	NA
23 – Medley-Martineau	< 0.1 PPB	0.1 PPB
24 – Fort George	0.2 PPB	NA
25 – Burnt Lake	0.1 PPB	0.1 PPB
26 – Mahikan	0.3 PPB	NA
27 – Mahkeses	0.6 PPB	0.6 PPB
28 – Town of Bonnyville	0.3 PPB	NA
29 – Cold Lake South 2	0.2 PPB	0.2 PPB
32 – St. Lina	0.2 PPB	NA



## Summary

Minimum : < 0.1 PPB – Wolf Lake and Medley-Martineau  
Maximum: 0.7 PPB –Maskwa  
Average: 0.2 PPB \*Includes Duplicates



# Passive Network Laboratory Analysis



Your Project #: 2009/07/03 - 2009/07/29  
Site:LICA

**Attention: MICHAEL BISAGA**

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

**Report Date: 2009/08/25**

This report supersedes all previous reports with the same Maxxam job number

**CERTIFICATE OF ANALYSIS**

**MAXXAM JOB #: A940939**

**Received: 2009/08/06, 08:15**

Sample Matrix: Air  
# Samples Received: 42

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
H2S Passive Analysis (0)	25	2009/08/20	2009/08/24		EDM SOP-0320
NO2 Passive Analysis (0)	33	2009/08/19	2009/08/24		EDM SOP-0318
O3 Passive Analysis (0)	33	2009/08/20	2009/08/24		EDM SOP-0317
SO2 Passive Analysis (0)	37	2009/08/24	2009/08/24		EDM SOP-0319
SO2 Passive Analysis (0)	1	2009/08/24	2009/08/25		EDM SOP-0319

\* 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

=====  
Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. SCC and CALA have approved this reporting process and electronic report format.

For Service Group specific validation please refer to the Validation Signature Page

Total cover pages: 1

**RESULTS OF CHEMICAL ANALYSES OF AIR**

Maxxam ID		Q10325	Q10327	Q10328	Q10329		
Sampling Date		2009/07/03 11:30	2009/07/03 10:50	2009/07/03 10:50	2009/07/04 15:10		
	<b>Units</b>	<b>2</b>	<b>3</b>	<b>3A (DUP)</b>	<b>4</b>	<b>RDL</b>	<b>QC Batch</b>

<b>Passive Monitoring</b>							
Calculated H2S	ppb		0.14			0.02	3360036
Calculated NO2	ppb	0.7	1.3	1.1	1.1	0.1	3358673
Calculated O3	ppb	14.7	21.8	18.0	21.3	0.1	3360712
Calculated SO2	ppb	0.1	0.1	0.1	0.2	0.1	3367859
RDL = Reportable Detection Limit							

Maxxam ID		Q10331	Q10332	Q10333	Q10334		
Sampling Date		2009/07/04 14:10	2009/07/04 14:10	2009/07/04 12:40	2009/07/04 16:00		
	<b>Units</b>	<b>5</b>	<b>5A (DUP)</b>	<b>6</b>	<b>8</b>	<b>RDL</b>	<b>QC Batch</b>

<b>Passive Monitoring</b>							
Calculated H2S	ppb	0.82	0.78			0.02	3360036
Calculated NO2	ppb	0.8	0.8	1.4	0.8	0.1	3358673
Calculated O3	ppb	22.2	20.3	20.5	22.6	0.1	3360712
Calculated SO2	ppb	0.4	0.3	0.2	0.2	0.1	3367859
RDL = Reportable Detection Limit							

Maxxam ID		Q10335	Q10336	Q10337	Q10338		
Sampling Date		2009/07/04 16:00	2009/07/03 09:15	2009/07/03 12:15	2009/07/03 12:15		
	<b>Units</b>	<b>8A (DUP)</b>	<b>9</b>	<b>10</b>	<b>10A (DUP)</b>	<b>RDL</b>	<b>QC Batch</b>

<b>Passive Monitoring</b>							
Calculated H2S	ppb			0.19	0.19	0.02	3360036
Calculated NO2	ppb	0.8	1.0	1.6	1.6	0.1	3358673
Calculated O3	ppb	23.2	21.3	24.7	21.3	0.1	3360712
Calculated SO2	ppb	0.2	0.2	0.1	0.1	0.1	3367859
RDL = Reportable Detection Limit							

**RESULTS OF CHEMICAL ANALYSES OF AIR**

Maxxam ID		Q10343	Q10344	Q10345	Q10346		
Sampling Date		2009/07/03 12:55	2009/07/03 14:30	2009/07/03 14:30	2009/07/03 15:55		
	<b>Units</b>	<b>11</b>	<b>12</b>	<b>12A (DUP)</b>	<b>13</b>	<b>RDL</b>	<b>QC Batch</b>

<b>Passive Monitoring</b>							
Calculated H2S	ppb	0.13	0.11	0.11	0.10	0.02	3360036
Calculated NO2	ppb	0.5	0.5	0.5	0.5	0.1	3358673
Calculated O3	ppb	14.9	18.6	17.8	24.4	0.1	3360712
Calculated SO2	ppb	<0.1	0.2	0.2	0.1	0.1	3367859

RDL = Reportable Detection Limit

Maxxam ID		Q10347	Q10348		Q10349		
Sampling Date		2009/07/03 16:55	2009/07/03 16:55		2009/07/03 08:15		
	<b>Units</b>	<b>14</b>	<b>14A (DUP)</b>	<b>QC Batch</b>	<b>15</b>	<b>RDL</b>	<b>QC Batch</b>

<b>Passive Monitoring</b>							
Calculated H2S	ppb	0.13	0.17	3360036		0.02	3360036
Calculated NO2	ppb	1.2	1.4	3358673	0.9	0.1	3358753
Calculated O3	ppb	24.1	24.5	3360712	18.8	0.1	3360712
Calculated SO2	ppb	0.7	0.7	3367859	0.3	0.1	3367853

RDL = Reportable Detection Limit

Maxxam ID		Q10350	Q10351	Q10352	Q10353		
Sampling Date		2009/07/04 11:00	2009/07/04 11:00	2009/07/04 11:50	2009/07/04 11:50		
	<b>Units</b>	<b>16</b>	<b>16A (DUP)</b>	<b>17</b>	<b>17A (DUP)</b>	<b>RDL</b>	<b>QC Batch</b>

<b>Passive Monitoring</b>							
Calculated H2S	ppb	0.20		0.54	0.53	0.02	3360036
Calculated NO2	ppb	1.1	1.2	1.8		0.1	3358753
Calculated O3	ppb	20.5	20.0	22.2		0.1	3360712
Calculated SO2	ppb	0.2	0.1	0.3		0.1	3367853

RDL = Reportable Detection Limit



**RESULTS OF CHEMICAL ANALYSES OF AIR**

Maxxam ID		Q10354	Q10355	Q10356		
Sampling Date		2009/07/04 10:15	2009/07/04 10:15	2009/07/04 07:20		
	<b>Units</b>	<b>18</b>	<b>18A (DUP)</b>	<b>19</b>	<b>RDL</b>	<b>QC Batch</b>

<b>Passive Monitoring</b>						
Calculated H2S	ppb	0.12			0.02	3360036
Calculated NO2	ppb	0.6	0.8	0.7	0.1	3358753
Calculated O3	ppb	16.5	14.8	23.1	0.1	3360712
Calculated SO2	ppb	DAMAGED	DAMAGED	0.1	0.1	3367853
RDL = Reportable Detection Limit						

Maxxam ID		Q10358	Q10359	Q10360	Q10361	
Sampling Date		2009/07/04 17:15	2009/07/04 07:55	2009/07/04 07:55	2009/07/04 13:20	
	<b>Units</b>	<b>22</b>	<b>23</b>	<b>23A (DUP)</b>	<b>24</b>	<b>RDL QC Batch</b>

<b>Passive Monitoring</b>						
Calculated H2S	ppb	0.25			0.24	0.02 3360036
Calculated NO2	ppb	1.3	0.3	0.3	2.2	0.1 3358753
Calculated O3	ppb	17.4	16.7	18.1	23.4	0.1 3360714
Calculated SO2	ppb	0.2	<0.1	0.1	0.2	0.1 3367853
RDL = Reportable Detection Limit						

Maxxam ID		Q10362	Q10363	Q10364	Q10365	
Sampling Date		2009/07/04 13:20	2009/07/03 15:35	2009/07/03 15:35	2009/07/03 16:25	
	<b>Units</b>	<b>24A (DUP)</b>	<b>25</b>	<b>25A (DUP)</b>	<b>26</b>	<b>RDL QC Batch</b>

<b>Passive Monitoring</b>						
Calculated H2S	ppb	0.24	0.10		0.16	0.02 3360036
Calculated SO2	ppb		0.1	0.1	0.3	0.1 3367853
RDL = Reportable Detection Limit						

**RESULTS OF CHEMICAL ANALYSES OF AIR**

Maxxam ID		Q10366	Q10367	Q10368	Q10369		
Sampling Date		2009/07/03 16:25	2009/07/03 17:25	2009/07/03 08:50	2009/07/03 08:50		
	<b>Units</b>	<b>26A (DUP)</b>	<b>27</b>	<b>27A (DUP)</b>	<b>28</b>	<b>RDL</b>	<b>QC Batch</b>

<b>Passive Monitoring</b>							
Calculated H2S	ppb	0.15	0.18			0.02	3360036
Calculated NO2	ppb				2.7	0.1	3358753
Calculated O3	ppb				21.4	0.1	3360714
Calculated SO2	ppb		0.6	0.6	0.3	0.1	3367853
RDL = Reportable Detection Limit							

Maxxam ID		Q10370	Q10371	Q10372	Q10453		
Sampling Date		2009/07/04 17:20	2009/07/04 17:20	2009/07/03 10:10	2009/07/03 10:10		
	<b>Units</b>	<b>28A (DUP)</b>	<b>29</b>	<b>29A (DUP)</b>	<b>32</b>	<b>RDL</b>	<b>QC Batch</b>

<b>Passive Monitoring</b>							
Calculated H2S	ppb		0.21	0.20	0.21	0.02	3360036
Calculated NO2	ppb	2.6	1.0		0.5	0.1	3358753
Calculated O3	ppb	24.0	22.4		30.6	0.1	3360714
Calculated SO2	ppb		0.2	0.2	0.2	0.1	3367853
RDL = Reportable Detection Limit							

**General Comments**

Samples Q10354 & Q10355: Notes on field sheet state 'Possible animal damage on SO2 samples'

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

Quality Assurance Report  
 Maxxam Job Number: PA940939

QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
3358673 DF4	Calibration Check	Calculated NO2	2009/08/19		97	%	76 - 118
	Spiked Blank	Calculated NO2	2009/08/19		99	%	N/A
	Method Blank	Calculated NO2	2009/08/19	<0.1		ppb	
3358753 DF4	Calibration Check	Calculated NO2	2009/08/19		98	%	76 - 118
	Spiked Blank	Calculated NO2	2009/08/19		99	%	N/A
	Method Blank	Calculated NO2	2009/08/19	<0.1		ppb	
3360036 TM5	Calibration Check	Calculated H2S	2009/08/20		104	%	80 - 120
	Spiked Blank	Calculated H2S	2009/08/20		100	%	N/A
3360712 OZ	Calibration Check	Calculated O3	2009/08/20		98	%	91 - 107
	Spiked Blank	Calculated O3	2009/08/20		96	%	N/A
	Method Blank	Calculated O3	2009/08/20	<0.1		ppb	
3360714 OZ	Calibration Check	Calculated O3	2009/08/20		98	%	91 - 107
	Spiked Blank	Calculated O3	2009/08/20		96	%	N/A
	Method Blank	Calculated O3	2009/08/20	<0.1		ppb	
3367853 DF4	Calibration Check	Calculated SO2	2009/08/24		100	%	95 - 105
	Spiked Blank	Calculated SO2	2009/08/24		105	%	N/A
	Method Blank	Calculated SO2	2009/08/24	<0.1		ppb	
3367859 DF4	Calibration Check	Calculated SO2	2009/08/24		100	%	95 - 105
	Spiked Blank	Calculated SO2	2009/08/24		100	%	N/A
	Method Blank	Calculated SO2	2009/08/24	<0.1		ppb	

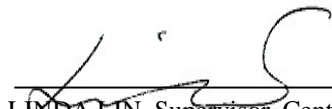
Calibration Check: A calibration standard analyzed at different times to evaluate on-going calibration accuracy.  
 Spiked Blank: A blank matrix to which a known amount of the analyte has been added. Used to evaluate analyte recovery.  
 Method Blank: A blank matrix containing all reagents used in the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

**Validation Signature Page**

**Maxxam Job #: A940939**

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



\_\_\_\_\_  
LINDA LIN, Supervisor, Centre for Passive Sampling Technology

=====

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. SCC and CALA have approved this reporting process and electronic report format.

# 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>	07/03/09	11:30	07/29/09	11:15	
2A (Dup)	NA	NA	NA	NA	NA	
3	H <sub>2</sub> S/SO <sub>2</sub> /NO <sub>2</sub> /O <sub>3</sub>	07/03/09	10:50	07/29/09	10:30	
3A (Dup)	SO <sub>2</sub> /NO <sub>2</sub> /O <sub>3</sub>	07/03/09	10:50	07/29/09	10:30	
4	SO <sub>2</sub> /NO <sub>2</sub> /O <sub>3</sub>	07/04/09	15:10	07/30/09	14:25	
4A (Dup)	NA	NA	NA	NA	NA	
5	H <sub>2</sub> S/SO <sub>2</sub> /NO <sub>2</sub> /O <sub>3</sub>	07/04/09	14:10	07/30/09	13:35	
5A (Dup)	H <sub>2</sub> S/SO <sub>2</sub> /NO <sub>2</sub> /O <sub>3</sub>	07/04/09	14:10	07/30/09	13:35	
6	SO <sub>2</sub> /NO <sub>2</sub> /O <sub>3</sub>	07/04/09	12:40	07/30/09	11:40	
6A (Dup)	NA	NA	NA	NA	NA	
8	SO <sub>2</sub> /NO <sub>2</sub> /O <sub>3</sub>	07/04/09	16:00	07/30/09	15:20	
8A (Dup)	SO <sub>2</sub> /NO <sub>2</sub> /O <sub>3</sub>	07/04/09	16:00	07/30/09	15:20	
9	SO <sub>2</sub> /NO <sub>2</sub> /O <sub>3</sub>	07/03/09	09:15	07/29/09	08:55	
9A (Dup)	NA	NA	NA	NA	NA	
10	H <sub>2</sub> S/SO <sub>2</sub> /NO <sub>2</sub> /O <sub>3</sub>	07/03/09	12:15	07/29/09	11:55	
10A (Dup)	H <sub>2</sub> S/SO <sub>2</sub> /NO <sub>2</sub> /O <sub>3</sub>	07/03/09	12:15	07/29/09	11:55	
11	H <sub>2</sub> S/SO <sub>2</sub> /NO <sub>2</sub> /O <sub>3</sub>	07/03/09	12:55	07/29/09	12:40	
11A (Dup)	NA	NA	NA	NA	NA	
12	H <sub>2</sub> S/SO <sub>2</sub> /NO <sub>2</sub> /O <sub>3</sub>	07/03/09	14:30	07/29/09	13:50	
12A (Dup)	H <sub>2</sub> S/SO <sub>2</sub> /NO <sub>2</sub> /O <sub>3</sub>	07/03/09	14:30	07/29/09	13:50	
13	H <sub>2</sub> S/SO <sub>2</sub> /NO <sub>2</sub> /O <sub>3</sub>	07/03/09	15:55	07/29/09	15:25	
13A (Dup)	NA	NA	NA	NA	NA	
14	H <sub>2</sub> S/SO <sub>2</sub> /NO <sub>2</sub> /O <sub>3</sub>	07/03/09	16:55	07/29/09	16:15	
14A (Dup)	H <sub>2</sub> S/SO <sub>2</sub> /NO <sub>2</sub> /O <sub>3</sub>	07/03/09	16:55	07/29/09	16:15	
15	SO <sub>2</sub> /NO <sub>2</sub> /O <sub>3</sub>	07/03/09	08:15	07/29/09	07:40	
15A (Dup)	NA	NA	NA	NA	NA	
16	H <sub>2</sub> S/SO <sub>2</sub> /NO <sub>2</sub> /O <sub>3</sub>	07/04/09	11:00	07/30/09	10:05	
16A (Dup)	SO <sub>2</sub> /NO <sub>2</sub> /O <sub>3</sub>	07/04/09	11:00	07/30/09	10:05	

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>	07/04/09	11:50	07/30/09	10:55	
17A (Dup)	H <sub>2</sub> S	07/04/09	11:50	07/30/09	10:55	
18	H <sub>2</sub> S/SO <sub>2</sub> /NO <sub>2</sub> /O <sub>3</sub>	07/04/09	10:15	07/30/09	09:15	
18A (Dup)	SO <sub>2</sub> /NO <sub>2</sub> /O <sub>3</sub>	07/04/09	10:15	07/30/09	09:15	
19	SO <sub>2</sub> /NO <sub>2</sub> /O <sub>3</sub>	07/04/09	09:20	07/30/09	08:00	
19A (Dup)	NA	NA	NA	NA	NA	
22	H <sub>2</sub> S/SO <sub>2</sub> /NO <sub>2</sub> /O <sub>3</sub>	07/04/09	17:15	07/29/09	06:45	
22A (Dup)	NA	NA	NA	NA	NA	
23	SO <sub>2</sub> /NO <sub>2</sub> /O <sub>3</sub>	07/04/09	07:55	07/29/09	17:30	
23A (Dup)	SO <sub>2</sub> /NO <sub>2</sub> /O <sub>3</sub>	07/04/09	07:55	07/23/09	17:30	
24	H <sub>2</sub> S/SO <sub>2</sub> /NO <sub>2</sub> /O <sub>3</sub>	07/04/09	13:20	07/30/09	12:40	
24A (Dup)	H <sub>2</sub> S	07/04/09	13:20	07/30/09	12:40	
25	H <sub>2</sub> S/SO <sub>2</sub>	07/03/09	15:35	07/29/09	15:00	
25A (Dup)	SO <sub>2</sub>	07/03/09	15:35	07/29/09	15:00	
26	H <sub>2</sub> S/SO <sub>2</sub>	07/03/09	16:25	07/29/09	16:00	
26A (Dup)	H <sub>2</sub> S	07/03/09	16:25	07/29/09	16:00	
27	H <sub>2</sub> S/SO <sub>2</sub>	07/03/09	17:25	07/29/09	16:35	
27A (Dup)	SO <sub>2</sub>	07/03/09	17:25	07/29/09	16:35	
28	SO <sub>2</sub> /NO <sub>2</sub> /O <sub>3</sub>	07/03/09	08:50	07/29/09	08:20	
28A (Dup)	NO <sub>2</sub> /O <sub>3</sub>	07/03/09	08:50	07/29/09	08:20	
29	H <sub>2</sub> S/SO <sub>2</sub> /NO <sub>2</sub> /O <sub>3</sub>	07/04/09	17:20	07/29/09	06:55	
29A (Dup)	H <sub>2</sub> S/SO <sub>2</sub>	07/04/09	17:20	07/29/09	06:55	
32	H <sub>2</sub> S/SO <sub>2</sub> /NO <sub>2</sub> /O <sub>3</sub>	07/03/09	10:10	07/29/09	09:50	
32A (Dup)	NA	NA	NA	NA	NA	



# Lakeland Industry & Community Association

Maskwa Monitoring Site  
Ambient Air Monitoring  
Data Report  
For  
July 2009

Prepared By:



August 24, 2009

# Lakeland Industry & Community Association

## Ambient Air Monitoring

### Maskwa

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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: Maskwa  
Data Period: July 2009

The monthly ambient data report:

- Prepared by Lily Lin
- Reviewed by Craig Snider

The monthly analytical report for static & passive monitoring:

- Authorized by Levi Manchak

# 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 – July 2009

LICA MASKWA SITE						MAXIMUM VALUES							OPERATIONAL TIME (PERCENT)
						OBJECTIVES					1-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									
SO2 (PPB)	172	57	0	0	0.17	9	20	7	12.4	305(WNW)	2.1	20	97.8
H2S (PPB)	10	3	0	0	0.01	2	12	21	4.7	123(ESE)	0.1	12	98.0
THC (PPM)	-	-	-	-	2.09	3.0	30	3	5.7	220(SW)	2.3	10	98.0
NOx (PPB)	-	-	-	-	1.65	22	4	7	1.9	292(WNW)	6.4	20	98.0
NO (PPB)	-	-	-	-	0.23	13	14	7	12.7	292(WNW)	2.0	20	98.0
NO2 (PPB)	212	106	0	0	1.45	12	6	16	8.6	109(ESE)	3.9	20	98.0
VECTOR WS (KPH)	-	-	-	-	5.34	20.2	18	23	-	4(N)	9.5	20	98.7
VECTOR WD (DEGREES)	-	-	-	-	294(WNW)	-	-	-	-	-	-	-	98.7
RELATIVE HUMIDITY (%)	-	-	-	-	67.76	94	VAR	VAR	VAR	VAR	85.0	19	98.1
TEMPERATURE (DEG C)	-	-	-	-	15.58	29.9	25	14	2.6	309(NW)	23.0	25	79.7
BAROMETRIC PRESSURE (MILIBAR)	-	-	-	-	944	954	27	7, 8	3.2, 4.3	321(NW), 316(NW)	951.2	27	96.0
PRECIPITATION (MM)	-	-	-	-	0.12	17.3	30	14	4.5	335(NNW)	21.9	30	96.6

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

#### Sulphur Dioxide (PPB)

- Analyzer make / model - API 100E

The analyzer spanned lower than –10% of control range on July 6<sup>th</sup> and July 7<sup>th</sup> due to the permeation tube failure. The perm tube was replaced on July 8<sup>th</sup>. It was expected the span would take several days to stabilize after the perm tube replacement. The UV lamp filter was replaced following the as found points on July 9<sup>th</sup>. After that a lamp calibration was a factory calibration were performed. A post repair calibration was performed on July 10<sup>th</sup>, and no issue was noticed. The expected span value was adjusted on July 10<sup>th</sup>. The inlet filter was changed before the monthly calibration was started. An auto daily calibration was not done on July 15<sup>th</sup> and 16<sup>th</sup> due to a Modbus installation. After the installation, the expected span value was incorrect, and the error was corrected on July 19<sup>th</sup>. An alarm test was performed on July 9<sup>th</sup>, the triggered and was received by the control room, but did not cancel. The problem was rectified after the Modbus installation. Data was corrected using daily zero information.

#### Hydrogen Sulphide (PPB)

- Analyzer make / model - API 101E

The temporary Maxxam-Supplied UV lamp driver board was replaced with a new (latest revision “Yellow Dot”) UV lamp driver board from API and the permeation tube were replaced following the as found point on July 9<sup>th</sup>. After a multi-point calibration was performed, the expected zero and span values were adjusted. It was expected the span would take several days to stabilize after the perm tube replacement. As found points were put to the analyzer to verify operation on July 14<sup>th</sup>, and no issue was discovered. The expected span value than was adjusted to match the last daily span. An auto daily calibration was not done on July 15<sup>th</sup> and 16<sup>th</sup> due to a Modbus installation. After the installation, the expected span valued was incorrect, and the error was corrected on July 19<sup>th</sup> and readjusted on July 20<sup>th</sup>. The expected span value was re-adjusted following a single point check because the permeation tube was not yet fully stabilized after the single point check on July 14<sup>th</sup>.

# General Monthly Summary

## AQM STATION – LICA – Maskwa

### Total HydroCarbon (PPM)

- Analyzer make / model –TECO 51C-LT

A Coalescer and H2O knock-out valve in the zero air supply were replaced following the as found points on July 10<sup>th</sup>. A tee and single stage regulator were added to the zero air line going from the supply to the analyzer, and the regulator was connected to the zero air port on the analyzer. It allows station zero air to be used for daily calibration not cylinder. A new cylinder of hydrogen, supplied by Maxxam, was also installed on July 10<sup>th</sup>. An auto daily calibration was not done on July 15<sup>th</sup> and 16<sup>th</sup> due to a Modbus installation. After the installation, the expected span valued was incorrect, and the error was corrected on July 19<sup>th</sup>. The inlet filter was changed before the monthly calibration was started. Data was corrected using daily zero information.

### Nitrogen Dioxide (PPB)

- Analyzer make / model - API 200E

The DFU filter and the permeation tube was replaced following the as found points on July 9<sup>th</sup>. An analog output calibration was performed on July 9<sup>th</sup>. A multi-points calibration was performed on July 10<sup>th</sup>. The expected zero/span values were adjusted on July 11<sup>th</sup>. An auto daily calibration was not done on July 15<sup>th</sup> and 16<sup>th</sup> due to a Modbus installation. After the installation, the expected span valued was incorrect, and the error was corrected on July 19<sup>th</sup>.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

The wind system is reported as vector wind speed and vector wind direction. The wind system is reported as vector wind speed and vector wind direction. The wind system channel was put in the “Maintenance” mode due to the Modbus installation for 10 hours this month.

# General Monthly Summary

## AQM STATION – LICA – Maskwa

### Relative Humidity (PERCENT)

- System make / model - Met One 083

No operational issues observed during the month. The RH channel was put in the “Maintenance” mode due to the Modbus installation for 14 hours this month.

### Precipitation (MM)

- System make / model - Met One 387

The Precipitation channel was put in the “maintenance” mode due to the Modbus installation for 9 hours this month. After the installation on July 15<sup>th</sup>, the configuration was incorrect. The error was corrected on July 16<sup>th</sup>. A total of 16 hours of data was invalidated.

### Barometric Pressure (MILLIBAR)

- System make / model - Met One 092

The BP channel was put in the “maintenance” mode due to the Modbus installation for 7 hours this month. After the installation on July 15<sup>th</sup>, the configuration was incorrect. The error was corrected on July 16<sup>th</sup>. A total of 23 hours of data was invalidated.

### Ambient Temperature (DEGC)

- System make / model - Met One 060

The Ambient Temperature channel was put in the “maintenance” mode due to the Modbus installation for 10 hours this month. After the installation on July 15<sup>th</sup>, the configuration was incorrect. The error was corrected on July 21<sup>st</sup>. A total of 146 hours of data was invalidated.



# General Monthly Summary

## AQM STATION – LICA – Maskwa

### Trailer Temperature (DEG C)

- System make / model – R&R 61

The Trailer Temperature channel was put in the “maintenance” mode due to the Modbus installation for 10 hours this month.

### Standard Deviation Wind Direction (DEG)

- System make / model – Climatronics MIII

The wind system channel was put in the “Maintenance” mode due to the Modbus installation for 10 hours this month. As a result, the data for the standard deviation wind direction was flagged as “Maintenance” the same time as the wind system was.

### Datalogger

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

A Modbus installation was performed on July 15<sup>th</sup> to July 17<sup>th</sup>.

### Trailer

No issues with the station. The manifold and inlet tubing were cleaned on July 10<sup>th</sup>.

# Continuous Monitoring

# Monthly Summaries, Graphs & Wind Roses

# Sulphur Dioxide

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - MASKWA

JULY 2009

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	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	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0.1	24
4	0	0	0	0	0	0	0	2	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	24
5	0	0	0	0	0	0	1	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	24
6	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0.4	24
7	0	0	0	0	0	0	0	0	0	0	2	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	24
8	1	1	0	1	0	1	0	0	C	C	1	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0.3	24
9	0	0	0	0	0	0	0	0	0	C	C	M	M	M	C	C	C	0	0	0	0	0	0	0	0	0.0	21	
10	0	0	0	0	0	0	0	0	0	C	C	C	C	C	C	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	1	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	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	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	M	M	M	0	0	0	0	M	M	0	0	0	0	0	0	2	0	0	0	0.1	19
16	0	0	0	0	0	0	0	M	M	0	0	0	0	M	M	M	0	0	0	0	0	0	0	0	0	0.0	19	
17	0	0	0	0	0	0	0	0	0	0	0	0	0	M	M	M	0	0	0	0	0	0	0	0	0	0.0	21	
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	0.2	24
19	1	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	0.2	24
20	1	1	2	0	8	6	5	9	6	2	0	0	0	1	0	3	0	0	0	0	3	1	0	0	0	9	2.1	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	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
25	1	0	0	0	1	2	1	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	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	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	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	1	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	24
HOURLY MAX	1	1	2	1	8	6	5	9	6	2	2	1	1	2	1	0	3	1	2	4	2	2	0	3				
HOURLY AVG	0.1	0.1	0.1	0.0	0.3	0.3	0.4	0.6	0.5	0.2	0.2	0.0	0.1	0.1	0.1	0.0	0.1	0.0	0.1	0.2	0.1	0.1	0.0	0.1				

STATUS FLAG CODES

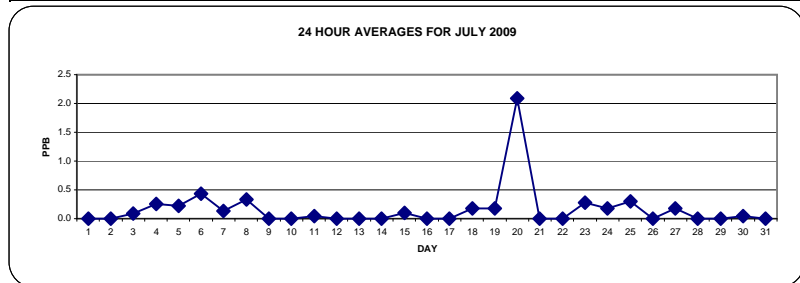
S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	- MAINTENANCE
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE

OBJECTIVE LIMIT:

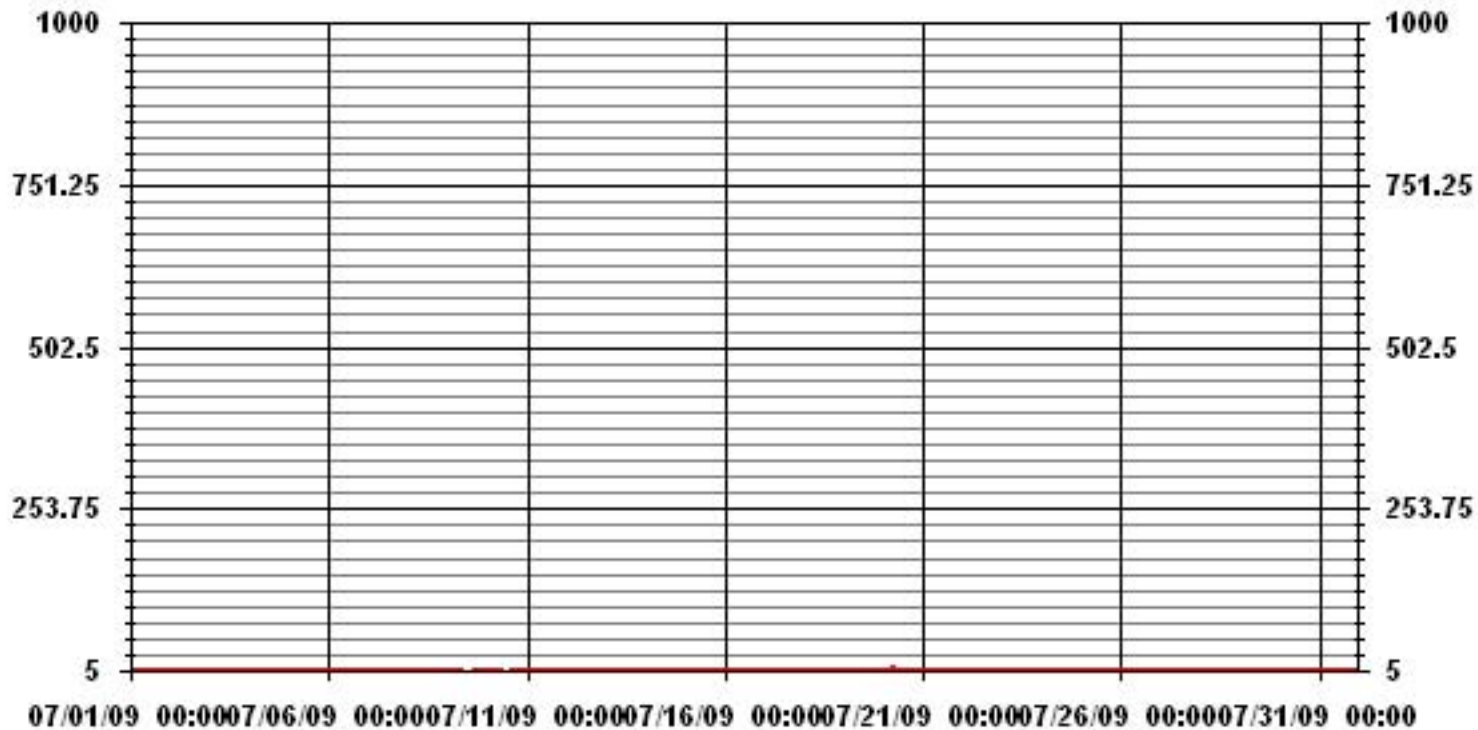
ALBERTA ENVIRONMENT:	1-HR	172	PPB	24-HR	57	PPB
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MONTHLY SUMMARY

NUMBER OF 1-HR EXCEEDENCES:	0
NUMBER OF 24-HR EXCEEDENCES:	0
NUMBER OF NON-ZERO READINGS:	57
MAXIMUM 1-HR AVERAGE:	9 PPB @ HOUR(S) 7 ON DAY(S) 20
MAXIMUM 24-HR AVERAGE:	2.1 PPB ON DAY(S) 20
IZS CALIBRATION TIME:	28 HRS
MONTHLY CALIBRATION TIME:	13 HRS
STANDARD DEVIATION:	0.74
OPERATIONAL TIME:	728 HRS
AMD OPERATION UPTIME:	97.8 %
MONTHLY AVERAGE:	0.17 PPB



# 01 Hour Averages



# LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - MASKWA

JULY 2009

## 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	1	0	0	0	0	0	0	0	0	0	0	0	0	3	0	IZS	0	3	0.2	24		
2		0	0	0	0	0	0	0	0	1	2	0	0	6	0	0	1	0	0	0	0	0	0	IZS	0	6	0.4	24		
3		0	0	0	0	0	0	0	9	5	0	0	0	0	0	0	0	0	6	2	IZS	0	0	0	9	1.0	24	24		
4		0	0	0	0	0	0	0	7	9	4	2	0	0	0	0	0	1	0	IZS	0	0	0	0	9	1.0	24	24		
5		0	0	0	0	0	0	1	7	6	1	0	0	0	3	0	1	IZS	0	0	0	0	0	0	7	0.9	24	24		
6		0	0	0	0	0	0	0	1	2	1	1	2	1	1	1	2	IZS	3	6	6	0	0	0	6	1.2	24	24		
7		0	0	0	1	0	0	0	1	1	1	4	1	3	1	0	0	IZS	0	0	0	0	0	1	1	4	0.7	24	24	
8		2	1	1	1	1	2	1	1	C	C	C	1	1	1	1	IZS	1	1	1	1	1	1	1	1	2	1.1	24	24	
9		1	1	1	1	1	1	1	1	1	C	C	M	M	M	C	C	C	0	0	0	0	0	0	0	1	0.6	21	24	
10		0	0	0	0	0	0	0	0	C	C	C	C	C	C	C	1	0	0	0	0	0	0	1	1	1	0.2	24	24	
11		0	0	0	1	1	1	3	1	0	1	1	2	IZS	0	0	0	0	0	0	0	0	0	0	0	3	0.5	24	24	
12		0	0	0	0	0	0	1	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	1	0.0	24	24	
13		0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	2	1	0	0	0	0	0	0	2	0.1	24	24		
14		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	
15		0	0	0	0	0	0	0	M	M	0	0	0	0	0	M	M	0	0	0	0	2	4	2	0	4	0.4	20	24	
16		0	0	0	0	0	0	0	M	M	M	M	0	0	M	M	M	0	0	0	0	0	0	0	0	0	0.0	17	24	
17		0	0	0	0	0	0	IZS	0	0	4	4	3	0	M	M	M	0	1	0	0	0	0	0	0	4	0.6	21	24	
18		0	0	0	0	0	IZS	4	4	2	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	4	0.5	24	24	
19		9	2	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	0	6	9	1.0	24	24	
20		3	5	5	IZS	15	14	13	14	9	8	4	6	4	3	7	3	13	14	7	17	8	0	0	0	17	7.5	24	24	
21		0	0	IZS	1	0	1	1	3	0	2	2	2	8	6	0	0	0	0	0	0	0	0	0	0	8	1.1	24	24	
22		0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0.0	24	24	
23		IZS	4	0	0	0	5	4	6	2	6	7	3	5	6	7	0	0	0	0	0	0	0	0	0	IZS	7	2.5	24	24
24		0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	0	10	0	0	0	0	0	0	IZS	8	10	1.1	24	
25		7	0	0	1	3	7	10	0	0	1	6	3	2	2	0	0	0	1	0	0	0	0	0	IZS	0	10	1.9	24	
26		0	0	0	0	0	0	0	0	1	1	1	0	0	0	7	0	0	0	0	0	0	0	IZS	0	7	0.4	24	24	
27		0	0	0	0	0	0	7	3	6	3	2	3	5	3	0	0	0	0	0	0	0	IZS	0	0	7	1.4	24	24	
28		0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	IZS	0	0	0	0	4	0.2	24	24	
29		0	0	0	0	0	0	0	0	0	0	0	0	3	1	1	2	1	IZS	0	2	0	0	0	0	3	0.4	24	24	
30		0	1	1	0	0	0	0	1	1	5	4	3	1	1	0	0	IZS	0	0	0	0	0	0	0	5	0.8	24	24	
31		0	0	0	0	0	0	0	P	0	1	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	1	0.0	24	24	
HOURLY MAX		9	5	5	1	15	14	13	14	9	8	7	6	8	7	7	13	14	7	17	8	7	2	8						
HOURLY AVG		0.7	0.5	0.3	0.2	0.7	1.0	1.5	1.8	1.7	1.6	1.7	1.0	1.3	1.1	1.1	0.8	0.7	1.0	0.6	1.0	0.7	0.4	0.2	0.6					

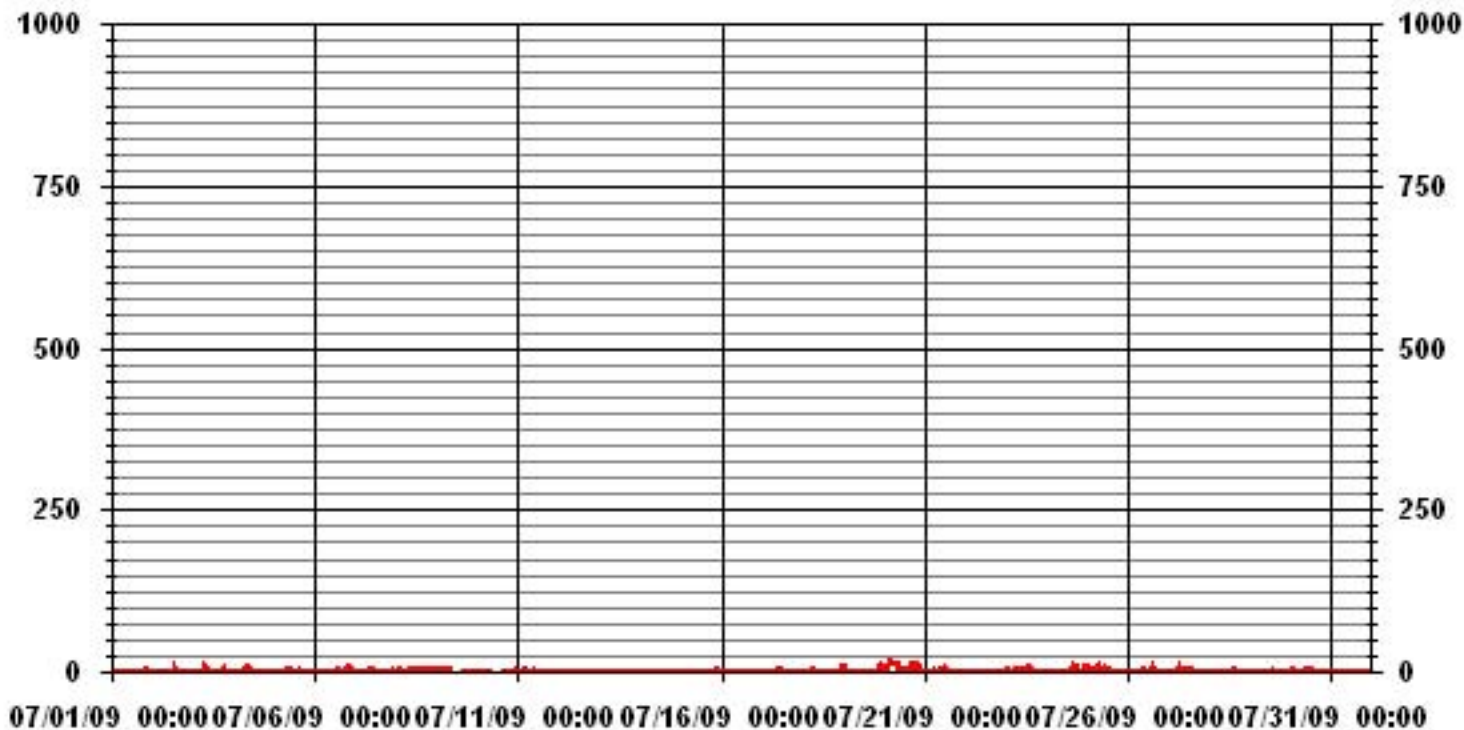
**STATUS FLAG CODES**

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:	187						
MAXIMUM INSTANTANEOUS VALUE:	17	PPB	@ HOUR(S)	19	ON DAY(S)	20	
IZS CALIBRATION TIME:	28	HRS			OPERATIONAL TIME:	727	HRS
MONTHLY CALIBRATION TIME:	15 HRS						
STANDARD DEVIATION:	2.24						

### 01 Hour Averages



— LICA30 SO2MAX PPB



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

July 2009

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	9.89	4.65	4.07	4.65	4.80	3.20	3.49	3.05	6.40	9.60	12.51	5.96	8.29	7.71	5.53	6.11	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	9.89	4.65	4.07	4.65	4.80	3.20	3.49	3.05	6.40	9.60	12.51	5.96	8.29	7.71	5.53	6.11	

Calm : .00 %

Total # Operational Hours : 687

Distribution By Samples

Limit	Direction																Freq
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
< 20	68	32	28	32	33	22	24	21	44	66	86	41	57	53	38	42	687
< 60																	
< 110																	
< 170																	
< 340																	
>= 340																	
Totals	68	32	28	32	33	22	24	21	44	66	86	41	57	53	38	42	

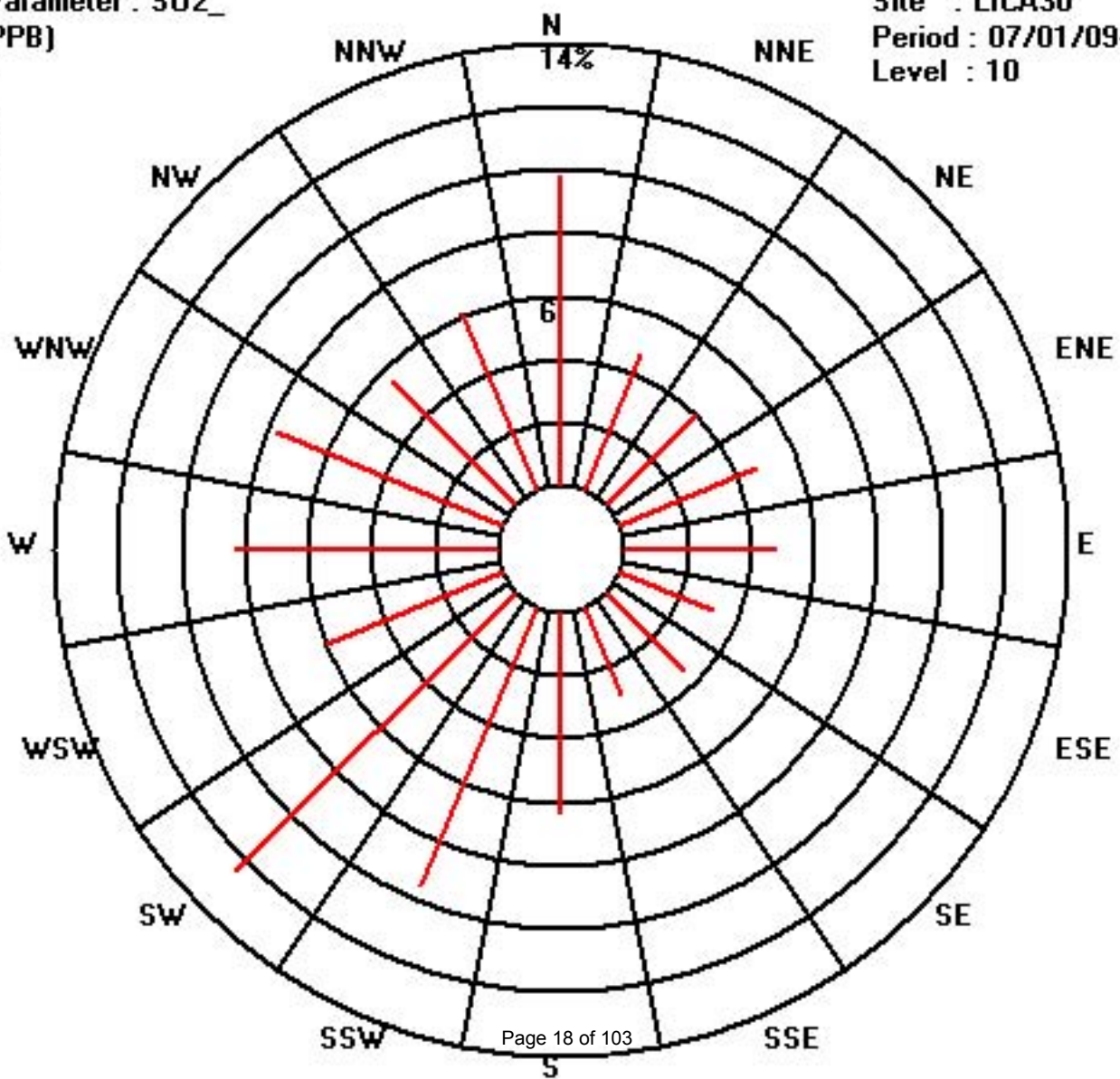
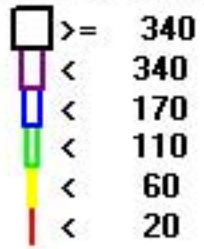
Calm : .00 %

Total # Operational Hours : 687

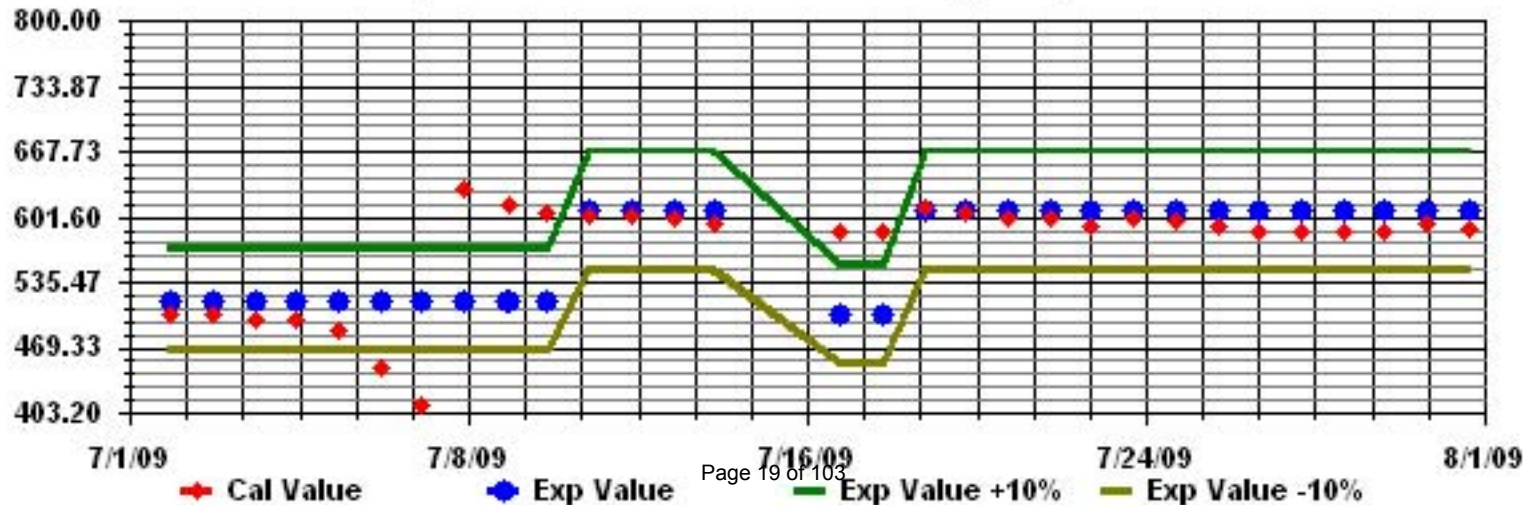
Class Limits (PPB)

Period : 07/01/09-07/31/09

Level : 10



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



# Hydrogen Sulphide

**LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - MASKWA**

JULY 2009

**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	0:00	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		0	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	0.0	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	<b>IZS</b>	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	<b>IZS</b>	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	<b>IZS</b>	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	<b>IZS</b>	0	0	0	0	1	0	1	0.0	24	
6		0	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	24	
7		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	
8		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	0.0	24
9		0	0	0	0	0	0	0	0	0	0	0	<b>C</b>	<b>C</b>	<b>M</b>	<b>M</b>	<b>C</b>	<b>C</b>	0	0	0	0	0	0	0	0	0	0	0.0	22
10		0	0	0	0	0	0	0	0	0	0	0	<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
11		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	0	0	0.0	24
12		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	<b>2</b>	0	0	<b>2</b>	<b>0.1</b>	24
13		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	0.0	24
14		0	0	0	0	0	0	0	<b>IZS</b>	0	<b>C</b>	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	<b>M</b>	<b>M</b>	<b>M</b>	0	0	0	0	<b>M</b>	<b>M</b>	0	0	0	0	0	0	0	0	0	0	0	0	0.0	19
16		0	0	0	0	0	0	<b>M</b>	<b>M</b>	0	0	0	0	0	<b>M</b>	<b>M</b>	<b>M</b>	0	0	0	0	0	0	0	0	0	0	0	0.0	19
17		0	0	0	0	0	<b>IZS</b>	0	0	0	0	0	0	0	<b>M</b>	<b>M</b>	<b>M</b>	0	0	0	0	0	0	0	0	0	0	0	0.0	21
18		0	0	0	0	<b>IZS</b>	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.0	24	
19		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	0	0	0.0	24
20		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	0	0	0	0.0	24
21		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	0	0	0	0	0.0	24
22		0	<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	0	0	0.0	24
23		<b>IZS</b>	0	0	0	0	0	0	0	<b>C</b>	<b>IZS</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	<b>IZS</b>	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	<b>IZS</b>	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	<b>IZS</b>	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	<b>IZS</b>	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	<b>IZS</b>	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	<b>IZS</b>	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	<b>IZS</b>	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	<b>IZS</b>	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	<b>IZS</b>	0	0	0	0	0	0	0	0	0	0	0	0.0	24	
HOURLY MAX		0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	0				
HOURLY AVG		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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			

**STATUS FLAG CODES**

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

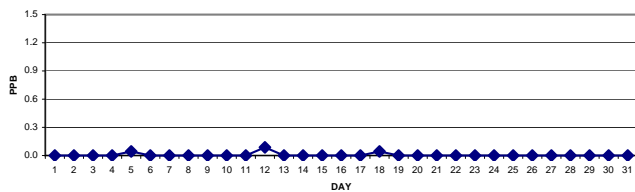
**OBJECTIVE LIMIT:**

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

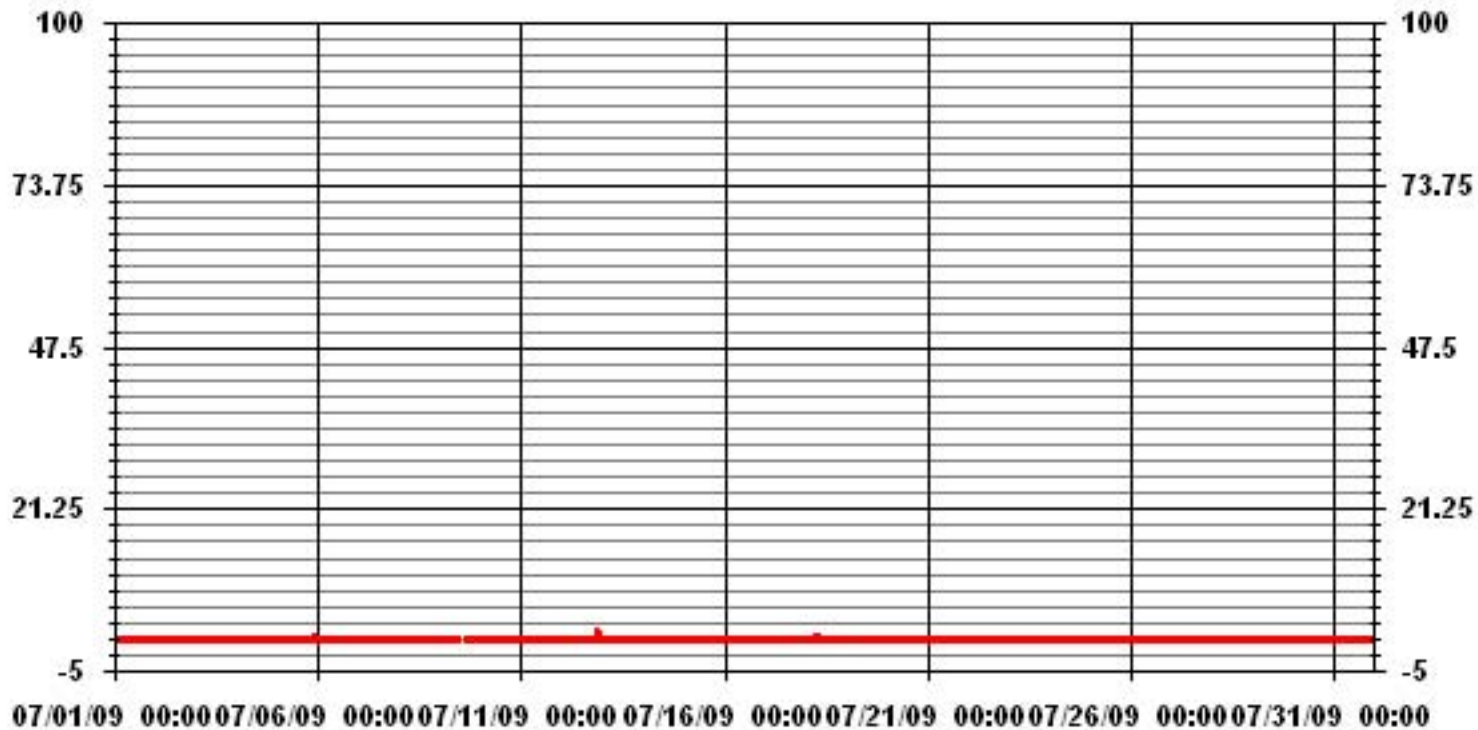
**MONTHLY SUMMARY**

NUMBER OF 1-HR EXCEEDENCES:	0
NUMBER OF 24-HR EXCEEDENCES:	0
NUMBER OF NON-ZERO READINGS:	3
MAXIMUM 1-HR AVERAGE:	2 PPB @ HOUR(S) 21 ON DAY(S) 12
MAXIMUM 24-HR AVERAGE:	0.1 PPB ON DAY(S) 12 VAR-VARIOUS
IZS CALIBRATION TIME:	28 HRS
MONTHLY CALIBRATION TIME:	9 HRS
OPERATIONAL TIME:	729 HRS
AMD OPERATION UPTIME:	98.0 %
STANDARD DEVIATION:	0.09
MONTHLY AVERAGE:	0.01 PPB

24 HOUR AVERAGES FOR JULY 2009

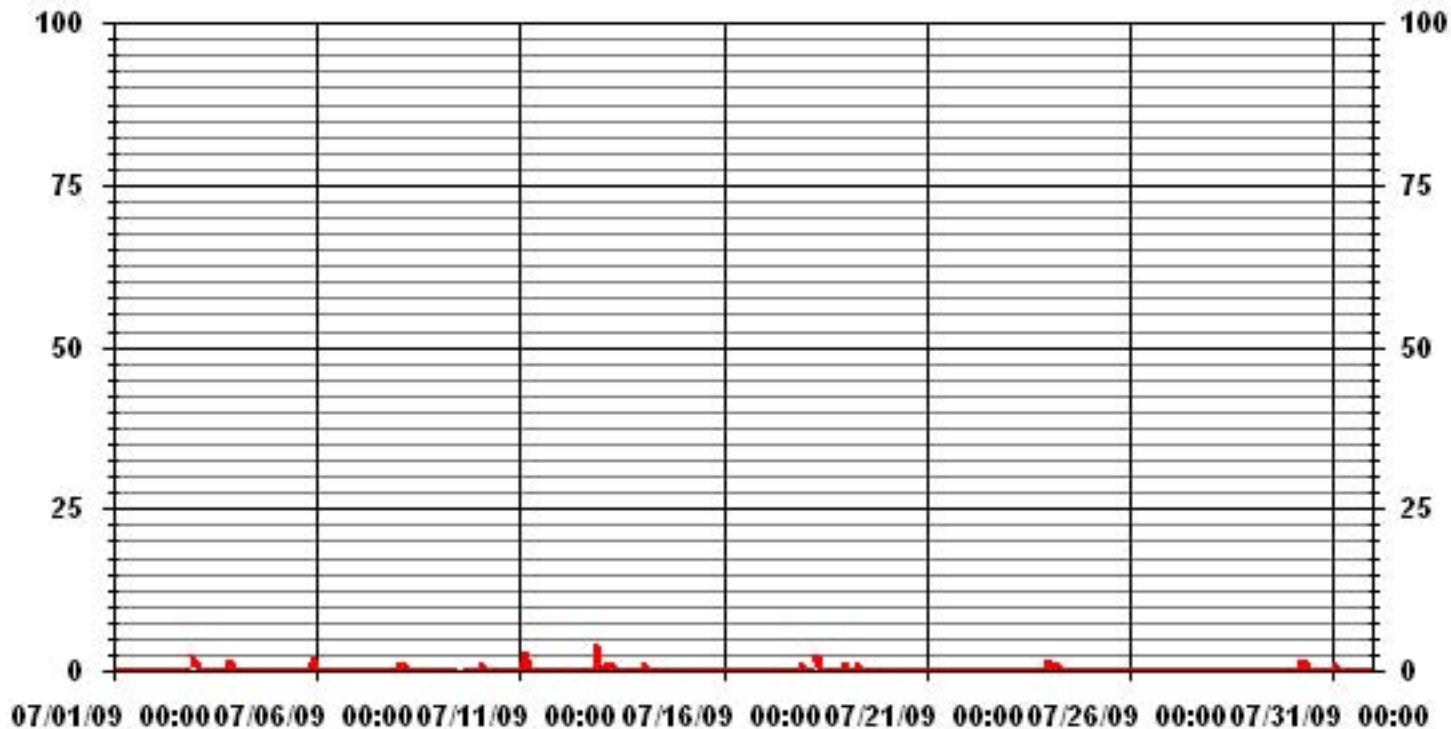


### 01 Hour Averages





### 01 Hour Averages



— LICA30 H2S MAX PPB



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

July 2009

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	9.97	4.62	4.19	4.62	4.76	3.17	3.61	3.03	6.35	9.53	12.42	6.06	8.38	7.80	5.49	5.92	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	9.97	4.62	4.19	4.62	4.76	3.17	3.61	3.03	6.35	9.53	12.42	6.06	8.38	7.80	5.49	5.92	

Calm : .00 %

Total # Operational Hours : 692

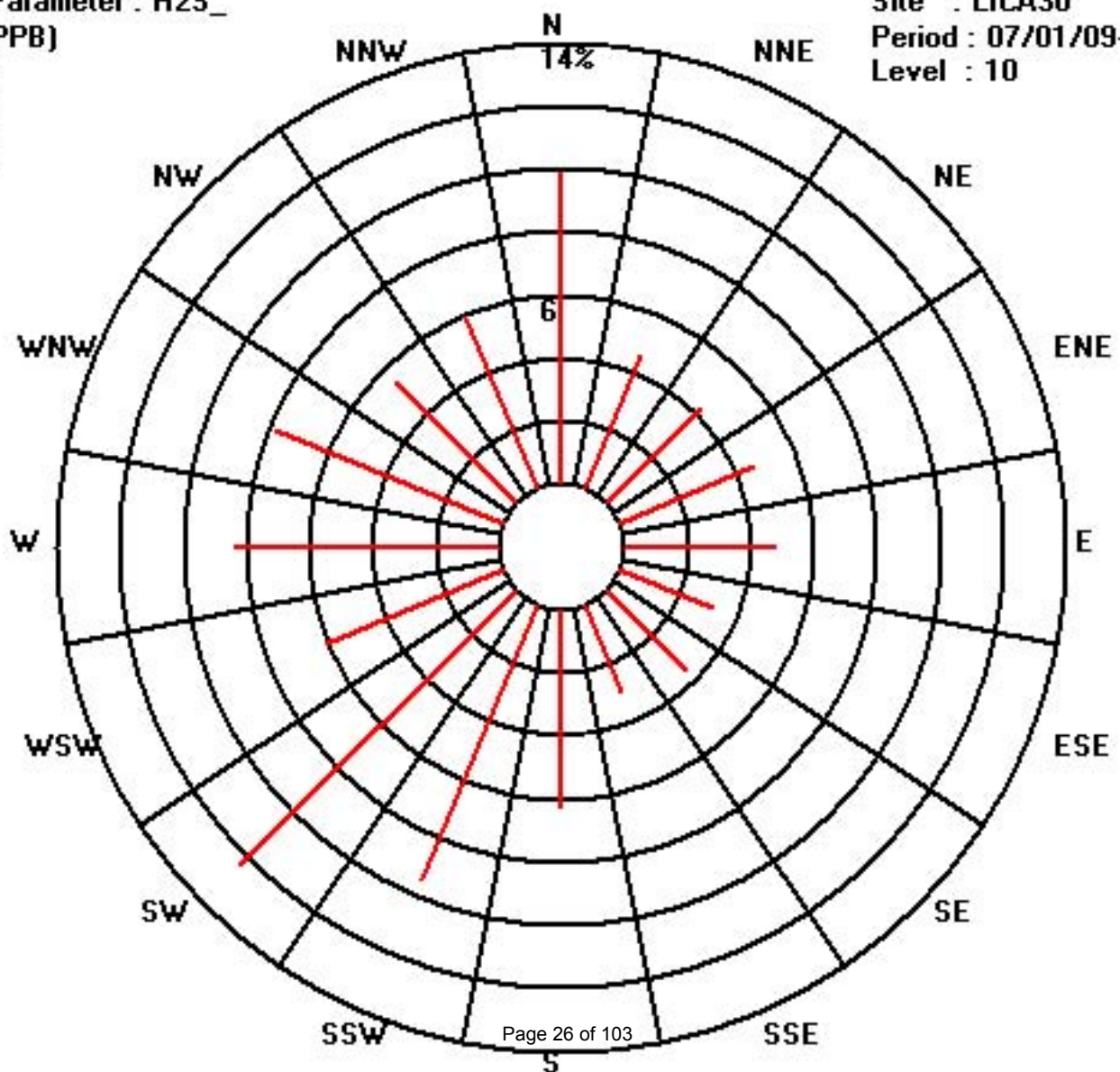
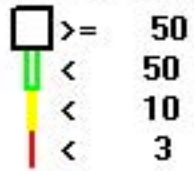
Distribution By Samples

	Direction																
Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 3	69	32	29	32	33	22	25	21	44	66	86	42	58	54	38	41	692
< 10																	
< 50																	
>= 50																	
Totals	69	32	29	32	33	22	25	21	44	66	86	42	58	54	38	41	

