February 26, 2008

Lakeland Industry & Community Association
Box 8237
5107W – 50 Street
Bonnyville, Alberta
T9N 2J5

ATTENTION: Mr. Mike Bisaga

REFERENCE: Ambient Air Monitoring Report For January 2008

Maxxam Analytics Inc. is pleased to submit this report of data collected at the Ambient Air Monitoring Station located at the Lakeland Industry & Community Assoc. Cold Lake site for the month of January 2008.

Included is a summary of the monthly continuous and hourly average reports, equipment calibration reports, as well as a brief description of the calibration procedure. The passive network data are also included in this report.

During the month of January 2008 the following proceedings were noted:

Cold Lake South Site

- All analyzers and wind systems were all above 90% uptime objective for the month.
- All data was within Provincial objectives for the month.
- All data was corrected using daily zero calibration data. Furthermore the PM 2.5 data was corrected using Alberta Environment correction standards.
- There was 0 hours of data for THC that was invalidated as no concentrations fell below the historical background average of 1.5 ppm, a concentration agreed to with the LICA Program Manager.
- There were no fair AQI values recorded in January 2008. The highest offending pollutant was Ozone with an hourly concentration of 40.0 ppb and an AQI value of 20 on January 20th.
- On January 4th there was one hour of data missing for the parameter of Standard Deviation of Vector Wind Direction.
- On January 29th – 30th there was approximately 12 hours of temperature data that is flagged as suspicious as the hourly temperature average was outside the detection limits of the sensor.

Passive Network

A summary of the passive monitoring are reported as follows:

- Monitoring period averages for O_3 ranged from 18.4 to 28.8 ppb.
- Monitoring period averages for SO_2 ranged from 0.4 to 1.7ppb.
- Monitoring period averages for NO_2 ranged from 1.2 to 11.6 ppb.
- Monitoring period averages for H_2S ranged from 0.07 to 0.24 ppb.

Site #11 – The technician noted that a service rig was operating near the station during the passive change out.

Please feel free to contact either of Craig Snider at (403) 219-3689 or Darren Morissette (403)-219-3661, should you have any questions concerning this report.

Sincerely,
Maxxam Analytics Inc.

Prepared by: _____ Reviewed by: _____

Darren Morissette, CEPIT
Senior Technologist

Craig Snider, CET
Ambient Manager

Lakeland Industry & Community Association

Cold Lake Monitoring Site
Ambient Air Monitoring
Data Report
For
January 2008

Prepared By:

Maxxam Analytics Inc

Driven by Service and Science

February 26, 2008

Lakeland Industry & Community Association
Ambient Air Monitoring

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Introduction

The following Ambient Air Monitoring report was prepared for:

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

Monitoring Location: Cold Lake
Data Period: January 2008

The monthly ambient data report:

- Prepared by Darren Morissette
- Reviewed by Craig Snider

The monthly analytical report for static monitoring:
Authorized by Jodi Hanson

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 – January 2008

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_2 (PPB)	172	57	0	0	0.34	4	25	0	7.1	229 (SW)	1.0	26,31	100.0
TRS (PPB)	-	-	-	-	0.03	1	VAR	VAR	VAR	VAR	0.2	3,12,13	100.0
NO_2 (PPB)	212	106	0	0	10.55	37	3,24	18,19	1.9 0.3	58 (ENE) 162 (SSE)	20.1	24	100.0
NO (PPB)	-	-	-	-	3.78	87	4	21	1.7	74 (ENE)	15.8	8	100.0
NOx (PPB)	-	-	-	-	14.66	120	4	21	1.7	74 (ENE)	33.1	8	100.0
O_3 (PPB)	82	-	0	-	19.90	40	24	VAR	VAR	VAR	32	28	100.0
THC (PPM)	-	-	-	-	2.22	4.5	8	5	0.5	272 (W)	3.1	12	100.0
PM 2.5 (UG/M^3)	-	30	-	0	3.64	17.2	12	11	0.5	340 (NNW)	8.8	12	100.0
TEMPERATURE (DEG C)	-	-	-	-	-15.43	-0.8	5	15	1.7	35 (NE)	-4.3	5	100.0
RELATIVE HUMIDITY (%)	-	-	-	-	77.09	93	27	2	1.9	8 (N)	88	6	100.0
VECTOR WS (KPH)	-	-	-	-	4.95	25.5	15	5	-	319 (NW)	14.1	15	100.0
VECTOR WD (DEGREES)	-	-	-	-	NW	-	-	-	-	-	-	-	100.0

VAR-VARIOUS

Monthly Non-Continuous Data Summary
LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - COLD LAKE

Passive Ambient Monitoring Network – January 2008

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION PASSIVE NETWORK			
NETWORK MAXIMUM			NETWORK AVERAGE
PARAMETER	STATION	READING (PPB)	READING (PPB)
NO_2	#25	11.6	4.0
SO_2	#3	1.7	0.8
H_2S	#21	0.24	0.18
O_3	#18	28.8	24.3

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 - TECO 43A

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

Total Reduced Sulphur (PPB)

- Analyzer make / model -TECO 43A
- Converter - CD NOVA CDN 101

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

Total HydroCarbon (PPM)

- Analyzer make / model -TECO 51C-LT

No operational issues during the month. The inlet filter was changed before the monthly calibration was started. Data was corrected using daily zero information. It was agreed to with the LICA Program Manager to invalidate all data, after zero correction, which falls below the historical background average of 1.5 ppm. As a result 0 hours of data was invalidated and the uptime was at 100.0%.

General Monthly Summary - Cold Lake

AQM STATION – LICA – COLD LAKE

Nitrogen Dioxide (PPB)

- Analyzer make / model - TECO 42C

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

Ozone (PPB)

- Analyzer make / model - TECO 49I

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

Particulate Matter 2.5 (ug/m^3)

- Analyzer make / model - TEOM 1400A

No operational issues during the month. During the monthly calibration a new sample tube connector was installed to reduce leakage in the flow system.

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. On January 4th there was one hour of data missing for the parameter of standard deviation of vector wind direction.

Relative Humidity (PERCENT)

- System make / model - Rotronic Hygroclip-S3

No operational issues observed during the month.

General Monthly Summary - Cold Lake

AQM STATION – LICA – COLD LAKE

Ambient Temperature (DEGC)

- System make / model - Rotronic Hygroclip-S3

No operational issues observed during the month.

Trailer Temperature (DEGC)

- System make / model - R&R 61

A new sensor installed in the trailer on December 18th. The sensor data is not reported and is used solely for troubleshooting and analysis of data.

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.

General Monthly Summary - Cold Lake

AQM STATION – LICA – COLD LAKE

Trailer

- No new information to report.

Air Quality Index (AQI)

The AQI data was adjusted to reflect regular monthly calibrations, maintenance, and downtime and daily calibrations. There were no fair AQI values recorded in January 2008. The highest offending pollutant was Ozone with an hourly concentration of 40.0 ppb and an AQI value of 20 on January 20th.

Passive Network

Site #11 – Technician noted a service rig near the station during the regular change out of samplers.

Continuous Monitoring

Cold Lake

Monthly Summaries, Graphs & Wind Roses

Air Quality Index

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

JANUARY 2008

AIR QUALITY INDEX (AQI)

MST

HOUR START HOUR END DAY	0:00 1:00	1:00 2:00	2:00 3:00	3:00 4:00	4:00 5:00	5:00 6:00	6:00 7:00	7:00 8:00	8:00 9:00	9:00 10:00	10:00 11:00	11:00 12:00	12:00 13:00	13:00 14:00	14:00 15:00	15:00 16:00	16:00 17:00	17:00 18:00	18:00 19:00	19:00 20:00	20:00 21:00	21:00 22:00	22:00 23:00	23:00 0:00	DAILY MAX.
1	9 O3_	9 O3_	8 PM2	8 PM2	9 O3_	12 O3_	14 O3_	- **NA**	10 O3_	9 O3_	11 O3_	13 O3_	15 O3_	15 O3_	13 O3_	12 O3_	7 O3_	13 O3_	15 O3_	15 O3_	15 O3_	14 O3_	15 O3_	16 O3_	16 O3_
2	16 O3_	17 O3_	16 O3_	16 O3_	16 O3_	16 O3_	- **NA**	15 O3_	15 O3_	15 O3_	16 O3_	16 O3_	17 O3_	17 O3_	16 O3_	15 O3_	12 O3_	10 O3_	12 O3_	12 O3_	13 O3_	13 O3_	15 O3_	17 O3_	17 O3_
3	17 O3_	18 O3_	18 O3_	18 O3_	18 O3_	- **NA**	13 O3_	6 O3_	5 O3_	- **NA**	- **NA**	- **NA**	- **NA**	- **NA**	- **NA**	- **NA**	- **NA**	- **NA**	- **NA**	4 PM2	5 PM2	3 PM2	4 O3_	12 O3_	18 O3_
4	13 O3_	12 O3_	14 O3_	14 O3_	- **NA**	15 O3_	15 O3_	15 O3_	13 O3_	12 O3_	13 O3_	13 O3_	13 O3_	13 O3_	12 O3_	9 O3_	2 O3_	2 PM2	3 PM2	5 PM2	7 PM2	5 PM2	4 PM2	4 PM2	15 O3_
5	6 O3_	8 O3_	14 O3_	- **NA**	16 O3_	15 O3_	14 O3_	14 O3_	13 O3_	15 O3_	15 O3_	15 O3_	15 O3_	14 O3_	14 O3_	14 O3_	11 O3_	12 O3_	10 O3_	7 O3_	8 O3_	10 O3_	10 O3_	11 O3_	16 O3_
6	11 O3_	11 O3_	- **NA**	11 O3_	11 O3_	11 O3_	10 O3_	11 O3_	10 O3_	8 O3_	9 O3_	10 O3_	11 O3_	11 O3_	10 O3_	10 O3_	10 O3_	9 O3_	8 O3_	8 O3_	8 O3_	6 O3_	7 O3_	7 O3_	11 O3_
7	11 O3_	- **NA**	10 O3_	10 O3_	9 O3_	9 O3_	6 O3_	5 PM2	6 PM2	7 O3_	10 O3_	12 O3_	12 O3_	12 O3_	10 O3_	7 O3_	3 PM2	3 PM2	2 O3_	4 O3_	3 O3_	3 O3_	3 PM2	2 PM2	12 O3_
8	- **NA**	2 PM2	2 PM2	2 PM2	2 PM2	2 PM2	3 PM2	3 PM2	4 PM2	5 PM2	9 PM2	6 PM2	7 O3_	7 PM2	7 O3_	6 O3_	5 PM2	7 PM2	9 PM2	9 PM2	6 PM2	6 PM2	8 PM2	- **NA**	9 PM2
9	7 O3_	8 O3_	9 O3_	9 O3_	10 O3_	10 O3_	10 O3_	10 O3_	10 O3_	10 O3_	11 O3_	12 O3_	13 O3_	13 O3_	14 O3_	13 O3_	13 O3_	10 O3_	11 O3_	13 O3_	11 O3_	12 O3_	- **NA**	12 O3_	14 O3_
10	12 O3_	12 O3_	12 O3_	12 O3_	11 O3_	10 O3_	10 O3_	9 O3_	8 O3_	13 O3_	13 O3_	14 O3_	13 O3_	13 O3_	13 O3_	12 O3_	9 O3_	8 O3_	11 O3_	12 O3_	11 O3_	- **NA**	11 O3_	9 O3_	14 O3_
11	9 O3_	7 O3_	8 O3_	7 O3_	7 O3_	5 PM2	4 PM2	5 PM2	5 PM2	6 PM2	7 PM2	8 O3_	9 O3_	8 O3_	8 O3_	7 O3_	5 O3_	7 PM2	6 O3_	7 O3_	- **NA**	6 O3_	6 O3_	6 O3_	9 O3_
12	5 PM2	5 O3_	6 PM2	6 PM2	7 PM2	9 PM2	7 PM2	8 PM2	8 PM2	13 PM2	**14** **PM2**	11 PM2	11 PM2	10 PM2	8 PM2	6 PM2	8 PM2	5 PM2	7 PM2	- **NA**	5 PM2	4 PM2	5 PM2	6 O3_	14 PM2
13	5 O3_	4 O3_	4 O3_	5 O3_	5 O3_	6 O3_	6 O3_	4 O3_	4 PM2	5 PM2	13 PM2	7 O3_	7 O3_	6 O3_	6 O3_	5 O3_	3 PM2	4 PM2	- **NA**	2 PM2	3 PM2	3 PM2	5 PM2	6 PM2	13 PM2
14	3 PM2	3 O3_	3 PM2	2 PM2	4 O3_	3 O3_	2 PM2	3 PM2	2 PM2	3 PM2	4 O3_	7 O3_	8 O3_	7 O3_	7 O3_	4 O3_	3 PM2	- **NA**	3 PM2	3 O3_	4 O3_	4 O3_	8 O3_	7 O3_	8 PM2
15	4 PM2	4 PM2	9 O3_	13 O3_	13 O3_	16 O3_	14 O3_	14 O3_	17 O3_	16 O3_	16 O3_	16 O3_	15 O3_	16 O3_	17 O3_	16 O3_	- **NA**	14 O3_	13 O3_	13 O3_	12 O3_	10 O3_	7 O3_	6 O3_	17 O3_
16	10 O3_	9 O3_	8 O3_	7 O3_	5 O3_	6 O3_	4 O3_	2 O3_	3 PM2	3 PM2	7 PM2	8 O3_	10 O3_	12 O3_	15 O3_	- **NA**	11 O3_	10 O3_	9 O3_	8 O3_	10 O3_	11 O3_	7 O3_	6 O3_	15 O3_
17	4 PM2	6 O3_	12 O3_	17 O3_	18 O3_	17 O3_	16 O3_	16 O3_	15 O3_	15 O3_	15 O3_	15 O3_	16 O3_	16 O3_	- **NA**	18 O3_	19 O3_	18 O3_	18 O3_	18 O3_	18 O3_	17 O3_	13 O3_	12 O3_	19 O3_
18	11 O3_	14 O3_	14 O3_	16 O3_	16 O3_	15 O3_	15 O3_	14 O3_	11 O3_	14 O3_	14 O3_	14 O3_	16 O3_	- **NA**	16 O3_	15 O3_	14 O3_	11 O3_	3 PM2	6 PM2	6 PM2	5 PM2	5 PM2	7 PM2	16 O3_
19	7 PM2	7 PM2	8 PM2	7 PM2	5 O3_	3 PM2	8 O3_	13 O3_	15 O3_	16 O3_	17 O3_	18 O3_	- **NA**	18 O3_	17 O3_	15 O3_	15 O3_	14 O3_	6 O3_	4 PM2	4 O3_	4 PM2	3 PM2	3 O3_	18 O3_
20	8 O3_	15 O3_	16 O3_	17 O3_	18 O3_	17 O3_	16 O3_	15 O3_	15 O3_	15 O3_	15 O3_	- **NA**	16 O3_	17 O3_	17 O3_	17 O3_	16 O3_	13 O3_	15 O3_	15 O3_	15 O3_	15 O3_	17 O3_	19 O3_	19 O3_
21	18 O3_	18 O3_	18 O3_	18 O3_	18 O3_	16 O3_	11 O3_	10 O3_	9 O3_	8 O3_	- **NA**	11 O3_	12 O3_	13 O3_	13 O3_	12 O3_	9 O3_	7 O3_	6 O3_	9 O3_	13 O3_	13 O3_	12 O3_	13 O3_	18 O3_
22	12 O3_	13 O3_	14 O3_	14 O3_	15 O3_	15 O3_	16 O3_	16 O3_	17 O3_	- **NA**	18 O3_	18 O3_	17 O3_	16 O3_	16 O3_	16 O3_	15 O3_	9 O3_	2 O3_	4 O3_	3 O3_	2 O3_	2 O3_	2 O3_	18 O3_
23	6 O3_	7 O3_	5 O3_	4 O3_	2 O3_	1 O3_	1 PM2	3 PM2	- **NA**	10 O3_	15 O3_	16 O3_	16 O3_	17 O3_	17 O3_	16 O3_	15 O3_	13 O3_	12 O3_	11 O3_	11 O3_	10 O3_	7 O3_	6 O3_	17 O3_
24	5 O3_	4 O3_	5 PM2	5 PM2	4 PM2	6 PM2	4 PM2	- **NA**	**20** **O3_**	**20** **O3_**	**20** **O3_**	19 O3_	**20** **O3_**	**20** **O3_**	**20** **O3_**	13 O3_	8 O3_	2 O3_	2 PM2	3 PM2	3 PM2	4 PM2	2 O3_	1 PM2	20 O3_
25	1 PM2	10 O3_	19 O3_	18 O3_	17 O3_	18 O3_	- **NA**	18 O3_	19 O3_	19 O3_	19 O3_	19 O3_	19 O3_	18 O3_	18 O3_	17 O3_	16 O3_	15 O3_	14 O3_	13 O3_	14 O3_	14 O3_	11 PM2	11 PM2	19 O3_
26	9 PM2	9 PM2	9 O3_	9 PM2	8 PM2	- **NA**	8 PM2	9 PM2	8 PM2	10 PM2	8 O3_	11 O3_	12 O3_	14 O3_	10 O3_	9 O3_	16 O3_	14 O3_	13 O3_	11 O3_	12 O3_	12 O3_	10 O3_	10 O3_	16 O3_
27	9 O3_	9 O3_	10 O3_	12 O3_	- **NA**	13 O3_	17 O3_	17 O3_	17 O3_	17 O3_	17 O3_	17 O3_	17 O3_	17 O3_	17 O3_	17 O3_	17 O3_	17 O3_	18 O3_	18 O3_	18 O3_	18 O3_	18 O3_	18 O3_	18 O3_
28	18 O3_	18 O3_	18 O3_	- **NA**	18 O3_	18 O3_	18 O3_	18 O3_	18 O3_	18 O3_	18 O3_	18 O3_	18 O3_	18 O3_	18 O3_	18 O3_	18 O3_	17 O3_	17 O3_	16 O3_	13 O3_	9 O3_	8 O3_	7 O3_	18 O3_
29	6 O3_	8 O3_	- **NA**	10 O3_	11 O3_	9 O3_	5 O3_	4 PM2	4 PM2	7 O3_	8 O3_	13 O3_	14 O3_	15 O3_	15 O3_	16 O3_	12 O3_	5 O3_	4 O3_	5 O3_	4 O3_	4 PM2	5 PM2	7 PM2	16 O3_
30	8 PM2	- **NA**	6 PM2	8 PM2	7 PM2	6 PM2	6 PM2	7 PM2	7 PM2	10 PM2	12 O3_	15 O3_	16 O3_	16 O3_	16 O3_	15 O3_	12 O3_	12 O3_	16 O3_	18 O3_	18 O3_	17 O3_	15 O3_	16 O3_	18 O3_
31	- **NA**	15 O3_	16 O3_	15 O3_	15 O3_	14 O3_	10 O3_	10 O3_	11 O3_	14 O3_	16 O3_	16 O3_	17 O3_	17 O3_	17 O3_	17 O3_	15 O3_	11 O3_	12 O3_	13 O3_	15 O3_	15 O3_	15 O3_	- **NA**	17 O3_
PEAK	18 O3_	18 O3_	19 O3_	18 O3_	18 O3_	18 O3_	18 O3_	18 O3_	20 O3_	20 O3_	20 O3_	19 O3_	20 O3_	20 O3_	20 O3_	18 O3_	19 O3_	18 O3_	18 O3_	18 O3_	18 O3_	18 O3_	18 O3_	19 O3_	

STATUS FLAG CODES	NA - NOT APPLICABLE

V - VARIOUS

AQI CLASS	OZONE (O_3)					PARTICULATE MATTER 2.5 (PM2)					NITROGEN DIOXIDE (NO_2)					SULPHUR DIOXIDE (SO_2)					FREQUENCY	
	HRS	%	MAX AQI	HR	DAY	HRS	%	MAX AQI	HR	DAY	HRS	%	MAX AQI	HR	DAY	HRS	%	MAX AQI	HR	DAY	HRS	%
VERY POOR (101-255)	0	0.0%	-	-	-	0	0.0%	-	-	-	0	0.0%	-	-	-	0	0.0%	-	-	-	0	0.0%
POOR (51-100)	0	0.0%	-	-	-	0	0.0%	-	-	-	0	0.0%	-	-	-	0	0.0%	-	-	-	0	0.0%
FAIR (26-50)	0	0.0%	-	-	-	0	0.0%	-	-	-	0	0.0%	-	-	-	0	0.0%	-	-	-	0	0.0%
GOOD (1-25)	560	75.3%	20	V	24	141	19.0%	14	11	12	0	0.0%	-	-	-	0	0.0%	-	-	-	701	94.2%
OVERALL	560	75.3%	-	-	-	141	19.0%	-	-	-	0	0.0%	-	-	-	0	0.0%	-	-	-	701	94.2%
UNAVAILABLE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	43	5.8%

Sulphur Dioxide

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

JANUARY 2008

SULPHUR DIOXIDE (SO_2) hourly averages in ppb

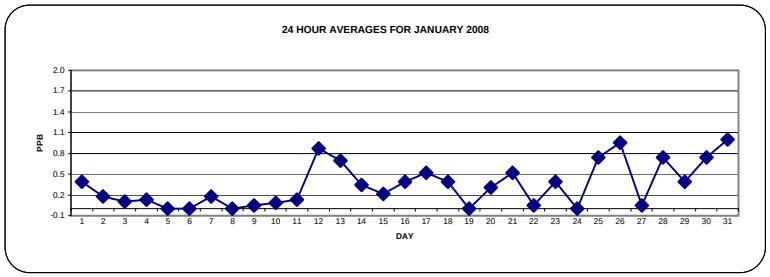
MST

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

STATUS FLAG CODES

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

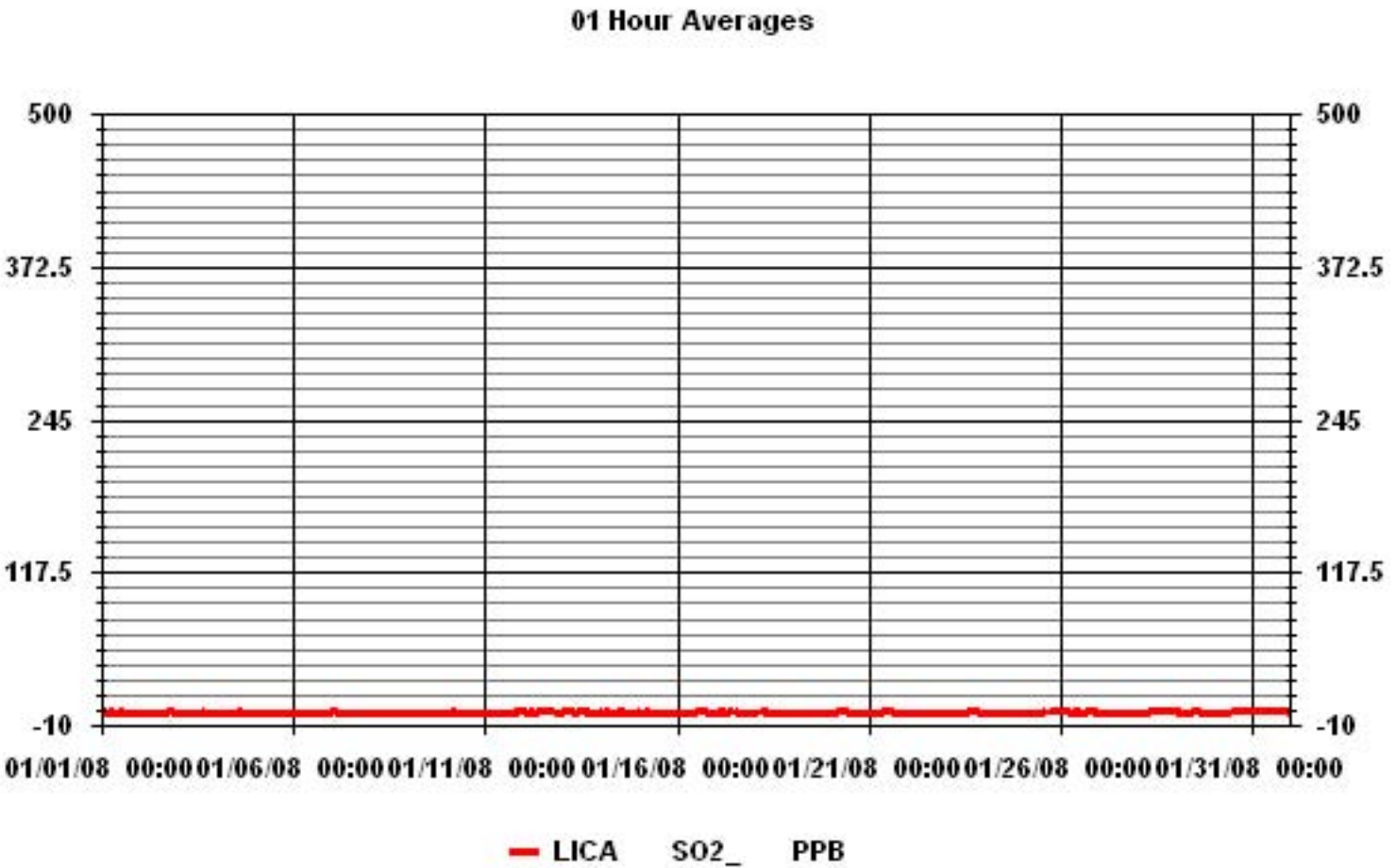
OBJECTIVE LIMIT: **ALBERTA ENVIRONMENT:** 1-HR 172 PPB 24-HR 57 PPB



MONTHLY SUMMARY

NUMBER OF 1-HR EXCEEDENCES:	0					
NUMBER OF 24-HR EXCEEDENCES:	0					
NUMBER OF NON-ZERO READINGS:	212					
MAXIMUM 1-HR AVERAGE:	4	PPB	@ HOUR(S)	0	ON DAY(S)	25
MAXIMUM 24-HR AVERAGE:	1.0	PPB			ON DAY(S)	26,31

IZS CALIBRATION TIME:	34	HRS	OPERATIONAL TIME:	744	HRS
MONTHLY CALIBRATION TIME:	3	HRS	AMD OPERATION UPTIME:	100.0	%
STANDARD DEVIATION:	0.57		MONTHLY AVERAGE:	0.34	PPB


01 Hour Averages
500
372.5
245
117.5
-10
01/01/08 00:00
01/06/08 00:00
01/11/08 00:00
01/16/08 00:00
01/21/08 00:00
01/26/08 00:00
01/31/08 00:00
LICA SO2_ PPB

LICA
SO2_ / WDR Joint Frequency Distribution (Percent)

January 2008

Distribution By % Of Samples

Logger Id : 01
Site Name : LICA
Parameter : SO2_
Units : PPB

Wind Parameter : WDR
Instrument Height : 10 Meters

Direction

	Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
<	20	3.39	8.62	7.77	4.38	6.78	6.93	9.19	2.97	2.82	3.81	12.87	15.55	5.65	2.12	3.67	3.39	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	3.39	8.62	7.77	4.38	6.78	6.93	9.19	2.97	2.82	3.81	12.87	15.55	5.65	2.12	3.67	3.39	

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
<	20	24	61	55	31	48	49	65	21	20	27	91	110	40	15	26	24	707
<	60																	
<	110																	
<	170																	
<	340																	
>=	340																	
	Totals	24	61	55	31	48	49	65	21	20	27	91	110	40	15	26	24	

Calm : .00 %

Total # Operational Hours : 707

Logger : 01 Parameter : SO2_

Class Limits (PPB)

>= 340

< 340

< 170

< 110

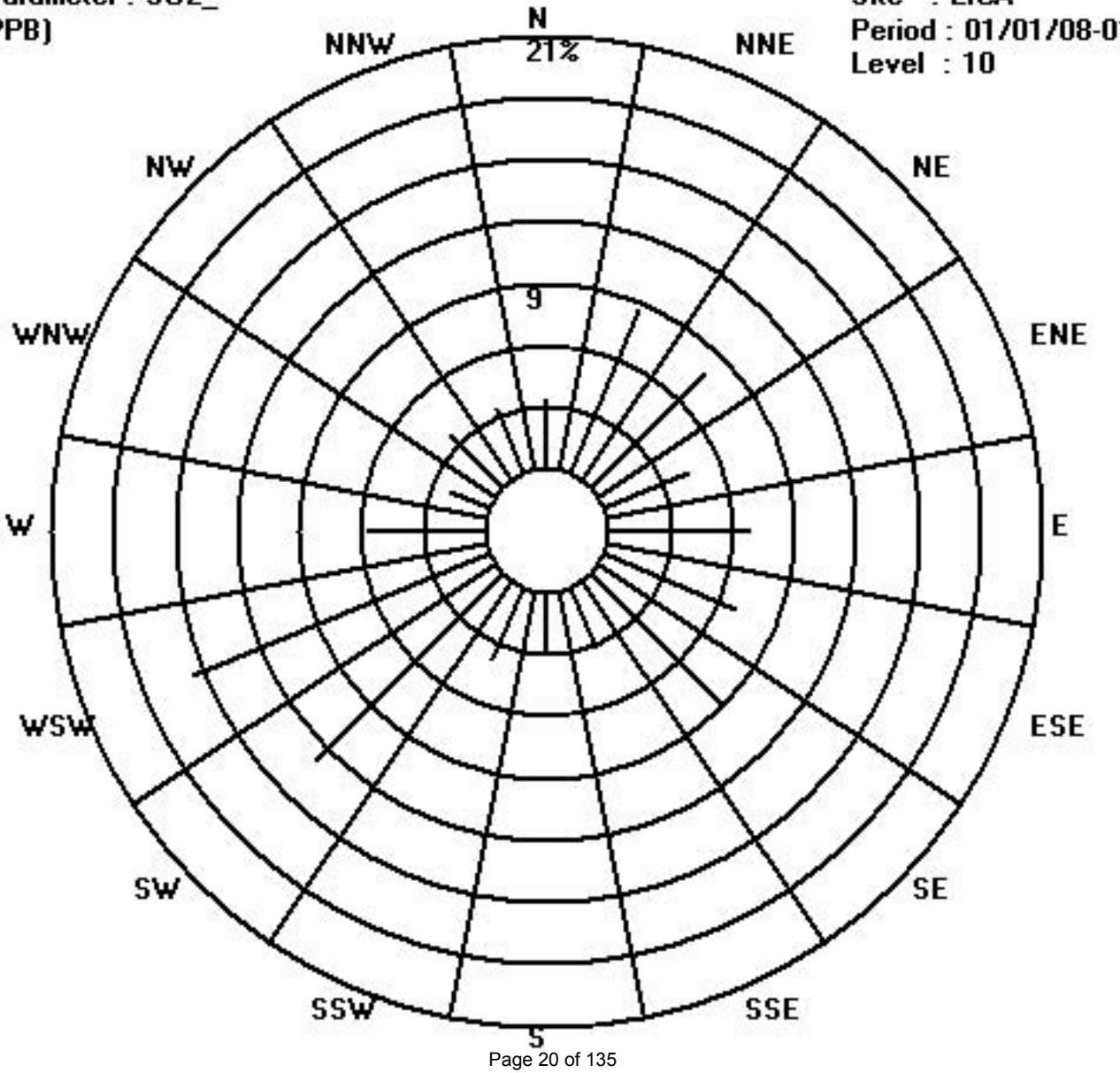
< 60

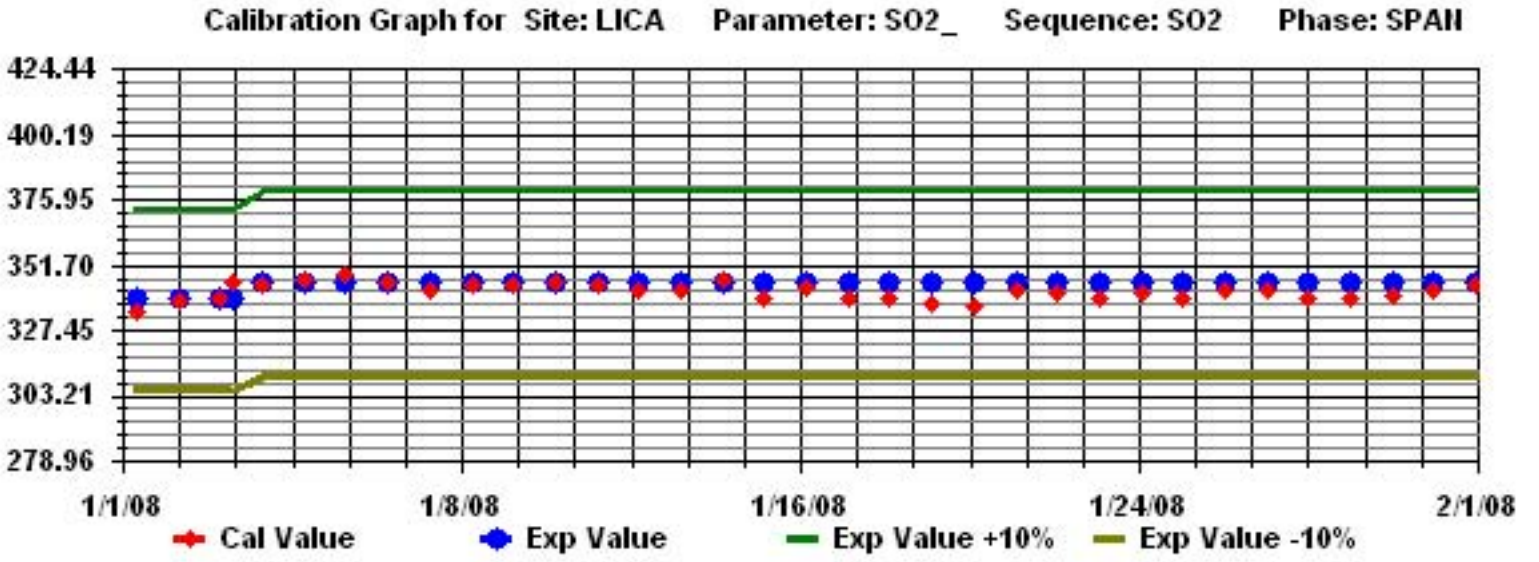
< 20

Site : LICA

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

Level : 10




Calibration Graph for Site: LICA Parameter: SO2_ Sequence: SO2 Phase: SPAN
424.44
400.19
375.95
351.70
327.45
303.21
278.96
1/1/08
1/8/08
1/16/08
1/24/08
2/1/08
Cal Value
Exp Value
Exp Value +10%
Exp Value -10%

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

JANUARY 2008

SULPHUR DIOXIDE MAX instantaneous maximum in ppb

MST

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

STATUS FLAG CODES

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

MONTHLY SUMMARY

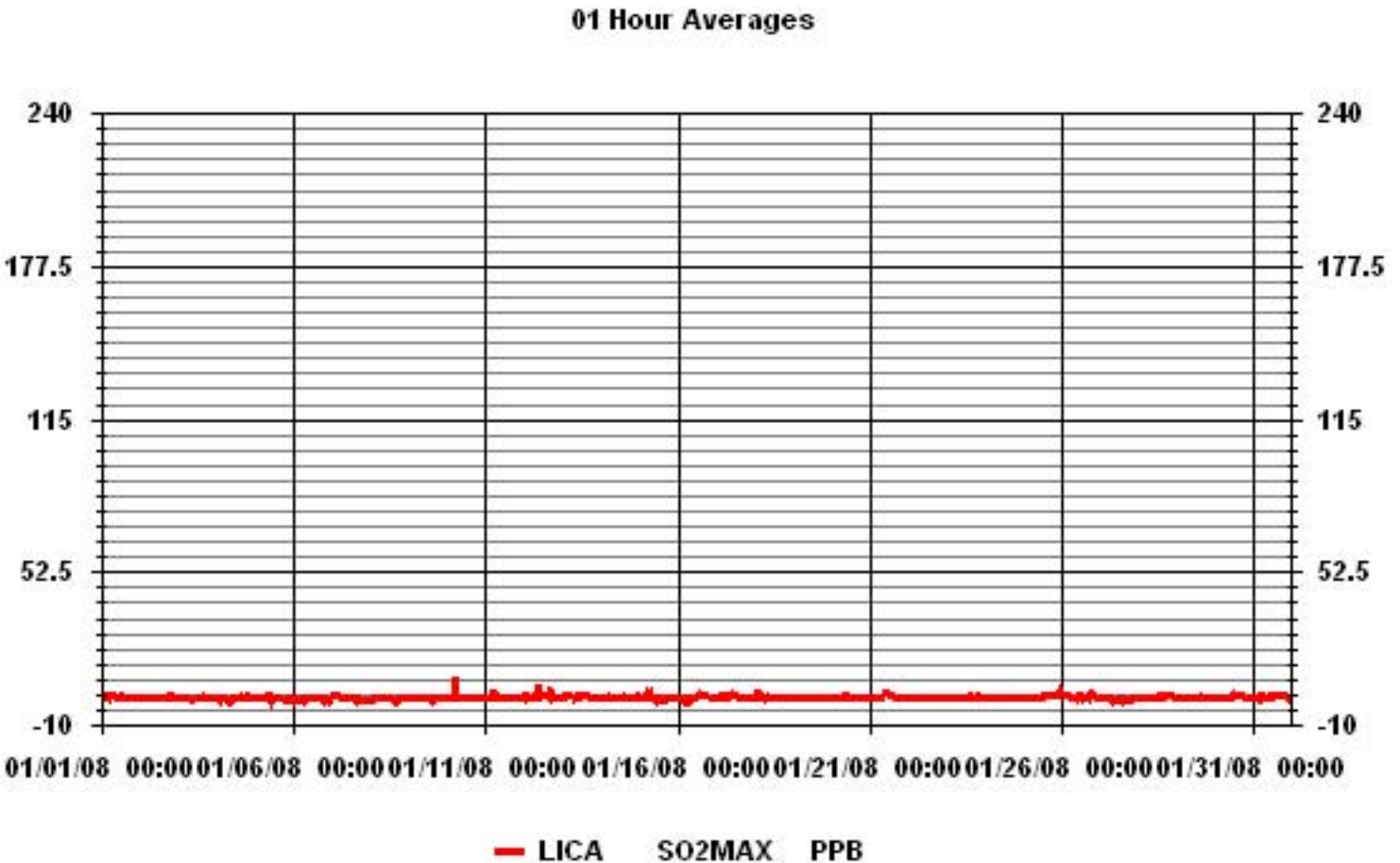
NUMBER OF NON-ZERO READINGS: 672

MAXIMUM INSTANTANEOUS VALUE: 10 PPB @ HOUR(S) 6 ON DAY(S) 10

IZS CALIBRATION TIME: 34 HRS OPERATIONAL TIME: 744 HRS

MONTHLY CALIBRATION TIME: 3 HRS

STANDARD DEVIATION: 0.71


01 Hour Averages
240
177.5
115
52.5
-10
01/01/08 00:00
01/06/08 00:00
01/11/08 00:00
01/16/08 00:00
01/21/08 00:00
01/26/08 00:00
01/31/08 00:00
LICA SO2MAX PPB

Total Reduced Sulphur

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

JANUARY 2008

TOTAL REDUCED SULPHUR (TRS) hourly averages in ppb

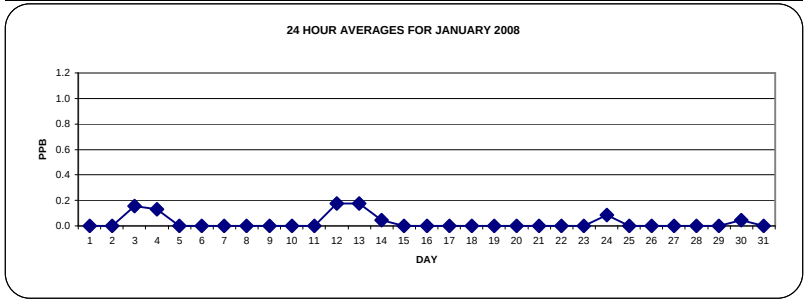
MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	0	0	0	0	0	0	0	**IZS**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
2	0	0	0	0	0	0	**IZS**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
3	0	0	0	0	0	**IZS**	0	0	0	**C**	**C**	**C**	**IZS**	0	0	0	0	**1**	**1**	**1**	0	0	0	0	1	**0.2**	24
4	0	0	0	0	**IZS**	**0**	0	0	0	0	0	0	0	0	0	0	0	0	**1**	**1**	**1**	0	0	0	1	0.1	24
5	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
6	0	0	**IZS**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
7	0	**IZS**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
8	**IZS**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**IZS**	0	0.0	24
9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**IZS**	0	0	0.0	24
10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**IZS**	0	0	0	0.0	24
11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**IZS**	0	0	0	0	0.0	24
12	0	0	0	0	0	0	**1**	**1**	**1**	0	**1**	0	0	0	0	0	0	0	0	**IZS**	0	0	0	0	1	**0.2**	24
13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**	**IZS**	0	**1**	**1**	**1**	0	1	**0.2**	24
14	0	0	0	0	0	0	0	0	0	**1**	0	0	0	0	0	0	0	**IZS**	0	0	0	0	0	0	1	0.0	24
15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**IZS**	0	0	0	0	0	0	0	0	0.0	24
16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**IZS**	0	0	0	0	0	0	0	0	0	0.0	24
17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**IZS**	0	0	0	0	0	0	0	0	0	0	0.0	24
18	0	0	0	0	0	0	0	0	0	0	0	0	0	**IZS**	0	0	0	0	0	0	0	0	0	0	0	0.0	24
19	0	0	0	0	0	0	0	0	0	0	0	0	**IZS**	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
20	0	0	0	0	0	0	0	0	0	0	0	**IZS**	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
21	0	0	0	0	0	0	0	0	0	0	**IZS**	0	0	**IZS**	**IZS**	**IZS**	0	0	0	0	0	0	0	0	0	0.0	24
22	0	0	0	0	0	0	0	0	0	**IZS**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
23	0	0	0	0	0	0	0	0	**IZS**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
24	0	0	0	0	0	0	0	**IZS**	0	0	0	0	0	0	0	0	0	**1**	**1**	0	0	0	0	0	1	0.1	24
25	0	0	0	0	0	0	**IZS**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
26	0	0	0	0	0	**IZS**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
27	0	0	0	0	**IZS**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
28	0	0	0	**IZS**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
29	0	0	**IZS**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
30	0	**IZS**	0	0	0	0	0	0	**1**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.0	24
31	**IZS**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**IZS**	0	0.0	24
HOURLY MAX	0	0	0	0	0	0	1	1	1	1	1	0	0	0	0	0	0	1	1	1	1	1	1	0			
HOURLY AVG	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	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	- MISSING DATA
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE

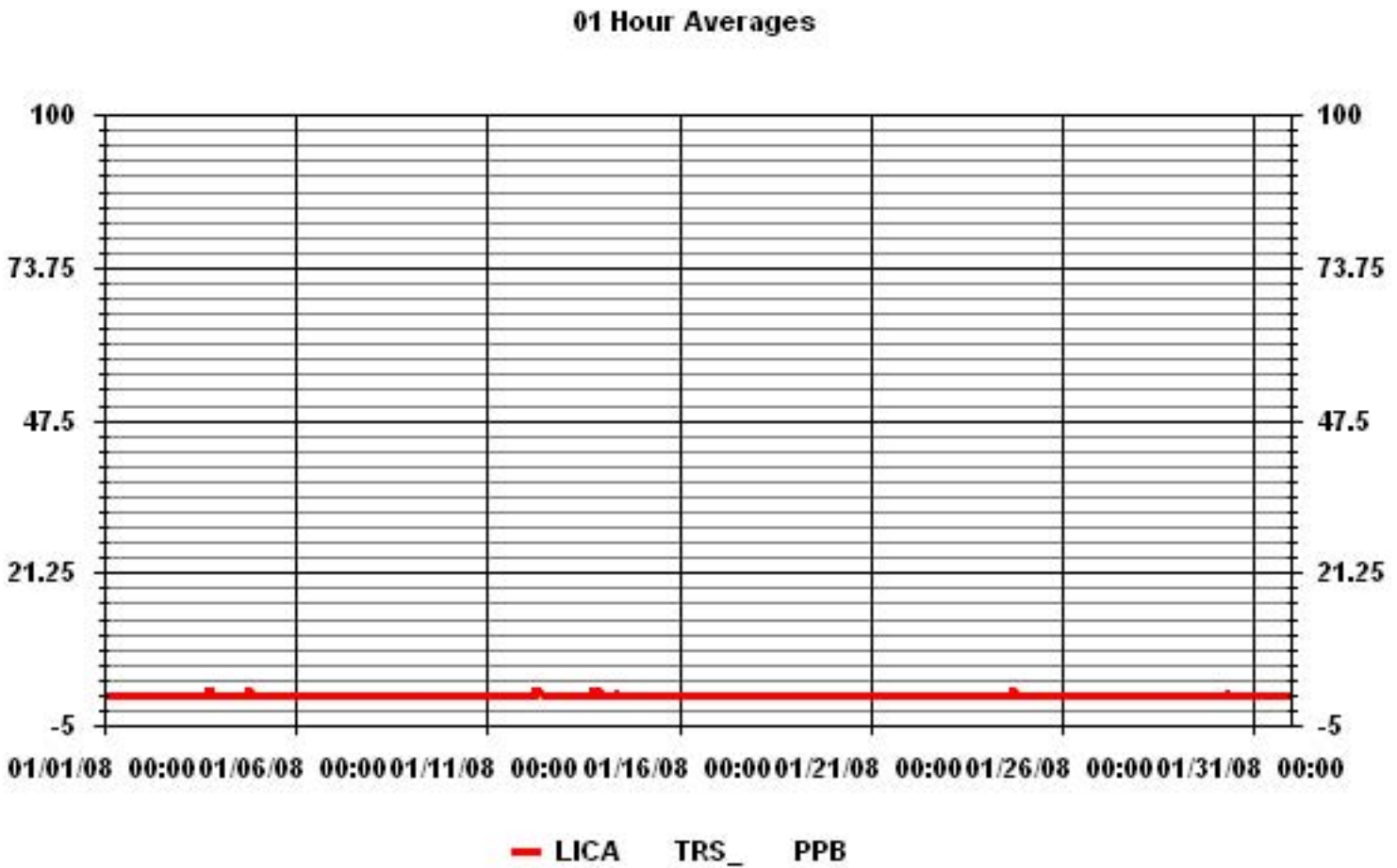
OBJECTIVE LIMIT: **ALBERTA ENVIRONMENT:** 1-HR 172 PPB | 24-HR 57 PPB



MONTHLY SUMMARY

NUMBER OF 1-HR EXCEEDENCES:	0					
NUMBER OF 24-HR EXCEEDENCES:	0					
NUMBER OF NON-ZERO READINGS:	18					
MAXIMUM 1-HR AVERAGE:	1	PPB	@ HOUR(S)	VAR	ON DAY(S)	VAR
MAXIMUM 24-HR AVERAGE:	0.2	PPB			ON DAY(S)	3,12,13
				VAR-VARIOUS		

IZS CALIBRATION TIME:	37	HRS	OPERATIONAL TIME:	744	HRS
MONTHLY CALIBRATION TIME:	3	HRS	AMD OPERATION UPTIME:	100.0	%
STANDARD DEVIATION:	0.16		MONTHLY AVERAGE:	0.03	PPB


01 Hour Averages
100
73.75
47.5
21.25
-5
01/01/08 00:00
01/06/08 00:00
01/11/08 00:00
01/16/08 00:00
01/21/08 00:00
01/26/08 00:00
01/31/08 00:00
LICA TRS_ PPB

LICA
TRS_ / WD Joint Frequency Distribution (Percent)

January 2008

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	3.40	8.66	7.81	4.40	6.81	6.96	9.23	2.98	2.84	3.83	12.64	15.48	5.68	2.13	3.69	3.40	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	3.40	8.66	7.81	4.40	6.81	6.96	9.23	2.98	2.84	3.83	12.64	15.48	5.68	2.13	3.69	3.40	

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
< 3	24	61	55	31	48	49	65	21	20	27	89	109	40	15	26	24	704
< 10																	
< 50																	
>= 50																	
Totals	24	61	55	31	48	49	65	21	20	27	89	109	40	15	26	24	

Calm : .00 %

Total # Operational Hours : 704

Logger : 01 Parameter : TRS_

Class Limits (PPB)

>= 50

< 50

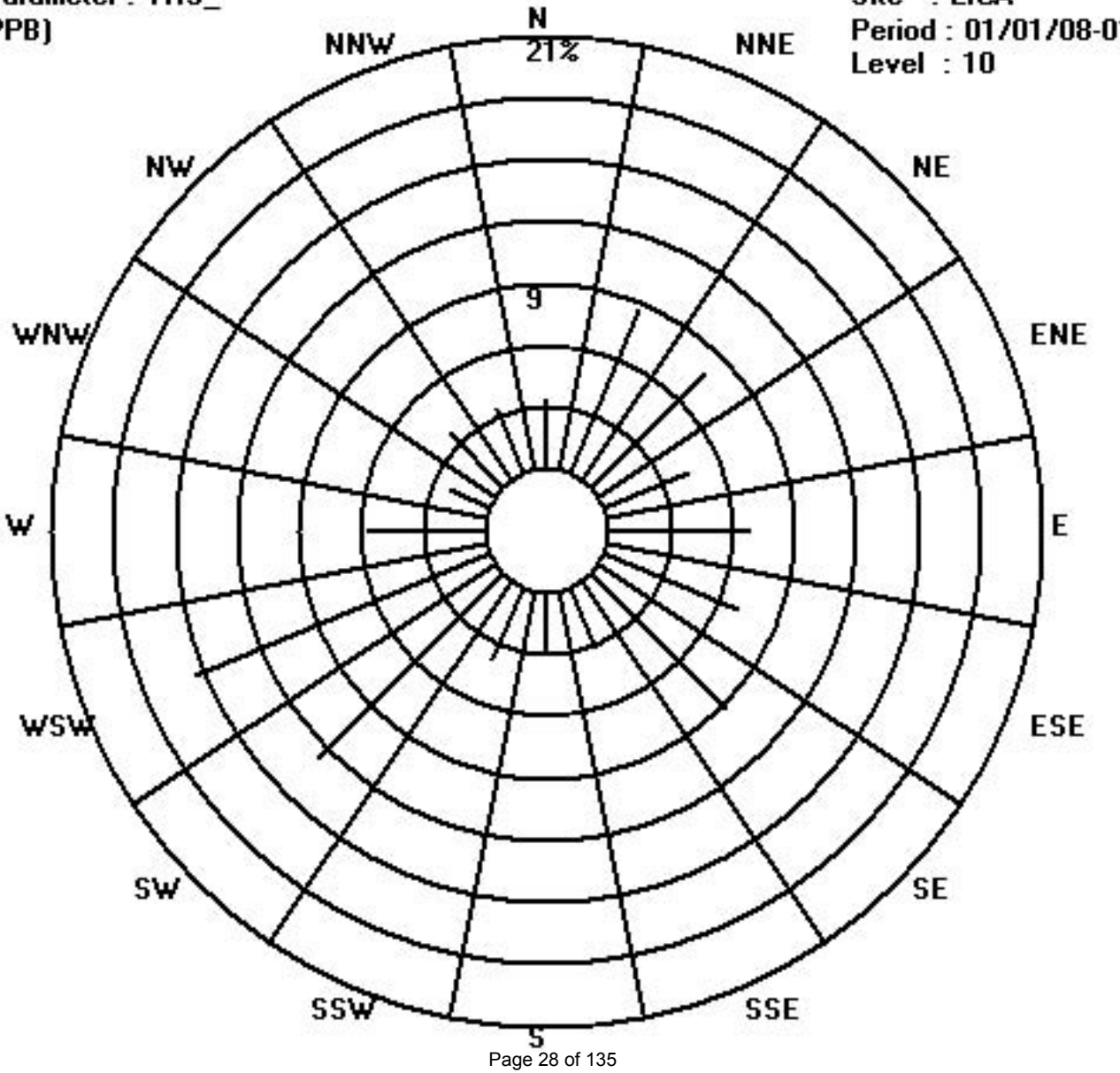
< 10

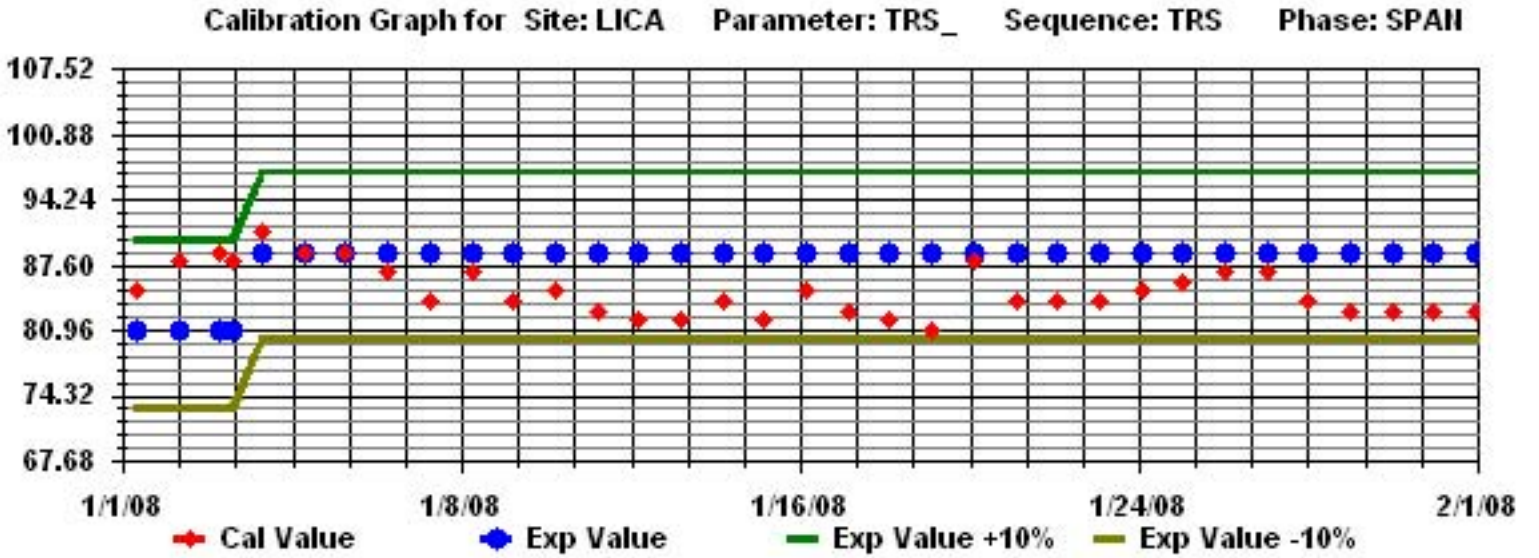
< 3

Site : LICA

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

Level : 10




Calibration Graph for Site: LICA Parameter: TRS_ Sequence: TRS Phase: SPAN
107.52
100.88
94.24
87.60
80.96
74.32
67.68
1/1/08
1/8/08
1/16/08
1/24/08
2/1/08
Cal Value
Exp Value
Exp Value +10%
Exp Value -10%

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

JANUARY 2008

TOTAL REDUCED SULPHUR MAX instantaneous maximum in ppb

MST

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

STATUS FLAG CODES

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

MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS: 698

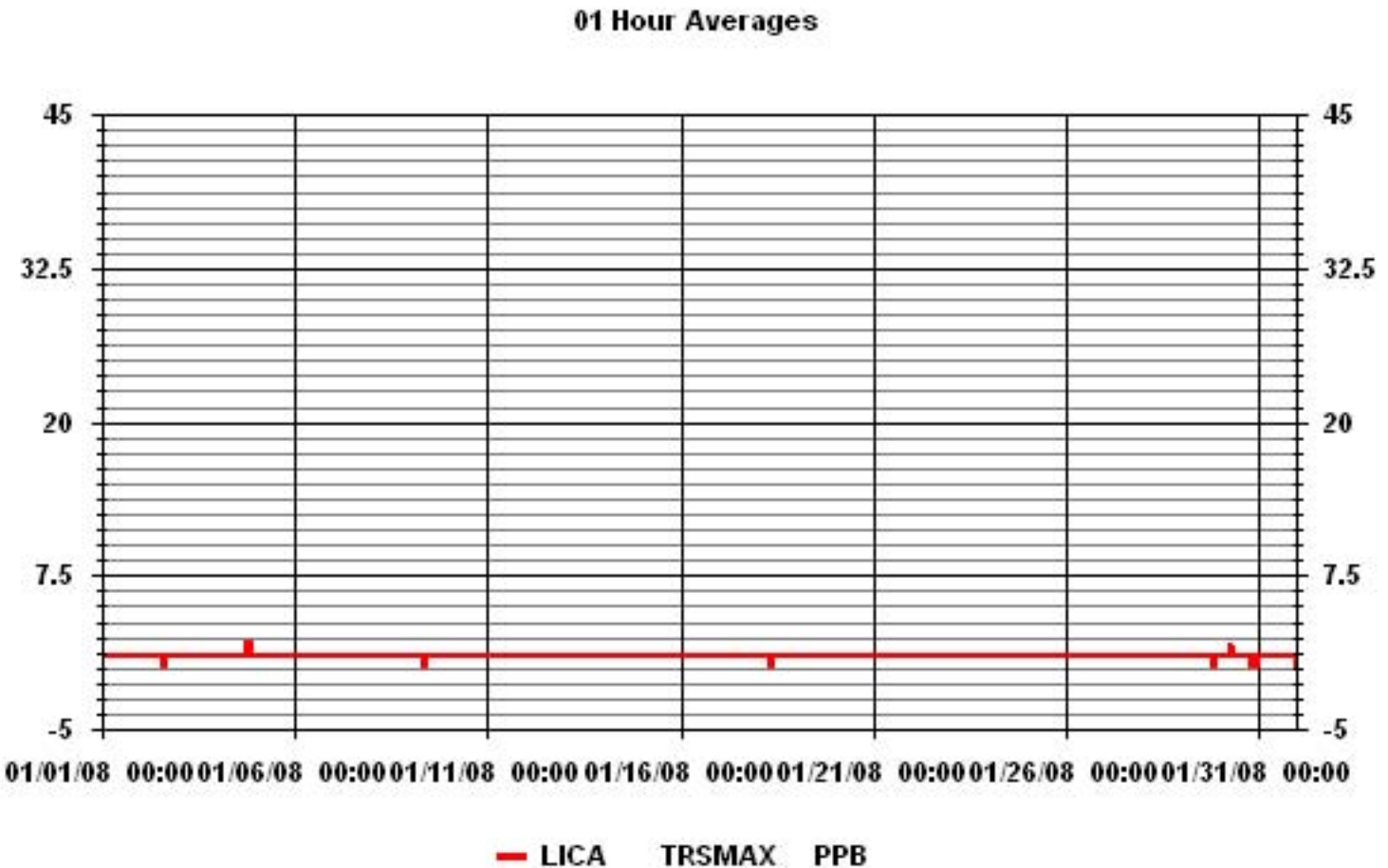
MAXIMUM INSTANTANEOUS VALUE: 2 PPB @ HOUR(S) VAR ON DAY(S) 4,30

VAR - VARIOUS

IZS CALIBRATION TIME: 37 HRS OPERATIONAL TIME: 744 HRS

MONTHLY CALIBRATION TIME: 3 HRS

STANDARD DEVIATION: 0.12


01 Hour Averages
45
32.5
20
7.5
-5
01/01/08 00:00
01/06/08 00:00
01/11/08 00:00
01/16/08 00:00
01/21/08 00:00
01/26/08 00:00
01/31/08 00:00
LICA TRSMAX PPB

Total Hydrocarbons

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

JANUARY 2008

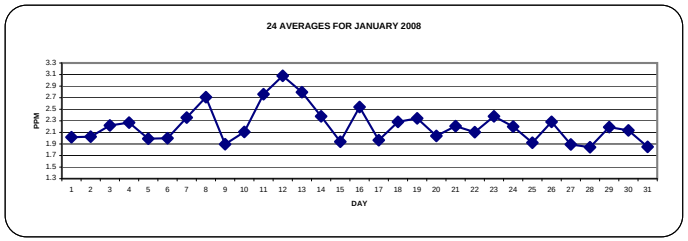
TOTAL HYDROCARBONS (THC) hourly averages in ppm

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	2.2	2.2	2.2	2.2	2.2	2.1	1.9	**IZS**	2	2.2	2.1	2	1.9	1.9	1.9	2	2	2	1.9	1.9	1.9	1.9	1.9	1.9	2.2	2.0	24
2	2	2	2	1.9	1.9	1.9	**IZS**	2	1.9	1.9	1.9	1.9	1.9	1.9	2	2.2	2.6	2.6	2.2	2	2.1	2	1.9	1.9	2.6	2.0	24
3	1.9	1.9	1.9	1.9	1.9	**IZS**	2.3	2	2.2	2.8	2.6	2.3	C	C	IZS	2	2.1	2.4	2.4	2.4	2.4	2.5	2.4	2.1	2.8	2.2	24
4	2	1.9	1.8	1.8	**IZS**	1.8	1.8	1.9	1.8	1.9	2.1	2.4	2.3	2.2	2.2	2.8	2.7	2.4	2.6	3.3	3.2	2.6	2.4	2.3	3.3	2.3	24
5	2.2	2.1	1.9	**IZS**	1.8	1.8	1.8	1.8	1.8	1.7	1.7	1.7	1.7	1.7	1.7	1.7	2.7	2.3	2.2	2.4	2.3	2.3	2.3	2.2	2.7	2.0	24
6	2.2	2.1	**IZS**	2	1.9	1.9	2	1.9	1.9	2	2	2	1.9	1.9	1.9	1.9	1.9	2	2	2	2	2.5	2.1	2	2.5	2.0	24
7	1.8	**IZS**	1.8	1.8	2	2.1	3.1	2.5	2.4	1.9	1.9	1.8	1.8	1.8	1.9	2.1	2.1	2.8	3.4	3.1	3.1	2.9	2.5	3.6	3.6	2.4	24
8	**IZS**	4.2	3	3.2	**4.5**	3.7	2.9	2.9	2.9	2.7	2.5	2.4	2.6	2.4	2.2	2.1	2.1	2.1	2.2	2.3	2.3	2.2	2.2	**IZS**	4.5	2.7	24
9	2	2	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.9	1.9	1.9	1.9	1.9	1.9	**IZS**	1.9	2.0	1.9	24
10	1.9	1.9	2	2	2.1	2.3	2.4	2.4	2.3	2.2	2.1	2	2	2	1.9	1.9	1.9	1.9	1.9	1.9	1.9	**IZS**	2.3	3.3	3.3	2.1	24
11	2.8	3	2.7	3	2.7	2.6	2.9	2.9	3	2.6	2.9	3.1	3	2.9	2.7	2.5	2.7	2.6	2.6	2.5	**IZS**	2.6	2.6	2.6	3.1	2.8	24
12	2.7	2.6	2.7	2.9	2.9	3	3.4	3.8	4.4	3.7	3.5	3.6	3.4	3.2	3	2.8	2.9	3	3.2	**IZS**	2.8	2.7	2.4	2.2	4.4	**3.1**	24
13	2.3	2.4	2.4	2.4	2.3	2.3	2.3	2.3	2.7	3.4	2.5	2.5	2.6	2.7	2.9	3	3.3	3.9	**IZS**	3.5	3.6	3.1	3.1	2.8	3.9	2.8	24
14	2.7	2.6	2.6	2.5	2.3	2.3	2.7	2.3	2.4	3.5	2.3	2.2	2.3	2.3	2.2	2.2	2.2	**IZS**	2.1	2.2	2.5	2.1	2	2.2	3.5	2.4	24
15	2.3	2.4	2.1	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	**IZS**	1.9	1.9	1.9	2.1	1.9	2.1	2.5	2.5	1.9	24
16	2.4	3.3	2.8	3.4	3.4	2.7	2.7	2.5	2.9	2.4	2.5	2.4	2.5	2.3	2.1	**IZS**	2.2	2.3	2.3	2.1	2	2.1	2.5	2.6	3.4	2.5	24
17	3.3	2.7	2.1	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	**IZS**	1.8	1.8	1.8	1.8	1.8	1.9	1.9	2.1	2.4	3.3	2.0	24
18	2.1	2	1.9	1.9	2	2	2	2	2	2	2	2	2	**IZS**	2	2	2	2.1	2.3	2.7	3.2	4.3	2.4	3.6	4.3	2.3	24
19	2.6	2.8	2.4	2.4	2.2	2.4	2.1	1.9	1.9	1.9	1.9	1.9	**IZS**	1.8	1.9	1.9	1.9	1.9	2.2	2.8	4.1	3.4	3.1	2.5	4.1	2.3	24
20	2.1	2.2	2.1	2	1.9	2	2	2	2.1	2.1	2	**IZS**	2	2	2	1.9	1.9	2	2.1	2.1	2.2	2.3	2	1.9	2.3	2.0	24
21	1.9	2	2	2	2	2.5	2.9	2.5	2.2	2.1	**IZS**	2.1	2.2	2.2	2.2	2.2	2.4	2.5	2.3	2.3	2.1	2	2	2.2	2.9	2.2	24
22	2.3	2.1	2	1.9	1.9	2	1.9	1.9	1.8	**IZS**	1.8	1.8	1.8	1.8	1.9	1.9	1.9	1.9	1.9	3.4	2.9	2.6	2.5	2.5	3.4	2.1	24
23	2.7	2.1	2.2	2.8	2.5	2.6	2.7	2.7	**IZS**	2.4	2.2	2.1	2.1	2.2	2.3	2.2	2.2	2.5	2.5	2.5	2.5	2.3	2.2	2.2	2.8	2.4	24
24	2.7	3	2.9	2.9	2.4	3.1	2.9	**IZS**	1.7	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	2	2	2.2	2.1	2.1	2.1	2	3.1	2.2	24
25	2	1.9	1.8	1.8	1.8	1.8	**IZS**	2.1	2.1	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2	2	2	1.9	1.9	2	2.1	1.9	24
26	2	2.1	2.2	2.2	2.2	**IZS**	2.3	2.3	2.4	2.6	2.3	2.3	2.4	2.3	2.4	2.5	2.1	2.1	2.1	2.2	2.2	2.4	2.5	2.4	2.6	2.3	24
27	2.5	2.4	2.5	2.3	**IZS**	1.8	1.7	1.7	1.7	1.7	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	2.5	1.9	24
28	1.8	1.8	1.8	**IZS**	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.8	2	2	2	2.1	2.1	1.8	24
29	2.2	2.1	**IZS**	2.1	2.1	2.3	2.3	2.4	2.5	2.5	2.7	2.3	2.2	2.2	2.1	1.9	1.9	2	2	2.1	2.1	2.1	2.1	2.2	2.7	2.2	24
30	2.3	**IZS**	2.3	2.3	2.4	2.4	2.5	2.4	2.4	2.4	2.2	2.1	2.1	2	2	2	2	2	1.9	1.9	1.9	1.9	1.9	1.8	2.5	2.1	24
31	**IZS**	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	1.8	1.8	1.8	**IZS**	1.9	1.9	24
HOURLY MAX	3.3	4.2	3.0	3.4	4.5	3.7	3.4	3.8	4.4	3.7	3.5	3.6	3.4	3.2	3.0	3.0	3.3	3.9	3.4	3.5	4.1	4.3	3.1	3.6			
HOURLY AVG	2.3	2.3	2.2	2.2	2.2	2.2	2.3	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.3	2.4	2.3	2.2	2.3			

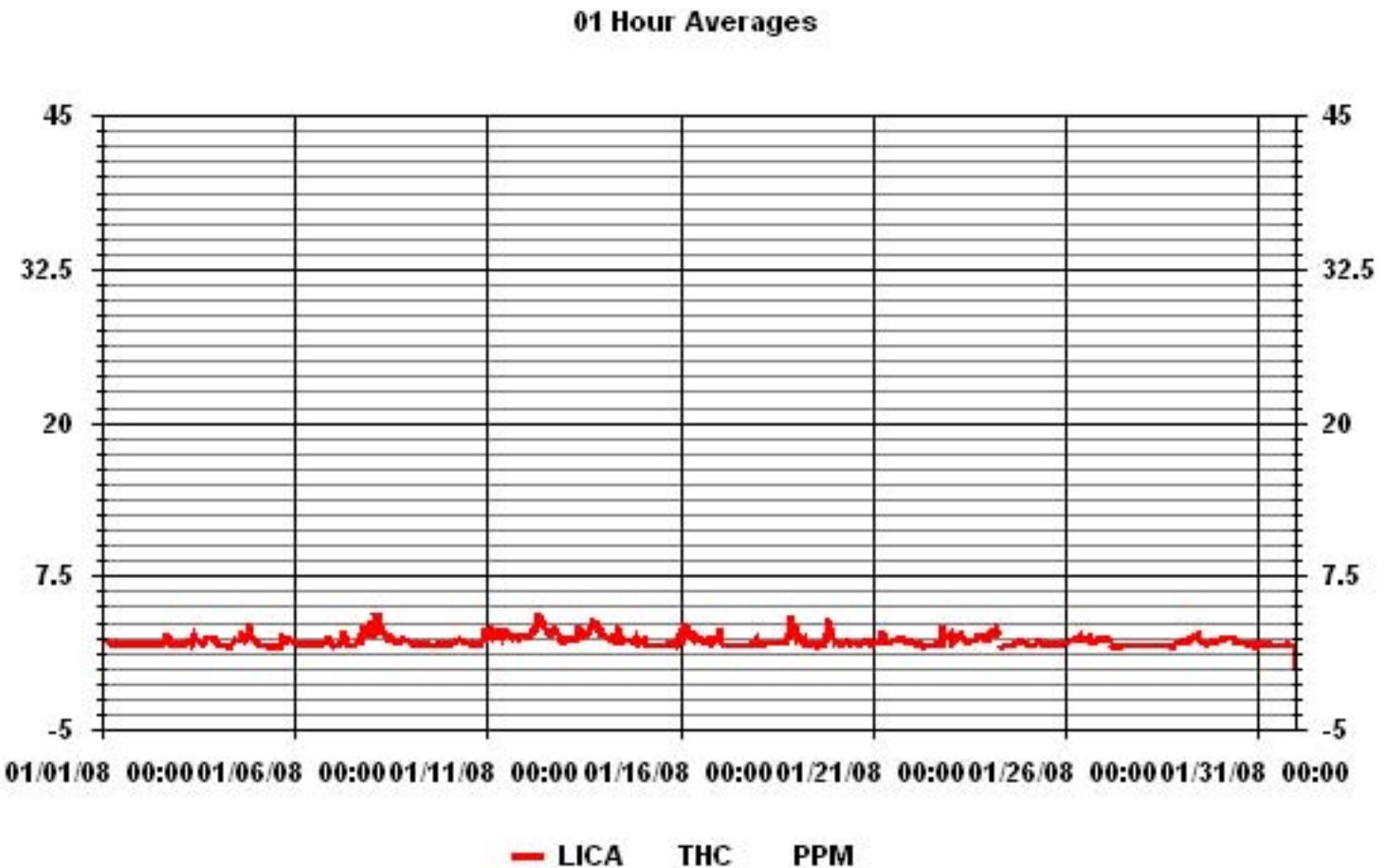
STATUS FLAG CODES

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



MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:	708						
MAXIMUM 1-HR AVERAGE:	4.5	PPM	@ HOUR(S)	5	ON DAY(S)	8	
MAXIMUM 24-HR AVERAGE:	3.1	PPM			ON DAY(S)	12	
IZS CALIBRATION TIME:	34	HRS	OPERATIONAL TIME:	744	HRS		
MONTHLY CALIBRATION TIME:	2	HRS	AMD OPERATION UPTIME:	100.0	%		
STANDARD DEVIATION:	0.45		MONTHLY AVERAGE:	2.22	PPM		


01 Hour Averages
45
32.5
20
7.5
-5
01/01/08 00:00
01/06/08 00:00
01/11/08 00:00
01/16/08 00:00
01/21/08 00:00
01/26/08 00:00
01/31/08 00:00
LICA THC PPM

LICA
THC / WD Joint Frequency Distribution (Percent)

January 2008

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	3.38	8.61	7.34	3.81	6.49	6.49	8.33	2.54	2.40	3.38	11.44	14.68	5.08	1.83	3.53	3.24	92.65
<	10.0	.00	.14	.42	.70	.28	.42	.70	.42	.42	.42	1.41	.84	.56	.28	.14	.14	7.34
<	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	3.38	8.75	7.76	4.51	6.77	6.92	9.03	2.96	2.82	3.81	12.85	15.53	5.64	2.11	3.67	3.38	

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	24	61	52	27	46	46	59	18	17	24	81	104	36	13	25	23	656
<	10.0		1	3	5	2	3	5	3	3	3	10	6	4	2	1	1	52
<	50.0																	
>=	50.0																	
	Totals	24	62	55	32	48	49	64	21	20	27	91	110	40	15	26	24	

Calm : .00 %

Total # Operational Hours : 708

Logger : 01 Parameter : THC

Class Limits (PPM)