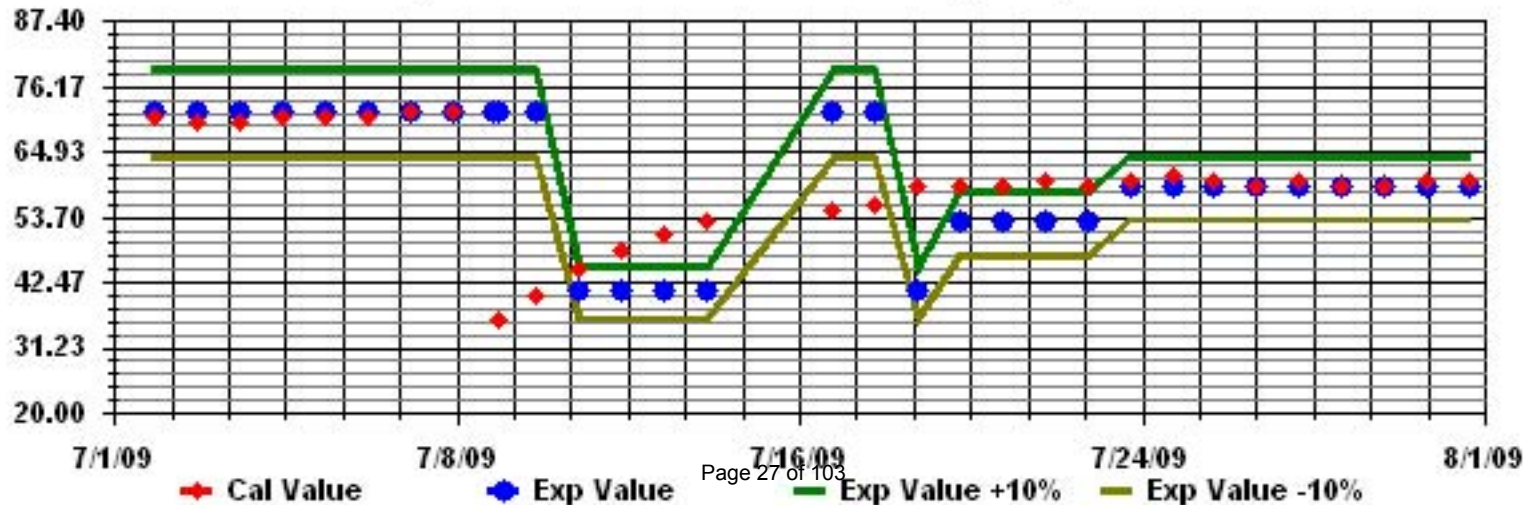
Calm : .00 %

Total # Operational Hours : 692

Class Limits (PPB)



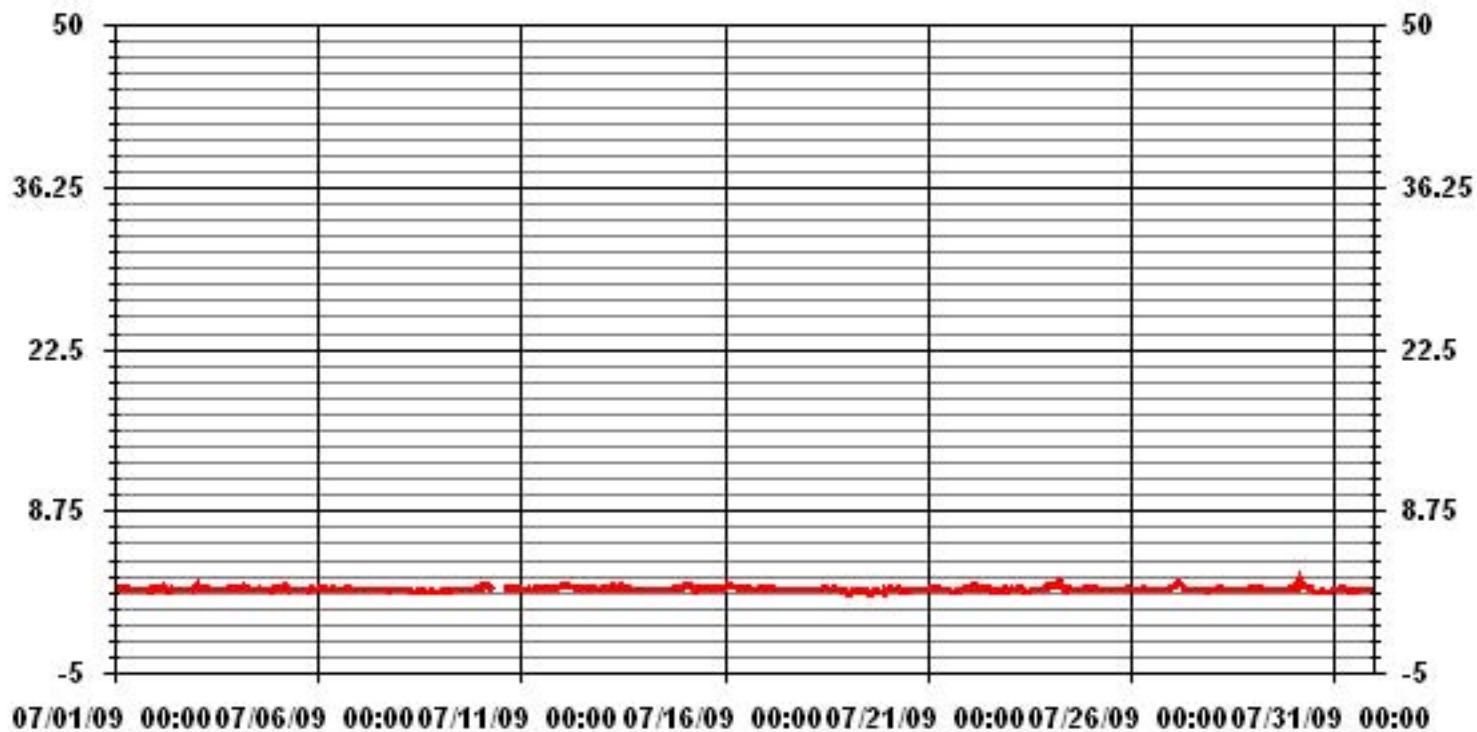
Calibration Graph for Site: LICA30 Parameter: H2S\_ Sequence: H2S Phase: SPAll



# Total Hydrocarbons



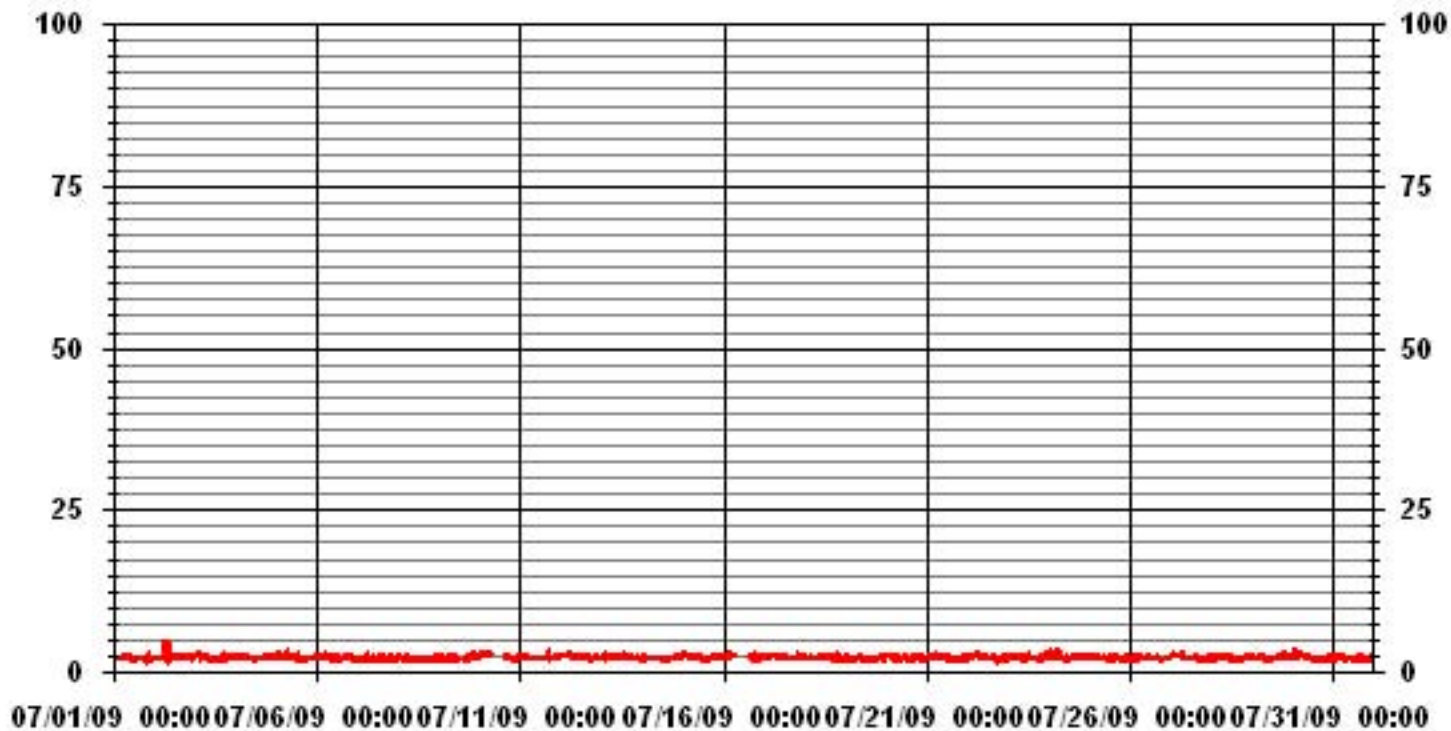
### 01 Hour Averages



— LICA30 THC PPM



### 01 Hour Averages



— LICA30 THCMAX PPM



LICA30  
 THC / WDR Joint Frequency Distribution (Percent)

July 2009

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	10.82	4.61	4.18	4.61	4.76	3.17	3.60	3.03	6.34	9.52	12.12	5.91	7.93	7.64	5.48	6.06	99.85
< 10.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.14	.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
>= 50.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
Totals	10.82	4.61	4.18	4.61	4.76	3.17	3.60	3.03	6.34	9.52	12.26	5.91	7.93	7.64	5.48	6.06	

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
< 3.0	75	32	29	32	33	22	25	21	44	66	84	41	55	53	38	42	692
< 10.0											1						1
< 50.0																	
>= 50.0																	
Totals	75	32	29	32	33	22	25	21	44	66	85	41	55	53	38	42	

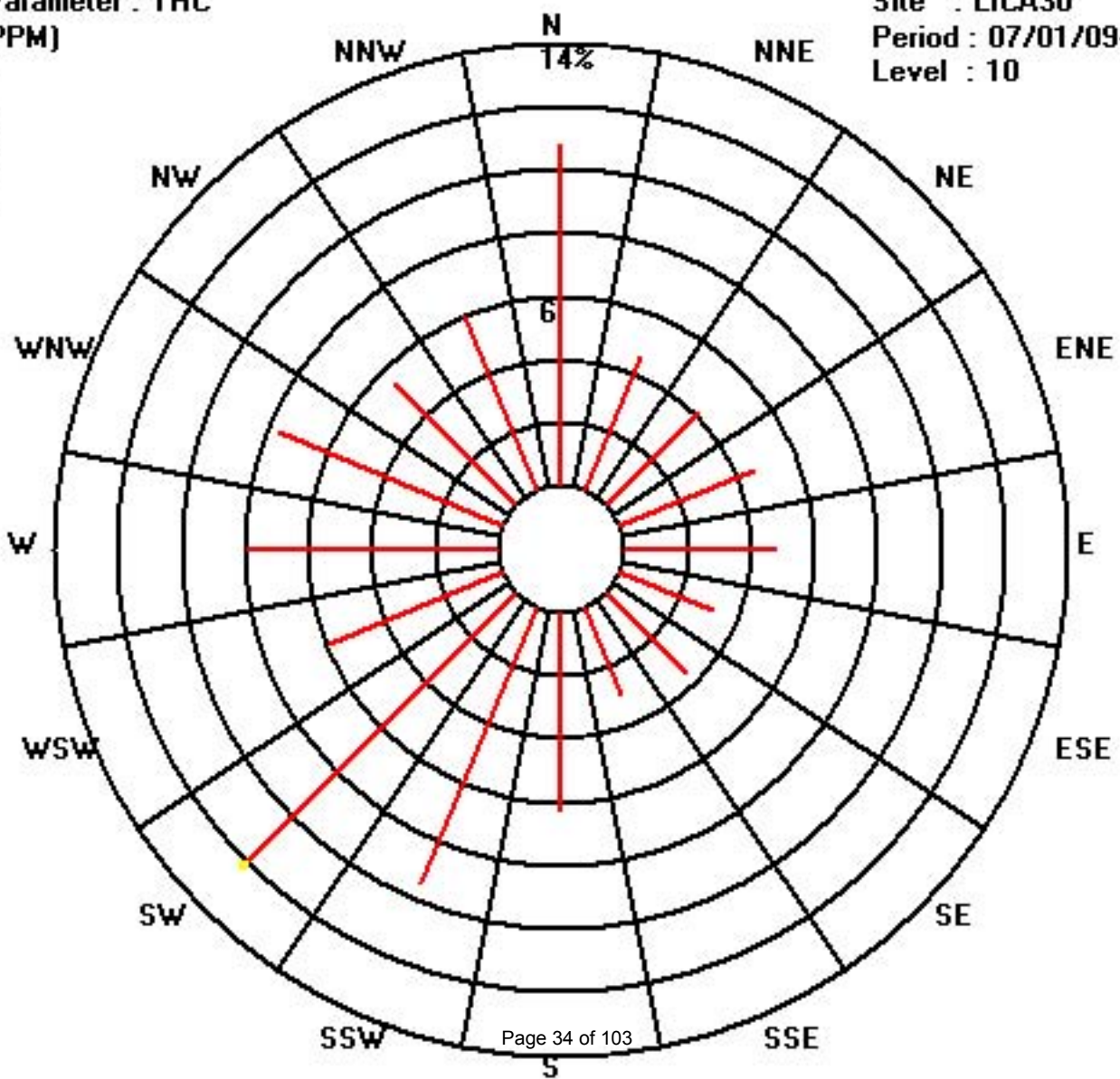
Calm : .00 %

Total # Operational Hours : 693

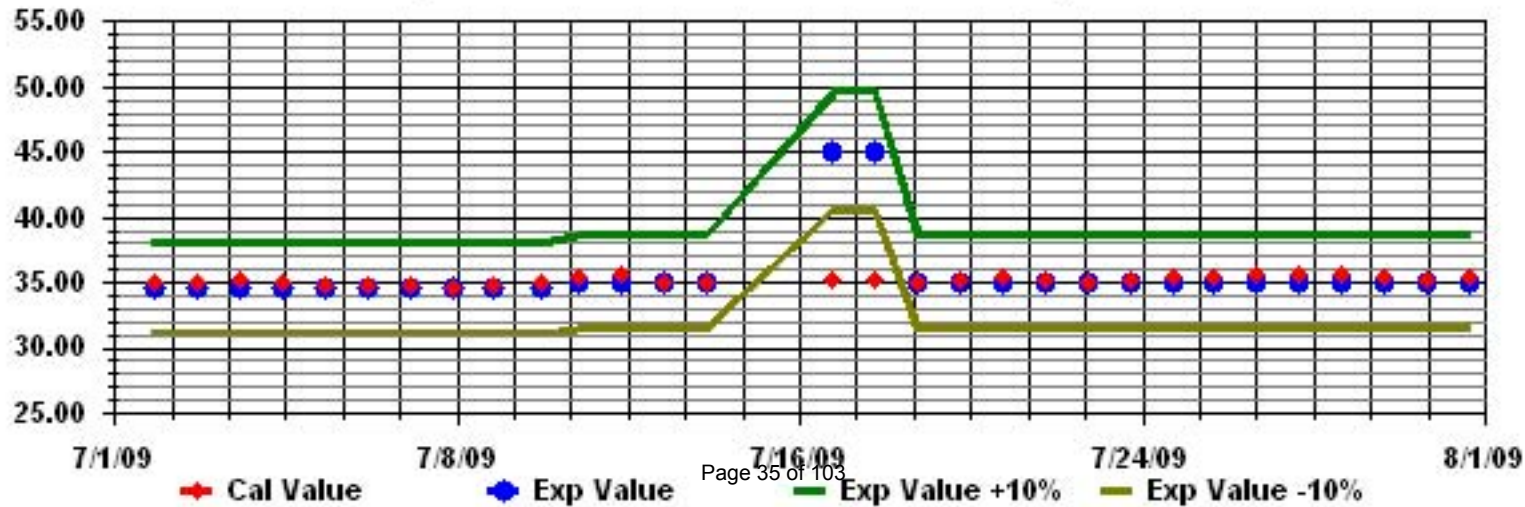
Class Limits (PPM)

Period : 07/01/09-07/31/09

Level : 10



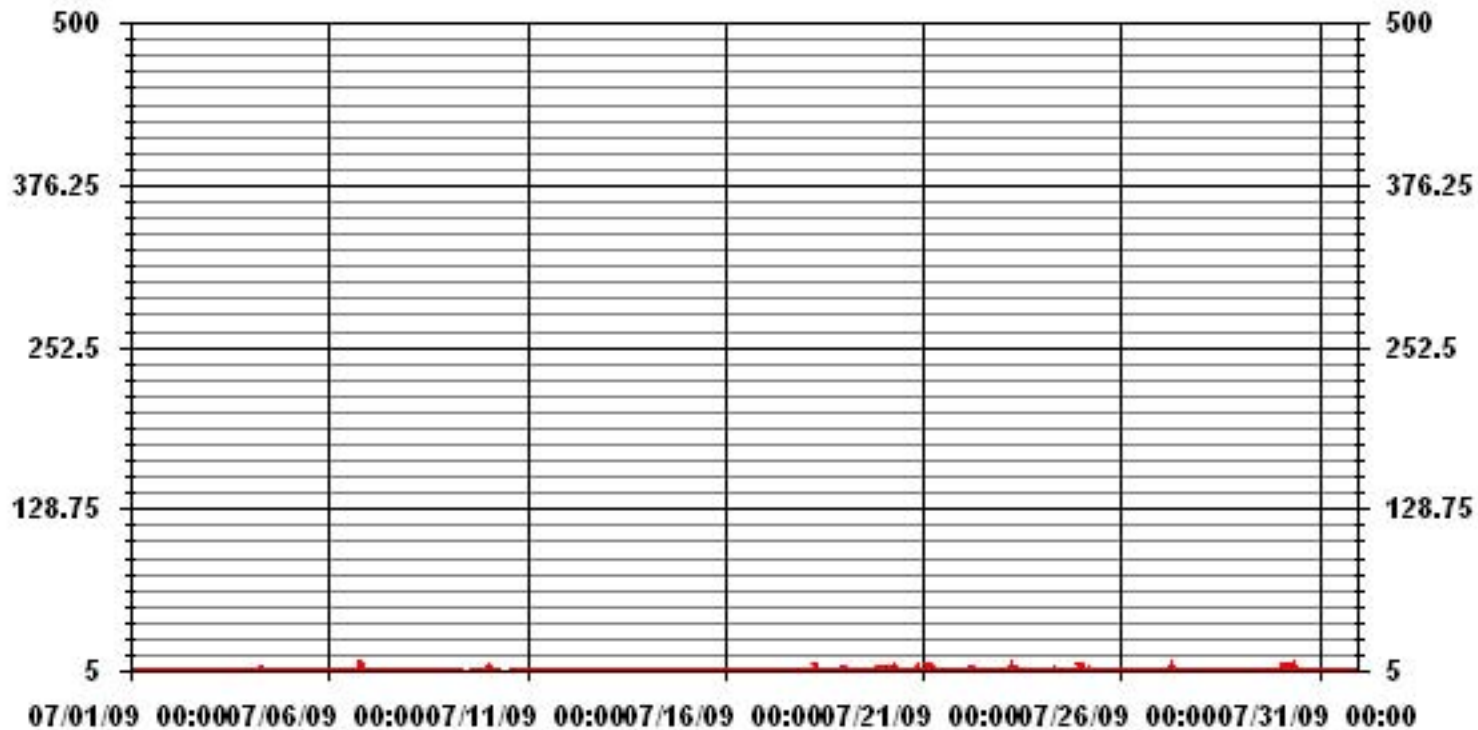
Calibration Graph for Site: LICA30 Parameter: THC Sequence: THC Phase: SPAll



# Nitrogen Dioxide



### 01 Hour Averages



— LICA30 IIO2\_ PPB

# LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - COLD LAKE

JULY 2009

## NITROGEN DIOXIDE MAX instantaneous maximum in ppb

MST																									DAILY	24-HOUR			
HR START	HR END	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	MAX.	AVG.	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					
1	2	2	2	1	0	2	17	3	2	2	1	1	1	0	1	1	0	0	0	0	0	5	1	<b>IZS</b>	0	17	1.9	24	
2	0	1	0	1	2	3	6	4	0	1	2	1	0	5	0	0	0	0	0	0	0	0	0	<b>IZS</b>	1	0	6	1.2	24
3	0	0	0	1	1	2	8	22	15	1	1	2	0	0	0	0	0	0	3	2	<b>IZS</b>	0	0	0	0	22	2.5	24	
4	0	0	0	2	2	4	8	9	10	5	3	1	3	4	3	4	2	7	5	<b>IZS</b>	0	0	0	0	0	10	3.1	24	
5	1	1	1	1	1	4	13	6	10	9	6	2	0	1	0	2	0	1	<b>IZS</b>	0	0	0	0	0	0	13	2.6	24	
6	0	0	0	0	0	0	0	1	3	5	4	0	2	2	3	3	5	<b>IZS</b>	12	17	18	1	1	1	18	3.4	23		
7	0	0	0	6	0	1	0	0	0	2	12	2	14	1	1	3	<b>IZS</b>	0	0	0	0	0	4	1	14	2.0	24		
8	13	4	8	6	5	8	3	1	3	9	6	2	0	1	3	<b>IZS</b>	1	2	2	5	2	1	1	0	13	3.7	24		
9	0	0	0	0	0	0	1	1	1	<b>C</b>	<b>C</b>	<b>M</b>	<b>M</b>	2	<b>IZS</b>	<b>C</b>	1	1	1	1	12	12	5	8	12	2.6	22		
10	9	11	8	6	6	5	6	<b>C</b>	<b>C</b>	<b>C</b>	<b>C</b>	<b>C</b>	<b>C</b>	<b>C</b>	<b>C</b>	7	1	1	1	1	1	1	1	5	11	4.6	24		
11	1	2	2	5	5	6	7	2	2	3	14	4	<b>IZS</b>	2	3	2	1	3	1	1	1	1	1	2	14	3.1	24		
12	3	4	3	2	1	1	4	2	2	1	1	<b>IZS</b>	1	1	1	1	1	1	1	1	1	1	1	1	4	1.6	24		
13	1	1	1	2	2	3	3	2	2	3	<b>IZS</b>	6	8	4	4	9	4	2	1	2	2	3	2	2	9	3.0	24		
14	1	2	1	2	3	2	2	2	3	<b>IZS</b>	2	1	0	0	0	0	0	0	5	0	0	0	0	0	5	1.1	24		
15	0	0	0	0	0	0	0	<b>M</b>	<b>M</b>	6	2	2	2	1	<b>M</b>	<b>M</b>	1	1	1	1	3	7	5	2	7	1.7	20		
16	1	1	2	3	3	3	3	<b>M</b>	<b>M</b>	<b>M</b>	<b>M</b>	2	2	<b>M</b>	<b>M</b>	<b>M</b>	2	2	2	2	2	3	3	3	3	2.3	17		
17	3	3	3	2	8	9	<b>IZS</b>	0	0	6	7	6	1	<b>M</b>	<b>M</b>	<b>M</b>	2	4	1	1	0	0	0	0	9	2.8	21		
18	0	0	0	4	6	<b>IZS</b>	11	7	2	1	3	2	3	3	2	2	6	3	2	2	2	2	18	18	18	4.3	24		
19	<b>27</b>	10	1	2	<b>IZS</b>	2	2	3	3	7	2	2	9	2	1	1	1	1	1	1	6	15	7	13	<b>27</b>	5.2	24		
20	10	11	10	<b>IZS</b>	13	12	10	10	7	8	5	7	4	4	8	6	13	13	6	19	14	8	1	3	19	8.8	24		
21	4	4	<b>IZS</b>	13	8	4	21	10	9	6	5	5	8	7	1	2	2	2	1	1	1	2	1	1	21	5.1	24		
22	4	<b>IZS</b>	4	6	8	8	12	14	7	9	8	4	3	3	4	6	2	1	1	4	4	7	4	2	14	5.4	24		
23	<b>IZS</b>	13	10	7	10	15	11	19	4	7	8	5	8	8	3	3	3	4	1	1	1	1	1	<b>IZS</b>	19	6.8	24		
24	3	4	1	1	1	24	9	8	6	4	2	2	4	5	7	12	2	14	1	1	1	2	<b>IZS</b>	17	24	5.7	24		
25	13	5	5	7	8	9	10	2	2	3	7	3	7	4	4	3	3	3	1	1	1	<b>IZS</b>	3	1	13	4.6	24		
26	1	0	1	0	1	1	3	3	4	4	2	1	1	1	8	1	1	1	1	1	<b>IZS</b>	1	1	2	8	1.7	24		
27	2	3	2	5	9	7	10	4	7	3	3	4	5	4	1	2	2	1	1	<b>IZS</b>	0	1	1	1	10	3.4	24		
28	1	1	1	1	1	4	2	1	1	1	1	1	1	1	4	2	1	1	<b>IZS</b>	1	1	1	1	1	4	1.3	24		
29	1	1	0	0	11	4	1	0	0	1	1	1	4	3	4	3	4	<b>IZS</b>	1	3	2	2	1	1	11	2.1	24		
30	3	6	11	11	6	8	14	19	6	12	9	7	4	2	6	2	<b>IZS</b>	0	1	1	0	0	0	0	19	5.6	24		
31	1	1	2	3	4	3	3	1	<b>P</b>	1	5	2	3	4	1	<b>IZS</b>	0	0	0	0	1	1	1	1	5	1.7	23		
HOURLY MAX	27	13	11	13	13	24	21	22	15	12	14	7	14	8	8	12	13	14	12	19	18	15	18	18					
HOURLY AVG	3.5	3.0	2.6	3.3	4.2	5.1	6.7	5.6	4.1	4.4	4.5	2.8	3.5	2.7	3.0	3.1	2.1	2.3	2.0	2.4	2.8	2.6	2.4	2.9					

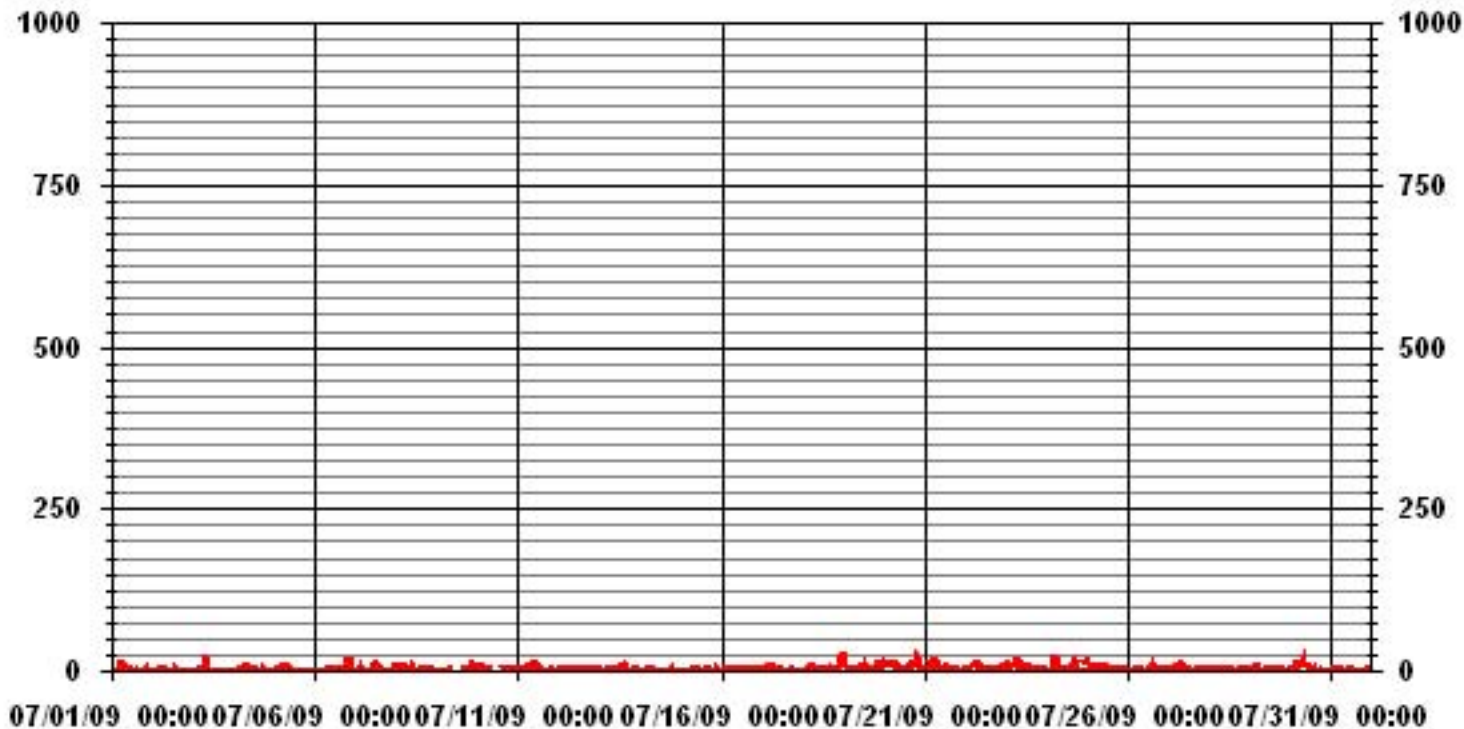
**STATUS FLAG CODES**

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:	570					
MAXIMUM INSTANTANEOUS VALUE:	27	PPB	@ HOUR(S)	0	ON DAY(S)	19
IZS CALIBRATION TIME:	29	HRS	OPERATIONAL TIME:	726	HRS	
MONTHLY CALIBRATION TIME:	11	HRS				
STANDARD DEVIATION	4.01					

### 01 Hour Averages



— LICA30 H02MAX PPB



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

July 2009

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	10.28	4.63	4.20	4.63	4.78	3.18	3.62	3.04	6.37	9.56	12.46	5.94	7.97	7.68	5.50	6.08	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	10.28	4.63	4.20	4.63	4.78	3.18	3.62	3.04	6.37	9.56	12.46	5.94	7.97	7.68	5.50	6.08	

Calm : .00 %

Total # Operational Hours : 690

Distribution By Samples

	Direction																
Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 50	71	32	29	32	33	22	25	21	44	66	86	41	55	53	38	42	690
< 110																	
< 210																	
>= 210																	
Totals	71	32	29	32	33	22	25	21	44	66	86	41	55	53	38	42	

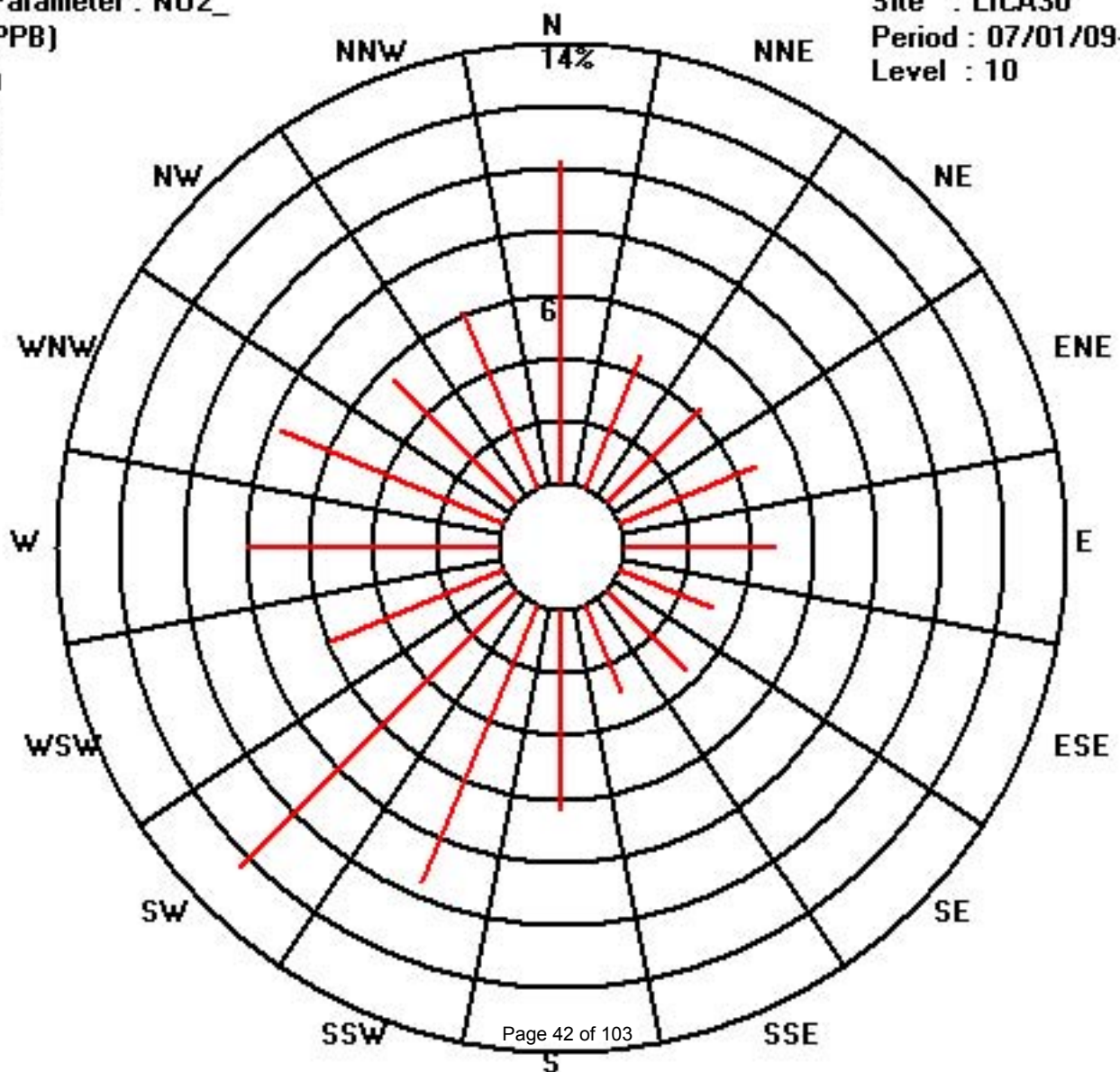
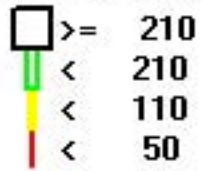
Calm : .00 %

Total # Operational Hours : 690

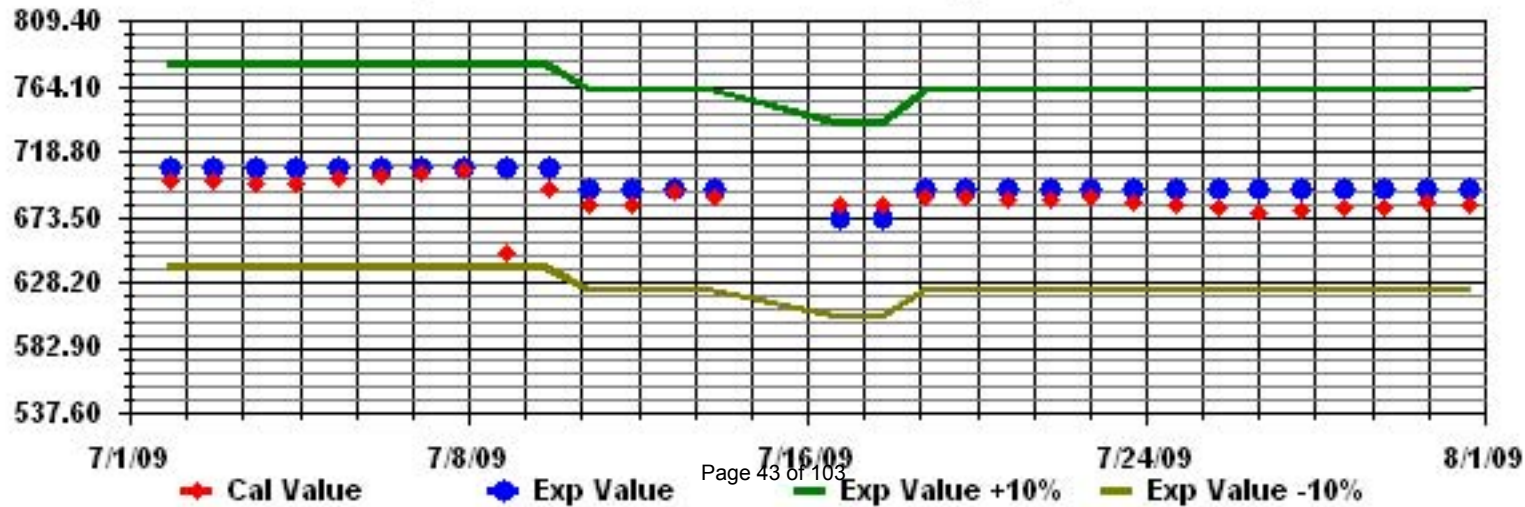
Class Limits (PPB)

Period : 07/01/09-07/31/09

Level : 10



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



# Nitric Oxide

# LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - MASKWA

JULY 2009

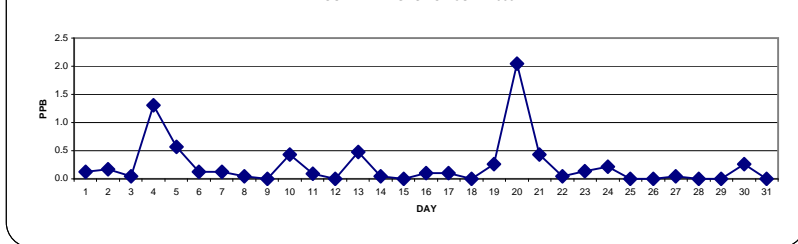
NITRIC OXIDE hourly averages in ppb

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			
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.	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	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	1	0.1	24
2	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	2	0.2	24
3	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	1	0.0	24
4	0	0	0	0	0	2	4	13	5	2	0	0	1	1	1	1	0	0	0	0	0	IZS	0	0	0	13	1.3	24
5	0	0	0	0	0	1	5	1	2	3	1	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	5	0.6	24
6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	1	2	0	0	0	0	2	0.1	24
7	0	0	0	0	0	0	0	0	0	0	2	0	1	0	0	0	IZS	0	0	0	0	0	0	0	0	2	0.1	24
8	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	1	0.0	24
9	0	0	0	0	0	0	0	0	0	C	C	M	M	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0.0	22
10	0	0	0	0	2	3	1	C	C	C	C	C	C	C	C	1	0	0	0	0	0	0	0	0	0	3	0.4	24
11	0	0	0	0	0	0	0	0	0	0	0	1	1	IZS	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	0	IZS	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	1	IZS	1	2	1	1	1	1	0	0	0	1	0	1	1	2	0.5	24
14	0	1	0	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
15	0	0	0	0	0	0	0	0	M	M	M	0	0	0	0	0	M	M	0	0	0	0	0	0	0	0	0.0	19
16	0	0	0	0	0	0	0	0	M	M	1	1	0	0	M	M	M	0	0	0	0	0	0	0	0	1	0.1	19
17	0	0	0	0	0	2	IZS	0	0	0	0	0	0	0	M	M	M	0	0	0	0	0	0	0	0	2	0.1	21
18	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
19	1	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	2	3	0.3	24
20	0	2	2	IZS	9	6	6	12	6	2	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	12	2.0	24
21	0	0	IZS	0	0	5	4	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0.4	24
22	0	IZS	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
23	IZS	0	0	0	0	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0.1	24
24	0	0	0	0	0	2	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	2	0.2	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	IZS	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	IZS	0	0	0.0	24
27	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	1	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	IZS	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	IZS	0	0	0.0	24
30	0	0	0	0	0	0	2	0	0	3	1	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	3	0.3	24
31	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
HOURLY MAX	1	2	2	0	9	6	6	13	6	3	2	1	2	1	1	1	1	0	1	2	1	3	1	2				
HOURLY AVG	0.0	0.1	0.1	0.0	0.4	0.6	1.0	1.3	0.5	0.5	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.0	0.1	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

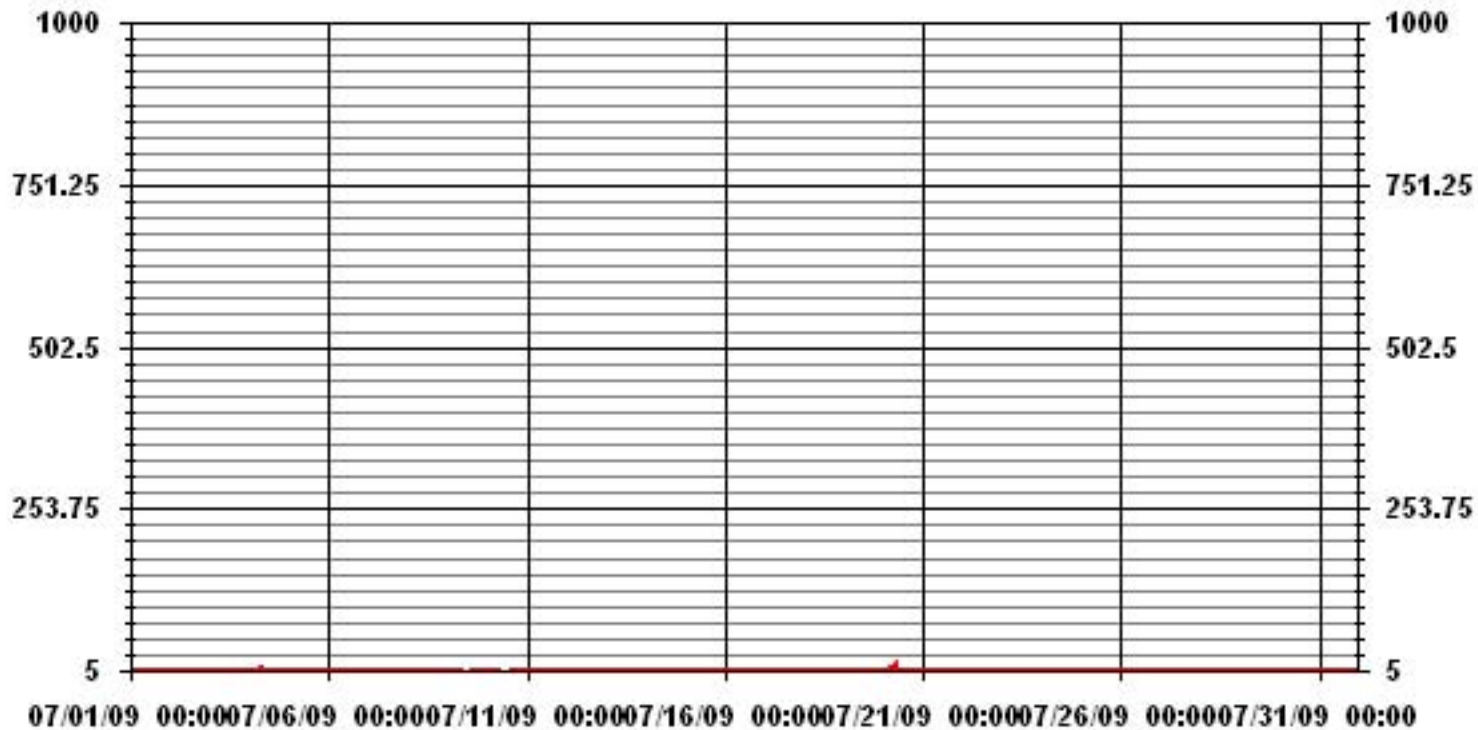
24 HOUR AVERAGES FOR JULY 2009



MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:	72		
MAXIMUM 1-HR AVERAGE:	13	PPB @ HOUR(S)	7 ON DAY(S)
MAXIMUM 24-HR AVERAGE:	2.0	PPB	ON DAY(S)
IZS CALIBRATION TIME:	29	HRS	OPERATIONAL TIME: 729 HRS
MONTHLY CALIBRATION TIME:	10	HRS	AMD OPERATION UPTIME: 98.0 %
STANDARD DEVIATION:	1.02		MONTHLY AVERAGE: 0.23 PPB

### 01 Hour Averages



# LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - MASKWA

JULY 2009

**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	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	0	0	0	0	0	0	55	3	3	2	1	1	1	0	0	0	0	0	0	0	2	0	<b>IZS</b>	0	55	3.0	24		
2	0	0	0	0	0	2	10	6	0	1	2	0	0	3	0	0	0	0	0	0	0	<b>IZS</b>	0	0	10	1.0	24		
3	0	0	0	0	0	0	2	12	4	0	0	0	0	0	0	0	0	0	0	0	0	<b>IZS</b>	0	0	12	0.8	24		
4	0	0	0	0	1	5	14	18	11	4	3	1	2	3	2	3	2	1	1	<b>IZS</b>	0	0	0	0	18	3.1	24		
5	0	0	0	0	0	6	19	4	8	8	4	2	0	1	0	1	0	0	<b>IZS</b>	1	1	0	0	0	19	2.4	24		
6	0	0	0	0	0	0	1	0	2	3	2	2	2	2	3	2	4	<b>IZS</b>	4	4	3	0	0	0	4	1.5	24		
7	0	0	0	0	0	0	0	0	0	0	6	0	8	0	0	<b>IZS</b>	0	0	0	0	0	0	0	0	8	0.6	24		
8	2	0	1	0	1	2	1	0	1	6	2	1	0	0	1	<b>IZS</b>	0	0	0	0	0	0	0	0	6	0.8	24		
9	0	0	0	0	0	0	0	0	0	<b>C</b>	<b>C</b>	<b>M</b>	<b>M</b>	1	<b>IZS</b>	<b>C</b>	0	0	0	0	1	1	0	0	1	0.2	22		
10	2	4	0	3	15	10	7	<b>C</b>	<b>C</b>	<b>C</b>	<b>C</b>	<b>C</b>	<b>C</b>	<b>C</b>	20	0	0	0	0	0	0	0	0	0	20	3.8	24		
11	0	0	0	0	0	0	2	0	0	2	21	2	<b>IZS</b>	1	2	1	0	18	0	0	0	0	0	0	21	2.1	24		
12	0	0	0	0	0	0	1	1	0	0	0	<b>IZS</b>	0	0	0	0	0	0	0	0	0	0	0	0	1	0.1	24		
13	0	0	0	0	0	0	1	1	1	2	<b>IZS</b>	3	5	2	2	5	2	1	1	1	1	1	1	1	5	1.3	24		
14	0	0	0	0	0	0	0	1	1	<b>IZS</b>	2	1	0	0	0	0	0	0	3	0	0	0	0	0	3	0.3	24		
15	0	0	0	0	0	0	0	<b>M</b>	<b>M</b>	17	1	4	4	2	<b>M</b>	<b>M</b>	30	0	0	0	0	0	0	0	30	2.9	20		
16	0	0	0	0	0	1	<b>M</b>	<b>M</b>	<b>M</b>	<b>M</b>	<b>M</b>	0	0	<b>M</b>	<b>M</b>	<b>M</b>	1	0	0	0	0	0	0	0	1	0.1	16		
17	0	0	0	0	11	16	<b>IZS</b>	0	0	3	4	2	0	<b>M</b>	<b>M</b>	<b>M</b>	0	1	0	0	0	0	0	0	16	1.9	21		
18	0	0	0	0	0	<b>IZS</b>	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	4	5	0.4	24	
19	14	1	0	0	<b>IZS</b>	0	1	0	1	3	1	1	13	1	0	0	0	0	0	0	16	0	11	16	16	2.7	24		
20	5	8	8	<b>IZS</b>	20	21	18	18	12	10	5	8	3	3	6	4	11	12	2	8	2	0	0	0	21	8.0	24		
21	0	0	<b>IZS</b>	2	0	1	42	11	7	4	2	4	4	4	1	1	0	0	0	0	0	0	0	0	42	3.6	24		
22	0	<b>IZS</b>	0	0	1	2	9	17	3	3	2	0	0	0	1	2	1	1	1	1	1	1	1	1	17	2.1	24		
23	<b>IZS</b>	0	0	0	0	5	3	22	2	4	5	2	3	4	5	1	0	0	0	0	0	0	0	<b>IZS</b>	22	2.5	24		
24	3	3	0	0	0	36	11	4	2	1	1	0	1	2	2	6	0	5	0	0	0	0	<b>IZS</b>	3	36	3.5	24		
25	0	0	0	0	0	3	4	0	0	0	4	1	9	2	1	1	0	0	0	0	<b>IZS</b>	0	0	9	1.1	24			
26	0	0	0	0	0	0	0	1	0	1	0	0	0	0	4	1	1	1	0	0	<b>IZS</b>	0	0	4	0.4	24			
27	0	0	0	0	4	2	5	2	3	1	1	2	3	2	0	0	0	0	0	<b>IZS</b>	0	0	0	0	5	1.1	24		
28	0	0	0	0	0	1	0	0	0	0	0	0	0	0	2	0	0	0	0	<b>IZS</b>	0	0	0	0	2	0.1	24		
29	0	0	0	0	5	0	0	0	0	0	0	0	2	1	2	1	1	<b>IZS</b>	0	0	0	0	0	0	5	0.5	24		
30	0	0	0	0	0	1	7	20	1	8	5	2	1	0	4	2	<b>IZS</b>	0	0	0	0	0	0	0	20	2.2	24		
31	0	0	0	0	0	2	2	1	<b>P</b>	1	3	2	2	2	2	<b>IZS</b>	0	0	0	0	1	1	0	0	3	0.9	23		
HOURLY MAX	14	8	8	3	20	36	55	22	12	17	21	8	13	4	6	20	30	18	4	8	3	16	5	11					
HOURLY AVG	0.9	0.5	0.3	0.2	1.9	3.9	7.4	5.1	2.3	3.1	2.9	1.5	2.3	1.3	1.5	2.0	1.8	1.4	0.4	0.5	0.4	0.7	0.2	0.7					

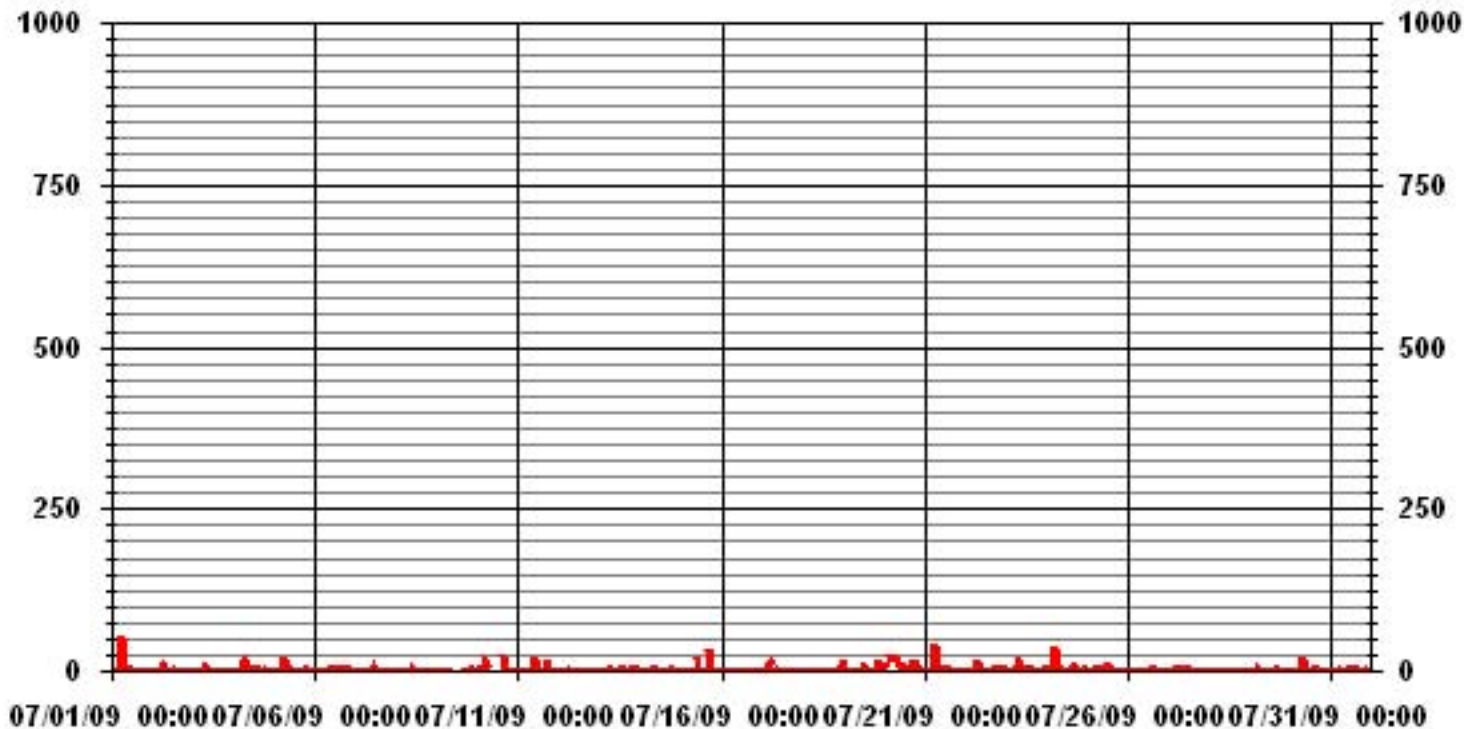
**STATUS FLAG CODES**

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**

NUMBER OF NON-ZERO READINGS:	265
MAXIMUM INSTANTANEOUS VALUE:	55 PPB @ HOUR(S) 6 ON DAY(S) 1
IZS CALIBRATION TIME:	29 HRS
MONTHLY CALIBRATION TIME:	11 HRS
STANDARD DEVIATION	4.63
OPERATIONAL TIME:	726 HRS

### 01 Hour Averages





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

July 2009

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	10.28	4.63	4.20	4.63	4.78	3.18	3.62	3.04	6.37	9.56	12.46	5.94	7.97	7.68	5.50	6.08	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	10.28	4.63	4.20	4.63	4.78	3.18	3.62	3.04	6.37	9.56	12.46	5.94	7.97	7.68	5.50	6.08	

Calm : .00 %

Total # Operational Hours : 690

Distribution By Samples

	Direction																
Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 50	71	32	29	32	33	22	25	21	44	66	86	41	55	53	38	42	690
< 110																	
< 210																	
>= 210																	
Totals	71	32	29	32	33	22	25	21	44	66	86	41	55	53	38	42	

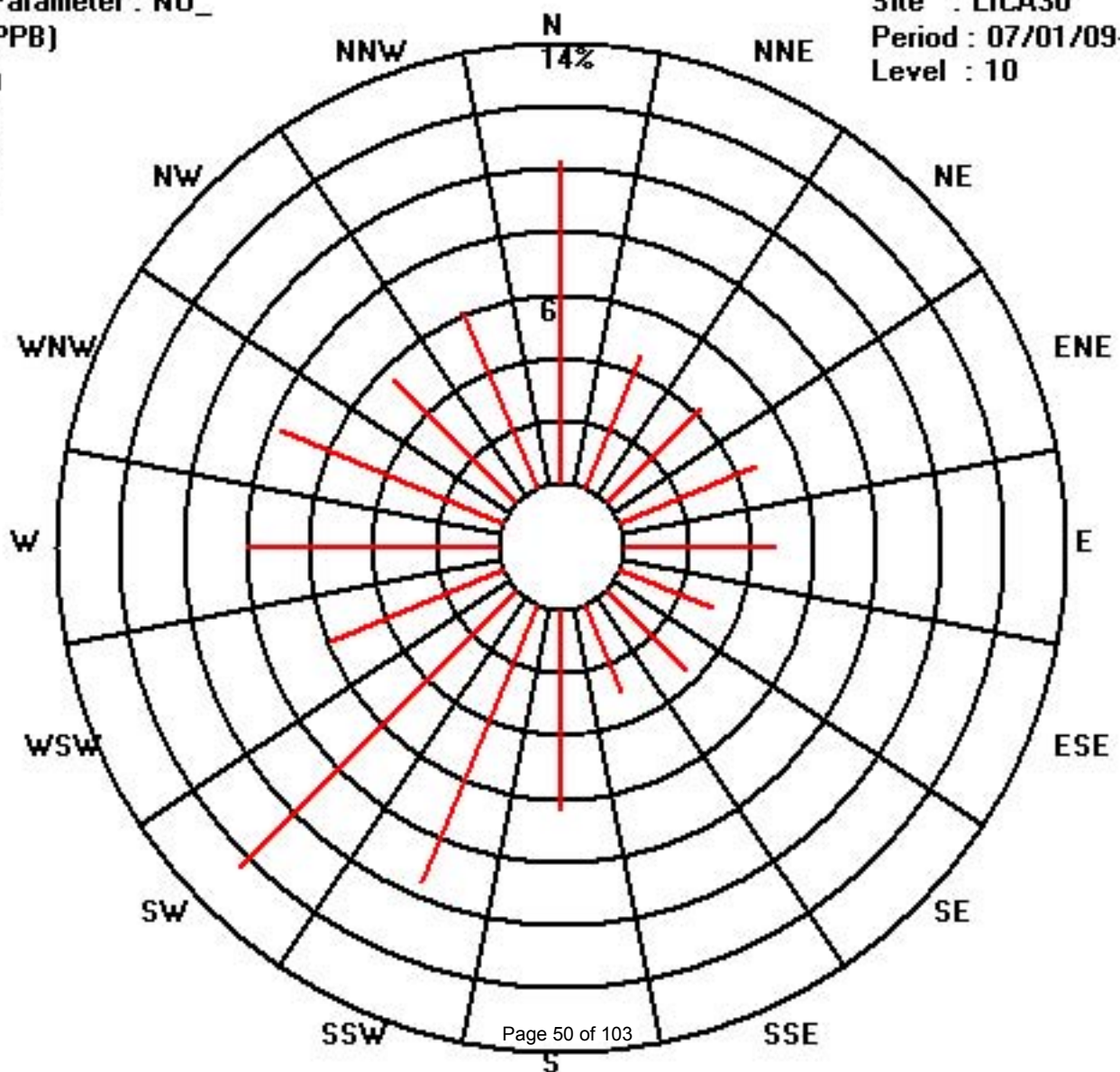
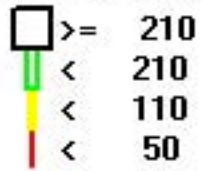
Calm : .00 %

Total # Operational Hours : 690

Class Limits (PPB)

Period : 07/01/09-07/31/09

Level : 10



# Oxides of Nitrogen

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - MASKWA

JULY 2009

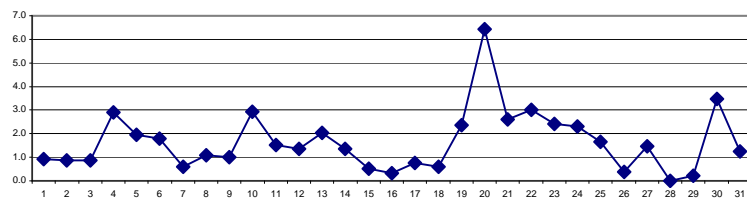
OXIDES OF NITROGEN hourly averages in ppb

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	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	1	0	1	0	0	1	5	5	3	2	1	0	0	0	0	0	0	0	0	2	0	IZS	0	5	0.9	24	
2	0	0	0	0	1	5	5	5	0	1	2	0	0	1	0	0	0	0	0	0	0	IZS	0	0	5	0.9	24
3	0	0	0	0	1	1	4	10	1	1	0	1	0	0	0	0	0	1	0	IZS	0	0	0	10	0.9	24	
4	0	0	0	0	1	4	7	22	10	6	1	0	1	3	2	3	1	3	3	IZS	0	0	0	22	2.9	24	
5	0	0	0	0	1	4	12	5	7	10	4	1	0	0	1	0	0	IZS	0	0	0	0	0	12	2.0	24	
6	0	0	0	0	0	0	0	0	0	4	2	0	0	0	0	3	IZS	9	15	8	0	0	0	15	1.8	24	
7	0	0	0	0	0	0	0	0	0	0	8	0	6	0	0	0	0	0	0	0	0	0	0	8	0.6	24	
8	6	1	1	2	1	2	0	0	0	5	2	0	0	0	0	IZS	1	0	0	3	1	0	0	6	1.1	24	
9	0	0	0	0	0	0	0	0	0	C	C	M	M	5	IZS	3	0	0	0	0	1	3	3	4	5	1.0	22
10	4	8	6	4	6	6	3	C	C	C	C	C	C	C	C	2	0	1	0	1	1	1	1	3	8	2.9	24
11	0	1	0	2	2	2	2	1	1	3	4	4	IZS	2	1	1	1	1	1	1	1	1	1	2	4	1.5	24
12	2	3	2	2	1	1	3	3	1	1	1	IZS	1	1	1	1	1	0	1	1	1	1	1	1	3	1.3	24
13	1	1	1	1	2	3	3	2	2	3	IZS	4	5	2	2	4	2	1	1	1	1	2	2	1	5	2.0	24
14	1	1	1	2	2	2	2	2	3	IZS	3	2	1	1	1	1	1	2	1	1	0	0	0	3	1.3	24	
15	0	0	0	0	0	0	0	M	M	M	1	1	1	0	M	M	M	0	0	0	0	4	3	0	4	0.5	19
16	0	0	0	1	1	1	1	M	M	0	0	0	0	M	M	M	0	0	0	0	0	0	1	1	1	0.3	19
17	1	1	0	0	1	4	IZS	0	0	0	3	3	0	M	M	M	1	1	0	0	0	0	0	0	4	0.8	21
18	0	0	0	0	2	IZS	7	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	7	0.6	24
19	8	0	0	0	IZS	1	1	2	2	5	1	1	1	1	1	1	0	0	0	0	0	14	4	11	14	2.3	24
20	8	11	11	IZS	18	13	12	20	13	5	2	3	1	1	5	2	7	2	1	6	6	1	0	0	20	6.4	24
21	0	0	IZS	10	5	3	13	11	5	6	1	2	1	3	0	0	0	0	0	0	0	0	0	0	13	2.6	24
22	2	IZS	3	4	5	6	8	7	5	6	6	2	2	1	2	3	0	0	0	1	4	2	0	8	3.0	24	
23	IZS	4	4	1	4	9	6	8	1	2	2	2	2	5	2	0	0	0	1	0	0	0	0	IZS	9	2.4	24
24	0	0	0	0	0	6	8	8	4	2	0	0	1	2	4	2	0	5	0	0	0	0	IZS	11	11	2.3	24
25	3	2	3	4	6	6	4	1	0	1	3	0	1	1	1	0	0	0	0	0	0	IZS	1	0	6	1.7	24
26	0	0	0	0	0	0	1	2	2	2	0	0	0	0	2	0	0	0	0	0	0	IZS	0	0	2	0.4	24
27	1	1	1	2	4	4	10	3	5	0	0	1	1	1	0	0	0	0	0	IZS	0	0	0	0	10	1.5	24
28	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
29	0	0	0	0	1	0	0	0	0	0	0	0	0	1	1	0	1	IZS	0	1	0	0	0	0	1	0.2	24
30	0	4	8	8	5	5	13	6	5	12	7	3	2	0	2	0	IZS	0	0	0	0	0	0	0	13	3.5	24
31	0	0	0	1	2	3	3	1	2	1	4	3	3	3	2	IZS	0	0	0	0	0	0	0	1	4	1.3	24
HOURLY MAX	8	11	11	10	18	13	13	22	13	12	8	4	6	5	5	4	7	5	9	15	8	14	4	11			
HOURLY AVG	1.3	1.3	1.4	1.5	2.4	3.1	4.4	4.5	2.6	2.9	2.1	1.2	1.1	1.2	1.1	1.0	0.7	0.5	0.7	1.0	0.8	1.1	0.7	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