>= 50.0

< 50.0

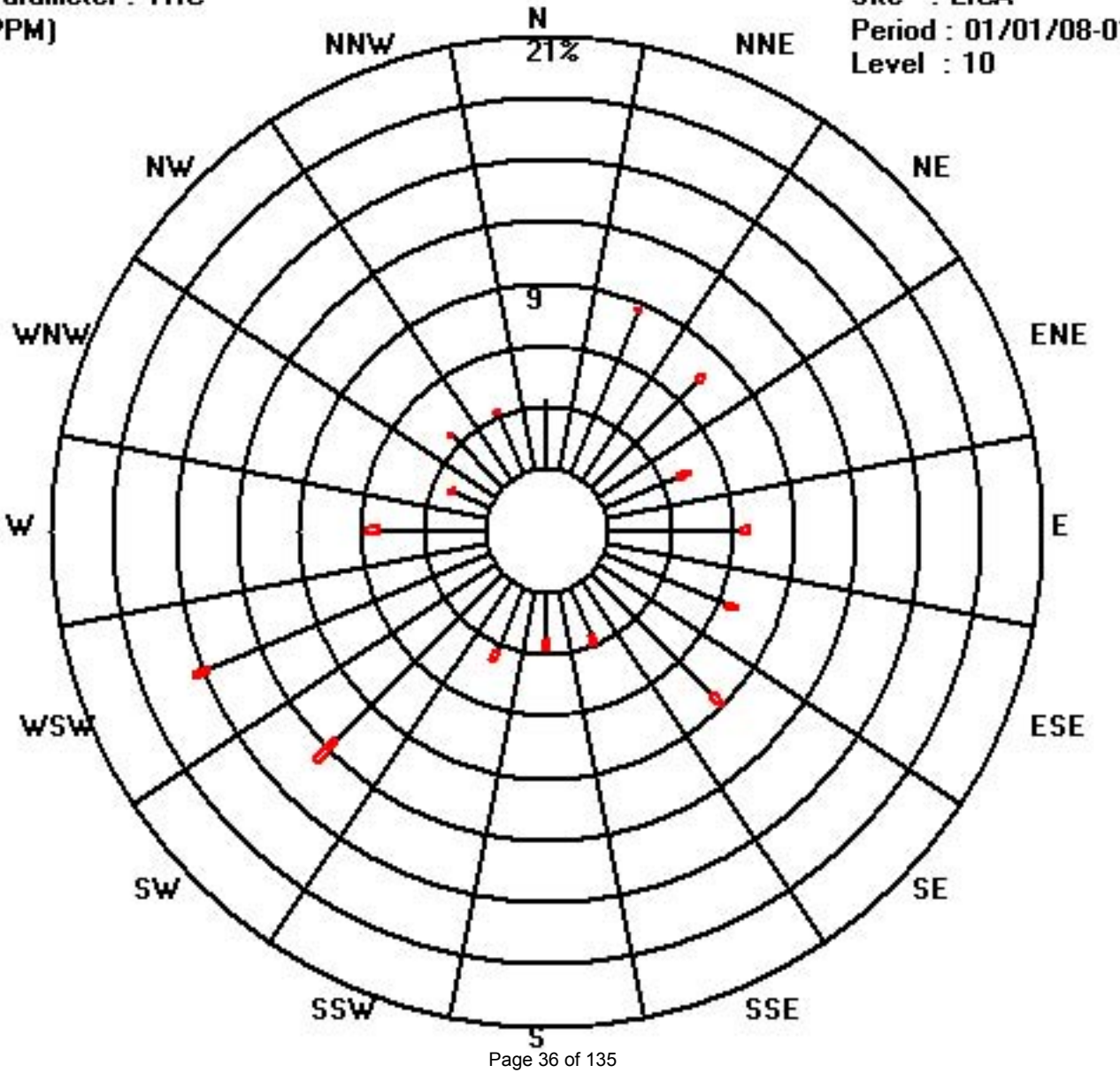
< 10.0

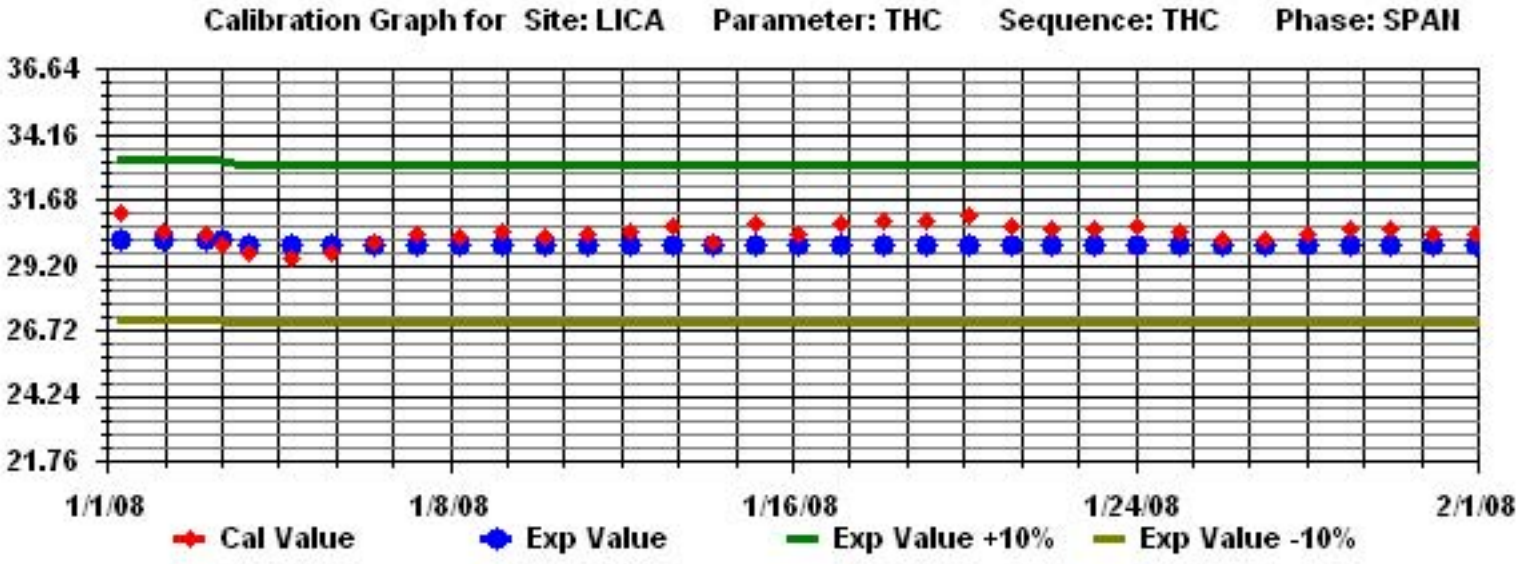
< 3.0

Site : LICA

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

Level : 10




Calibration Graph for Site: LICA Parameter: THC Sequence: THC Phase: SPAN
36.64
34.16
31.68
29.20
26.72
24.24
21.76
1/1/08
1/8/08
1/16/08
1/24/08
2/1/08
Cal Value
Exp Value
Exp Value +10%
Exp Value -10%

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

JANUARY 2008

TOTAL HYDROCARBONS MAX instantaneous maximum in ppm

MST

HOUR START / HOUR END	0:00 / 1:00	1:00 / 2:00	2:00 / 3:00	3:00 / 4:00	4:00 / 5:00	5:00 / 6:00	6:00 / 7:00	7:00 / 8:00	8:00 / 9:00	9:00 / 10:00	10:00 / 11:00	11:00 / 12:00	12:00 / 13:00	13:00 / 14:00	14:00 / 15:00	15:00 / 16:00	16:00 / 17:00	17:00 / 18:00	18:00 / 19:00	19:00 / 20:00	20:00 / 21:00	21:00 / 22:00	22:00 / 23:00	23:00 / 0:00	DAILY MAX.	24-HOUR AVG.	RDGS.
DAY																											
1	2.3	2.3	2.3	2.3	2.3	2.3	2	**IZS**	2.1	3.2	2.6	2.1	2	1.9	2	3.3	2.2	2.2	1.9	2	1.9	1.9	2	2	3.3	2.2	24
2	2.1	2.1	2	2	2	2	**IZS**	2	2	1.9	1.9	1.9	2	2.1	2.2	2.7	5.1	6.7	2.3	2.1	2.2	2.1	2	2	6.7	2.4	24
3	2	2.1	1.9	1.9	2	**IZS**	4.2	3	3.8	4.3	3.4	2.5	**C**	**C**	**IZS**	2.1	2.2	6.1	2.6	2.5	2.8	2.6	2.5	2.3	6.1	2.8	24
4	2	2	1.9	1.8	**IZS**	1.9	1.9	2.2	2	2.5	2.3	2.5	2.4	2.3	2.2	9.3	4.5	2.8	7.8	4.7	3.6	3	2.7	2.5	9.3	3.1	24
5	2.4	2.2	2.1	**IZS**	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	2.4	5.8	2.3	2.3	3.5	2.6	2.4	2.4	2.2	5.8	2.3	24
6	2.4	2.1	**IZS**	2.1	2	2.1	2.1	2	2	2.9	2.1	2.1	2	1.9	2	2	2	2.1	2.1	2	2.1	4.1	2.2	2.2	4.1	2.2	24
7	1.8	**IZS**	1.8	1.9	4.7	5.2	5.6	3.3	6.8	2	2	1.9	1.9	1.9	2.2	5.3	4.1	5.1	5	5	6.9	5.6	6.2	6	6.9	4.0	24
8	**IZS**	7.5	9	3.9	**13.9**	7.8	4.3	3.1	5	3.3	2.9	2.8	3.2	2.6	2.2	2.2	2.7	2.2	2.3	4.6	2.6	2.4	2.2	**IZS**	13.9	4.2	24
9	2.1	2	2	2	2	1.9	1.9	2.1	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2	2	2.3	2	2	**IZS**	1.9	2.3	2.0	24
10	1.9	2	2	2	2.2	2.5	2.6	2.5	2.5	2.2	2.1	2	2	2.1	2	2	2	2	2	2	2	**IZS**	3.7	4.8	4.8	2.3	24
11	3.8	4.6	3.9	4.5	8.6	3.8	4	4.1	4.9	3.3	3.3	3.4	3.3	3	3	2.7	2.9	2.8	2.8	2.6	**IZS**	2.8	2.6	2.7	8.6	3.6	24
12	2.7	2.7	2.9	4.8	3.6	3.2	6.2	6.2	6.2	4.4	3.8	3.7	4.2	3.8	3.2	2.9	3.5	3.2	3.2	**IZS**	3	4.4	2.8	2.3	6.2	3.8	24
13	2.4	2.4	2.5	2.4	2.4	2.3	2.3	2.6	5.5	4.6	3.9	2.7	2.7	2.8	3	3.3	5.5	4.8	**IZS**	9.4	6	3.2	3.3	3	9.4	3.6	24
14	2.8	2.6	2.6	2.7	2.4	2.6	4.9	3.5	3.4	6.2	2.8	2.3	2.3	2.5	2.3	2.3	2.5	**IZS**	2.2	3	4	2.5	2	3.5	6.2	3.0	24
15	3	2.5	2.4	2	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.9	1.9	**IZS**	1.9	1.9	2	3	2	3	4.5	4.5	2.2	24
16	3.5	4.8	4.3	5.6	5.5	7	3.7	4.3	3.9	3	3	2.8	2.7	2.5	2.2	**IZS**	2.5	2.6	3	3.2	2.1	2.3	2.5	2.8	7	3.5	24
17	6.2	4.1	2.4	1.9	1.8	1.9	1.8	1.8	1.8	1.9	1.9	1.9	1.9	1.9	**IZS**	2	1.9	1.9	1.9	1.9	1.9	1.9	2.6	4.9	6.2	2.4	24
18	2.3	2	2	2	2.1	2.1	2	2	2.5	2.1	2.2	2.1	2.1	**IZS**	2.1	2.2	2.2	2.4	4	5.1	4.3	8	6.5	10.4	10.4	3.2	24
19	4.6	3.2	2.8	2.6	2.6	2.9	2.6	2	1.9	2	2.2	1.9	**IZS**	1.9	1.9	1.9	1.9	2.1	3.5	5.5	6.7	5.5	4.9	4.5	6.7	3.1	24
20	2.6	2.4	2.2	2.1	2	2.1	2.1	2.1	2.1	2.6	2.2	**IZS**	2	2	2	2	2.1	2.2	2.2	2.3	2.3	2.5	2.3	1.9	2.6	2.2	24
21	2	2.1	2.1	2.2	2.2	3.6	4.5	3.2	2.3	2.2	**IZS**	2.2	2.2	2.2	2.2	2.3	3.2	3.9	3.2	3.3	2.4	2.1	2.2	2.3	4.5	2.6	24
22	2.4	2.4	2.1	2	2	2	1.9	1.9	1.9	**IZS**	1.8	1.8	1.9	1.9	1.9	1.9	1.9	2.3	2.5	5.8	4.2	3.5	3.4	4.3	5.8	2.5	24
23	4.9	2.3	4.6	6.8	4.3	3.4	2.9	3.4	**IZS**	2.9	2.3	2.2	2.2	2.3	2.3	2.4	2.3	2.8	3.1	3	3.4	2.6	2.4	2.3	6.8	3.1	24
24	7.9	5.8	5.1	3.7	2.6	6.3	4.1	**IZS**	1.8	1.8	2.1	1.9	1.8	2	1.8	1.9	2.1	2.2	2.3	2.2	2.4	2.5	2.4	2.1	7.9	3.0	24
25	2.2	2.1	1.8	1.8	1.8	2.2	**IZS**	2.2	2.3	2.1	1.9	1.9	1.9	2	2	2	1.9	2	2	2	2	2	2.2	2	2.3	2.0	24
26	2	2.2	2.2	2.2	2.4	**IZS**	2.3	2.5	3	3.3	2.5	2.3	2.6	2.4	2.5	2.6	2.4	2.2	2.3	2.3	2.3	2.9	2.5	2.5	3.3	2.5	24
27	2.5	2.5	2.6	2.5	**IZS**	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	2.6	1.9	24
28	1.8	1.8	1.8	**IZS**	1.8	1.8	1.8	1.8	1.8	1.8	2	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.9	1.9	2.2	2.1	2.2	2.2	2.2	1.9	24
29	2.3	2.2	**IZS**	2.1	2.2	2.4	2.4	2.6	2.6	2.6	2.7	2.6	2.4	2.3	2.2	2	2.1	2	2	2.2	2.2	2.2	2.3	2.3	2.7	2.3	24
30	2.4	**IZS**	2.4	2.5	2.5	2.5	4	3.3	2.5	2.5	2.4	2.1	2.1	2.1	2.1	2.1	2.1	2.5	2	1.9	1.9	2	1.9	1.9	4	2.3	24
31	**IZS**	1.9	2	1.9	1.9	1.9	2.1	2.1	2	2	1.9	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.9	1.9	1.9	1.9	1.9	**IZS**	2.1	1.9	24
HOURLY MAX	8	8	9	7	14	8	6	6	7	6	4	4	4	4	3	9	6	7	8	9	7	8	7	10			
HOURLY AVG	2.9	2.8	2.7	2.7	3.1	2.9	3.0	2.7	2.9	2.7	2.4	2.2	2.2	2.2	2.2	2.6	2.7	2.8	2.7	3.1	3.0	2.9	2.8	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
BB	- BELOW BACKGROUND OF 1.5 PPM		

MONTHLY SUMMARY

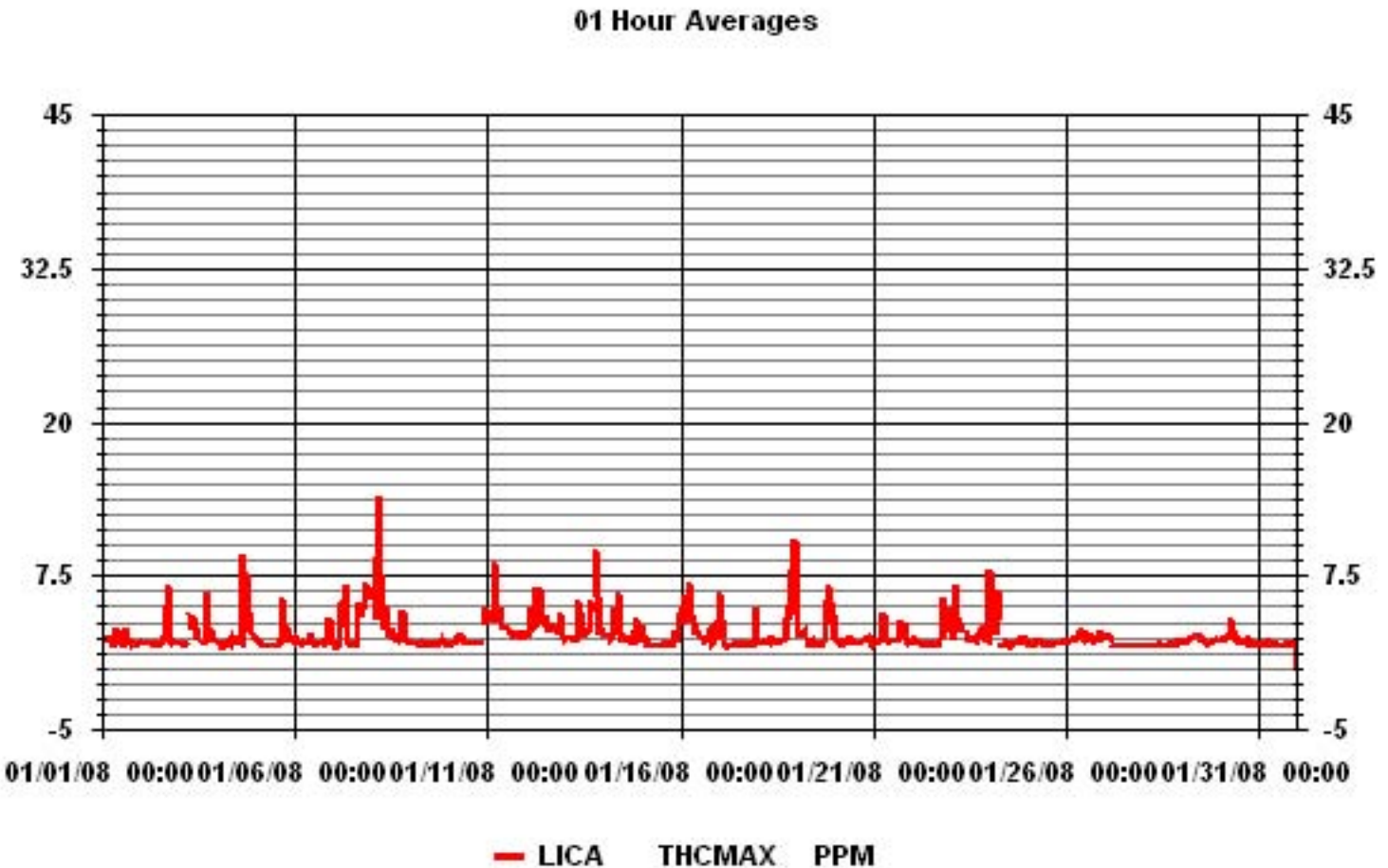
NUMBER OF NON-ZERO READINGS: 708

MAXIMUM INSTANTANEOUS VALUE: 13.9 PPM @ HOUR(S) 5 ON DAY(S) 8

IZS CALIBRATION TIME: 34 HRS OPERATIONAL TIME: 744 HRS

MONTHLY CALIBRATION TIME: 2 HRS

STANDARD DEVIATION: 1.32


01 Hour Averages
45
32.5
20
7.5
-5
01/01/08 00:00
01/06/08 00:00
01/11/08 00:00
01/16/08 00:00
01/21/08 00:00
01/26/08 00:00
01/31/08 00:00
LICA THCMAX PPM

Particulate Matter 2.5

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

JANUARY 2008

PARTICULATE MATTER 2.5 (PM2.5) hourly averages in ug/m^3

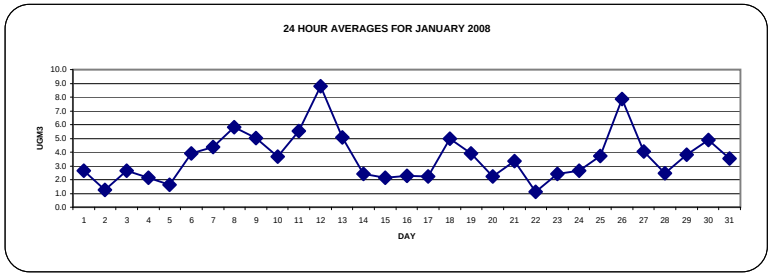
MST

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	6.6	7.4	9.5	10.1	6.3	2.4	1.1	2.2	2.2	4.4	2.3	1.1	0.6	0.5	1.6	1.2	4.1	0.2	0	0	0	0	0	0	10.1	2.7	24
2	0	0	0	0	0	0	0	0	0.1	0.9	1.3	1	0	0.5	1.5	1.7	1.2	3	4.1	4.2	2.2	2.8	3.4	2.7	4.2	1.3	24
3	1.2	1.4	1.3	1.6	0.5	0.5	0	0	1.4	7.4	10	**C**	**C**	**C**	**C**	**C**	**C**	3.2	0	4.6	5.7	3.5	3.4	1.9	10.0	2.6	24
4	0	0	0	0	0	0.5	0	0.3	0.7	1.3	0.9	1.2	2	2.2	1.4	2.6	1.5	2.6	4.1	6.3	8.7	6	5	4.3	8.7	2.2	24
5	2.3	1	0.9	0	0	0.7	0	0.7	0.1	1.3	0.6	1.5	0.5	1.4	4.2	2.6	1.4	1.1	2.9	3.3	3.6	2.6	3.2	3.7	4.2	1.7	24
6	3.7	4.1	3.2	2.3	1.5	2.1	2.6	2.8	3.1	4	5.3	4.3	4.6	3.9	5	4.8	4.7	4.7	5.2	4.5	3.8	4.7	4.6	4.2	5.3	3.9	24
7	4.5	5.9	6.9	6.7	6.5	6.6	7.1	6.3	6.8	6.3	3.8	2.4	2.5	2.5	3.6	3.8	3.6	3.5	2.4	2.9	2.3	2.6	3.3	2.2	7.1	4.4	24
8	2.5	2.3	2.9	2.1	2.2	2.1	3.9	4	4.5	5.8	11.4	6.8	5.8	8.4	4.2	5.2	6.2	8.2	10.4	10.2	6.7	7.5	9.2	6.5	11.4	5.8	24
9	3.7	5.3	4.5	3.7	3.9	3.4	4.4	5.3	4.5	5.9	6.1	5.2	4.9	4.1	4.4	3.6	3.7	4.8	8.1	12.8	8.6	6	1.3	2.1	12.8	5.0	24
10	2.3	2.7	2.9	2.6	2.9	5.5	3.2	4	4.5	4	3.3	2.5	2.4	2.6	3.2	3.1	3.9	4.3	6.4	6.7	3.9	5.2	2.9	3.1	6.7	3.7	24
11	4.4	3.9	3.7	4.4	3.9	6	4.6	5.9	6.3	6.7	8.8	6	7.9	5.6	5.3	5.8	5.8	8.6	4.2	4.3	4.4	5.4	5.1	5.9	8.8	5.5	24
12	6.4	5.8	6.7	6.7	8	10.6	8.8	9.4	9.2	15.6	**17.2**	13.5	13.2	11.6	9.6	7	9	6.1	7.9	8	6.4	4.5	5.8	3.5	17.2	**8.8**	24
13	3.5	3.9	4.7	4	4.2	5.2	7.1	4.5	4.8	5.5	15.2	5.3	3.7	5.4	4.7	4.5	4	4.7	4.2	2.8	3.3	4.1	5.8	6.7	15.2	5.1	24
14	4	2.8	3.5	2.3	2.1	3	1.9	3.1	2.3	4	4.5	3.7	0.2	1.3	2.1	2	3.8	1.3	3	0.6	0.9	3.3	0.7	1.2	4.5	2.4	24
15	4.2	5.1	8	4.3	0.8	0.1	0.9	0	1.3	0.5	0.8	1.4	2	1.5	2.1	2.3	1.9	2.4	2.6	2.4	2.2	1.2	1.7	1.7	8.0	2.1	24
16	1.2	0.4	0.3	0	0	0.9	0	1.1	3.1	4	8.2	3.1	5.9	1	1.7	1.5	1.9	1.7	3.2	3.5	2.3	2.4	2.4	5.3	8.2	2.3	24
17	5.1	5.8	2.5	0	0.4	1.9	1.1	2.2	2.4	3.4	3	2.1	1.3	2	2	1.1	1.5	1.8	1.5	1.7	3	3.1	2.3	2.5	5.8	2.2	24
18	2.2	1.7	2.2	2.4	5.3	5.3	7.8	15.4	12.7	8.3	3.8	2.8	1.3	0.7	0.4	3.2	3.8	3.1	4	6.9	6.6	5.6	6	8.1	15.4	5.0	24
19	7.8	8.8	9.5	8.3	4	3.7	4.6	4.4	2.6	2.9	2	0.4	0.6	0.8	2.2	3.1	3.8	4.5	2.8	4.5	2.6	4.3	3.2	2.3	9.5	3.9	24
20	3.7	1.8	1.4	0.3	1.2	1.6	2.5	3	3.9	3.9	3.9	3	2.5	1.6	2.2	2.5	2.1	4.7	2.9	3.2	0.6	1	0.4	0	4.7	2.2	24
21	0	0	1.2	0	0	0.6	1.8	5.1	6.9	7.8	8.9	4.3	5.9	6.5	5.8	4.2	4.3	2	4.5	4.1	0.9	1.1	3.1	1.7	8.9	3.4	24
22	1.4	1	0.3	1.5	1.4	1.5	2.3	3.5	3.3	0	1.9	0	1.5	0.8	1.3	0.9	1.4	0	0	0	0.2	0	1.4	1	3.5	1.1	24
23	0.4	0	0	0	0.2	0	1.7	3.4	5.5	9.1	0.4	1.8	0.1	1.6	2.8	2.1	1.7	1.9	2	3.7	4.4	4.4	4.8	5.8	9.1	2.4	24
24	3.7	4.2	6.2	6.4	5.3	6.6	4.8	5.1	1.1	0	0	0	0	0	0	1.1	1.2	1	2	4	3.9	4.2	1.8	1.5	6.6	2.7	24
25	1.3	1.9	0	0	0	0	0	0	0	0.6	0	0	0	0	1.7	3.4	4.2	6.2	8.9	10.5	11.8	12.5	13.3	12.7	13.3	3.7	24
26	10.7	10.9	10	10.3	9.9	10.5	9.3	11.1	9.9	11.7	8.3	6.6	5.4	3.9	6.2	7.3	2.9	3.4	4	7.9	9.7	6.9	5.3	6.7	11.7	7.9	24
27	7.9	6.7	4.8	3.5	2.7	6.2	1.3	0	0.4	2.9	5.5	4.9	6.2	7.5	5.1	3.3	2.7	5.5	5.6	5.3	3.3	3.1	2.1	0.8	7.9	4.1	24
28	2.9	3	1.7	2.3	1.7	1.3	3.8	2.3	1.6	2.6	2.4	3.4	2	2.7	1.7	2.7	2.6	2.8	2.3	2.1	1.8	2.6	2.9	3.9	3.9	2.5	24
29	2.8	2.9	3.9	2	2.1	2.6	3.4	4.5	4.3	6.5	9.2	6	2.3	3.5	3.9	2.2	0.8	1.7	2.6	3.7	2.9	4.2	5.4	8.2	9.2	3.8	24
30	10	5.8	7.3	9.5	8.7	6.8	7.2	8.3	7.8	11.8	7	4.2	3.9	1.9	2	1.4	1.6	2	1.6	0.7	2.1	2	1.5	1.9	11.8	4.9	24
31	1	0.8	2.8	2.2	2.4	0.7	3.9	4.4	5	4.7	4.6	3.1	2.7	4.5	3	2.7	3	5	5.4	4.2	3.8	7.4	5	2.8	7.4	3.5	24
HOURLY MAX	11	11	10	10	10	11	9	15	13	16	17	14	13	12	10	7	9	9	10	13	12	13	13	13			
HOURLY AVG	3.6	3.5	3.6	3.2	2.8	3.2	3.3	3.9	3.9	5.0	5.2	3.4	3.1	3.0	3.2	3.1	3.1	3.4	3.8	4.5	4.0	4.0	3.8	3.7			

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

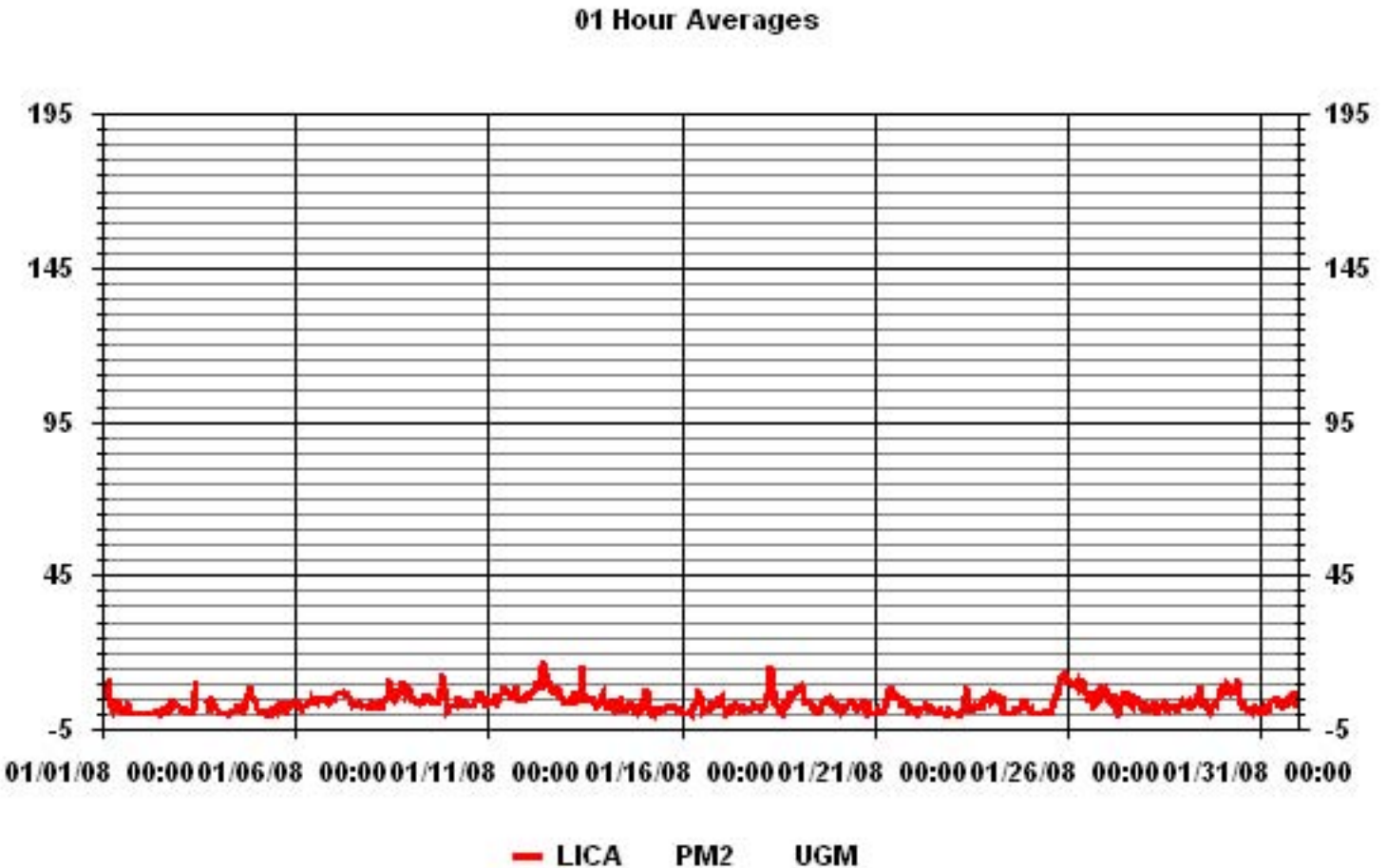
OBJECTIVE LIMIT: **ALBERTA ENVIRONMENT:** 1-HR - PPB 24-HR 30 PPB



MONTHLY SUMMARY

NUMBER OF 1-HR EXCEEDENCES:	-					
NUMBER OF 24-HR EXCEEDENCES:	0	PROPOSED CANADA WIDE GUIDELINE				
NUMBER OF NON-ZERO READINGS:	673					
MAXIMUM 1-HR AVERAGE:	17.2	UG/M^3	@ HOUR(S)	11	ON DAY(S)	12
MAXIMUM 24-HR AVERAGE:	8.8	UG/M^3			ON DAY(S)	12

IZS CALIBRATION TIME:	0	HRS	OPERATIONAL TIME:	744	HRS
MONTHLY CALIBRATION TIME:	6	HRS	AMD OPERATION UPTIME:	100.0	%
STANDARD DEVIATION:	2.89		MONTHLY AVERAGE:	3.64	UG/M^3


01 Hour Averages
195
145
95
45
-5
01/01/08 00:00
01/06/08 00:00
01/11/08 00:00
01/16/08 00:00
01/21/08 00:00
01/26/08 00:00
01/31/08 00:00
LICA PM2 UGM

LICA
PM2 / WD Joint Frequency Distribution (Percent)

January 2008

Distribution By % Of Samples

Logger Id : 01
Site Name : LICA
Parameter : PM 2.5
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	3.65	9.21	7.72	4.60	6.91	6.77	9.34	2.98	2.71	3.65	12.60	15.44	5.42	2.03	3.65	3.25	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	3.65	9.21	7.72	4.60	6.91	6.77	9.34	2.98	2.71	3.65	12.60	15.44	5.42	2.03	3.65	3.25	

Calm : .00 %

Total # Operational Hours : 738

Distribution By Samples

Direction

	Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
<	30.0	27	68	57	34	51	50	69	22	20	27	93	114	40	15	27	24	738
<	60.0																	
<	80.0																	
<	120.0																	
<	240.0																	
>=	240.0																	
	Totals	27	68	57	34	51	50	69	22	20	27	93	114	40	15	27	24	

Calm : .00 %

Total # Operational Hours : 738

Logger : 01 Parameter : PM2

Class Limits (UG/M3)