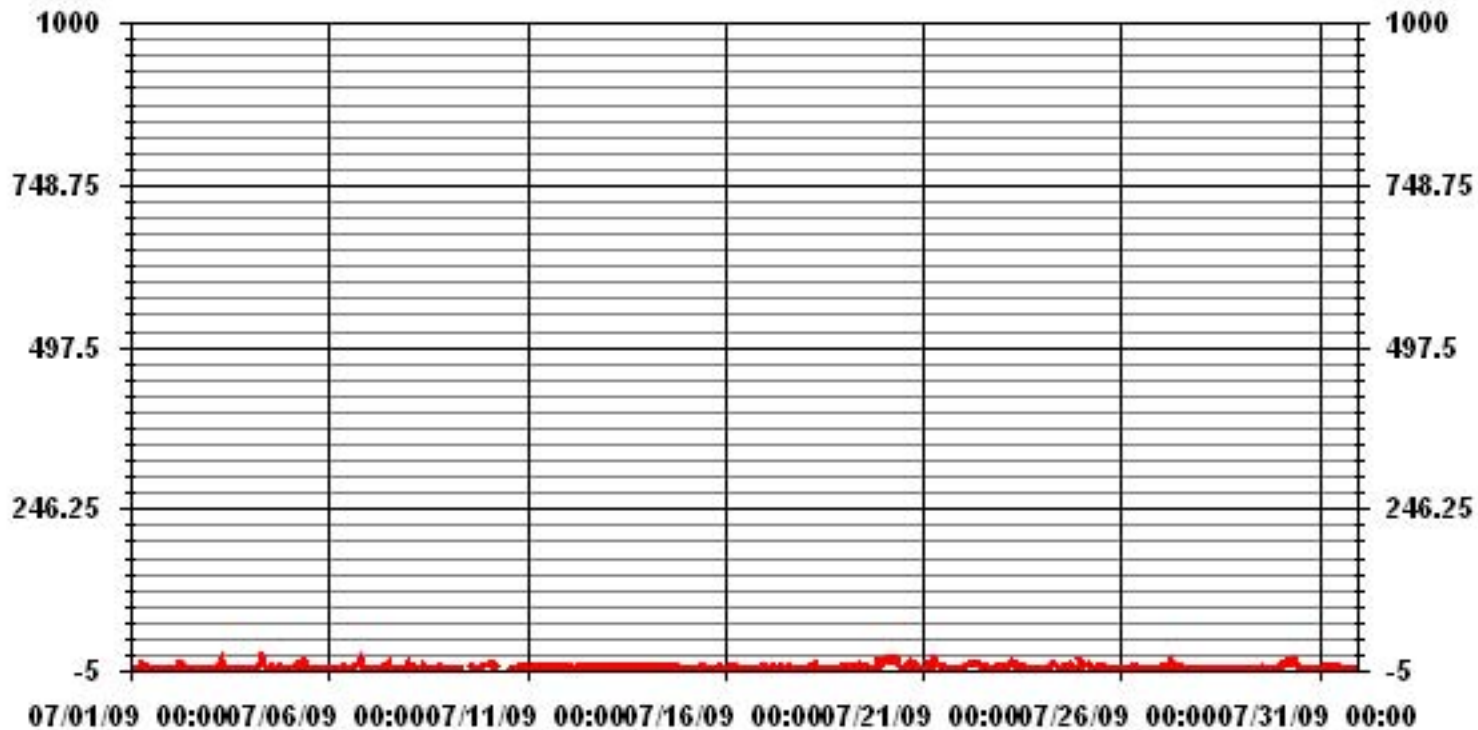
24 HOUR AVERAGES FOR JULY 2009



MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:	350				
MAXIMUM 1-HR AVERAGE:	22 PPB	@ HOUR(S)	7	ON DAY(S)	4
MAXIMUM 24-HR AVERAGE:	6.4 PPB			ON DAY(S)	20
IZS CALIBRATION TIME:	29 HRS	OPERATIONAL TIME:	729 HRS		
MONTHLY CALIBRATION TIME:	10 HRS	AMD OPERATION UPTIME:	98.0 %		
STANDARD DEVIATION:	2.82	MONTHLY AVERAGE:	1.65 PPB		

### 01 Hour Averages



— LICA30 NOX\_ PPB

# LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - MASKWA

JULY 2009

## 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 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	1	1	0	0	3	68	6	5	4	3	2	1	0	1	1	0	0	0	0	8	0	IZS	0	68	4.6	24	
2	1	2	0	1	2	6	17	12	2	3	5	2	1	9	1	1	1	0	0	0	0	IZS	2	0	17	3.0	24	
3	0	1	1	1	1	3	11	36	21	2	2	3	1	0	0	0	0	0	4	2	IZS	0	0	0	36	3.9	24	
4	0	1	0	3	3	10	22	28	21	9	6	2	5	7	5	8	3	8	6	IZS	0	0	0	1	28	6.4	24	
5	1	1	1	1	2	10	31	11	19	18	11	5	2	2	0	4	0	2	IZS	1	0	0	0	0	31	5.3	24	
6	0	0	0	0	0	0	1	1	5	9	6	0	4	3	5	4	9	IZS	16	21	22	1	1	0	22	4.7	23	
7	0	0	0	6	0	0	0	0	0	3	18	2	22	1	0	4	IZS	0	0	0	0	0	4	0	22	2.6	24	
8	15	4	9	6	5	10	3	0	4	15	7	2	0	1	3	IZS	2	2	2	5	2	0	0	0	15	4.2	24	
9	0	0	0	0	0	0	0	0	0	C	C	M	M	4	IZS	C	0	0	0	0	12	12	4	7	12	2.2	22	
10	10	15	8	9	20	15	13	C	C	C	C	C	C	C	23	1	1	1	1	1	1	1	5	5	23	8.1	24	
11	1	2	2	6	6	7	10	3	3	5	35	7	IZS	4	5	2	2	21	1	1	1	1	1	3	35	5.6	24	
12	3	5	3	2	2	2	5	4	2	1	1	IZS	1	1	1	1	1	1	1	1	2	2	1	1	5	1.9	24	
13	1	1	2	2	3	4	3	3	3	5	IZS	9	12	5	5	14	6	2	2	2	2	3	3	2	14	4.1	24	
14	1	1	1	2	3	2	2	3	4	IZS	5	3	2	2	1	2	2	1	10	1	1	1	1	1	10	2.3	24	
15	1	1	1	1	1	1	2	M	M	23	4	6	6	3	M	M	M	32	0	0	0	2	7	4	1	32	4.8	21
16	0	0	1	2	2	3	M	M	M	M	M	1	1	M	M	M	2	0	0	0	0	1	1	1	3	1.0	16	
17	1	1	1	1	17	24	IZS	1	0	10	13	10	1	M	M	M	3	6	2	1	0	0	0	0	24	4.6	21	
18	0	0	0	5	6	IZS	11	5	0	0	2	0	1	1	0	0	5	2	0	0	1	0	22	21	22	3.6	24	
19	40	11	0	0	IZS	3	3	3	4	11	3	2	22	4	2	1	1	1	1	1	7	32	7	25	40	8.0	24	
20	15	20	18	IZS	33	33	27	27	20	17	9	14	7	6	14	9	23	24	8	27	16	7	0	2	33	16.3	24	
21	3	3	IZS	15	8	5	58	20	16	9	7	8	11	11	2	2	1	1	0	0	0	1	0	0	58	7.9	24	
22	4	IZS	4	5	8	9	20	29	10	12	9	5	3	2	5	7	1	1	0	3	3	6	4	1	29	6.6	24	
23	IZS	13	9	6	9	19	14	37	5	11	12	6	11	12	11	3	3	3	0	0	0	0	0	0	37	8.5	24	
24	6	8	0	0	0	58	18	12	7	5	2	1	5	6	8	17	2	19	0	0	0	1	IZS	20	58	8.5	24	
25	13	4	4	6	7	12	14	3	1	2	10	3	15	5	4	4	2	3	0	0	0	IZS	3	0	15	5.0	24	
26	0	0	0	0	0	0	3	3	3	4	1	0	0	0	11	1	1	0	0	0	IZS	0	0	1	11	1.2	24	
27	2	3	2	5	13	9	15	6	10	4	3	5	7	6	0	1	1	0	0	IZS	0	0	0	0	15	4.0	24	
28	0	0	0	0	0	5	2	0	0	0	0	1	0	6	2	0	0	0	IZS	0	0	0	1	1	6	0.8	24	
29	0	0	0	0	16	4	0	0	0	0	1	0	7	3	5	4	4	IZS	1	2	1	0	0	0	16	2.1	24	
30	2	5	11	10	6	9	20	34	7	20	14	8	4	2	9	3	IZS	0	0	0	0	0	0	0	34	7.1	24	
31	0	0	1	2	3	5	5	2	P	2	9	5	6	7	3	IZS	1	1	1	1	1	1	1	1	9	2.6	23	
HOURLY MAX	40	20	18	15	33	58	68	37	21	23	35	14	22	12	14	23	32	24	16	27	22	32	22	25				
HOURLY AVG	4.0	3.4	2.7	3.2	5.9	9.0	13.7	10.3	6.4	7.6	7.3	4.0	5.7	3.8	4.1	4.7	3.8	3.4	2.0	2.4	2.9	2.7	2.2	3.1				

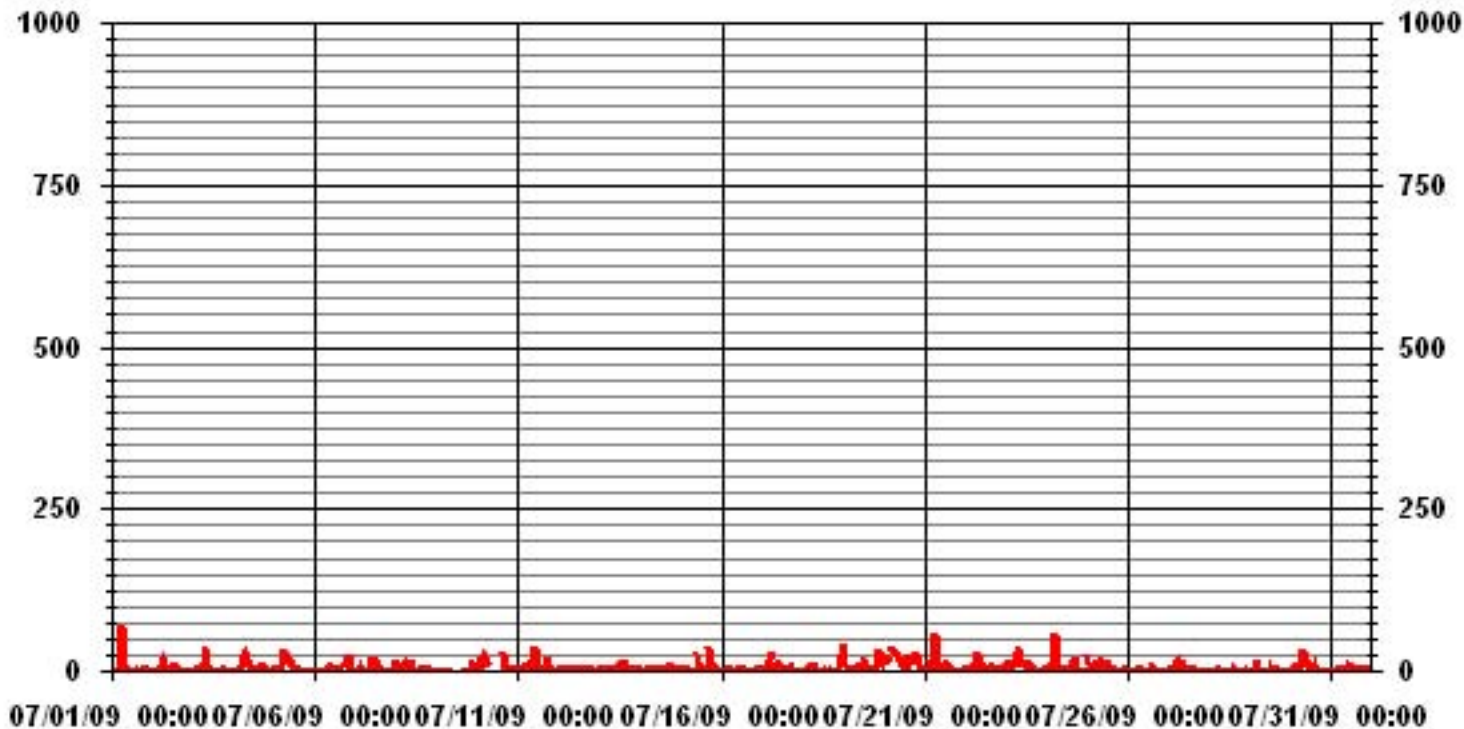
### STATUS FLAG CODES

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:	506					
MAXIMUM INSTANTANEOUS VALUE:	68	PPB	@ HOUR(S)	6	ON DAY(S)	1
IZS CALIBRATION TIME:	29	HRS	OPERATIONAL TIME:	726 HRS		
MONTHLY CALIBRATION TIME:	11	HRS				
STANDARD DEVIATION	7.68					

### 01 Hour Averages



— LICA30 NOxMAX PPB

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

July 2009

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	10.28	4.63	4.20	4.63	4.78	3.18	3.62	3.04	6.37	9.56	12.46	5.94	7.97	7.68	5.50	6.08	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	10.28	4.63	4.20	4.63	4.78	3.18	3.62	3.04	6.37	9.56	12.46	5.94	7.97	7.68	5.50	6.08	

Calm : .00 %

Total # Operational Hours : 690

Distribution By Samples

	Direction																
Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 50	71	32	29	32	33	22	25	21	44	66	86	41	55	53	38	42	690
< 110																	
< 210																	
>= 210																	
Totals	71	32	29	32	33	22	25	21	44	66	86	41	55	53	38	42	

Calm : .00 %

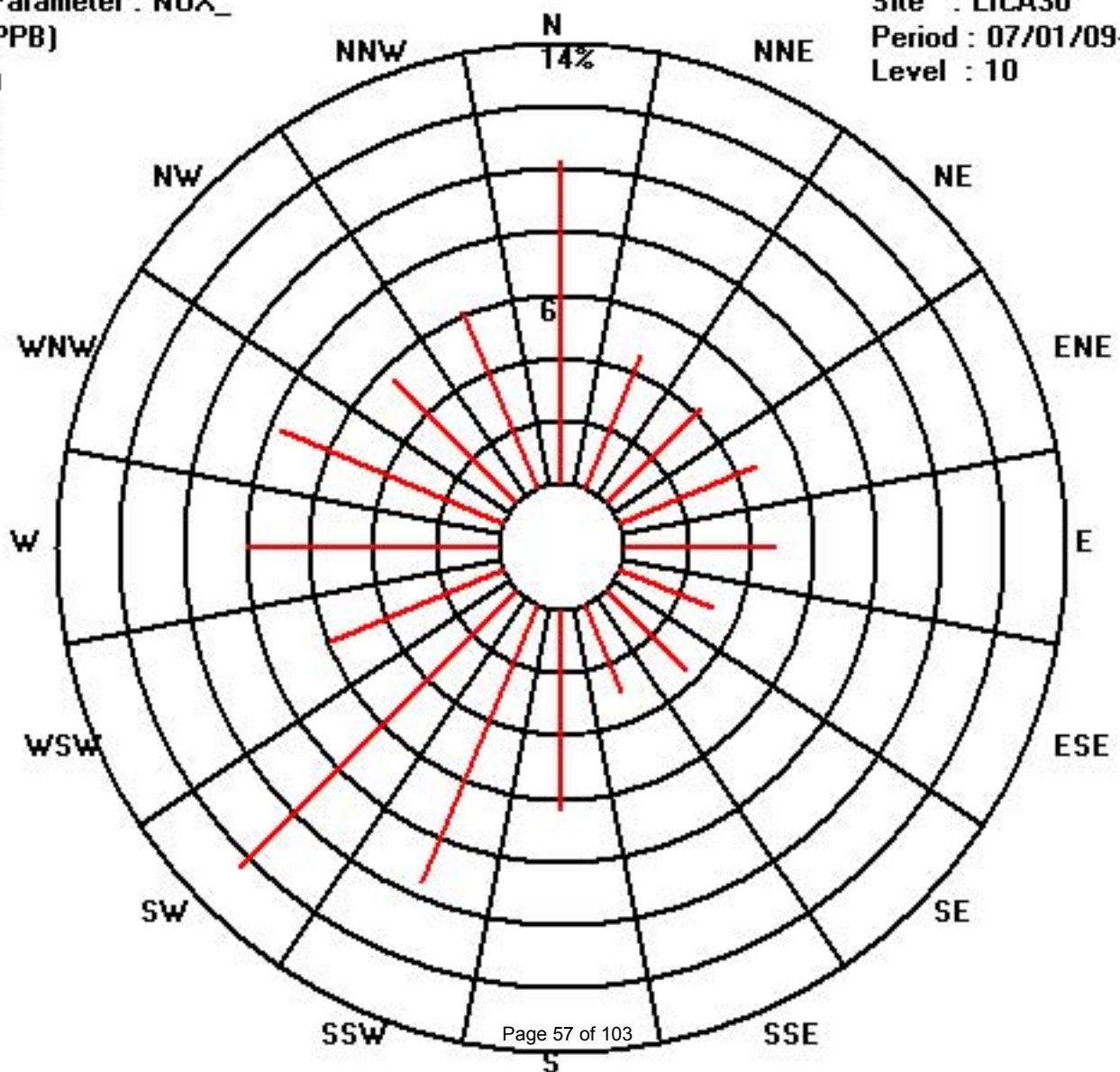
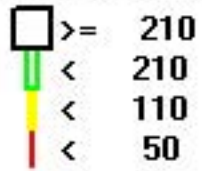
Total # Operational Hours : 690



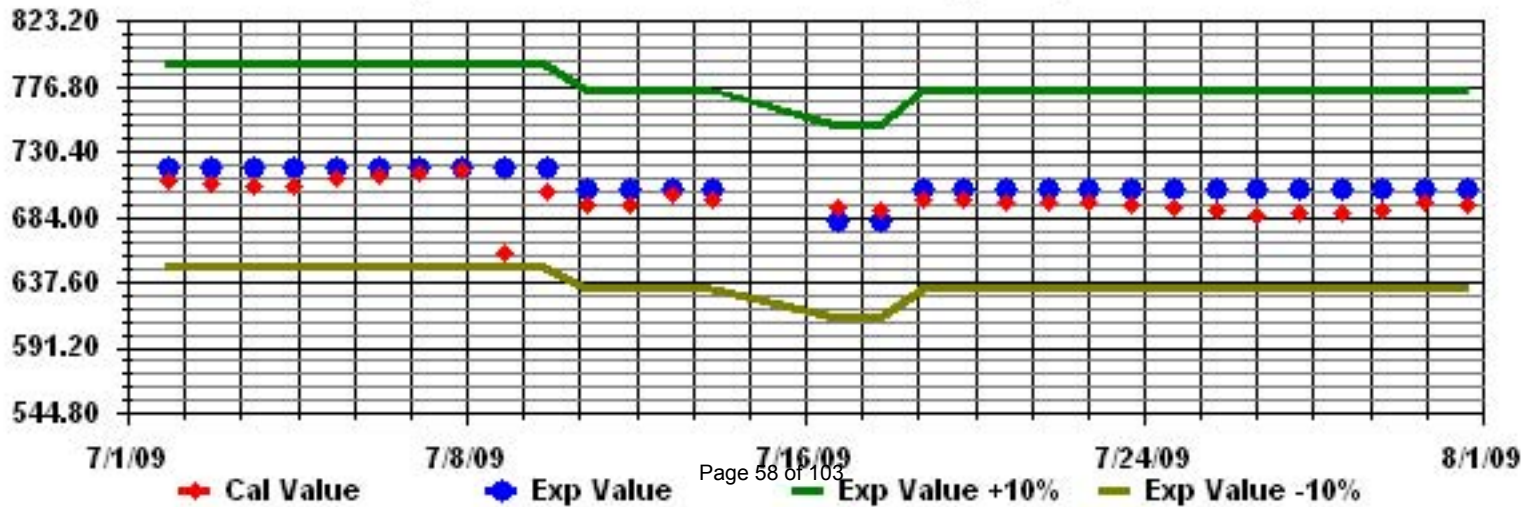
Class Limits (PPB)

Period : 07/01/09-07/31/09

Level : 10



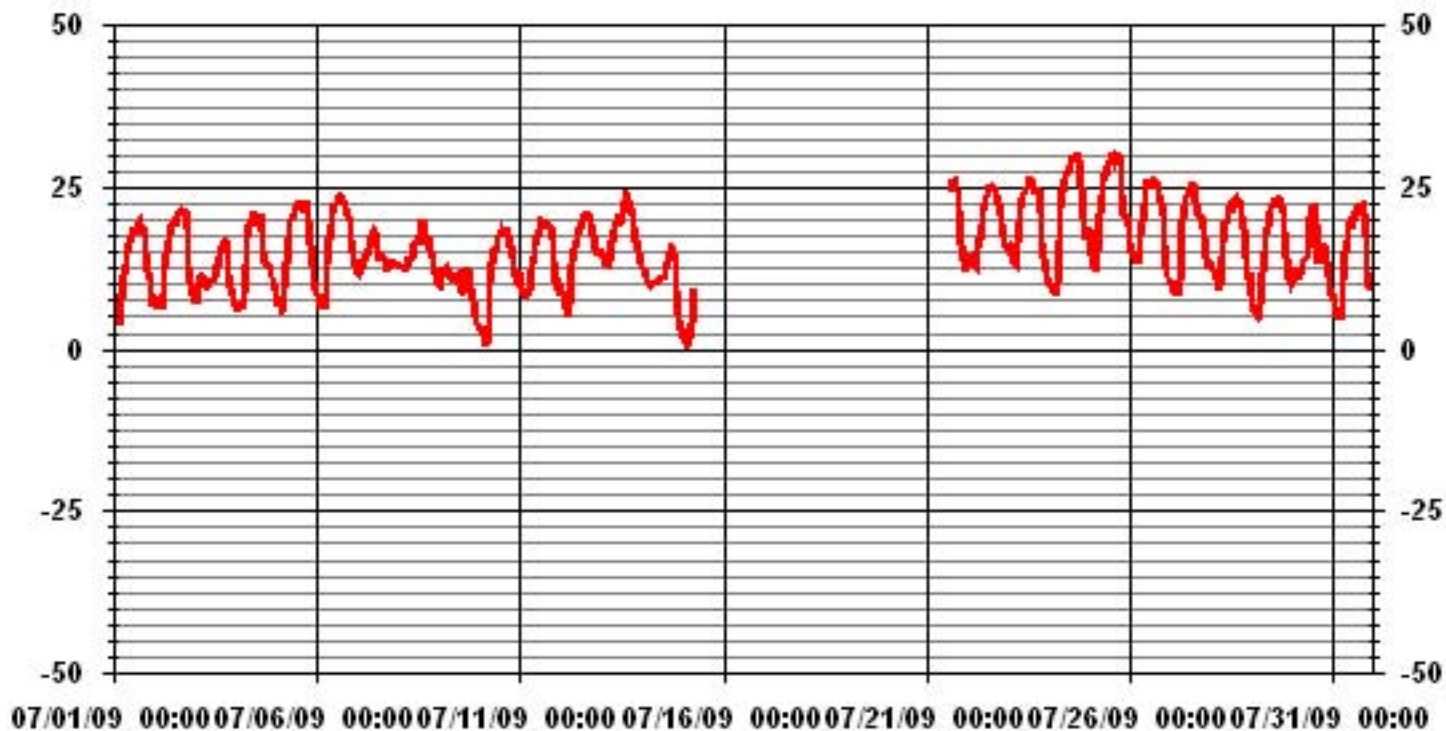
Calibration Graph for Site: LICA30 Parameter: NOX\_ Sequence: NO2 Phase: SPAN



# Temperature



### 01 Hour Averages



# Precipitation

### LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - MASKWA

JULY 2009

#### PRECIPITATION hourly averages (mm)

MST																										DAILY	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	0:00	MAX.	TOTAL	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	0	0.3	0.1	0	0	0.3	0.4	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	1.7	5.9	2.2	2.3	0.1	0.8	0.4	0.2	0	0	0	0	0	0	0	0	0	0	0	0	5.9	13.6	24
4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6.9	0.3	1.6	0	0.1	0	0	0	0	6.9	8.9	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	0.0	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	0.0	24
7	0	0	0	0	0	0	0	0	0	0	0	0.1	0.7	0.3	0.9	0.3	0.2	1.5	0.2	0	0	0	0	0	0	1.5	4.2	24
8	0	0	0.1	0.2	0	0	0	0	0	0	0	0	0	0.1	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4	24
9	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.2	0	0	0	0	0	0	0	0	0	0	0.4	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	0	0	0.8	0.8	0.8	24
11	1.8	3	2.5	0.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3.0	7.5	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	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	0	0	0	0	0	M	M	0	0	0	M	M	M	N	N	N	N	N	N	N	N	N	N	0.0	0.0	11
16	N	N	N	N	N	N	N	N	M	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	15
17	0	0	0	0	0	0	0	0	0	0	0	0	0	M	M	M	0	0	0	0	0	0	0	0	0	0.0	0.0	21
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	24
19	0.7	4.4	0	0	0.1	0	0	0	0	0	0	0	0.3	0.6	0.3	1.3	0.5	0.1	0.1	0.2	2.2	0.9	0	0	4.4	11.7	24	
20	0	0	0	0	0.2	0.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4	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	0.2	0	0	0.2	0.2	24
28	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	0.1	0.1	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	17.3	4.1	0	0.5	0	0	0	0	0	0	0	17.3	21.9	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	1.8	4.4	2.5	0.2	0.2	1.7	5.9	2.2	2.3	0.1	0.8	0.4	0.7	0.6	17.3	4.1	6.9	1.5	1.6	0.2	2.2	0.9	11.8	0.8				

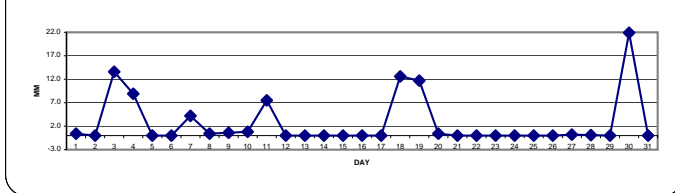
#### STATUS FLAG CODES

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

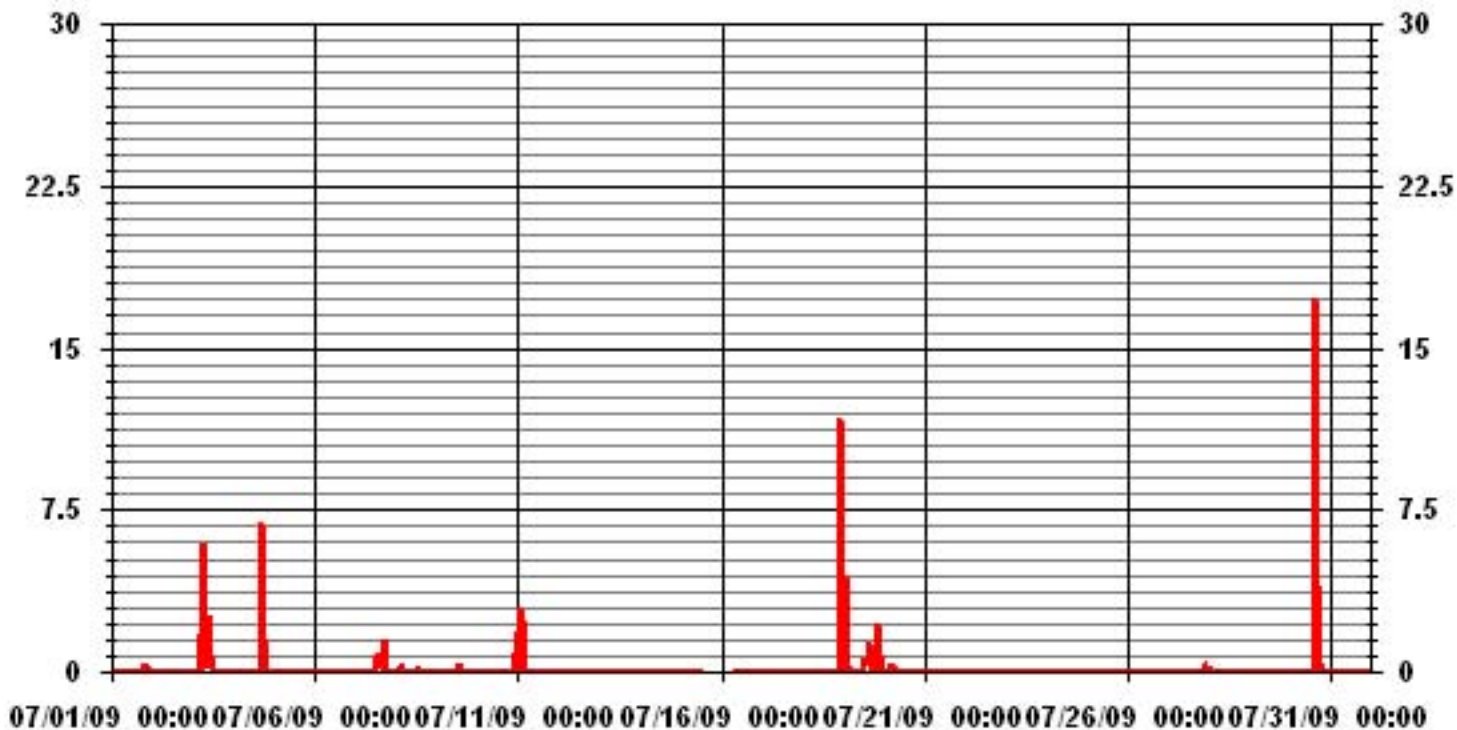
#### MONTHLY SUMMARY

MAXIMUM 1-HR AVERAGE:	17.3	MM	HOUR(S)	14	ON DAY(S)	30
MAXIMUM DAILY TOTAL	21.9	MM			ON DAY(S)	30
MONTHLY TOTAL	83.3	MM				
CALIBRATION TIME:	0	HRS	OPERATIONAL TIME:	719	HRS	
STANDARD DEVIATION:	0.91		AMD OPERATION UPTIME:	96.6	%	
			MONTHLY AVERAGE:	0.12	MM	

DAILY TOTALS FOR JULY 2009



### 01 Hour Averages



— LICA30 PRECIP MM



# Relative Humidity

## LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - MASKWA

JULY 2009

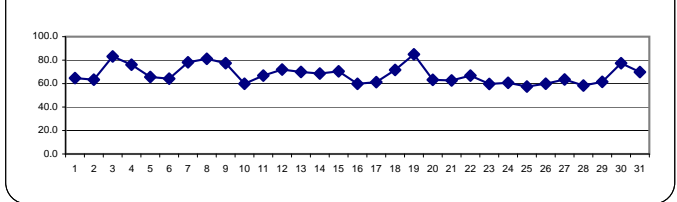
### RELATIVE HUMIDITY hourly averages (%)

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	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	77	84	91	92	92	81	69	65	59	52	49	45	47	43	40	38	39	41	45	60	78	83	90	93	93	64.7	24
2	2	89	90	91	91	92	88	77	70	61	54	49	44	42	42	39	36	34	35	35	43	68	77	85	88	92	63.3	24
3	3	89	91	82	80	83	87	91	92	91	91	89	88	86	82	76	70	68	64	58	70	89	92	93	93	93	83.1	24
4	4	94	94	94	94	94	94	86	68	57	51	46	42	46	49	51	51	74	88	90	91	92	93	94	94	94	76.1	24
5	5	94	94	94	94	94	94	89	69	60	56	50	43	42	40	38	40	41	42	36	50	63	77	86	89	94	65.6	24
6	6	92	93	93	94	94	93	83	73	67	58	52	45	42	38	38	37	40	42	43	46	57	67	79	75	94	64.2	24
7	7	79	81	75	74	72	67	65	65	63	59	61	71	78	80	82	85	82	91	92	92	91	91	90	90	92	78.2	24
8	8	90	91	91	92	92	92	88	87	85	78	75	75	71	64	61	70	74	73	69	78	82	87	90	92	92	81.1	24
9	9	93	92	90	86	86	83	82	82	81	76	70	74	80	83	71	59	52	53	61	71	80	84	87	93	93	77.4	24
10	10	89	91	91	92	92	93	74	59	52	46	41	36	36	33	35	36	33	36	46	56	70	70	66	64	93	59.9	24
11	11	85	91	89	90	90	90	77	70	66	59	56	53	48	47	46	43	43	46	47	53	68	80	85	82	91	66.8	24
12	12	86	89	92	92	93	93	75	70	64	60	58	56	54	53	55	55	57	60	63	72	82	85	82	81	93	72.0	24
13	13	81	81	87	87	87	86	75	71	68	66	68	74	67	59	52	53	51	54	56	62	70	75	75	73	87	69.9	24
14	14	74	73	73	74	77	75	74	74	74	71	70	67	65	65	61	57	51	43	45	50	70	84	88	91	91	68.6	24
15	15	92	92	92	92	91	81	M	M	M	M	M	M	M	M	M	M	38	39	41	51	64	65	63	64	92	70.5	15
16	16	67	69	73	76	78	71	64	M	M	53	50	47	44	44	44	43	47	51	52	60	63	70	73	77	78	59.8	22
17	17	82	88	90	93	93	91	72	62	55	46	40	37	45	M	M	M	40	36	42	49	49	47	57	72	93	61.2	21
18	18	81	85	85	90	88	85	84	84	84	78	74	60	61	50	50	49	50	51	57	65	73	69	78	88	90	71.6	24
19	19	86	92	92	93	93	91	88	83	79	74	67	66	65	83	85	88	89	88	88	89	90	90	91	89	93	85.0	24
20	20	89	89	88	88	86	86	77	72	64	58	53	46	43	40	37	39	43	43	42	44	59	73	78	80	89	63.2	24
21	21	80	81	82	86	91	89	72	64	56	47	42	41	42	38	38	39	39	41	44	53	75	86	87	91	91	62.7	24
22	22	90	85	80	84	83	77	75	72	66	62	60	57	54	54	56	52	52	49	48	57	65	72	78	76	90	66.8	24
23	23	72	73	77	81	84	74	63	57	50	44	40	35	36	32	35	39	37	41	47	65	80	87	91	93	93	59.7	24
24	24	93	93	93	94	94	94	79	62	52	46	42	42	39	34	33	30	30	32	37	50	69	77	73	68	94	60.7	24
25	25	66	81	88	90	90	84	65	57	49	43	40	35	34	34	34	37	36	37	39	57	70	72	70	72	90	57.5	24
26	26	82	87	90	91	92	90	80	69	59	48	40	36	35	34	28	29	31	34	38	47	63	73	79	83	92	59.9	24
27	27	85	88	91	90	91	86	67	55	48	43	38	36	34	34	39	45	51	52	57	63	62	85	92	92	92	63.5	24
28	28	87	89	89	91	93	92	75	66	57	47	37	37	33	32	29	31	30	32	36	41	57	71	68	80	93	58.3	24
29	29	85	90	92	92	92	92	77	65	54	48	41	36	34	31	30	29	29	36	45	53	70	82	85	88	92	61.5	24
30	30	85	81	79	82	81	78	72	73	77	71	56	53	54	53	66	91	89	85	79	87	88	90	93	94	94	77.4	24
31	31	93	94	94	94	94	94	92	77	66	53	51	45	46	44	42	41	44	44	46	62	85	91	93	91	94	69.8	24
HOURLY MAX		94	94	94	94	94	94	92	92	91	91	89	88	86	83	85	91	89	91	92	92	92	93	94	94			
HOURLY AVG		84.7	86.8	87.4	88.4	88.8	86.5	77.0	70.1	64.3	58.1	53.7	50.6	49.9	48.7	48.4	49.1	49.1	50.3	52.1	60.5	72.0	78.7	81.8	83.5			

#### 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

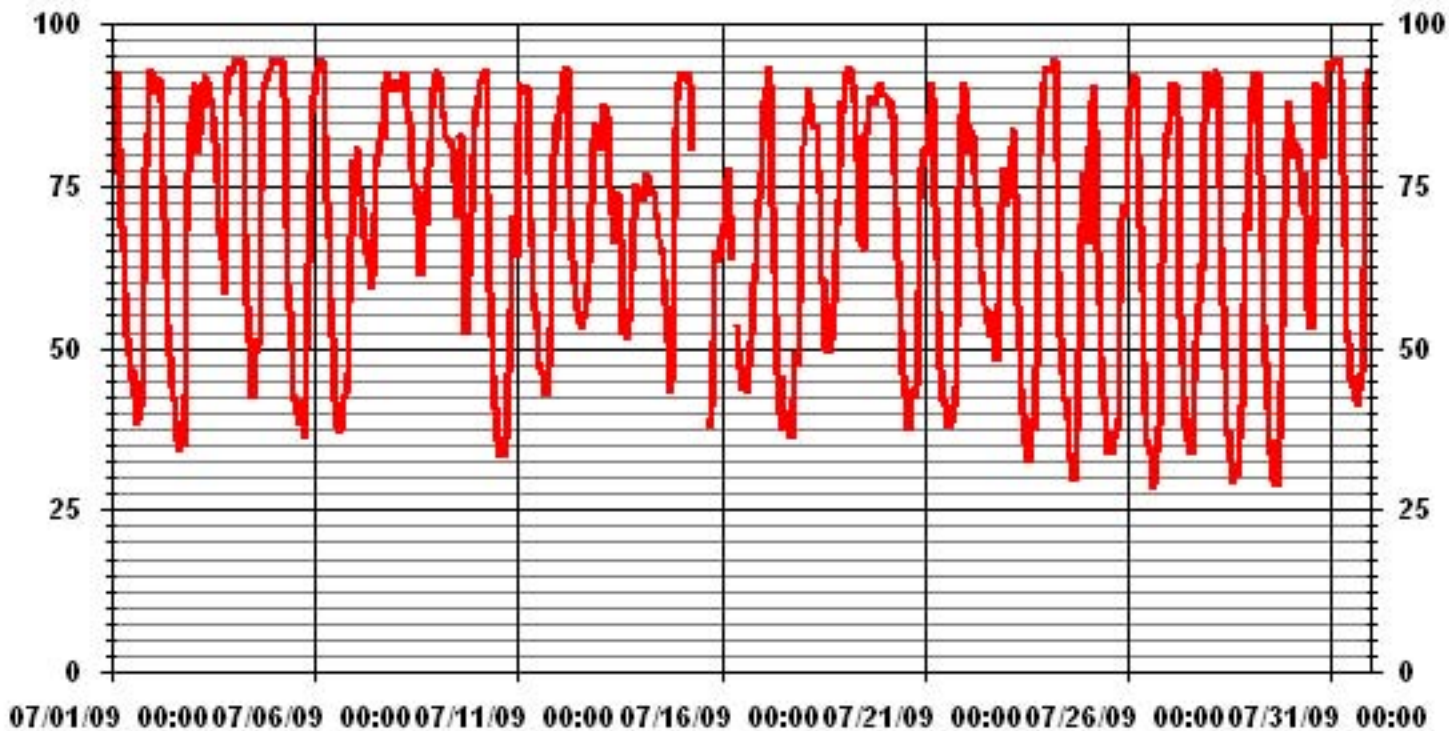
24 HOUR AVERAGES FOR JULY 2009



#### MONTHLY SUMMARY

MAXIMUM 1-HR AVERAGE:	94	%	@ HOUR(S)	VAR	ON DAY(S)	VAR
MAXIMUM 24-HR AVERAGE:	85.0	%			ON DAY(S)	19
					VAR-VARIOUS	
CALIBRATION TIME:	0	HRS	OPERATIONAL TIME:		730	HRS
STANDARD DEVIATION:	19.81		AMD OPERATION UPTIME:		98.1	%
			MONTHLY AVERAGE:		67.76	%

### 01 Hour Averages



— LICA30 RH %FS

# Barometric Pressure

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - MASKWA

JULY 2009

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	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	942	942	942	943	943	944	945	946	946	946	946	946	946	946	946	946	946	946	946	946	946	946	946	946	946	945.1	24		
2	2	946	947	946	947	947	948	949	949	949	949	949	949	949	948	948	948	948	948	948	948	948	947	947	947	947	949	947.8	24	
3	3	947	947	947	948	948	948	948	948	948	947	947	948	948	948	948	948	948	948	948	948	948	948	947	947	947	948	947.7	24	
4	4	947	947	947	947	947	948	949	949	949	949	949	948	948	947	947	947	946	946	946	946	946	946	946	946	946	949	947.3	24	
5	5	945	945	945	945	945	945	947	947	947	947	947	946	946	945	945	945	945	945	945	945	945	945	944	944	944	947	945.4	24	
6	6	944	944	944	943	944	944	945	945	945	945	945	944	944	944	943	942	942	942	941	942	942	941	941	940	945	943.2	24		
7	7	940	940	939	939	939	939	939	939	939	939	939	939	939	939	939	938	938	938	937	937	937	937	937	937	937	940	938.5	24	
8	8	937	937	937	936	936	935	936	935	935	936	935	935	935	934	934	934	934	934	934	934	934	933	933	933	937	934.8	24		
9	9	933	933	933	934	934	935	935	936	936	937	938	924	938	940	940	941	942	942	943	943	943	943	943	943	943	943	937.9	24	
10	10	943	943	944	944	943	944	945	946	946	945	945	945	945	945	945	945	945	945	944	944	944	944	944	944	944	945	946	944.5	24
11	11	945	945	945	945	945	945	946	947	948	948	948	948	948	948	948	948	948	948	948	948	948	948	947	947	947	948	947.0	24	
12	12	947	947	947	947	947	948	948	948	948	948	948	947	947	946	946	945	945	944	944	943	943	942	942	942	942	948	945.8	24	
13	13	941	940	940	939	939	939	939	939	939	939	939	938	938	938	938	937	937	937	937	938	938	938	939	939	941	938.6	24		
14	14	939	939	939	939	940	940	940	941	941	941	941	942	942	942	943	943	943	943	943	943	943	943	943	943	943	943	941.5	24	
15	15	943	943	943	943	944	945	M	M	M	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	945	943.4	7	
16	16	N	N	N	N	N	N	N	N	N	M	949	948	948	948	948	948	947	947	947	947	947	947	947	947	949	947.5	14		
17	17	948	948	948	948	948	949	950	951	951	952	951	951	951	M	M	M	951	951	951	951	950	950	950	950	952	950.0	21		
18	18	949	949	949	948	948	948	947	946	946	946	946	944	943	942	942	941	940	939	938	937	935	935	937	934	949	942.9	24		
19	19	936	938	935	935	936	936	936	936	937	937	937	937	937	937	937	937	937	937	938	938	939	939	939	939	939	939	937.1	24	
20	20	940	940	940	940	941	942	942	943	943	943	944	944	944	945	945	945	945	945	945	945	945	944	944	944	945	943.2	24		
21	21	944	944	944	944	944	944	945	946	946	945	945	945	944	944	944	944	943	943	943	942	942	942	941	941	946	943.6	24		
22	22	941	941	941	941	940	940	941	941	941	940	941	940	940	940	939	939	939	939	939	939	939	940	940	940	941	940.1	24		
23	23	940	940	940	940	941	941	942	943	943	943	943	943	943	942	942	942	942	942	942	942	942	942	942	942	943	941.8	24		
24	24	942	942	943	943	943	943	945	945	946	945	945	944	944	944	943	943	943	943	943	943	943	943	943	943	946	943.5	24		
25	25	944	944	944	944	945	945	947	948	948	948	948	948	947	947	947	947	946	946	946	946	946	946	946	947	948	946.3	24		
26	26	946	946	946	946	947	947	948	949	949	950	950	950	950	950	950	950	950	951	951	951	951	951	951	951	951	951	949.2	24	
27	27	951	951	951	951	952	952	953	954	954	953	953	952	952	951	951	951	950	950	950	950	949	949	949	949	954	951.2	24		
28	28	949	949	949	949	949	949	950	950	951	951	951	950	950	950	950	949	949	949	949	949	949	949	949	949	951	949.5	24		
29	29	949	949	949	949	949	949	951	951	952	951	951	951	951	950	950	949	948	948	947	947	946	945	945	944	952	948.7	24		
30	30	944	943	943	942	942	941	941	941	940	940	940	940	940	940	940	940	941	942	942	943	943	944	944	944	944	941.5	24		
31	31	944	944	945	945	945	945	947	948	948	948	948	947	947	946	946	945	945	944	944	943	942	942	942	941	948	945.0	24		
HOURLY MAX		951	951	951	951	952	952	953	954	954	953	953	952	952	951	951	951	951	951	951	951	951	951	951	951	951	951			
HOURLY AVG		944	944	944	943	944	944	945	945	945	945	945	944	945	944	944	944	944	944	944	944	944	944	944	944	943				

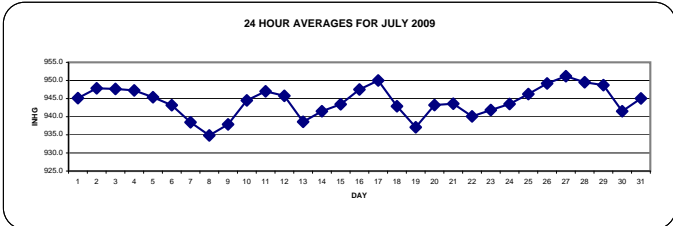
STATUS FLAG CODES

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

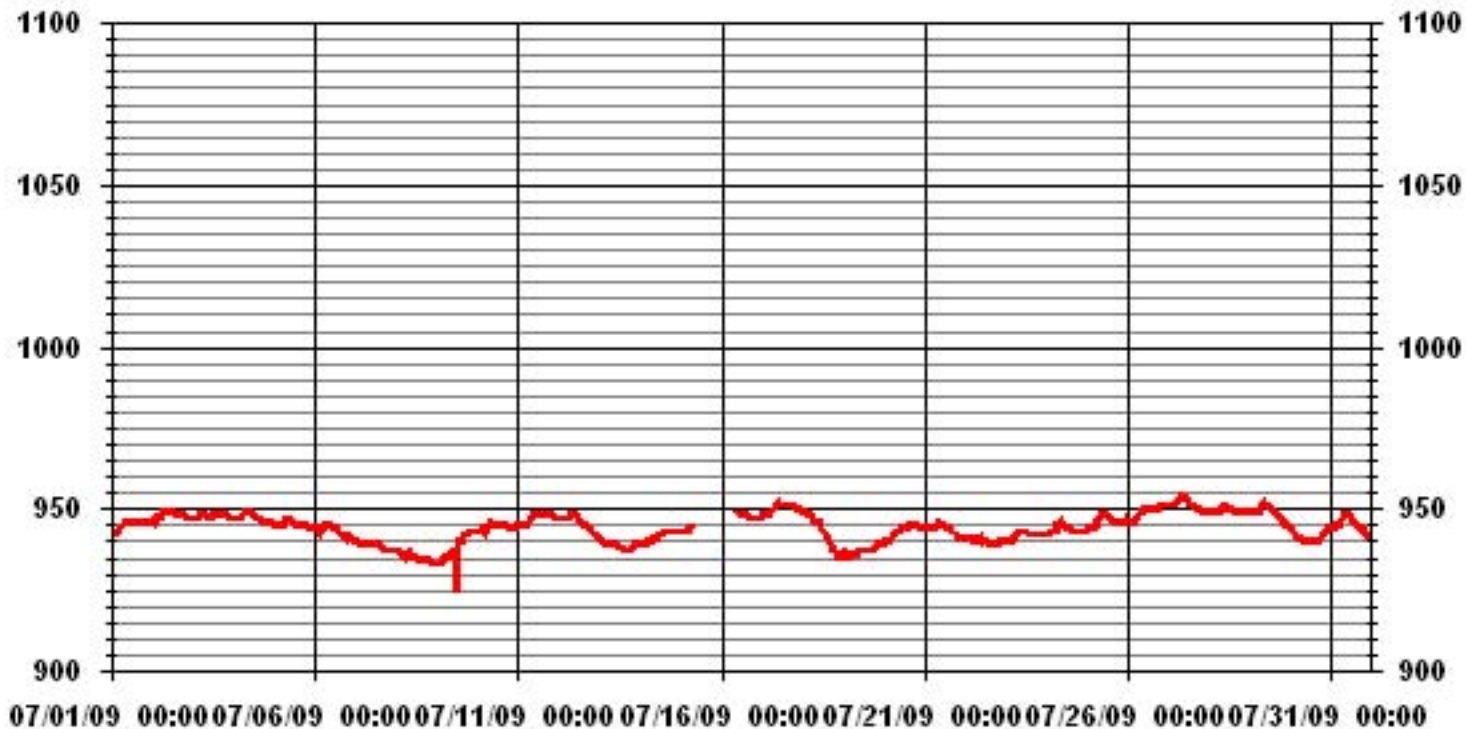
MONTHLY SUMMARY

MAXIMUM 1-HR AVERAGE:	954	INHG	@ HOUR(S)	7, 8	ON DAY(S)	27
MAXIMUM 24-HR AVERAGE:	951.2	INHG			ON DAY(S)	27
VAR-VARIOUS						
CALIBRATION TIME:	0	HRS	OPERATIONAL TIME:	714	HRS	
STANDARD DEVIATION:	4.45		AMD OPERATION UPTIME:	96.0	%	
			MONTHLY AVERAGE:	944	MB	

24 HOUR AVERAGES FOR JULY 2009



### 01 Hour Averages



— LICA30 BP MB

# Vector Wind Speed

# LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - MASKWA

JULY 2009

## WIND SPEED hourly averages (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	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	2.6	2.7	3.3	3.9	5.4	4.6	7.4	6.6	8.1	7.2	8.2	6.4	6.6	7.4	6.3	8.8	5.7	2.8	3.6	4.3	5.1	1.1	3.5	8.8	4.5	24
2	6	4	4.7	5.3	4.5	3.5	3	6	6.5	7.4	5.6	6	6.3	6.3	6.7	6.7	6.6	5.6	5	3.3	1.2	3	1.9	2	7.4	4	24
3	0.1	1.5	4.8	3.9	5.4	5.1	3	6.2	4.8	7.4	5.3	6.6	7.7	4.3	7	6.6	4.9	5.1	4.3	1.9	2.1	2.2	1.9	2.2	7.7	1.8	24
4	2.6	1.5	2.2	2.2	1.6	1.6	2.3	1.9	2.1	3.4	4.6	6.5	8.3	9	10.5	8.9	4.8	0	2.3	0.7	1.5	0.2	2.7	4.3	10.5	3.2	24
5	0.6	2	1.8	1	1	1.2	0	0.6	1.4	2.8	5.8	5.9	6.2	7.2	3.2	2.7	4	3.1	1.9	4.3	3.1	1.7	1.1	2.8	7.2	1	24
6	0.2	1.7	1	1.6	3	1.7	3.7	4.3	5	5.2	8.4	8.8	8.7	8.1	8.5	9	8.6	8.3	7.2	6	4.1	3.6	3.4	4	9	4.6	24
7	3.2	3.7	5.2	5.4	7.8	9	10.1	11.1	11.7	13.4	10.7	8.1	9.1	8	7.8	7.7	11.2	12	9.5	5.9	5.2	6.2	5.4	6.2	13.4	7.7	24
8	6.1	4.8	4.9	3.8	3.4	4	5.7	5	4.8	2.8	4.9	4.9	5.4	5.6	6.2	6.2	5.7	1.9	2.7	3.1	4.1	3.9	1.6	1.4	6.2	3	24
9	1.8	2.5	5	7.6	7.9	10.8	14.6	12.5	12.2	11.7	12.9	12.8	11.5	11.1	8.8	10.4	12.6	10.2	8.9	5	2.6	3.4	3.2	2.8	14.6	7.8	24
10	2.6	2.2	1.9	2	1.5	1.5	3.4	3	4.3	6.6	5.8	6.7	5.3	6.8	7.5	4.6	5.8	5.9	6.5	4.4	3.7	3.4	4.7	8.9	8.9	3.7	24
11	5.6	2.5	6.9	4.4	2.8	2.2	4	4.1	3.7	3.9	1.1	2.2	1.7	5.4	5.5	7.4	8.5	7.9	6.9	5.7	4.5	4.1	4.1	5.6	8.5	3.4	24
12	4.6	4.7	3.7	2.1	0.5	0.5	5.7	9.4	8.3	9.6	10.3	11	10.2	9.7	10.9	9.7	9.8	8.5	8.4	4.2	3.7	4.7	5.9	5.5	11	6.2	24
13	4.5	3.9	1.1	2.7	1.8	2.1	4	6.9	7.1	4	5.4	4.5	5.5	5.7	5.6	9	10	9.3	10.1	7.8	9.1	9.7	11.9	11.5	11.9	3	24
14	8.4	11.4	12.5	13.2	12.2	12.3	12	12.7	9.7	10	12	12.9	11.7	11.4	10.3	10.7	8.8	9.8	9	7.5	2.4	0.3	0.3	1.1	13.2	9	24
15	0.7	0.4	0.4	1	1	1.8	4.1	<b>M</b>	<b>M</b>	<b>M</b>	2.3	4.2	4.1	3.4	<b>M</b>	<b>M</b>	8.1	8	6.9	4.5	5.1	6.8	7.9	7.5	8.1	3.2	19
16	5.6	6.4	6.5	6.2	4.9	6.7	6.5	<b>M</b>	<b>M</b>	9.6	10.5	11.9	13.7	9.3	14.8	14.3	11.6	8.8	11.1	10.4	9.4	5.6	6.3	5.9	14.8	8.6	22
17	4.5	2.6	1.3	1.3	0.5	0.4	1.2	4.9	4.1	3.3	1.6	3.7	4.1	<b>M</b>	<b>M</b>	<b>M</b>	1.1	3.2	1.4	5.3	5.5	5.2	3.8	3.4	5.5	0.3	21
18	3.5	3.6	4.4	3.5	3.4	4.5	3.9	4.4	4.2	7.3	0.9	4	3.4	7.2	8.1	7.8	6.2	6.1	5.7	2.8	4.2	14.1	7.3	<b>20.2</b>	<b>20.2</b>	2.7	24
19	8.8	7.9	5.8	4.8	4.7	6.3	8.6	11.4	13.8	10.4	11.5	10.3	11.6	9.3	9.1	7.8	8.6	10.2	10.6	9.9	9.9	9	9.5	9	13.8	8.7	24
20	9.6	9.7	9.6	11.1	11.5	10	12	12.4	13.6	13.2	13.5	13.6	14.2	13.1	13.2	12.9	10.4	7.6	7.2	6.5	3.9	3.2	3.3	3.2	14.2	<b>9.5</b>	24
21	4.5	5	4.3	2.7	1.6	2.1	3.8	4.6	4.2	5.7	8.6	6.9	6.3	5.8	7.7	7.4	6.8	6.8	6.8	3.7	2.7	2.8	1.8	2.9	8.6	4.3	24
22	4.6	5.2	6.1	4.2	4.3	6	6.1	5.6	6.3	5.4	2.2	4.7	6	6.2	5.7	5.7	6.6	8.1	6.8	3.8	2.6	2	1.2	2.4	8.1	4.1	24
23	3.2	2.6	3.5	3.1	2.8	4.8	5.9	5.2	6.6	6.9	8.2	9.2	8.1	9.4	7.9	5.8	5.1	3.9	2.3	1.1	1.7	1.4	0.3	0.3	9.4	3.8	24
24	0.6	0.2	0.7	0.6	0.4	0.3	2	1.6	3.3	4.3	5	7.4	6.8	6.7	6.3	7.4	9	6.2	3.9	2.7	3.4	2.8	3.9	4.7	9	3	24
25	3.5	0.4	1.4	1.2	1.9	1.8	2.3	2.9	3.7	5.9	5.3	5.8	5.2	5	2.6	3.2	3.3	4.3	4.1	3.5	1.6	4.8	2	5.9	5.9	2	24
26	4.5	3.9	4.2	3	2.1	1.4	4.4	3.7	4.3	8.2	11.3	14.6	12.5	11.3	11.7	11.6	11.7	10.3	10.5	7.6	3.6	1.6	0.3	0.9	14.6	6.2	24
27	1.2	2	1.7	1.9	2.2	1.9	3.3	3.2	4.3	4.6	6.5	6.6	5.6	5.5	5.9	2.9	4.2	2.5	0.9	3.7	4.8	1.6	0.3	1.7	6.6	1.5	24
28	2	0.2	0.2	0.1	1.6	1.7	2.4	5.6	4.7	6.8	7.3	8.2	8.1	7.8	8.2	12.1	11.3	11.6	12.3	6.3	3	2.4	3	0.7	12.3	5.1	24
29	0.9	1.1	1.3	2.1	0.3	0.6	3.8	3.9	5.1	6.6	4.8	2.2	2.8	1.8	3.6	5.5	4.4	1.4	6	5.6	3	2.9	3.2	2.6	6.6	0.7	24
30	4.1	5.3	7.9	5.7	6.9	5.5	5.3	1.5	3.6	4.4	3.4	5.4	6.3	6.2	4.5	1.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	7.9	1.7	24
31	0.3	0.1	0.2	0.2	0.2	0.3	0.1	0.3	3.3	3.5	3.7	4.1	4.5	5	5.8	5.5	5.6	4.9	4	2.6	3.3	2.9	4	4.9	5.8	2	24
HOURLY MAX	9.6	11.4	12.5	13.2	12.2	12.3	14.6	12.7	13.8	13.4	13.5	14.6	14.2	13.1	14.8	14.3	12.6	12.0	12.3	10.4	9.9	14.1	11.9	20.2			
HOURLY AVG	3.6	3.4	3.8	3.6	3.5	3.8	4.9	5.6	6.0	6.7	6.7	7.4	7.3	7.3	7.6	7.5	7.2	6.4	6.0	4.6	3.9	3.9	3.5	4.5			

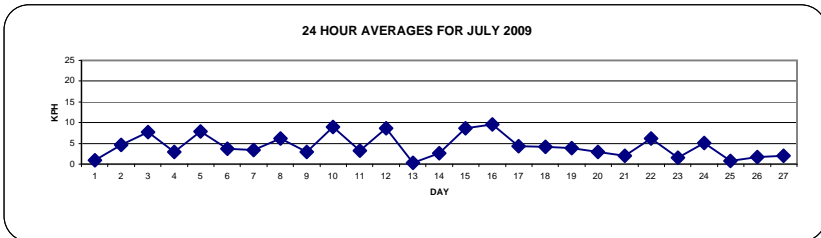
### STATUS FLAG CODES

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

LAST CALIBRATION: November 7, 2007

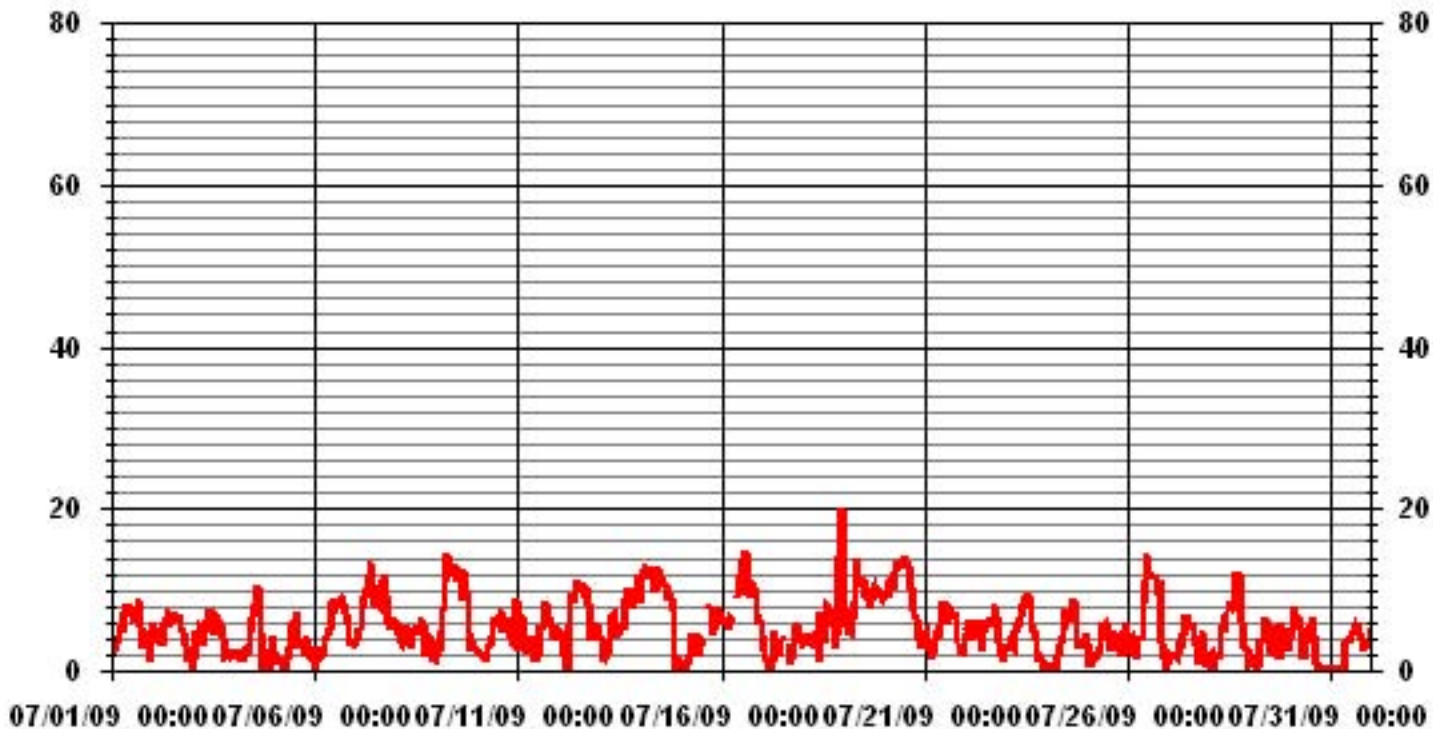
### MONTHLY SUMMARY

MAXIMUM 1-HR AVERAGE:	20.2 KPH	@ HOUR(S)	23	ON DAY(S)	18
MAXIMUM 24-HR AVERAGE:	9.5 KPH			ON DAY(S)	20
CALMS (≤ 0 KPH)	6.72 %	OPERATIONAL TIME:	734	HRS	
MONTHLY CALIBRATION TIME:	0 HRS	AMD OPERATION UPTIME	98.7	%	
STANDARD DEVIATION	3.41	MONTHLY AVERAGE	5.34	KPH	