>= 240.0

< 240.0

< 120.0

< 80.0

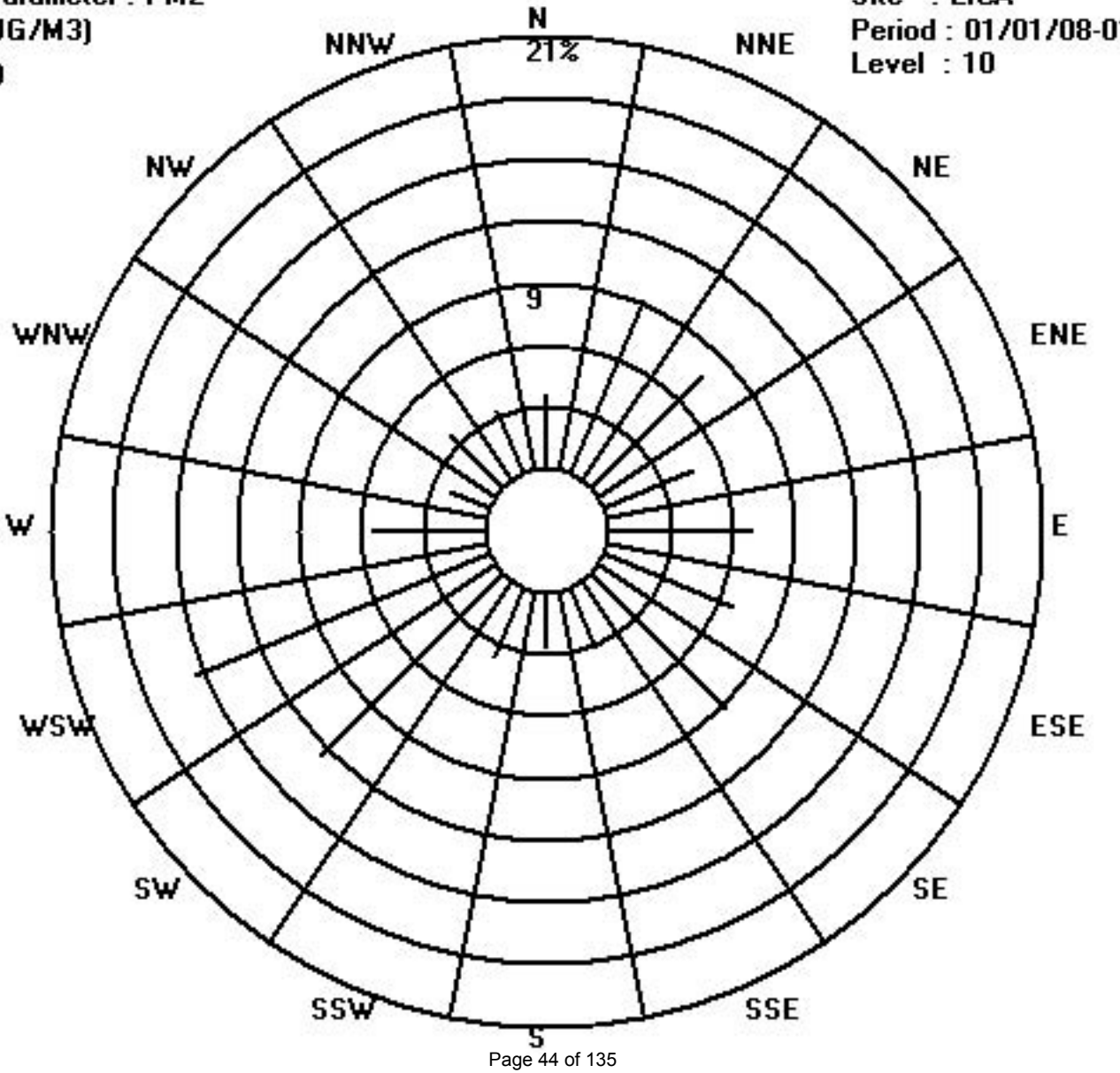
< 60.0

< 30.0

Site : LICA

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

Level : 10



LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

JANUARY 2008

PARTICULATE MATTER 2.5 MAX instantaneous maximum in ug/m^3

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	9.2	10.4	13.2	13.9	9.7	5.6	4.4	6.1	5.7	8	5.7	4	3.5	4	4.8	4.9	11	3.6	1.6	2.2	2.4	1.9	1	1.2	13.9	5.8	24
2	1.9	1.4	0.7	2.4	2.4	2.4	3.3	2.1	3.2	3.8	5.3	4.8	2.7	5.6	6	4.9	4.4	7.5	9.9	6.9	5.6	6.6	5.7	6.4	9.9	4.4	24
3	3.6	4.2	3.8	4	3.6	2.7	3.1	1.2	4.3	12.5	16.9	**C**	**C**	**C**	**C**	**C**	**C**	10.6	3.8	12.1	12.1	7.5	6	5.7	16.9	6.5	24
4	0	1.2	2.6	1.7	3.8	3.6	2.3	2.4	4.4	4	4.6	3.3	4.7	4.5	3.9	5	3.8	5.9	5.9	12.9	11.4	9.5	8.4	9.9	12.9	5.0	24
5	9.5	5.6	7.3	2.4	4.3	5.3	6.4	6.7	3.4	6.8	3.6	5.8	3.2	4.3	9.8	6.6	6	3.9	6.1	6.4	7.2	4.9	5.4	6.2	9.8	5.7	24
6	5.9	6.4	6.7	4.9	4.5	4.9	4.3	7.1	6.7	8.4	9.5	6.6	7.3	5.9	7.2	7.6	6.8	6.8	6.8	6.6	6.5	7	7.1	6	9.5	6.6	24
7	6.8	8.3	9.9	9.4	9	8.2	8.8	8.4	8.8	8.8	6.7	5.4	5.1	4.7	6.1	6.2	6.4	5.7	4.4	5	5	5.8	6.4	4.9	9.9	6.8	24
8	5.5	5.9	5.7	5.1	4.4	7.3	7.6	8	7.2	10.1	20.2	11.4	13.5	21	6.5	8.4	11.3	13.6	21.5	18	9.3	10.1	16	10.5	21.5	10.8	24
9	6.5	8.9	6.5	6.4	7.3	6.4	6.5	7.4	7.3	8.1	8.7	7.8	8.6	7	6.5	7.1	6.5	7	**30.4**	29.8	16.4	18.3	4.4	4.6	30.4	9.8	24
10	5.1	5.1	5.5	4.9	5	16	6.5	6.5	8.9	8.9	5.7	5	4.8	7.1	8	6.2	6	7.3	11	24.1	11.1	14.9	6	5.4	24.1	8.1	24
11	6.6	7.2	6	7.3	5.9	14.9	7.1	8.6	8.3	10.3	13.8	11.7	13	8	8.8	9.2	14.3	15.8	7.6	7.6	9.3	10.5	8.5	8.4	15.8	9.5	24
12	9.8	8.4	9.7	10.3	12	13.5	12	12.1	12	21.6	22.4	17.1	15.9	13.9	12.9	9.7	14	8.7	11.3	11.5	9.3	6.7	8.5	5.5	22.4	12.0	24
13	5.7	6	7.8	8.5	7.7	9.2	14.3	8.4	10	12.4	21.1	15.6	6.5	7.7	7.8	8.2	8	8.9	7.6	6.7	6.1	9	8.8	12	21.1	9.3	24
14	8.4	8.5	7.1	6.6	5	7	4.6	6.5	7.1	9.2	9.4	9.2	4	5	6.7	5.9	14.4	8.8	9.5	3.8	3.6	11.4	4.5	5.6	14.4	7.2	24
15	7.1	7.8	12.5	7.1	5	4.5	6.5	2.7	4.5	3.2	3	4.3	4.6	4.4	4.5	4.9	5.5	5.3	4.5	5.9	5	4.8	6.4	5.6	12.5	5.4	24
16	4.7	3.2	3.6	3.2	2.7	4.5	2.3	4.2	8	8	14.4	7.9	9.6	4.5	7.6	5.3	4.7	3.5	6.7	6.6	5	4.9	6.2	9.9	14.4	5.9	24
17	7.4	9.4	8.7	2.6	3.8	5	4.3	4.5	5	5.7	6.1	5.7	4	4.2	4.6	3.7	4.2	3.8	5	4.6	6.2	5.3	4.7	5.1	9.4	5.2	24
18	5	4.3	5	5.4	10.5	9.5	13.8	19.9	16.9	12.1	8.4	9.5	4.7	3.2	2.8	5.5	6.9	5.9	6.1	12.4	10	8.7	8.8	11.7	19.9	8.6	24
19	10.5	12.7	12.9	10.6	8	6.1	7.5	8.4	4.7	5.5	4.9	3	2.9	3.5	4.6	5.9	5.9	7.3	5.6	9.2	7.1	9.6	7.2	5.3	12.9	7.0	24
20	7	7.5	5	3.3	3.7	4.8	5.2	5.5	6.4	5.8	6.4	6.4	5	3.7	4.2	4.9	3.9	8	5.5	5.5	3.9	3.4	2.9	1.5	8	5.0	24
21	1.5	2	3.8	2.8	2.3	3.6	5.3	9.4	10.9	11.5	12.6	9	8.3	8.8	8.6	7.1	8.5	5.6	7.6	7.8	4.3	4	7.7	6.5	12.6	6.6	24
22	5.4	5.9	3.1	4.4	4	3.7	6.6	6.2	5.9	2.8	5.5	3.2	5	3.3	3.9	3.7	3.7	3.3	2	3.7	2.8	3.4	5.7	3.5	6.6	4.2	24
23	3.3	2.1	1.7	2.7	2.8	2.1	5	8.3	9	12.1	8.5	9	4.8	4	5.4	4.8	4	5.9	3.9	7	7.5	7.1	10	9.2	12.1	5.8	24
24	6.6	7.2	9.3	9.8	7.6	9.9	7.2	10.9	3.5	3.6	1.8	2	2.8	1.6	2.7	4.3	3.9	4.3	5.1	7.8	7.2	10.5	4.7	3.9	10.9	5.8	24
25	4	5	3.6	1	0	1.4	2	2.1	2.9	3.9	3.8	1.7	2.6	1.7	4.6	6.6	7.3	8.4	11.4	12.7	14.3	17.4	16.8	15.4	17.4	6.3	24
26	13.5	14.2	12.2	13.3	12.6	12.8	11.3	15	13.8	18.8	13.3	9.2	8.7	6.4	9.5	10.9	6.6	8.7	7	12.4	13.3	11.6	8	9.9	18.8	11.4	24
27	11.5	10.5	7.2	6	6.8	10.6	5.3	2.3	3.2	6.1	8.3	9	9.9	14.8	11.3	7	6.1	9.5	8.2	10.9	8.1	6.6	6	3.8	14.8	7.9	24
28	6.5	7	5.7	7.6	6.7	6	8.9	5.4	3.9	5.4	6.4	7.7	6	6.5	6.5	5.9	5.1	6.2	6.1	5.4	5.5	6.7	6.6	7.3	8.9	6.3	24
29	6.1	6	8.6	5.8	5.5	6.5	6.7	8.4	7.5	10.7	13.6	12.1	13.2	7	7.7	6.7	4.8	4.9	6.7	10.5	6	8.7	10.4	11.9	13.6	8.2	24
30	13.2	11.3	11.1	15.1	13	10.1	14.5	13	12	16.1	14	7.3	8.7	6.7	5.1	5	4.9	4.9	5.6	5.8	6.7	5.5	6.4	6.4	16.1	9.3	24
31	4.8	4.3	7	5.6	6.2	5.5	8.9	7.6	8.7	9.8	7.7	7.7	7.8	11.4	5.6	6.5	5.6	7.7	10.3	7.7	7.7	13.1	12.4	6.5	13.1	7.8	24
HOURLY MAX	14	14	13	15	13	16	15	20	17	22	22	17	16	21	13	11	14	16	30	30	16	18	17	15			
HOURLY AVG	6.5	6.7	6.9	6.3	6.0	6.9	6.9	7.3	7.2	8.8	9.4	7.4	6.7	6.5	6.5	6.3	6.8	7.0	7.9	9.3	7.6	8.2	7.3	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

MONTHLY SUMMARY

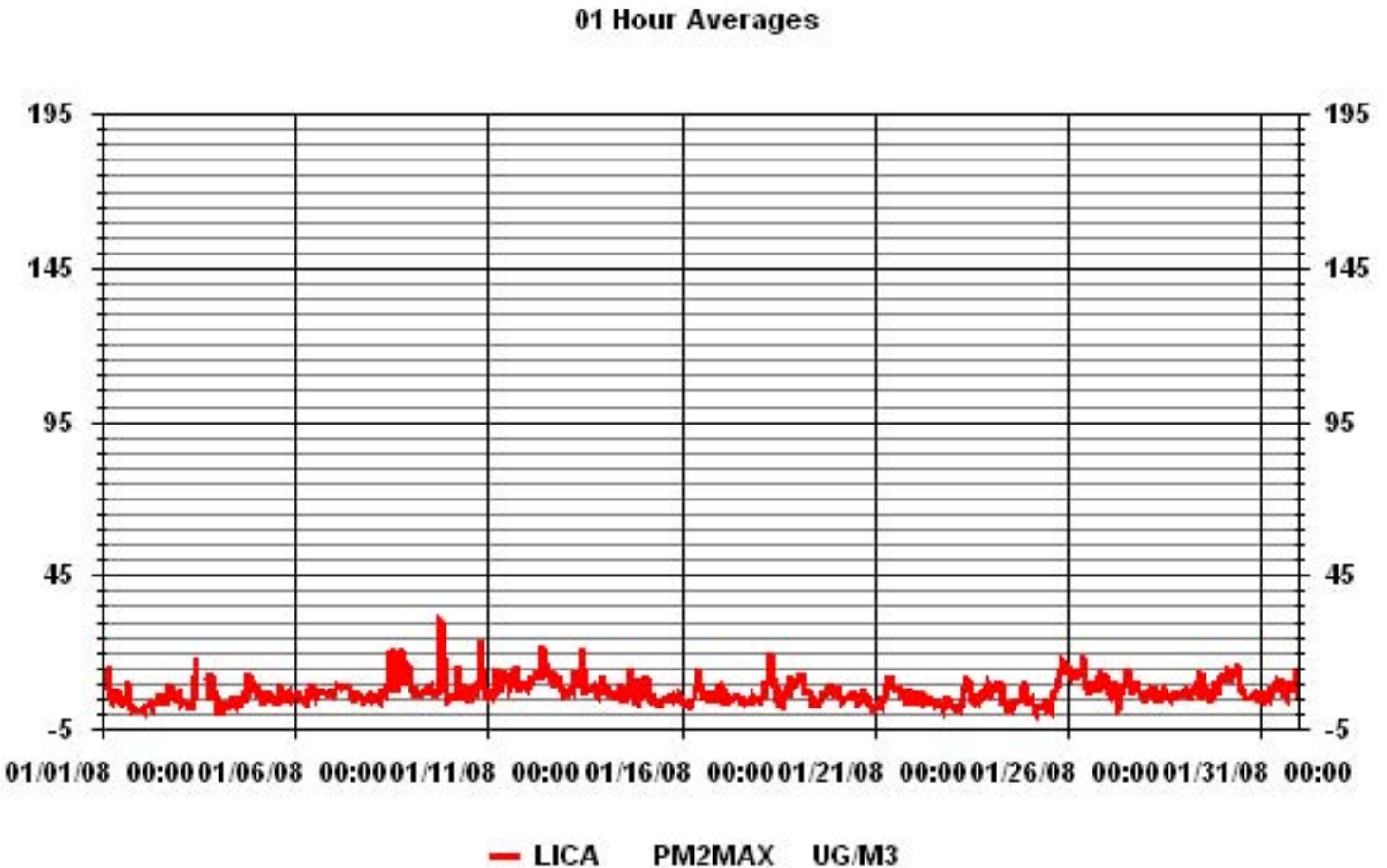
NUMBER OF NON-ZERO READINGS: 736

MAXIMUM INSTANTANEOUS VALUE: 30.4 UG/M^3 @ HOUR(S) 19 ON DAY(S) 9

IZS CALIBRATION TIME: 0 HRS OPERATIONAL TIME: 744 HRS

MONTHLY CALIBRATION TIME: 6 HRS

STANDARD DEVIATION 3.83


01 Hour Averages
195
145
95
45
-5
01/01/08 00:00
01/06/08 00:00
01/11/08 00:00
01/16/08 00:00
01/21/08 00:00
01/26/08 00:00
01/31/08 00:00
LICA PM2MAX UG/M3

Nitrogen Dioxide

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

JANUARY 2008

NITROGEN DIOXIDE hourly averages in ppb

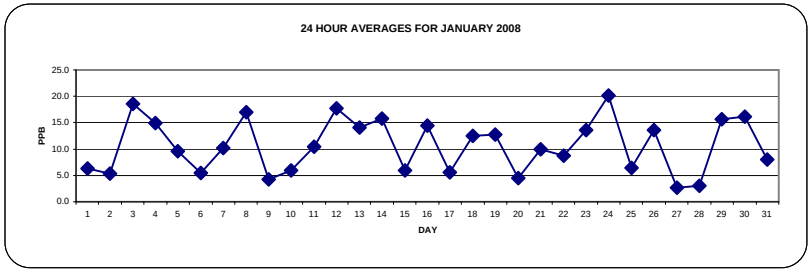
MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	9	11	15	15	9	5	3	**IZS**	9	9	6	3	2	2	5	6	17	6	2	2	2	3	2	2	17	6.3	24
2	2	2	2	2	2	2	**IZS**	3	3	3	3	3	3	3	5	7	12	13	12	11	9	9	7	6	13	5.4	24
3	5	4	4	4	5	**IZS**	9	22	20	**C**	**C**	**C**	**C**	**C**	**C**	**IZS**	22	**37**	33	33	32	31	27	10	37	18.6	24
4	10	12	8	8	**IZS**	6	4	4	7	9	6	7	7	8	10	15	26	29	30	29	32	29	27	20	32	14.9	24
5	14	15	9	**IZS**	6	8	7	7	10	5	7	7	6	8	9	8	11	10	13	19	15	11	9	7	19	9.6	24
6	7	7	**IZS**	5	4	4	5	4	5	8	5	4	3	3	4	5	5	7	7	6	6	9	7	7	9	5.5	24
7	4	**IZS**	5	4	4	4	8	12	14	10	5	3	3	3	6	12	22	22	17	12	16	15	16	17	22	10.2	24
8	**IZS**	15	16	15	16	17	19	23	20	17	18	18	13	15	10	13	16	18	21	21	20	19	15	**IZS**	23	17.0	24
9	6	6	5	5	4	4	4	7	4	4	3	2	2	2	3	4	5	9	7	3	4	3	**IZS**	2	9	4.3	24
10	3	3	3	2	4	6	6	9	14	4	4	3	4	4	4	7	11	14	10	6	7	**IZS**	5	5	14	6.0	24
11	5	6	6	6	5	10	14	18	16	12	9	11	10	9	9	10	14	14	11	11	**IZS**	11	10	12	18	10.4	24
12	12	11	14	15	16	23	23	22	21	19	23	20	20	17	16	16	22	20	21	**IZS**	17	16	14	10	23	17.7	24
13	13	15	14	13	12	11	10	15	17	13	8	7	8	10	10	13	19	21	**IZS**	17	18	21	20	19	21	14.1	24
14	17	14	15	16	16	17	19	20	23	21	17	11	11	12	13	17	20	**IZS**	21	18	15	16	6	8	23	15.8	24
15	15	14	12	8	6	3	4	3	2	2	1	2	2	2	2	2	**IZS**	5	4	5	6	10	14	14	15	6.0	24
16	7	7	6	7	13	9	12	17	22	17	21	15	20	12	10	**IZS**	16	17	18	19	16	13	19	19	22	14.4	24
17	21	18	9	3	3	3	6	5	4	3	3	2	2	3	**IZS**	3	2	3	3	3	3	5	10	11	21	5.6	24
18	12	8	7	4	5	4	5	7	11	7	7	7	4	**IZS**	5	7	9	13	32	30	28	26	25	25	32	12.5	24
19	24	25	25	27	16	18	11	5	3	4	3	2	**IZS**	3	2	3	3	6	18	24	18	19	18	15	27	12.7	24
20	11	5	4	3	3	4	3	4	4	4	4	**IZS**	3	3	3	4	5	10	6	5	5	5	4	2	11	4.5	24
21	2	2	2	2	2	4	9	12	13	16	**IZS**	10	10	10	10	11	19	21	23	16	9	8	10	7	23	9.9	24
22	8	8	7	6	5	5	5	5	4	**IZS**	1	1	1	1	1	1	2	15	26	18	19	21	21	19	26	8.7	24
23	13	11	12	13	17	23	26	27	**IZS**	15	5	5	6	5	6	7	9	12	13	15	15	16	20	22	27	13.6	24
24	22	21	24	23	21	27	25	**IZS**	5	4	6	6	3	2	3	19	27	35	**37**	33	32	33	27	28	37	**20.1**	24
25	28	14	2	5	6	4	**IZS**	3	3	2	2	3	2	3	4	4	5	6	7	8	7	6	10	15	28	6.5	24
26	14	12	9	11	14	**IZS**	21	19	15	15	12	11	10	9	17	20	10	13	14	16	12	12	15	12	21	13.6	24
27	13	11	9	7	**IZS**	4	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	13	2.7	24
28	1	0	1	**IZS**	1	1	0	1	1	1	0	0	0	0	0	1	1	2	2	3	8	15	14	17	17	3.0	24
29	17	11	**IZS**	7	6	10	20	29	24	16	17	8	6	4	5	4	11	22	24	21	22	23	25	27	29	15.6	24
30	29	**IZS**	29	31	32	35	34	33	30	27	9	4	4	4	5	6	13	13	7	2	3	5	9	7	35	16.1	24
31	**IZS**	6	5	4	5	7	22	23	17	10	4	3	3	2	3	3	5	15	12	11	6	7	4	**IZS**	23	8.0	24
HOURLY MAX	29	25	29	31	32	35	34	33	30	27	23	20	20	17	17	20	27	37	37	33	32	33	27	28			
HOURLY AVG	11.9	10.1	9.6	9.3	8.9	9.6	11.6	12.4	11.4	9.6	7.2	6.2	5.8	5.5	6.2	7.9	12.0	14.3	15.1	13.9	13.4	13.9	13.7	12.6			

STATUS FLAG CODES

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

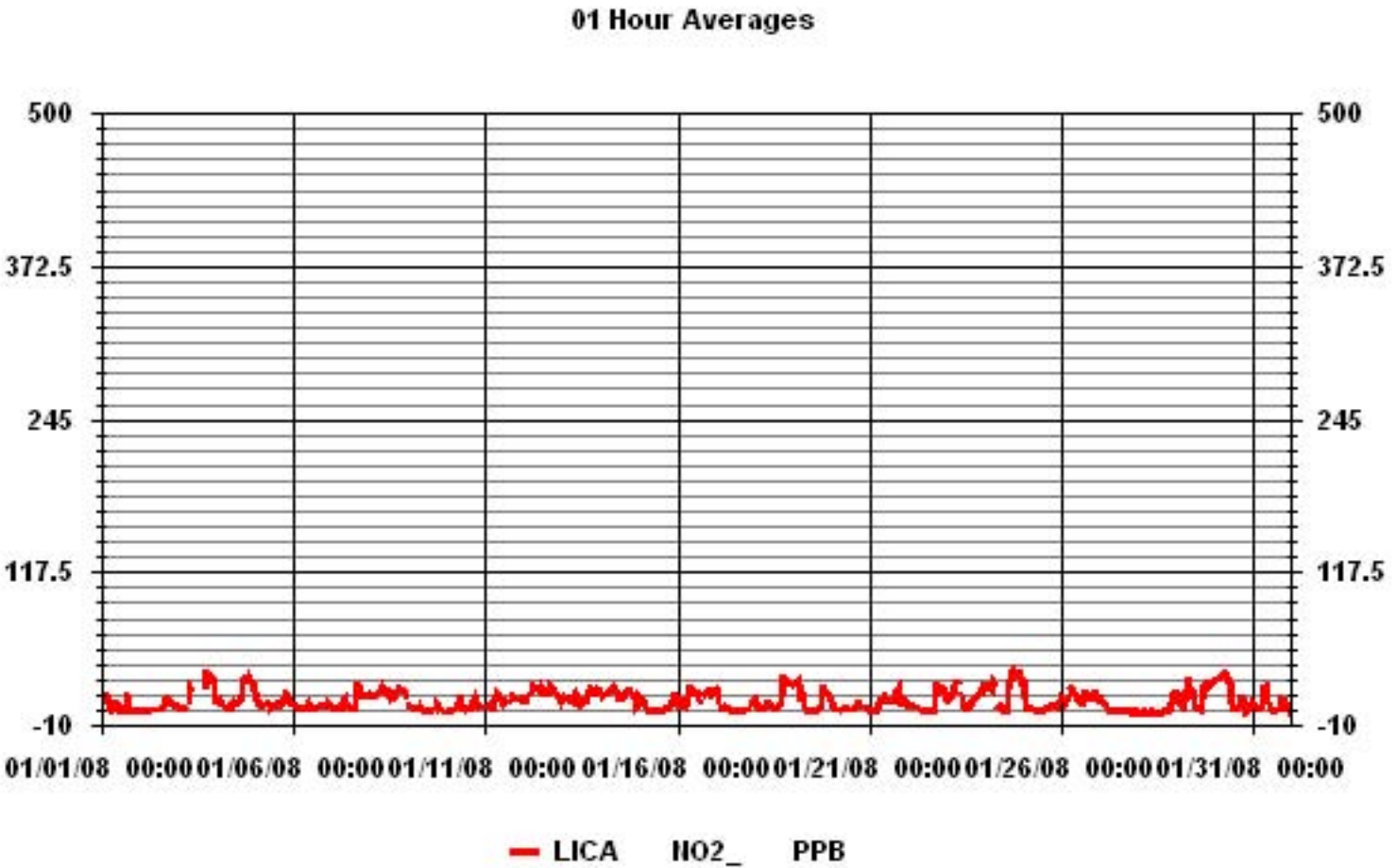
OBJECTIVE LIMIT: **ALBERTA ENVIRONMENT:** 1-HR 212 PPB | 24-HR 106 PPB



MONTHLY SUMMARY

NUMBER OF 1-HR EXCEEDENCES:	0					
NUMBER OF 24-HR EXCEEDENCES:	0					
NUMBER OF NON-ZERO READINGS:	696					
MAXIMUM 1-HR AVERAGE:	37	PPB	@ HOUR(S)	18,19	ON DAY(S)	3,24
MAXIMUM 24-HR AVERAGE:	20.1	PPB			ON DAY(S)	24

IZS CALIBRATION TIME:	34	HRS	OPERATIONAL TIME:	744	HRS
MONTHLY CALIBRATION TIME:	6	HRS	AMD OPERATION UPTIME:	100.0	%
STANDARD DEVIATION:	8.01		MONTHLY AVERAGE:	10.55	PPB


01 Hour Averages
500
372.5
245
117.5
-10
01/01/08 00:00
01/06/08 00:00
01/11/08 00:00
01/16/08 00:00
01/21/08 00:00
01/26/08 00:00
01/31/08 00:00
LICA NO2_ PPB

LICA
NO2_ / WD Joint Frequency Distribution (Percent)

January 2008

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	3.40	8.66	7.81	4.40	6.67	6.96	8.94	2.98	2.84	3.83	12.92	15.62	5.68	2.13	3.69	3.40	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	3.40	8.66	7.81	4.40	6.67	6.96	8.94	2.98	2.84	3.83	12.92	15.62	5.68	2.13	3.69	3.40	

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	24	61	55	31	47	49	63	21	20	27	91	110	40	15	26	24	704
<	110																	
<	210																	
>=	210																	
	Totals	24	61	55	31	47	49	63	21	20	27	91	110	40	15	26	24	

Calm : .00 %

Total # Operational Hours : 704

Logger : 01 Parameter : NO2_

Class Limits (PPB)

>= 210

< 210

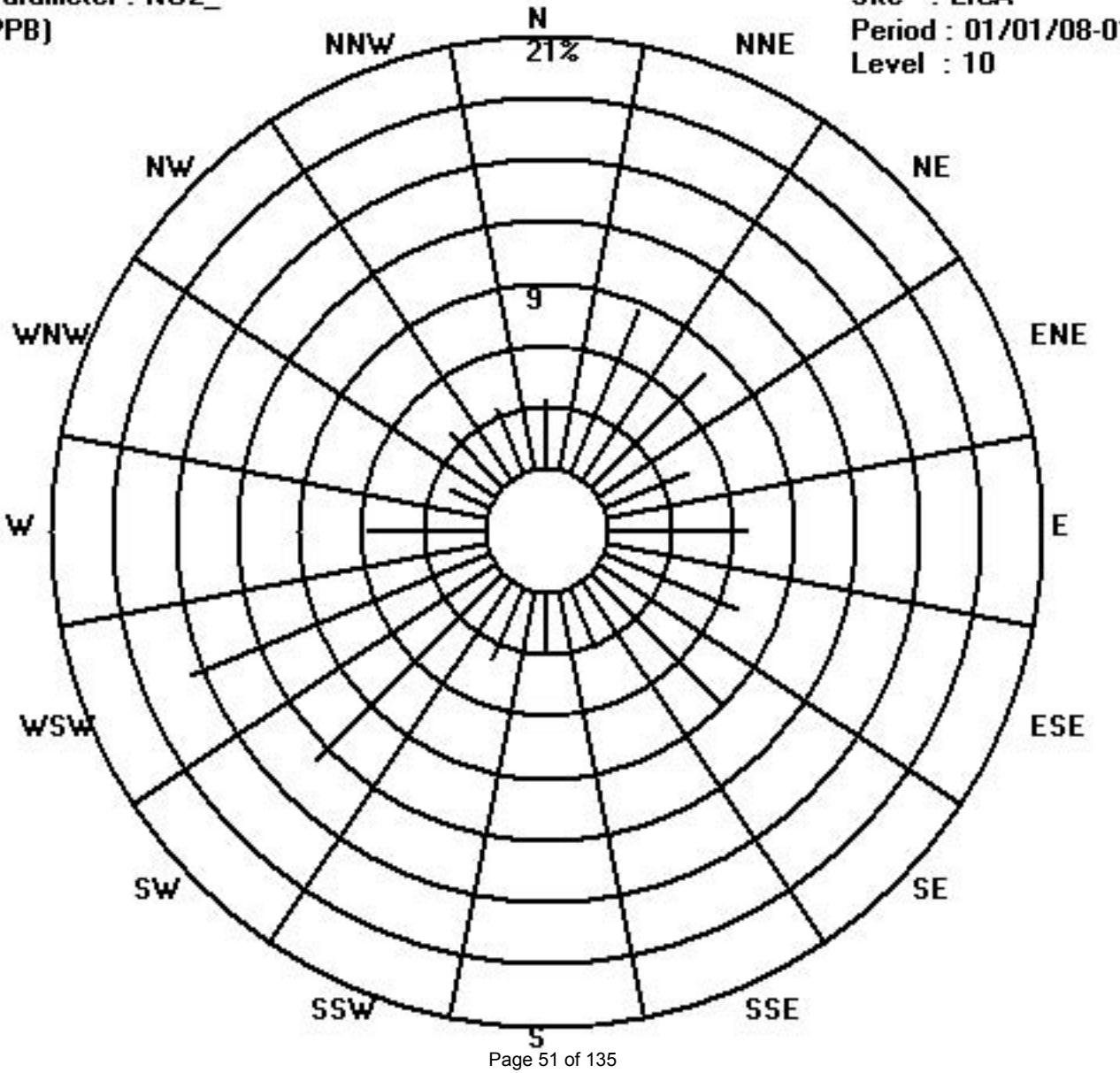
< 110

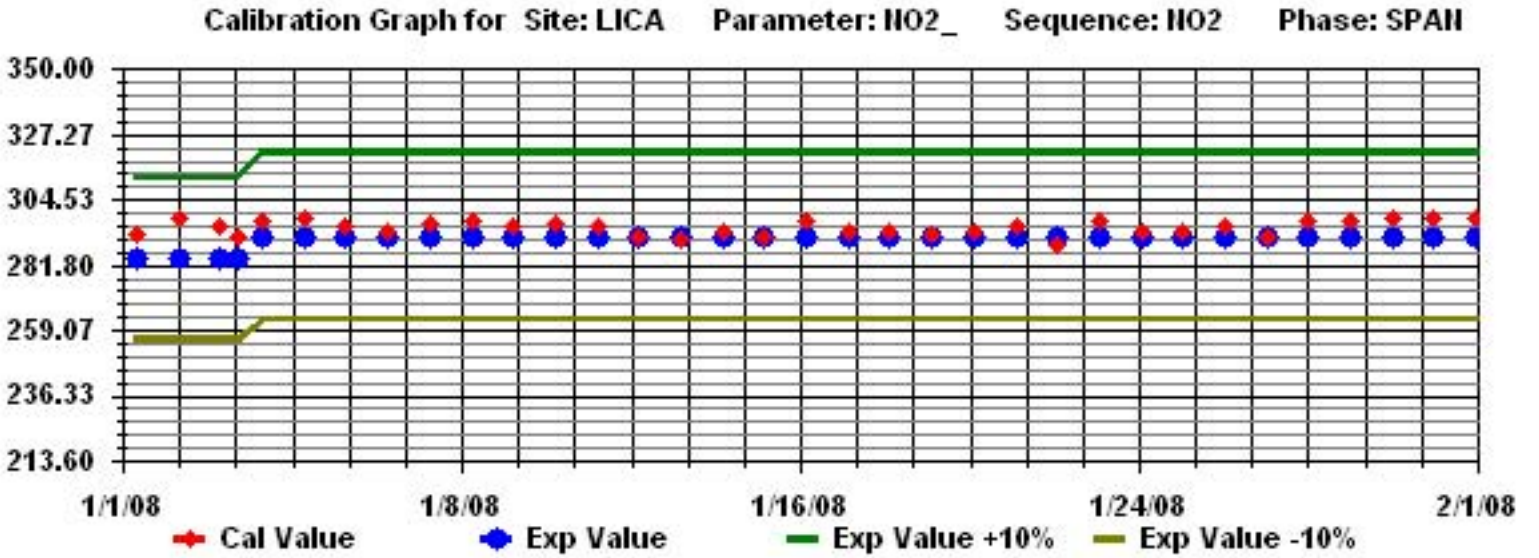
< 50

Site : LICA

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

Level : 10




Calibration Graph for Site: LICA Parameter: NO2_ Sequence: NO2 Phase: SPAN
350.00
327.27
304.53
281.80
259.07
236.33
213.60
1/1/08
1/8/08
1/16/08
1/24/08
2/1/08
Cal Value
Exp Value
Exp Value +10%
Exp Value -10%

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

JANUARY 2008

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	10	14	17	18	12	8	3	**IZS**	14	14	8	5	5	5	10	10	27	11	2	4	3	5	3	2	27	9.1	24
2	7	3	3	3	3	4	**IZS**	4	15	19	5	17	4	5	8	10	21	18	15	14	10	11	8	7	21	9.3	24
3	6	5	4	5	6	**IZS**	20	45	31	**C**	**C**	**C**	**C**	**C**	**C**	**IZS**	39	42	37	38	37	35	38	17	45	25.3	24
4	14	15	11	14	**IZS**	16	6	6	13	11	7	8	9	9	13	28	34	40	48	36	38	31	30	26	48	20.1	24
5	19	22	15	**IZS**	7	11	13	18	24	12	20	14	14	23	15	13	23	13	16	24	24	15	12	8	24	16.3	24
6	10	7	**IZS**	6	6	6	8	4	9	13	7	6	4	5	5	6	6	8	10	8	10	12	9	11	13	7.7	24
7	5	**IZS**	8	5	6	7	12	15	22	18	10	4	5	4	11	23	27	26	21	17	20	19	21	20	27	14.2	24
8	**IZS**	18	18	17	18	26	31	41	24	20	22	24	18	21	15	16	19	23	23	23	22	22	21	**IZS**	41	21.9	24
9	10	8	10	8	5	5	6	14	8	6	6	6	6	6	6	13	12	21	13	8	6	5	**IZS**	10	21	8.6	24
10	4	5	5	5	6	16	10	16	27	8	7	4	7	7	7	14	16	20	13	10	18	**IZS**	9	9	27	10.6	24
11	7	15	12	10	5	17	19	21	19	15	14	15	12	11	12	14	19	20	13	22	**IZS**	15	13	14	22	14.5	24
12	15	13	15	17	19	25	27	25	33	26	29	23	23	20	18	20	30	23	24	**IZS**	22	19	17	11	33	21.5	24
13	16	17	18	14	13	13	12	21	29	18	17	10	8	24	13	16	28	27	**IZS**	21	22	29	27	20	29	18.8	24
14	18	17	17	18	30	30	32	40	30	27	22	18	24	18	17	21	24	**IZS**	23	24	19	26	8	15	40	22.5	24
15	20	15	16	10	8	4	5	3	3	3	3	2	2	2	2	2	**IZS**	6	5	7	9	15	21	22	22	8.0	24
16	9	10	13	14	20	11	22	25	31	21	34	19	24	16	12	**IZS**	20	19	28	28	18	15	21	22	34	19.7	24
17	23	22	24	5	4	13	22	14	14	5	12	5	12	5	**IZS**	6	4	6	5	6	6	10	20	23	24	11.6	24
18	17	11	9	7	7	7	6	10	18	11	8	9	5	**IZS**	7	16	12	26	38	36	33	30	28	28	38	16.5	24
19	30	29	29	29	26	20	20	9	5	23	7	4	**IZS**	6	7	5	6	17	26	45	28	24	26	20	45	19.2	24
20	19	7	6	5	3	5	5	6	5	5	5	**IZS**	4	3	4	19	9	15	10	8	6	7	7	3	19	7.2	24
21	3	2	2	2	3	6	18	15	19	17	**IZS**	11	11	11	11	14	23	31	28	26	12	12	13	8	31	13.0	24
22	9	9	8	7	5	6	7	6	5	**IZS**	2	2	1	2	3	2	6	30	35	28	24	28	37	23	37	12.4	24
23	19	14	15	23	27	31	56	39	**IZS**	36	10	8	15	6	7	9	11	13	18	20	18	17	27	27	56	20.3	24
24	26	27	33	27	28	36	29	**IZS**	13	10	31	12	6	8	33	53	43	45	45	44	53	37	36	33	53	30.8	24
25	32	29	4	8	11	9	**IZS**	5	4	3	3	5	11	7	17	7	8	16	9	8	8	7	15	16	32	10.5	24
26	20	19	10	19	19	**IZS**	26	26	21	24	20	12	12	13	26	28	16	38	21	20	18	18	19	16	38	20.0	24
27	18	18	13	8	**IZS**	4	3	2	2	2	3	2	2	2	4	2	2	5	6	6	2	1	2	1	18	4.8	24
28	1	1	1	**IZS**	1	1	1	1	1	1	1	1	1	1	1	1	3	4	3	4	13	21	19	21	21	4.5	24
29	21	16	**IZS**	16	10	25	31	33	34	22	21	12	8	6	5	6	21	27	31	32	30	28	28	30	34	21.4	24
30	33	**IZS**	34	37	38	40	39	39	37	33	24	6	8	7	7	12	17	23	17	4	7	10	11	11	40	21.5	24
31	**IZS**	9	7	6	8	21	**100**	81	53	46	8	6	4	4	5	4	10	25	16	19	17	12	6	**IZS**	100	21.2	24
HOURLY MAX	33	29	34	37	38	40	100	81	53	46	34	24	24	24	33	53	43	45	48	45	53	37	38	33			
HOURLY AVG	15.2	13.7	13.0	12.5	12.2	14.6	20.3	20.1	18.8	16.2	12.6	9.3	9.1	8.9	10.4	13.4	17.9	21.3	20.0	19.7	18.4	17.9	18.4	16.3			