### 01 Hour Averages



— LICA30 WSP KPH

## LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - MASKWA

JULY 2009

### 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	10.8	7.9	5.2	6.7	7.2	10.1	11.7	15.3	16.1	20.8	19.2	23.7	20.9	20.5	23.5	20.5	26.4	14.8	14.2	12.9	36.6	19.5	4.8	7	36.6
2	11.3	8.6	8.3	9.9	8.6	6.3	12.4	15.2	18.4	18.7	22.8	19.6	23.2	17.4	19.9	22.4	21.6	18.2	14.1	11.9	3.7	5.1	3.9	7.2	23.2
3	11.9	5.5	15.6	11.1	13.4	15	9.6	21.5	13.8	16.7	14.9	20.1	18.1	12.2	16.6	14.5	11.7	13.9	11.2	8.9	8.2	5.5	4.7	4.9	21.5
4	6.2	4.5	6.8	5.2	5.5	5.7	7	5.4	8.7	12.7	15.2	19.6	19.5	21.8	26.9	23.4	26.1	8.7	7.4	3.4	4.6	7.7	6.2	9.2	26.9
5	4.7	5.2	4.7	6.8	6.4	4.1	3.2	4.8	5.3	10.7	16.2	18	17.2	18.1	20.6	9.7	13.5	10	9.3	12.4	8.5	4.7	7.3	6.6	20.6
6	2.7	4.3	4.9	3.4	6.5	4.8	7.4	9.5	11.8	16.1	21.1	P	25.8	23.1	25	25.6	24.1	23	18.2	16.3	11.5	7.9	7.2	8.7	25.8
7	7.3	8.5	13.2	17.4	18.9	21.5	23	24.9	28.7	32.5	31.6	20.7	26.1	19	18.5	19.7	29.9	28.3	20.2	13.2	12.3	14.9	15.1	15.2	32.5
8	16.6	12.3	15.6	11.2	8	11.1	14.6	13	12.2	10.8	12.2	11.4	12.1	15.7	18.9	19.1	13	5.7	9.1	10.7	9.3	8.9	6.1	4.7	19.1
9	5.6	6.7	18.8	25.6	19.1	30.3	34.7	27.8	24.8	29.9	32.5	31.8	0	28.2	23.1	28.4	31.2	25.7	24.5	16	8.9	7.8	7.6	7	34.7
10	5.8	5	5.1	3.6	3.6	4.3	6.6	8.9	15.4	19.6	18.1	18.2	19.4	21.3	21.4	14.5	18.3	17.1	16.4	9.1	6.1	7.9	9.2	26.1	26.1
11	17.4	7.3	17.6	10.7	7.7	10.3	13.5	11.3	14.3	12.1	10.5	12.3	15.9	17.6	17.2	17.9	15.8	17	16.1	11.5	7.3	6.1	6.5	11	17.9
12	8.5	10.1	7	6.2	3	3.5	13.1	18.7	20.1	21.5	26.1	24.2	25.2	26.4	21.7	19.7	23	21.6	25	10.1	8.8	11.2	15.5	15.3	26.4
13	11	10.3	7.1	11.4	6.5	10.6	10.4	14.6	18.9	11.1	13.7	13.2	16.8	15.2	19.3	25.4	26.8	25.2	26.2	21.2	23.9	21	24.8	27.1	27.1
14	20.8	25.3	31.1	32.7	31.5	31.2	32.3	29.7	26.5	27.5	27.2	33	29.5	27.9	26.4	26	25.4	33	22.5	16.9	13.3	0.9	0.6	4.7	33
15	3.3	3	3.1	4	3.1	5.7	10	M	M	10.9	14.6	15.1	14.7	15	M	M	17.4	16.2	14.9	8.3	9.4	12.7	14.1	15.2	17.4
16	12.3	14.8	14.7	13.7	9.4	15.5	15.5	M	M	M	21.3	27	27.6	77.1	31.5	29	30	21.3	21.3	21.7	23.5	10.1	11.5	11.5	77.1
17	10.7	7.8	4.4	7.2	7.4	3.8	4	12.4	12.9	9.9	12.5	13.7	14.3	M	M	M	11.2	12.9	12.4	10.9	13.2	12.2	9	5.8	14.3
18	7.1	6.4	7.3	9.8	9.3	11.9	10.5	11.6	14.5	15.7	22.1	15.6	11.7	16.2	17.9	19.9	15.8	18.5	15.2	8	12.6	29.8	44.4	41.5	44.4
19	32.2	29.3	15.9	19.7	16	20.1	22.8	28.2	38.2	28.1	30.8	29	31	32.6	29.1	21.8	22.8	22.1	29.5	26.1	23.9	27.5	26.2	20.9	38.2
20	22.5	22.5	22.9	29.7	35.3	29	27.7	27.7	31.8	32.8	35.2	34.7	44.1	32.8	33.4	40.7	29	31.6	24.6	17.3	10.6	7.9	9.6	9.1	44.1
21	11.3	12.6	14.6	12.4	5.2	6.3	11	13.5	10.8	14.8	23.3	22.2	19.3	18.1	24.8	21.8	17.2	19.7	18.8	13.3	5.9	9	9.4	5.5	24.8
22	8.9	10.3	11.9	7.6	7.8	10.9	11.1	10.6	12.7	11.6	11.5	10.6	15.5	13.8	11.7	16.4	20.4	24.8	20.2	10.6	8.2	6	4.7	7.3	24.8
23	9.4	7.7	10.7	8.8	8.6	12.8	14.6	17.8	16.5	22.2	23.4	24.7	25.1	29.7	21.6	14.7	13.9	14	9.3	4.4	7.2	5.2	0.4	2.7	29.7
24	4.4	2.3	2.8	2.5	1.5	0.4	6.3	5.6	8.6	12.9	15	17.5	19.1	19.6	18.2	23.6	26.2	19.1	10.5	6.6	7	7.7	10.6	11.1	26.2
25	10.9	4.4	4.7	5.1	5.7	9.2	7.4	9.5	10.4	15.9	16	18	18.7	16.8	14.3	12.4	15.9	12.8	13.5	6.4	4	8.9	13.5	15.6	18.7
26	9.6	8.9	9.9	7.6	6.3	5.8	12	9.5	11.5	23.1	28.5	29.8	31.1	28.3	35	28.7	29.5	29.9	25.1	16.6	13.9	4.4	3	6.7	35
27	4.3	4.5	3.9	5.1	4.5	4.9	7.1	8.1	11.6	13	18.9	20.6	19.5	18.1	14	13	18.8	8.6	4.1	11.5	10.3	15.6	3.3	5.8	20.6
28	5.9	5	2.9	2.8	4.2	4.8	5.4	9.9	10.1	17.2	21.6	20	24	19.9	21.8	22.5	24.5	26.6	27	17.5	10.1	7.3	7.7	4.6	27
29	4.6	3.3	3.7	8.4	5.8	3.5	8.2	10.9	13.2	17.8	15.6	13.1	13.2	14.3	18.8	16.8	17.5	12.1	13.5	11.6	7.5	5.4	6.1	5.1	18.8
30	7.8	11	14.5	10.8	13.2	12.6	12.5	14.8	7.2	10.1	12.3	15.6	17.4	16.1	38.3	18.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	38.3
31	0.3	0.3	0.3	0.3	0.3	0.3	0.3	5.1	P	12.2	12.8	13.7	14.8	18.9	21.4	18.4	21.9	15	17.1	7.3	5.2	5.4	7.2	9.6	21.9
PEAK	32.2	29.3	31.1	32.7	35.3	31.2	34.7	29.7	38.2	32.8	35.2	34.7	44.1	77.1	38.3	40.7	31.2	33.0	29.5	26.1	36.6	29.8	44.4	41.5	

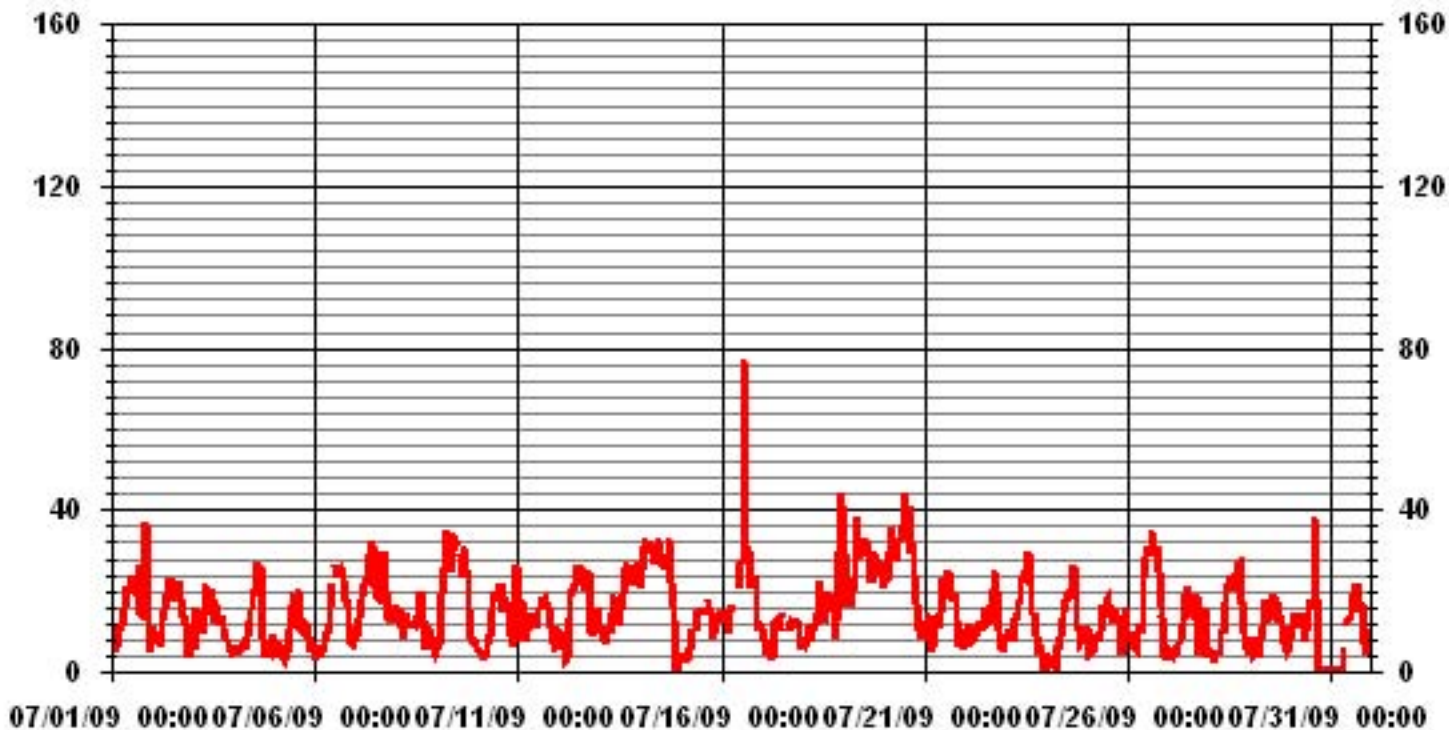
**STATUS FLAG CODES**

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

**MONTHLY SUMMARY**

MAXIMUM INSTANTANEOUS READING	77.1	KPH	@ HOUR(S)	13
			ON DAY(S)	16

### 01 Hour Averages



— LICA30 WSMAX KPH

LICA30  
WSP / WDR Joint Frequency Distribution (Percent)

July 2009

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	3.26	2.58	3.67	3.95	2.99	1.90	2.58	2.04	3.26	6.67	9.40	4.63	6.13	3.40	2.99	3.67	63.21
< 12.0	5.04	1.49	.13	.40	1.49	1.36	1.08	.81	3.13	2.72	2.72	1.22	2.31	4.22	1.63	1.77	31.60
< 20.0	2.04	.40	.13	.13	.13	.00	.00	.00	.40	.00	.00	.00	.00	.13	.68	.68	4.76
< 29.0	.13	.00	.00	.00	.00	.00	.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
>= 39.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
Totals	10.49	4.49	3.95	4.49	4.63	3.26	3.67	2.86	6.81	9.40	12.12	5.85	8.44	7.76	5.31	6.13	

Calm : .27 %

Total # Operational Hours : 734

Distribution By Samples

	Direction																
Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 6.0	24	19	27	29	22	14	19	15	24	49	69	34	45	25	22	27	464
< 12.0	37	11	1	3	11	10	8	6	23	20	20	9	17	31	12	13	232
< 20.0	15	3	1	1	1				3					1	5	5	35
< 29.0	1																1
< 39.0																	
>= 39.0																	
Totals	77	33	29	33	34	24	27	21	50	69	89	43	62	57	39	45	

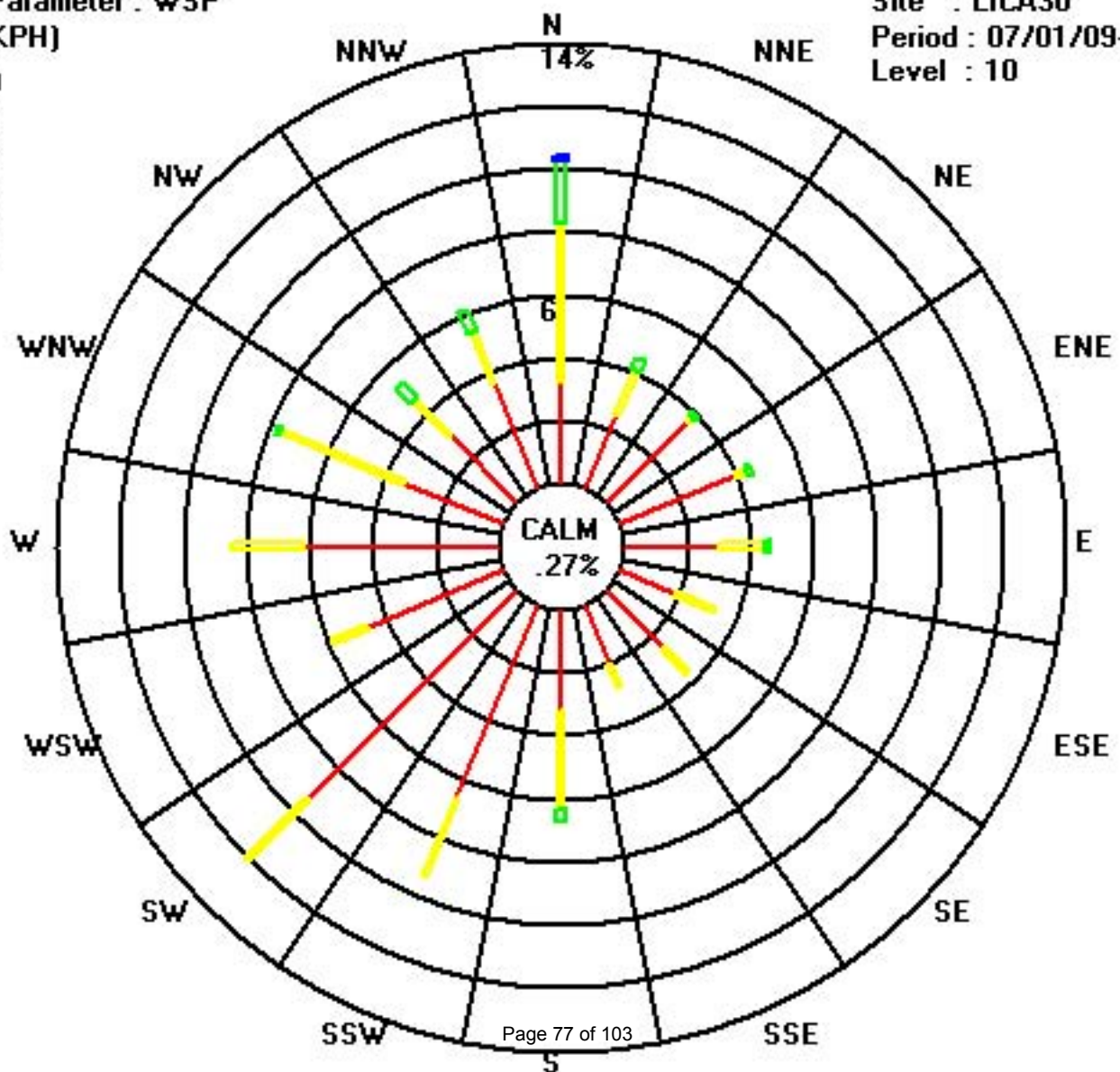
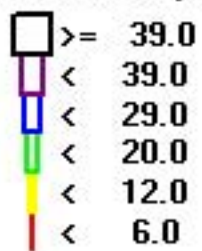
Calm : .27 %

Total # Operational Hours : 734

Class Limits (KPH)

Period : 07/01/09-07/31/09

Level : 10



# Vector Wind Direction

# LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - MASKWA

JULY 2009

## 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	260	239	202	216	221	219	231	211	219	229	238	246	255	258	254	237	212	220	228	17	334	219	207	207	233	SW	24	
2	215	225	220	214	218	217	272	290	281	297	291	265	278	289	262	267	267	268	267	263	194	188	204	127	257	WSW	24	
3	118	211	255	247	228	227	246	329	1	8	349	2	30	45	41	19	358	22	324	78	132	148	207	207	351	N	24	
4	224	225	233	238	237	266	267	292	276	278	240	214	220	214	220	214	220	270	23	227	250	228	328	197	218	231	SW	24
5	208	226	242	195	199	219	239	178	333	235	227	235	229	229	279	22	355	331	336	141	104	108	129	73	231	SW	24	
6	284	96	60	94	70	58	47	57	51	116	107	121	127	127	136	112	109	117	115	116	94	60	68	67	103	ESE	24	
7	71	64	81	89	89	97	84	83	88	91	114	144	97	70	90	72	85	76	73	79	77	80	85	83	87	E	24	
8	113	105	94	99	79	88	79	81	144	56	113	73	61	87	115	146	194	141	302	339	21	53	36	14	93	E	24	
9	333	2	2	2	2	11	8	9	7	358	355	358	354	357	349	356	356	342	355	353	324	266	245	239	355	N	24	
10	231	245	243	215	202	243	305	273	275	293	265	252	232	235	214	231	246	225	207	196	184	185	167	201	230	SW	24	
11	208	78	155	119	71	54	114	136	157	178	283	262	263	201	202	197	206	215	219	211	206	210	211	210	191	S	24	
12	214	214	213	216	143	147	190	188	188	169	173	186	169	162	168	170	177	171	172	157	124	123	125	128	171	S	24	
13	126	147	134	164	115	174	173	189	206	237	294	295	317	329	298	317	331	346	1	351	4	11	9	12	339	NNW	24	
14	1	5	4	1	8	3	6	0	352	348	353	351	348	356	355	9	6	7	17	20	13	229	193	156	1	N	24	
15	166	175	129	124	93	67	44	M	M	M	195	222	223	211	M	M	204	196	197	174	166	166	166	170	181	S	19	
16	180	192	189	191	190	184	187	M	M	171	160	172	185	178	190	191	192	185	200	201	201	217	213	215	188	S	22	
17	219	247	207	191	190	39	10	34	34	308	305	301	212	M	M	M	326	309	43	146	167	137	97	97	172	S	21	
18	66	55	54	66	74	112	101	111	87	144	153	175	185	178	171	169	143	96	72	81	50	38	303	4	87	E	24	
19	297	315	18	279	261	266	270	291	291	295	288	289	287	278	277	271	280	284	286	286	285	303	285	298	287	WNW	24	
20	296	298	298	301	317	320	316	305	313	330	331	330	327	328	326	325	315	338	326	321	282	262	262	261	316	NW	24	
21	262	272	279	270	209	232	262	284	276	283	301	297	287	298	268	282	283	282	272	263	225	211	160	201	273	W	24	
22	214	213	215	217	213	214	215	214	219	221	233	210	208	212	211	253	270	282	280	284	335	284	258	279	234	SW	24	
23	302	266	269	262	247	289	293	319	327	329	330	328	322	304	309	339	343	330	255	213	153	132	197	173	310	NW	24	
24	149	179	204	223	175	202	216	224	223	217	218	192	215	234	238	281	293	294	248	231	223	248	277	293	244	WSW	24	
25	322	245	273	255	254	295	324	339	336	336	333	305	348	309	291	313	254	245	212	189	194	54	55	310	NW	24		
26	52	51	37	49	54	57	14	14	350	353	354	13	9	0	340	351	353	1	13	17	15	359	290	259	6	N	24	
27	256	224	232	263	234	240	288	321	316	329	330	323	336	322	32	122	77	71	115	57	53	71	173	46	346	NNW	24	
28	67	281	349	258	48	33	32	31	32	17	17	27	0	1	355	19	5	8	15	8	4	329	347	359	12	NNE	24	
29	6	86	139	93	65	281	29	46	34	24	322	350	315	329	290	349	340	317	146	181	201	214	222	214	348	NNW	24	
30	218	216	211	220	216	224	229	78	181	209	273	323	323	351	335	0	329	2	7	355	1	14	19	0	244	NNW	24	
31	358	234	221	233	226	200	191	4	26	328	324	289	263	253	271	255	276	274	269	237	200	197	201	205	261	W	24	
HOURLY AVG	358	315	349	301	317	320	324	339	352	358	355	358	354	357	355	356	358	346	355	355	335	359	347	359				

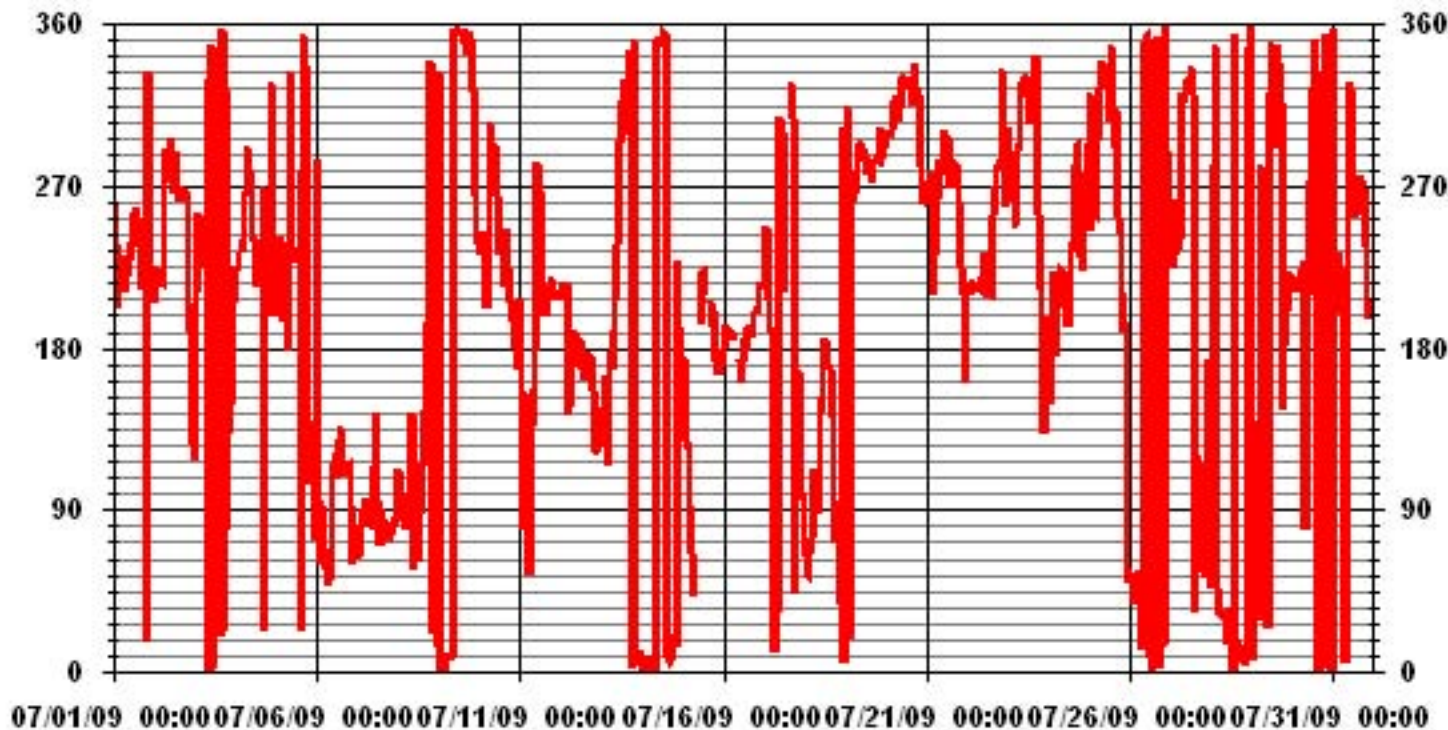
**STATUS FLAG CODES**

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:	November 7, 2007
DECLINATION :	19 DEGREES FROM MAGNETIC NORTH

MONTHLY CALIBRATION TIME:	0 HRS	OPERATIONAL TIME:	734 HRS
STANDARD DEVIATION	103.48	AMD OPERATION UPTIME	98.7 %
		MONTHLY AVERAGE	294 DEG

### 01 Hour Averages



— LICA30 WDR DEG



# Standard Deviation Wind Direction

# LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - MASKWA

JULY 2009

## 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	25	25	21	10	14	11	24	20	31	31	34	32	33	37	33	40	21	26	33	35	50	48	55	13
2	13	15	13	9	10	16	35	29	33	31	39	45	40	36	36	41	35	37	32	30	24	13	21	21
3	52	27	29	27	22	20	31	31	32	19	33	26	17	25	27	26	29	27	30	50	37	23	11	21
4	15	26	20	22	26	26	28	36	50	42	40	32	26	22	22	27	36	69	36	25	19	51	20	12
5	37	15	30	64	44	24	26	41	36	52	37	43	39	33	48	55	31	29	44	16	25	28	40	27
6	59	38	56	32	17	31	16	26	32	39	29	34	33	36	35	34	31	28	24	28	19	16	16	17
7	17	16	20	26	23	30	24	26	27	27	25	20	29	20	23	21	25	24	19	21	21	21	18	21
8	23	20	23	20	21	25	28	28	29	43	24	24	28	32	36	24	19	31	35	35	18	16	32	29
9	36	32	24	20	19	17	16	21	18	22	23	23	25	22	27	25	23	27	25	28	28	23	22	27
10	19	18	23	16	14	22	19	32	40	33	34	36	40	44	32	48	35	32	14	9	10	10	10	13
11	20	20	15	22	31	30	31	36	44	39	73	63	61	34	52	29	18	20	20	12	8	6	7	8
12	10	9	10	13	21	25	16	17	23	23	26	20	25	28	21	22	22	19	18	13	11	16	20	22
13	24	28	32	25	53	47	21	22	24	41	34	35	47	35	38	27	31	28	23	29	20	18	17	17
14	20	17	20	20	18	22	22	22	30	28	26	28	27	24	27	22	30	26	16	13	32	16	18	32
15	33	45	47	47	46	39	18	M	M	59	76	54	50	59	M	M	22	15	14	12	8	8	9	11
16	13	12	11	13	13	15	18	M	M	23	21	21	19	54	17	17	18	17	15	12	11	12	10	12
17	12	27	36	40	48	30	35	21	41	44	66	32	30	M	M	M	54	38	41	23	18	25	22	14
18	13	14	13	17	21	22	23	21	27	20	42	39	48	24	23	25	26	31	21	19	21	11	42	22
19	31	29	20	27	27	27	26	23	22	26	28	30	28	28	28	29	28	24	20	24	23	26	25	26
20	22	21	22	22	25	25	22	21	20	28	31	29	26	29	30	28	28	29	28	28	23	25	23	27
21	22	24	32	34	27	25	30	27	37	31	28	40	34	39	32	37	31	34	30	28	16	31	22	11
22	9	9	9	11	9	11	16	16	17	26	44	26	23	21	22	29	31	29	27	31	34	39	30	22
23	32	34	28	27	27	22	22	34	29	37	34	33	36	28	37	29	31	37	41	60	44	38	11	49
24	46	48	24	14	14	15	25	29	31	36	38	28	31	35	38	32	29	34	27	18	13	23	21	21
25	35	34	36	24	25	34	37	37	35	36	39	50	36	58	41	42	37	27	12	6	7	56	15	
26	19	22	10	15	38	13	18	24	33	28	24	18	24	24	32	27	26	25	18	13	28	27	34	19
27	17	17	16	22	18	21	16	33	32	42	31	35	42	37	24	30	27	20	27	18	19	42	31	25
28	32	50	39	47	38	45	26	17	27	22	30	25	28	34	30	17	22	22	14	16	23	25	26	70
29	59	40	30	28	33	27	17	26	39	34	49	72	56	55	60	37	39	54	18	11	51	15	20	11
30	11	10	10	12	12	18	19	44	19	21	44	31	29	44	62	38	41	25	20	25	23	14	12	20
31	23	32	32	23	28	19	58	46	52	44	44	47	39	39	31	40	35	36	32	20	8	5	8	8

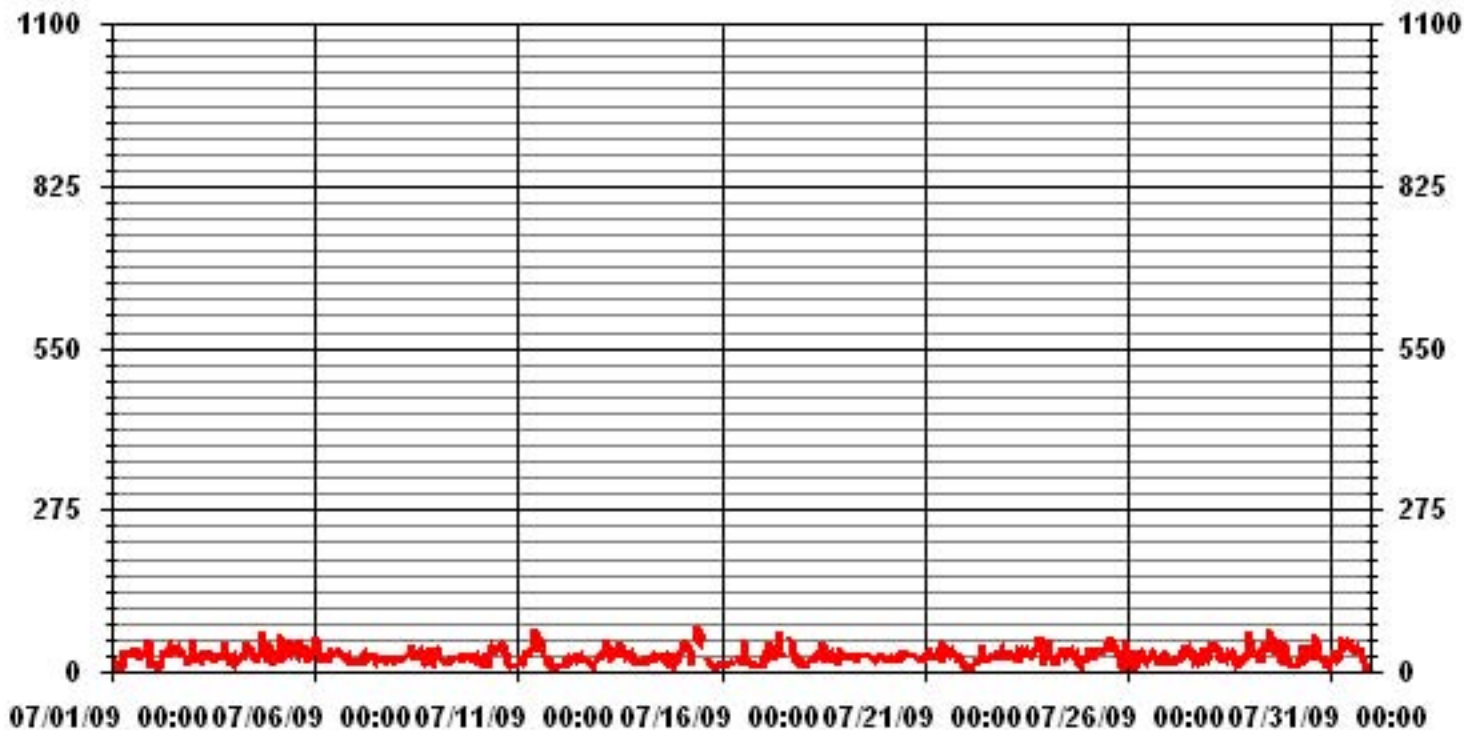
**STATUS FLAG CODES**

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: November 7, 2007

CALIBRATION TIME: 0 HRS OPERATIONAL TIME: 735 HRS

### 01 Hour Averages



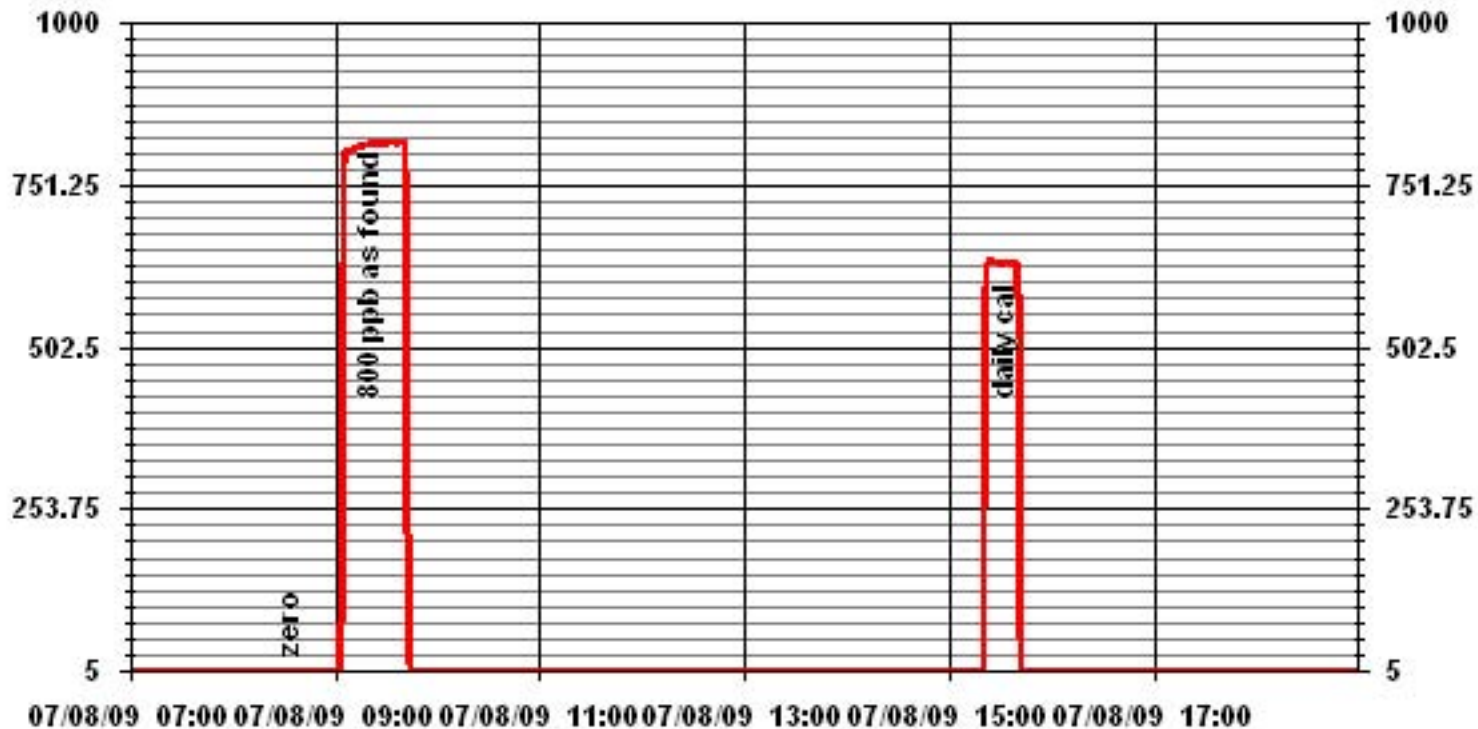
— LICA30 STDWDIR DEG

# Calibration Reports

# Sulphur Dioxide



### 01 Minute Averages

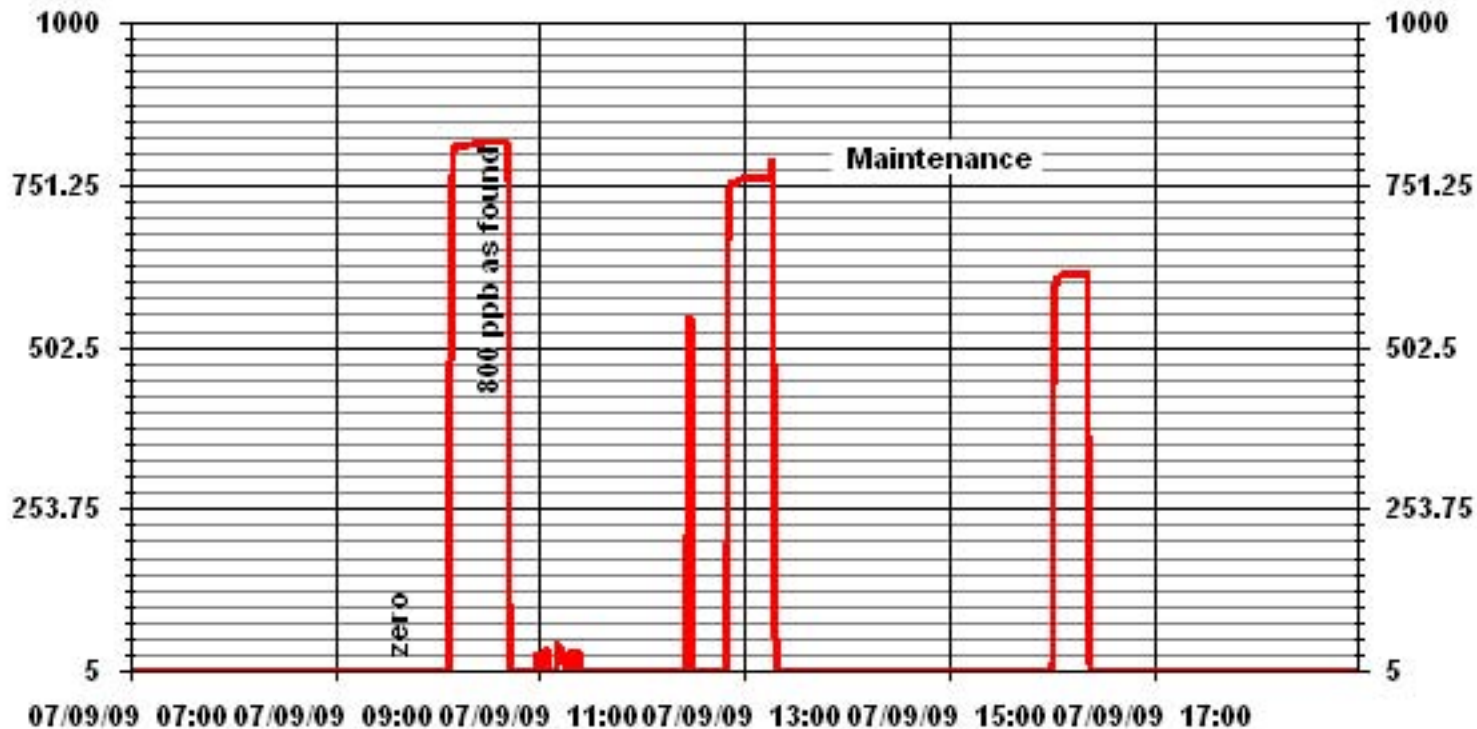


— LICA30 SO2\_ PPB





### 01 Minute Averages



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

#### Station Information

Calibration Date	July 10, 2009	Previous Calibration	June 24, 2009
Company	Lakeland Industry & Community Association		
Plant / Location	Cold Lake - Maskwa		
Start Time (MST)	8:48	End Time (MST)	13:15
Reason:	Post Repair Calibration		
Barometric Pressure	946 mBar	Station Temperature	25 Deg C
Cal Gas	52.2 ppm	Cal Gas Expiry date	12/19/2010
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	614 ccm 34.3 Deg C	614 ccm 32.1 Deg C	
HVPS / Lamp Setting	522 3484	522 3477	
PMT / RxCell Temp	7.7 Deg C 50 Deg C	7.7 Deg C 50 Deg C	
Converter / IZS Temp	NA Deg C 45 Deg C	NA Deg C 45 Deg C	
Offset / Slope	39.3 1.09	30.4 1.087	

#### Calibration Data

Dilution Flow Rate	Source Gas Flow Rate	Calculated Concentration	Indicated Conc. (DAS)	Correction Factor
5000.0	0	0	-4	N/A
4921.0	76.6	800	797	1.0039
5000.0	0	0	0	N/A
4921.0	76.6	800	800	1.0001
4962.0	38.3	400	398	1.0046
4978.0	19.2	201	200	1.0028
4999.0	0	0	0	N/A
Sum of Least Squares				1.0011
New Correction Factor				1.0001

#### Before Calibration

#### After Calibration

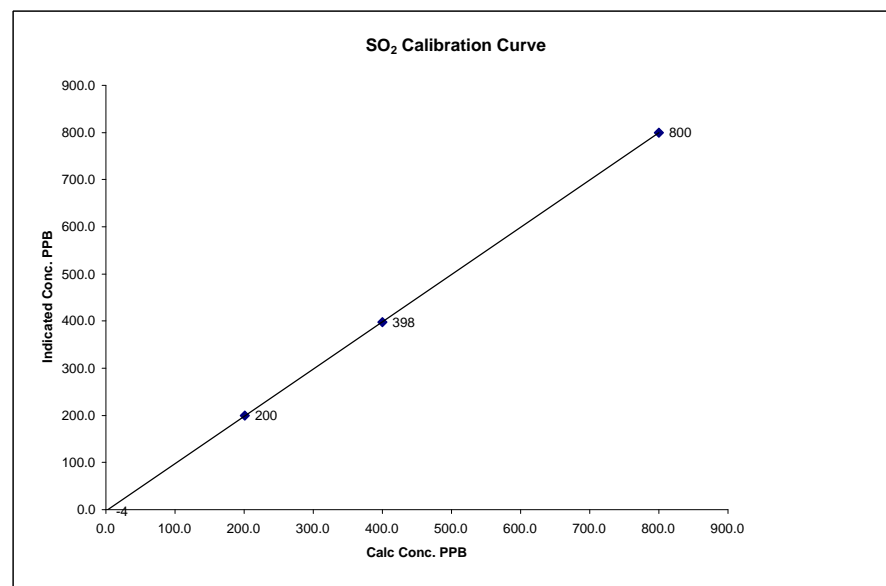
Auto Zero	-1.7	0.7
Auto Span	613.0	608.0
Sample Lines Connected	YES	
Percent Change from Previous Calibration	-0.6%	

Calibration Performed by: Shea Beaton

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

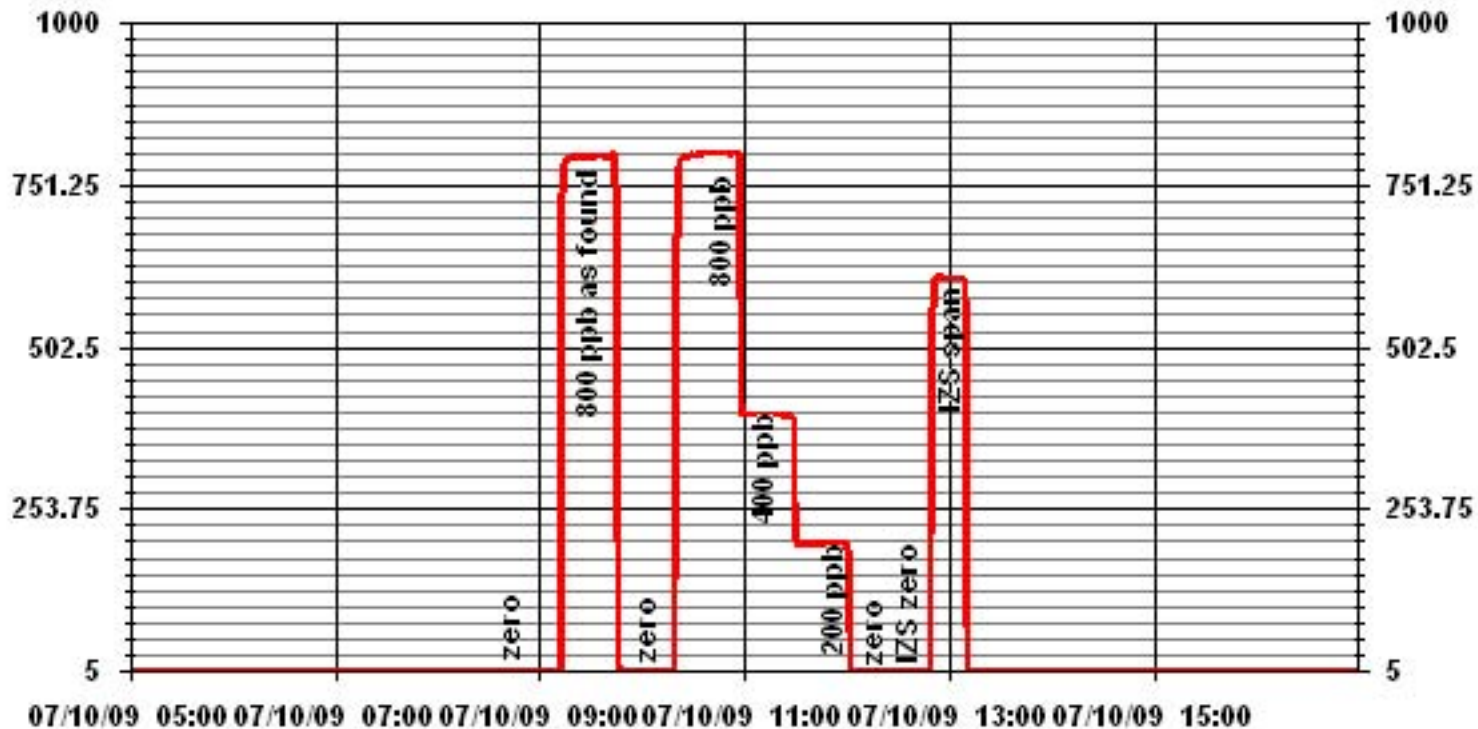
Calibration Date	July 10, 2009
Company	Lakeland Industry & Community Association
Plant / Location	Cold Lake - Maskwa
Start Time (MST)	8:48
End Time (MST)	13:15

Calculated Conc. ppb	Indicated Response ppb	Correction Factor	Correlation Coefficient Slope	(≥ 0.995) (0.85 to 1.15)	0.999989
0	-4	n/a	Intercept	(± 3% F.S.)	-2.973753
201	200	1.0028			
400	398	1.0046			
800	800	1.0001			



Notes: Yesterday the UV lamp filter was replaced. Performed A/F points then did a multi-point cal.

### 01 Minute Averages



# Hydrogen Sulphide

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

### Station Information

Calibration Date	July 9, 2009	Previous Calibration	June 2, 2009
Company	Lakelnad Industry & Community Association		
Plant / Location	Cold Lake - Maskwa		
Start Time (MST)	8:35	End Time (MST)	15:40
Reason:	Monthly Calibration		
Barometric Pressure	939 mBar	Station Temperature	25 Deg C
Cal Gas	10.6 ppm	Cal Gas Expiry date	04/03/2009
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	0 - 100 ppb	
Sample Flow / Box Temp	529 ccm 34.8 Deg C	530 ccm 36.6 Deg C	
HVPS / Lamp Setting	524 3269	524 3315	
PMT / RxCell Temp	7.9 Deg C 49.9 Deg C	7.9 Deg C 50 Deg C	
Converter / IZS Temp	315.3 Deg C 45 Deg C	314.5 Deg C 45 Deg C	
Offset / Slope	27.8 1.103	24.4 1.124	

### Calibration Data

Dilution Flow Rate	Source Gas Flow Rate	Calculated Concentration	Indicated Conc. (DAS)	Correction Factor
4999	0	0	-1	N/A
4962	37.7	80	77	1.0380
4999	0	0	0	N/A
4962	37.7	80	80	0.9991
4978	21.2	45	45	0.9989
4989	11.8	25	25	1.0005
4999	0	0	0	N/A
Sum of Least Squares				0.9992
New Correction Factor				0.9991

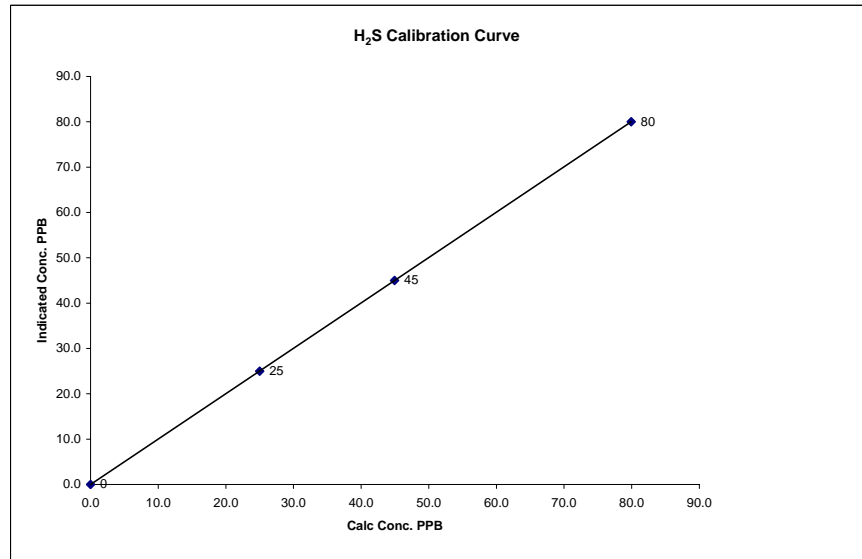
Before Calibration		After Calibration	
Auto Zero	0.0	0.1	
Auto Span	73.0	36.0	
Sample Lines Connected		YES	
Percent Change from Previous Calibration		-3.5%	

Calibration Performed by: Shea Beaton

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

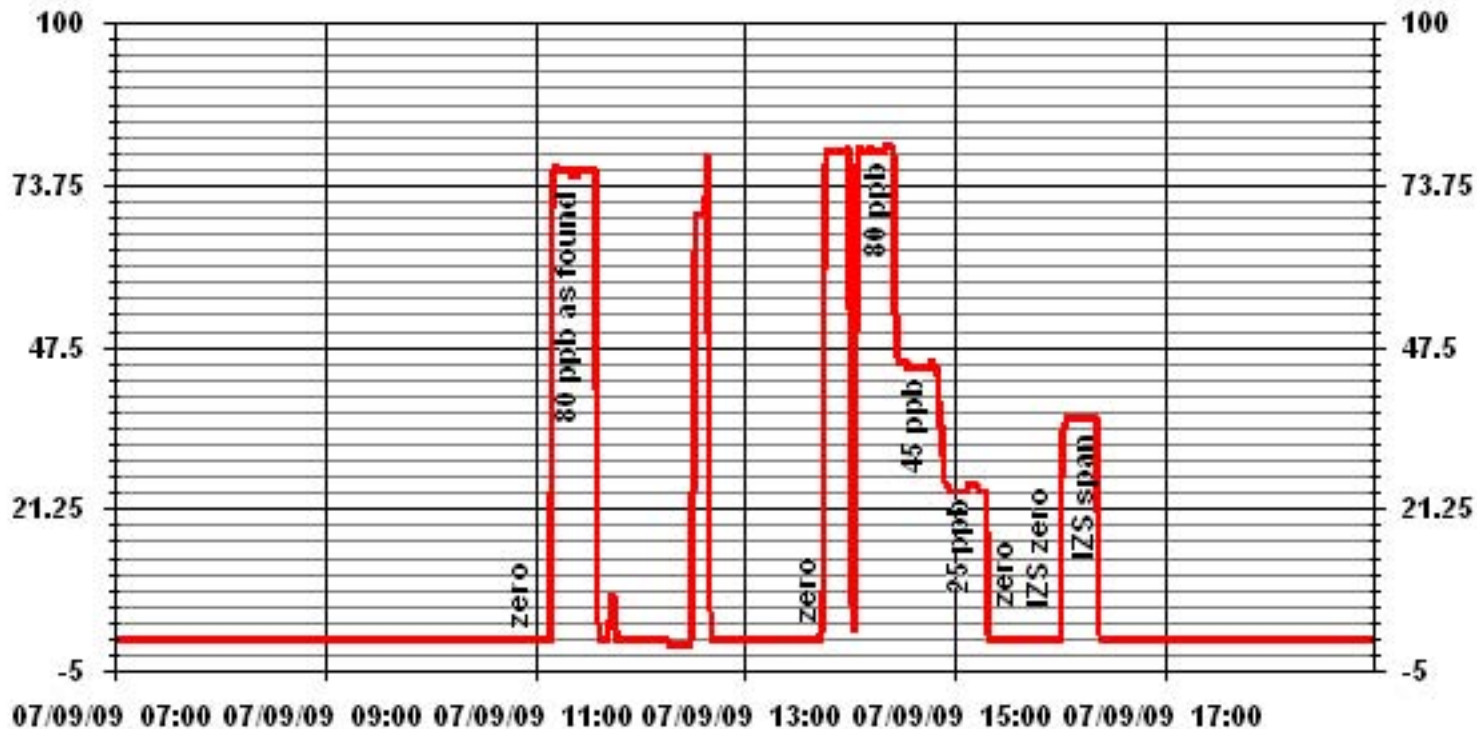
Calibration Date	July 9, 2009
Company	Lakelnad Industry & Community Association
Plant / Location	Cold Lake - Maskwa
Start Time (MST)	8:35
End Time (MST)	15:40

Calculated Conc. ppb	Indicated Response ppb	Correction Factor	Correlation Coefficient Slope	(≥ 0.995) (0.85 to 1.15)	1.000000
0	0	n/a	Intercept	(± 3% F.S.)	-0.011781
25	25	1.0005			
45	45	0.9989			
80	80	0.9991			



**Notes:** Following the as found points, the UV lamp driver board was replaced with a new one supplied by API. A lamp cal was done followed by a multi-point cal start at 13:21. During the span point, the daily cal program began. Aboarted cal program, repeated point. New perm tube was installed.

### 01 Minute Averages



# Total Hydrocarbons

### THC Calibration Report

Station Information			
Calibration Date:	July 10, 2009	Previous Calibration	June 24, 2009
Company:	Lakeland Industry & Community Association		
Plant / Location:	Cold Lake - Maskwa		
:	(MST) 7:20	End Time	(MST) 15:25
Reason:	Monthly Calibration		
Barometric Pressure:	946 mBar	Station Temperature:	25 Deg C
Calibrator:	API 700	S/N:	831
Cal Gas Concentration:	299 Prop/ 1019 Meth	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
3003	0	0.0	0.0	N/A
2090	65.3	39.1	39.5	0.9899
3017	0.0	0.0	0.0	N/A
3016	65.9	39.4	39.6	0.9949
3023	35.6	21.4	21.2	1.0094
3023	20.4	12.3	12.2	1.0082
3015	0	0.0	0.0	N/A
Correction Factor:				0.9949

Previous Calibration Correction Factor:	0.9949
Current Correction Factor Before Span Adjust:	0.9949
Percent Change:	-0.01%

### IZS Calibration Data

	Before Calibration	After Calibration
Auto Zero	0.1	0.1
Auto Span	34.9	35.1
Sample Lines Connected		YES

### Cylinder Pressures

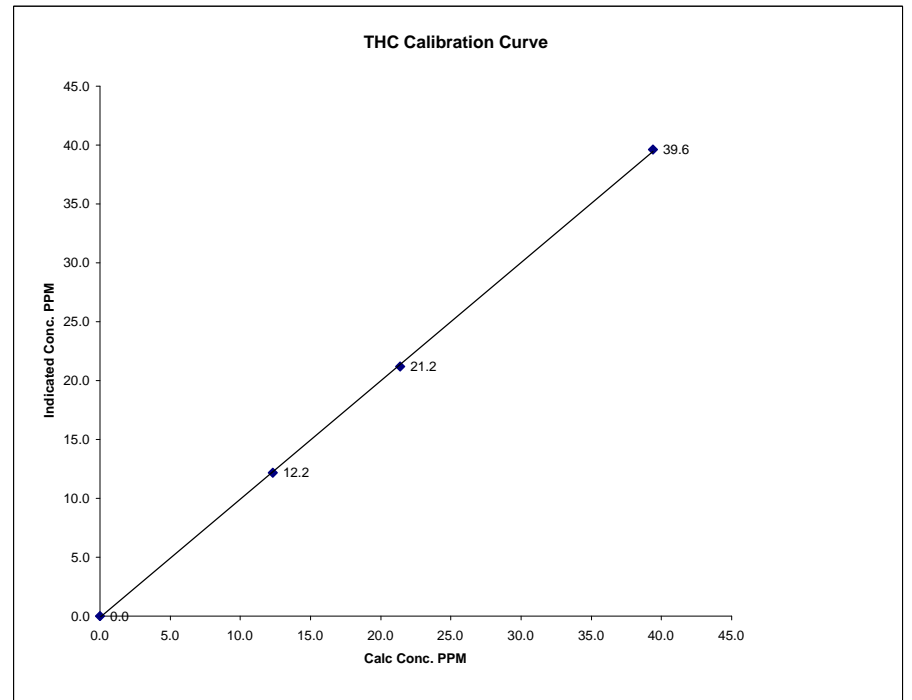
Span	-	psi
Hydrogen	-	psi
Zero Air	-	psi

Calibration Performed by: Shea Beaton

### THC Calibration Curve

Calibration Date	July 10, 2009		
Company	Lakeland Industry & Community Association		
Plant / Location	Cold Lake - Maskwa		
Start Time (MST)	7:20	End Time (MST)	15:25

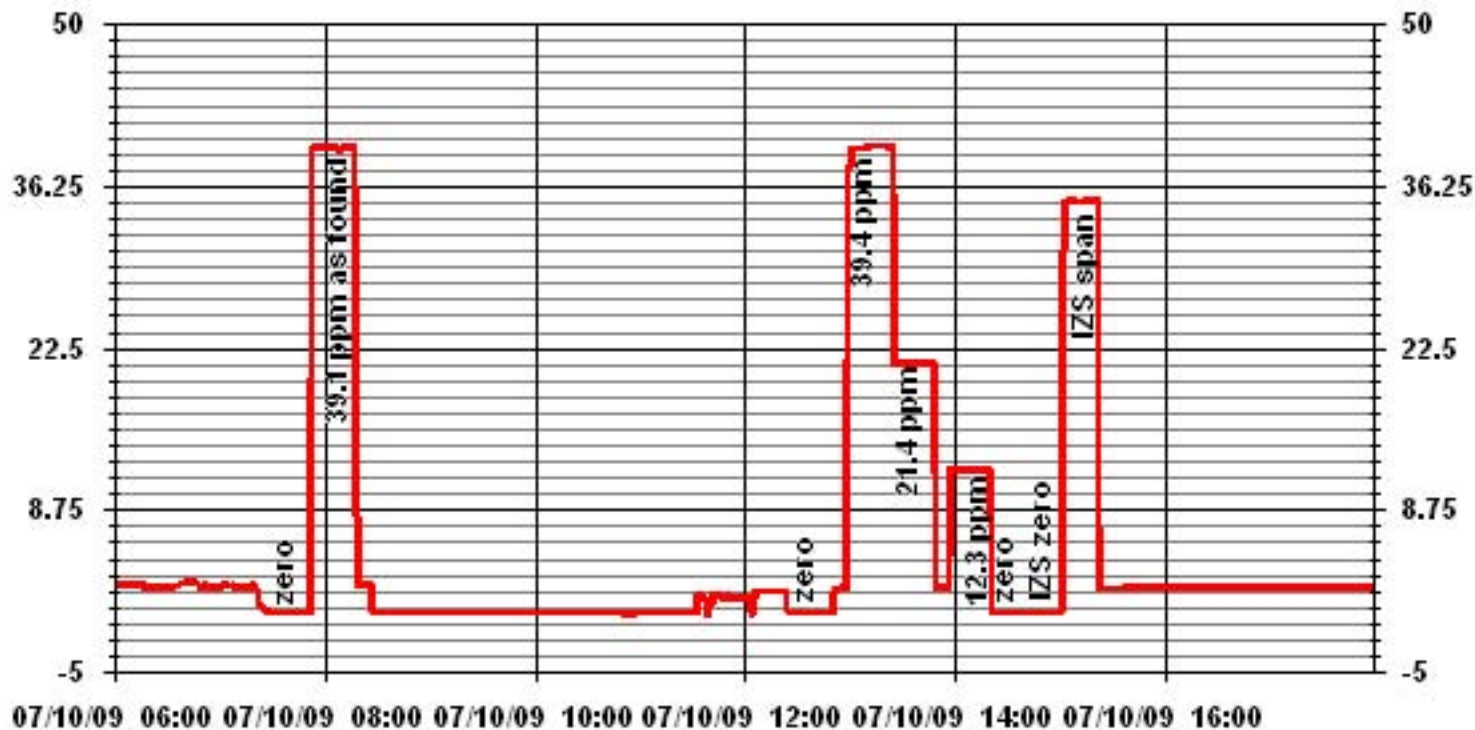
Calculated Conc. ppm	Indicated Response ppm	Correction Factor	Correlation Coefficient Slope	(≥ 0.995) (0.85 to 1.15)	0.999921
0.0	0.0		Intercept	(± 3% F.S.)	-0.117901
12.3	12.2	1.0082			
21.4	21.2	1.0094			
39.4	39.6	0.9949			



Notes: Flow manually measured.



### 01 Minute Averages



# Nitrogen Dioxide

### NOx - NO- NO2 Calibration Report Station Information

Calibration Date	July 9, 2009	Previous Calibration	June 24, 2009
Company	LICA	Plant/Location	Cold Lake - Maskwa
Start Time (MST)	9:40	End Time (MST)	-
Reason:	As Found / Pre Repair		
Barometric Pressure	939.00 mBar	Station Temperature	24.0 Deg C
Cal Gas Concentration	NOx 51.8 ppm	NO	51.6 ppm
DAS Output Voltage	0 - 1 Volts	Chart Rec. Output	0 - 1 Volts

#### Equipment Information

Analyzer Make / Model:	API 200E	S/N :	594	Method:	Chemiluminescent
Calibrator Make / Model:	Enviroics 2000	S/N:	1991		
DAS Make / Model:	ESC 8832	S/N :	AO 791		
Flow Meter:	Enviroics 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	458	ccm	314	Deg C
Ozone Flow / Vacuum HVPS	76	ccm	4.2	*Hg-A	76	ccm	4.1	*Hg-A
	767	Volts			767	Volts		
Rx/ Temp / PMT Temp	50	Deg C	6.5	Deg C	50	Deg C	6.5	Deg C
Box Temp / IZS Temp	34.9	Deg C	45.2	Deg C	34.6	Deg C	45.1	Deg C
Offset	0.1	NOx	0	NO	0.1	NOx	0	NO
Slope	1.157	NOx	1.148	NO	1.157	NOx	1.148	NO

#### Gas Phase Titration Calibration Data

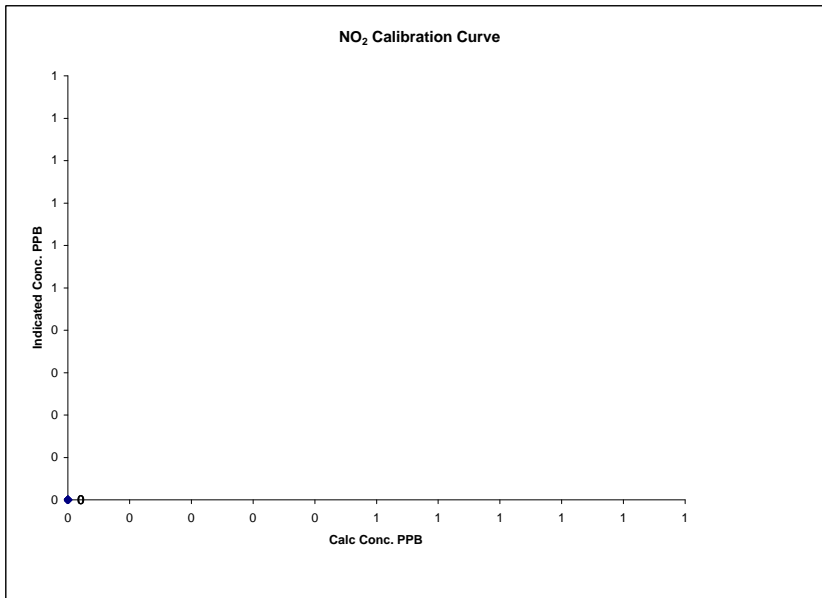
Dilution Air Flow Rate	Source Flow Rate	O3 Set Point	Calculated Concentration		Indicated Concentration			Correction Factor	
			NOx	NO	NOx	NO	NO2	NOx	NO
5003.0	0	N/A	0	0	-2	-1	-1	N/A	N/A
4925.0	77.5	N/A	802	799	819	817	2	0.9799	0.9785
Converter Efficiency									
Correction Factor									
Linearity OK?			Yes	No	Sum of Least Squares			#DIV/0!	#DIV/0!
Flows Checked on-site?			Yes	No	New Correction Factor			0.0000	0.0000
					Average Converter Efficiency			#DIV/0!	

Before Calibration				After Calibration				
Auto Zero	-2.2	NOx	-1.0	NO2	-	NOx	-	NO2
Auto Span	718.0	NOx	708.0	NO2	-	NOx	-	NO2
Sample Lines Connected				YES				
Percent Change from Previous Calibration				NOx	-	NO	-	

Calibration Performed by: Shea Beaton

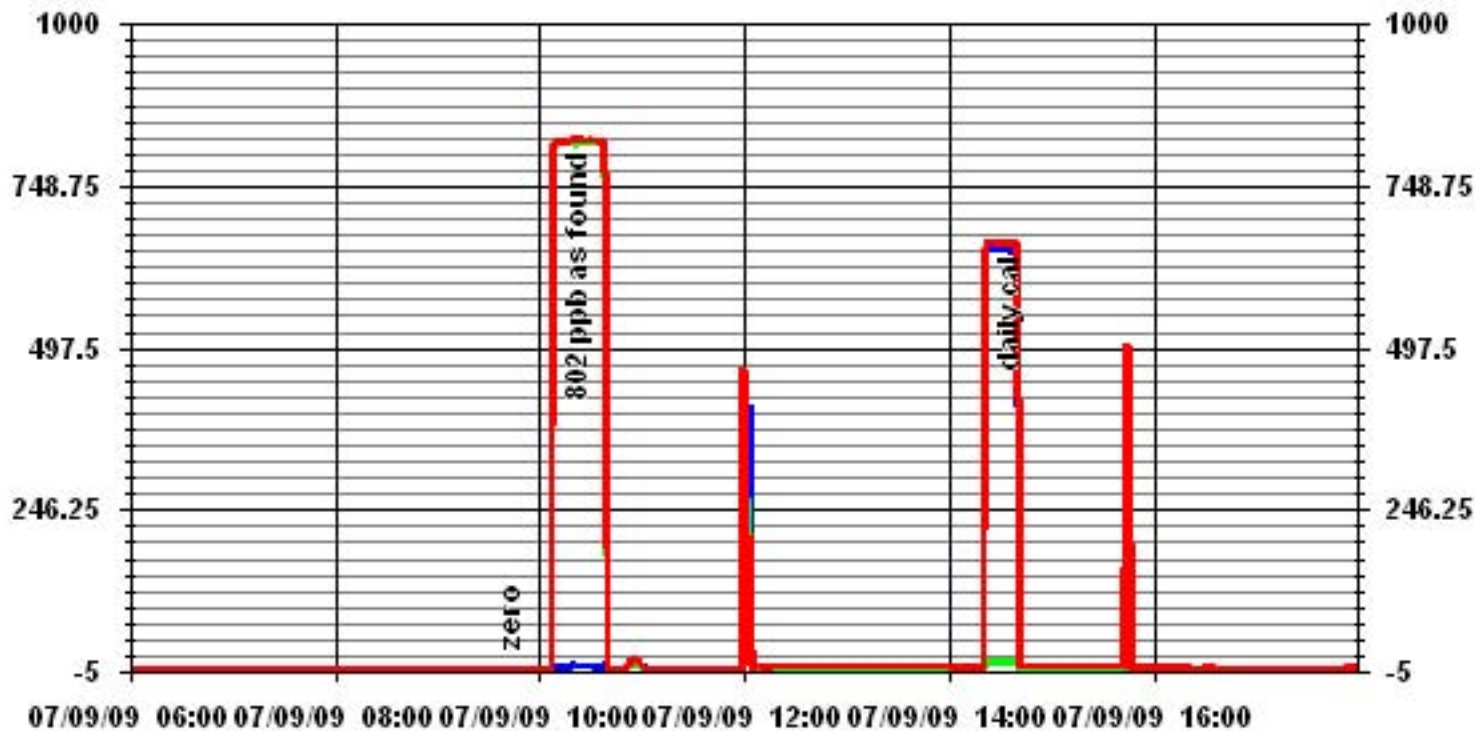
### NO2 Calibration Curve

Calibration Date	July 9, 2009	Company	LICA
Plant / Location	Cold Lake - Maskwa	Start Time (MST)	9:40
End Time (MST)	-	Calculated Conc.	Indicated Response
		ppb	ppb
		0	0
		0	0
		0	0
		0	0
		Correction Factor	Correlation Coefficient
		N/A	(≥ 0.995)
		#DIV/0!	Slope
		#DIV/0!	Intercept
		#DIV/0!	(± 3% F.S.)
		#DIV/0!	#DIV/0!