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

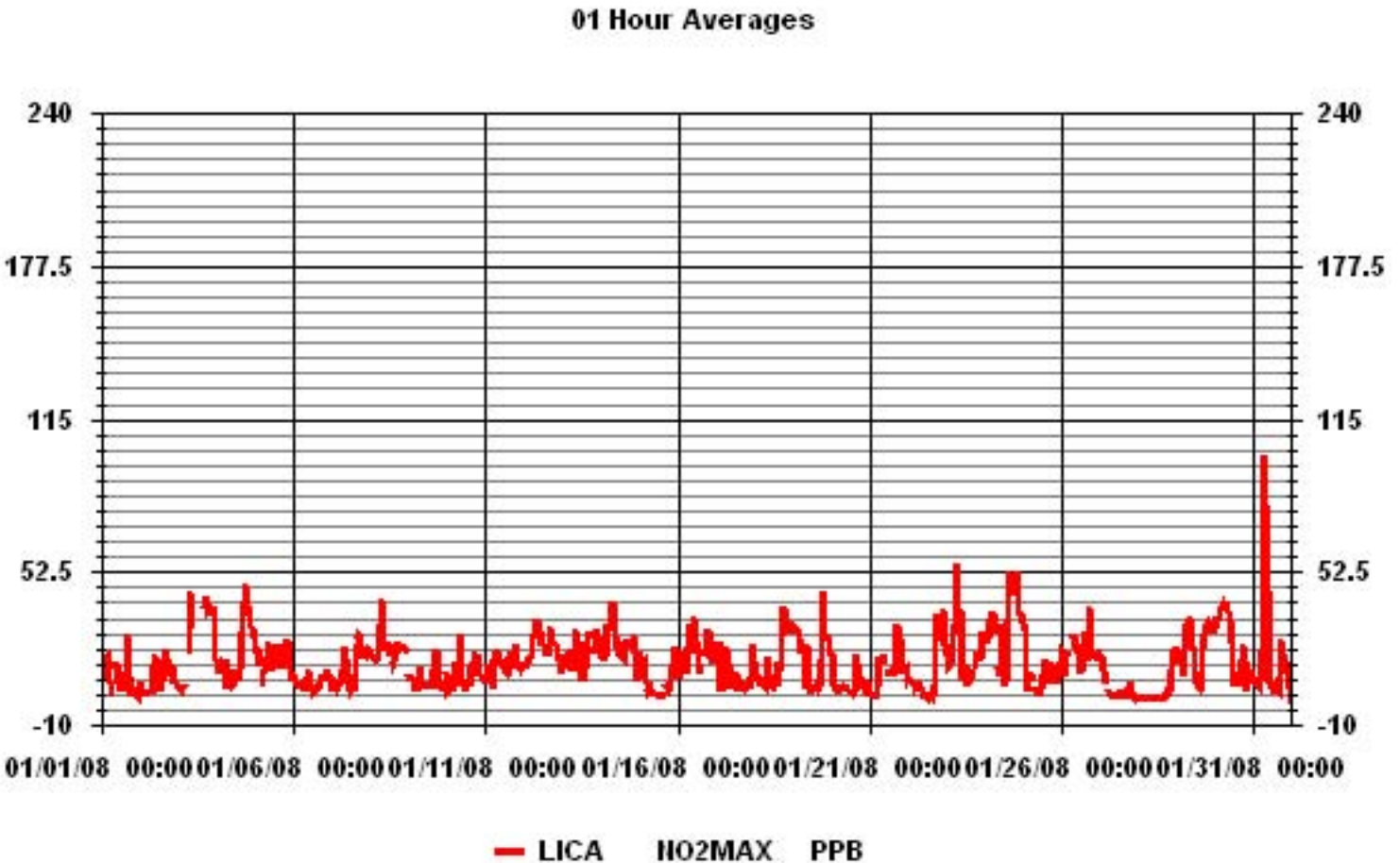
NUMBER OF NON-ZERO READINGS: 704

MAXIMUM INSTANTANEOUS VALUE: 100 PPB @ HOUR(S) 7 ON DAY(S) 31

IZS CALIBRATION TIME: 34 HRS OPERATIONAL TIME: 744 HRS

MONTHLY CALIBRATION TIME: 6 HRS

STANDARD DEVIATION 11.29


01 Hour Averages
240
177.5
115
52.5
-10
01/01/08 00:00
01/06/08 00:00
01/11/08 00:00
01/16/08 00:00
01/21/08 00:00
01/26/08 00:00
01/31/08 00:00
LICA NO2MAX PPB

Nitric Oxide

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

JANUARY 2008

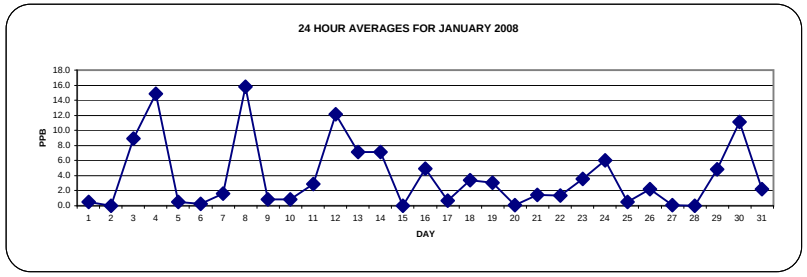
NITRIC OXIDE hourly averages in ppb

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	0	0	0	0	0	0	0	**IZS**	1	2	2	1	1	0	1	1	3	0	0	0	0	0	0	0	3	0.5	24
2	0	0	0	0	0	0	**IZS**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
3	0	0	0	0	0	**IZS**	0	4	2	**C**	**C**	**C**	**C**	**C**	**C**	**IZS**	2	22	24	30	27	24	8	0	30	8.9	24
4	0	0	0	0	**IZS**	0	0	0	0	0	1	3	3	3	3	4	11	31	55	65	**87**	45	23	7	87	14.8	24
5	0	0	0	**IZS**	0	0	0	0	1	0	2	2	2	2	2	1	0	0	0	0	0	0	0	0	2	0.5	24
6	0	0	**IZS**	0	0	0	0	0	0	1	2	1	1	0	0	0	0	0	0	0	0	0	0	0	2	0.2	24
7	0	**IZS**	0	0	0	0	0	0	4	2	1	1	1	1	2	3	9	8	2	0	2	1	0	1	9	1.7	24
8	**IZS**	4	3	3	5	17	31	31	33	32	37	34	16	23	10	6	4	5	8	14	16	11	4	**IZS**	37	**15.8**	24
9	1	1	1	1	1	1	1	3	1	1	1	1	1	1	1	1	0	1	0	1	0	0	**IZS**	0	3	0.9	24
10	0	0	0	0	0	1	1	1	4	1	1	1	2	2	1	2	1	2	0	0	0	**IZS**	0	0	4	0.9	24
11	0	0	0	0	0	1	5	8	5	5	7	10	8	6	5	2	2	1	0	1	**IZS**	0	0	0	10	2.9	24
12	0	0	0	0	0	7	11	14	21	31	50	33	34	22	14	10	14	7	7	**IZS**	2	2	1	0	50	12.2	24
13	1	1	0	0	0	0	0	2	18	8	5	4	5	6	6	5	10	22	**IZS**	5	13	25	22	7	25	7.2	24
14	3	1	1	1	4	5	13	12	20	32	19	9	8	10	6	8	6	**IZS**	4	1	0	2	0	0	32	7.2	24
15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**IZS**	0	0	0	0	0	0	0	0	0.0	24
16	0	0	0	0	1	0	0	5	26	21	30	13	12	4	2	**IZS**	0	0	0	0	0	0	0	0	30	5.0	24
17	0	0	2	0	0	0	7	1	1	1	1	1	1	1	**IZS**	0	0	0	0	0	0	0	0	0	7	0.7	24
18	0	0	0	0	0	0	0	0	0	1	1	2	1	**IZS**	1	1	0	0	14	14	11	9	9	14	14	3.4	24
19	8	15	14	8	2	1	1	0	0	1	1	0	**IZS**	1	0	1	0	0	3	7	2	2	2	1	15	3.0	24
20	0	0	0	0	0	0	0	0	0	0	0	**IZS**	0	0	0	1	0	0	0	0	0	0	0	0	1	0.0	24
21	0	0	0	0	0	0	0	0	1	5	**IZS**	7	7	6	4	2	2	0	0	0	0	0	0	0	7	1.5	24
22	0	0	0	0	0	0	0	0	0	**IZS**	0	0	0	0	0	0	0	1	6	1	2	7	13	2	13	1.4	24
23	1	0	0	0	2	7	19	25	**IZS**	17	2	2	3	2	1	1	0	0	0	0	0	0	0	0	25	3.6	24
24	0	0	3	2	1	6	1	**IZS**	1	2	3	1	1	0	1	10	4	17	31	24	12	8	6	5	31	6.0	24
25	6	2	0	0	0	0	**IZS**	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	6	0.5	24
26	0	0	0	0	0	**IZS**	1	3	2	9	6	5	5	4	10	5	0	0	0	0	0	0	1	0	10	2.2	24
27	0	0	0	0	**IZS**	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0.0	24
28	0	0	0	**IZS**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
29	0	0	**IZS**	0	0	0	2	16	12	15	24	10	7	4	3	1	1	2	3	3	1	2	2	4	24	4.9	24
30	13	**IZS**	14	22	28	34	36	21	22	39	8	3	2	3	2	2	3	2	1	0	0	0	0	0	39	11.1	24
31	**IZS**	0	0	0	0	1	13	11	8	4	2	2	1	1	1	0	0	1	1	1	1	1	0	**IZS**	13	2.2	24
HOURLY MAX	13	15	14	22	28	34	36	31	33	39	50	34	34	23	14	10	14	31	55	65	87	45	23	14			
HOURLY AVG	1.1	0.8	1.3	1.3	1.5	2.8	4.9	5.4	6.1	7.9	7.1	5.0	4.2	3.6	2.7	2.3	2.4	4.1	5.3	5.6	5.9	4.6	3.0	1.4			

STATUS FLAG CODES

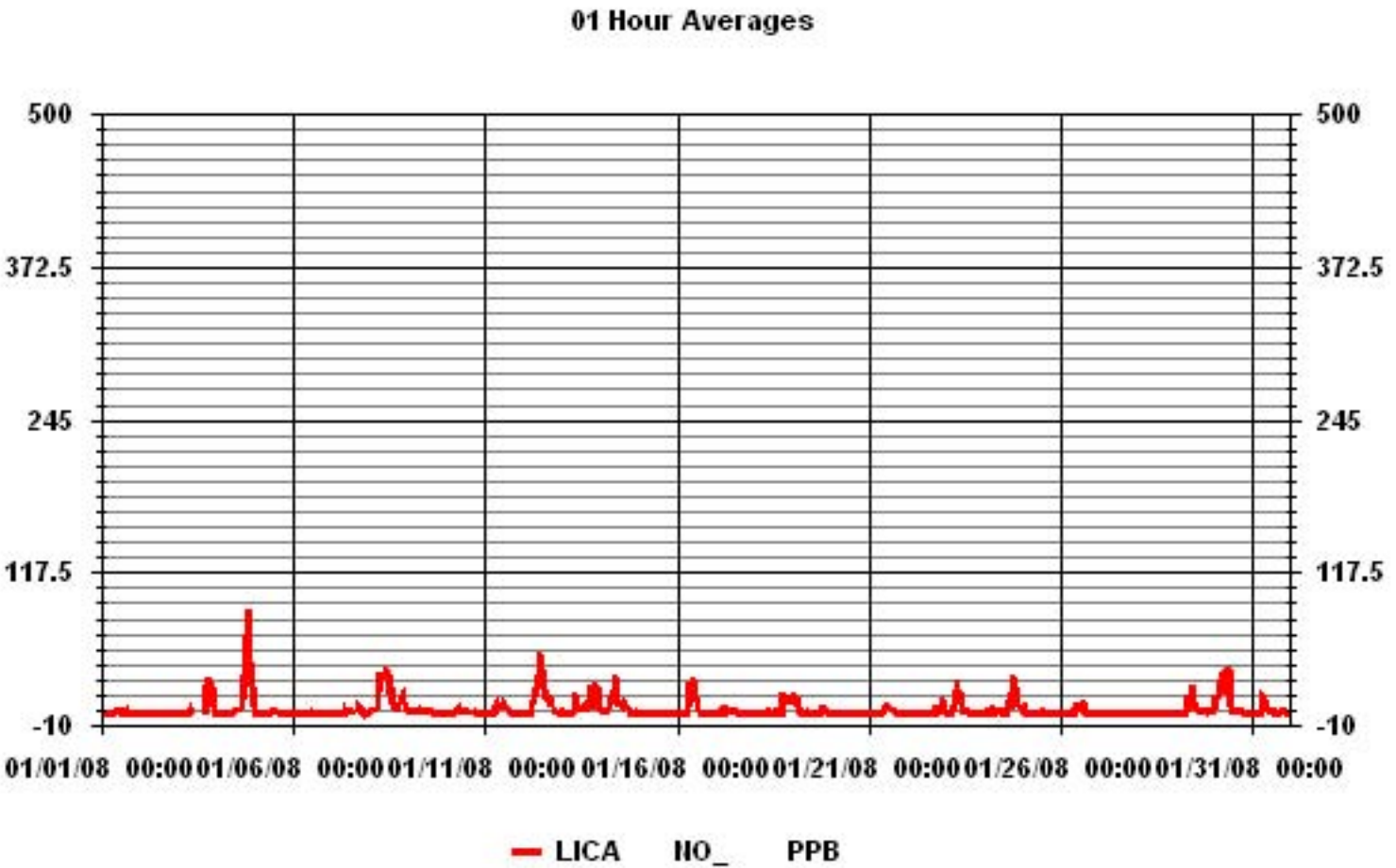
S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	- MISSING DATA
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE



MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:	341					
MAXIMUM 1-HR AVERAGE:	87	PPB	@ HOUR(S)	21	ON DAY(S)	4
MAXIMUM 24-HR AVERAGE:	15.8	PPB			ON DAY(S)	8

IZS CALIBRATION TIME:	34	HRS	OPERATIONAL TIME:	744	HRS
MONTHLY CALIBRATION TIME:	6	HRS	AMD OPERATION UPTIME:	100.0	%
STANDARD DEVIATION:	8.48		MONTHLY AVERAGE:	3.78	PPB


01 Hour Averages
500
372.5
245
117.5
-10
01/01/08 00:00
01/06/08 00:00
01/11/08 00:00
01/16/08 00:00
01/21/08 00:00
01/26/08 00:00
01/31/08 00:00
LICA NO_ PPB

LICA
NO_ / WD Joint Frequency Distribution (Percent)

January 2008

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	3.40	8.66	7.81	4.11	6.53	6.96	8.94	2.98	2.84	3.83	12.92	15.62	5.68	2.13	3.69	3.26	99.43
< 110	.00	.00	.00	.28	.14	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.14	.56
< 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	3.40	8.66	7.81	4.40	6.67	6.96	8.94	2.98	2.84	3.83	12.92	15.62	5.68	2.13	3.69	3.40	

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	24	61	55	29	46	49	63	21	20	27	91	110	40	15	26	23	700
< 110				2	1											1	4
< 210																	
>= 210																	
Totals	24	61	55	31	47	49	63	21	20	27	91	110	40	15	26	24	

Calm : .00 %

Total # Operational Hours : 704

Logger : 01 Parameter : NO_

Class Limits (PPB)

>= 210

< 210

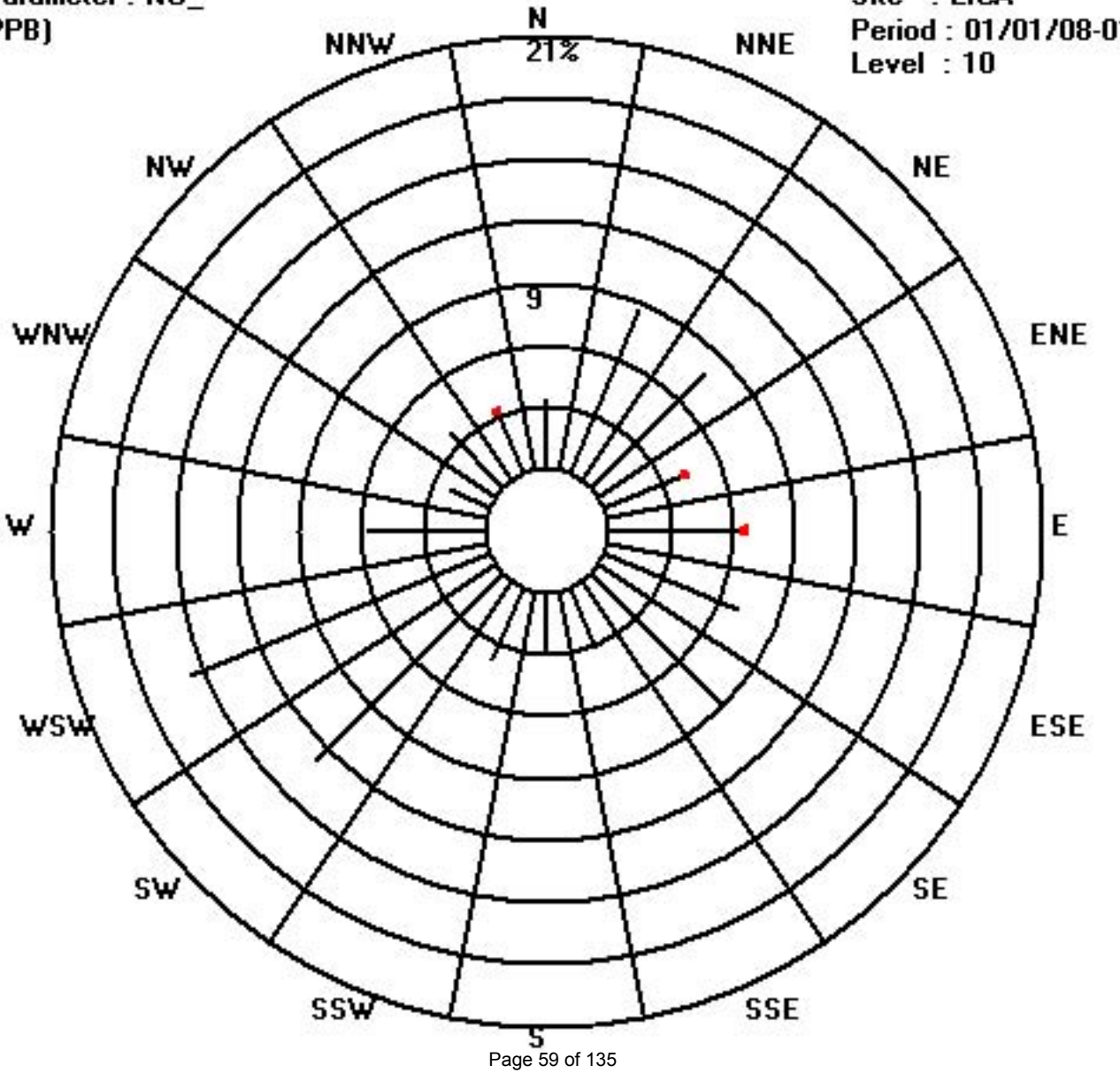
< 110

< 50

Site : LICA

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

Level : 10



LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

JANUARY 2008

NITRIC OXIDE MAX instantaneous maximum in ppb

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	0	0	0	0	0	0	0	**IZS**	4	3	3	3	3	3	5	3	11	1	0	4	0	1	0	0	11	1.9	24
2	3	0	0	0	0	0	**IZS**	2	2	2	0	5	2	2	1	1	12	1	0	0	0	0	0	0	12	1.4	24
3	0	0	0	0	0	**IZS**	1	37	14	**C**	**C**	**C**	**C**	**C**	**C**	**IZS**	11	39	34	40	44	47	24	2	47	18.3	24
4	3	3	2	3	**IZS**	2	0	3	1	1	3	4	4	5	3	20	33	107	133	107	105	67	37	20	133	29.0	24
5	1	2	1	**IZS**	1	1	3	4	7	5	7	9	15	16	7	2	2	0	1	2	4	0	0	0	16	3.9	24
6	1	0	**IZS**	0	0	0	0	0	0	5	3	3	2	0	0	2	0	0	0	0	0	0	0	2	5	0.8	24
7	0	**IZS**	1	0	0	0	1	1	16	5	4	1	1	1	4	17	26	15	6	3	5	5	6	4	26	5.3	24
8	**IZS**	10	6	7	12	43	75	44	67	38	46	53	23	32	21	8	12	10	11	25	36	20	11	**IZS**	75	27.7	24
9	11	3	11	2	2	5	2	11	5	4	3	5	3	4	5	8	7	4	2	9	0	1	**IZS**	5	11	4.9	24
10	0	0	0	0	0	5	22	12	41	4	3	1	17	8	6	24	3	9	2	4	11	**IZS**	0	1	41	7.5	24
11	0	0	0	0	0	25	37	15	9	9	14	15	10	7	7	6	29	5	1	7	**IZS**	2	1	0	37	8.7	24
12	1	0	0	1	2	13	15	22	51	49	61	49	41	34	22	20	31	11	15	**IZS**	7	6	3	2	61	19.8	24
13	3	2	3	1	1	1	1	7	**177**	16	17	4	8	11	8	9	27	36	**IZS**	31	22	48	35	12	177	20.9	24
14	6	4	5	4	38	40	89	39	35	75	37	20	26	24	13	13	36	**IZS**	8	5	3	11	0	0	89	23.1	24
15	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**IZS**	0	0	1	1	1	1	10	10	0.9	24
16	0	1	2	1	5	0	8	15	60	37	52	20	17	8	3	**IZS**	2	3	5	1	1	0	0	0	60	10.5	24
17	0	0	57	1	1	1	36	5	15	2	6	3	7	3	**IZS**	2	0	0	1	1	1	0	0	1	57	6.2	24
18	1	1	0	0	0	0	0	0	3	4	3	5	2	**IZS**	2	5	0	4	27	29	22	17	25	25	29	7.6	24
19	13	26	25	17	4	2	3	0	1	24	8	1	**IZS**	3	9	2	1	3	58	29	9	9	13	3	58	11.4	24
20	2	1	0	0	0	0	0	0	0	0	0	**IZS**	1	1	0	15	0	4	0	0	0	0	0	0	15	1.0	24
21	0	0	0	0	0	0	3	0	3	7	**IZS**	10	8	9	5	6	4	6	3	1	0	0	0	0	10	2.8	24
22	0	0	0	0	0	0	0	0	0	**IZS**	0	2	0	1	2	0	8	8	28	7	7	22	54	4	54	6.2	24
23	4	2	3	6	17	15	53	37	**IZS**	54	10	6	13	2	2	4	5	0	0	0	0	0	10	1	54	10.6	24
24	2	4	14	6	4	24	5	**IZS**	11	43	30	5	4	8	31	71	28	43	55	52	111	19	15	12	111	26.0	24
25	11	9	0	1	1	2	**IZS**	0	0	0	0	1	14	6	7	2	1	2	0	0	0	0	0	0	14	2.5	24
26	2	0	0	2	1	**IZS**	5	36	6	63	16	7	8	7	29	10	6	8	2	3	5	5	4	1	63	9.8	24
27	2	2	0	0	**IZS**	0	0	0	9	3	4	0	0	0	5	1	0	1	5	1	2	11	0	0	11	2.0	24
28	0	0	0	**IZS**	0	0	0	0	0	0	15	2	0	0	0	0	1	0	0	0	0	1	1	1	15	0.9	24
29	3	1	**IZS**	0	3	10	9	21	23	23	29	15	9	5	4	2	4	12	9	18	7	11	5	8	29	10.0	24
30	25	**IZS**	24	35	37	49	54	38	49	50	32	4	5	11	4	9	7	12	5	1	1	7	1	2	54	20.1	24
31	**IZS**	1	2	1	1	7	101	50	46	20	6	4	3	2	3	1	1	26	6	6	22	9	1	**IZS**	101	14.5	24
HOURLY MAX	25	26	57	35	38	49	101	50	177	75	61	53	41	34	31	71	36	107	133	107	111	67	54	25			
HOURLY AVG	3.4	2.5	5.4	3.0	4.5	8.4	18.0	13.8	21.8	18.8	14.2	8.9	8.5	7.3	7.2	9.1	10.3	12.3	13.9	12.9	14.2	10.7	8.2	4.0			

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

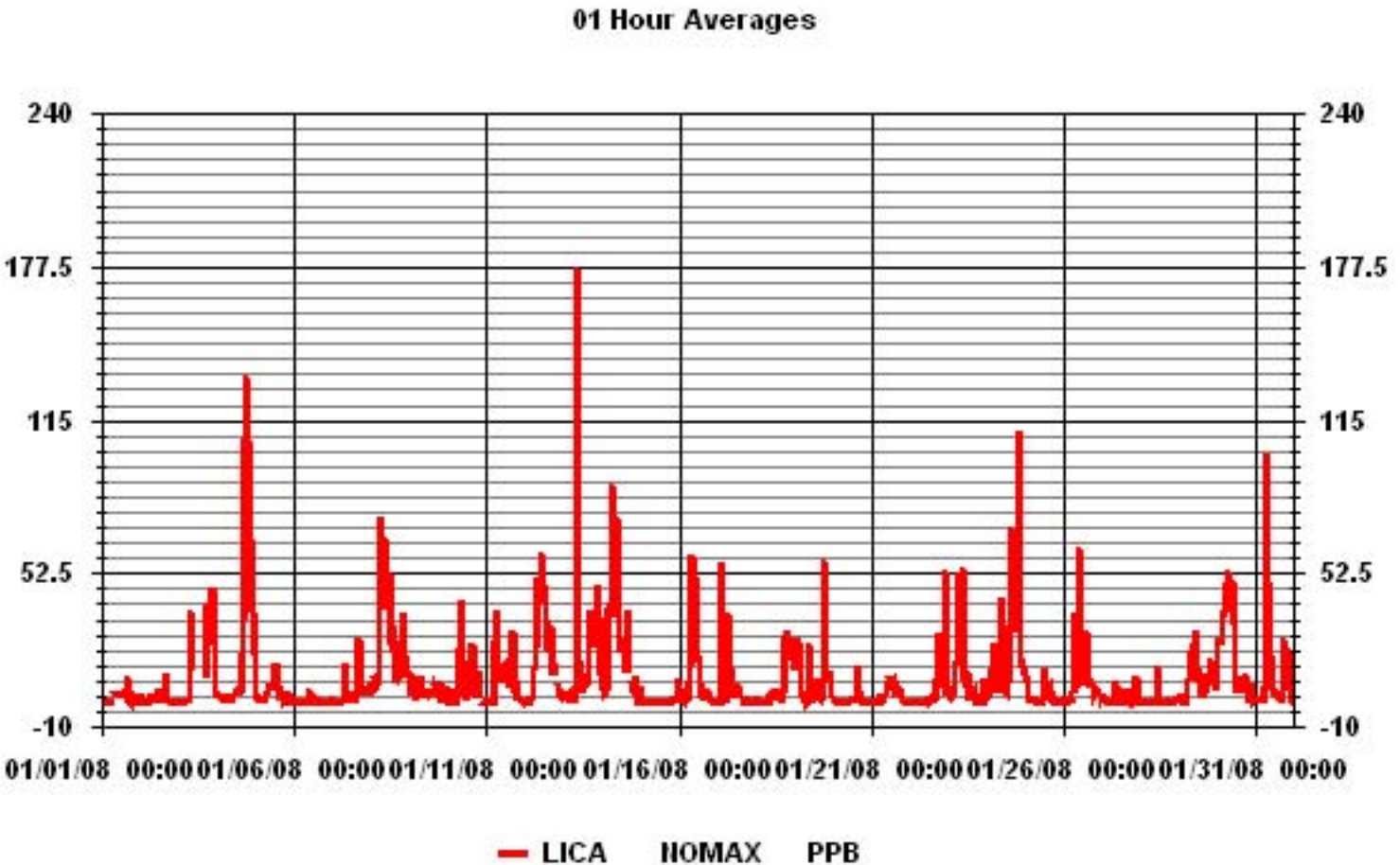
NUMBER OF NON-ZERO READINGS: 511

MAXIMUM INSTANTANEOUS VALUE: 177 PPB @ HOUR(S) 9 ON DAY(S) 13

IZS CALIBRATION TIME: 34 HRS OPERATIONAL TIME: 744 HRS

MONTHLY CALIBRATION TIME: 6 HRS

STANDARD DEVIATION 18.09


01 Hour Averages
240
177.5
115
52.5
-10
01/01/08 00:00
01/06/08 00:00
01/11/08 00:00
01/16/08 00:00
01/21/08 00:00
01/26/08 00:00
01/31/08 00:00
LICA NOMAX PPB

Oxides of Nitrogen

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

JANUARY 2008

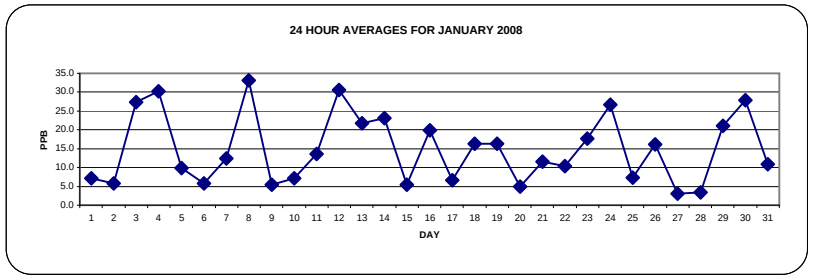
OXIDES OF NITROGEN hourly averages in ppb

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	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	9	11	15	15	9	5	3	**IZS**	11	11	9	5	4	3	7	7	20	6	2	3	2	3	2	2	20	7.1	24
2	2	2	2	2	2	3	**IZS**	3	3	4	3	4	4	4	6	7	13	14	12	11	9	9	7	6	14	5.7	24
3	5	4	4	4	5	**IZS**	10	26	23	**C**	**C**	**C**	**C**	**C**	**C**	**IZS**	24	58	56	62	58	55	35	9	62	27.4	24
4	10	13	8	9	**IZS**	6	4	5	7	9	8	10	11	11	14	19	38	61	86	95	**120**	74	50	28	120	30.3	24
5	15	16	9	**IZS**	5	8	7	7	10	5	8	9	7	10	11	8	11	9	13	19	15	10	8	6	19	9.8	24
6	6	6	**IZS**	5	4	4	5	4	5	9	7	6	4	4	5	5	5	7	7	6	6	9	7	7	9	5.8	24
7	4	**IZS**	6	4	4	4	9	13	19	12	7	5	5	4	8	15	31	30	20	13	18	17	17	19	31	12.3	24
8	**IZS**	19	19	18	21	35	51	54	53	49	55	53	30	38	20	19	20	24	30	35	36	31	19	**IZS**	55	**33.1**	24
9	7	7	6	6	5	5	5	10	5	5	4	4	4	3	5	5	6	11	8	4	5	4	**IZS**	3	11	5.5	24
10	3	3	3	3	4	7	7	11	18	5	5	4	6	7	6	9	13	16	11	7	8	**IZS**	5	5	18	7.2	24
11	5	6	6	6	5	12	19	27	22	17	17	22	18	15	14	13	16	16	11	12	**IZS**	12	11	12	27	13.7	24
12	13	11	14	16	17	30	35	37	43	51	74	53	55	40	31	27	37	27	28	**IZS**	19	18	15	11	74	30.5	24
13	14	17	15	14	12	12	11	18	36	21	14	12	13	16	17	18	30	44	**IZS**	22	31	46	42	26	46	21.8	24
14	20	15	16	17	21	23	32	32	44	53	36	21	20	22	20	26	26	**IZS**	24	19	14	18	6	7	53	23.1	24
15	15	13	11	7	5	2	3	2	1	1	1	1	1	1	1	1	**IZS**	5	4	5	6	10	15	15	15	5.5	24
16	8	7	6	7	14	9	13	22	49	39	52	29	32	17	12	**IZS**	17	17	18	20	16	13	19	20	52	19.8	24
17	21	18	12	4	3	3	14	7	6	4	5	3	4	5	**IZS**	3	3	4	3	3	3	5	10	11	21	6.7	24
18	12	8	7	4	5	4	5	8	12	8	9	10	6	**IZS**	6	9	10	13	46	45	40	36	34	40	46	16.4	24
19	33	40	40	36	19	19	12	6	4	6	5	3	**IZS**	4	3	4	4	6	22	31	20	22	21	17	40	16.4	24
20	12	5	5	3	3	4	4	4	4	4	5	**IZS**	4	4	3	6	5	10	6	5	5	5	4	2	12	4.9	24
21	2	1	2	2	2	4	9	12	14	22	**IZS**	18	17	16	15	13	21	22	23	16	9	8	10	7	23	11.5	24
22	8	8	7	6	5	5	5	5	4	**IZS**	2	1	1	1	2	2	2	17	32	20	21	29	35	22	35	10.4	24
23	14	11	13	14	20	31	45	52	**IZS**	33	8	8	9	7	8	9	10	12	13	16	15	16	21	23	52	17.7	24
24	22	22	28	25	22	34	26	**IZS**	6	6	9	8	5	3	4	29	32	52	69	57	45	42	33	34	69	26.7	24
25	34	17	3	5	7	4	**IZS**	3	3	2	2	3	4	4	6	5	6	7	7	8	7	6	10	15	34	7.3	24
26	14	12	9	11	14	**IZS**	23	22	17	24	19	16	15	14	27	25	11	14	14	16	12	13	16	12	27	16.1	24
27	14	12	9	7	**IZS**	4	2	2	2	1	2	1	1	1	1	1	1	1	2	1	1	1	1	1	14	3.0	24
28	1	1	1	**IZS**	1	1	1	1	1	1	1	1	0	1	1	1	1	2	2	3	8	15	14	18	18	3.3	24
29	17	11	**IZS**	7	6	11	23	46	37	32	42	19	13	9	8	6	13	25	27	25	24	26	27	31	46	21.1	24
30	43	**IZS**	44	53	61	70	71	54	52	67	18	7	7	7	8	9	16	15	8	3	3	6	10	8	71	27.8	24
31	**IZS**	6	5	5	6	8	36	35	26	14	7	6	4	4	4	3	6	17	14	13	8	8	5	**IZS**	36	10.9	24
HOURLY MAX	43	40	44	53	61	70	71	54	53	67	74	53	55	40	31	29	38	61	86	95	120	74	50	40			
HOURLY AVG	13.2	11.1	11.2	10.9	10.6	12.7	16.9	18.2	17.9	17.8	15.0	11.8	10.5	9.5	9.4	10.5	14.9	18.7	20.6	19.8	19.5	18.9	17.0	14.4			

STATUS FLAG CODES

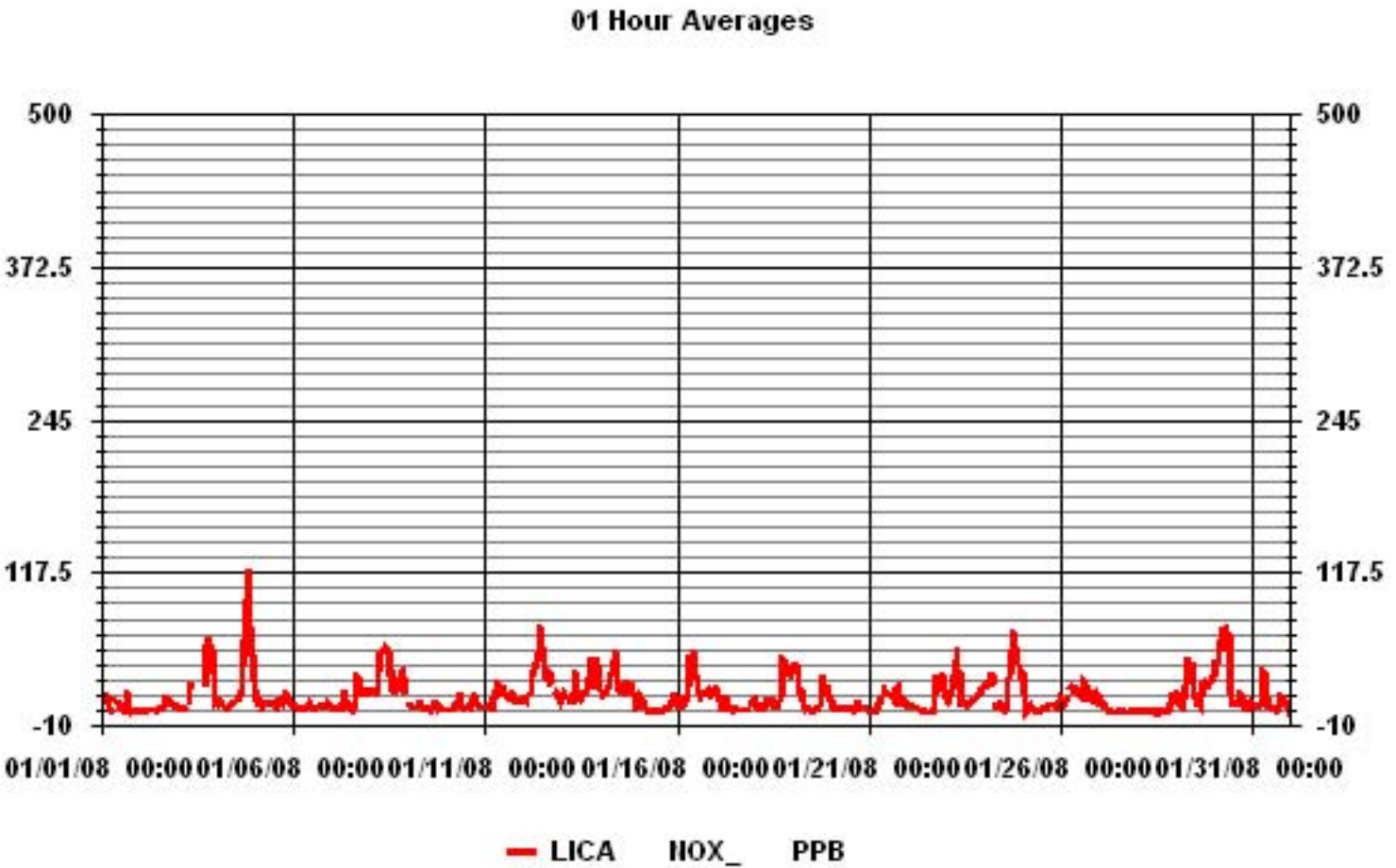
S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	- MISSING DATA
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE



MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:	703					
MAXIMUM 1-HR AVERAGE:	120	PPB	@ HOUR(S)	21	ON DAY(S)	4
MAXIMUM 24-HR AVERAGE:	33.1	PPB			ON DAY(S)	8

IZS CALIBRATION TIME:	34	HRS	OPERATIONAL TIME:	744	HRS
MONTHLY CALIBRATION TIME:	6	HRS	AMD OPERATION UPTIME:	100.0	%
STANDARD DEVIATION:	14.94		MONTHLY AVERAGE:	14.66	PPB


01 Hour Averages
500
372.5
245
117.5
-10
01/01/08 00:00
01/06/08 00:00
01/11/08 00:00
01/16/08 00:00
01/21/08 00:00
01/26/08 00:00
01/31/08 00:00
LICA NOX_ PPB

LICA
NOX_ / WD Joint Frequency Distribution (Percent)

January 2008

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	3.40	8.66	6.96	3.40	6.10	6.81	8.38	2.84	2.84	3.40	12.64	15.19	5.68	1.98	3.69	3.26	95.31
<	110	.00	.00	.85	.85	.56	.14	.56	.14	.00	.42	.28	.42	.00	.14	.00	.14	4.54
<	210	.00	.00	.00	.14	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.14
>=	210	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
	Totals	3.40	8.66	7.81	4.40	6.67	6.96	8.94	2.98	2.84	3.83	12.92	15.62	5.68	2.13	3.69	3.40	

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	24	61	49	24	43	48	59	20	20	24	89	107	40	14	26	23	671
<	110			6	6	4	1	4	1		3	2	3		1		1	32
<	210				1													1
>=	210																	
	Totals	24	61	55	31	47	49	63	21	20	27	91	110	40	15	26	24	

Calm : .00 %

Total # Operational Hours : 704

Logger : 01 Parameter : NOX_

Class Limits (PPB)

>= 210

< 210

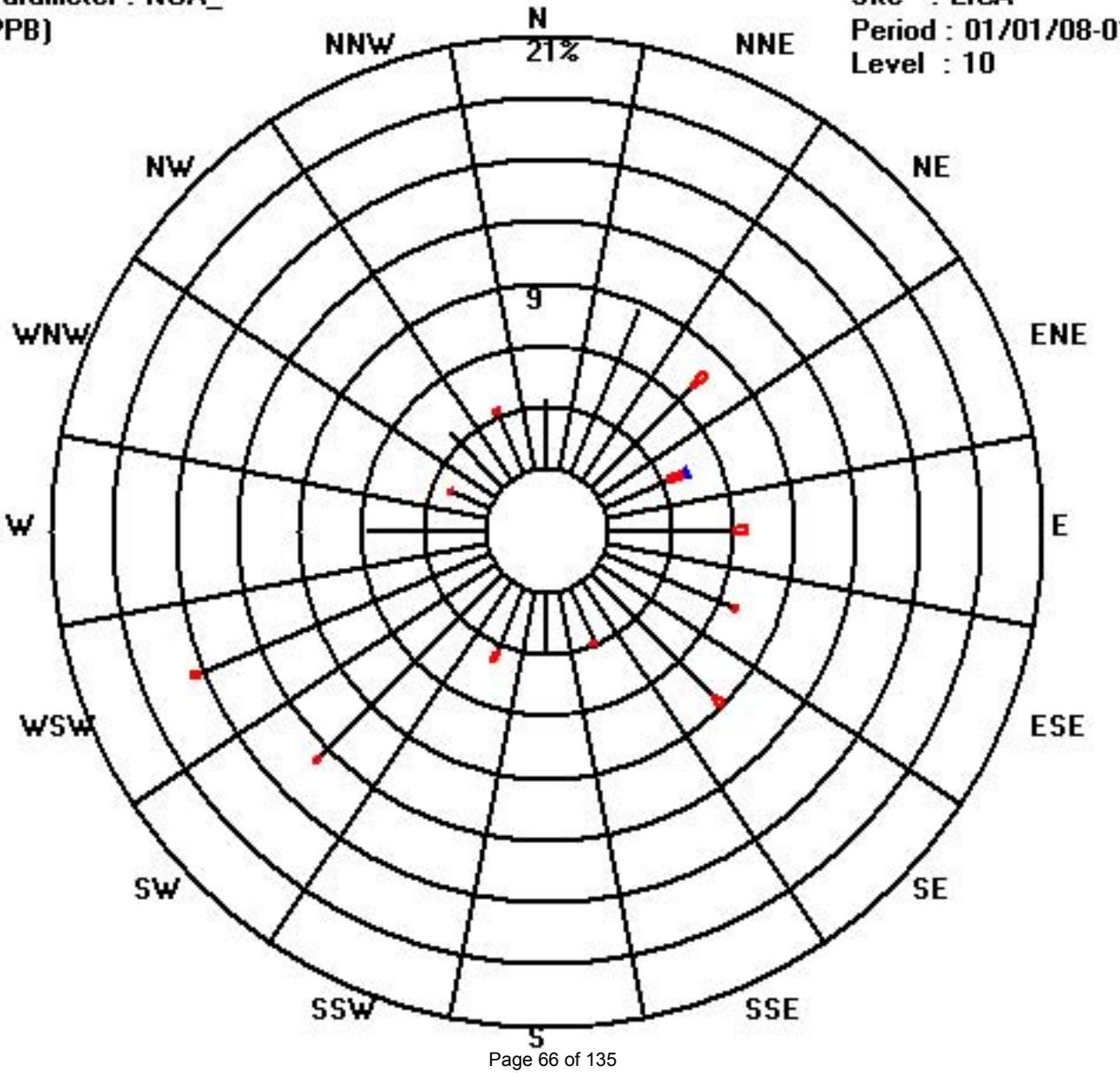
< 110

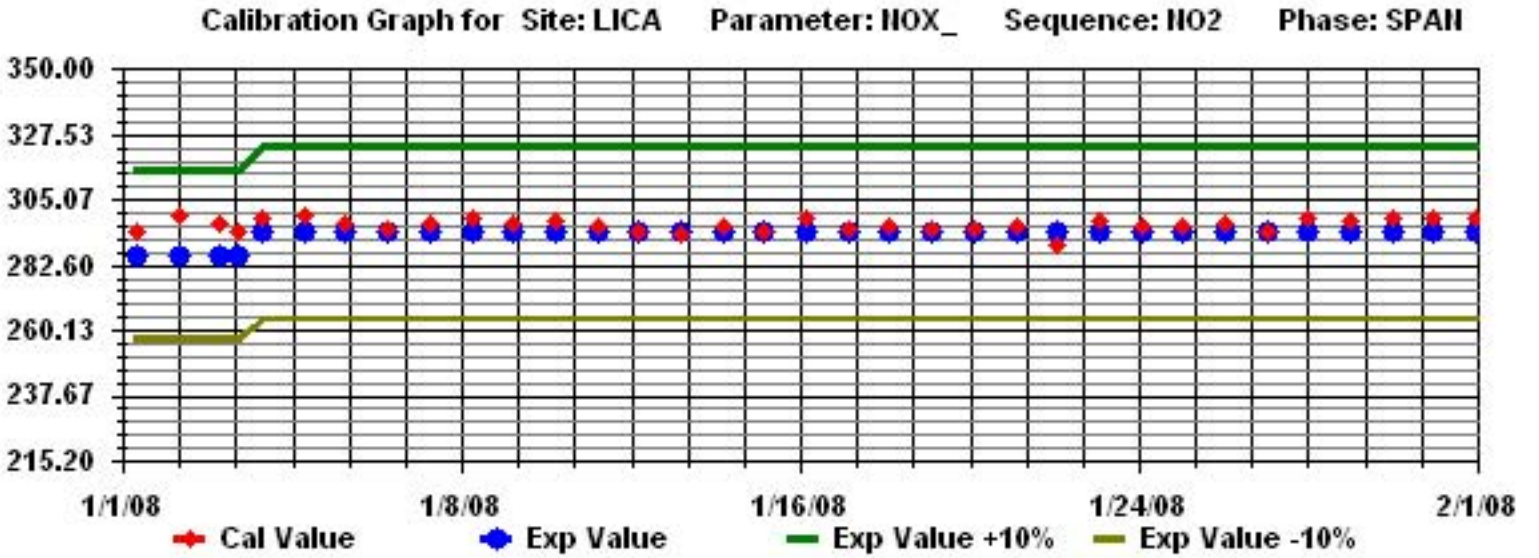
< 50

Site : LICA

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

Level : 10




Calibration Graph for Site: LICA Parameter: NOX_ Sequence: NO2 Phase: SPAN
350.00
327.53
305.07
282.60
260.13
237.67
215.20
1/1/08
1/8/08
1/16/08
1/24/08
2/1/08
Cal Value
Exp Value
Exp Value +10%
Exp Value -10%

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

JANUARY 2008

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	10	14	18	18	12	8	4	**IZS**	18	17	12	9	7	6	16	13	38	12	3	7	3	6	3	3	38	11.2	24
2	11	3	3	3	3	4	**IZS**	4	18	22	6	20	7	5	9	10	31	19	15	14	10	11	8	8	31	10.6	24
3	6	5	4	5	6	**IZS**	21	74	45	**C**	**C**	**C**	**C**	**C**	**C**	**IZS**	48	78	71	73	75	80	59	18	80	41.8	24
4	15	16	11	17	**IZS**	18	7	10	13	13	10	13	14	15	16	48	66	148	181	142	141	98	67	46	181	48.9	24
5	21	23	16	**IZS**	7	12	16	22	30	16	27	20	28	38	21	14	25	12	16	25	28	15	11	8	38	19.6	24
6	10	6	**IZS**	6	6	7	8	5	10	18	10	10	6	5	6	7	7	8	10	8	10	12	10	12	18	8.6	24
7	7	**IZS**	8	5	7	8	14	16	36	23	14	6	7	5	15	40	49	39	27	20	24	21	26	24	49	19.2	24
8	**IZS**	28	24	24	30	69	106	79	80	57	68	73	39	52	36	25	31	32	34	48	56	41	32	**IZS**	106	48.4	24
9	18	11	21	10	9	8	8	18	13	11	8	9	8	10	8	21	18	25	15	14	7	7	**IZS**	15	25	12.7	24
10	5	6	5	5	7	21	24	20	58	10	10	6	23	11	13	25	19	26	16	14	28	**IZS**	9	10	58	16.1	24
11	7	16	13	10	5	40	52	37	28	22	27	31	22	18	19	19	39	25	14	30	**IZS**	18	14	15	52	22.7	24
12	15	14	16	20	21	39	42	46	83	75	91	72	65	50	38	38	60	32	37	**IZS**	30	24	20	13	91	40.9	24
13	20	19	20	16	14	15	14	29	**181**	34	34	15	15	34	19	25	56	64	**IZS**	50	42	70	62	31	181	38.2	24
14	23	20	21	20	66	52	100	76	61	89	57	36	46	42	26	34	53	**IZS**	31	29	22	37	8	15	100	41.9	24
15	24	16	16	10	8	4	5	3	4	3	3	3	3	3	3	3	**IZS**	6	5	8	10	16	23	30	30	9.1	24
16	10	11	15	15	24	11	31	36	84	57	85	39	42	25	15	**IZS**	21	22	31	29	19	15	21	23	85	29.6	24
17	23	23	62	6	6	15	37	20	20	7	17	7	16	8	**IZS**	8	4	6	6	6	6	10	20	25	62	15.6	24
18	18	12	9	7	7	7	6	11	20	15	11	13	8	**IZS**	9	21	13	31	66	62	53	44	53	53	66	23.9	24
19	43	55	55	47	29	23	23	10	6	45	12	6	**IZS**	10	16	7	7	19	78	66	36	34	40	24	78	30.0	24
20	21	8	6	6	3	5	5	6	5	6	6	**IZS**	6	5	4	23	9	16	10	8	6	7	7	3	23	7.9	24
21	3	2	2	2	3	6	21	16	23	24	**IZS**	22	19	18	17	18	26	37	31	26	12	12	13	9	37	15.7	24
22	9	10	8	7	6	6	7	6	6	**IZS**	2	3	2	3	6	2	13	37	57	36	31	48	83	27	83	18.0	24
23	22	15	18	29	44	42	99	75	**IZS**	87	20	14	27	9	9	14	15	14	19	20	19	18	36	27	99	30.1	24
24	28	31	47	33	32	57	35	**IZS**	22	32	41	16	10	14	65	123	71	85	96	96	146	56	48	43	146	53.3	24
25	42	37	4	9	13	10	**IZS**	6	4	3	4	6	18	11	25	9	11	18	9	8	8	7	15	16	42	12.7	24
26	22	20	11	21	19	**IZS**	32	51	27	76	36	17	21	20	56	37	22	46	22	20	19	20	23	17	76	28.5	24
27	20	20	14	9	**IZS**	4	3	2	5	6	7	3	3	3	9	4	3	6	9	8	3	2	2	2	20	6.4	24
28	2	1	2	**IZS**	2	2	1	1	1	2	5	3	1	1	2	2	3	4	3	4	13	22	19	22	22	5.1	24
29	25	17	**IZS**	16	14	33	40	55	56	41	51	27	17	11	10	8	25	35	41	50	38	38	34	38	56	31.3	24
30	57	**IZS**	58	73	73	88	91	77	82	82	57	10	13	12	11	21	23	35	20	5	8	15	13	13	91	40.7	24
31	**IZS**	9	9	7	9	28	140	117	57	65	14	10	8	7	7	6	10	47	20	25	38	20	8	**IZS**	140	30.0	24
HOURLY MAX	57	55	62	73	73	88	140	117	181	89	91	73	65	52	65	123	71	148	181	142	146	98	83	53			
HOURLY AVG	18.5	16.1	17.8	15.7	16.7	22.1	34.2	32.0	36.5	33.0	25.7	17.9	17.3	15.6	17.4	21.6	27.2	32.8	33.1	31.7	31.4	27.5	26.2	20.3			

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

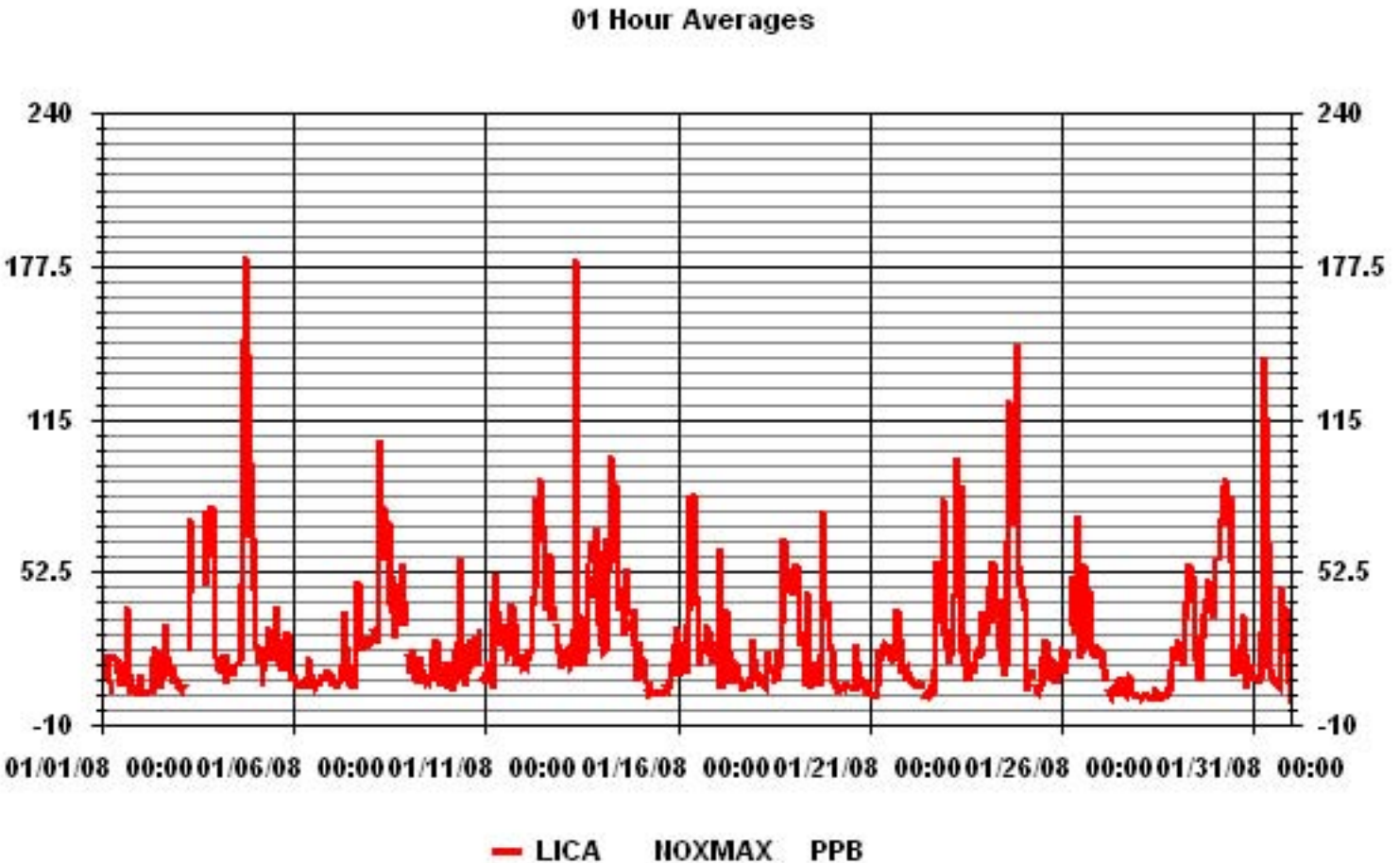
NUMBER OF NON-ZERO READINGS: 704

MAXIMUM INSTANTANEOUS VALUE: 181 PPB @ HOUR(S) 9 ON DAY(S) 13

IZS CALIBRATION TIME: 34 HRS OPERATIONAL TIME: 744 HRS

MONTHLY CALIBRATION TIME: 6 HRS

STANDARD DEVIATION 25.05


01 Hour Averages
240
177.5
115
52.5
-10
01/01/08 00:00
01/06/08 00:00
01/11/08 00:00
01/16/08 00:00
01/21/08 00:00
01/26/08 00:00
01/31/08 00:00
LICA NOXMAX PPB

Ozone

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

JANUARY 2008

OZONE (O_3) hourly averages in ppb

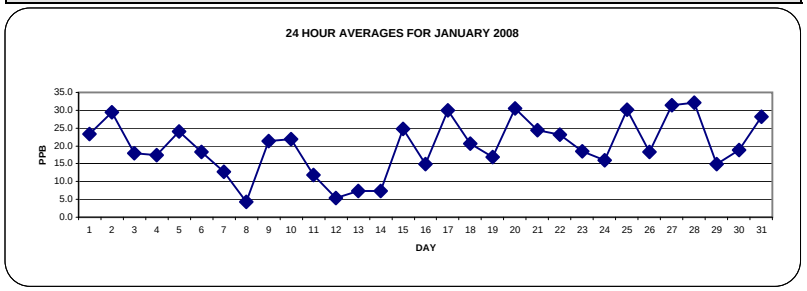
MST

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	18	17	11	11	17	23	27	**IZS**	20	17	22	26	29	30	26	24	14	26	30	29	29	28	30	32	32	23.3	24
2	32	33	31	31	31	31	**IZS**	30	30	30	32	32	33	34	32	29	23	20	23	24	25	26	30	33	34	29.3	24
3	34	35	36	36	35	**IZS**	26	11	9	7	5	14	15	24	C	C	C	C	IZS	1	1	1	8	24	36	17.9	24
4	25	24	28	28	**IZS**	30	30	29	25	24	26	25	25	26	23	17	3	1	1	1	2	1	1	4	30	17.3	24
5	12	16	**27**	**IZS**	32	29	28	28	25	30	29	29	30	27	27	27	22	24	20	13	16	19	20	22	32	24.0	24
6	21	21	**IZS**	22	22	21	20	21	19	15	18	20	22	21	20	19	19	17	16	16	15	11	13	14	22	18.4	24
7	22	**IZS**	20	20	18	17	12	8	5	14	20	23	23	23	20	14	4	2	4	8	5	5	5	1	23	12.7	24
8	**IZS**	1	0	0	0	0	0	1	1	3	6	9	13	12	13	12	8	5	2	1	1	1	6	**IZS**	13	4.3	24
9	14	16	17	17	19	20	20	20	20	20	22	23	25	26	27	26	25	20	22	25	21	23	**IZS**	24	27	21.4	24
10	23	23	23	24	21	20	19	18	15	25	26	27	26	25	25	23	18	16	21	23	22	**IZS**	21	18	27	21.8	24
11	17	14	15	14	14	8	5	1	3	9	13	16	17	16	16	14	10	10	12	13	**IZS**	11	12	11	17	11.8	24
12	9	10	8	5	4	0	0	0	0	3	5	8	9	10	10	7	2	3	2	**IZS**	5	4	7	12	12	5.3	24
13	9	7	8	9	10	11	12	8	4	7	14	14	14	12	12	9	3	0	**IZS**	3	1	0	0	2	14	7.3	24
14	4	5	4	3	7	6	2	5	1	3	8	13	15	13	13	8	6	**IZS**	4	5	7	7	16	14	16	7.3	24
15	6	8	17	26	26	31	28	28	33	32	32	31	30	32	33	32	**IZS**	27	26	25	23	19	14	12	33	24.8	24
16	20	17	16	14	9	11	8	4	1	5	9	15	19	24	29	**IZS**	21	20	18	16	19	21	14	12	29	14.9	24
17	8	12	24	34	35	34	32	31	30	30	29	30	32	32	**IZS**	36	38	36	36	36	35	33	25	23	38	30.0	24
18	22	27	28	31	31	30	29	27	22	27	28	28	31	**IZS**	31	30	27	22	1	2	1	0	1	0	31	20.7	24
19	1	1	1	1	10	6	16	26	30	31	34	35	**IZS**	36	34	29	30	27	11	5	7	5	5	6	36	16.8	24
20	15	29	31	34	35	33	32	30	29	29	29	**IZS**	32	33	33	33	31	25	29	29	29	29	34	37	37	30.4	24
21	36	36	36	36	35	31	22	20	17	15	**IZS**	22	24	25	25	24	17	13	11	18	25	26	23	26	36	24.5	24
22	24	25	27	28	30	30	31	32	34	**IZS**	35	35	33	31	31	31	30	18	4	8	6	3	3	4	35	23.2	24
23	12	13	10	7	4	1	1	1	**IZS**	19	30	31	31	34	33	32	29	26	24	21	21	19	14	12	34	18.5	24
24	9	7	4	3	6	2	4	**IZS**	39	**40**	**40**	38	**40**	**40**	**40**	26	15	3	1	1	2	1	4	2	40	16.0	24
25	0	20	38	35	34	36	**IZS**	36	37	38	38	37	37	36	35	33	31	29	27	25	27	28	22	15	38	30.2	24
26	16	16	18	16	13	**IZS**	3	3	7	12	16	21	24	28	19	17	31	28	25	22	23	24	20	20	31	18.3	24
27	18	18	20	23	**IZS**	26	33	34	33	34	34	34	34	34	34	34	34	34	35	35	35	35	35	36	36	31.4	24
28	36	36	35	**IZS**	35	35	35	35	36	35	35	36	36	36	36	35	35	34	33	32	25	17	16	13	36	**32.0**	24
29	12	16	**IZS**	19	21	17	9	1	5	13	16	25	27	30	30	31	24	10	8	10	7	4	4	2	31	14.8	24
30	2	**IZS**	1	1	1	1	1	1	3	7	24	29	31	31	31	29	23	23	31	35	35	33	29	31	35	18.8	24
31	**IZS**	30	31	30	30	28	20	19	22	27	31	32	33	33	33	33	30	22	24	25	29	29	30	**IZS**	33	28.2	24
HOURLY MAX	36	36	38	36	35	36	35	36	39	40	40	38	40	40	40	36	38	36	36	36	35	35	35	37			
HOURLY AVG	16.4	18.4	19.5	19.2	20.2	19.6	17.4	17.5	18.5	20.0	23.5	25.3	26.3	27.1	26.6	24.6	20.8	18.7	17.3	16.9	16.6	15.4	15.4	15.9			

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

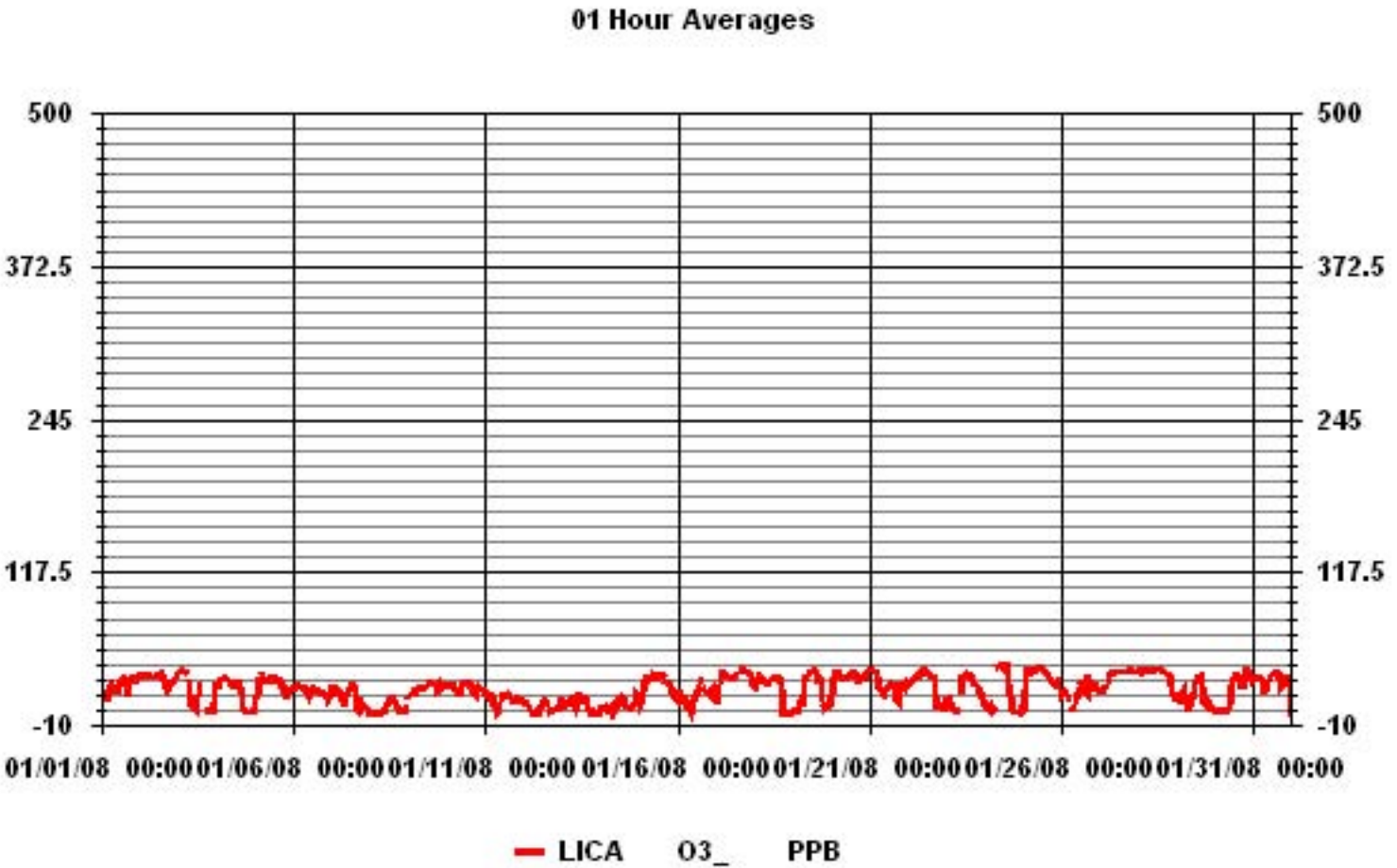
OBJECTIVE LIMIT: **ALBERTA ENVIRONMENT:** 1-HR 82 PPB



MONTHLY SUMMARY

NUMBER OF 1-HR EXCEEDENCES:	0					
NUMBER OF NON-ZERO READINGS:	691					
MAXIMUM 1-HR AVERAGE:	40	PPB	@ HOUR(S)	VAR	ON DAY(S)	24
MAXIMUM 24-HR AVERAGE:	32.0	PPB			ON DAY(S)	28
					VAR-VARIOUS	

IZS CALIBRATION TIME:	34	HRS	OPERATIONAL TIME:	744	HRS
MONTHLY CALIBRATION TIME:	4	HRS	AMD OPERATION UPTIME	100.0	%
STANDARD DEVIATION	11.34		MONTHLY AVERAGE	19.90	PPB


01 Hour Averages
500
372.5
245
117.5
-10
01/01/08 00:00
01/06/08 00:00
01/11/08 00:00
01/16/08 00:00
01/21/08 00:00
01/26/08 00:00
01/31/08 00:00
LICA O3_ PPB

LICA
O3_ / WD Joint Frequency Distribution (Percent)

January 2008

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	3.39	8.78	7.79	4.39	6.94	6.79	8.92	2.97	2.83	3.82	12.88	15.58	5.66	2.12	3.68	3.39	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	3.39	8.78	7.79	4.39	6.94	6.79	8.92	2.97	2.83	3.82	12.88	15.58	5.66	2.12	3.68	3.39	

Calm : .00 %

Total # Operational Hours : 706

Distribution By Samples

Direction

	Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
<	50	24	62	55	31	49	48	63	21	20	27	91	110	40	15	26	24	706
<	110																	
<	210																	
>=	210																	
	Totals	24	62	55	31	49	48	63	21	20	27	91	110	40	15	26	24	

Calm : .00 %

Total # Operational Hours : 706

Logger : 01 Parameter : 03_

Class Limits (PPB)

>= 210

< 210

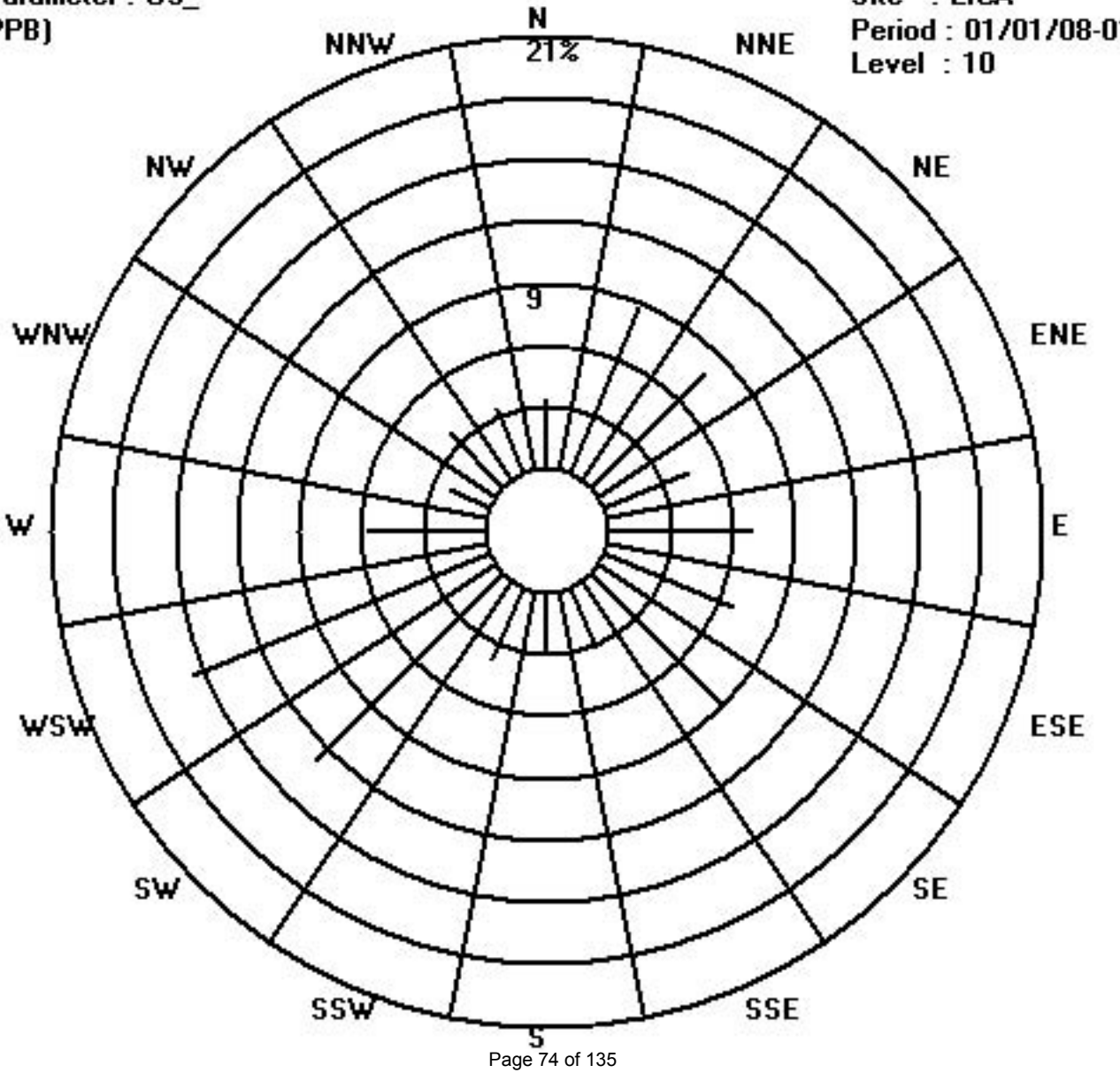
< 110

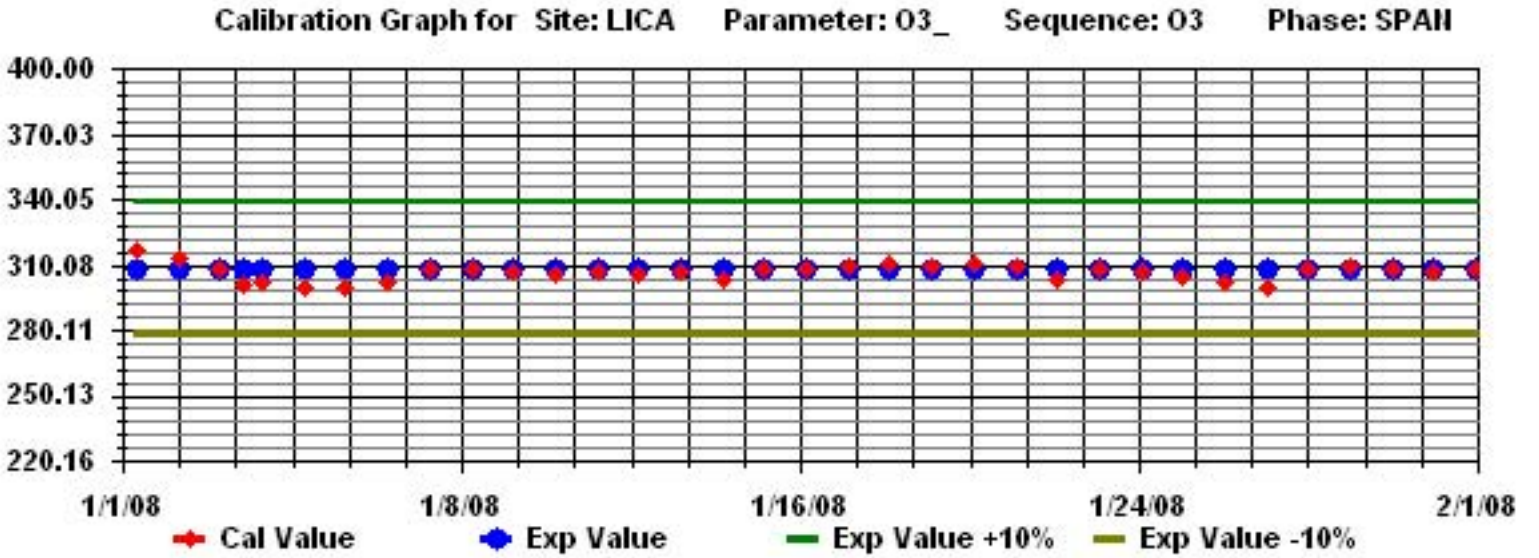
< 50

Site : LICA

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

Level : 10




Calibration Graph for Site: LICA Parameter: O3_ Sequence: O3 Phase: SPAN
400.00
370.03
340.05
310.08
280.11
250.13
220.16
1/1/08
1/8/08
1/16/08
1/24/08
2/1/08
Cal Value
Exp Value
Exp Value +10%
Exp Value -10%

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

JANUARY 2008

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	19	13	15	19	28	28	**IZS**	23	21	27	29	30	31	29	28	23	30	30	29	29	29	31	32	32	25.7	24
2	33	33	32	31	31	31	**IZS**	30	31	31	33	33	34	35	33	32	28	23	25	27	27	28	32	34	35	30.7	24
3	34	35	36	37	36	**IZS**	32	20	21	10	9	20	24	33	**C**	**C**	**C**	**C**	**IZS**	5	5	5	19	29	37	22.8	24
4	28	26	32	31	**IZS**	32	31	30	28	28	27	27	26	27	26	22	12	2	2	4	5	2	4	15	32	20.3	24
5	18	22	29	**IZS**	34	32	32	30	28	31	31	33	32	31	33	30	28	26	21	18	19	20	22	23	34	27.1	24
6	23	22	**IZS**	23	23	23	22	22	20	17	19	22	23	23	21	20	20	18	17	17	17	14	14	21	23	20.0	24
7	22	**IZS**	22	21	21	18	16	13	11	20	24	24	24	24	24	18	13	6	9	13	12	8	8	4	24	16.3	24
8	**IZS**	3	1	0	0	0	1	4	1	5	7	11	15	18	14	13	10	9	5	2	2	4	13	**IZS**	18	6.3	24
9	16	17	18	19	20	21	20	21	21	21	23	25	26	27	28	28	28	24	37	35	27	28	**IZS**	25	37	24.1	24
10	25	24	24	25	23	21	21	20	21	27	27	28	28	27	27	25	22	19	28	32	25	**IZS**	23	21	32	24.5	24
11	19	17	17	16	15	13	9	5	7	12	15	20	22	17	19	16	15	16	16	16	**IZS**	12	13	12	22	14.7	24
12	11	11	10	7	6	3	0	0	2	4	6	10	10	11	11	9	4	4	3	**IZS**	7	7	12	12	12	7.0	24
13	11	8	9	10	11	12	13	12	9	13	17	16	14	14	13	11	7	1	**IZS**	7	4	1	2	4	17	9.5	24
14	7	7	5	8	10	8	7	10	3	7	14	15	17	17	16	12	10	**IZS**	7	11	11	16	17	16	17	10.9	24
15	10	9	24	28	33	33	30	33	34	33	33	32	31	32	33	33	**IZS**	28	27	26	25	22	21	19	34	27.3	24
16	21	19	19	17	13	13	11	10	4	11	13	20	23	26	31	**IZS**	23	23	20	22	21	24	19	14	31	18.1	24
17	10	17	31	36	36	35	33	33	31	31	29	32	34	33	**IZS**	39	38	37	37	36	37	35	30	28	39	32.1	24
18	27	29	32	33	33	31	30	29	26	29	29	30	33	**IZS**	32	32	28	25	10	11	4	2	4	1	33	23.5	24
19	4	4	1	2	15	14	25	29	31	33	37	36	**IZS**	37	37	31	31	30	26	10	22	11	8	13	37	21.2	24
20	27	31	33	35	35	34	33	32	30	30	30	**IZS**	33	33	34	34	33	29	31	31	30	30	38	38	38	32.3	24
21	37	37	36	36	36	33	29	33	21	17	**IZS**	23	25	25	25	26	23	18	13	26	27	28	26	26	37	27.2	24
22	26	28	27	29	30	31	32	34	36	**IZS**	35	35	34	32	31	32	31	31	12	14	11	18	10	8	36	26.4	24
23	18	17	18	12	10	3	2	2	**IZS**	30	32	32	34	35	34	34	32	28	26	23	22	22	17	16	35	21.7	24
24	16	9	10	10	10	5	7	**IZS**	41	**42**	**42**	41	41	41	**42**	37	27	15	4	2	4	4	19	12	42	20.9	24
25	1	38	38	38	36	37	**IZS**	38	38	39	39	38	38	37	36	34	33	30	28	26	28	28	26	16	39	32.2	24
26	17	18	19	18	15	**IZS**	7	6	14	16	21	22	27	31	27	26	32	32	29	26	27	29	24	24	32	22.0	24
27	19	20	23	25	**IZS**	29	35	35	34	35	34	34	35	35	34	34	34	35	35	35	35	36	36	36	36	32.3	24
28	36	36	36	**IZS**	36	36	36	36	36	36	36	36	36	36	36	36	36	34	34	33	31	22	19	15	36	33.2	24
29	15	20	**IZS**	22	23	20	15	3	12	15	22	27	28	31	31	32	32	15	18	20	13	7	8	4	32	18.8	24
30	4	**IZS**	1	1	1	1	4	2	4	11	28	30	32	32	32	31	28	27	36	37	36	34	30	33	37	20.7	24
31	**IZS**	32	33	31	31	31	25	24	28	31	33	33	33	34	34	33	32	26	27	28	31	33	32	**IZS**	34	30.7	24
HOURLY MAX	37	38	38	38	36	37	36	38	41	42	42	41	41	41	42	39	38	37	37	37	37	36	38	38			
HOURLY AVG	19.1	21.0	21.7	21.2	22.1	21.7	20.2	20.6	21.5	22.9	25.7	27.1	28.1	28.8	28.4	27.2	24.6	22.1	21.1	20.7	19.8	18.6	19.2	19.0			

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

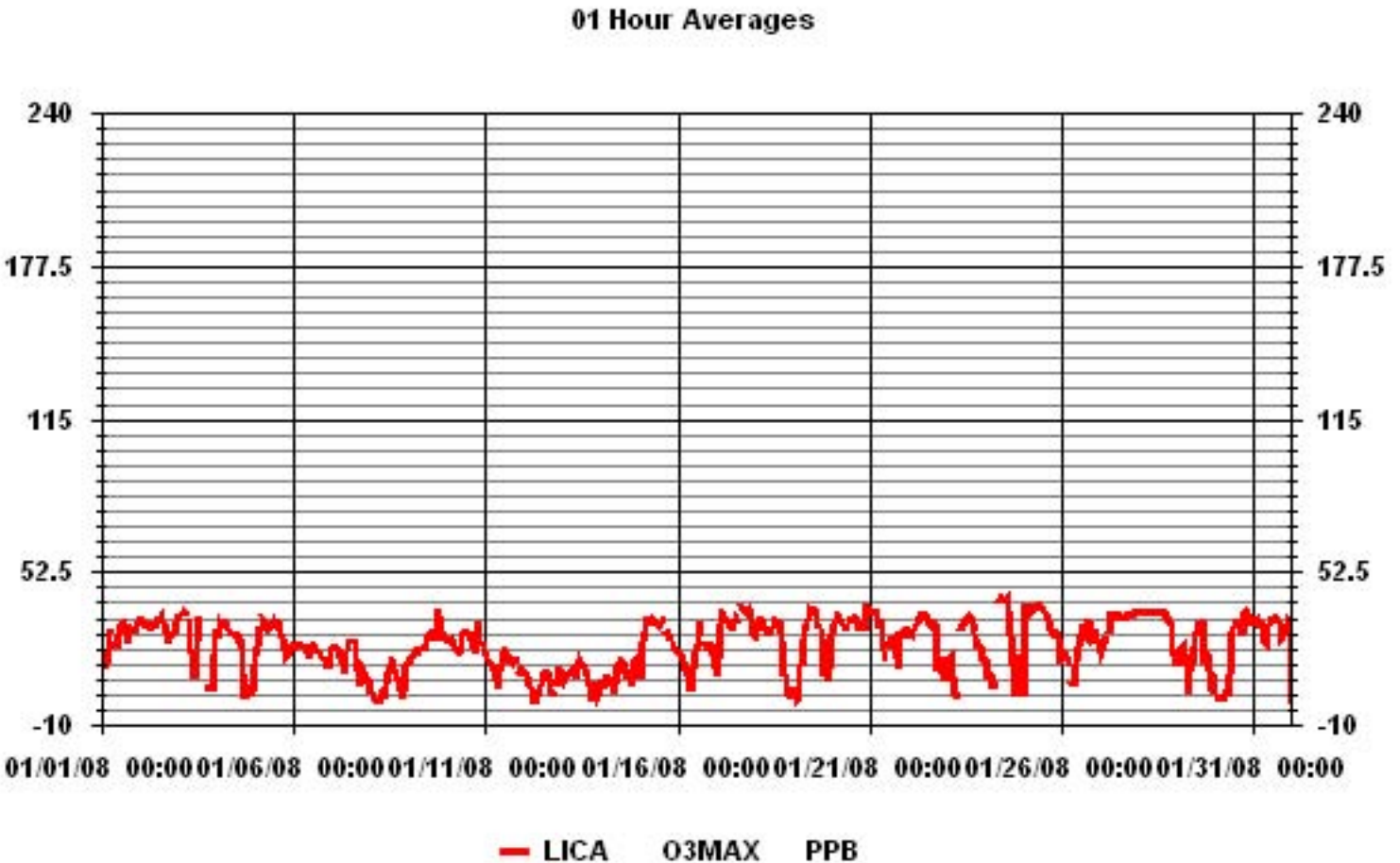
NUMBER OF NON-ZERO READINGS: 701

MAXIMUM INSTANTANEOUS VALUE: 42 PPB @ HOUR(S) 10,11,15 ON DAY(S) 24

IZS CALIBRATION TIME: 34 HRS OPERATIONAL TIME: 744 HRS

MONTHLY CALIBRATION TIME: 4 HRS

STANDARD DEVIATION 10.70


01 Hour Averages
240
177.5
115
52.5
-10
01/01/08 00:00
01/06/08 00:00
01/11/08 00:00
01/16/08 00:00
01/21/08 00:00
01/26/08 00:00
01/31/08 00:00
LICA O3MAX PPB

Ambient Temperature

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

JANUARY 2008

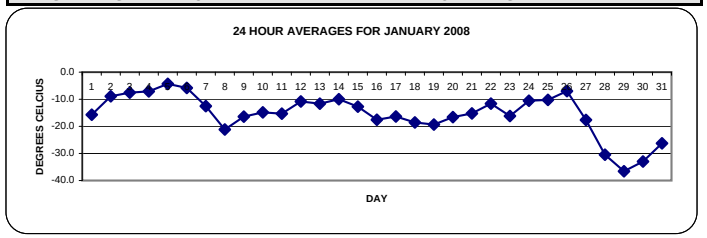
AMBIENT TEMPERATURE hourly averages (Degrees C)

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	-12.1	-12.2	-12.2	-12.3	-12.3	-12.2	-14.1	-15.6	-17.5	-18.1	-15.6	-16	-15.9	-15.6	-16	-17	-18.3	-18.1	-18	-18.1	-18.2	-18.2	-16.9	-16.4	-12.1	-15.7	24
2	-15.5	-14	-13.1	-13	-12.3	-11.1	-10.5	-10.4	-10.2	-9.9	-8.4	-7.3	-5.8	-5.3	-5.6	-6.4	-8.6	-10.6	-7.1	-5.9	-5.7	-6.2	-5.7	-5.2	-5.2	-8.9	24
3	-5.9	-5.3	-5.3	-5.5	-5.5	-5.9	-7.7	-11.7	-13.6	-13.3	-11.4	-5.4	-3.3	-2.7	-1.9	-2.9	-4.5	-7.3	-9.7	-11.2	-11.8	-11.4	-10.2	-8.3	-1.9	-7.6	24
4	-8.1	-8.7	-8.5	-7.6	-7.1	-6.2	-6.2	-6.9	-7.1	-7	-5.8	-4.4	-2.7	-1.6	-1.2	-2.4	-5.8	-8.4	-10.1	-11.3	-11.8	-11.7	-10.5	-9.5	-1.2	-7.1	24
5	-7.8	-6.3	-4	-3.1	-2.4	-2.3	-3.1	-3.3	-3.6	-3.8	-3.4	-2.4	-2.1	-1.6	**-0.8**	-1.4	-3.5	-5.2	-6.6	-8	-7.7	-8.1	-7.4	-6	-0.8	**-4.3**	24
6	-5.6	-5.3	-5	-4.7	-4.6	-5.1	-5.9	-6.2	-6	-7.4	-6.6	-5	-5.2	-5.2	-5	-5	-5.4	-5.9	-5.9	-6.2	-6.7	-7	-7.2	-7.8	-4.6	-5.8	24
7	-8.7	-9.4	-10	-10.2	-10.3	-10.6	-10.5	-10.6	-11.5	-10.7	-10.1	-10.2	-10.7	-10.7	-10.8	-11.9	-13.3	-14.5	-15.3	-16	-16.9	-18.4	-18.9	-20.6	-8.7	-12.5	24
8	-21.4	-22.4	-23.5	-24.1	-24.7	-25	-25.5	-25.6	-26.4	-24.8	-20.5	-18.4	-17.5	-16.2	-15.7	-16.7	-18.6	-19.5	-20.1	-21.2	-22	-21.9	-19	-17.5	-15.7	-21.2	24
9	-17.7	-17.2	-17.3	-18.2	-18.5	-17.5	-17.2	-16.7	-16.7	-16.7	-16.5	-16.2	-16.1	-16.1	-15.9	-15.8	-15.7	-15.3	-15.2	-15.3	-15.5	-15.6	-15.7	-15.7	-15.2	-16.4	24
10	-15.5	-15.5	-15.5	-15.5	-15.6	-15.5	-15.4	-15.6	-15.9	-15.4	-14.8	-14.3	-13.7	-13.3	-13.3	-13.5	-14.1	-14.3	-14.2	-14.3	-14.5	-14.7	-15.3	-16.7	-13.3	-14.9	24
11	-16.8	-16.5	-17.3	-18.1	-18.3	-18.6	-18.9	-18.8	-18.7	-18.2	-17.1	-15.4	-15	-14.4	-13.5	-13.6	-13.5	-13.4	-12.8	-12.4	-12	-11.8	-11.5	-11.1	-11.1	-15.3	24
12	-10.9	-10.7	-10.3	-11.2	-10.6	-10.2	-11.8	-13.5	-14.8	-14.3	-10.8	-9	-8.5	-7.7	-7.9	-8.6	-9.5	-10.2	-10.9	-11.5	-11.6	-12.4	-11.6	-11.1	-7.7	-10.8	24
13	-11.4	-11.8	-11.5	-11.9	-12.7	-12	-11.4	-11.8	-13.1	-13.7	-11.1	-9.8	-9	-8.8	-7.8	-7.3	-10.2	-12.3	-12.6	-12.6	-14	-13.9	-14.5	-14	-7.3	-11.6	24
14	-13	-13	-12.5	-11.6	-11.1	-11.7	-12.6	-11.2	-12	-12.3	-10.2	-9	-7.7	-6.9	-7	-7.7	-9.2	-9.6	-8.7	-8.8	-9	-8.8	-8.2	-8.1	-6.9	-10.0	24
15	-7.9	-6.6	-3.5	-1.1	-1.9	-4.8	-5.9	-7.8	-9.8	-11.3	-12.3	-13.3	-14.3	-15.6	-15	-14.9	-15.9	-16.9	-18	-19.2	-20.4	-21.5	-22.9	-24.7	-1.1	-12.7	24
16	-23.1	-24.5	-25.9	-26.4	-26.8	-27.1	-26.2	-26.5	-26.1	-24.5	-19.7	-17.5	-14.9	-12.9	-11.6	-11	-10.9	-10.7	-10.1	-9.4	-8.8	-8.9	-9.1	-9.1	-8.8	-17.6	24
17	-9.3	-9.2	-9.3	-9.8	-10.6	-12.5	-14.1	-15.2	-16.2	-17.8	-18.1	-17.9	-17.5	-17	-16.8	-16.6	-17.3	-18.4	-19.5	-20.3	-20.7	-21.6	-23.5	-23.7	-9.2	-16.4	24
18	-22.3	-21.5	-20.8	-20.2	-19.7	-19.3	-19.1	-19	-18.7	-17.9	-17	-16.1	-14.8	-13.3	-13.2	-13.2	-14.4	-16.2	-18.4	-19.9	-21.1	-22.2	-23.5	-23.6	-13.2	-18.6	24
19	-24.2	-24.2	-23.5	-22.3	-21	-20.6	-17.7	-15.8	-15.4	-15.1	-14.9	-14.6	-14.4	-14.2	-14.3	-14.9	-15.2	-17.2	-20.1	-22.4	-24.1	-25.4	-26.4	-26.5	-14.2	-19.4	24
20	-23.3	-20.7	-19.9	-18.8	-18.2	-17.9	-17.5	-17.1	-16.6	-16.2	-15.6	-14.8	-14.3	-14.1	-13.8	-13.8	-14.3	-14.7	-15.1	-15.7	-16.7	-17	-16.1	-16.3	-13.8	-16.6	24
21	-16.1	-15.8	-15.3	-15.2	-16.2	-17.7	-19.8	-19	-19	-19.2	-18.3	-16.7	-15.2	-13.9	-12.8	-13.1	-14.5	-15.5	-14.4	-12.2	-11.4	-11.6	-11.5	-11.2	-11.2	-15.2	24
22	-10.7	-10.2	-9.5	-8.6	-7.3	-6.7	-6.1	-5.6	-4.7	-6	-7.1	-8.4	-9.6	-9.8	-10.3	-10.5	-11.7	-13.7	-16.7	-18.8	-20.4	-21.5	-22.2	-22.8	-4.7	-11.6	24
23	-22.3	-23.2	-24	-24.7	-25.3	-24.9	-25.3	-25.6	-25.2	-18.3	-13.9	-12.1	-9.2	-7.3	-6.6	-6.8	-8	-9.6	-10.7	-11.6	-11.8	-12.9	-15	-14.5	-6.6	-16.2	24
24	-15.8	-17.7	-18.4	-16.5	-14.6	-12.7	-10.7	-7.4	-6	-6	-6.1	-5.8	-5.3	-5.2	-5.6	-5.8	-7.7	-10.8	-12.6	-13.1	-12.5	-12.1	-12.3	-12.9	-5.2	-10.6	24
25	-13.9	-12.4	-11.2	-11.6	-12.3	-12.2	-11.9	-11.4	-11.2	-10.8	-10.4	-10	-9.4	-9.2	-9.1	-9	-8.9	-8.8	-8.6	-8.4	-8.1	-8.4	-9.1	-9.6	-8.1	-10.2	24
26	-10.5	-10.9	-11	-11	-11.4	-11.4	-11.9	-12.2	-11.2	-10	-8.2	-6.4	-4.7	-2.1	-2.2	-2.3	-2.5	-3	-3.3	-3.4	-4.2	-4.5	-4.7	-4.9	-2.1	-7.0	24
27	-5	-5	-5.5	-5.5	-7.1	-8.2	-10.1	-12.5	-14.1	-16.7	-18.4	-19.3	-19.9	-21	-21.8	-23	-24.2	-24.8	-25.5	-26.2	-26.8	-27.3	-27.6	-28	-5.0	-17.6	24
28	-28.2	-28.6	-29	-29.5	-29.5	-29.6	-29.7	-30.2	-30.3	-30.5	-30.3	-29.5	-28.8	-28.5	-28.4	-28.5	-29.1	-30.1	-30.6	-31.3	-32.3	-34.5	-36.6	-37.6	-28.2	-30.5	24
29	-38.6	-39.5	***-40***	***-40***	***-40***	***-40***	***-40***	***-40***	***-40***	***-40***	-38	-34.2	-32	-30	-28.9	-28	-30.1	-33.4	-35.3	-36.6	-37.5	-37.8	-38.6	-39.3	-28.0	-36.6	24
30	-39.6	***-40***	***-40***	***-40***	***-40***	-39.9	-39.8	-39	-37.9	-36	-33.4	-31.2	-29.3	-27.8	-27.2	-27.1	-27.4	-27.6	-27.4	-27.4	-27.7	-28.2	-28.7	-28.9	-27.1	-33.0	24
31	-28.7	-28.7	-28.2	-28.2	-28	-28.1	-28.7	-29.1	-28.8	-28.5	-26.9	-26	-25.3	-24.9	-24.1	-23.4	-23.6	-23.9	-24.2	-24.1	-23.9	-24.6	-25	-25.4	-23.4	-26.3	24
HOURLY MAX	-5.0	-5.0	-3.5	-1.1	-1.9	-2.3	-3.1	-3.3	-3.6	-3.8	-3.4	-2.4	-2.1	-1.6	-0.8	-1.4	-2.5	-3.0	-3.3	-3.4	-4.2	-4.5	-4.7	-4.9			
HOURLY AVG	-16.4	-16.4	-16.2	-16.0	-16.0	-16.0	-16.3	-16.5	-16.7	-16.5	-15.2	-14.1	-13.3	-12.7	-12.4	-12.6	-13.7	-14.8	-15.4	-15.9	-16.3	-16.8	-16.9	-17.0			

STATUS FLAG CODES

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

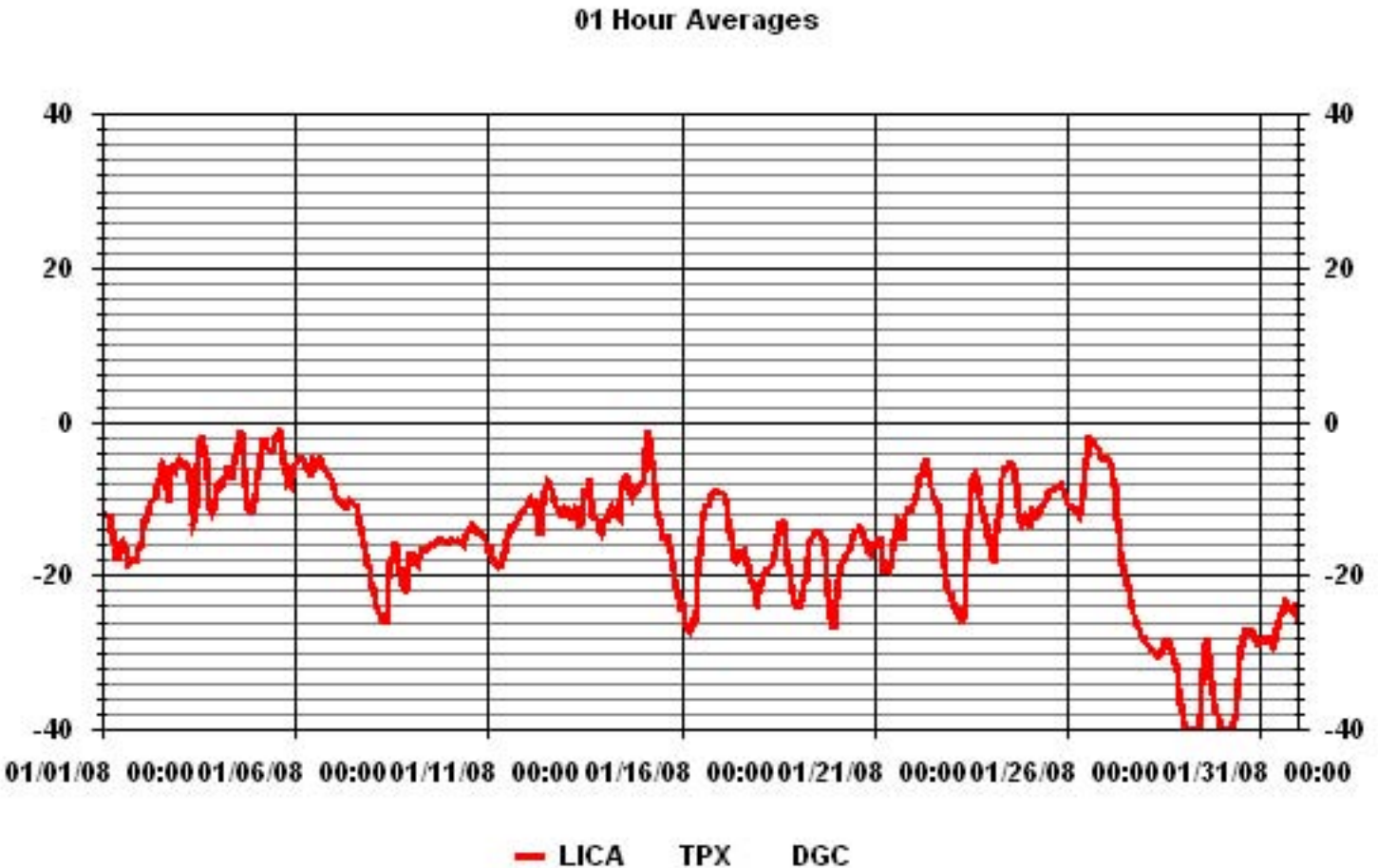


MONTHLY SUMMARY

MINIMUM 1-HR AVERAGE:	*	-40	^{o}C	@ HOUR(S)	VAR	ON DAY(S)	29,30
MAXIMUM 1-HR AVERAGE:		-0.8	^{o}C	@ HOUR(S)	15	ON DAY(S)	5
MAXIMUM 24-HR AVERAGE:		-4.3	^{o}C			ON DAY(S)	5
					VAR-VARIOUS		

CALIBRATION TIME:	0	HRS	OPERATIONAL TIME:	744	HRS
			AMD OPERATION UPTIME:	100.0	%
STANDARD DEVIATION:	8.52		MONTHLY AVERAGE:	-15.43	^{o}C

*** Outside detection limits of sensor.**


01 Hour Averages
40
20
0
-20
-40
01/01/08 00:00
01/06/08 00:00
01/11/08 00:00
01/16/08 00:00
01/21/08 00:00
01/26/08 00:00
01/31/08 00:00
LICA
TPX
DGC

Relative Humidity

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

JANUARY 2008

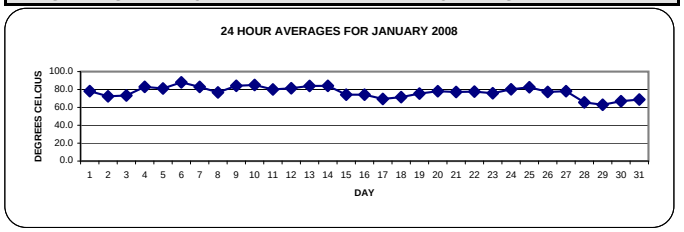
RELATIVE HUMIDITY hourly averages (%)

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	82.7	82.9	84.3	84.9	85.1	82.7	79.9	80.5	81.4	76.5	69.5	72.7	69.8	67.2	70.9	76.2	80.0	78.8	78.1	79.8	79.5	79.2	77.4	76.4	85.1	78.2	24
2	75.4	71.6	69.5	71.1	70.9	68.2	67.3	68.3	69.8	71.8	70.1	67.9	63.4	63.1	65.6	68.6	77.1	82.2	74.6	75.6	79.3	82.2	81.8	81.5	82.2	72.4	24
3	81.2	75.0	73.0	71.1	69.7	69.8	75.8	86.0	86.0	79.6	75.7	60.8	55.8	53.8	51.3	56.8	63.4	75.2	81.4	82.7	83.8	83.1	83.9	84.4	86.0	73.3	24
4	84.9	88.1	88.7	87.8	87.2	85.8	85.2	86.3	89.3	88.9	83.6	75.7	69.0	64.9	62.2	67.6	81.2	87.0	88.2	88.5	88.1	87.5	87.0	87.4	89.3	82.9	24
5	87.0	84.7	75.6	71.3	67.5	69.5	73.9	76.6	80.1	82.9	82.6	79.9	78.4	76.7	72.7	75.6	83.2	85.9	88.6	91.4	90.5	91.1	91.0	89.9	91.4	81.1	24
6	90.1	90.4	88.4	87.7	87.1	86.9	88.6	88.5	87.5	90.4	87.1	83.1	83.5	82.7	82.2	83.6	89.1	90.7	90.2	90.3	91.2	91.4	91.4	90.1	91.4	**88.0**	24
7	87.3	86.5	86.6	87.5	88.1	87.6	87.0	86.9	87.1	86.6	83.3	79.0	73.9	73.3	74.1	78.5	82.7	83.7	83.2	83.5	82.5	81.1	81.0	77.7	88.1	82.9	24
8	77.8	76.7	75.6	75.9	75.2	75.9	74.8	76.2	74.1	73.9	71.2	73.0	71.9	72.8	74.1	78.2	83.1	81.3	79.6	78.7	78.5	78.7	81.4	82.5	83.1	76.7	24
9	82.6	85.7	83.8	81.7	81.7	83.0	83.0	83.9	84.1	84.3	83.8	83.2	83.6	84.1	84.6	84.4	84.5	84.9	84.8	86.2	85.8	85.0	84.9	84.7	86.2	84.1	24
10	84.7	84.6	84.6	84.6	84.5	84.6	84.7	84.4	84.1	84.7	85.3	85.6	86.0	86.2	86.3	86.2	85.8	85.7	85.6	85.6	85.3	85.0	84.0	82.5	86.3	85.0	24
11	82.6	82.6	81.8	81.0	80.6	80.5	80.0	80.0	80.1	80.5	80.0	78.8	79.2	79.7	77.5	76.2	78.5	79.5	79.7	79.8	80.0	80.6	81.5	80.7	82.6	80.1	24
12	80.3	81.6	80.3	84.6	84.5	83.1	86.8	86.1	83.9	79.3	71.8	71.1	71.4	70.9	75.5	78.8	81.7	81.3	83.7	84.8	85.7	87.2	89.0	89.2	89.2	81.4	24
13	88.8	88.0	87.1	86.4	87.9	88.7	87.3	87.1	86.0	82.9	82.6	80.9	79.8	78.0	72.3	70.2	82.6	86.0	86.2	83.8	85.9	84.1	85.3	86.5	88.8	83.9	24
14	85.8	84.7	84.9	86.1	85.2	85.6	85.9	85.5	86.2	84.7	83.4	79.8	75.6	73.2	76.2	79.4	83.9	86.0	86.6	87.5	88.2	88.5	87.6	87.4	88.5	84.1	24
15	87.3	86.6	91.2	91.2	85.4	79.3	77.5	74.1	74.4	72.5	66.2	65.3	65.6	65.0	68.1	66.9	65.5	63.4	65.0	67.0	71.9	74.9	77.9	77.9	91.2	74.2	24
16	78.2	76.0	75.2	74.9	74.1	73.9	74.2	74.2	74.4	73.9	73.1	75.5	71.4	69.3	68.1	67.4	70.8	71.8	74.6	77.4	77.6	76.9	77.6	80.7	80.7	74.2	24
17	87.6	88.3	88.1	84.5	81.1	79.3	78.5	79.4	77.7	70.3	71.4	66.0	58.7	56.7	56.0	52.4	55.0	56.9	56.9	57.0	58.4	63.4	70.5	72.5	88.3	69.4	24
18	69.3	67.4	66.1	65.6	66.0	70.1	71.4	70.8	72.7	72.2	73.5	72.8	67.8	62.3	63.3	66.1	71.1	76.2	80.3	80.4	78.0	77.1	77.4	76.6	80.4	71.4	24
19	75.0	76.2	75.6	77.7	79.5	76.4	80.2	81.0	80.0	78.0	74.3	72.8	70.0	67.4	71.3	72.4	69.6	73.9	79.2	78.4	77.2	76.1	74.6	74.0	81.0	75.5	24
20	77.3	76.6	76.5	76.3	77.1	78.8	79.4	79.6	79.5	78.6	77.4	75.8	74.8	74.3	73.1	74.0	76.0	78.2	78.4	79.3	81.7	83.0	83.6	83.6	83.6	78.0	24
21	83.8	84.2	84.8	84.4	83.6	81.7	79.2	81.1	80.1	78.8	75.9	71.6	67.0	61.3	61.5	66.0	73.7	77.0	77.3	79.2	79.1	79.5	80.3	81.8	84.8	77.2	24
22	83.8	87.2	88.3	87.7	84.1	83.2	84.4	86.8	83.6	72.7	72.3	67.9	67.0	65.2	64.4	64.8	69.7	75.6	81.6	80.5	78.3	78.7	78.0	76.8	88.3	77.6	24
23	78.9	76.1	75.1	74.8	75.3	75.4	75.2	75.3	75.3	78.8	76.7	76.3	70.7	66.9	65.2	66.1	70.2	75.6	77.8	80.1	81.1	82.0	84.7	85.5	85.5	75.8	24
24	84.1	81.8	81.8	80.9	83.1	86.0	87.1	87.8	85.0	77.5	75.3	73.1	71.0	69.2	68.1	67.7	74.4	83.3	85.5	85.1	84.8	84.2	84.0	84.6	87.8	80.2	24
25	85.0	84.8	84.3	85.7	86.3	86.9	87.7	86.6	85.7	84.6	84.0	81.7	75.0	73.3	73.6	75.1	76.1	77.4	80.5	82.6	83.5	85.0	86.8	87.6	87.7	82.5	24
26	88.7	88.5	86.9	86.4	86.8	86.2	87.1	86.8	85.9	81.4	76.0	70.3	63.8	53.7	56.0	59.1	59.1	62.9	64.4	65.1	80.9	92.4	92.7	92.5	92.7	77.2	24
27	92.7	**93.0**	92.8	92.9	88.9	87.2	86.0	83.7	81.3	77.1	72.7	70.8	70.0	69.7	70.4	70.2	69.4	70.3	73.1	71.9	72.8	73.1	72.5	71.8	93.0	78.1	24
28	71.9	71.3	71.1	70.9	71.0	71.2	70.7	69.1	68.8	66.9	64.7	61.7	60.3	57.1	55.9	56.0	57.5	60.7	62.9	64.8	67.7	68.5	67.0	66.6	71.9	65.6	24
29	65.5	65.4	64.9	64.2	63.7	63.4	63.0	62.9	62.5	62.3	62.0	61.2	58.6	55.9	54.0	53.1	61.2	68.8	68.4	66.5	66.2	66.2	65.6	65.4	68.8	63.0	24
30	65.3	64.7	64.3	64.3	65.0	65.4	65.4	66.0	66.5	66.8	67.5	66.9	65.2	63.9	65.3	66.6	68.6	70.8	70.0	67.3	67.4	69.4	71.5	71.9	71.9	66.9	24
31	71.7	71.6	70.6	71.2	70.9	71.1	73.3	73.7	73.5	72.1	66.7	64.3	63.3	63.4	61.6	61.5	63.4	67.5	70.0	69.6	68.3	70.6	69.9	71.4	73.7	68.8	24
HOURLY MAX	92.7	93.0	92.8	92.9	88.9	88.7	88.6	88.5	89.3	90.4	87.1	85.6	86.0	86.2	86.3	86.2	89.1	90.7	90.2	91.4	91.2	92.4	92.7	92.5			
HOURLY AVG	81.2	80.7	80.1	79.8	79.3	78.9	79.4	79.8	79.6	77.8	75.5	73.1	70.4	68.4	68.4	69.9	73.8	76.7	77.9	78.4	79.3	80.2	80.7	80.7			