Notes: Following the as found points, the DFU filter and the permeation tube were replaced. An analog output cal was also done. Slope and offset were not changed. Will do complete cal tomorrow.

### 01 Minute Averages



— LICA30 IIOX\_ PPB    
 — LICA30 IIO\_ PPB    
 — LICA30 IIO2\_ PPB

**NOx - NO- NO2 Calibration Report**

**Station Information**

Calibration Date	July 10, 2009	Previous Calibration	June 24, 2009
Company	LICA	Plant/Location	Cold Lake - Maskwa
Start Time (MST)	7:20	End Time (MST)	14:15
Reason:	Post Repair Calibration		
Barometric Pressure	946.00 mBar	Station Temperature	25.0 Deg C
Cal Gas Concentration	NOx 51.8 ppm NO	Cal Gas Expiry date	12/19/2010
DAS Output Voltage	0 - 1 Volts	Chart Rec. Output	0 - 1 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		
Flow Meter:	EnviroNics 2000	S/N :	1991		

**Analyzer Settings**

Before Calibration				After Calibration			
Concentration Range	0 - 1000 ppb						
Sample Flow/Conv. Temp	462 ccm	315.7 Deg C		461 ccm	314 Deg C		
Ozone Flow / Vacuum HVPS	76 ccm	4.2 *Hg-A		77 ccm	4.2 *Hg-A		
	767 Volts			767 Volts			
Rx/ Temp / PMT Temp	50 Deg C	6.6 Deg C		50 Deg C	6.6 Deg C		
Box Temp / IZS Temp	36.5 Deg C	45.2 Deg C		32 Deg C	45 Deg C		
Offset	0.1 NOx	0 NO		0.1 NOx	0 NO		
Slope	1.157 NOx	1.148 NO		1.13 NOx	1.123 NO		

**Gas Phase Titration Calibration Data**

Dilution Air Flow Rate	Source Flow Rate	O3 Set Point	Calculated Concentration		Indicated Concentration			Correction Factor	
			NOx	NO	NOx	NO	NO2	NOx	NO
5001.0	0	N/A	0	0	0	0	0	N/A	N/A
4923.0	77.5	N/A	803	800	822	818	4	0.9767	0.9777
4923.0	77.5	N/A	803	800	803	800	3	0.9998	0.9997
4958.0	38.7	N/A	401	400	399	397	2	1.0055	1.0067
4982.0	19.4	N/A	201	200	199	198	1	N/A	N/A
5003.0	0	N/A	0	0	1	0	0		
Converter Efficiency									
4920.0	77.5	N/A	803	800	804	802	3	N/A	
4920.0	77.5	400	803	N/A	802	425	377	99%	
4920.0	77.5	200	803	N/A	806	614	192	101%	
4920.0	77.5	100	803	N/A	808	712	95	102%	
4920.0	77.5	N/A	803	800	808	803	5	N/A	
Correction Factor									
5003.0	0	N/A	0	0	1	0	0	N/A	N/A
Linearity OK? <b>Yes</b> No									
Flows Checked on-site? <b>Yes</b> No									
								Sum of Least Squares	
								1.0013	
								1.0015	
								New Correction Factor	
								0.9998	
								0.9997	
								Average Converter Efficiency	
								101%	

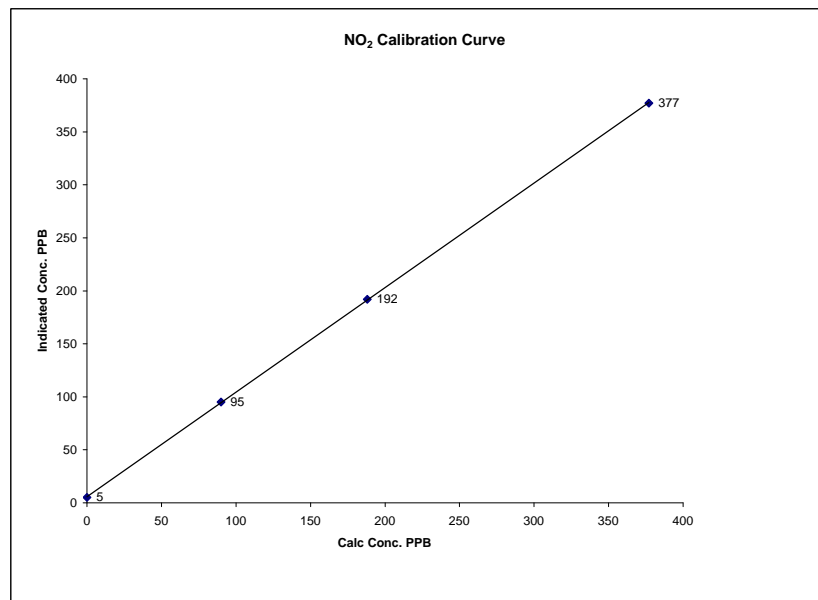
Before Calibration				After Calibration			
Auto Zero	1.9 NOx	0.8 NO2		0.5 NOx	0.5 NO2		
Auto Span	660.0 NOx	649.0 NO2		704.0 NOx	693.0 NO2		
Sample Lines Connected							
YES							
Percent Change from Previous Calibration							
				NOx	2.0%	NO	2.1%

Calibration Performed by: Shea Beaton

**NO2 Calibration Curve**

Calibration Date	July 10, 2009
Company	LICA
Plant / Location	Cold Lake - Maskwa
Start Time (MST)	7:20
End Time (MST)	14:15

Calculated Conc. ppb	Indicated Response ppb	Correction Factor	Correlation Coefficient Slope Intercept	(≥ 0.995) (0.85 to 1.15) (± 3% F.S.)
0	5	N/A		0.999976
90	95	0.9474		0.986076
188	192	0.9792		5.780092
377	377	1.0000		

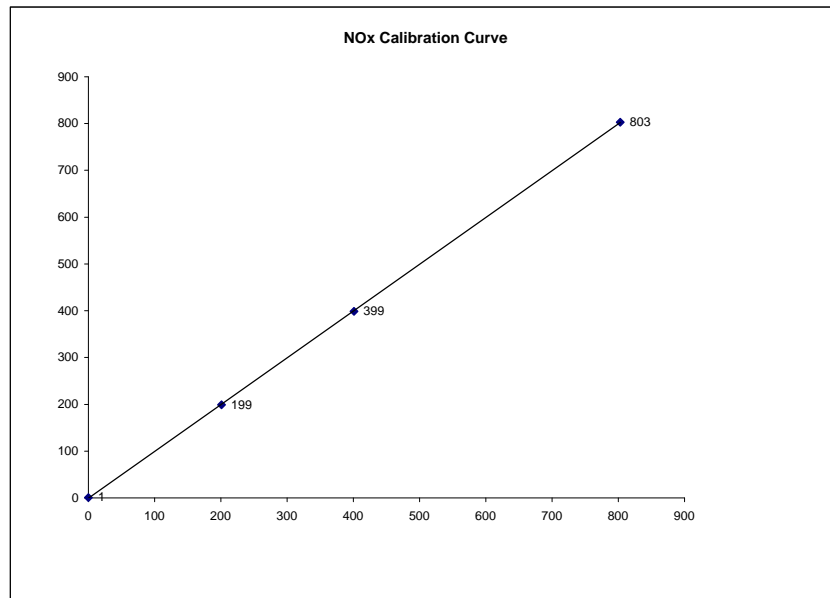


Notes:

### NOx Calibration Curve

Calibration Date	July 10, 2009	
Company	LICA	
Plant / Location	Cold Lake - Maskwa	
Start Time (MST)	7:20	End Time (MST) 14:15

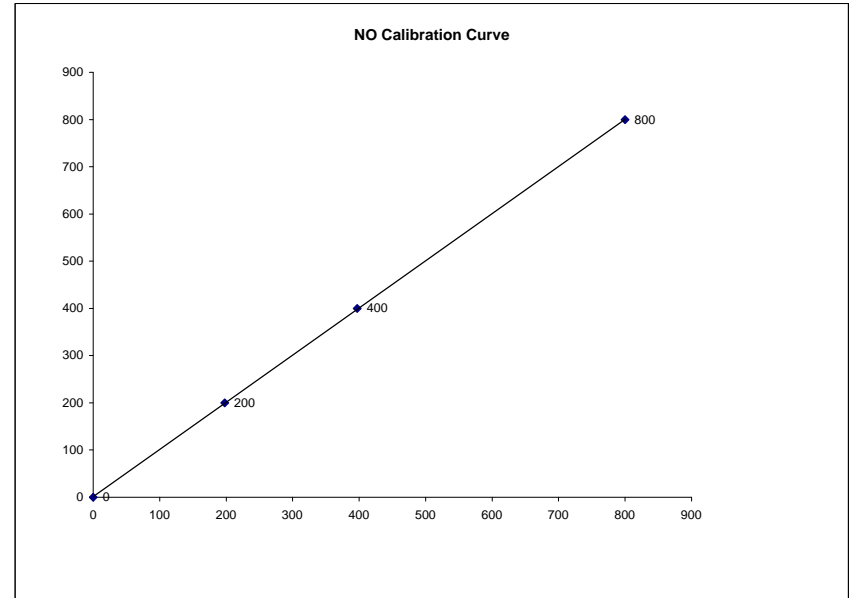
Calculated Conc. ppb	Indicated Response ppb	Correction Factor	Correlation Coefficient	( $\geq 0.995$ )	0.999979
0	1	N/A	Slope	(0.85 to 1.15)	0.999745
201	199	1.0097	Intercept	( $\pm 3\%$ F.S.)	-0.646533
401	399	1.0055			
803	803	0.9998			



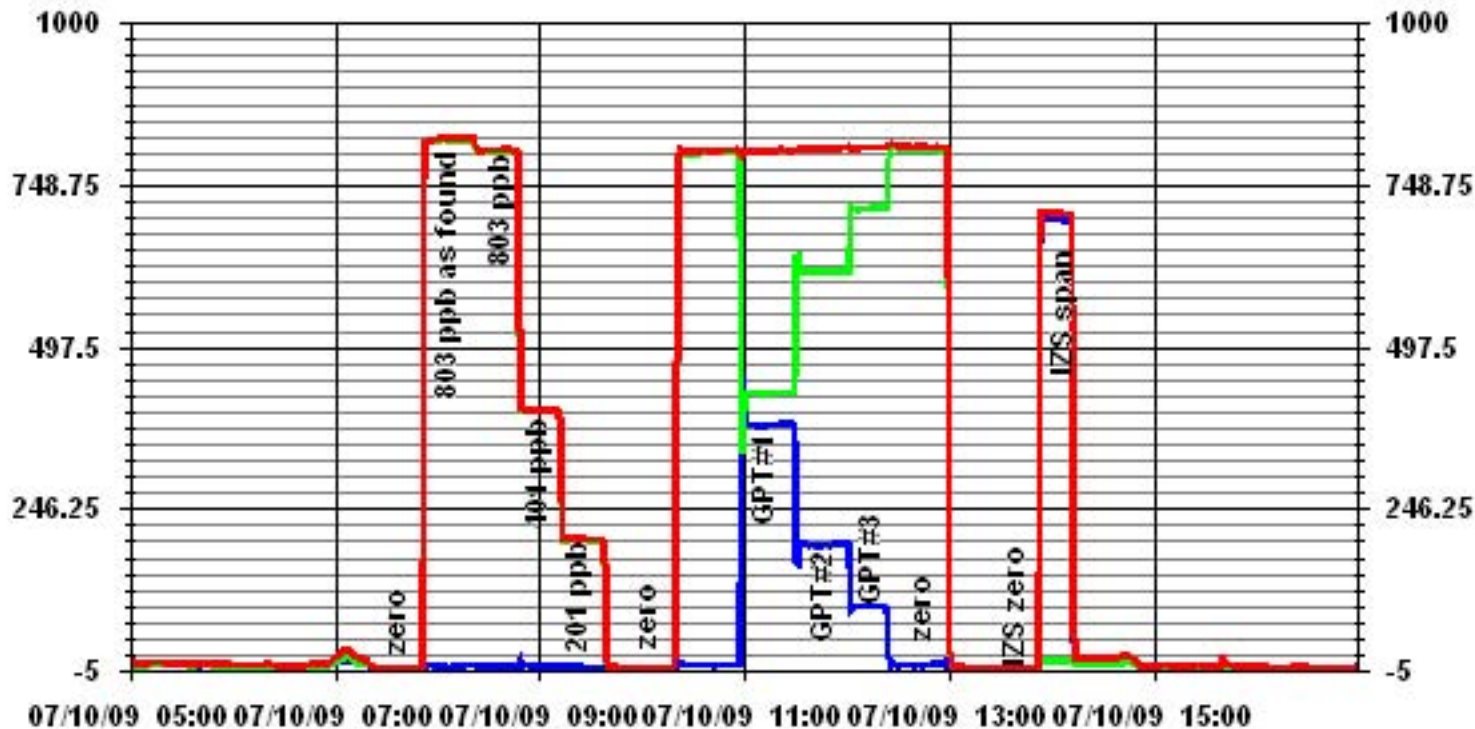
### NO Calibration Curve

Calibration Date	July 10, 2009	
Company	LICA	
Plant / Location	Cold Lake - Maskwa	
Start Time (MST)	7:20	End Time (MST) 14:15

Calculated Conc. ppb	Indicated Response ppb	Correction Factor	Correlation Coefficient	( $\geq 0.995$ )	0.999982
0	0	N/A	Slope	(0.85 to 1.15)	1.000905
200	198	1.0109	Intercept	( $\pm 3\%$ F.S.)	-1.446508
400	397	1.0067			
800	800	0.9997			



### 01 Minute Averages



— LICA30 NOX\_ PPB    
 — LICA30 NO\_ PPB    
 — LICA30 NO2\_ PPB

# Lakeland Industry & Community Association

St. Lina Monitoring Site  
Ambient Air Monitoring  
Data Report  
For  
July 2009

Prepared By:



August 18, 2009



# Lakeland Industry & Community Association

## St. Lina

### Ambient Air Monitoring

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<ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>● Total Hydrocarbons</li> </ul> </li> </ul>	<b>27</b>		
<ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>● Nitrogen Dioxide</li> </ul> </li> </ul>	<b>35</b>		
<ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>● Nitric Oxide</li> </ul> </li> </ul>	<b>43</b>		
<ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>● Oxides of Nitrogen</li> </ul> </li> </ul>	<b>50</b>		
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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: July 2009

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

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 – July 2009

LICA ST. LINA 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									
SO2 (PPB)	172	57	0	0	0.03	3	30	8	12.9	246(WSW)	0.5	30	97.2
H2S (PPB)	10	3	0	0	0.08	1	VAR	VAR	VAR	VAR	0.5	18	51.2
THC (PPM)	-	-	-	-	2.03	5.4	25	2	9.8	304(WNW)	2.3	25	92.7
NOx (PPB)	-	-	-	-	0.52	7	30	8	12.9	246(WSW)	2.0	30	97.0
NO (PPB)	-	-	-	-	0.18	2	10	6, 7	8.3, 9.6	223(SW), 221(SW)	0.6	10	97.0
NO <sub>2</sub> (PPB)	212	106	0	0	0.47	6	30	8	12.9	246(WSW)	1.8	30	97.0
VECTOR WS (KPH)	-	-	-	-	9.88	23.3	7	13, 14	-	67(ENE), 70(ENE)	16.9	19	96.5
VECTOR WD (DEGREES)	-	-	-	-	301(WNW)	-	-	-	-	-	-	-	96.5

VAR-VARI96.50US

# 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

#### Sulphur Dioxide (PPB)

- Analyzer make / model - API 100E

No operational issue was observed during this month. The monthly calibration was performed on July 15<sup>th</sup>. Several power failure events occurred during this month that caused 21 hours of data invalidated. After the power failure on July 18<sup>th</sup>, the analyzer daily zero was reading 7 ppb as a baseline. The analyzer was re-calibrated on July 21<sup>st</sup>, and no issue was discovered. Data was corrected using daily zero information.

#### Hydrogen Sulphide (PPB)

- Analyzer make / model - API 101E

After the calibration on July 26<sup>th</sup>, the sample inlet line was left disconnected and sample air was collected from inside the trailer. This issue was noticed and corrected on July 15<sup>th</sup>, and then the monthly calibration was performed. The data was invalidated from July 1<sup>st</sup> to July 15<sup>th</sup> before the monthly calibration. 343 hours data was invalidated during this month. Several power failure events occurred during this month that caused 20 hours of data invalidated. After the power failure on July 18<sup>th</sup>, the analyzer daily zero was reading -4 ppb as a baseline. The analyzer was re-calibrated on July 21<sup>st</sup>, and no issue was discovered. Data was corrected using daily zero information.

# General Monthly Summary

## AQM STATION – LICA – St. Lina

### Total HydroCarbon (PPM)

- Analyzer make / model –TECO 51C

A new single stage regulator was installed on the daily calibration zero air port on the rear bulkhead of the analyzer following the as found points on July 15<sup>th</sup>. The zero air from the station zero air supply was tee'ed at the FID air port on the rear bulkhead and a line was installed going to the new regulator. This allows the station zero air supply to be used as the supply of zero air for the daily zero/span calibration. The analyzer flamed out following a power failure on July 16<sup>th</sup>, and the analyzer was re-lit on July 17<sup>th</sup>. A daily calibration program was ran after relit. Another power failure event occurred on July 18<sup>th</sup> causing the analyzer to flame out, and it was re-lit on July 20<sup>th</sup>. A total of 21 hours of data was invalidated during this month due to power failures. 17 hours of data on July 16<sup>th</sup> and 16 hours of data on July 19<sup>th</sup> were invalidated due to the power failures causing the analyzer to flame out. Data was corrected using daily zero information.

### Nitrogen Dioxide (PPB)

- Analyzer make / model - API 200E

No operational issue was observed during this month. The monthly calibration was performed on July 15<sup>th</sup>. Several power failure events occurred during this month that caused 22 hours of data invalidated. Data was corrected using daily zero information.

# General Monthly Summary

## AQM STATION – LICA – St. Lina

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

- System make / model – Met 50.5

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

The wind system was checked on July 15<sup>th</sup>. The wind speed was reading 2 km/hr high at zero and 6 km/hr low at full scale.

The wind direction was reading 7 degree with the North/South pathway blocked, 150 degree with the East/West pathway blocked, and 160 degree with both pathways blocked. Switched power supply-same readings; switched sensor-same readings; switched cables- readings normalized. When the cable was initially switched, the shield was not connected- this configuration resulted in normal readings. When the shield was connected to the data logger, the readings reverted back to what they were prior to the cable change. The wind system cable was left with the shield disconnected from the logger.

Readings after connection change: Wind Speed (WS) at expected zero was 0.0kph; N/S pathway blocked: WS=177kph, WD=10 degree; E/W pathway blocked: WS=177kph, WD=158 degree; N/S and E/W pathways blocked: WS=177kph, WD=167 degree.

### Datalogger

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

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

One-minute data between July 1<sup>st</sup> and July 5<sup>th</sup> is missing because of communication difficulty.

### Trailer

No issued was discovered.

# Continuous Monitoring



# Monthly Summaries, Graphs & Wind Roses

# Sulphur Dioxide

## LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - ST. LINA

JULY 2009

### 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	0:00	MAX.	AVG.	RDGS.		
DAY																													
1	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		
2	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		
3	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		
4	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		
5	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		
6	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		
7	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	
8	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	
9	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	
10	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	
11	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	
12	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	
13	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	
14	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	P	0	0	0	0	0	0	0	0	0	0	0	0.0	23	
15	0	0	0	0	0	0	0	C	C	C	C	C	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24	
16	0	0	0	0	0	0	0	0	0	IZS	0	0	1	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	IZS	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	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	P	P	P	0	0.0	21	
19	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	0	0	0	0	0	0	0	0	0	0	0.0	8	
20	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	
21	0	0	0	0	IZS	0	0	0	0	C	C	C	C	C	C	0	0	0	0	0	0	0	0	0	0	0	0.0	24	
22	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	
23	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	P	0	0.0	23	
24	0	IZS	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	
25	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	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	IZS	0	0	0.0	24	
27	0	0	0	1	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	1	0.2	24	
28	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	
29	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	
30	0	0	0	0	0	0	0	2	3	1	1	1	1	1	1	1	0	0	IZS	0	0	0	0	0	3	0.5	24		
31	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	
HOURLY MAX	0	0	0	1	0	0	1	2	3	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0.0		
HOURLY AVG	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	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	0.0	0.0	

#### STATUS FLAG CODES

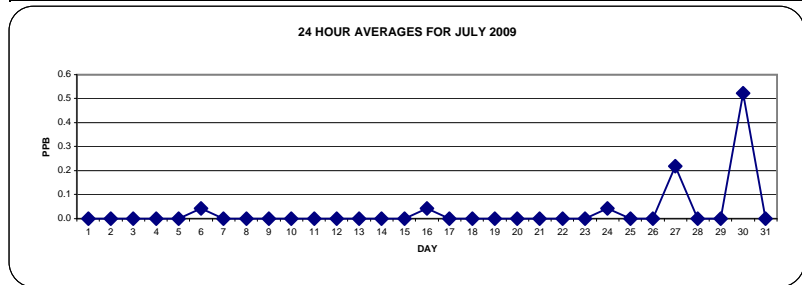
S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	- MAINTENANCE
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE

OBJECTIVE LIMIT:

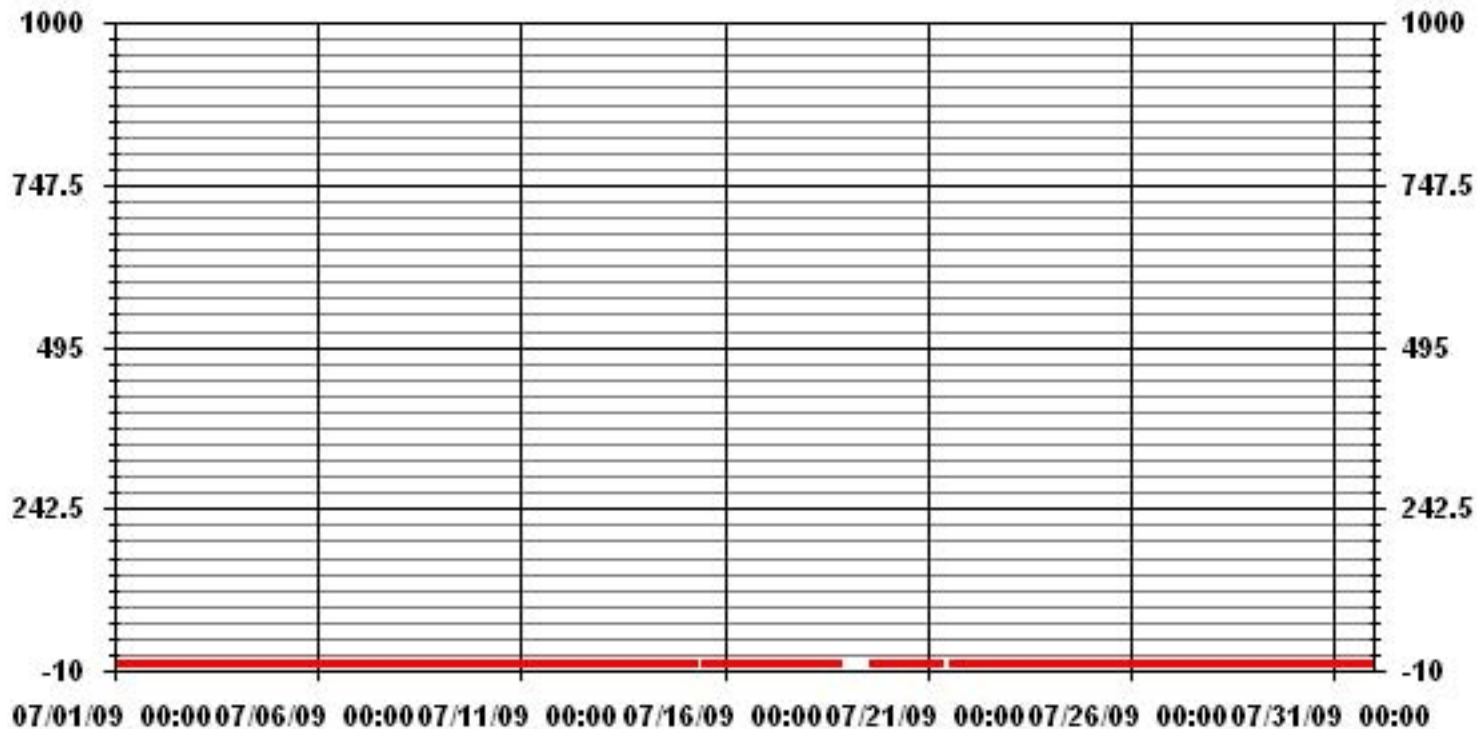
ALBERTA ENVIRONMENT:	1-HR	172	PPB	24-HR	57	PPB
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#### MONTHLY SUMMARY

NUMBER OF 1-HR EXCEEDENCES:	0					
NUMBER OF 24-HR EXCEEDENCES:	0					
NUMBER OF NON-ZERO READINGS:	17					
MAXIMUM 1-HR AVERAGE:	3	PPB	@ HOUR(S)	8	ON DAY(S)	30
MAXIMUM 24-HR AVERAGE:	0.5	PPB			ON DAY(S)	30
IZS CALIBRATION TIME:	31	HRS	OPERATIONAL TIME:	723	HRS	
MONTHLY CALIBRATION TIME:	11	HRS	AMD OPERATION UPTIME:	97.2	%	
STANDARD DEVIATION:	0.20		MONTHLY AVERAGE:	0.03	PPB	



### 01 Hour Averages



— LICA31 SO2\_ PPB

# LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - ST. LINA

JULY 2009

## 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	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	0:00	MAX.	AVG.	RDGS.	
1		1	IZS	0	0	0	0	0	1	1	1	1	1	1	1	2	2	1	1	1	1	1	1	0	2	0.8	24		
2		IZS	0	1	1	1	0	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	IZS	1	0.9	24	
3		1	1	1	1	1	1	0	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	IZS	1	0.9	24	
4		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	
5		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	1.0	24	
6		1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	IZS	0	0	0	0	2	0.9	24	
7		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	
8		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	
9		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	
10		0	0	0	0	0	0	0	0	0	0	1	0	0	0	IZS	1	1	1	1	1	1	1	1	1	1	0.4	24	
11		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	
12		1	1	1	1	1	1	1	1	1	1	1	1	1	IZS	0	0	0	0	0	0	0	0	0	0	0	0.6	24	
13		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	
14		0	0	0	0	0	0	0	0	0	0	0	IZS	P	0	P	0	0	0	0	0	0	0	0	0	0	0.0	22	
15		0	0	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	
16		0	0	0	0	0	0	0	0	0	IZS	1	1	2	2	0	0	1	P	2	0	0	0	0	0	0	2	0.4	23
17		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	
18		0	0	0	0	0	0	0	IZS	0	1	1	1	1	1	1	1	1	1	1	1	1	P	P	P	1	0.6	21	
19		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	3	0	1	1	1	1	1	1	1	1	3	1.1	8
20		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
21		1	1	1	1	IZS	1	1	1	1	C	C	C	C	C	C	1	1	1	1	1	1	1	1	1	1	1	1.0	24
22		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
23		1	1	IZS	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	P	1	1.0	23	
24		1	IZS	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1.0	24
25		IZS	0	0	0	0	0	0	0	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.1	24
26		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
27		1	1	1	2	1	1	2	1	2	2	1	1	1	1	1	1	1	1	1	1	1	1	IZS	1	1	2	1.2	24
28		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	IZS	0	1	0	1	0.9	24
29		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	1	1	1	1	1	1	0.2	24
30		1	1	1	1	1	1	5	5	3	2	2	2	1	1	2	1	1	IZS	0	0	0	0	0	0	5	1.4	24	
31		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	1	0	0	0	0	1	0.0	24
HOURLY MAX		1	1	1	2	1	1	2	5	5	3	2	2	2	2	1	2	3	3	1	2	1	1	1	1	1			
HOURLY AVG		0.6	0.5	0.5	0.6	0.5	0.5	0.5	0.8	0.8	0.8	0.7	0.7	0.7	0.6	0.6	0.7	0.8	0.6	0.7	0.6	0.6	0.5	0.5	0.5				

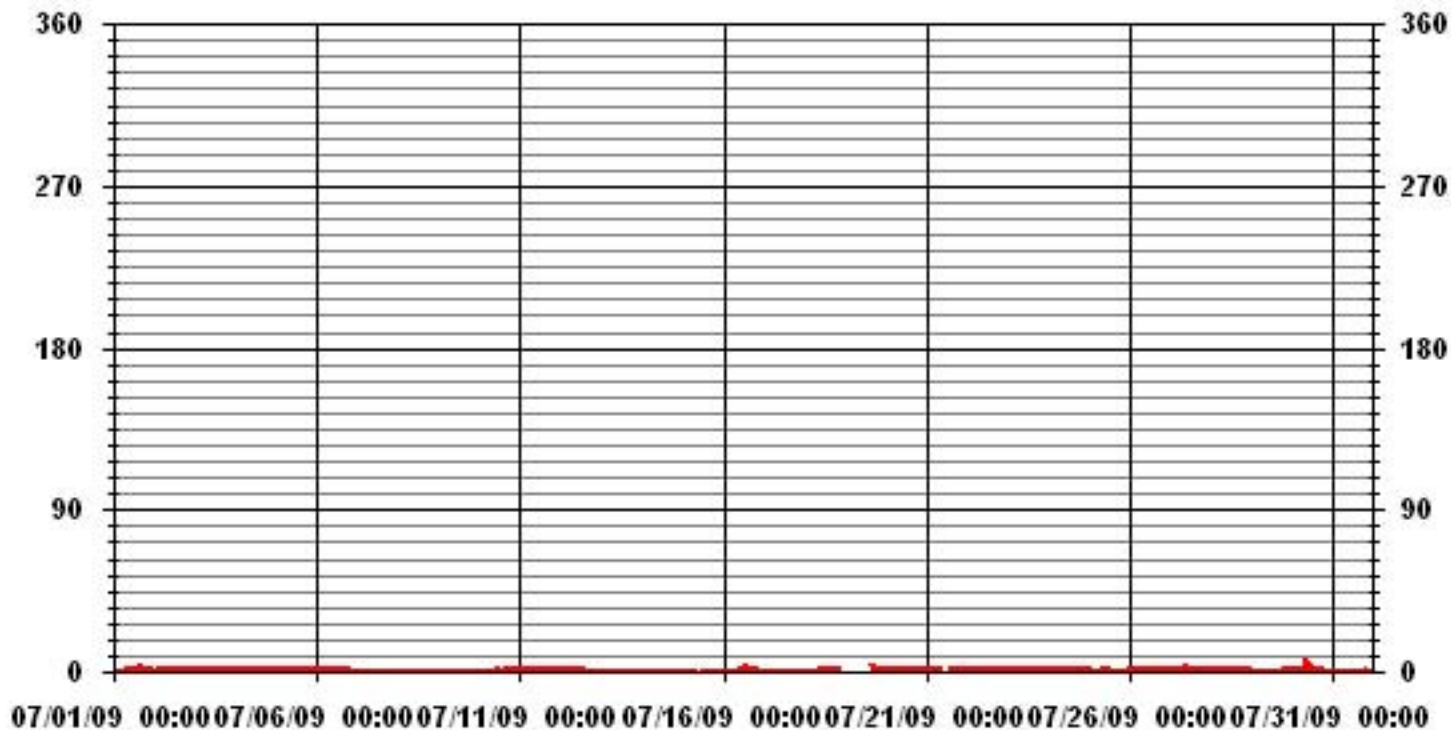
**STATUS FLAG CODES**

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

**MONTHLY SUMMARY**

NUMBER OF NON-ZERO READINGS:	393					
MAXIMUM INSTANTANEOUS VALUE:	5	PPB	@ HOUR(S)	7, 8	ON DAY(S)	30
IZS CALIBRATION TIME:	31	HRS		OPERATIONAL TIME:	721	HRS
MONTHLY CALIBRATION TIME:	11	HRS				
STANDARD DEVIATION:	0.60					

### 01 Hour Averages



— LICA31 SO2MAX PPB

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

July 2009

Distribution By % Of Samples

Logger Id : 31  
 Site Name : LICA31  
 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	5.16	5.76	2.36	7.23	4.43	4.43	3.98	4.28	4.28	4.57	6.05	7.09	8.71	10.93	11.81	8.86	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	5.16	5.76	2.36	7.23	4.43	4.43	3.98	4.28	4.28	4.57	6.05	7.09	8.71	10.93	11.81	8.86	

Calm : .00 %

Total # Operational Hours : 677

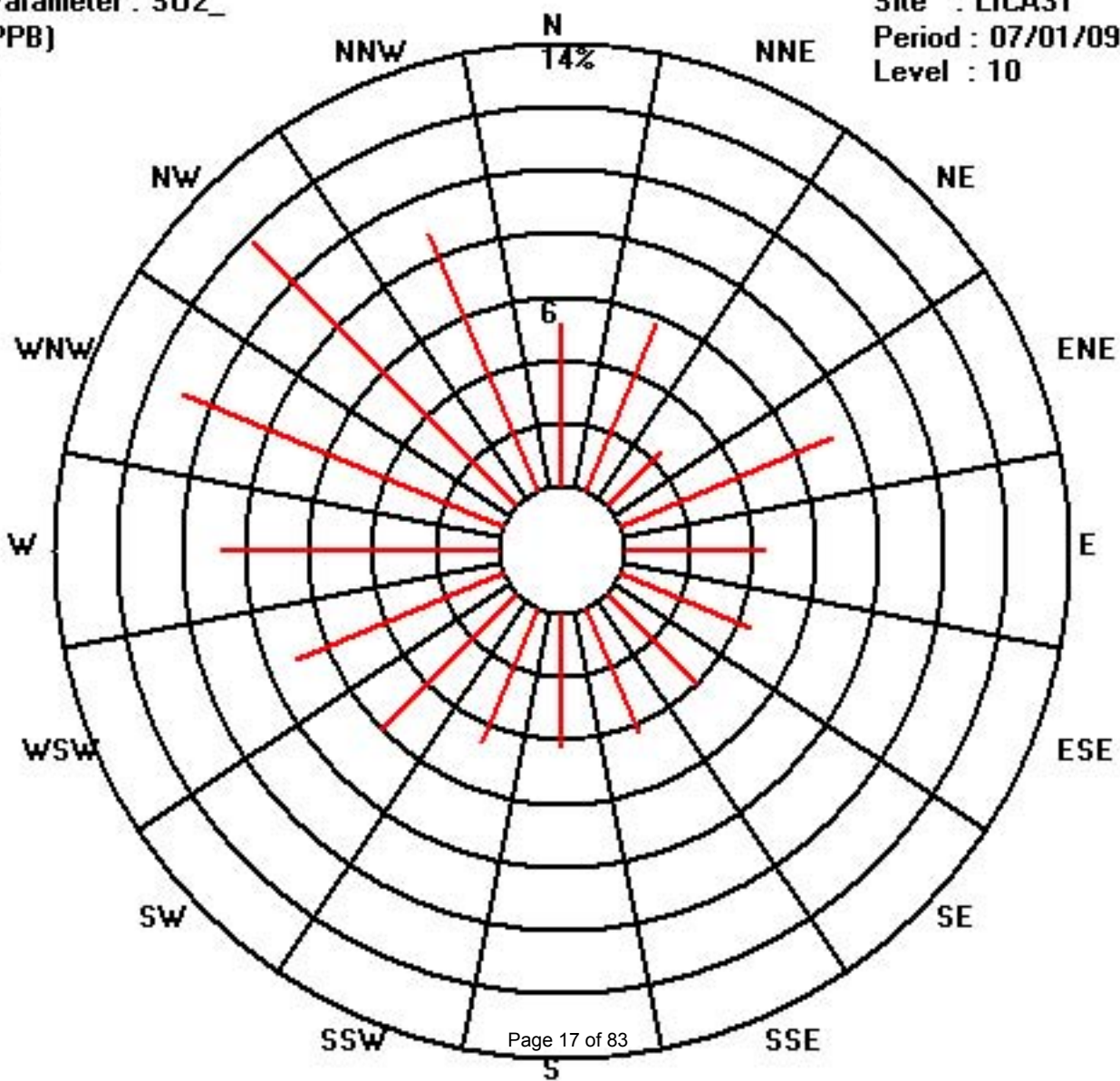
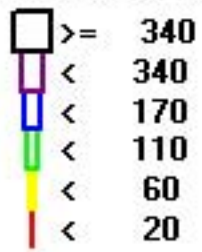
Distribution By Samples

Limit	Direction																Freq
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
< 20	35	39	16	49	30	30	27	29	29	31	41	48	59	74	80	60	677
< 60																	
< 110																	
< 170																	
< 340																	
>= 340																	
Totals	35	39	16	49	30	30	27	29	29	31	41	48	59	74	80	60	

Calm : .00 %

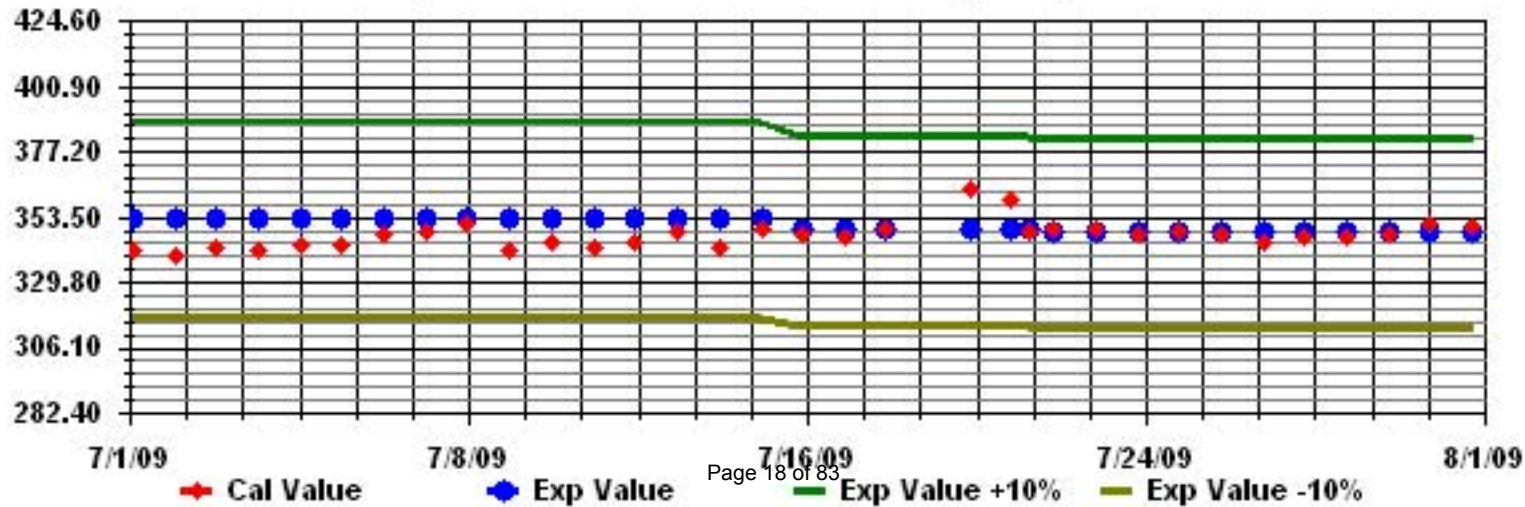
Total # Operational Hours : 677

Class Limits (PPB)





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



# Hydrogen Sulphide

# LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - ST. LINA

JULY 2009

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		N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N			0	
2		N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N			0	
3		N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N			0	
4		N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N			0	
5		N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N			0	
6		N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N			0	
7		N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N			0	
8		N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N			0	
9		N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N			0	
10		N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N			0	
11		N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N			0	
12		N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N			0	
13		N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N			0	
14		N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N			0	
15		N	N	N	N	N	N	N	N	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	0	0.0	17	
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	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	0.0	24
18		0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0	0	0	1	0.5	21	
19		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	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	0	0	0	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	1	0.1	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	0.0	23
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	1	0.1	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	0.0	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	0.0	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	1	0.1	24	
28		0	1	1	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	
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		1	1	1	1	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.3	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	0.0	24
HOURLY MAX		1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	1	1	1	1	0	0	0				
HOURLY AVG		0.1	0.1	0.1	0.2	0.1	0.3	0.2	0.1	0.3	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.0				

STATUS FLAG CODES

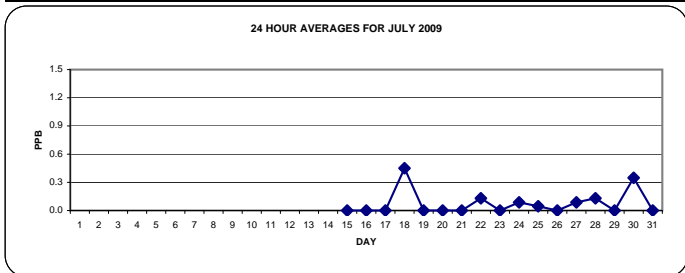
S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	- MAINTENANCE
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE

OBJECTIVE LIMIT:

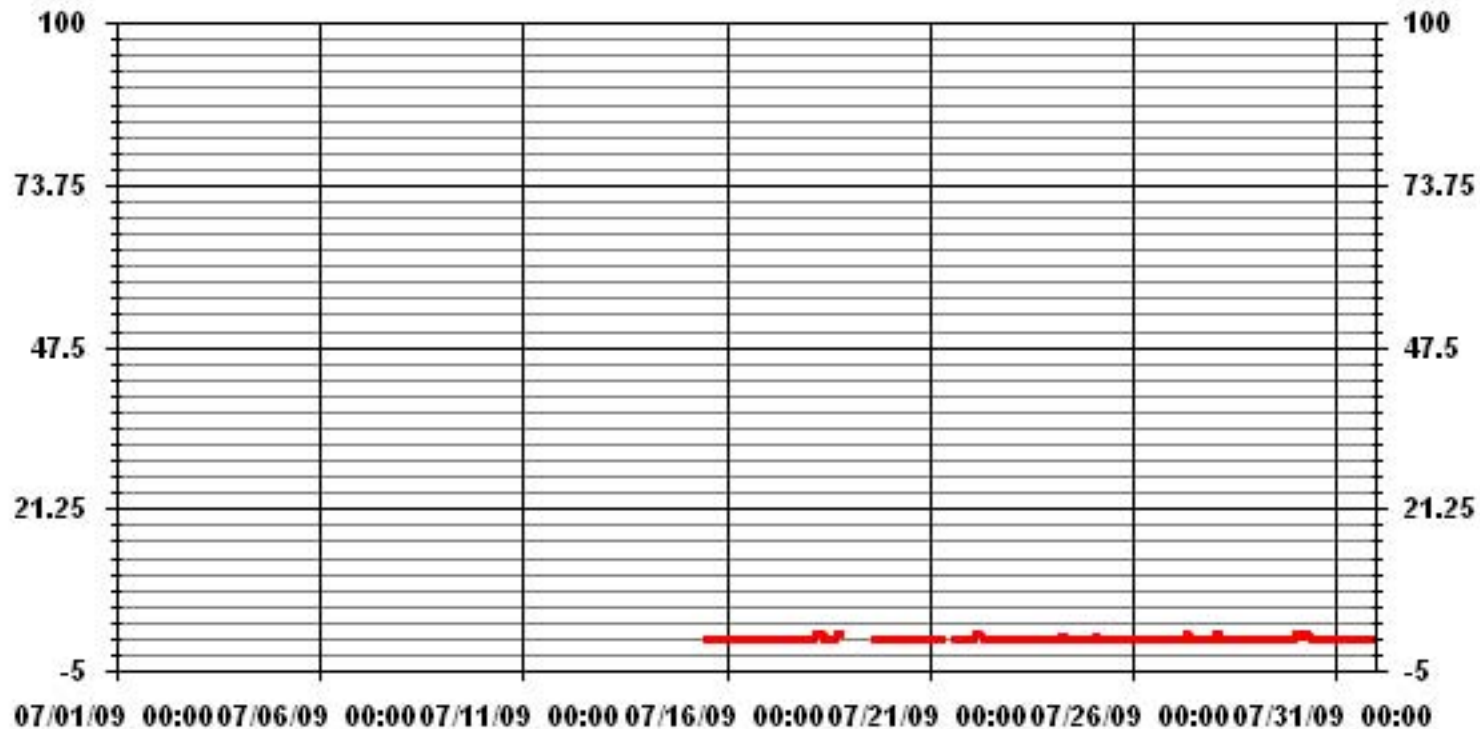
ALBERTA ENVIRONMENT: 1-HR 10 PPB 24-HR 3 PPB

MONTHLY SUMMARY

NUMBER OF 1-HR EXCEEDENCES:	0
NUMBER OF 24-HR EXCEEDENCES:	0
NUMBER OF NON-ZERO READINGS:	28
MAXIMUM 1-HR AVERAGE:	1 PPB @ HOUR(S) VAR ON DAY(S) VAR
MAXIMUM 24-HR AVERAGE:	0.5 PPB VAR-VARIOUS ON DAY(S) 18
IZS CALIBRATION TIME:	16 HRS OPERATIONAL TIME: 381 HRS
MONTHLY CALIBRATION TIME:	11 HRS AMD OPERATION UPTIME: 51.2 %
STANDARD DEVIATION:	0.27 MONTHLY AVERAGE: 0.08 PPB



### 01 Hour Averages



— LICA31 H2S\_ PPB

# LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - ST. LINA

JULY 2009

## 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		N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N			0	2		N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N			0	3		N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N			0	4		N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N			0	5		N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N			0	6		N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N			0	7		N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N			0	8		N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N			0	9		N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N			0	10		N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N			0	11		N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N			0	12		N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N			0	13		N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N			0	14		N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N			0	15		N	N	N	N	N	N	N	N	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	0	0.0	17	16		0	0	0	0	0	0	1	0	0	IZS	0	0	0	0	0	0	0	0	P	0	0	0	0	0	0	0	1	0.0	23	17		0	0	0	0	1	1	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0.1	24	18		0	0	1	1	1	1	1	IZS	1	1	1	1	1	1	1	1	1	1	1	1	1	1	P	P	P	1	0.9	21	19		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	0	0	0	0	0	0	0	0	0.0	7	20		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	21		0	0	0	0	IZS	0	0	0	0	C	C	C	C	C	C	C	C	0	0	0	0	0	0	0	0	0	0.0	24	22		0	0	0	0	IZS	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.2	24	23		0	0	IZS	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	P	1	0.0	23	24		0	IZS	0	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.2	24	25		IZS	1	0	1	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	1	0.2	24	26		0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	1	0.1	24	27		0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	2	0.2	24	28		1	1	1	1	1	0	0	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	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0.0	24	30		1	1	1	1	1	1	2	3	1	1	1	0	0	0	1	0	1	0	IZS	0	0	0	0	0	0	3	0.7	24	31		0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	IZS	0	0	1	1	0	1	1	0.2	24	HOURLY MAX		1	1	1	1	1	1	2	3	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1				HOURLY AVG		0.1	0.3	0.3	0.4	0.5	0.4	0.5	0.4	0.4	0.4	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.0	0.1			
1		N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N			0	2		N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N			0	3		N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N			0	4		N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N			0	5		N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N			0	6		N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N			0	7		N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N			0	8		N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N			0	9		N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N			0	10		N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N			0	11		N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N			0	12		N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N			0	13		N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N			0	14		N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N			0	15		N	N	N	N	N	N	N	N	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	0	0.0	17	16		0	0	0	0	0	0	1	0	0	IZS	0	0	0	0	0	0	0	0	P	0	0	0	0	0	0	0	1	0.0	23	17		0	0	0	0	1	1	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0.1	24	18		0	0	1	1	1	1	1	IZS	1	1	1	1	1	1	1	1	1	1	1	1	1	1	P	P	P	1	0.9	21	19		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	0	0	0	0	0	0	0	0	0.0	7	20		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	21		0	0	0	0	IZS	0	0	0	0	C	C	C	C	C	C	C	C	0	0	0	0	0	0	0	0	0	0.0	24	22		0	0	0	0	IZS	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.2	24	23		0	0	IZS	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	P	1	0.0	23	24		0	IZS	0	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.2	24	25		IZS	1	0	1	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	1	0.2	24	26		0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	1	0.1	24	27		0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	2	0.2	24	28		1	1	1	1	1	0	0	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	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0.0	24	30		1	1	1	1	1	1	2	3	1	1	1	0	0	0	1	0	1	0	IZS	0	0	0	0	0	0	3	0.7	24	31		0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	IZS	0	0	1	1	0	1	1	0.2	24	HOURLY MAX		1	1	1	1	1	1	2	3	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1				HOURLY AVG		0.1	0.3	0.3	0.4	0.5	0.4	0.5	0.4	0.4	0.4	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.0	0.1																																	
2		N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N			0	3		N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N			0	4		N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N			0	5		N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N			0	6		N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N			0	7		N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N			0	8		N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N			0	9		N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N			0	10		N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N			0	11		N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N			0	12		N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N			0	13		N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N			0	14		N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N			0	15		N	N	N	N	N	N	N	N	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	0	0.0	17	16		0	0	0	0	0	0	1	0	0	IZS	0	0	0	0	0	0	0	0	P	0	0	0	0	0	0	0	1	0.0	23	17		0	0	0	0	1	1	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0.1	24	18		0	0	1	1	1	1	1	IZS	1	1	1	1	1	1	1	1	1	1	1	1	1	1	P	P	P	1	0.9	21	19		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	0	0	0	0	0	0	0	0	0.0	7	20		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	21		0	0	0	0	IZS	0	0	0	0	C	C	C	C	C	C	C	C	0	0	0	0	0	0	0	0	0	0.0	24	22		0	0	0	0	IZS	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.2	24	23		0	0	IZS	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	P	1	0.0	23	24		0	IZS	0	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.2	24	25		IZS	1	0	1	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	1	0.2	24	26		0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	1	0.1	24	27		0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	2	0.2	24	28		1	1	1	1	1	0	0	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	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0.0	24	30		1	1	1	1	1	1	2	3	1	1	1	0	0	0	1	0	1	0	IZS	0	0	0	0	0	0	3	0.7	24	31		0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	IZS	0	0	1	1	0	1	1	0.2	24	HOURLY MAX		1	1	1	1	1	1	2	3	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1				HOURLY AVG		0.1	0.3	0.3	0.4	0.5	0.4	0.5	0.4	0.4	0.4	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.0	0.1																																																															
3		N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N			0	4		N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N			0	5		N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N			0	6		N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N			0	7		N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N			0	8		N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N			0	9		N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N			0	10		N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N			0	11		N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N			0	12		N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N			0	13		N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N			0	14		N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N			0	15		N	N	N	N	N	N	N	N	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	0	0.0	17	16		0	0	0	0	0	0	1	0	0	IZS	0	0	0	0	0	0	0	0	P	0	0	0	0	0	0	0	1	0.0	23	17		0	0	0	0	1	1	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0.1	24	18		0	0	1	1	1	1	1	IZS	1	1	1	1	1	1	1	1	1	1	1	1	1	1	P	P	P	1	0.9	21	19		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	0	0	0	0	0	0	0	0	0.0	7	20		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	21		0	0	0	0	IZS	0	0	0	0	C	C	C	C	C	C	C	C	0	0	0	0	0	0	0	0	0	0.0	24	22		0	0	0	0	IZS	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.2	24	23		0	0	IZS	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	P	1	0.0	23	24		0	IZS	0	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.2	24	25		IZS	1	0	1	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	1	0.2	24	26		0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	1	0.1	24	27		0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	2	0.2	24	28		1	1	1	1	1	0	0	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	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0.0	24	30		1	1	1	1	1	1	2	3	1	1	1	0	0	0	1	0	1	0	IZS	0	0	0	0	0	0	3	0.7	24	31		0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	IZS	0	0	1	1	0	1	1	0.2	24	HOURLY MAX		1	1	1	1	1	1	2	3	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1				HOURLY AVG		0.1	0.3	0.3	0.4	0.5	0.4	0.5	0.4	0.4	0.4	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.0	0.1																																																																																														
4		N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N			0	5		N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N			0	6		N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N			0	7		N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N			0	8		N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N			0	9		N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N			0	10		N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N			0	11		N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N			0	12		N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N			0	13		N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N			0	14		N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N			0	15		N	N	N	N	N	N	N	N	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	0	0.0	17	16		0	0	0	0	0	0	1	0	0	IZS	0	0	0	0	0	0	0	0	P	0	0	0	0	0	0	0	1	0.0	23	17		0	0	0	0	1	1	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0.1	24	18		0	0	1	1	1	1	1	IZS	1	1	1	1	1	1	1	1	1	1	1	1	1	1	P	P	P	1	0.9	21	19		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	0	0	0	0	0	0	0	0	0.0	7	20		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	21		0	0	0	0	IZS	0	0	0	0	C	C	C	C	C	C	C	C	0	0	0	0	0	0	0	0	0	0.0	24	22		0	0	0	0	IZS	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.2	24	23		0	0	IZS	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	P	1	0.0	23	24		0	IZS	0	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.2	24	25		IZS	1	0	1	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	1	0.2	24	26		0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	1	0.1	24	27		0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	2	0.2	24	28		1	1	1	1	1	0	0	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	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0.0	24	30		1	1	1	1	1	1	2	3	1	1	1	0	0	0	1	0	1	0	IZS	0	0	0	0	0	0	3	0.7	24	31		0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	IZS	0	0	1	1	0	1	1	0.2	24	HOURLY MAX		1	1	1	1	1	1	2	3	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1				HOURLY AVG		0.1	0.3	0.3	0.4	0.5	0.4	0.5	0.4	0.4	0.4	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.0	0.1																																																																																																																													
5		N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N			0	6		N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N			0	7		N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N			0	8		N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N			0	9		N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N			0	10		N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N			0	11		N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N			0	12		N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N			0	13		N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N			0	14		N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N			0	15		N	N	N	N	N	N	N	N	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	0	0.0	17	16		0	0	0	0	0	0	1	0	0	IZS	0	0	0	0	0	0	0	0	P	0	0	0	0	0	0	0	1	0.0	23	17		0	0	0	0	1	1	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0.1	24	18		0	0	1	1	1	1	1	IZS	1	1	1	1	1	1	1	1	1	1	1	1	1	1	P	P	P	1	0.9	21	19		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	0	0	0	0	0	0	0	0	0.0	7	20		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	21		0	0	0	0	IZS	0	0	0	0	C	C	C	C	C	C	C	C	0	0	0	0	0	0	0	0	0	0.0	24	22		0	0	0	0	IZS	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.2	24	23		0	0	IZS	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	P	1	0.0	23	24		0	IZS	0	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.2	24	25		IZS	1	0	1	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	1	0.2	24	26		0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	1	0.1	24	27		0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	2	0.2	24	28		1	1	1	1	1	0	0	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	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0.0	24	30		1	1	1	1	1	1	2	3	1	1	1	0	0	0	1	0	1	0	IZS	0	0	0	0	0	0	3	0.7	24	31		0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	IZS	0	0	1	1	0	1	1	0.2	24	HOURLY MAX		1	1	1	1	1	1	2	3	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1				HOURLY AVG		0.1	0.3	0.3	0.4	0.5	0.4	0.5	0.4	0.4	0.4	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.0	0.1																																																																																																																																																												
6		N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N			0	7		N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N			0	8		N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N			0	9		N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N			0	10		N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N			0	11		N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N			0	12		N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N			0	13		N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N			0	14		N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N			0	15		N	N	N	N	N	N	N	N	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	0	0.0	17	16		0	0	0	0	0	0	1	0	0	IZS	0	0	0	0	0	0	0	0	P	0	0	0	0	0	0	0	1	0.0	23	17		0	0	0	0	1	1	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0.1	24	18		0	0	1	1	1	1	1	IZS	1	1	1	1	1	1	1	1	1	1	1	1	1	1	P	P	P	1	0.9	21	19		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	0	0	0	0	0	0	0	0	0.0	7	20		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	21		0	0	0	0	IZS	0	0	0	0	C	C	C	C	C	C	C	C	0	0	0	0	0	0	0	0	0	0.0	24	22		0	0	0	0	IZS	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.2	24	23		0	0	IZS	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	P	1	0.0	23	24		0	IZS	0	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.2	24	25		IZS	1	0	1	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	1	0.2	24	26		0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	1	0.1	24	27		0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	2	0.2	24	28		1	1	1	1	1	0	0	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	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0.0	24	30		1	1	1	1	1	1	2	3	1	1	1	0	0	0	1	0	1	0	IZS	0	0	0	0	0	0	3	0.7	24	31		0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	IZS	0	0	1	1	0	1	1	0.2	24	HOURLY MAX		1	1	1	1	1	1	2	3	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1				HOURLY AVG		0.1	0.3	0.3	0.4	0.5	0.4	0.5	0.4	0.4	0.4	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.0	0.1																																																																																																																																																																																											
7		N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N			0	8		N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N			0	9		N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N			0	10		N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N			0	11		N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N			0	12		N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N			0	13		N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N			0	14		N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N			0	15		N	N	N	N	N	N	N	N	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	0	0.0	17	16		0	0	0	0	0	0	1	0	0	IZS	0	0	0	0	0	0	0	0	P	0	0	0	0	0	0	0	1	0.0	23	17		0	0	0	0	1	1	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0.1	24	18		0	0	1	1	1	1	1	IZS	1	1	1	1	1	1	1	1	1	1	1	1	1	1	P	P	P	1	0.9	21	19		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	0	0	0	0	0	0	0	0	0.0	7	20		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	21		0	0	0	0	IZS	0	0	0	0	C	C	C	C	C	C	C	C	0	0	0	0	0	0	0	0	0	0.0	24	22		0	0	0	0	IZS	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.2	24	23		0	0	IZS	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	P	1	0.0	23	24		0	IZS	0	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.2	24	25		IZS	1	0	1	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	1	0.2	24	26		0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	1	0.1	24	27		0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	2	0.2	24	28		1	1	1	1	1	0	0	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	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0.0	24	30		1	1	1	1	1	1	2	3	1	1	1	0	0	0	1	0	1	0	IZS	0	0	0	0	0	0	3	0.7	24	31		0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	IZS	0	0	1	1	0	1	1	0.2	24	HOURLY MAX		1	1	1	1	1	1	2	3	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1				HOURLY AVG		0.1	0.3	0.3	0.4	0.5	0.4	0.5	0.4	0.4	0.4	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.0	0.1																																																																																																																																																																																																																										
8		N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N			0	9		N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N			0	10		N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N			0	11		N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N			0	12		N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N			0	13		N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N			0	14		N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N			0	15		N	N	N	N	N	N	N	N	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	0	0.0	17	16		0	0	0	0	0	0	1	0	0	IZS	0	0	0	0	0	0	0	0	P	0	0	0	0	0	0	0	1	0.0	23	17		0	0	0	0	1	1	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0.1	24	18		0	0	1	1	1	1	1	IZS	1	1	1	1	1	1	1	1	1	1	1	1	1	1	P	P	P	1	0.9	21	19		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	0	0	0	0	0	0	0	0	0.0	7	20		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	21		0	0	0	0	IZS	0	0	0	0	C	C	C	C	C	C	C	C	0	0	0	0	0	0	0	0	0	0.0	24	22		0	0	0	0	IZS	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.2	24	23		0	0	IZS	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	P	1	0.0	23	24		0	IZS	0	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.2	24	25		IZS	1	0	1	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	1	0.2	24	26		0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	1	0.1	24	27		0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	2	0.2	24	28		1	1	1	1	1	0	0	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	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0.0	24	30		1	1	1	1	1	1	2	3	1	1	1	0	0	0	1	0	1	0	IZS	0	0	0	0	0	0	3	0.7	24	31		0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	IZS	0	0	1	1	0	1	1	0.2	24	HOURLY MAX		1	1	1	1	1	1	2	3	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1				HOURLY AVG		0.1	0.3	0.3	0.4	0.5	0.4	0.5	0.4	0.4	0.4	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.0	0.1																																																																																																																																																																																																																																																									
9		N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N			0	10		N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N			0	11		N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N			0	12		N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N			0	13		N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N			0	14		N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N			0	15		N	N	N	N	N	N	N	N	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	0	0.0	17	16		0	0	0	0	0	0	1	0	0	IZS	0	0	0	0	0	0	0	0	P	0	0	0	0	0	0	0	1	0.0	23	17		0	0	0	0	1	1	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0.1	24	18		0	0	1	1	1	1	1	IZS	1	1	1	1	1	1	1	1	1	1	1	1	1	1	P	P	P	1	0.9	21	19		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	0	0	0	0	0	0	0	0	0.0	7	20		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	21		0	0	0	0	IZS	0	0	0	0	C	C	C	C	C	C	C	C	0	0	0	0	0	0	0	0	0	0.0	24	22		0	0	0	0	IZS	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.2	24	23		0	0	IZS	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	P	1	0.0	23	24		0	IZS	0	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.2	24	25		IZS	1	0	1	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	1	0.2	24	26		0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	1	0.1	24	27		0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	2	0.2	24	28		1	1	1	1	1	0	0	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	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0.0	24	30		1	1	1	1	1	1	2	3	1	1	1	0	0	0	1	0	1	0	IZS	0	0	0	0	0	0	3	0.7	24	31		0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	IZS	0	0	1	1	0	1	1	0.2	24	HOURLY MAX		1	1	1	1	1	1	2	3	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1				HOURLY AVG		0.1	0.3	0.3	0.4	0.5	0.4	0.5	0.4	0.4	0.4	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.0	0.1																																																																																																																																																																																																																																																																																								
10		N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N			0	11		N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N			0	12		N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N			0	13		N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N			0	14		N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N			0	15		N	N	N	N	N	N	N	N	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	0	0.0	17	16		0	0	0	0	0	0	1	0	0	IZS	0	0	0	0	0	0	0	0	P	0	0	0	0	0	0	0	1	0.0	23	17		0	0	0	0	1	1	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0.1	24	18		0	0	1	1	1	1	1	IZS	1	1	1	1	1	1	1	1	1	1	1	1	1	1	P	P	P	1	0.9	21	19		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	0	0	0	0	0	0	0	0	0.0	7	20		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	21		0	0	0	0	IZS	0	0	0	0	C	C	C	C	C	C	C	C	0	0	0	0	0	0	0	0	0	0.0	24	22		0	0	0	0	IZS	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.2	24	23		0	0	IZS	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	P	1	0.0	23	24		0	IZS	0	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.2	24	25		IZS	1	0	1	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	1	0.2	24	26		0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	1	0.1	24	27		0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	2	0.2	24	28		1	1	1	1	1	0	0	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	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0.0	24	30		1	1	1	1	1	1	2	3	1	1	1	0	0	0	1	0	1	0	IZS	0	0	0	0	0	0	3	0.7	24	31		0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	IZS	0	0	1	1	0	1	1	0.2	24	HOURLY MAX		1	1	1	1	1	1	2	3	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1				HOURLY AVG		0.1	0.3	0.3	0.4	0.5	0.4	0.5	0.4	0.4	0.4	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.0	0.1																																																																																																																																																																																																																																																																																																																							
11		N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N			0	12		N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N			0	13		N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N			0	14		N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N			0	15		N	N	N	N	N	N	N	N	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	0	0.0	17	16		0	0	0	0	0	0	1	0	0	IZS	0	0	0	0	0	0	0	0	P	0	0	0	0	0	0	0	1	0.0	23	17		0	0	0	0	1	1	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0.1	24	18		0	0	1	1	1	1	1	IZS	1	1	1	1	1	1	1	1	1	1	1	1	1	1	P	P	P	1	0.9	21	19		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	0	0	0	0	0	0	0	0	0.0	7	20		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	21		0	0	0	0	IZS	0	0	0	0	C	C	C	C	C	C	C	C	0	0	0	0	0	0	0	0	0	0.0	24	22		0	0	0	0	IZS	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.2	24	23		0	0	IZS	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	P	1	0.0	23	24		0	IZS	0	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.2	24	25		IZS	1	0	1	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	1	0.2	24	26		0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	1	0.1	24	27		0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	2	0.2	24	28		1	1	1	1	1	0	0	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	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0.0	24	30		1	1	1	1	1	1	2	3	1	1	1	0	0	0	1	0	1	0	IZS	0	0	0	0	0	0	3	0.7	24	31		0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	IZS	0	0	1	1	0	1	1	0.2	24	HOURLY MAX		1	1	1	1	1	1	2	3	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1				HOURLY AVG		0.1	0.3	0.3	0.4	0.5	0.4	0.5	0.4	0.4	0.4	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.0	0.1																																																																																																																																																																																																																																																																																																																																																						
12		N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N			0	13		N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N			0	14		N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N			0	15		N	N	N	N	N	N	N	N	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	0	0.0	17	16		0	0	0	0	0	0	1	0	0	IZS	0	0	0	0	0	0	0	0	P	0	0	0	0	0	0	0	1	0.0	23	17		0	0	0	0	1	1	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0.1	24	18		0	0	1	1	1	1	1	IZS	1	1	1	1	1	1	1	1	1	1	1	1	1	1	P	P	P	1	0.9	21	19		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	0	0	0	0	0	0	0	0	0.0	7	20		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	21		0	0	0	0	IZS	0	0	0	0	C	C	C	C	C	C	C	C	0	0	0	0	0	0	0	0	0	0.0	24	22		0	0	0	0	IZS	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.2	24	23		0	0	IZS	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	P	1	0.0	23	24		0	IZS	0	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.2	24	25		IZS	1	0	1	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	1	0.2	24	26		0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	1	0.1	24	27		0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	2	0.2	24	28		1	1	1	1	1	0	0	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	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0.0	24	30		1	1	1	1	1	1	2	3	1	1	1	0	0	0	1	0	1	0	IZS	0	0	0	0	0	0	3	0.7	24	31		0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	IZS	0	0	1	1	0	1	1	0.2	24	HOURLY MAX		1	1	1	1	1	1	2	3	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1				HOURLY AVG		0.1	0.3	0.3	0.4	0.5	0.4	0.5	0.4	0.4	0.4	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.0	0.1																																																																																																																																																																																																																																																																																																																																																																																					
13		N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N			0	14		N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N			0	15		N	N	N	N	N	N	N	N	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	0	0.0	17	16		0	0	0	0	0	0	1	0	0	IZS	0	0	0	0	0	0	0	0	P	0	0	0	0	0	0	0	1	0.0	23	17		0	0	0	0	1	1	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0.1	24	18		0	0	1	1	1	1	1	IZS	1	1	1	1	1	1	1	1	1	1	1	1	1	1	P	P	P	1	0.9	21	19		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	0	0	0	0	0	0	0	0	0.0	7	20		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	21		0	0	0	0	IZS	0	0	0	0	C	C	C	C	C	C	C	C	0	0	0	0	0	0	0	0	0	0.0	24	22		0	0	0	0	IZS	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.2	24	23		0	0	IZS	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	P	1	0.0	23	24		0	IZS	0	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.2	24	25		IZS	1	0	1	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	1	0.2	24	26		0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	1	0.1	24	27		0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	2	0.2	24	28		1	1	1	1	1	0	0	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	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0.0	24	30		1	1	1	1	1	1	2	3	1	1	1	0	0	0	1	0	1	0	IZS	0	0	0	0	0	0	3	0.7	24	31		0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	IZS	0	0	1	1	0	1	1	0.2	24	HOURLY MAX		1	1	1	1	1	1	2	3	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1				HOURLY AVG		0.1	0.3	0.3	0.4	0.5	0.4	0.5	0.4	0.4	0.4	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.0	0.1																																																																																																																																																																																																																																																																																																																																																																																																																				
14		N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N			0	15		N	N	N	N	N	N	N	N	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	0	0.0	17	16		0	0	0	0	0	0	1	0	0	IZS	0	0	0	0	0	0	0	0	P	0	0	0	0	0	0	0	1	0.0	23	17		0	0	0	0	1	1	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0.1	24	18		0	0	1	1	1	1	1	IZS	1	1	1	1	1	1	1	1	1	1	1	1	1	1	P	P	P	1	0.9	21	19		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	0	0	0	0	0	0	0	0	0.0	7	20		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	21		0	0	0	0	IZS	0	0	0	0	C	C	C	C	C	C	C	C	0	0	0	0	0	0	0	0	0	0.0	24	22		0	0	0	0	IZS	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.2	24	23		0	0	IZS	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	P	1	0.0	23	24		0	IZS	0	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.2	24	25		IZS	1	0	1	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	1	0.2	24	26		0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	1	0.1	24	27		0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	2	0.2	24	28		1	1	1	1	1	0	0	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	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0.0	24	30		1	1	1	1	1	1	2	3	1	1	1	0	0	0	1	0	1	0	IZS	0	0	0	0	0	0	3	0.7	24	31		0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	IZS	0	0	1	1	0	1	1	0.2	24	HOURLY MAX		1	1	1	1	1	1	2	3	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1				HOURLY AVG		0.1	0.3	0.3	0.4	0.5	0.4	0.5	0.4	0.4	0.4	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.0	0.1																																																																																																																																																																																																																																																																																																																																																																																																																																																			
15		N	N	N	N	N	N	N	N	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	0	0.0	17	16		0	0	0	0	0	0	1	0	0	IZS	0	0	0	0	0	0	0	0	P	0	0	0	0	0	0	0	1	0.0	23	17		0	0	0	0	1	1	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0.1	24	18		0	0	1	1	1	1	1	IZS	1	1	1	1	1	1	1	1	1	1	1	1	1	1	P	P	P	1	0.9	21	19		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	0	0	0	0	0	0	0	0	0.0	7	20		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	21		0	0	0	0	IZS	0	0	0	0	C	C	C	C	C	C	C	C	0	0	0	0	0	0	0	0	0	0.0	24	22		0	0	0	0	IZS	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.2	24	23		0	0	IZS	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	P	1	0.0	23	24		0	IZS	0	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.2	24	25		IZS	1	0	1	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	1	0.2	24	26		0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	1	0.1	24	27		0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	2	0.2	24	28		1	1	1	1	1	0	0	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	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0.0	24	30		1	1	1	1	1	1	2	3	1	1	1	0	0	0	1	0	1	0	IZS	0	0	0	0	0	0	3	0.7	24	31		0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	IZS	0	0	1	1	0	1	1	0.2	24	HOURLY MAX		1	1	1	1	1	1	2	3	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1				HOURLY AVG		0.1	0.3	0.3	0.4	0.5	0.4	0.5	0.4	0.4	0.4	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.0	0.1																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
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17		0	0	0	0	1	1	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0.1	24	18		0	0	1	1	1	1	1	IZS	1	1	1	1	1	1	1	1	1	1	1	1	1	1	P	P	P	1	0.9	21	19		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	0	0	0	0	0	0	0	0	0.0	7	20		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	21		0	0	0	0	IZS	0	0	0	0	C	C	C	C	C	C	C	C	0	0	0	0	0	0	0	0	0	0.0	24	22		0	0	0	0	IZS	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.2	24	23		0	0	IZS	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	P	1	0.0	23	24		0	IZS	0	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.2	24	25		IZS	1	0	1	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	1	0.2	24	26		0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	1	0.1	24	27		0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	2	0.2	24	28		1	1	1	1	1	0	0	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	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0.0	24	30		1	1	1	1	1	1	2	3	1	1	1	0	0	0	1	0	1	0	IZS	0	0	0	0	0	0	3	0.7	24	31		0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	IZS	0	0	1	1	0	1	1	0.2	24	HOURLY MAX		1	1	1	1	1	1	2	3	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1				HOURLY AVG		0.1	0.3	0.3	0.4	0.5	0.4	0.5	0.4	0.4	0.4	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.0	0.1																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
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23		0	0	IZS	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	P	1	0.0	23	24		0	IZS	0	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.2	24	25		IZS	1	0	1	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	1	0.2	24	26		0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	1	0.1	24	27		0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	2	0.2	24	28		1	1	1	1	1	0	0	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	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0.0	24	30		1	1	1	1	1	1	2	3	1	1	1	0	0	0	1	0	1	0	IZS	0	0	0	0	0	0	3	0.7	24	31		0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	IZS	0	0	1	1	0	1	1	0.2	24	HOURLY MAX		1	1	1	1	1	1	2	3	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1				HOURLY AVG		0.1	0.3	0.3	0.4	0.5	0.4	0.5	0.4	0.4	0.4	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.0	0.1																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
24		0	IZS	0	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.2	24	25		IZS	1	0	1	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	1	0.2	24	26		0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	1	0.1	24	27		0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	2	0.2	24	28		1	1	1	1	1	0	0	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	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0.0	24	30		1	1	1	1	1	1	2	3	1	1	1	0	0	0	1	0	1	0	IZS	0	0	0	0	0	0	3	0.7	24	31		0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	IZS	0	0	1	1	0	1	1	0.2	24	HOURLY MAX		1	1	1	1	1	1	2	3	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1				HOURLY AVG		0.1	0.3	0.3	0.4	0.5	0.4	0.5	0.4	0.4	0.4	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.0	0.1																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
25		IZS	1	0	1	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	1	0.2	24	26		0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	1	0.1	24	27		0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	2	0.2	24	28		1	1	1	1	1	0	0	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	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0.0	24	30		1	1	1	1	1	1	2	3	1	1	1	0	0	0	1	0	1	0	IZS	0	0	0	0	0	0	3	0.7	24	31		0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	IZS	0	0	1	1	0	1	1	0.2	24	HOURLY MAX		1	1	1	1	1	1	2	3	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1				HOURLY AVG		0.1	0.3	0.3	0.4	0.5	0.4	0.5	0.4	0.4	0.4	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.0	0.1																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
26		0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	1	0.1	24	27		0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	2	0.2	24	28		1	1	1	1	1	0	0	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	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0.0	24	30		1	1	1	1	1	1	2	3	1	1	1	0	0	0	1	0	1	0	IZS	0	0	0	0	0	0	3	0.7	24	31		0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	IZS	0	0	1	1	0	1	1	0.2	24	HOURLY MAX		1	1	1	1	1	1	2	3	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1				HOURLY AVG		0.1	0.3	0.3	0.4	0.5	0.4	0.5	0.4	0.4	0.4	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.0	0.1																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
27		0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	2	0.2	24	28		1	1	1	1	1	0	0	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	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0.0	24	30		1	1	1	1	1	1	2	3	1	1	1	0	0	0	1	0	1	0	IZS	0	0	0	0	0	0	3	0.7	24	31		0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	IZS	0	0	1	1	0	1	1	0.2	24	HOURLY MAX		1	1	1	1	1	1	2	3	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1				HOURLY AVG		0.1	0.3	0.3	0.4	0.5	0.4	0.5	0.4	0.4	0.4	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.0	0.1																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
28		1	1	1	1	1	0	0	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	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0.0	24	30		1	1	1	1	1	1	2	3	1	1	1	0	0	0	1	0	1	0	IZS	0	0	0	0	0	0	3	0.7	24	31		0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	IZS	0	0	1	1	0	1	1	0.2	24	HOURLY MAX		1	1	1	1	1	1	2	3	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1				HOURLY AVG		0.1	0.3	0.3	0.4	0.5	0.4	0.5	0.4	0.4	0.4	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.0	0.1																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
29		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	30		1	1	1	1	1	1	2	3	1	1	1	0	0	0	1	0	1	0	IZS	0	0	0	0	0	0	3	0.7	24	31		0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	IZS	0	0	1	1	0	1	1	0.2	24	HOURLY MAX		1	1	1	1	1	1	2	3	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1				HOURLY AVG		0.1	0.3	0.3	0.4	0.5	0.4	0.5	0.4	0.4	0.4	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.0	0.1																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
30		1	1	1	1	1	1	2	3	1	1	1	0	0	0	1	0	1	0	IZS	0	0	0	0	0	0	3	0.7	24	31		0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	IZS	0	0	1	1	0	1	1	0.2	24	HOURLY MAX		1	1	1	1	1	1	2	3	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1				HOURLY AVG		0.1	0.3	0.3	0.4	0.5	0.4	0.5	0.4	0.4	0.4	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.0	0.1																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
31		0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	IZS	0	0	1	1	0	1	1	0.2	24	HOURLY MAX		1	1	1	1	1	1	2	3	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1				HOURLY AVG		0.1	0.3	0.3	0.4	0.5	0.4	0.5	0.4	0.4	0.4	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.0	0.1																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
HOURLY MAX		1	1	1	1	1	1	2	3	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1				HOURLY AVG		0.1	0.3	0.3	0.4	0.5	0.4	0.5	0.4	0.4	0.4	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.0	0.1																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
HOURLY AVG		0.1	0.3	0.3	0.4	0.5	0.4	0.5	0.4	0.4	0.4	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.0	0.1																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		

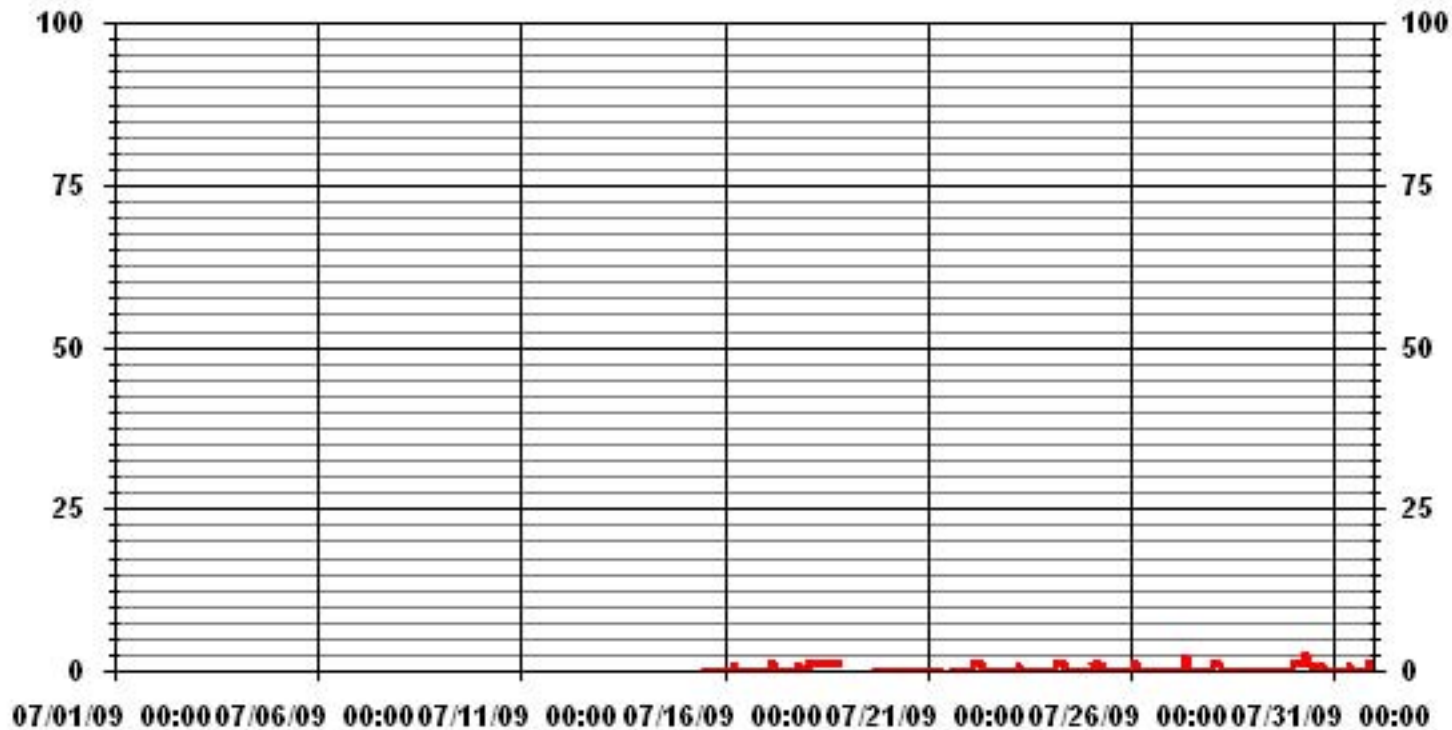
**STATUS FLAG CODES**

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:	64					
MAXIMUM INSTANTANEOUS VALUE:	3	PPB	@ HOUR(S)	7	ON DAY(S)	30
IZS CALIBRATION TIME:	16	HRS	OPERATIONAL TIME:	379	HRS	
MONTHLY CALIBRATION TIME:	11	HRS				
STANDARD DEVIATION:	0.44					

### 01 Hour Averages



— LICA31 H2S MAX PPB

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

July 2009

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	6.57	7.71	2.28	2.57	2.00	3.42	3.42	4.00	5.42	5.14	5.71	4.85	11.42	14.28	12.28	8.85	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	6.57	7.71	2.28	2.57	2.00	3.42	3.42	4.00	5.42	5.14	5.71	4.85	11.42	14.28	12.28	8.85	

Calm : .00 %

Total # Operational Hours : 350

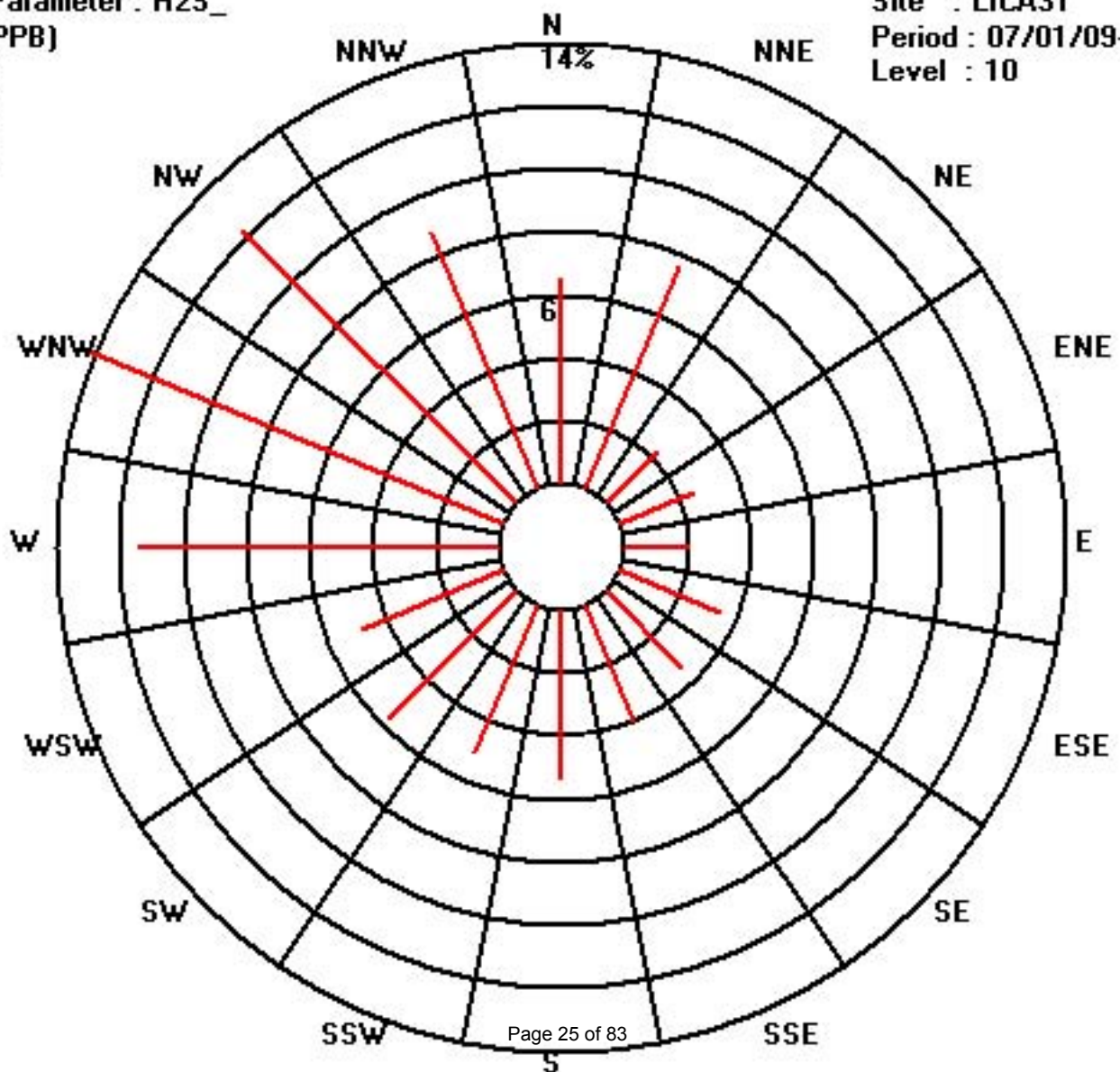
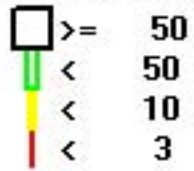
Distribution By Samples

	Direction																
Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 3	23	27	8	9	7	12	12	14	19	18	20	17	40	50	43	31	350
< 10																	
< 50																	
>= 50																	
Totals	23	27	8	9	7	12	12	14	19	18	20	17	40	50	43	31	

Calm : .00 %

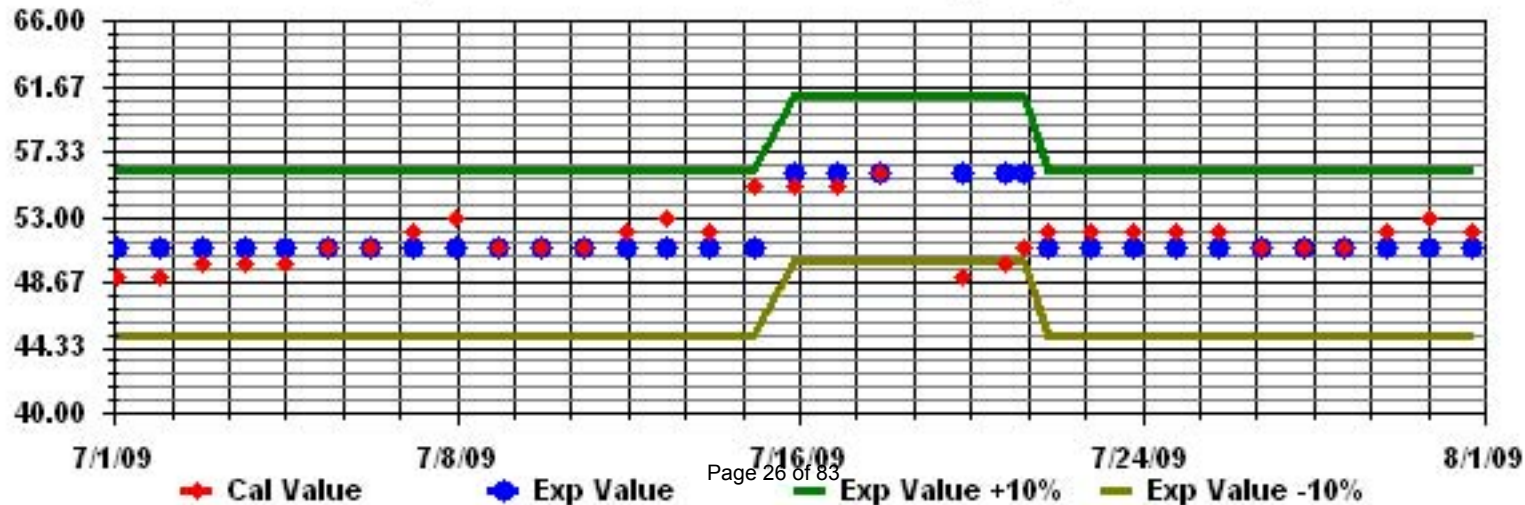
Total # Operational Hours : 350

Class Limits (PPB)





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



# Total Hydrocarbons

# LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - ST. LINA

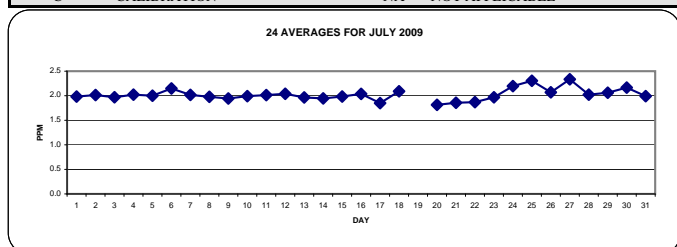
JULY 2009

## 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	IZS	2	2	2	2	2.1	2	1.9	1.9	1.9	1.9	1.9	2	2	2	2	2	2	2	2	2	2	2	2	2.1	2.0	24	
2	IZS	2	2	2.1	2.1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2.1	IZS	2.1	2.0	24	
3	2	2	2	2	2	2	2	2	2	2	1.9	1.9	1.9	1.9	1.9	2	2	1.9	1.9	2	2	2	2	IZS	2	2.0	2.0	24	
4	2	2	2.1	2.1	2.2	2.2	2.1	2	2	2	2	2	1.9	2	2	1.9	2	2	2	2	2	2	2	IZS	2	2.2	2.0	24	
5	2	2	2	2	2.1	2.1	2.1	2	2	2	2	1.9	1.9	1.9	2	2	2	2	2	2	2	2	2	IZS	2	2	2.1	2.0	24
6	2.1	2.1	2.2	2.4	2.4	2.3	2.3	2.3	2.3	2.3	2.2	2.2	2.1	2.1	2	2	2	2	2	2	2	IZS	2	2	2	2.1	2.4	2.1	24
7	2.1	2.1	2.1	2.1	2.1	2.1	2	2	2	2	2	2	1.9	2	2.2	1.9	1.9	1.9	IZS	2	2	2	2	2	2	2.2	2.0	2.0	24
8	2	2	2.2	2.2	2.1	2.1	2	2	2	2	2	1.9	1.9	1.9	1.9	2	1.9	IZS	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.2	2.0	24
9	1.9	2	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2	2	1.9	1.9	1.9	1.9	IZS	1.9	1.9	2	2	2.1	2	2	2.1	1.9	1.9	24
10	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	IZS	1.9	1.9	1.9	2	2	2	2	2.1	2.1	2.0	24	
11	2.2	2.1	2	2	2	2	2	2	2	2	2	2	2	2	2	IZS	2	2	2	2	2	2	2	2	2	2.2	2.0	2.0	24
12	2	2.1	2.1	2.1	2.1	2.1	2.1	2	2	2	2	2	2	2	IZS	2	2	2	2	2	2	2	2	2.1	2.1	2.1	2.1	2.0	24
13	2.1	2	2	2	2	2.1	2.1	2	2	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	2.1	2.0	24
14	1.9	1.9	1.9	2	2	1.9	1.9	2	2	1.9	1.9	IZS	1.9	1.9	P	1.9	1.9	1.9	2	2	2	2	2	2	2	2.0	1.9	2.3	24
15	2	2	2	2	2.1	2.1	2	2	2	2	2	IZS	C	C	C	C	C	1.9	1.9	1.9	1.9	1.9	1.9	2	2.1	2.1	2.0	24	
16	2.1	2.1	2.1	2.2	2.2	2.2	2.2	2.1	2	IZS	2	1.9	1.9	1.9	1.9	1.9	N	N	N	N	N	N	N	N	N	N	2.2	2.0	17
17	N	N	N	N	N	N	N	N	N	N	N	C	C	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.9	1.8	1.9	1.9	1.9	1.9	14
18	2	2.1	2.3	2.3	2.3	2.2	2.2	IZS	2.3	2.3	2.2	2.1	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.1	2.1	P	P	P	2.3	2.1	2.1	24
19	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	N	N	N	N	N	N	N	N	N	N	N	0
20	N	N	N	N	N	N	N	N	N	C	1.9	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	1.8	1.8	1.9	1.8	16
21	1.8	1.8	1.8	1.9	IZS	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.9	1.9	1.9	24
22	1.8	1.9	1.9	IZS	2	2	2	2	1.9	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	1.9	1.9	1.9	1.9	2.0	1.9	24
23	1.8	1.8	IZS	1.9	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	2.3	1.9	1.9	1.9	1.9	1.9	1.9	1.9	P	2.5	2.0	23
24	1.8	IZS	1.9	1.9	2	2	2	2	2	2	2.1	1.9	1.9	1.9	2.2	2.1	2.2	2.2	2.3	2.2	1.9	2.4	4.7	1.9	3	4.7	2.2	24	
25	IZS	2.8	5.4	4.2	2.4	2	2	2	2	2	2.2	1.9	1.9	2	2.1	2.1	2.1	2	1.9	1.9	1.9	2	1.9	2	IZS	5.4	2.3	24	
26	2	3.3	2.3	2.1	2	2	1.9	1.9	2.3	2.4	2.1	1.9	1.9	1.9	1.9	2	2	1.9	1.9	1.9	2	2	IZS	2	3.3	2.1	24		
27	1.9	2.3	2.8	2.8	2	2.5	2	2	2	2.1	2.1	2	2.2	2.3	2.3	2.2	2.1	2.4	2	2.5	2.7	IZS	4.4	2.1	4.4	2.3	24		
28	2.1	2.2	2.1	2.1	2	2	2.1	2.1	2.1	1.9	2	1.9	2.1	2	2	2	1.9	1.9	2	2	IZS	2	2	2	2.2	2.0	24		
29	2	2	2	2	2	2	2	2	1.9	1.9	2	2	2	1.9	2.1	2.1	2.2	2.4	2.4	IZS	2.7	1.9	1.9	2	2.7	2.1	24		
30	2	2	2	2	2	2	2	2	2	2.2	2	2.1	2.3	2.3	2.2	2.3	1.9	1.9	IZS	4.5	2.3	2	1.9	1.9	4.5	2.2	24		
31	1.9	1.9	1.9	1.9	1.9	1.9	2.9	2	1.9	1.9	2	2.1	2	2.1	2	1.9	2.1	IZS	2.3	1.8	1.9	1.9	1.8	1.8	2.9	2.0	24		
HOURLY MAX	2.2	3.3	5.4	4.2	2.4	2.5	2.9	2.3	2.3	2.4	2.2	2.2	2.3	2.3	2.3	2.4	2.5	2.4	2.4	2.4	4.5	2.7	4.7	4.4	3.0				
HOURLY AVG	2.0	2.1	2.2	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	2.0	2.0	2.0	2.1	2.0	2.1	2.0	2.0				

### STATUS FLAG CODES

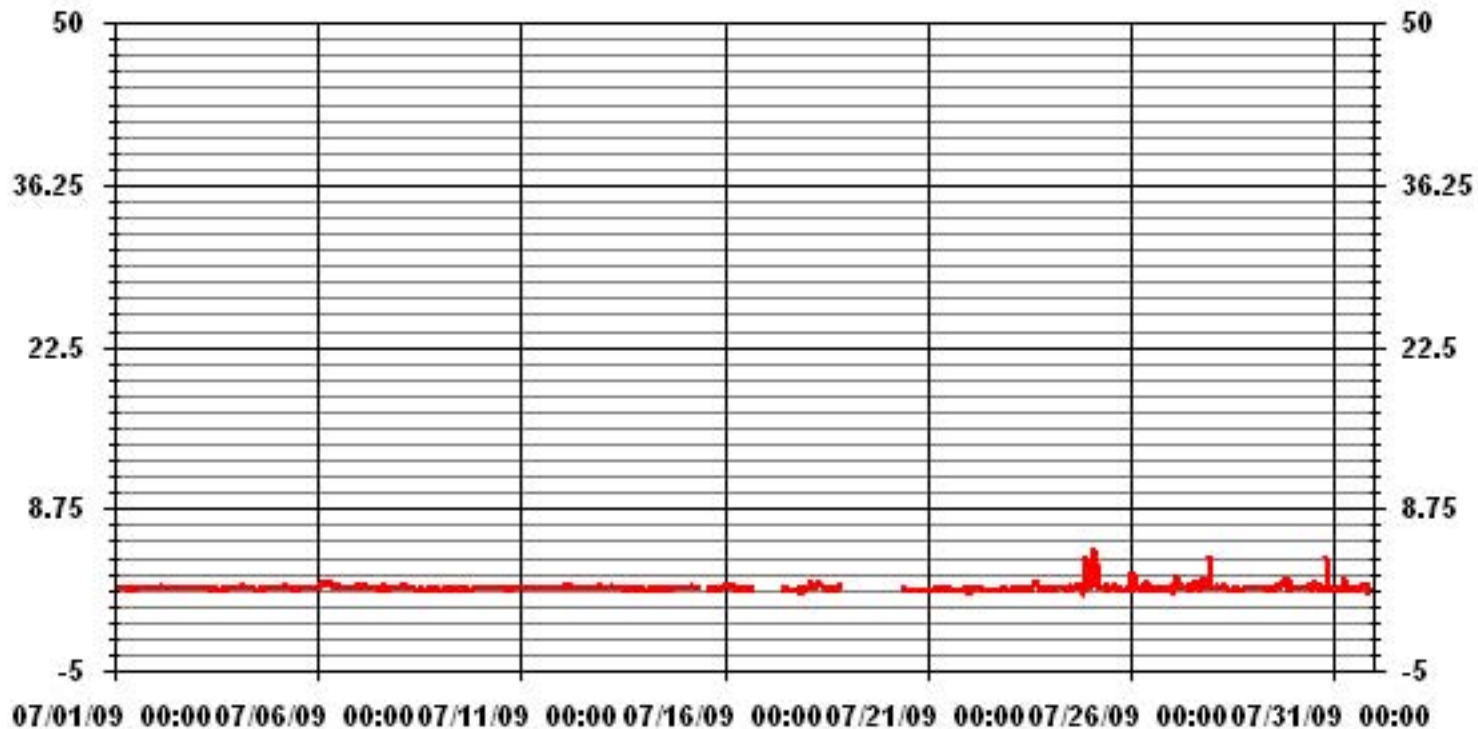
S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	- MAINTENANCE
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE



### MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:	651
MAXIMUM 1-HR AVERAGE:	5.4 PPM @ HOUR(S) 2 ON DAY(S) 25
MAXIMUM 24-HR AVERAGE:	2.3 PPM ON DAY(S) 25
	VAR- VARIOUS
IZS CALIBRATION TIME:	30 HRS
MONTHLY CALIBRATION TIME:	9 HRS
STANDARD DEVIATION:	0.28
OPERATIONAL TIME:	690 HRS
AMD OPERATION UPTIME:	92.7 %
MONTHLY AVERAGE:	2.03 PPM

### 01 Hour Averages



— LICA31 THC PPM

# LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - ST. LINA

JULY 2009

## TOTAL HYDROCARBONS MAX instantaneous maximum in ppr

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	2.3	<b>IZS</b>	2	2.1	2.1	2.1	2.1	2	2	1.9	2	1.9	2	2	2	2.1	2	2.4	2	2	2	2	2	2	2.4	2.0	24		
2	<b>IZS</b>	2	2.1	2.1	2.1	2	2	2	2	2.1	2	2	2	2.1	2	2	2	2	2	2	2.1	2.3	2.7	2.2	<b>IZS</b>	2.7	2.1	24	
3	2	2	2.1	2.2	2.1	2	2	2	2	2	2	1.9	2	2	2	2.5	2.1	2	2	2.2	2	2.5	<b>IZS</b>	2	2.5	2.1	24		
4	2	2	2.2	2.2	2.2	2.2	2	2	2	2	2	2	2	2	2	2	2	2.3	2	2	2	<b>IZS</b>	2.1	2	2.3	2.1	24		
5	2.1	2.1	4	2	2.3	2.4	2.1	2.1	2	2	2	2	2	2	2	2	2	2	2.2	2	<b>IZS</b>	2.4	2.1	2.1	2	4	2.2	24	
6	2.2	2.2	2.3	2.4	2.4	2.3	2.5	2.5	2.4	2.4	2.3	2.3	2.2	2.1	2	2	2	2	2	2.1	<b>IZS</b>	2.1	2.1	2.1	2.1	2.5	2.2	24	
7	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2	2	3.9	6.1	2	2	2	<b>IZS</b>	2	2	2	2	2	2.1	6.1	2.3	24	
8	2.1	2.1	2.3	2.3	2.2	2.1	2.1	2	2	2	2	2	2	2	2	2.1	2	<b>IZS</b>	2.5	1.9	1.9	2	2.2	2	2.5	2.1	24		
9	2	2.1	2	2	1.9	1.9	1.9	1.9	1.9	2	2	2	2	2	2	2	<b>IZS</b>	2	2.1	2.2	2	2.3	2.3	2.1	2.3	2.0	24		
10	2	2	2	2	2	2.1	2.1	2	2	2	2	2	2	2.1	2	<b>IZS</b>	2	2	2	2	2	2	2	2.1	2.3	2.3	2.0	24	
11	2.3	2.2	2.2	2.1	2.1	2.1	2	2	2	2.4	2.1	2	2	2	<b>IZS</b>	2	2	2	2	2	2	2	2	2	2	2	2.4	2.1	24
12	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2	2	2	2	2	2	<b>IZS</b>	2	2	2	2	2	2	2	2.1	2.1	2.1	2.1	2.1	2.0	24	
13	2.1	2	2	2	2	2.1	2.1	2	2	2.1	2	2	<b>IZS</b>	1.9	1.9	2	2	2	2	1.9	1.9	2	2	1.9	2.1	2.0	24		
14	2	2	2	2	2	2	2	2	2	2	2	<b>IZS</b>	<b>P</b>	1.9	<b>P</b>	2	2	2	2	2	2	2.1	2	2	2	2.1	2.0	22	
15	2.1	2.9	2.7	2.4	2.7	2.4	2.2	2	2.4	2.1	<b>IZS</b>	<b>C</b>	<b>C</b>	<b>C</b>	<b>C</b>	<b>C</b>	1.9	1.9	1.9	1.9	1.9	1.9	2	2.1	2.1	2.9	2.2	24	
16	2.1	2.1	2.2	2.2	2.2	2.2	2.2	2.1	2.1	<b>IZS</b>	2	2	1.9	1.9	1.9	1.9	1.9	<b>N</b>	<b>N</b>	<b>N</b>	<b>N</b>	<b>N</b>	<b>N</b>	<b>N</b>	<b>N</b>	2.2	2.1	17	
17	<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>C</b>	<b>C</b>	2	2.1	1.9	1.9	1.8	1.9	2	2	2	2	1.9	1.9	2.1	2.0	14		
18	2.1	2.2	2.4	2.3	2.3	2.3	2.2	<b>IZS</b>	2.4	2.4	2.3	2.2	2.1	1.9	1.9	1.9	1.9	1.9	1.9	2.1	2.1	2.2	<b>P</b>	<b>P</b>	<b>P</b>	2.4	2.2	21	
19	<b>P</b>	<b>P</b>	<b>P</b>	<b>P</b>	<b>P</b>	<b>P</b>	<b>P</b>	<b>P</b>	<b>P</b>	<b>P</b>	<b>P</b>	<b>P</b>	<b>P</b>	<b>P</b>	<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>	<b>N</b>	0		
20	<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>C</b>	2.1	1.9	1.9	1.9	1.8	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	2.1	1.9	16		
21	1.8	1.8	1.9	1.9	<b>IZS</b>	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	1.9	1.9	1.9	1.9	1.9	1.9	2	1.9	24	
22	2	2	2	<b>IZS</b>	2	2	2	2	2	1.9	1.9	1.8	1.8	1.8	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2	1.9	24		
23	2	2	<b>IZS</b>	1.9	2	2	2	2	1.9	1.9	1.9	1.9	1.9	2	5	5.2	5.6	6.9	5.4	2	2.1	2.1	1.9	<b>P</b>	6.9	2.8	23		
24	1.9	<b>IZS</b>	2	2	2	2	2	2	2	8.2	3.5	2.8	3.1	4.7	4.6	4.5	4.5	4.9	5.1	2	9.1	15.4	3.4	10.2	15.4	4.4	24		
25	<b>IZS</b>	8.6	11.2	10.8	7.5	2.2	2.8	2.1	5.5	5.1	3.4	2.6	6.7	6.2	4.6	5.1	5.1	2.1	2.4	2	2.1	2	2	2.5	<b>IZS</b>	11.2	4.7	24	
26	3.7	8.7	6.3	2.3	2.4	4.1	2	2	6.3	5.2	4.1	2.2	2.5	3.6	2.3	4.4	3.1	2.6	2.1	2	2	2	2	<b>IZS</b>	2.2	8.7	3.4	24	
27	2	12.6	12.5	15.8	2.1	5.5	4.7	2	3	5.7	6.4	3.8	4.5	10.9	4.9	6.5	4.6	12	6.1	10	7	<b>IZS</b>	<b>38.4</b>	3.9	<b>38.4</b>	8.0	24		
28	2.4	2.5	2.7	2.4	2.1	2	2.1	2.1	2.1	2	3	2.2	3.8	2.8	4	2.6	2.3	2	2	2	<b>IZS</b>	2	2.1	2.1	4	2.4	24		
29	2.1	2	2	2	2	2	2.1	2	2	1.9	3.1	4.4	3.9	2.2	4.3	4.9	5	5.1	6	<b>IZS</b>	17.9	2	2	2	17.9	3.6	24		
30	2	2	2	2	2	2.1	2	2.1	2	5	3.8	4.5	6.8	4.7	4	3.9	2	2	<b>IZS</b>	13	11.7	5.7	2	1.9	13	3.9	24		
31	1.9	2	2	2	1.9	1.9	17.2	2.2	2	2.6	4.4	4.8	3.9	3.9	3.9	3	4	<b>IZS</b>	6.2	2.2	2.1	2.1	1.9	2	17.2	3.5	24		
HOURLY MAX	4	13	13	16	8	6	17	3	6	8	6	5	7	11	6	7	6	12	6	13	18	15	38	10					
HOURLY AVG	2.1	3.0	3.1	2.9	2.3	2.3	2.7	2.1	2.4	2.8	2.6	2.4	2.7	2.9	2.9	2.8	2.6	2.8	2.7	2.7	3.4	2.7	3.5	2.4					

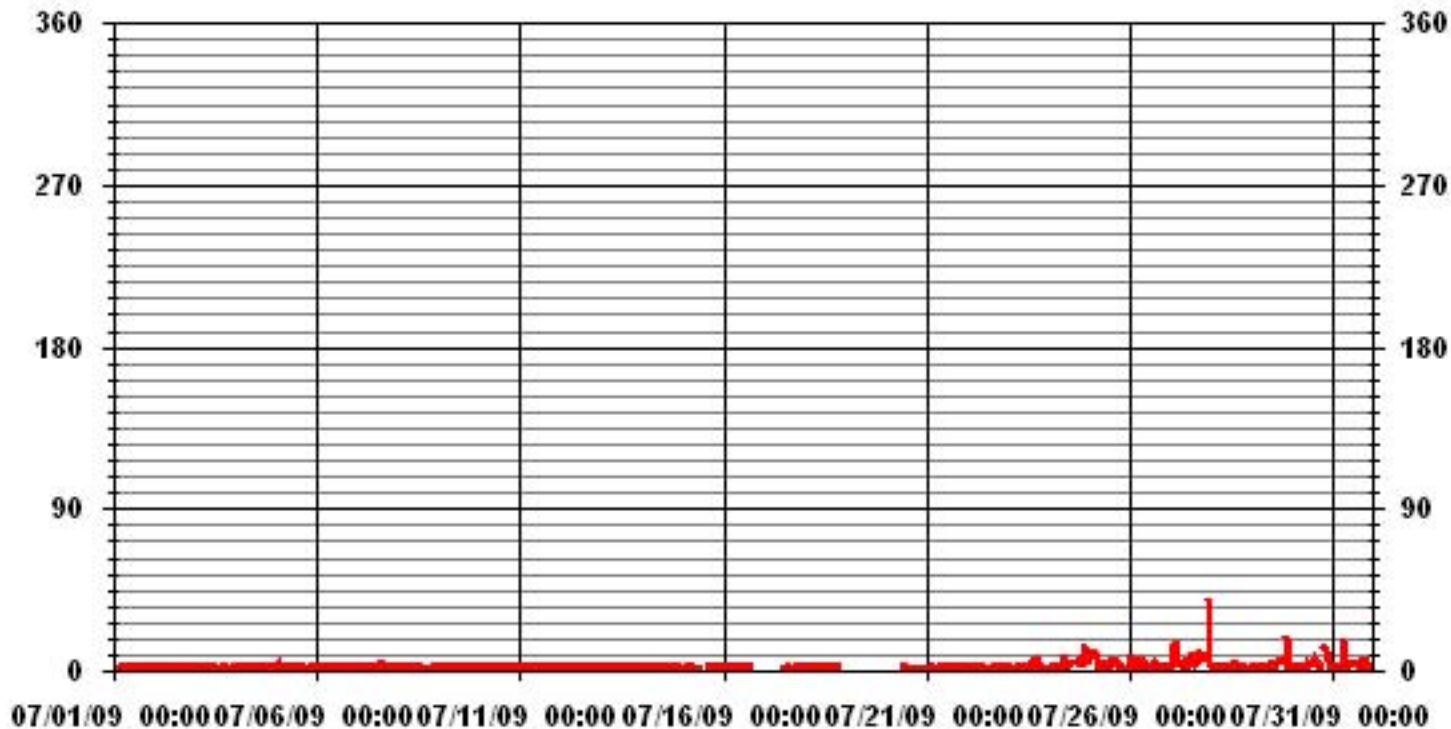
### STATUS FLAG CODES

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
BB	- BELOW BACKGROUND OF 1.5 PPM		

### MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:	650					
MAXIMUM INSTANTANEOUS VALUE:	38.4	PPM	@ HOUR(S)	22	ON DAY(S)	27
IZS CALIBRATION TIME:	30	HRS	OPERATIONAL TIME:	689	HRS	
MONTHLY CALIBRATION TIME:	9	HRS				
STANDARD DEVIATION:	2.36					

### 01 Hour Averages



LICA31  
 THC / WDR Joint Frequency Distribution (Percent)

July 2009

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	5.37	5.99	2.45	7.68	4.60	4.60	3.84	4.30	4.14	4.76	5.68	7.06	8.14	9.67	11.67	8.90	98.92
< 10.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.15	.46	.46	.00	1.07
< 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	5.37	5.99	2.45	7.68	4.60	4.60	3.84	4.30	4.14	4.76	5.68	7.06	8.29	10.13	12.13	8.90	

Calm : .00 %

Total # Operational Hours : 651

Distribution By Samples

	Direction																
Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 3.0	35	39	16	50	30	30	25	28	27	31	37	46	53	63	76	58	644
< 10.0													1	3	3		7
< 50.0																	
>= 50.0																	
Totals	35	39	16	50	30	30	25	28	27	31	37	46	54	66	79	58	

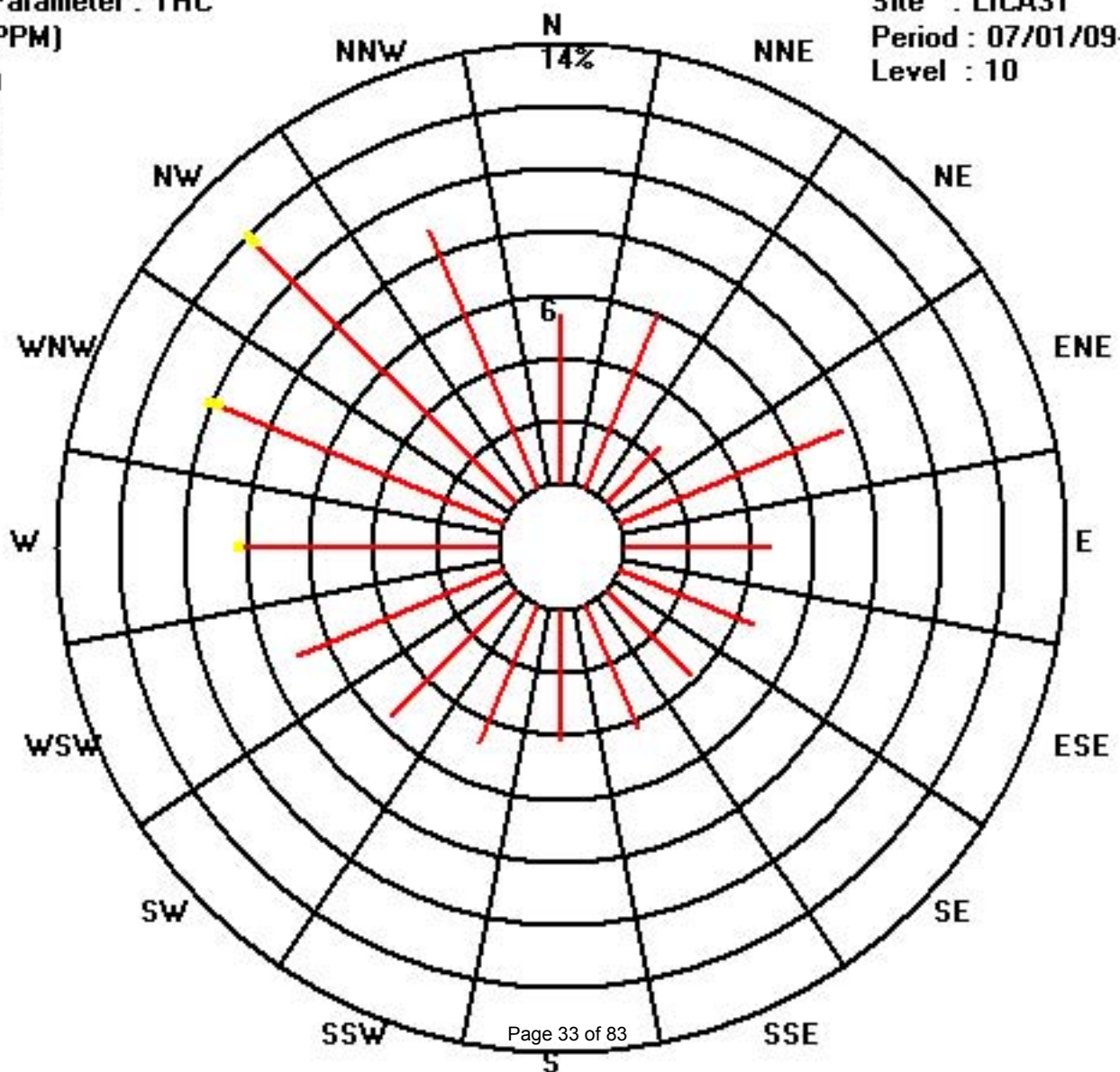
Calm : .00 %

Total # Operational Hours : 651

Class Limits (PPM)

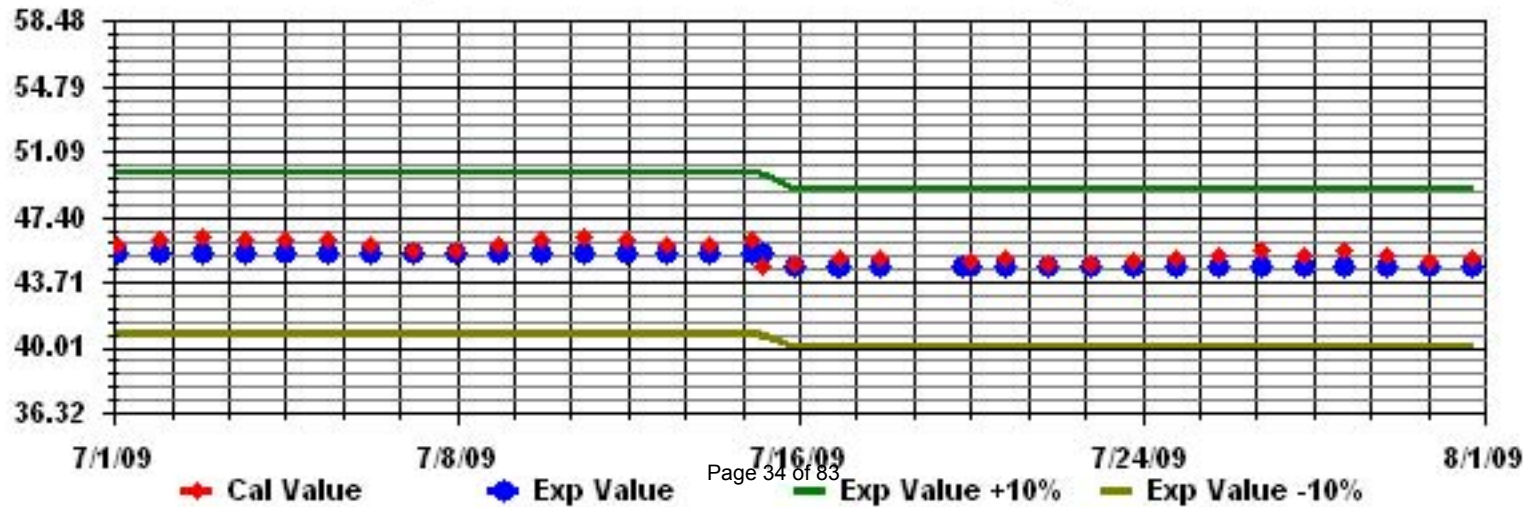
Period : 07/01/09-07/31/09

Level : 10





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



# Nitrogen Dioxide

# LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - ST. LINA

JULY 2009

## 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.			
DAY																														
1	0	IZS	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.1	24		
2	IZS	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	1	0.1	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	IZS	0	0.0	24		
4	1	1	2	2	2	2	2	1	1	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	IZS	0	1	2	0.7	24
5	1	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	1	0.1	24
6	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0.1	24		
7	1	1	1	2	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		
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	1	1	0	0	0	0	0	0	0	0	0	0	0	1	0.1	24		
10	0	1	2	3	2	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0.5	24		
11	1	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		
12	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0.2	24		
13	1	1	1	1	1	2	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	0.9	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	1	0	1	0.1	23	
15	1	1	1	1	1	1	1	C	C	C	C	C	C	C	C	0	0	0	0	0	0	0	0	1	1	1	1	0.7	24	
16	1	1	1	1	2	1	1	1	1	1	IZS	1	1	1	1	0	1	1	1	1	1	1	1	2	2	2	2	1.1	24	
17	2	1	2	2	2	2	2	1	IZS	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	2	0.8	24	
18	1	2	2	2	2	1	1	IZS	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	P	P	P	2	1.2	21
19	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	0	0	0	0	0	0	0	0	0	0.0	7	
20	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	1	0.0	24	
21	0	0	0	1	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	2	0.4	24	
22	2	2	2	IZS	3	4	4	3	3	2	1	1	1	1	1	1	1	0	0	0	0	0	1	1	1	4	1.5	24		
23	1	0	IZS	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	P	1	0.3	23	
24	1	IZS	1	2	2	2	2	2	1	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2	0.8	24
25	IZS	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0.3	24		
26	1	1	1	1	1	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	
27	0	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	IZS	0	1	0.5	24
28	1	1	1	1	2	2	2	1	1	1	1	0	0	0	0	1	0	0	0	0	0	0	0	1	IZS	0	1	2	0.8	24
29	1	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	1	1	0.3	24
30	2	2	1	2	2	3	3	3	6	3	2	1	1	1	1	1	1	1	1	0	0	0	0	0	0	6	1.8	24		
31	1	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0.3	24	
HOURLY MAX	2	2	2	3	3	4	4	3	6	3	2	1	1	1	1	1	1	1	1	1	2	1	2	2	2					
HOURLY AVG	0.7	0.7	0.7	0.8	1.0	1.0	0.9	0.6	0.6	0.4	0.3	0.2	0.3	0.2	0.1	0.2	0.2	0.1	0.1	0.3	0.3	0.5	0.6	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

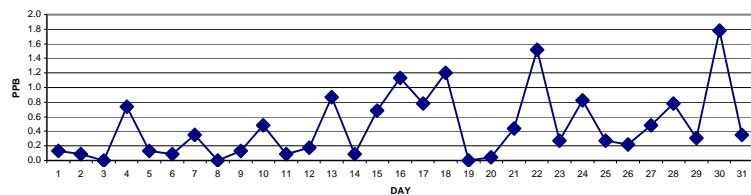
### OBJECTIVE LIMIT:

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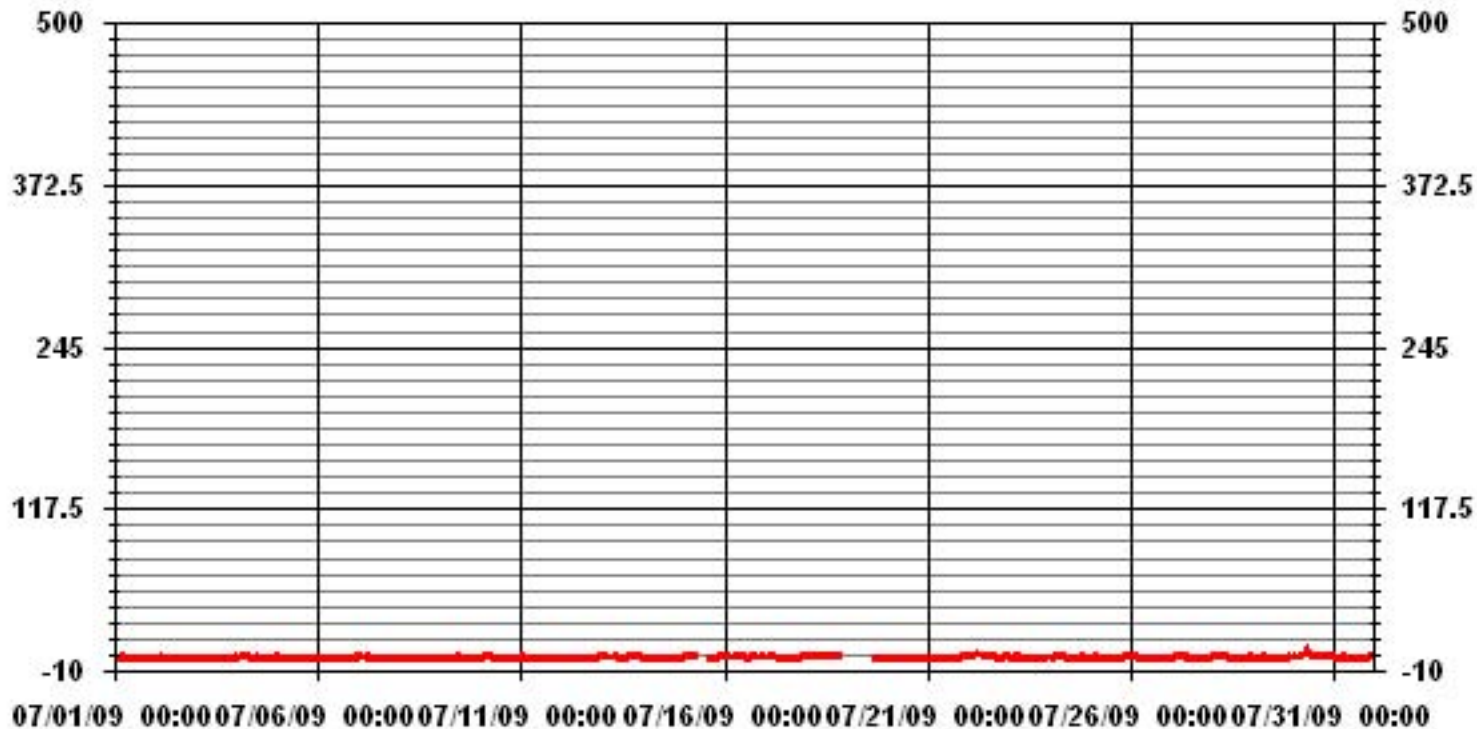
### MONTHLY SUMMARY

NUMBER OF 1-HR EXCEEDENCES:	0		
NUMBER OF 24-HR EXCEEDENCES:	0		
NUMBER OF NON-ZERO READINGS:	252		
MAXIMUM 1-HR AVERAGE:	6 PPB @ HOUR(S) 8 ON DAY(S) 30		
MAXIMUM 24-HR AVERAGE:	1.8 PPB ON DAY(S) 30		
IZS CALIBRATION TIME:	31 HRS	OPERATIONAL TIME:	722 HRS
MONTHLY CALIBRATION TIME:	8 HRS	AMD OPERATION UPTIME:	97.0 %
STANDARD DEVIATION:	0.73	MONTHLY AVERAGE:	0.47 PPB

24 HOUR AVERAGES FOR JULY 2009



### 01 Hour Averages



— LICA31 NO2\_ PPB

# LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - ST.LINA

JULY 2009

## 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	IZS	1	1	2	10	1	1	0	0	0	0	0	0	0	9	1	0	1	0	0	0	0	0	10	1.2	24
2	IZS	1	1	2	2	6	0	1	0	0	0	0	0	1	0	12	0	0	0	0	0	0	0	IZS	12	1.2	24
3	0	0	0	0	0	3	1	1	1	1	0	0	0	0	0	0	0	0	1	1	2	1	IZS	1	3	0.6	24
4	1	2	3	3	3	3	3	2	1	1	1	2	1	2	2	1	2	1	1	1	1	IZS	1	1	3	1.7	24
5	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	IZS	0	0	1	1	0.9	24
6	0	0	0	1	2	1	1	1	1	1	1	0	0	0	0	0	0	0	0	IZS	1	1	1	1	2	0.6	24
7	1	1	3	3	2	1	1	1	1	1	1	1	1	1	1	1	1	1	IZS	0	0	0	0	0	3	1.0	24
8	0	1	1	1	1	0	0	0	0	1	0	0	0	0	0	0	0	IZS	1	1	1	1	1	1	1	0.5	24
9	1	1	1	1	1	1	0	1	1	1	2	2	1	1	1	1	IZS	0	0	0	0	0	0	0	2	0.7	24
10	1	2	3	4	3	2	2	2	1	0	0	1	1	0	0	IZS	1	0	0	1	1	1	1	1	4	1.2	24
11	2	2	1	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	2	1	2	0.4	24
12	1	2	2	0	1	1	1	0	0	0	0	0	0	0	IZS	0	1	1	1	1	1	1	1	1	2	0.7	24
13	2	2	2	2	2	3	2	2	2	1	1	1	IZS	1	1	1	0	0	0	0	0	0	0	1	3	1.1	24
14	1	1	1	1	1	1	1	1	0	0	0	IZS	P	1	P	1	1	1	1	2	1	1	1	1	2	0.9	22
15	1	1	2	1	1	3	2	C	C	C	C	C	C	C	C	1	12	2	2	2	2	2	3	3	12	2.5	24
16	3	3	3	3	3	3	3	3	3	IZS	1	2	2	2	3	9	1	P	1	2	2	2	2	2	9	2.6	23
17	2	2	2	4	3	3	3	2	IZS	2	2	2	1	1	1	1	1	1	1	1	1	2	2	1	4	1.8	24
18	2	2	3	3	2	2	2	IZS	2	2	2	2	2	2	2	2	1	1	1	2	2	P	P	P	3	2.0	21
19	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	2	1	1	1	1	1	1	1	2	1.1	8
20	1	1	1	1	1	IZS	0	0	0	0	0	6	0	3	0	0	0	0	0	0	0	0	1	0	6	0.7	24
21	0	0	0	0	IZS	1	1	1	1	1	1	1	1	1	1	2	1	2	6	2	13	4	4	13	2.0	24	
22	4	3	3	IZS	4	4	6	4	3	3	2	1	1	2	2	1	2	1	1	1	1	2	1	2	6	2.3	24
23	2	1	IZS	1	1	2	2	2	1	1	1	1	1	1	1	1	2	2	1	1	1	1	1	P	2	1.3	23
24	2	IZS	3	4	2	2	2	4	2	2	2	1	1	2	1	1	1	1	1	2	2	4	1	1	4	1.9	24
25	IZS	1	1	1	2	1	1	1	1	1	1	1	10	1	1	1	1	1	1	1	1	3	3	IZS	10	1.6	24
26	2	2	1	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	IZS	1	2	1.2	24
27	1	2	2	2	3	2	1	1	2	2	1	1	1	1	1	2	13	2	1	1	IZS	1	2	13	2.0	24	
28	2	2	2	2	3	3	2	2	2	1	1	1	2	1	1	1	2	1	1	4	IZS	1	2	1	4	1.7	24
29	1	1	1	1	1	1	2	2	1	2	1	1	1	0	1	1	1	2	1	IZS	1	2	2	2	2	1.3	24
30	3	3	3	3	4	14	7	6	7	5	4	3	2	2	1	1	2	2	IZS	3	3	2	1	1	14	3.6	24
31	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	IZS	2	1	2	2	1	2	2	2	1.2	24
HOURLY MAX	4	3	3	4	4	14	7	6	7	5	4	6	10	3	3	12	12	13	2	6	3	13	4	4			
HOURLY AVG	1.4	1.5	1.7	1.7	1.9	2.6	1.7	1.6	1.3	1.1	1.0	1.2	1.2	1.0	0.9	1.8	1.4	1.3	0.9	1.3	1.1	1.7	1.1	1.2			

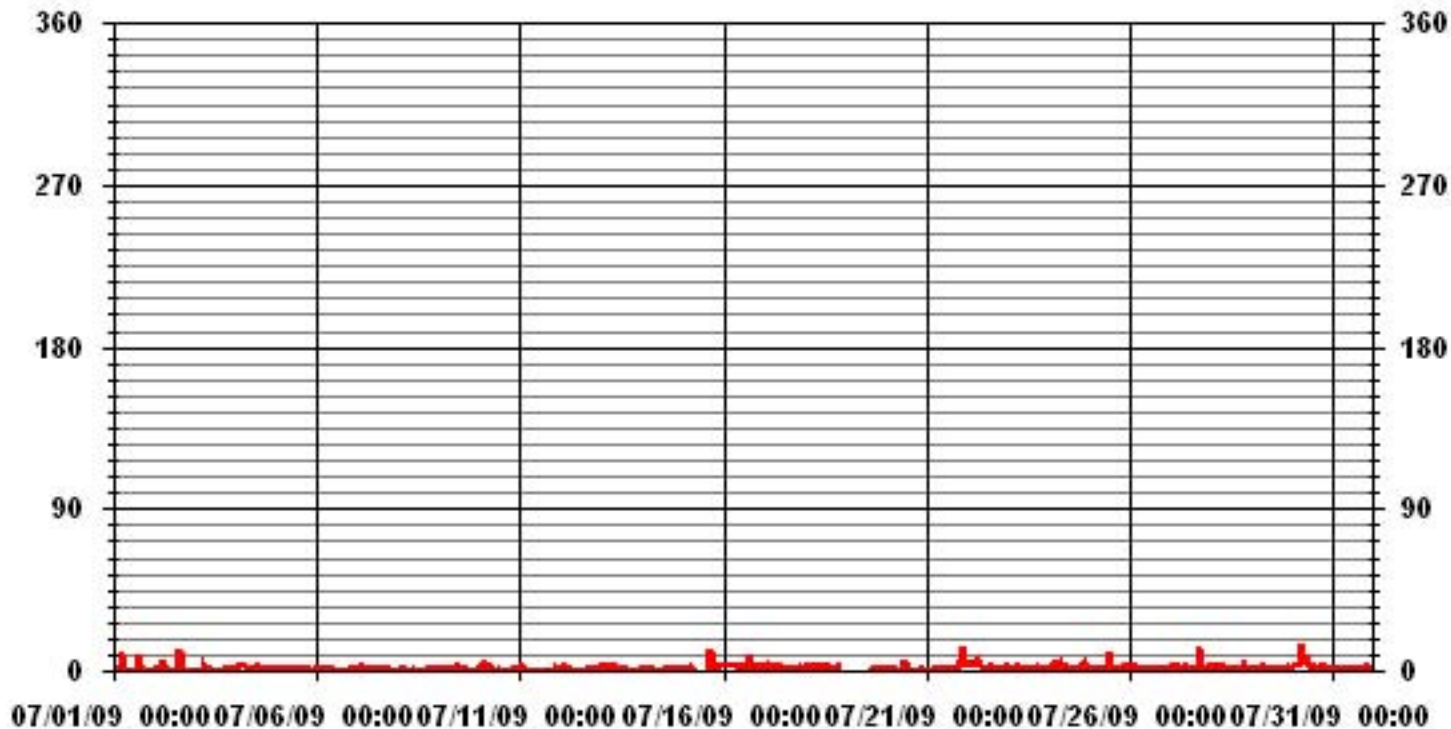
**STATUS FLAG CODES**

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:	543					
MAXIMUM INSTANTANEOUS VALUE:	14	PPB	@ HOUR(S)	5	ON DAY(S)	30
IZS CALIBRATION TIME:	31	HRS	OPERATIONAL TIME:	721	HRS	
MONTHLY CALIBRATION TIME:	8	HRS				
STANDARD DEVIATION	1.57					

### 01 Hour Averages



— LICA31 NO2MAX PPB

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

July 2009

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	5.13	5.71	2.34	7.18	4.39	4.39	3.95	4.25	4.25	4.54	6.01	7.03	8.50	11.43	12.02	8.79	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	5.13	5.71	2.34	7.18	4.39	4.39	3.95	4.25	4.25	4.54	6.01	7.03	8.50	11.43	12.02	8.79	

Calm : .00 %

Total # Operational Hours : 682

Distribution By Samples

	Direction																
Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 50	35	39	16	49	30	30	27	29	29	31	41	48	58	78	82	60	682
< 110																	
< 210																	
>= 210																	
Totals	35	39	16	49	30	30	27	29	29	31	41	48	58	78	82	60	

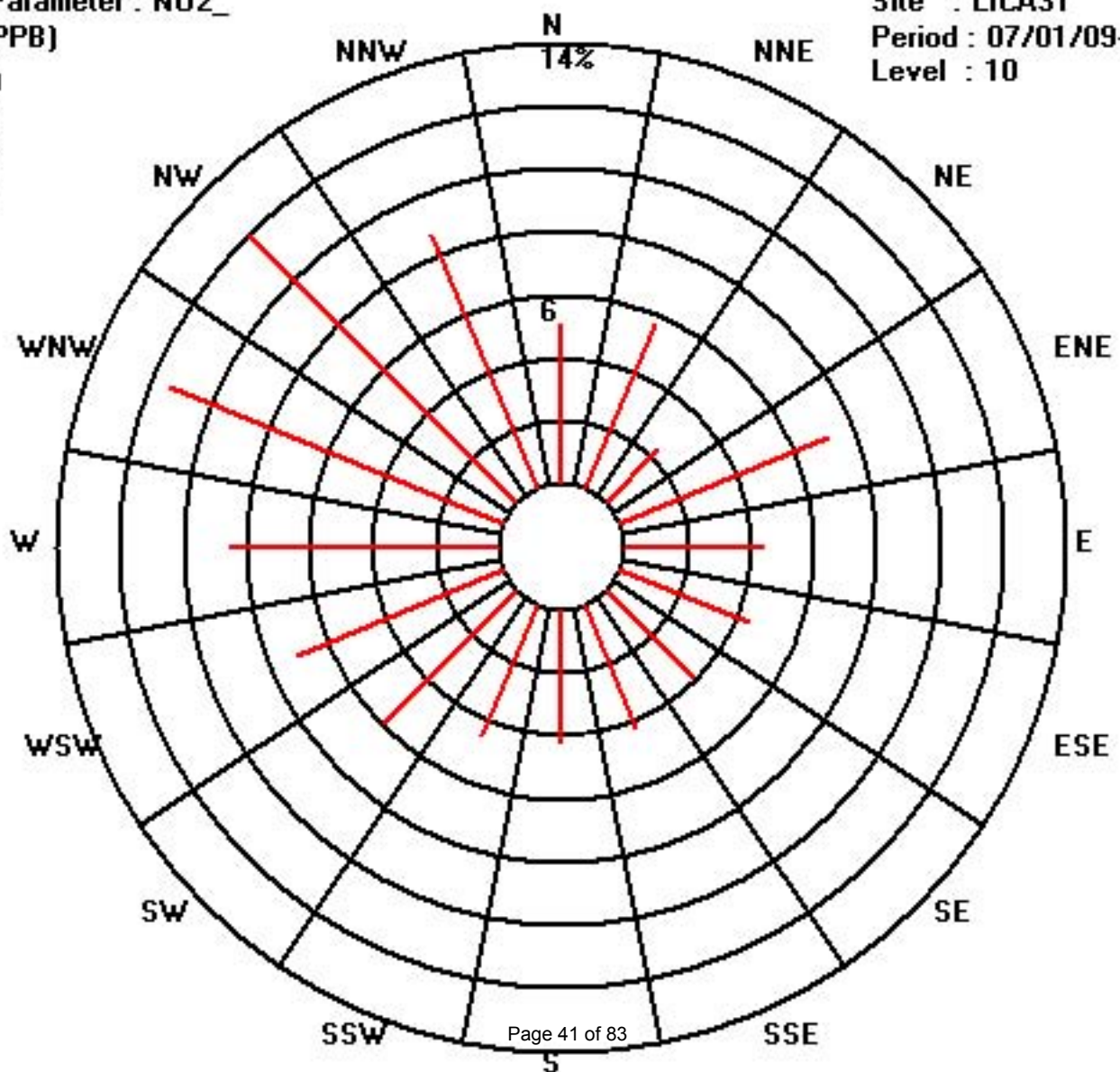
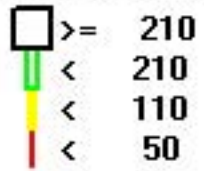
Calm : .00 %

Total # Operational Hours : 682

Class Limits (PPB)

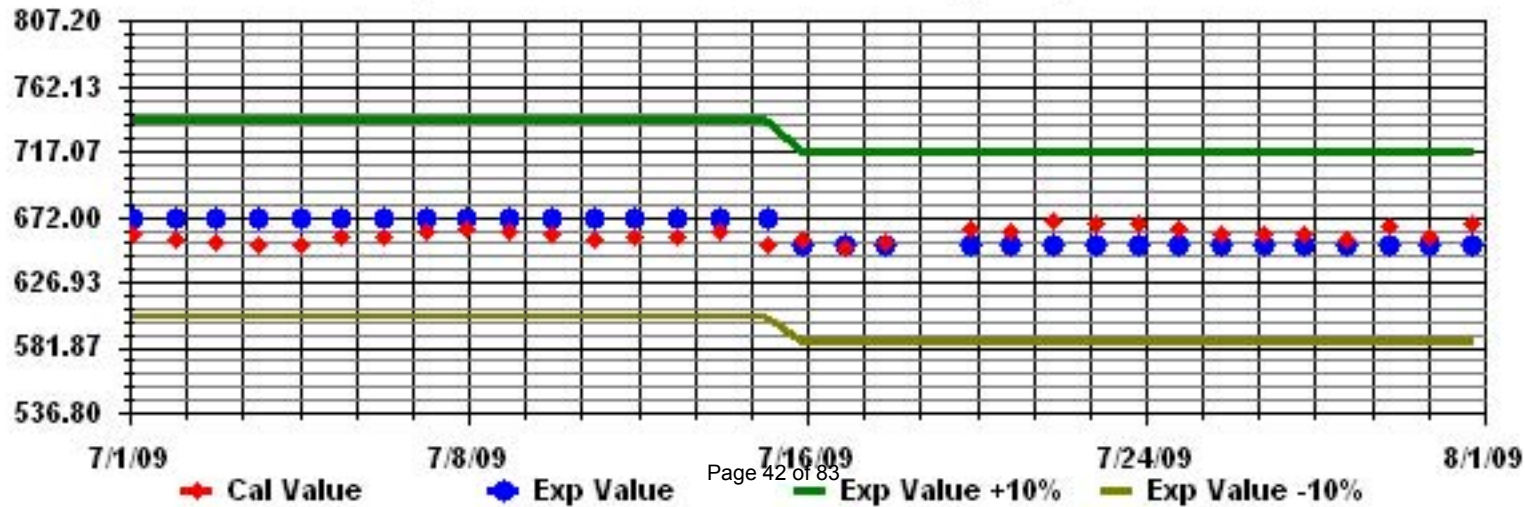
Period : 07/01/09-07/31/09

Level : 10





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



# Nitric Oxide

# LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - ST. LINA

JULY 2009

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	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
2	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	
3	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	IZS	0	1	0.1	24	
4	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	1	0.1	24	
5	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	
6	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	1	0.0	24	
7	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	
8	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	
9	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	IZS	1	0	0	0	0	0	1	1	0.2	24	
10	1	1	1	1	1	1	2	2	1	1	1	1	0	0	0	IZS	0	0	0	0	0	0	0	0	0	2	0.6	24
11	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	0.0	24	
12	0	0	0	0	0	0	1	1	1	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	1	0.1	24	
13	0	0	0	0	0	0	1	1	1	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	1	0.1	24	
14	0	0	0	0	0	0	0	0	0	0	0	IZS	1	1	P	0	0	0	0	0	0	0	0	0	1	0.1	23	
15	0	0	0	1	0	1	1	C	C	C	C	C	C	C	C	0	0	0	0	0	0	0	0	0	0	1	0.2	24
16	0	0	0	0	1	1	1	1	1	IZS	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0.3	24
17	0	0	0	0	1	1	1	1	IZS	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.3	24
18	0	0	0	0	0	0	1	IZS	1	0	1	0	0	0	0	0	0	0	0	0	0	0	P	P	P	1	0.2	21
19	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	0	0	0	0	0	0	0	0	0.0	7
20	0	0	0	0	0	IZS	1	1	1	0	0	1	1	0	0	0	0	0	1	0	0	0	0	0	1	0.3	24	
21	0	0	0	0	IZS	1	1	1	1	1	0	0	0	0	1	1	0	0	1	0	1	0	1	0	0	1	0.4	24
22	0	0	0	IZS	1	1	1	1	1	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	1	0.3	24	
23	0	0	IZS	1	0	0	0	0	0	0	0	0	0	1	0	0	1	0	1	0	0	0	0	P	1	0.2	23	
24	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
25	IZS	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	IZS	1	1	0.1	24	
26	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	IZS	1	1	0.2	24
27	1	0	0	0	0	0	0	0	1	0	0	0	0	1	1	0	0	1	0	1	0	IZS	1	0	1	0.3	24	
28	0	0	0	0	0	0	1	1	1	0	1	0	1	0	0	1	0	0	1	0	1	IZS	1	0	0	1	0.3	24
29	1	0	0	0	1	0	1	1	0	1	0	0	0	0	0	0	0	1	0	IZS	0	0	0	0	0	1	0.3	24
30	0	0	0	0	0	1	1	0	1	0	0	0	0	0	0	0	0	0	IZS	1	1	1	0	0	1	0.3	24	
31	0	0	1	0	0	1	1	1	1	1	1	0	0	0	1	0	0	IZS	1	1	1	1	0	0	1	0.5	24	
HOURLY MAX	1	1	1	1	1	1	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1			
HOURLY AVG	0.1	0.1	0.1	0.1	0.2	0.3	0.6	0.5	0.5	0.3	0.2	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.0	0.1				

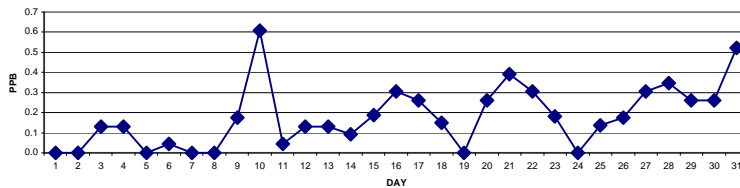
### STATUS FLAG CODES

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

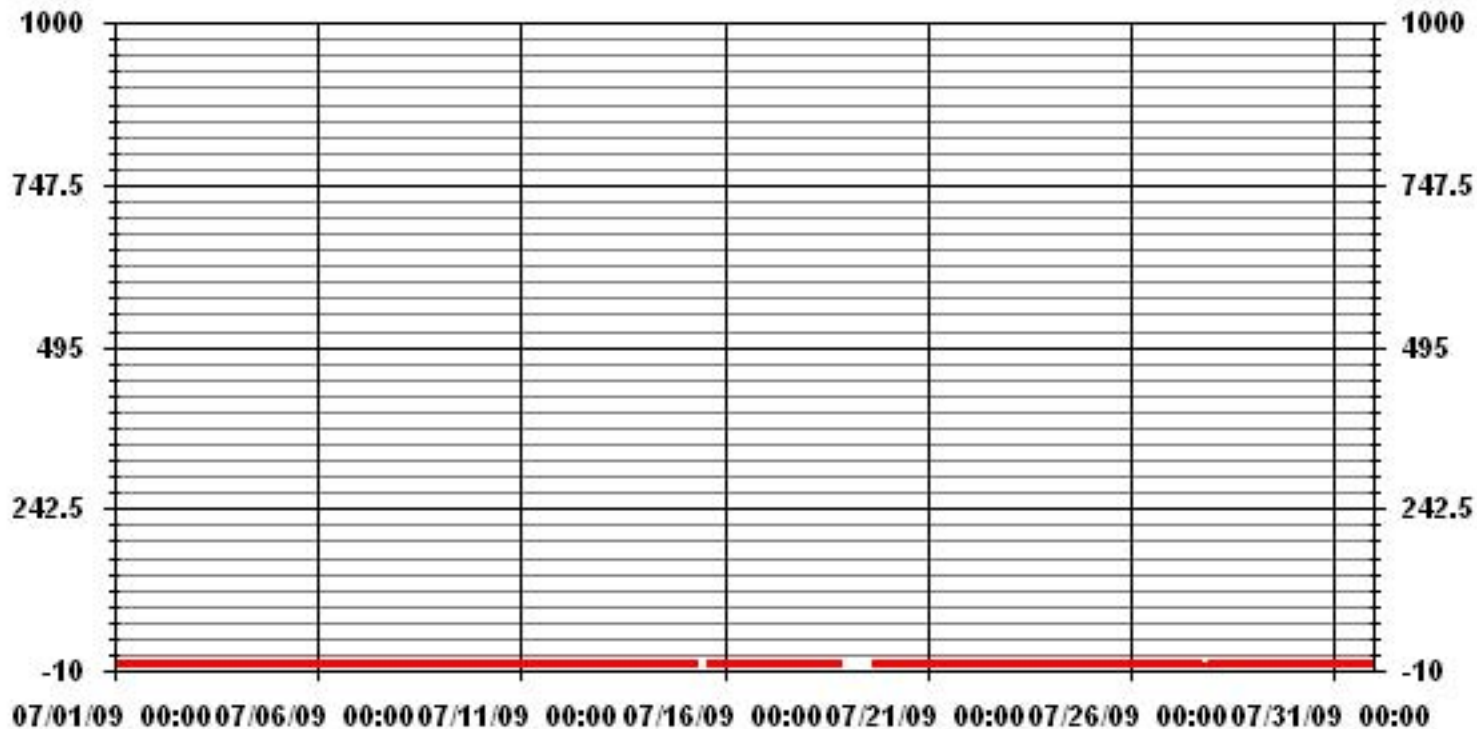
### MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:	123					
MAXIMUM 1-HR AVERAGE:	2	PPB	@ HOUR(S)	6, 7	ON DAY(S)	10
MAXIMUM 24-HR AVERAGE:	0.6	PPB			ON DAY(S)	10
IZS CALIBRATION TIME:	31	HRS	OPERATIONAL TIME:	722	HRS	
MONTHLY CALIBRATION TIME:	8	HRS	AMD OPERATION UPTIME:	97.0	%	
STANDARD DEVIATION:	0.39		MONTHLY AVERAGE:	0.18	PPB	

24 HOUR AVERAGES FOR JULY 2009



### 01 Hour Averages



— LICA31 NO\_ PPB

# LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - ST. LINA

JULY 2009

## 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	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	IZS	1	0	1	16	1	2	1	1	0	0	0	0	0	2	0	1	1	0	0	0	0	0	0	16	1.2	24
2	IZS	1	0	0	0	12	1	1	1	0	0	0	0	0	10	0	0	0	0	0	0	0	0	0	IZS	12	1.2	24
3	1	1	1	1	1	3	1	1	1	1	1	1	1	0	2	1	1	2	1	1	2	2	IZS	1	3	1.2	24	
4	1	1	1	1	1	2	2	1	1	1	1	1	2	1	1	0	1	1	0	1	1	IZS	1	1	2	1.0	24	
5	1	1	0	0	1	1	1	1	1	1	0	1	0	1	1	1	0	0	1	0	IZS	1	1	0	1	0.7	24	
6	1	0	0	1	1	1	1	2	1	1	1	0	1	1	1	1	1	1	1	IZS	1	1	0	0	2	0.8	24	
7	0	1	1	1	1	1	1	1	0	1	0	1	1	1	1	1	1	1	IZS	1	1	1	1	1	1	1	0.9	24
8	0	1	0	0	1	1	1	1	0	1	1	1	1	1	1	0	IZS	2	0	0	0	0	1	1	2	0.7	24	
9	0	1	1	1	1	1	1	1	1	2	1	2	1	1	1	1	IZS	2	1	1	1	2	1	1	2	1.1	24	
10	1	1	1	1	1	2	3	3	2	2	1	1	1	1	2	IZS	2	1	1	1	1	1	1	1	3	1.4	24	
11	1	1	1	1	1	1	1	1	1	1	1	1	1	1	IZS	2	1	1	1	1	1	0	1	1	2	1.0	24	
12	0	1	1	1	1	1	1	2	1	1	1	1	0	IZS	1	1	0	0	1	1	0	1	1	1	2	0.8	24	
13	0	0	1	1	1	3	3	1	1	1	1	0	IZS	1	0	0	0	1	0	1	1	0	0	1	3	0.8	24	
14	0	1	1	0	1	1	1	1	1	1	1	IZS	P	1	P	1	1	1	1	2	1	1	1	1	2	1.0	22	
15	1	1	1	1	1	3	4	C	C	C	C	C	C	C	C	0	0	0	0	0	0	0	0	0	4	0.8	24	
16	0	0	0	0	0	0	1	1	1	IZS	2	1	1	1	4	2	1	P	1	1	1	1	1	1	4	1.0	23	
17	1	1	1	1	1	2	2	1	IZS	1	2	2	1	1	1	1	1	1	1	1	1	1	1	1	2	1.2	24	
18	1	1	1	1	1	1	1	IZS	2	1	1	1	1	1	1	1	1	1	1	1	1	P	P	P	2	1.1	21	
19	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	1	1	2	1	1	1	1	1	2	1.1	8	
20	1	1	1	1	1	IZS	1	1	1	0	1	10	0	4	0	0	0	0	1	0	0	1	0	0	10	1.1	24	
21	0	0	0	0	IZS	2	1	2	2	1	1	1	1	1	2	1	1	1	1	2	1	12	1	1	12	1.5	24	
22	1	1	1	IZS	2	1	3	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	3	1.2	24	
23	1	1	IZS	2	1	2	1	1	1	1	1	1	2	2	1	1	1	1	1	1	1	1	1	P	2	1.2	23	
24	1	IZS	1	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	2	0.3	24	
25	IZS	2	1	1	1	1	1	1	1	1	1	1	13	1	1	1	1	1	1	1	1	1	1	2	IZS	13	1.6	24
26	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	IZS	2	2	1.1	24
27	1	1	1	1	1	2	1	1	1	1	1	1	1	1	2	1	1	24	2	1	1	IZS	2	1	24	2.2	24	
28	1	1	1	1	1	1	1	2	2	1	2	1	2	1	1	2	1	1	1	2	IZS	2	1	1	2	1.3	24	
29	1	1	1	1	1	1	1	1	1	3	1	2	1	1	2	1	1	1	1	IZS	2	2	2	2	3	1.3	24	
30	1	1	1	1	3	20	8	4	3	2	1	1	1	1	1	1	1	1	IZS	2	2	2	1	1	20	2.6	24	
31	1	1	1	1	1	1	2	1	1	1	3	1	1	1	2	1	1	IZS	2	1	1	1	1	1	3	1.2	24	
HOURLY MAX	2	2	1	2	3	20	8	4	3	3	3	10	13	4	4	10	2	24	2	2	2	12	2	2				
HOURLY AVG	0.8	0.9	0.8	0.8	1.0	2.9	1.6	1.4	1.1	1.1	1.0	1.3	1.3	1.0	1.1	1.3	0.8	1.7	1.0	0.9	0.9	1.3	0.9	0.9				

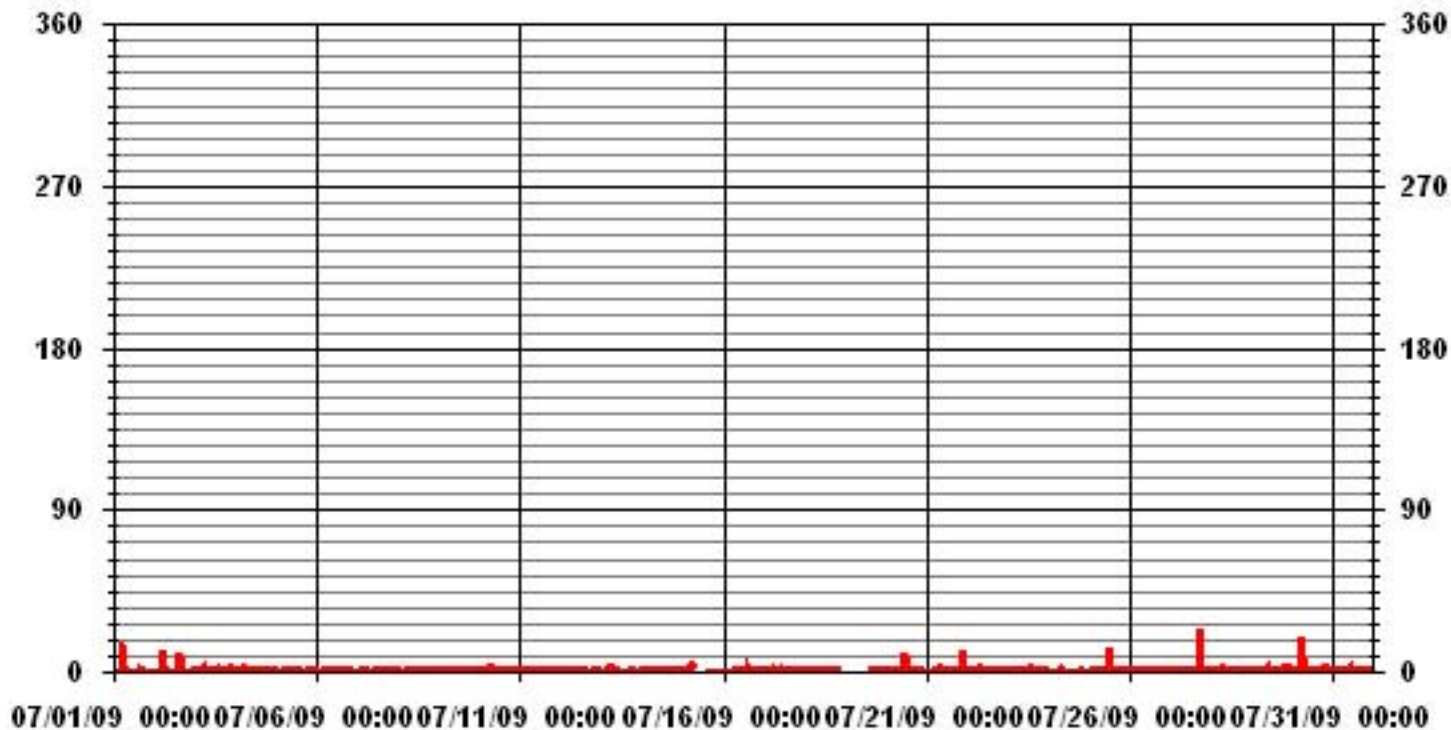
**STATUS FLAG CODES**

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:	562					
MAXIMUM INSTANTANEOUS VALUE:	24	PPB	@ HOUR(S)	17	ON DAY(S)	27
IZS CALIBRATION TIME:	31	HRS	OPERATIONAL TIME:	721	HRS	
MONTHLY CALIBRATION TIME:	8	HRS				
STANDARD DEVIATION	1.70					

### 01 Hour Averages



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

July 2009

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	5.13	5.71	2.34	7.18	4.39	4.39	3.95	4.25	4.25	4.54	6.01	7.03	8.50	11.43	12.02	8.79	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	5.13	5.71	2.34	7.18	4.39	4.39	3.95	4.25	4.25	4.54	6.01	7.03	8.50	11.43	12.02	8.79	

Calm : .00 %

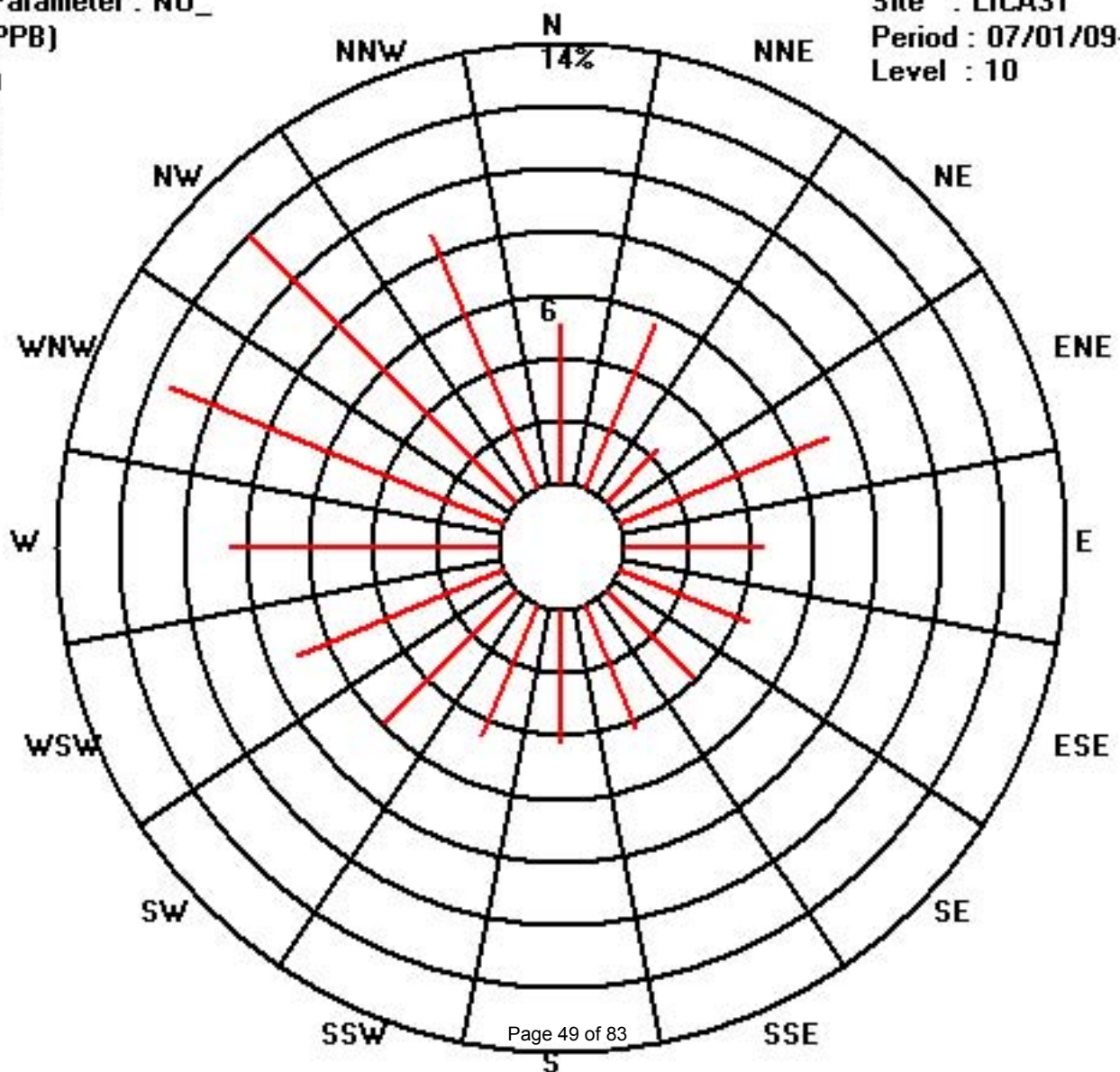
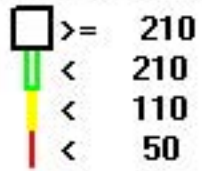
Total # Operational Hours : 682

Distribution By Samples

	Direction																
Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 50	35	39	16	49	30	30	27	29	29	31	41	48	58	78	82	60	682
< 110																	
< 210																	
>= 210																	
Totals	35	39	16	49	30	30	27	29	29	31	41	48	58	78	82	60	

Calm : .00 %

Total # Operational Hours : 682





# Oxides of Nitrogen

# LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - ST. LINA

JULY 2009

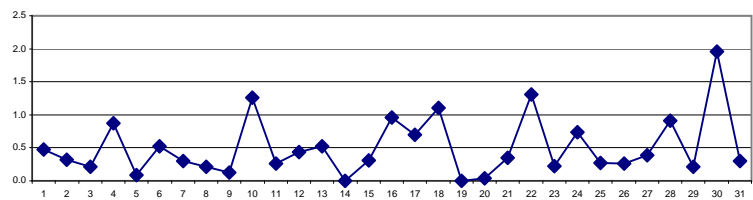
## OXIDES OF NITROGEN hourly averages in ppb

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	1	IZS	1	1	1	2	2	1	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	2	0.5	24		
2	IZS	1	1	2	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	2	0.3	24		
3	0	0	0	0	0	1	0	0	1	1	0	0	0	0	0	0	0	1	0	0	1	0	IZS	0	1	0.2	24		
4	1	1	2	2	2	3	3	1	1	0	0	0	1	1	0	0	0	0	0	0	0	0	IZS	1	1	3	0.9	24	
5	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	1	0.1	24	
6	0	0	1	1	2	1	1	2	2	1	1	0	0	0	0	0	0	0	0	0	IZS	0	0	0	2	0.5	24		
7	0	1	2	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	2	0.3	24		
8	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	1	0.2	24		
9	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	IZS	0	0	0	0	0	0	0	1	0.1	24		
10	1	1	3	3	3	2	3	3	2	0	1	1	1	0	0	IZS	1	0	0	0	1	1	1	1	3	1.3	24		
11	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	1	1	1	1	0.3	24	
12	1	1	1	1	1	1	1	1	1	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	1	1	0.4	24	
13	0	1	1	1	1	2	2	2	2	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	2	0.5	24		
14	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	23	
15	0	0	0	0	0	1	1	C	C	C	C	C	C	C	C	C	0	0	0	0	0	0	1	1	1	1	0.3	24	
16	1	1	1	1	1	1	2	1	1	IZS	1	1	1	1	0	1	0	1	1	1	1	1	1	1	1	2	1.0	24	
17	2	1	1	2	2	2	2	1	IZS	1	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2	0.7	24		
18	1	1	1	2	2	1	1	IZS	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	P	P	P	2	1.1	21
19	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	0	0	0	0	0	0	0	0	0.0	7	
20	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		
21	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	2	2	1	2	0.3	24	
22	2	1	2	IZS	3	4	4	3	3	2	1	1	1	1	1	0	1	0	0	0	0	0	0	0	4	1.3	24		
23	1	0	IZS	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	P	1	0.2	23	
24	0	IZS	1	2	2	2	1	2	1	1	1	0	0	0	0	0	0	0	1	1	1	1	0	0	2	0.7	24		
25	IZS	0	1	2	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	IZS	1	0.3	24	
26	2	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	2	0.3	24	
27	0	0	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	1	1	0.4	24	
28	1	1	1	1	2	2	2	2	2	1	1	0	1	0	0	1	0	0	0	1	IZS	1	1	0	2	0.9	24		
29	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	1	1	1	1	0.2	24	
30	2	2	1	2	2	4	4	4	7	4	2	1	1	1	1	0	1	1	IZS	2	1	1	1	0	7	2.0	24		
31	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	IZS	1	0	1	1	1	1	1	0.3	24		
HOURLY MAX	2	2	3	3	3	4	4	4	7	4	2	1	1	1	1	1	1	1	1	1	2	1	2	2	1				
HOURLY AVG	0.6	0.6	0.9	0.9	1.1	1.2	1.2	1.0	0.9	0.5	0.3	0.2	0.3	0.2	0.1	0.1	0.2	0.1	0.1	0.3	0.3	0.5	0.5	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

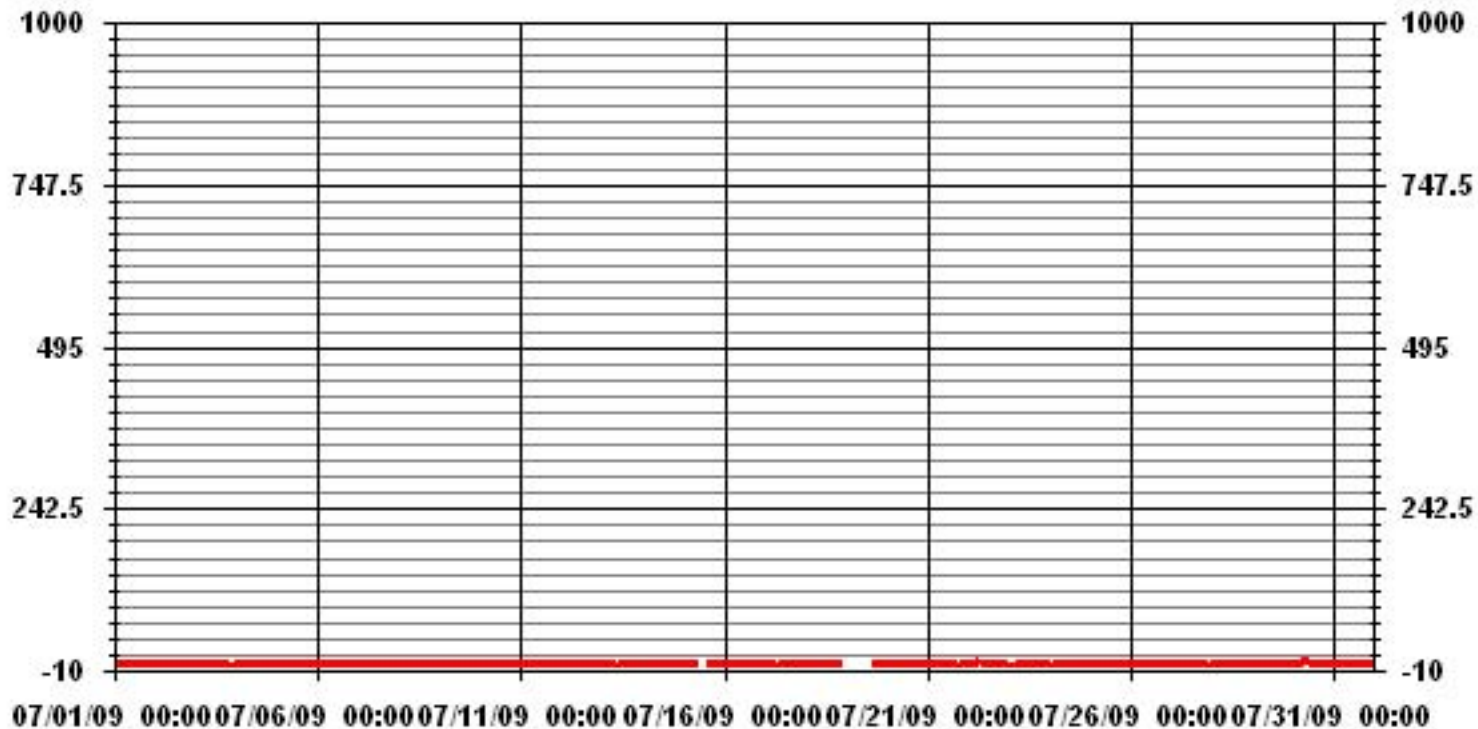
24 HOUR AVERAGES FOR JULY 2009



### MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:	263					
MAXIMUM 1-HR AVERAGE:	7	PPB	@ HOUR(S)	8	ON DAY(S)	30
MAXIMUM 24-HR AVERAGE:	2.0	PPB			ON DAY(S)	30
IZS CALIBRATION TIME:	31	HRS	OPERATIONAL TIME:	722	HRS	
MONTHLY CALIBRATION TIME:	8	HRS	AMD OPERATION UPTIME:	97.0	%	
STANDARD DEVIATION:	0.80		MONTHLY AVERAGE:	0.52	PPB	

### 01 Hour Averages



— LICA31 NOX\_ PPB

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - ST. LINA

JULY 2009

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	IZS	1	2	3	26	3	3	1	2	1	1	1	1	13	2	2	2	1	1	1	1	1	1	26	3.1	24	
2	IZS	1	2	2	2	15	1	2	1	1	1	1	0	2	0	23	1	1	0	1	1	1	1	IZS	23	2.7	24	
3	1	1	1	1	1	5	1	1	2	2	1	1	1	0	2	1	1	3	3	2	5	4	IZS	1	5	1.8	24	
4	1	2	3	3	4	4	4	2	1	1	1	2	3	2	2	1	3	1	1	1	1	IZS	1	1	4	2.0	24	
5	1	1	1	1	1	1	1	1	1	1	0	1	0	1	0	1	0	1	0	0	IZS	1	1	1	1	1	0.7	24
6	1	1	1	3	3	2	2	3	2	2	2	1	1	1	1	0	1	1	1	IZS	1	0	1	1	3	1.4	24	
7	1	2	4	4	2	1	1	1	0	1	0	1	0	0	0	0	0	1	IZS	1	1	1	1	1	1	4	1.0	24
8	1	2	1	1	2	1	1	1	1	2	1	0	1	1	1	1	1	IZS	1	2	1	1	1	1	2	1.1	24	
9	0	1	1	1	1	1	0	1	1	2	2	2	2	1	1	1	IZS	1	1	1	1	0	2	1	2	1.1	24	
10	2	2	3	4	4	4	5	4	3	2	2	2	1	1	2	IZS	2	2	1	1	2	2	1	2	5	2.3	24	
11	2	2	2	1	0	0	1	1	1	1	1	1	0	1	IZS	1	0	1	1	1	1	3	3	1	3	1.1	24	
12	1	3	3	1	1	2	1	2	1	1	1	0	1	IZS	1	1	0	1	1	1	1	1	1	1	3	1.2	24	
13	1	1	2	2	3	6	5	2	3	1	1	1	1	IZS	1	0	1	0	0	0	0	1	0	0	6	1.3	24	
14	0	1	1	1	1	1	1	0	0	0	0	IZS	P	1	P	0	0	0	1	2	1	0	1	1	2	0.6	22	
15	1	1	2	1	1	5	4	C	C	C	C	C	C	C	C	1	11	1	1	1	1	1	2	2	11	2.3	24	
16	2	1	1	2	2	2	2	2	3	IZS	2	2	2	2	4	10	1	P	1	2	2	2	2	2	10	2.3	23	
17	2	2	2	3	3	3	4	2	IZS	2	2	2	2	1	1	1	1	1	1	0	1	2	1	1	4	1.7	24	
18	2	2	3	2	2	2	2	IZS	2	2	2	2	1	2	1	1	1	1	2	1	2	P	P	P	3	1.8	21	
19	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	1	1	1	1	1	1	1	1	1	1.0	8
20	1	1	1	1	1	IZS	2	1	2	1	1	17	1	6	0	1	1	0	1	1	1	3	1	1	17	2.0	24	
21	1	1	1	1	IZS	2	1	2	2	1	2	1	1	1	0	2	2	1	2	8	2	24	4	3	24	2.8	24	
22	4	2	3	IZS	4	4	9	4	4	3	3	2	2	2	2	1	2	1	1	1	1	2	1	2	9	2.6	24	
23	1	1	IZS	1	1	3	2	2	1	1	1	2	1	2	1	1	1	2	2	1	0	1	1	P	3	1.3	23	
24	1	IZS	2	4	2	2	2	6	3	2	1	1	1	2	2	1	1	1	1	4	4	4	1	1	6	2.1	24	
25	IZS	1	1	1	1	2	1	1	1	1	1	1	22	1	1	1	1	1	1	1	1	2	4	IZS	22	2.2	24	
26	3	2	1	2	1	1	1	1	1	1	1	1	1	0	1	1	2	0	0	1	1	1	IZS	1	3	1.1	24	
27	1	1	1	2	3	3	2	1	2	1	1	1	0	1	2	1	1	34	3	1	2	IZS	1	2	34	2.9	24	
28	2	2	2	2	2	3	2	3	3	1	2	2	3	2	1	2	2	1	1	5	IZS	1	2	1	5	2.0	24	
29	1	1	1	1	1	1	1	2	1	4	0	2	1	0	1	1	2	1	IZS	2	3	3	3	3	4	1.5	24	
30	3	3	2	3	6	31	14	8	10	5	4	3	2	2	2	1	1	2	IZS	4	3	3	1	1	31	5.0	24	
31	1	1	1	1	1	2	2	1	1	1	3	1	1	1	2	1	1	IZS	2	1	2	2	1	2	3	1.4	24	
HOURLY MAX	4	3	4	4	6	31	14	8	10	5	4	17	22	6	4	23	11	34	3	8	5	24	4	3				
HOURLY AVG	1.4	1.5	1.7	1.9	2.0	4.7	2.6	2.1	1.9	1.6	1.4	1.9	1.9	1.4	1.2	2.4	1.4	2.3	1.2	1.6	1.5	2.5	1.4	1.3				

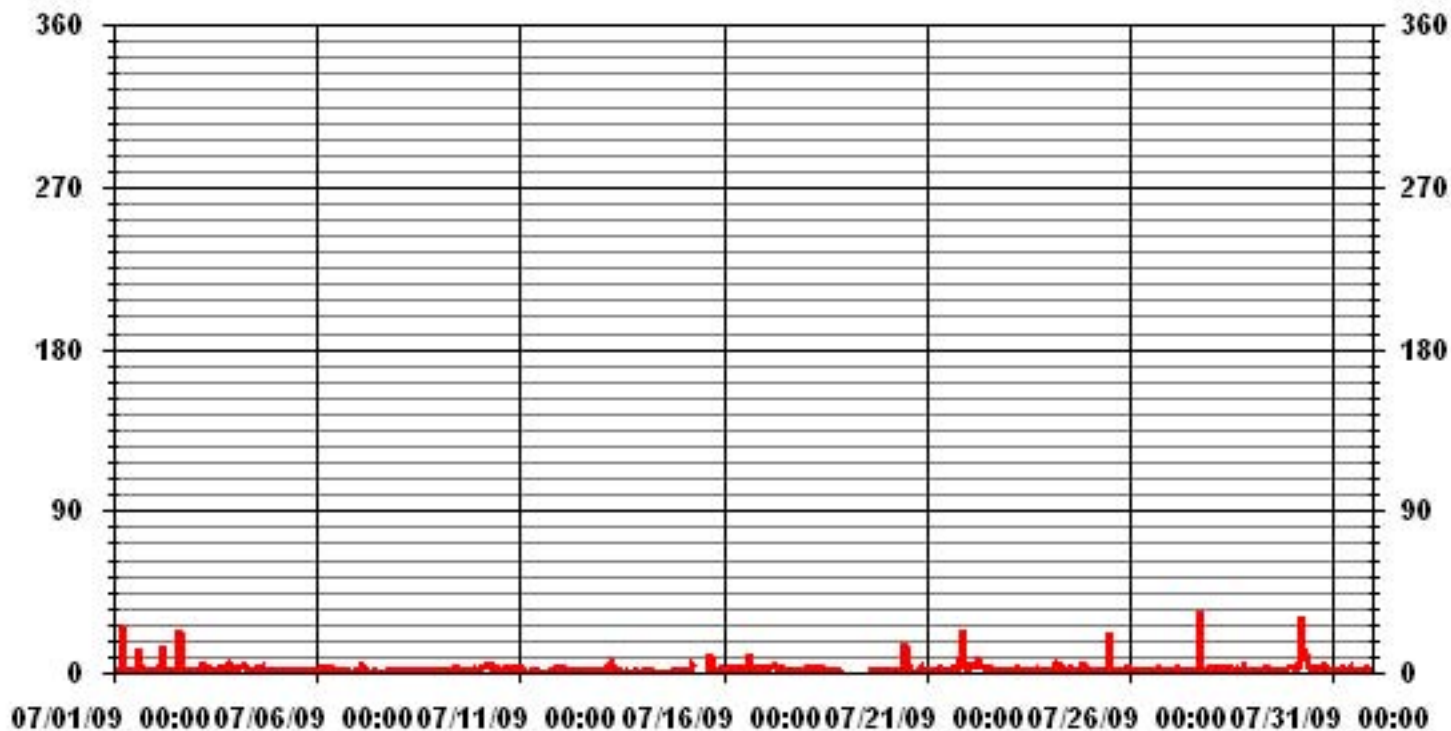
STATUS FLAG CODES

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

MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:	625
MAXIMUM INSTANTANEOUS VALUE:	34 PPB @ HOUR(S) 17 ON DAY(S) 27
IZS CALIBRATION TIME:	31 HRS
MONTHLY CALIBRATION TIME:	8 HRS
STANDARD DEVIATION:	2.87
OPERATIONAL TIME:	721 HRS

### 01 Hour Averages



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

July 2009

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	5.13	5.71	2.34	7.18	4.39	4.39	3.95	4.25	4.25	4.54	6.01	7.03	8.50	11.43	12.02	8.79	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	5.13	5.71	2.34	7.18	4.39	4.39	3.95	4.25	4.25	4.54	6.01	7.03	8.50	11.43	12.02	8.79	

Calm : .00 %

Total # Operational Hours : 682

Distribution By Samples

	Direction																
Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 50	35	39	16	49	30	30	27	29	29	31	41	48	58	78	82	60	682
< 110																	
< 210																	
>= 210																	
Totals	35	39	16	49	30	30	27	29	29	31	41	48	58	78	82	60	

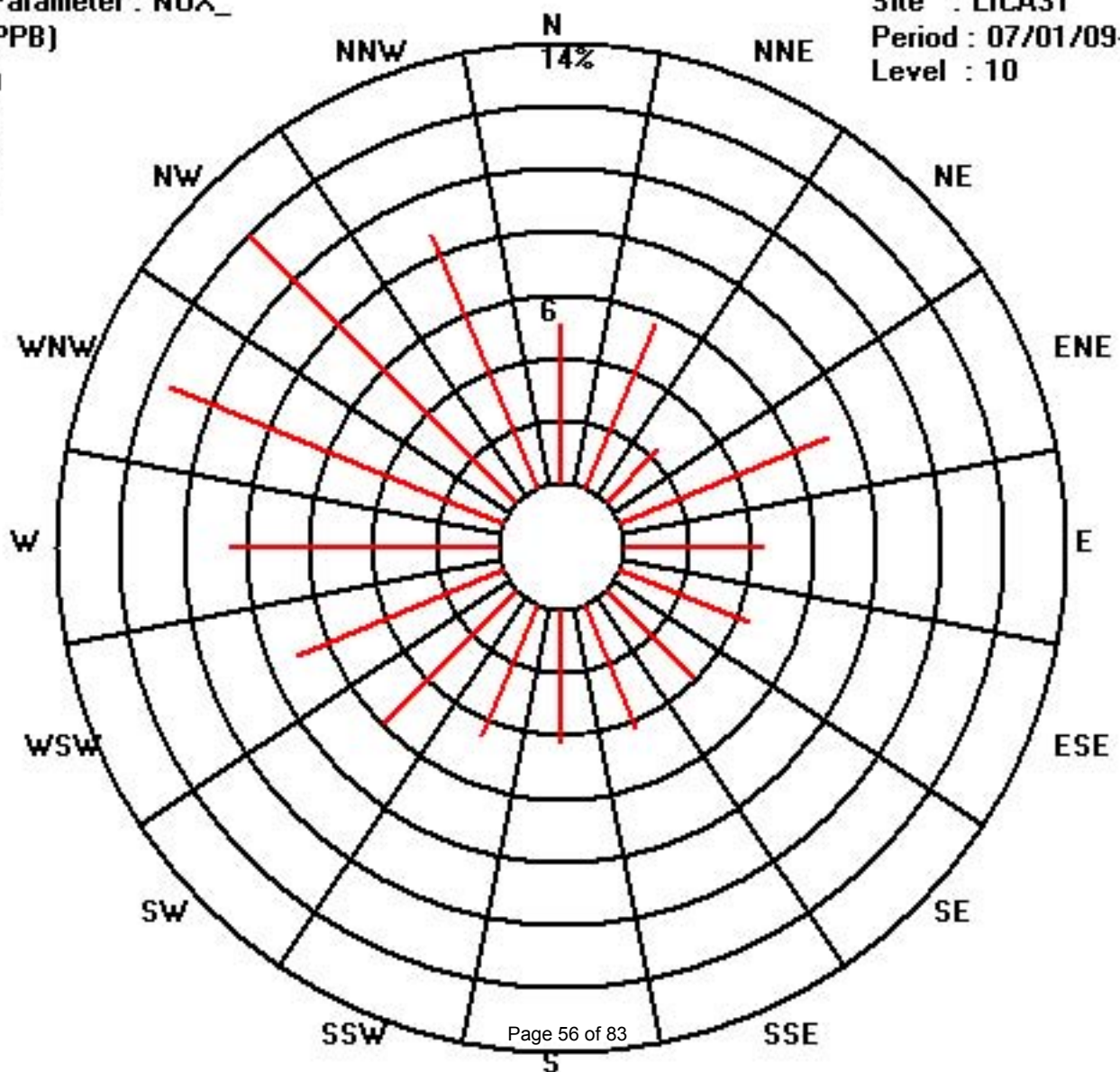
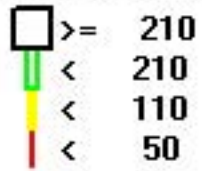
Calm : .00 %

Total # Operational Hours : 682

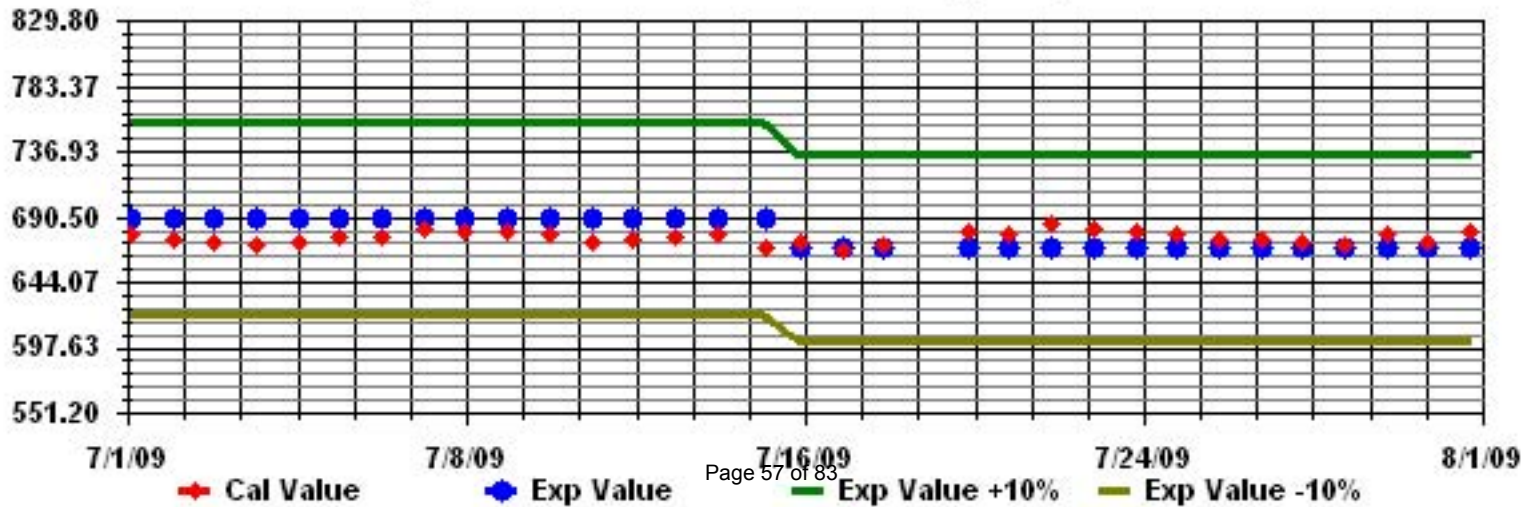
Class Limits (PPB)

Period : 07/01/09-07/31/09

Level : 10



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





# Vector Wind Speed

# LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - ST. LINA

JULY 2009

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		9.6	9.4	9.4	10.2	9.7	9.4	9.1	12.6	20.3	20.5	22	18.9	17.6	16.3	20.4	20.2	19.5	22	14.6	13	13	10.2	9.2	10.6	22	13	24	
2		8.7	7.9	7.9	8.4	10	10.5	9.7	10.1	10.4	9.1	8.9	10.6	10.6	9.4	6.6	7.9	6.6	7.2	8.4	8.5	8.1	8.2	9.5	0.9	10.6	5.2	24	
3		15.1	10.2	7.1	12.1	6.4	7.3	11.2	10	11.7	9.8	11.9	11.4	10.6	8.2	9.2	9.2	12	9.3	7.2	6.9	7.7	8.7	7.2	8.1	15.1	5.9	24	
4		10.3	8	5.6	9.1	8.5	5.8	5	2.6	4.1	3.7	5.1	11	11.3	10.1	8.1	10.5	8	9.2	8.8	9	5.7	6.5	6.5	6.9	11.3	4.1	24	
5		5.6	8.3	7.9	6.5	6.1	4.2	4.8	4.4	4.8	3.2	2.4	3.6	2.6	4.6	2.6	6.4	5.7	4.9	5.2	6	6.1	7.2	8.6	9.7	9.7	2	24	
6		9.8	9.8	9.8	10.1	10	9.2	7.7	9.7	12.5	15.2	16.6	17.2	19.2	15.6	16.9	17	15.4	12.9	13.3	14.8	15.4	15.4	14.8	13.8	19.2	12.4	24	
7		13.5	14.1	13.6	13.6	13.9	16.1	18.5	17.7	18.3	16	17.3	20.6	22.8	<b>23.3</b>	<b>23.3</b>	22.4	20.6	16.7	16.8	15.3	13.2	14.2	11.4	11.8	<b>23.3</b>	16.7	24	
8		10.5	11	10.7	8.1	11.8	13	13	13.9	9.2	3	1.3	4.2	8.3	6.3	3.8	6.8	11	5.6	5.4	9.8	10.7	8.8	10.2	11.6	13.9	6.1	24	
9		9.6	11.3	12.6	12.7	13.4	13.8	15.7	16.2	16.2	16.2	19.7	18.9	19.1	19.2	19.2	16.6	18.6	16.5	16.3	11.4	9.6	10.4	8.5	10	19.7	13.9	24	
10		10.7	13.1	14.2	15.2	13.3	10.8	8.3	9.6	15.1	13.4	12.7	11.5	6.9	10	8	7.5	6.4	5.8	7	9.1	11.1	12.7	12.2	11.2	15.2	6.3	24	
11		10.1	12	17.4	19	20.1	11.1	8.4	9.6	7.2	5	5.3	5.5	6.8	6.6	4.4	3.8	4.1	7.8	8.9	9.1	9.9	10.2	9.8	9.1	20.1	4.6	24	
12		9.6	11.3	11.1	12.4	12.2	13.1	13.5	15	15	11.7	12.7	13	15.2	15.6	16.7	16.4	16.3	16.6	17.1	13.6	13.1	13.7	15.5	17.2	17.2	17.2	13.1	24
13		14.7	12.6	13.3	12.4	11.4	10.3	8.4	9.3	10.3	10.2	11.4	14.2	15.4	14	16.5	17.3	18.5	17.4	21.1	18.1	15.5	16.1	17.1	16	21.1	8.4	24	
14		13.5	15.5	13.2	14.3	16.8	14.8	15.2	15.3	17.1	17.2	19.3	18.4	21.2	21.8	<b>P</b>	19.4	18.4	16.3	13.8	11	10.4	10.7	11	11.2	21.8	14.8	23	
15		5.8	9.4	10.3	10.6	6.4	7.2	6.2	2.9	3.3	3.6	4.5	<b>M</b>	<b>M</b>	<b>M</b>	<b>M</b>	<b>M</b>	5.2	2.7	4	7.9	9.3	10.4	10.1	11.5	11.5	0.4	19	
16		12.5	12.5	12.3	14	15	14.9	14.2	13.3	11.4	12.1	16.4	16.4	15.4	14.6	15.5	14.5	10.8	15.9	3.1	7.4	9.6	10.8	9.5	7.9	16.4	10.9	24	
17		9.3	8.7	7.7	5.9	7.3	5.2	8.4	5.8	3.9	2.9	4.2	3.6	3.7	4.2	2.4	4.3	4.3	3.1	5.3	6.1	7.1	9.9	11.6	12.5	12.5	0.4	24	
18		11.8	11.6	12.2	13.6	12.7	10	4.9	2.7	6.4	6.1	3.3	5	9	8.2	6.2	5.8	5.1	6.8	6.1	7.4	6	<b>P</b>	<b>P</b>	<b>P</b>	13.6	5.4	21	
19		<b>P</b>	<b>P</b>	<b>P</b>	<b>P</b>	<b>P</b>	<b>P</b>	<b>P</b>	<b>P</b>	<b>P</b>	<b>P</b>	<b>P</b>	<b>P</b>	<b>P</b>	<b>P</b>	<b>P</b>	17.1	18.3	19	17.6	16.1	14.9	16.5	17.2	19	<b>16.9</b>	8		
20		14.7	15	13.6	13.7	14.4	15.6	16.4	15.7	15.3	18.7	18.6	18.8	18.6	17.6	16.9	16.5	15.4	15.4	12.2	9.4	7.3	8.1	9.4	9.2	18.8	14.1	24	
21		10.4	10.1	11.8	12.1	12.2	11.7	9.8	8.6	7.6	10.6	9.6	9.9	10.8	11.1	10.2	8.6	7.1	4.5	4.7	1.3	3.5	6	6.1	6.8	12.2	7.5	24	
22		7.2	7.4	7.3	8.1	7.9	8.5	6.8	8.6	9	8.2	8.3	8.1	10	12.6	10.9	10.7	8.5	8.6	5	7.5	7.8	7.9	7	8.7	12.6	5.1	24	
23		9.1	8.7	8.3	8.7	8	6.8	7.3	9.1	7.9	9.2	8.4	9.9	9.7	8.8	9.2	11	10.1	8.2	5.1	2.2	2.5	4.1	6.2	<b>P</b>	11	6.4	23	
24		6	6.7	6.6	7	6.4	6.5	6.1	6.8	5.6	3.3	3.9	3.2	7.2	7.8	10.7	14.7	14.5	10.5	8.8	6.1	7.3	8.8	8.8	7.6	14.7	5.9	24	
25		9	9.4	9.8	9.2	8.8	7.5	4.8	3.5	2.7	3.2	3.9	5.5	4.8	4.9	5	4.2	2.3	2.8	4.9	6.5	5.7	4.2	6.2	7.7	9.8	3.1	24	
26		6.3	6.8	9.1	9.8	9.3	9.4	9.3	9.6	8.9	9.1	14.5	15.5	14.9	13.5	13.5	14.1	14.7	15.1	11.9	8.2	7.3	7.8	7.9	5.3	15.5	9.8	24	
27		4.1	2.6	4.6	4.6	6	5.8	5.6	5.9	5.8	3.4	5.1	6	8.2	8.6	6.7	7.3	6.9	4.7	3.8	1.2	6.2	1.4	4.1	4.6	8.6	3.5	24	
28		7.1	5.9	3.8	3.3	5.5	5.4	6.1	6.1	5.5	6.7	6.4	7.8	9.7	8.8	9.8	11.4	13.2	10.2	7.7	6.7	7.3	7.6	8.5	9.1	13.2	6.4	24	
29		9.7	9.2	8.4	8.5	7.2	6.4	6	4.1	3	5.8	4.5	4.7	5.1	5.6	5.7	6.7	6.7	8.6	4.8	4.3	5.9	6.9	6.6	6.9	9.7	4.2	24	
30		6.6	8.6	9.6	9.8	9.4	7.2	8.3	10.4	12.9	12.2	10.4	10.7	11	12.7	12	13.2	13	7.5	4.6	6.8	7	7.6	8.2	8.3	13.2	5.4	24	
31		7.6	7.1	6.5	6.9	5.7	5.1	1.5	1.5	4.2	4.9	4.2	6.3	7.4	6.5	9.4	9.9	7.2	7.8	4.7	3.8	7	6.9	7.5	7.4	9.9	1.6	24	
HOURLY MAX		15.1	15.5	17.4	19.0	20.1	16.1	18.5	17.7	20.3	20.5	22.0	20.6	22.8	23.3	23.3	22.4	20.6	22.0	21.1	18.1	16.1	16.1	17.1	17.2				
HOURLY AVG		9.6	9.8	9.9	10.3	10.2	9.4	9.0	9.0	9.5	9.1	9.8	10.7	11.5	11.3	10.7	11.5	11.1	10.3	9.0	8.6	8.8	9.2	9.5	9.6				

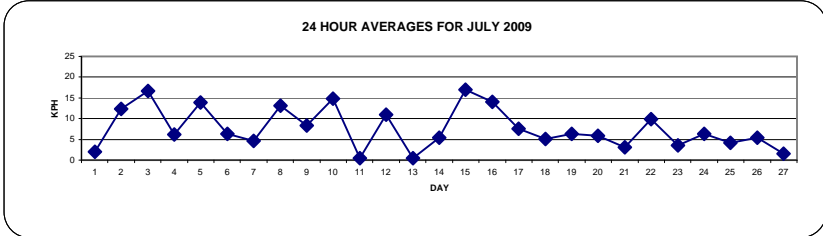
**STATUS FLAG CODES**

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

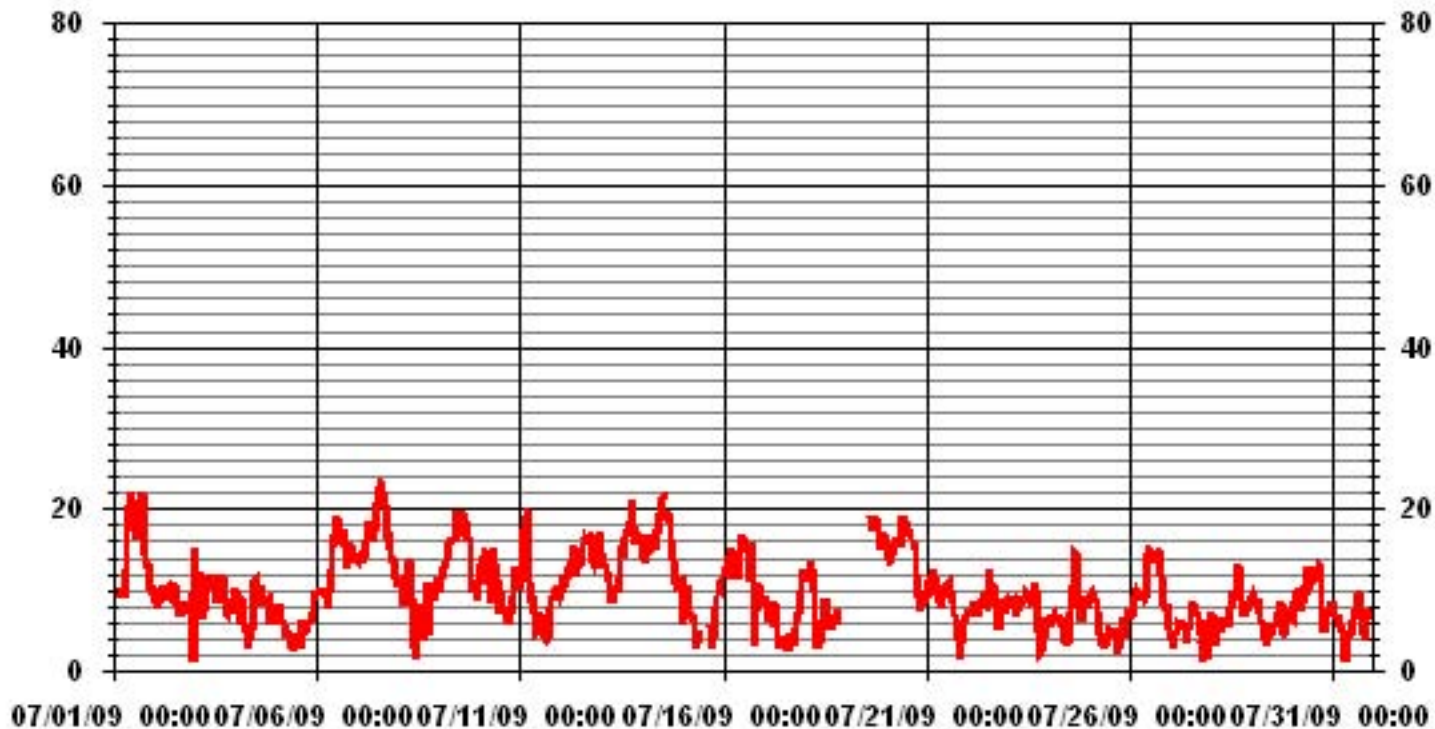
LAST CALIBRATION: November 7, 2007

**MONTHLY SUMMARY**

MAXIMUM 1-HR AVERAGE:	23.3	KPH	@ HOUR(S)	13, 14	ON DAY(S)	7
MAXIMUM 24-HR AVERAGE:	16.9	KPH			ON DAY(S)	19
CALMS (≤ 0 KPH)	0.00	%	OPERATIONAL TIME:	718	HRS	
MONTHLY CALIBRATION TIME:	0	HRS	AMD OPERATION UPTIME	96.5	%	
STANDARD DEVIATION	4.48		MONTHLY AVERAGE	9.88	KPH	



### 01 Hour Averages



— LICA31 WSP KPH

LICA31  
WSP / WDR Joint Frequency Distribution (Percent)

July 2009

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	1.53	2.64	.83	1.25	1.25	.83	.69	.83	.55	.69	1.39	.97	1.53	1.11	1.39	1.53	19.08
< 12.0	2.92	3.20	1.25	2.22	1.53	1.94	1.67	1.25	1.94	3.89	3.76	3.62	5.98	7.10	5.84	3.48	51.67
< 20.0	.69	.00	.27	2.78	1.67	1.53	1.53	1.94	1.81	.13	.55	1.81	1.25	3.20	4.45	3.34	27.01
< 29.0	.00	.00	.00	.83	.13	.00	.00	.00	.00	.00	.00	.83	.00	.00	.27	.13	2.22
< 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	5.15	5.84	2.36	7.10	4.59	4.31	3.89	4.03	4.31	4.73	5.71	7.24	8.77	11.42	11.97	8.49	

Calm : .00 %

Total # Operational Hours : 718

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	19	6	9	9	6	5	6	4	5	10	7	11	8	10	11	137
< 12.0	21	23	9	16	11	14	12	9	14	28	27	26	43	51	42	25	371
< 20.0	5		2	20	12	11	11	14	13	1	4	13	9	23	32	24	194
< 29.0				6	1							6			2	1	16
< 39.0																	
>= 39.0																	
Totals	37	42	17	51	33	31	28	29	31	34	41	52	63	82	86	61	

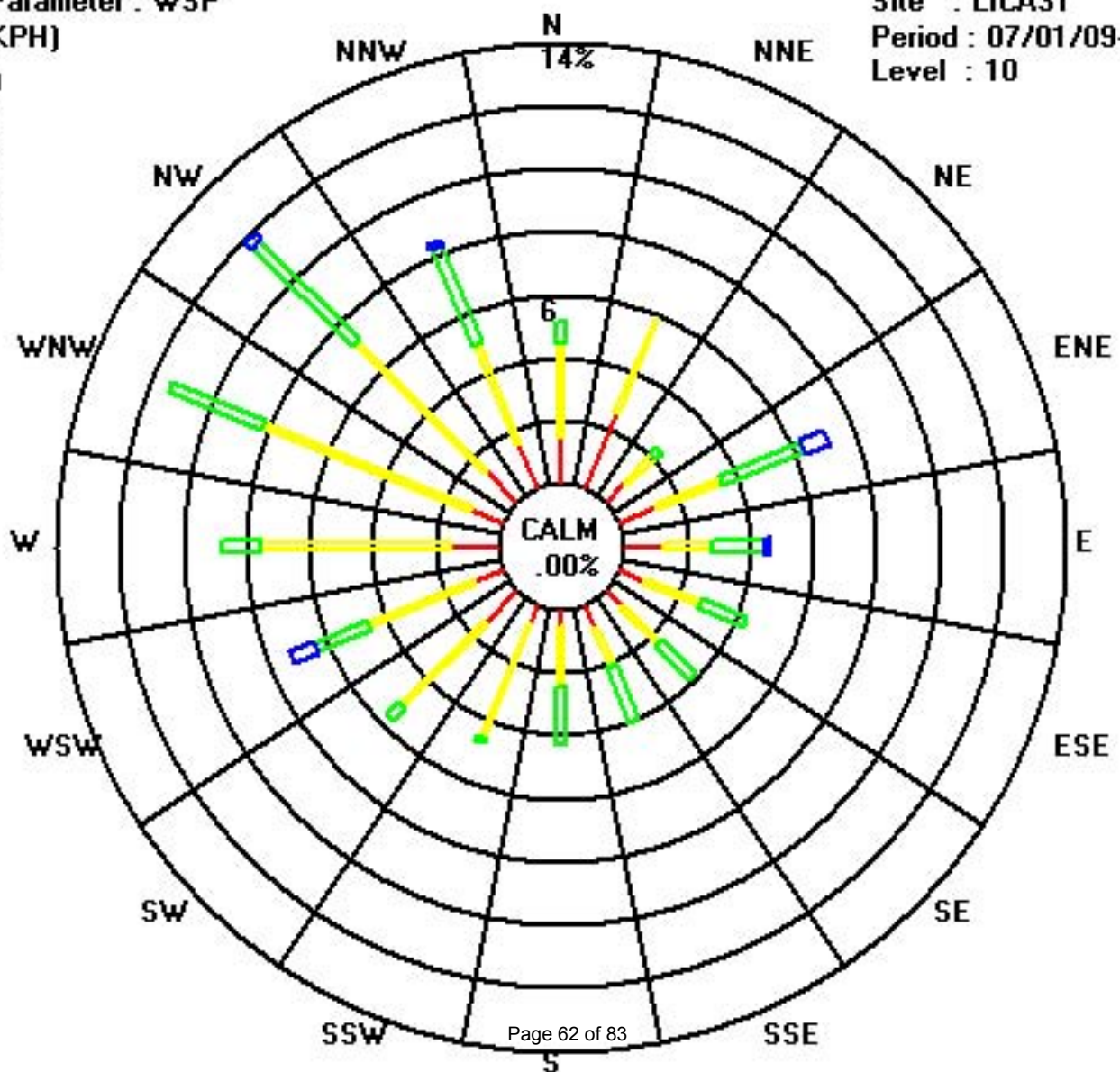
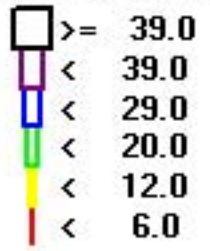
Calm : .00 %

Total # Operational Hours : 718

Class Limits (KPH)

Period : 07/01/09-07/31/09

Level : 10



# Vector Wind Direction

# LAKELAND INDUSTRY & COMMUNITY ASSOCIATION -ST. LINA

JULY 2009

## 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	
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	316	256	233	229	220	220	220	244	246	252	247	251	254	254	238	241	239	248	252	307	309	313	289	291	253	WSW	24
2	272	245	253	244	246	269	265	285	273	287	288	271	269	265	291	308	299	332	12	25	54	64	76	108	286	WNW	24
3	251	297	108	86	303	351	29	12	354	331	3	357	350	0	342	306	287	303	274	278	283	286	249	251	323	NW	24
4	262	243	167	180	200	199	231	13	213	214	233	218	228	238	243	259	286	302	352	23	14	210	149	143	234	SW	24
5	21	306	296	279	248	289	42	79	82	131	165	232	181	245	9	348	343	5	39	16	43	61	61	93	11	NNE	24
6	133	117	130	146	150	141	103	100	97	102	103	114	101	90	100	112	132	111	85	79	75	77	74	74	103	ESE	24
7	68	65	59	60	58	55	65	67	73	78	66	59	65	67	70	74	71	68	77	79	83	64	77	75	68	ENE	24
8	67	96	102	58	59	62	81	77	114	190	102	15	44	92	127	62	81	94	274	348	16	12	332	357	58	ENE	24
9	338	314	317	322	329	332	330	335	326	325	337	330	331	332	339	328	320	318	321	319	280	291	259	262	322	NW	24
10	247	252	255	257	256	246	223	221	236	240	231	230	270	250	225	209	210	209	148	117	109	103	108	89	222	SW	24
11	59	73	88	79	92	97	43	45	49	87	77	66	72	65	94	83	158	214	214	213	213	210	209	203	101	E	24
12	194	176	159	162	176	172	168	165	161	154	142	148	140	145	128	131	148	133	127	115	108	112	142	157	146	SE	24
13	216	184	170	185	198	186	196	214	271	319	312	318	311	318	327	322	312	325	327	336	326	317	328	330	300	WNW	24
14	325	313	319	331	351	350	334	328	330	331	310	326	326	320	P	314	311	316	316	307	295	295	277	279	319	NW	23
15	327	324	298	304	301	301	298	289	353	65	289	M	M	M	M	M	151	143	123	112	120	135	146	163	248	WSW	19
16	167	169	168	167	168	168	174	170	171	173	168	169	174	182	191	192	190	351	131	146	164	171	184	214	174	S	24
17	236	232	256	236	241	276	322	348	329	338	305	307	303	264	301	26	21	53	95	77	83	100	111	117	310	NW	24
18	125	138	127	136	147	144	161	21	57	96	107	85	106	121	90	60	57	50	26	18	327	P	P	P	105	ESE	21
19	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	271	280	284	283	280	277	286	301	282	W	8
20	299	294	288	284	283	286	288	292	296	302	303	314	311	309	302	301	307	290	290	276	278	275	276	272	294	WNW	24
21	267	273	269	270	273	279	280	295	294	289	298	287	291	312	312	301	289	295	278	318	199	215	208	187	279	W	24
22	188	202	196	190	191	206	202	219	213	201	202	211	217	229	282	316	326	323	319	313	301	295	321	308	246	WSW	24
23	298	288	282	285	266	274	265	259	304	314	320	297	296	305	287	304	303	320	336	5	62	157	172	P	293	WNW	23
24	206	209	205	210	195	184	180	212	217	270	259	234	248	288	269	278	273	277	276	257	262	297	322	289	254	WSW	24
25	305	313	304	307	317	326	331	1	0	349	342	6	326	296	316	297	315	59	104	122	133	178	229	240	315	NW	24
26	250	295	320	341	339	329	339	343	321	300	323	338	344	350	344	333	324	327	331	333	354	2	12	25	334	NNW	24
27	30	240	246	237	247	252	242	222	234	276	323	339	315	298	313	300	335	330	320	107	320	242	274	53	291	WNW	24
28	75	94	77	67	21	21	27	38	23	27	3	0	327	347	340	341	352	350	342	338	354	7	10	8	5	N	24
29	13	17	20	14	16	2	23	34	24	18	12	2	351	16	336	329	312	308	329	279	261	250	238	228	344	NNW	24
30	212	222	224	228	225	220	244	243	246	267	263	280	294	296	298	296	39	41	31	308	336	0	14	20	280	W	24
31	16	352	13	5	16	28	352	184	198	232	277	261	241	298	263	267	284	280	317	47	102	128	152	161	298	WNW	24
HOURLY AVG	338	352	320	341	351	351	352	348	354	349	342	357	351	350	344	348	352	351	352	348	354	317	332	357			

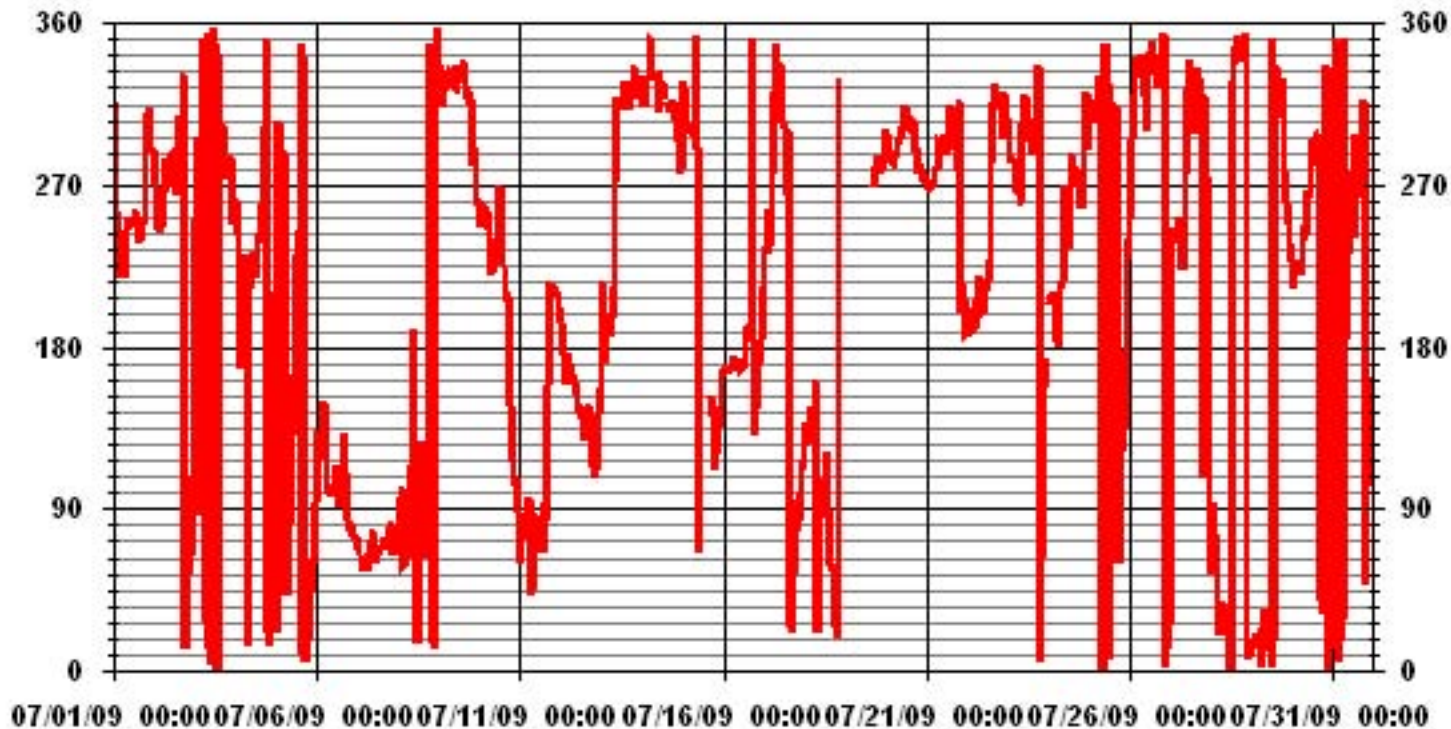
### STATUS FLAG CODES

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:	November 7, 2007
DECLINATION :	19 DEGREES FROM MAGNETIC NORTH

MONTHLY CALIBRATION TIME:	0	HRS	OPERATIONAL TIME:	718	HRS
STANDARD DEVIATION	105.84		AMD OPERATION UPTIME	96.5	%
			MONTHLY AVERAGE	301	DEG

### 01 Hour Averages





# Calibration Reports

# Sulphur Dioxide

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

#### Station Information

Calibration Date	July 15, 2009	Previous Calibration	06/11/209
Company	LAKELAND INDUSTRY & COMMUNITY ASSOCIATION		
Plant / Location	ST. LINA		
Start Time (MST)	7:15	End Time (MST)	11:25
Reason:	Monthly Calibration		
Barometric Pressure	702 mmHg	Station Temperature	22 Deg C
Cal Gas	52.2 ppm	Cal Gas Expiry date	12/19/2010
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:	Enviroics 2000	S/N :	1991	Method:	Dilution
DAS Make / Model:	ESC 8832	S/N :	AO715		
Flow Meter:	Enviroics 2000	S/N :	1991		

#### Analyzer Settings

Before Calibration		After Calibration	
Concentration Range	0 - 1000	ppb	
Sample Flow / Box Temp	586 ccm 29.5 Deg C	580 ccm 32.7 Deg C	
HVPS / Lamp Setting	529 2995	529 2295	
PMT / RxCell Temp	7.8 Deg C 50 Deg C	7.9 Deg C 50 Deg C	
Converter / IZS Temp	NA Deg C 40 Deg C	NA Deg C 40 Deg C	
Offset / Slope	46.4 1.013	47.9 1.028	

#### Calibration Data

Dilution Flow Rate	Source Gas Flow Rate	Calculated Concentration	Indicated Conc. (DAS)	Correction Factor
5006.0	0	0	1	N/A
5006.0	0	0	0	N/A
4933.0	77.7	809	799	1.0131
4933.0	77.7	809	810	0.9993
4974.0	38.8	404	402	1.0051
4995.0	19.4	202	199	1.0148
5006.0	0	0	0	N/A
Sum of Least Squares				1.0011
New Correction Factor				0.9993

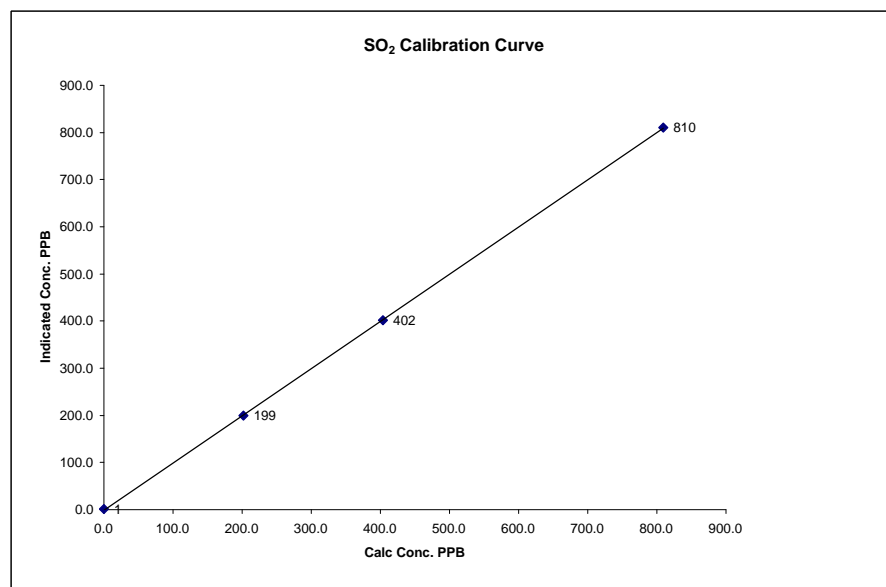
	Before Calibration	After Calibration
Auto Zero	1.1	0.4
Auto Span	343.0	349.0
Sample Lines Connected		YES
Percent Change from Previous Calibration		-0.2%

Calibration Performed by: Shea Beaton

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

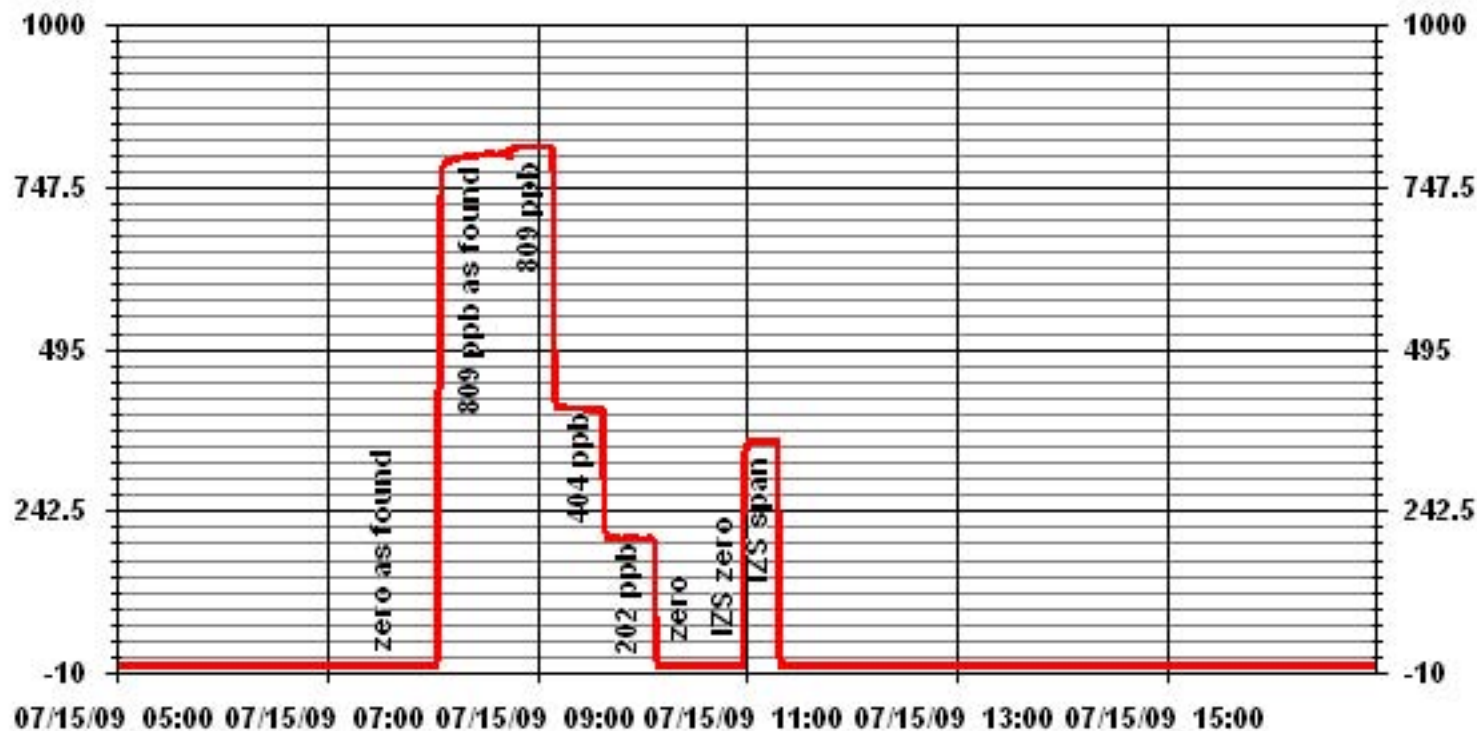
Calibration Date	July 15, 2009
Company	LAKELAND INDUSTRY & COMMUNITY ASSOCIATION
Plant / Location	ST. LINA
Start Time (MST)	7:15
End Time (MST)	11:25

Calculated Conc. ppb	Indicated Response ppb	Correction Factor	Correlation Coefficient Slope	(≥ 0.995) (0.85 to 1.15)	0.999969
0	1	n/a	Intercept	(± 3% F.S.)	-1.099556
202	199	1.0148			
404	402	1.0051			
809	810	0.9993			



Notes:

### 01 Minute Averages



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

#### Station Information

Calibration Date	July 21, 2009	Previous Calibration	July 15, 2009
Company	LAKELAND INDUSTRY & COMMUNITY ASSOCIATION		
Plant / Location	ST. LINA		
Start Time (MST)	9:25	End Time (MST)	14:05
Reason:	As Found/ Re-Calibration		
Barometric Pressure	699 mmHg	Station Temperature	24 Deg C
Cal Gas	52.2 ppm	Cal Gas Expiry date	12/19/2010
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:	Enviroics 2000	S/N :	1991	Method:	Dilution
DAS Make / Model:	ESC 8832	S/N :	AO715		
Flow Meter:	Enviroics 2000	S/N :	1991		

#### Analyzer Settings

Before Calibration		After Calibration	
Concentration Range	0 - 1000 ppb	0 - 1000 ppb	
Sample Flow / Box Temp	588 ccm 31 Deg C	585 ccm 31.1 Deg C	
HVPS / Lamp Setting	529 2680	529 2679	
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	47.9 1.028	53.8 1.127	

#### Calibration Data

Dilution Flow Rate	Source Gas Flow Rate	Calculated Concentration	Indicated Conc. (DAS)	Correction Factor
5005.0	0	0	6	N/A
4934.0	76.8	800	823	0.9721
5018.0	0	0	0	N/A
4937.0	76.9	801	801	0.9995
4978.0	38.4	400	398	1.0040
4996.0	19.2	200	198	1.0093
5018.0	0	0	1	N/A
Sum of Least Squares			1.0008	
New Correction Factor			0.9995	

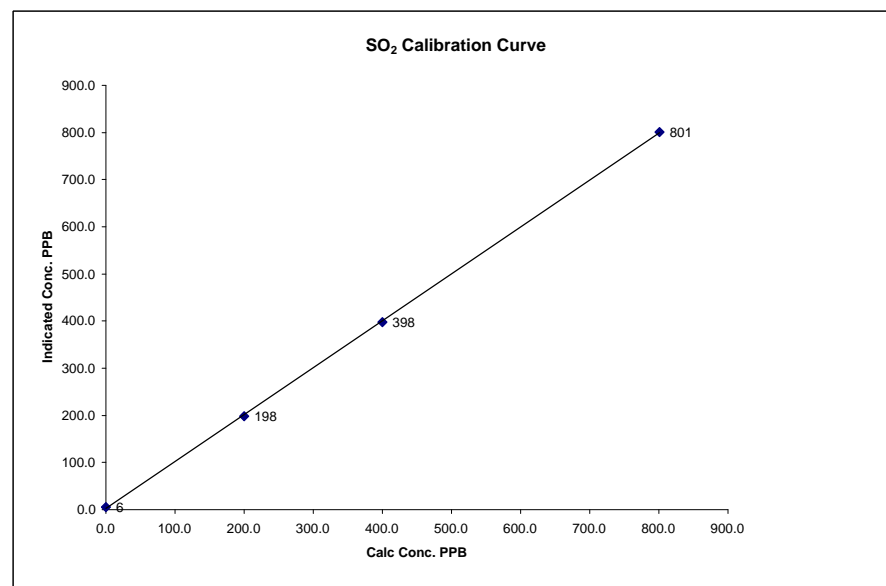
	Before Calibration	After Calibration
Auto Zero	6.9	0.6
Auto Span	361.0	348.0
Sample Lines Connected		YES
Percent Change from Previous Calibration		0.0%

Calibration Performed by: Shea Beaton

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

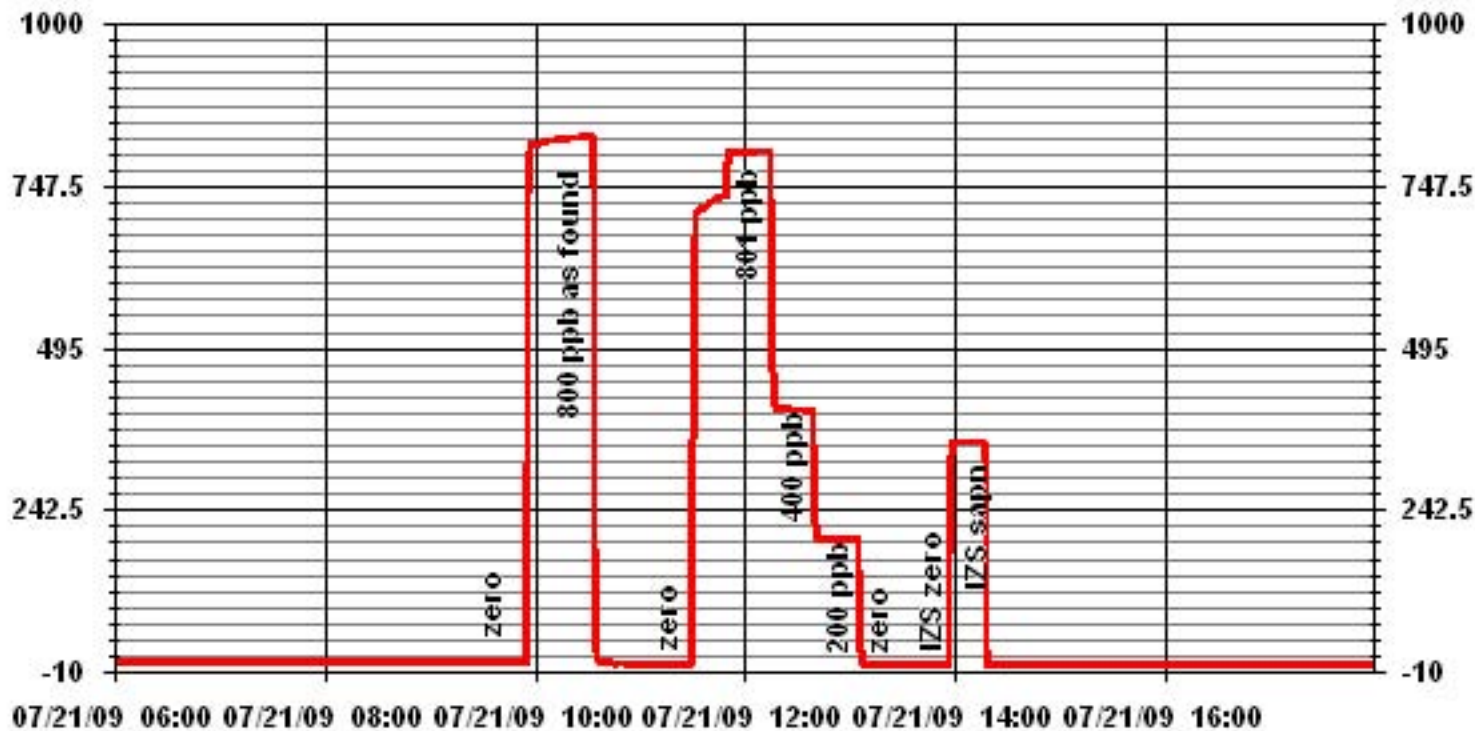
Calibration Date	July 21, 2009
Company	LAKELAND INDUSTRY & COMMUNITY ASSOCIATION
Plant / Location	ST. LINA
Start Time (MST)	9:25
End Time (MST)	14:05

Calculated Conc. ppb	Indicated Response ppb	Correction Factor	Correlation Coefficient Slope	(≥ 0.995) (0.85 to 1.15)	0.999910
0	6	n/a	Intercept	(± 3% F.S.)	2.464937
200	198	1.0093			
400	398	1.0040			
801	801	0.9995			



Notes:

### 01 Minute Averages



# Hydrogen Sulphide

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

### Station Information

Calibration Date	July 15, 2009	Previous Calibration	June 26, 2009
Company	LAKELAND INDUSTRY & COMMUNITY ASSOCIATION		
Plant / Location	ST.LINA		
Start Time (MST)	7:15	End Time (MST)	11:25
Reason:	Monthly Calibration		
Barometric Pressure	702 mmHg	Station Temperature	22 Deg C
Cal Gas	10.6 ppm	Cal Gas Expiry date	04/03/2009
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 :	AO715		
Flow Meter:	API 700	S/N :	831		

### Analyzer Settings

		Before Calibration		After Calibration	
Concentration Range		0 - 100		ppb	
Sample Flow / Box Temp	553 ccm	31 Deg C	549	34.2	Deg C
HVPS / Lamp Setting	534	2059	534	2055	
PMT / RxCell Temp	8.4 Deg C	50 Deg C	8.4 Deg C	50 Deg C	
Converter / IZS Temp	314.7 Deg C	45 Deg C	315.3 Deg C	45 Deg C	
Offset / Slope	48.2	1.06	49.9	1.142	

### Calibration Data

Dilution Flow Rate	Source Gas Flow Rate	Calculated Concentration	Indicated Conc. (DAS)	Correction Factor
5000	0	0	1	N/A
5000	0	0	0	N/A
4963	37.7	80	75	1.0655
4963	37.7	80	80	0.9989
4977	21.2	45	45	0.9991
4988	11.8	25	25	1.0007
4988	0	0	0	N/A
Sum of Least Squares				0.9991
New Correction Factor				0.9989

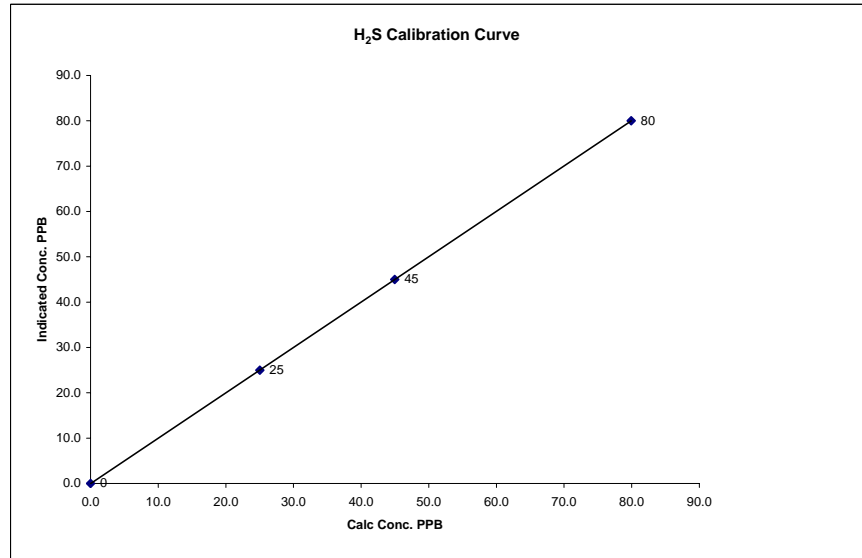
		Before Calibration	After Calibration
Auto Zero		1.6	0.6
Auto Span		52.0	56.0
Sample Lines Connected			YES
Percent Change from Previous Calibration			-5.1%

Calibration Performed by: Shea Beaton

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

Calibration Date	July 15, 2009
Company	LAKELAND INDUSTRY & COMMUNITY ASSOCIATION
Plant / Location	ST.LINA
Start Time (MST)	7:15
End Time (MST)	11:25

Calculated Conc. ppb	Indicated Response ppb	Correction Factor	Correlation Coefficient Slope	(≥ 0.995) (0.85 to 1.15)	1.000000
0	0	n/a	Intercept	(± 3% F.S.)	-0.018676
25	25	1.0007			
45	45	0.9991			
80	80	0.9989			



Notes:

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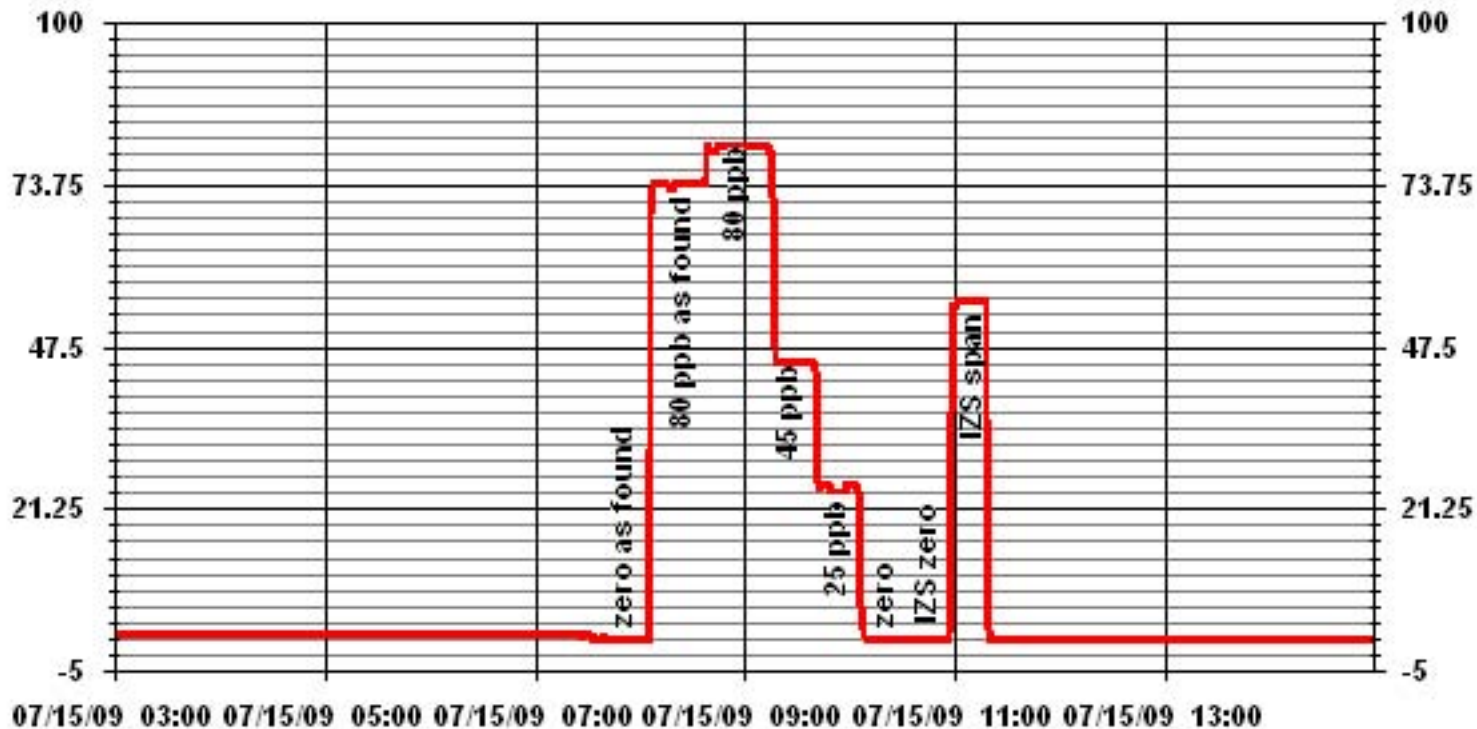
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### 01 Minute Averages



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

### Station Information

Calibration Date	July 21, 2009	Previous Calibration	July 15, 2009
Company	LAKELAND INDUSTRY & COMMUNITY ASSOCIATION		
Plant / Location	ST.LINA		
Start Time (MST)	9:25	End Time (MST)	14:05
Reason:	As Found/ Re-Calibration		
Barometric Pressure	699 mmHg	Station Temperature	24 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 :	AO715		
Flow Meter:	API 700	S/N :	831		

### Analyzer Settings

		Before Calibration		After Calibration	
Concentration Range		0 - 100		ppb	
Sample Flow / Box Temp	550 ccm	33 Deg C	548	33.5	Deg C
HVPS / Lamp Setting	534	2224	534	2223	
PMT / RxCell Temp	8.4 Deg C	50 Deg C	8.4	50	Deg C
Converter / IZS Temp	315.1 Deg C	45 Deg C	314.8	45	Deg C
Offset / Slope	49.9	1.142	46.8	0.986	

### Calibration Data

Dilution Flow Rate	Source Gas Flow Rate	Calculated Concentration	Indicated Conc. (DAS)	Correction Factor
4999	0	0	-4	N/A
4963	37	80	80	0.9990
4999	0	0	0	N/A
4963	37	80	80	0.9990
4977	20.8	45	45	0.9988
4989	11.6	25	25	1.0021
4999	0	0	0	N/A
Sum of Least Squares				0.9992
New Correction Factor				0.9990

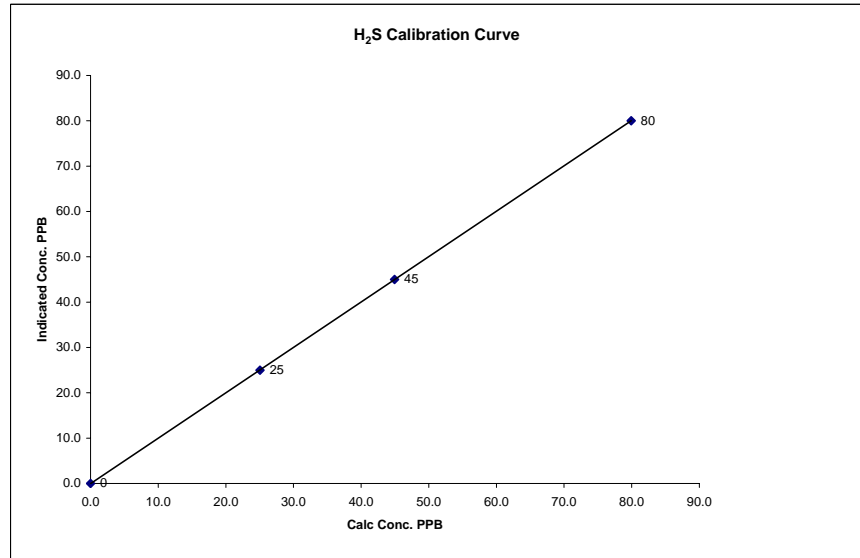
		Before Calibration	After Calibration
Auto Zero		-3.5	0.6
Auto Span		50.0	51.0
Sample Lines Connected			YES
Percent Change from Previous Calibration			0.0%

Calibration Performed by: Shea Beaton

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

Calibration Date	July 21, 2009
Company	LAKELAND INDUSTRY & COMMUNITY ASSOCIATION
Plant / Location	ST.LINA
Start Time (MST)	9:25
End Time (MST)	14:05

Calculated Conc. ppb	Indicated Response ppb	Correction Factor	Correlation Coefficient Slope	( $\geq 0.995$ ) (0.85 to 1.15)	0.999999
0	0	n/a	Intercept	( $\pm 3\%$ F.S.)	-0.028948
25	25	1.0021			
45	45	0.9988			
80	80	0.9990			



Notes:

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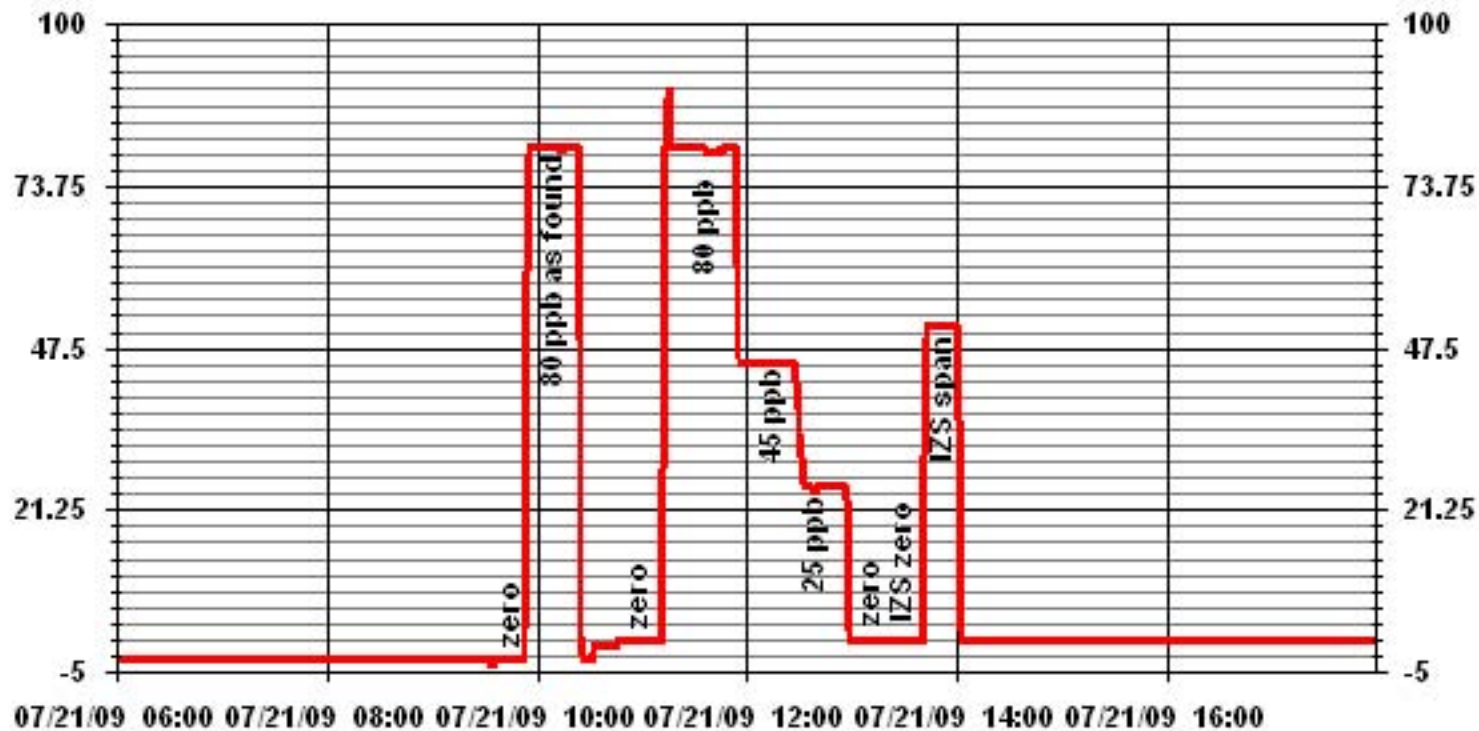


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### 01 Minute Averages



# Total Hydrocarbons

### THC Calibration Report

Station Information			
Calibration Date:	July 15, 2009	Previous Calibration	June 11, 2009
Company:	LAKELAND INDUSTRY & COMMUNITY ASSOCIATION		
Plant / Location:	ST. LINA		
:	(MST) 10:45	End Time	(MST) 15:45
Reason:	Monthly Calibration		
Barometric Pressure:	702 mmHg	Station Temperature:	25 Deg C
Calibrator:	API 700	S/N:	831
Cal Gas Concentration:	299 Prop/ 1019 Meth	ppm	Cal Gas Expiry Date: August 21, 2011
DAS make & Model:	ESC 8832	S/N :	A0717
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	20	psi	20	psi

### Calibration Data

Dilution Flow	Source Gas Flow	Calculated Concentration	Indicated Concentration	Correction Factor
3000	0	0.0	0.0	N/A
3007	65.4	39.2	40.7	0.9631
3005	0.0	0.0	0.0	N/A
3014	65.7	39.3	39.5	0.9949
3016	35.7	21.5	21.2	1.0142
3017	20.4	12.4	12.1	1.0248
3003	0	0.0	0.0	N/A
Correction Factor:				0.9949

Previous Calibration Correction Factor:	0.9975
Current Correction Factor Before Span Adjust:	0.9631
Percent Change:	3.57%

### IZS Calibration Data

	Before Calibration	After Calibration
Auto Zero	0.0	0.0
Auto Span	46.1	44.7
Sample Lines Connected		YES

### Cylinder Pressures

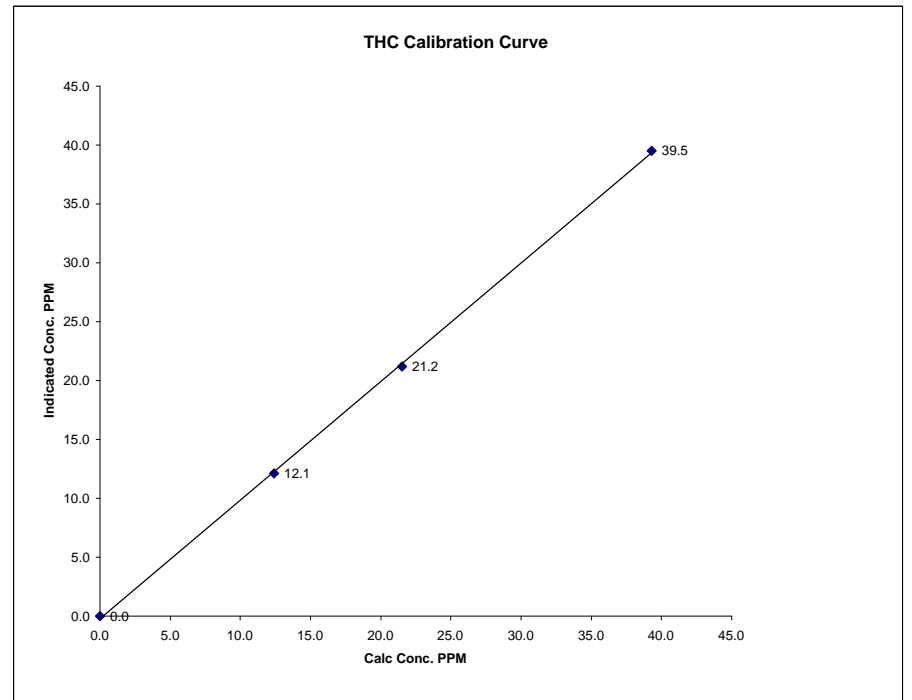
Span	1500	psi	
Hydrogen	1400	psi	
Zero Air	N/A	psi	Unlimited API 701

Calibration Performed by: Shea Beaton

### THC Calibration Curve

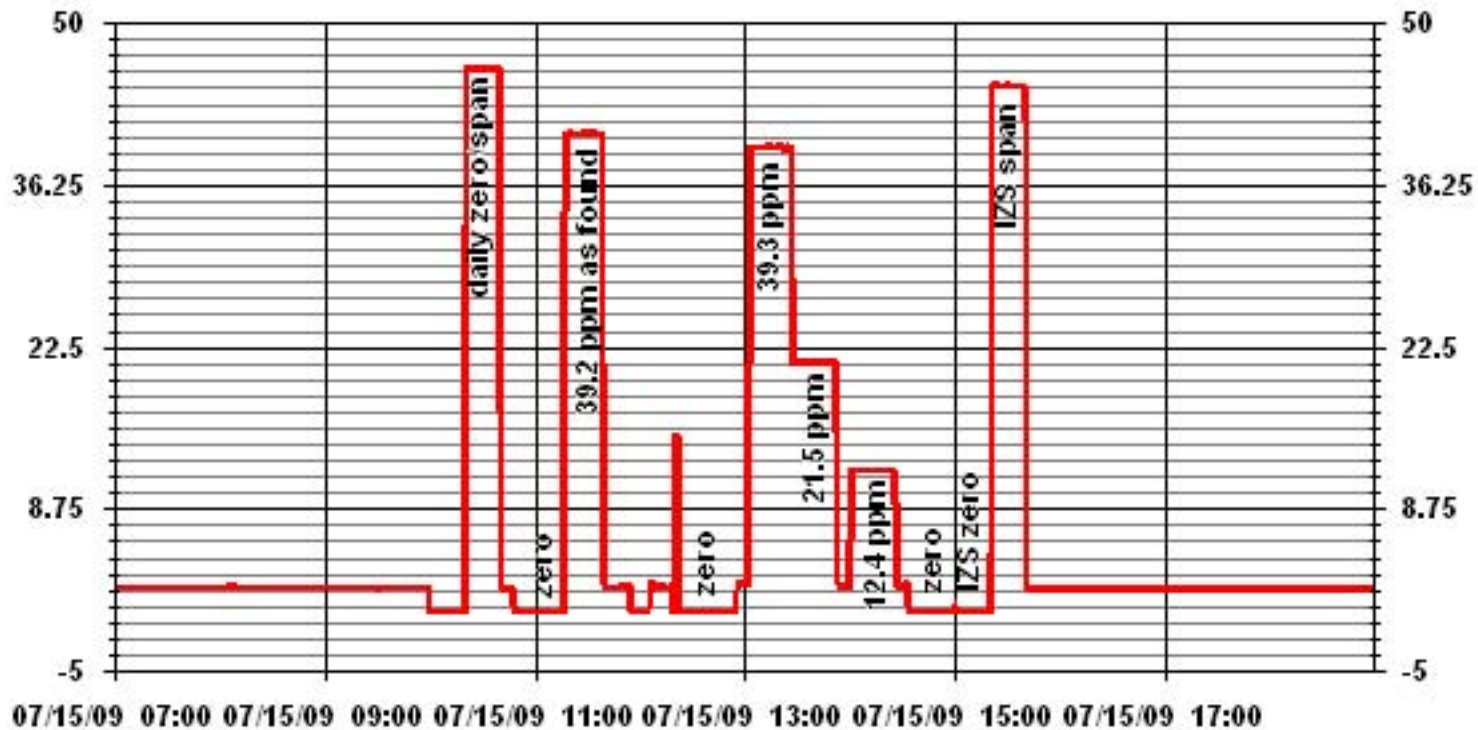
Calibration Date	July 15, 2009		
Company	LAKELAND INDUSTRY & COMMUNITY ASSOCIATION		
Plant / Location	ST. LINA		
Start Time (MST)	10:45	End Time (MST)	15:45

Calculated Conc. ppm	Indicated Response ppm	Correction Factor	Correlation Coefficient (≥ 0.995)	Slope (0.85 to 1.15)	Intercept (± 3% F.S.)
0.0	0.0		0.999820	1.006103	-0.211681
12.4	12.1	1.0248			
21.5	21.2	1.0142			
39.3	39.5	0.9949			



Notes: Flame temp 177, Flows were manually measured for this cal.

### 01 Minute Averages



# Nitrogen Dioxide

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

Calibration Date	July 15, 2009	Previous Calibration	June 12, 2009
Company	LICA	Plant/Location	ST. LINA
Start Time (MST)	7:15	End Time (MST)	14:36
Reason:	Monthly Calibration		
Barometric Pressure	702 mmHg	Station Temperature	22.0 Deg C
Cal Gas Concentration	NOx 51.8 ppm	NO	51.6 ppm
DAS Output Voltage	0 - 1 Volts	Cal Gas Expiry date	12/19/2010

**Equipment Information**

Analyzer Make / Model:	API 200E	S/N :	592	Method:	Chemiluminescent
Calibrator Make / Model:	EnviroNics 2000	S/N:	1991		
DAS Make / Model:	ESC 8832	S/N :	A0717		
Flow Meter:	EnviroNics 2000	S/N :	1991		

**Analyzer Settings**

Before Calibration		After Calibration	
Concentration Range	0 - 1000 ppb		
Sample Flow/Conv. Temp	454 ccm 314.8 Deg C	453 ccm 316.4 Deg C	
Ozone Flow / Vacuum	73 ccm 3.6 *Hg-A	73 ccm 3.6 *Hg-A	
HVPS	710 Volts	710 Volts	
Rx/ Temp / PMT Temp	50 Deg C 6.8 Deg C	50 Deg C 6.9 Deg C	
Box Temp / IZS Temp	29.2 Deg C 45 Deg C	31.3 Deg C 45.2 Deg C	
Offset	1.8 NOx 0.5 NO	1.8 NOx 0.5 NO	
Slope	1.001 NOx 0.996 NO	1.001 NOx 0.996 NO	

**Gas Phase Titration Calibration Data**

Dilution Air Flow Rate	Source Flow Rate	O3 Set Point	Calculated Concentration		Indicated Concentration			Correction Factor	
			NOx	NO	NOx	NO	NO2	NOx	NO
5006.0	0	N/A	0	0	0	1	0	N/A	N/A
4933.0	77.7	N/A	803	800	808	803	5	0.9941	0.9965
4974.0	38.8	N/A	401	399	401	400	1	0.9999	0.9985
4995.0	19.4	N/A	200	200	199	199	0	1.0071	1.0032
5011.0	0	N/A	0	0	0	1	-1	N/A	N/A
Converter Efficiency									
4938.0	77.7	N/A	802	800	808	803	5	N/A	
4938.0	77.7	400	802	N/A	803	332	471	99%	
4938.0	77.7	200	802	N/A	806	614	192	99%	
4938.0	77.7	100	802	N/A	805	711	94	97%	
4923.0	77.5	N/A	803	800	806	804	2	N/A	
Correction Factor									
5009.0	0	N/A	0	0	0	1	-1	N/A	N/A
Linearity OK? <b>Yes</b> No									
Flows Checked on-site? <b>Yes</b> No									
Sum of Least Squares								0.9958	0.9972
New Correction Factor								0.9941	0.9965
Average Converter Efficiency								98%	

Before Calibration		After Calibration	
Auto Zero	-0.1 NOx -1.0 NO2	0.1 NOx -0.4 NO2	
Auto Span	680.0 NOx 663.0 NO2	668.0 NOx 652.0 NO2	
Sample Lines Connected	YES		
Percent Change from Previous Calibration	NOx 0.6%	NO 0.2%	

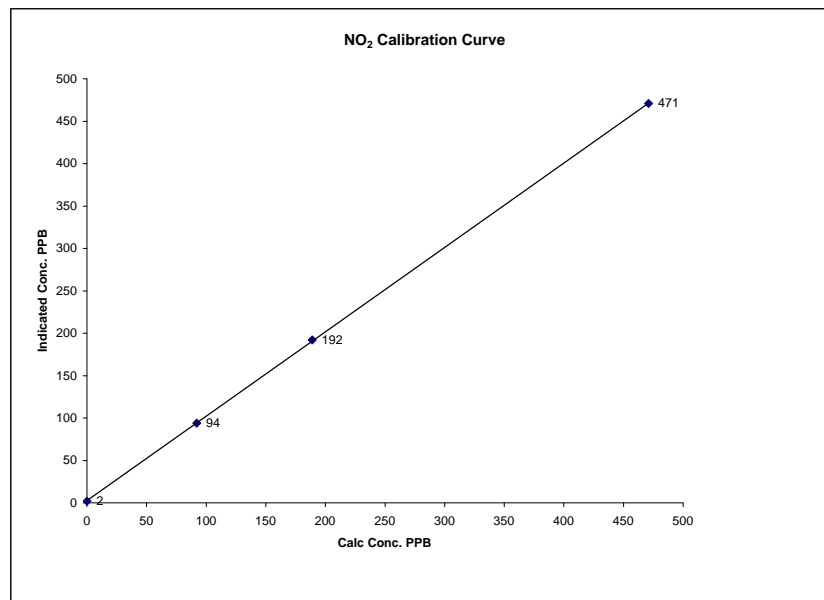
Calibration Performed by: Shea Beaton

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

Calibration Date	July 15, 2009
Company	LICA
Plant / Location	ST. LINA
Start Time (MST)	7:15
End Time (MST)	14:36

Calculated Conc. ppb	Indicated Response ppb	Correction Factor	Correlation Coefficient Slope Intercept	(≥ 0.995) (0.85 to 1.15) (± 3% F.S.)
0	2	N/A		0.999982
92	94	0.9787		0.995467
189	192	0.9844		
471	471	1.0000		2.602146



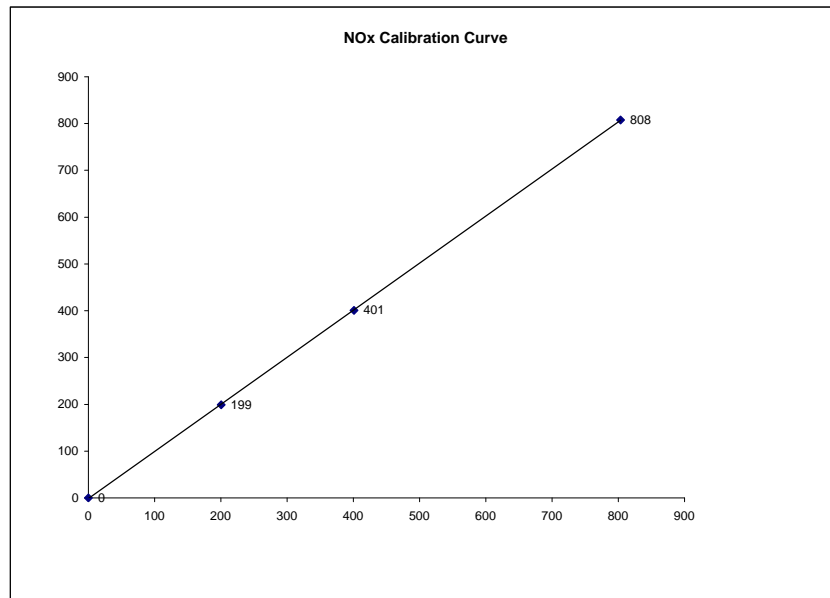
Notes:



### NOx Calibration Curve

Calibration Date	July 15, 2009	
Company	LICA	
Plant / Location	ST. LINA	
Start Time (MST)	7:15	End Time (MST) 14:36

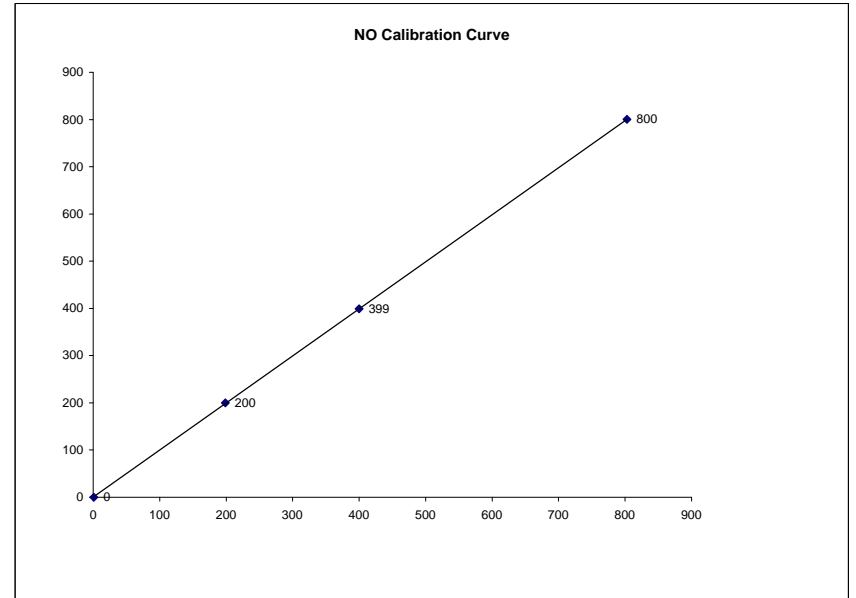
Calculated Conc. ppb	Indicated Response ppb	Correction Factor	Correlation Coefficient	( $\geq 0.995$ )	0.999984
0	0	N/A	Slope	(0.85 to 1.15)	1.006690
200	199	1.0071	Intercept	( $\pm 3\%$ F.S.)	-1.499709
401	401	0.9999			
803	808	0.9941			



### NO Calibration Curve

Calibration Date	July 15, 2009	
Company	LICA	
Plant / Location	ST. LINA	
Start Time (MST)	7:15	End Time (MST) 14:36

Calculated Conc. ppb	Indicated Response ppb	Correction Factor	Correlation Coefficient	( $\geq 0.995$ )	0.999991
0	1	N/A	Slope	(0.85 to 1.15)	1.003022
200	199	1.0032	Intercept	( $\pm 3\%$ F.S.)	-0.101496
399	400	0.9985			
800	803	0.9965			



### 01 Minute Averages