STATUS FLAG CODES

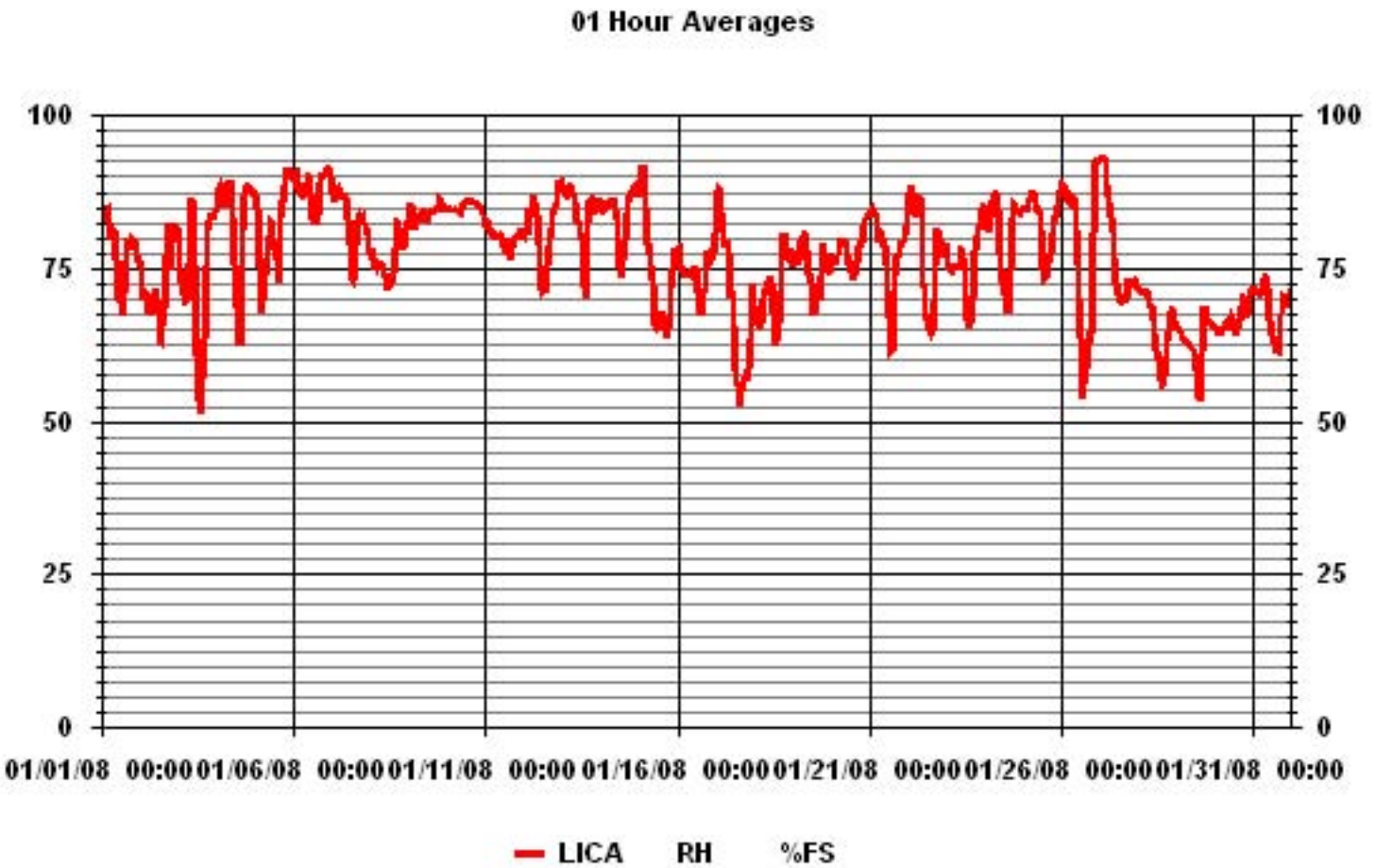
S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	- MISSING DATA
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE



MONTHLY SUMMARY

MAXIMUM 1-HR AVERAGE:	93.0	%	@ HOUR(S)	2	ON DAY(S)	27
MAXIMUM 24-HR AVERAGE:	88.0	%			ON DAY(S)	6

CALIBRATION TIME:	0	HRS	OPERATIONAL TIME:	744	HRS
			AMD OPERATION UPTIME:	100.0	%
STANDARD DEVIATION:	8.63		MONTHLY AVERAGE:	77.09	%


01 Hour Averages
100
75
50
25
0
01/01/08 00:00
01/06/08 00:00
01/11/08 00:00
01/16/08 00:00
01/21/08 00:00
01/26/08 00:00
01/31/08 00:00
LICA RH %FS

Vector Wind Speed

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

JANUARY 2008

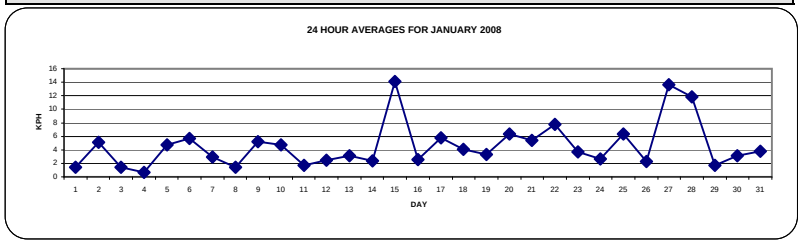
VECTOR WIND SPEED (WS) hourly averages (km/hr)

MST

HOUR START / HOUR END	0:00 / 1:00	1:00 / 2:00	2:00 / 3:00	3:00 / 4:00	4:00 / 5:00	5:00 / 6:00	6:00 / 7:00	7:00 / 8:00	8:00 / 9:00	9:00 / 10:00	10:00 / 11:00	11:00 / 12:00	12:00 / 13:00	13:00 / 14:00	14:00 / 15:00	15:00 / 16:00	16:00 / 17:00	17:00 / 18:00	18:00 / 19:00	19:00 / 20:00	20:00 / 21:00	21:00 / 22:00	22:00 / 23:00	23:00 / 0:00	DAILY MAX.	24-HOUR AVG.	RDGS.
DAY																											
1	8.2	6.1	6.2	7.1	6.9	8.6	8.9	3.3	2.3	0.8	0.8	3.7	2.9	1.2	2.5	2.3	2.2	5.7	8.6	8.9	7.7	5.6	9.7	11.3	11.3	1.4	24
2	10.3	10.7	15.8	11.9	13.3	13	9.9	11.1	11.6	8.5	5.5	3.2	3.1	5.5	4.3	4.4	3.8	5.3	10.6	7.8	7.9	8.3	9.2	9	15.8	5.1	24
3	8.3	8.4	8.9	9.2	7.4	6.4	4.5	1.7	0.7	0.6	1.2	1.3	3	2.8	5	3.2	2.6	1.9	1	1.9	2.3	1.9	3	4.9	9.2	1.4	24
4	4.9	3.7	4.2	4	4.3	4.9	4.2	3	0.6	3.1	6.2	5.6	4.8	5.9	4.2	2.1	0.6	0.7	0.7	1	1.7	1.9	2.1	1.4	6.2	0.7	24
5	2.3	2.7	4.9	6.1	7	4.6	5.6	4.4	6	5.9	4.6	4.6	3.6	0.5	1.7	1.2	3.8	7	6	4.8	6.3	7	6.6	6.3	7.0	4.7	24
6	5.9	7.7	6.1	6.9	7.9	7.5	6.3	4.1	5.5	4	4.9	6.5	7.6	8.8	7.1	6.1	5.2	5.6	6.1	5.3	3	2.6	3.3	2.1	8.8	5.7	24
7	3.6	3.9	1.8	0.6	0	0.9	0.7	0.6	2.1	3.4	5.1	8.1	8	5.8	3	2.7	2.4	2.8	1.5	3.4	2.7	3.2	2.7	0.8	8.1	2.9	24
8	0.4	0.2	0.8	0.2	0.5	0.6	0.3	0.9	0.6	1.3	0.2	0.4	1.1	3	2.9	3.9	2.6	2.6	1.7	0.8	1.5	0.7	2.3	4.2	4.2	1.4	24
9	4.4	5	4.1	3.3	4.5	7	5.8	6.4	5.5	5	5.1	5.1	5.8	6.1	4.9	4.5	2.3	2.3	3.3	6.8	8.1	7.9	6.2	5.5	8.1	5.2	24
10	4.8	4.5	4.2	5.4	5.1	5.1	4.8	3.8	4.4	7.8	7.2	6.4	5.6	6.7	6.2	6.2	4.8	5	3.1	3.9	4.2	2.6	0.7	0.5	7.8	4.7	24
11	0.1	0.6	0.6	0.9	1	0.5	0.7	0.5	0.5	0.7	2.3	3.3	3.7	2.7	1.7	2.9	2.2	1.3	1.6	3.5	2.1	2.5	2.6	1.5	3.7	1.7	24
12	1.8	1.7	1	1	0.5	1.1	0.8	0.5	0.9	0.4	0.5	1.1	2.3	3.3	4.2	3.5	3.9	5.5	4.9	4.1	3.4	2.1	4.9	6	6.0	2.5	24
13	6.2	4.5	5.5	6.5	5.8	5.6	5.2	2.8	1	1.1	3.1	3.6	4.7	4.6	4.1	0.7	0.3	0.8	1.5	0.8	1.5	1.3	2	2.8	6.5	3.2	24
14	3.2	1.4	0.6	0.9	2.2	2.4	0.5	2.9	1.9	1.9	5.4	3.7	3.4	1.4	2.8	2.1	2.1	2.4	2.2	1.1	1	3.3	5	2.5	5.4	2.3	24
15	2.8	6.7	8.6	16.3	**25.5**	22.4	19.3	20.9	23	22.6	23.8	23.3	19.8	16.8	11.8	15.3	11.9	13.8	10.8	6.1	4.1	4.5	3.9	3.6	25.5	**14.1**	24
16	4.8	1.1	0.9	0.6	0.5	1.5	0.6	0.2	0.5	1	0.2	2.7	3.4	6.8	6.1	3.3	3.8	3.9	2.2	5	4.8	3.6	2.9	0.6	6.8	2.5	24
17	0.7	1.5	5.5	8.6	9.9	11.4	9.4	8.2	9.2	9.5	8.1	6.9	7.2	3.8	2.6	5.3	6	7.6	6.7	3.8	3.7	1.4	0.4	1.2	11.4	5.8	24
18	3.9	3.1	2.6	6.4	8.6	10.5	11.4	5.6	0.5	1.7	3.6	6.3	4.6	5	5.6	7	5.2	2.2	0.7	0.7	0.3	0.5	0.5	0.3	11.4	4.0	24
19	0.9	9	0.4	0.3	1.2	0.2	4	5	6.5	5	5.8	5.4	6.1	6.2	6.1	6.7	5.1	2.2	0.1	0.1	0.6	0.4	1.1	0.6	9.0	3.3	24
20	5.2	5.4	5.3	7.5	7.7	7.6	7.5	4.3	3.4	3.4	5.2	6.6	7.7	8.6	7.5	6.9	5.2	5.2	6.1	5.2	6.2	6.2	9.4	8.5	9.4	6.3	24
21	5.3	4.9	5	4.4	5.4	3.7	3.1	4.9	6.2	6.8	6.5	8.1	9.1	5.9	6.3	5.2	4.9	2.6	3	5.9	4.1	5.5	5.8	6.3	9.1	5.4	24
22	3.8	6.7	8.6	7.8	10.6	8.2	6.5	8.2	13	19.7	19	17.2	14	13.4	10.8	7.6	6.3	0.6	0.5	0.2	1.1	0.7	1.2	0.8	19.7	7.8	24
23	1.4	0.9	0.2	0.7	2.2	0.5	0.7	1.1	1.5	1.5	3.1	3.3	1.1	6.7	8.2	7.8	6.6	5.9	6.3	5.7	7.1	5	3.8	6.4	8.2	3.7	24
24	1	0.9	0.9	1.2	0.1	1.4	1.2	5.3	8.4	7.6	6.6	4.2	5.6	6.5	4.4	2.3	0.3	0	0.3	1.2	1.4	1.5	0.2	0.6	8.4	2.6	24
25	0.2	5	5.8	3.7	3.8	7.5	5.5	4.3	3.5	4.9	6.2	8.7	6.5	8.7	7.5	7.6	8.7	5.9	6.1	6.4	9.7	9.9	9.3	7.1	9.9	6.4	24
26	3.2	2.9	2.2	1.4	2.8	1.3	0.7	0.9	1.8	0.9	2.5	4.6	3.5	0.8	3.5	2.8	3.3	1	2.3	1.9	3.8	2.7	2.3	2.2	4.6	2.3	24
27	2.4	1.9	5	7.3	13.4	13.5	14.7	16.2	15.9	15.6	17.3	16.7	15.3	15	14.4	14.3	16.2	14.9	15.5	16.5	16	17	14.3	16.8	17.3	13.6	24
28	15.5	15.4	15.5	16.9	15	17.3	15.7	15	15.5	15.7	15.5	14.6	14.3	14.2	13.7	13.1	10.2	6.6	6.7	6.4	3	1.9	1.3	5.9	17.3	11.9	24
29	11.9	3.5	0.1	1	0.4	0.4	0.3	0.2	0.3	0.1	1.8	1.5	4.4	4.9	4.3	2.2	0.6	0.3	0.3	0.8	0.1	0.1	0.6	0.2	11.9	1.7	24
30	0.3	0.6	0.7	0.2	0.2	0.6	0.8	4.9	0.3	1.4	2.9	6.9	0.9	3.6	4	5.7	5.2	2.9	7.7	10.3	7	3	2.9	2	10.3	3.1	24
31	4.1	4.4	4	5.3	4.9	4.7	3.6	3.2	6.2	3.7	4.5	3.3	4.3	3.7	1.5	7	2.6	2.6	2.4	3.1	4.3	2.1	0.3	4.9	7.0	3.8	24
HOURLY MAX	15.5	15.4	15.8	16.9	25.5	22.4	19.3	20.9	23.0	22.6	23.8	23.3	19.8	16.8	14.4	15.3	16.2	14.9	15.5	16.5	16.0	17.0	14.3	16.8			
HOURLY AVG	4.3	4.4	4.4	5.0	5.8	5.8	5.3	5.0	5.1	5.3	6.0	6.4	6.0	6.1	5.6	5.4	4.5	4.1	4.2	4.3	4.2	3.8	3.9	4.1			

STATUS FLAG CODES

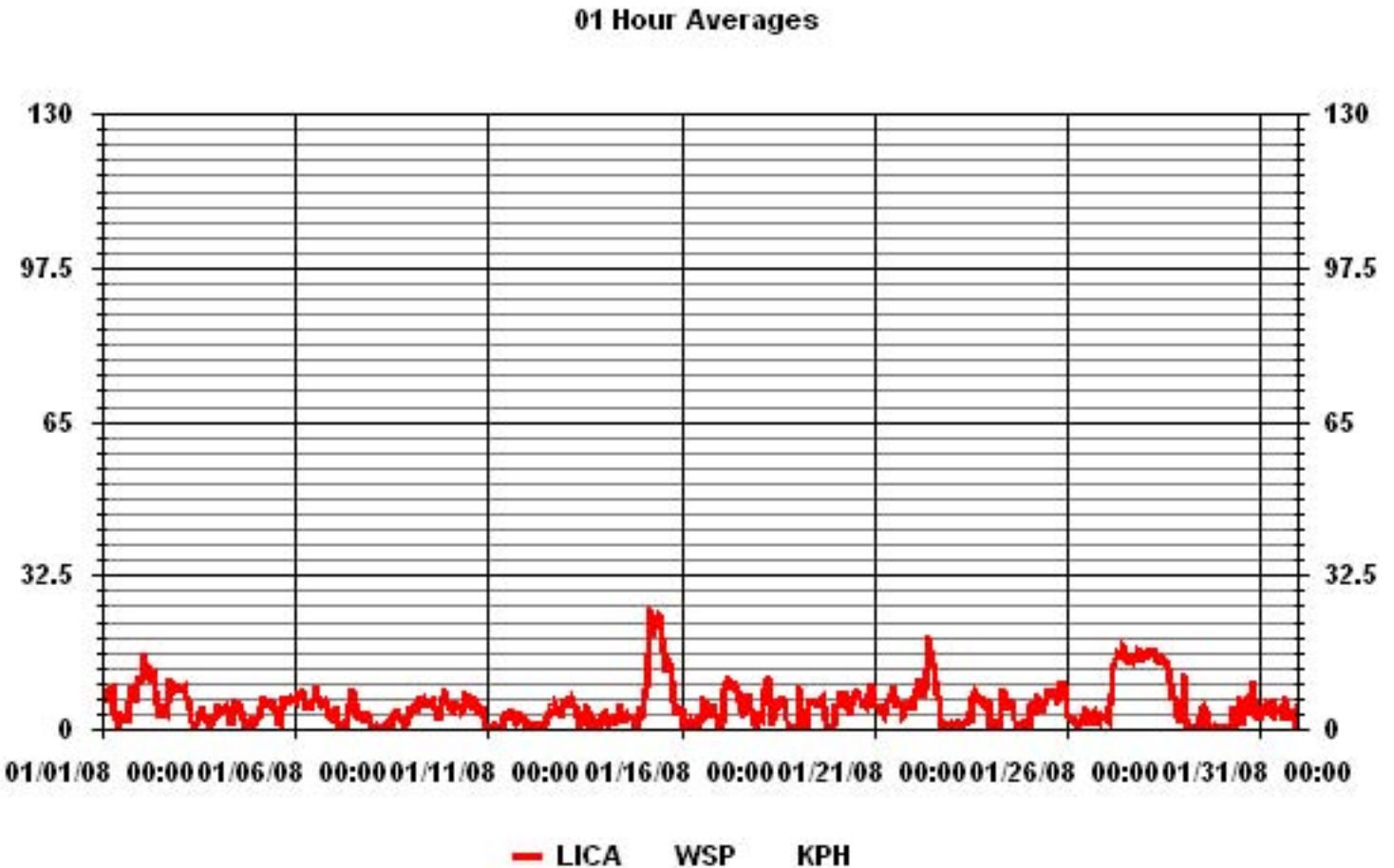
S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	- MISSING DATA
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE



LAST CALIBRATION:	December-2006

MONTHLY SUMMARY

MAXIMUM 1-HR AVERAGE:	25.5	KPH	@ HOUR(S)	5	ON DAY(S)	15	
MAXIMUM 24-HR AVERAGE:	14.1	KPH			ON DAY(S)	15	
CALMS (≤ 0 KPH)	5.11	%	OPERATIONAL TIME:		744	HRS	
MONTHLY CALIBRATION TIME:	0	HRS	AMD OPERATION UPTIME		100.0	%	
STANDARD DEVIATION:	4.35		MONTHLY AVERAGE:		4.95	KPH	


01 Hour Averages
130
97.5
65
32.5
0
01/01/08 00:00
01/06/08 00:00
01/11/08 00:00
01/16/08 00:00
01/21/08 00:00
01/26/08 00:00
01/31/08 00:00
LICA WSP KPH

LICA
WSP / WD Joint Frequency Distribution (Percent)

January 2008

Distribution By % Of Samples

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

Wind Parameter : WD
Instrument Height : 10 Meters

Direction

	Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
<	6.0	1.74	4.16	6.31	4.03	5.77	5.24	6.45	2.41	2.41	2.82	7.66	8.33	3.89	1.07	.80	.80	63.97
<	12.0	.40	1.74	1.34	.40	.80	1.34	2.01	.00	.00	.26	4.43	6.45	1.20	.67	1.07	.94	23.11
<	20.0	1.47	3.22	.00	.00	.00	.13	.26	.00	.00	.00	.00	.00	.00	.00	.94	.80	6.85
<	29.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.13	.67	.13	.94
<	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	9.13	7.66	4.43	6.58	6.72	8.73	2.41	2.41	3.09	12.09	14.78	5.10	1.88	3.49	2.68	

Calm : 5.10 %

Total # Operational Hours : 744

Distribution By Samples

Direction

	Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
<	6.0	13	31	47	30	43	39	48	18	18	21	57	62	29	8	6	6	476
<	12.0	3	13	10	3	6	10	15			2	33	48	9	5	8	7	172
<	20.0	11	24				1	2								7	6	51
<	29.0														1	5	1	7
<	39.0																	
>=	39.0																	
	Totals	27	68	57	33	49	50	65	18	18	23	90	110	38	14	26	20	

Calm : 5.10 %

Total # Operational Hours : 744

Logger : 01 Parameter : WSP

Class Limits (KPH)

>= 39.0

< 39.0

< 29.0

< 20.0

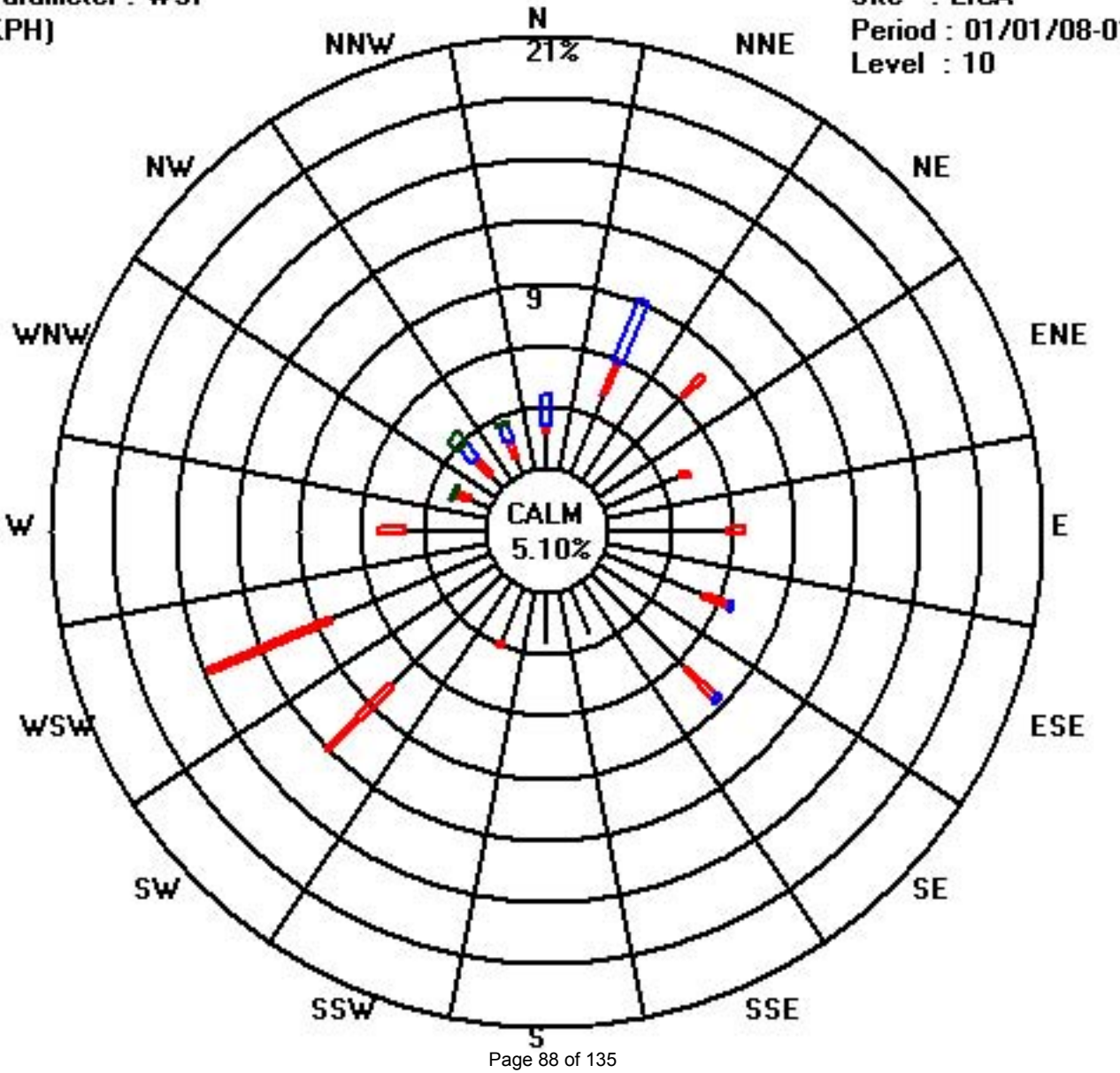
< 12.0

< 6.0

Site : LICA

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

Level : 10



LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

JANUARY 2008

VECTOR WIND SPEED MAX instantaneous maximum in km/hr

MST

HOUR START HOUR END DAY	0:00 1:00	1:00 2:00	2:00 3:00	3:00 4:00	4:00 5:00	5:00 6:00	6:00 7:00	7:00 8:00	8:00 9:00	9:00 10:00	10:00 11:00	11:00 12:00	12:00 13:00	13:00 14:00	14:00 15:00	15:00 16:00	16:00 17:00	17:00 18:00	18:00 19:00	19:00 20:00	20:00 21:00	21:00 22:00	22:00 23:00	23:00 0:00	DAILY MAX.
1	11.3 SW	12.1 SW	9.9 WSW	11.2 W	10.6 W	14.9 NNW	13.7 N	6.6 N	3.9 NE	2.8 ESE	5.6 N	7.3 WNE	6.7 N	5 N	5.6 E	4.6 E	14.6 WSW	9.9 SE	11.5 ESE	12.3 ESE	12.1 SE	9.2 E	14.8 ESE	16.1 ESE	16.1 ESE
2	15.7 ESE	16.1 SE	24.6 SE	21.2 ESE	20.9 ESE	19 SE	15.2 SE	15.2 SE	17.3 SE	13.4 SE	8.9 SE	7.3 SE	8.8 SSW	10 SW	8 SW	7.1 SW	5.8 SW	8.4 WSW	17.9 WSW	10.7 WSW	12.8 SW	11.5 SW	12.9 WSW	12.9 WSW	24.6 SE
3	10.4 WSW	12.1 SW	11.6 WSW	12.4 SW	11.5 SW	9.9 SW	7.5 WSW	4.1 SE	3.5 SE	4.6 SE	2.5 E	4.1 N	4.9 NE	6.8 SE	7.8 SE	6.2 SE	4.7 SE	4.4 NE	3.5 ENE	5 ESE	4.8 NE	4.5 SE	5.6 ESE	10.1 ESE	12.4 SW
4	9.1 ESE	7.4 NE	8.8 E	7.9 ENE	8.8 SE	8 SE	6.7 SW	8.3 SE	7.2 SW	7.2 SSW	15.3 SW	9.7 WSW	8.9 SW	8.5 SW	7.9 WSW	4.7 SW	2.7 E	2.8 SE	5.4 N	6.4 S	3.4 NNE	4.2 NE	4.6 NNE	4.3 NW	15.3 SW
5	9.5 NE	6.7 E	7.7 ENE	10.6 ENE	12 ESE	7.1 ENE	13.1 E	11.3 E	11.1 E	10.2 ESE	7 E	12.2 E	8.4 ESE	4.1 NW	4.1 N	4.6 NE	7.7 SW	9.3 WSW	9 WSW	6.5 SW	8.4 SW	8.5 WSW	8.7 WSW	8.7 WSW	13.1 E
6	8.8 WSW	11.7 WSW	10.3 WSW	12.2 WSW	11.1 WSW	12.3 WSW	10.5 WSW	6.7 W	8.1 W	5.7 WSW	7.6 WSW	10.8 WSW	10.9 WSW	11.9 WSW	10.6 WSW	11 WSW	8.7 W	7.6 WSW	8.6 WSW	8.6 WSW	5.1 W	4.2 WSW	4.6 W	7.3 NNE	12.3 WSW
7	6.3 NE	5.7 NNE	4.6 NE	7.6 SW	8.6 S	1.7 SW	2.9 N	2.5 SE	6.2 WNW	5.9 WNW	11.1 WNW	12.2 WNW	13 NW	10.3 NW	5.4 W	4.6 W	4.5 WSW	4.1 WSW	3.1 SSW	5.1 SW	4.8 SW	5.1 SW	5.2 SW	4.7 S	13 NW
8	2.5 ESE	2.6 WSW	2.8 WSW	1.8 E	44.4 WNW	2.1 ENE	1.9 NE	9.9 SE	12.8 SW	4.5 NE	1.9 E	17.9 SW	2.8 NE	6.3 E	4.7 NNE	6.9 NNE	5.6 NE	4.9 NE	2.9 NE	3.3 NE	3.2 NE	17.3 SW	5.4 NNE	7.7 NNE	44.4 WNW
9	6.9 NE	7.8 NNE	7.2 NE	6.8 NNE	7.1 NNE	10.8 NE	9 NE	9.5 NNE	8.1 NNE	8.2 NE	9.2 NNE	8.5 NNE	9 NNE	11.2 N	8.6 N	7.6 N	5.2 NE	4.8 E	6.8 E	11.4 ESE	10.1 SE	11.7 ESE	10.1 SE	7.7 SE	11.7 ESE
10	8.7 SE	7.9 SE	7.1 SE	8.8 SE	7.6 SE	8.7 ESE	9.2 SE	7.8 E	8.9 ESE	13.2 ESE	11.9 SE	13 SE	9.1 ESE	10.9 E	9.8 E	9.5 E	9.1 E	8.1 E	6.5 E	5.6 ESE	6.2 SE	3.9 SE	2.3 SE	9.1 N	13.2 ESE
11	2 W	1.8 SE	1.7 SE	2.3 SE	2.3 WSW	3.2 W	2.5 WSW	1.9 SE	5.7 N	2.5 SW	5.8 WSW	6.7 W	9.7 W	6 SW	6.7 SE	6.3 W	7.5 SW	8.2 SE	4.4 SE	7.3 ESE	5.6 SE	6.7 SSE	5.7 SE	2.9 SE	9.7 W
12	4.3 ESE	3.9 SSE	3.4 SW	6.3 N	4.1 W	4.6 WNW	5.5 N	3.9 NE	3.5 SW	1.9 NE	2.2 WSW	3.1 W	4.2 ENE	6.7 N	6.6 NE	6.8 NE	6.1 ENE	7.9 E	8.4 E	6.4 E	6.6 E	4.8 E	8.4 E	8.2 E	8.4 E
13	9.2 E	7.7 E	8.3 ESE	11 ESE	9.7 SE	9.8 SE	10.4 SE	6.1 SE	5.1 SE	4 SE	6.8 ESE	6.9 SW	10.1 SW	8.1 W	6.9 WSW	3.6 SSW	3.5 W	3 ESE	4.2 SE	3.7 SE	3.5 SE	3.5 E	3.8 E	5 NNE	11 ESE
14	6.8 NE	4.6 NW	2.8 WSW	4.2 W	4.1 ENE	4.6 E	2.9 ESE	8.2 E	5.2 E	4.4 ESE	7.6 SE	8 E	6.1 ESE	6.6 SE	5.8 ENE	6 N	4.3 NE	7.4 NNE	5.6 E	7.4 NW	4.8 WNW	10 NW	8.6 SW	5.8 NNW	10 NW
15	7 SW	10.1 SW	15.6 WNW	26.4 NW	41.4 NNW	36.9 NNW	28.4 NW	29.9 NW	35.3 NW	35.4 NW	33 WNW	31.3 NW	28.2 NW	27.8 NNW	17.7 WNW	25.3 NW	17.7 WNW	21.7 NW	15.1 NW	11.9 WNW	6.8 WNW	14 SE	7.1 WSW	7.8 WSW	41.4 NNW
16	7.8 SW	3.9 SW	3.3 ESE	1.7 ESE	2.5 W	3.3 N	2.2 WSW	2.5 SE	4.8 NNE	3.6 W	1.8 E	4.9 NW	9.9 SW	9.8 SW	9.5 SW	5.9 W	6 SW	5.8 WSW	5.7 SW	6.7 WSW	6.5 WSW	5.9 W	4.9 W	2.9 WNW	9.9 SW
17	1.9 W	3.4 N	11.8 NE	13 NE	17.7 NE	16.4 NE	13.7 NNE	12.3 NNE	14.1 NNE	15 NNE	11.6 NE	12.4 NNE	11.3 NE	7.1 NE	5.5 E	10.3 NW	8.6 NNW	12.1 NNW	11 NNW	10.7 SSE	24.8 SSE	23 SSE	15.3 N	3.9 SW	24.8 SSE
18	7.8 W	5.7 WSW	6.3 W	10.1 WSW	13.4 W	14.4 WSW	16.6 WSW	12.6 SW	3.8 WSW	6 SSW	7.4 WSW	11.3 SW	8.2 WSW	8.3 SW	9 SW	10.2 SW	9.1 SW	5.1 WSW	2.5 SSW	3.5 NNE	1.6 SE	13.3 N	3.8 W	37 NW	37 NW
19	40 SE	32.8 NW	3.1 WNW	7 S	28.1 SW	1.5 SSW	9.5 NE	9.4 NNE	10.8 NE	8.9 NE	9.1 NE	9.3 N	11.6 NNE	9 NE	10.3 NE	10.3 ENE	9.2 N	37.1 SSW	3.2 NW	7.2 S	2.3 NW	1.9 ESE	4.5 WSW	34.5 NE	40 SE
20	7.4 W	8.7 SSW	8.6 WSW	11.2 SW	12.4 WSW	10.7 WSW	13.9 W	7.9 W	7.9 WSW	5.7 SSW	8.9 WSW	9.6 WSW	11.6 WSW	12.1 WSW	11.3 WSW	10.9 W	8.1 WSW	7.4 WSW	8.7 WSW	7.6 WSW	9 SW	9.1 SW	15.6 W	13.7 W	15.6 W
21	11.4 W	7.9 SW	9.1 SW	8.2 SSW	7.8 WSW	5.6 SW	5.6 WSW	7.4 SW	8.6 SW	9.1 WSW	9.9 W	11.6 WSW	13.3 WSW	8.9 SW	9.3 WSW	7.7 WSW	7 SW	5 SW	6 WSW	9.1 W	7.3 WSW	9.1 WSW	9.5 SW	10.6 SSW	13.3 WSW
22	7.3 SSW	11 SSW	12.2 SW	11.4 W	14.4 W	11.5 W	10 WNW	14 WNW	21.2 NNE	29.2 N	28.5 NNW	26.5 N	21.4 N	18.2 NNW	19 N	13.5 NNW	8.9 NNW	5.2 NNW	8.4 N	4.8 N	2.8 W	34.9 WNW	3.5 SW	3.9 WSW	34.9 WNW
23	4.2 SW	17.8 NW	4 NE	23.2 ESE	53.3 SSW	5.7 S	4.3 SSE	2.5 E	3.7 SE	4 SE	6.3 SE	6 SE	6.1 SW	11.4 SSW	11.8 SW	11.9 SW	12 SW	8.3 SW	9.3 SW	9.8 SSW	11.3 SW	8.2 WSW	7 WSW	8 WSW	53.3 SSW
24	6.4 WSW	5 WSW	6.7 WSW	4 WNW	4.2 W	5.1 SE	4.2 WSW	12.8 NNE	12.3 NNE	10.6 NE	11.9 NE	8.8 NNE	12 NE	9.5 N	7.7 NNW	5.2 NE	2.8 E	2 E	1.7 SE	2.2 NNE	2.9 NE	4.3 NE	2.9 E	11.9 S	12.8 NNE
25	3.4 E	9.4 SE	9.2 ESE	5.4 ESE	7.3 E	11.7 SE	9.9 SE	9.6 S	6.8 SE	9.9 SSE	9.7 S	13.6 SW	12.5 SW	15.8 SSW	14.4 SW	11.3 SSW	12.4 SSW	8.9 SSW	9.7 SW	9.3 SW	15 SW	15.7 SW	14.4 SW	12 SW	15.8 SSW
26	8.3 SW	6.2 SE	4.5 SSE	3.6 SE	4.6 SE	2.9 E	3.2 S	3.3 SE	3.9 S	3 SE	7.1 SW	7.2 SW	6 WSW	4.2 SSW	7.3 ESE	7.2 SE	6.5 SE	6.5 SE	6.3 SSE	4.4 ESE	9.1 SE	6.5 SE	4.3 ESE	4.5 N	9.1 SE
27	4.8 NE	4.8 N	8 NNE	16.7 NNE	21.1 NNE	19.7 NNE	21 NNE	22.9 NNE	21.6 NNE	22.2 N	23.5 NNE	24.4 NNE	22.9 NNE	23.1 NNE	21.2 N	20.4 N	23.5 NNE	22.5 N	24.9 N	26.1 NNE	22.9 NNE	27 NNE	21.7 NNE	24.6 NNE	27 NNE
28	22.9 N	24.2 N	24.1 NNE	26.1 N	22 N	24.6 N	24.5 N	22.8 NNE	22.5 N	21.7 N	22.7 N	20.6 N	20.3 NW	19.4 NW	18.2 NNW	22 NW	17.1 NW	9.3 NNW	9.5 NW	9.1 NW	14.9 NW	7.2 NE	33.6 SE	63.1 NE	63.1 NE
29	41.9 NE	6.5 WSW	10.5 N	2.4 SW	29.5 ENE	11.4 S	5.8 SSE	2 N	28.7 NNE	11.7 SSE	29.9 NE	21.1 SE	7.9 WSW	13.5 SSE	7.6 WSW	30.6 NE	16.3 N	13.6 N	10.5 N	2.4 SW	4.2 WSW	1.8 SW	12.3 SSW	10 N	41.9 NE
30	3.9 S	19.6 N	14.9 NE	2.2 SSE	2.1 WSW	6.8 S	8.8 S	30.4 SSW	11.4 S	3.2 WSW	5.6 SE	30 NW	24.1 NW	11.8 NW	7.2 E	12 E	10 E	20.2 WNW	14.2 SE	17.8 SE	13.5 SE	5.2 SE	4.9 ESE	15.1 SW	30.4 SSW
31	18.2 NW	10.4 E	18.1 SW	9.2 E	16.1 SSW	24.1 SSW	22.2 SSW	20 SW	9.8 ESE	25.3 SW	17 WSW	34.6 SSW	10.5 N	27.6 SSE	52.6 SE	39.1 SE	**68.6** **N**	37.7 SSE	4.4 NE	8.7 SW	7.6 NNE	22 SSW	27 SSW	10.3 N	68.6 N
PEAK	41.9 NE	32.8 NW	24.6 SE	26.4 NW	53.3 SSW	36.9 NNW	28.4 NW	30.4 SSW	35.3 NW	35.4 NW	33.0 WNW	34.6 SSW	28.2 NW	27.8 NNW	52.6 SE	39.1 SE	68.6 N	37.7 SSE	24.9 N	26.1 NNE	24.8 SSE	34.9 WNW	33.6 SE	63.1 NE	

STATUS FLAG CODES

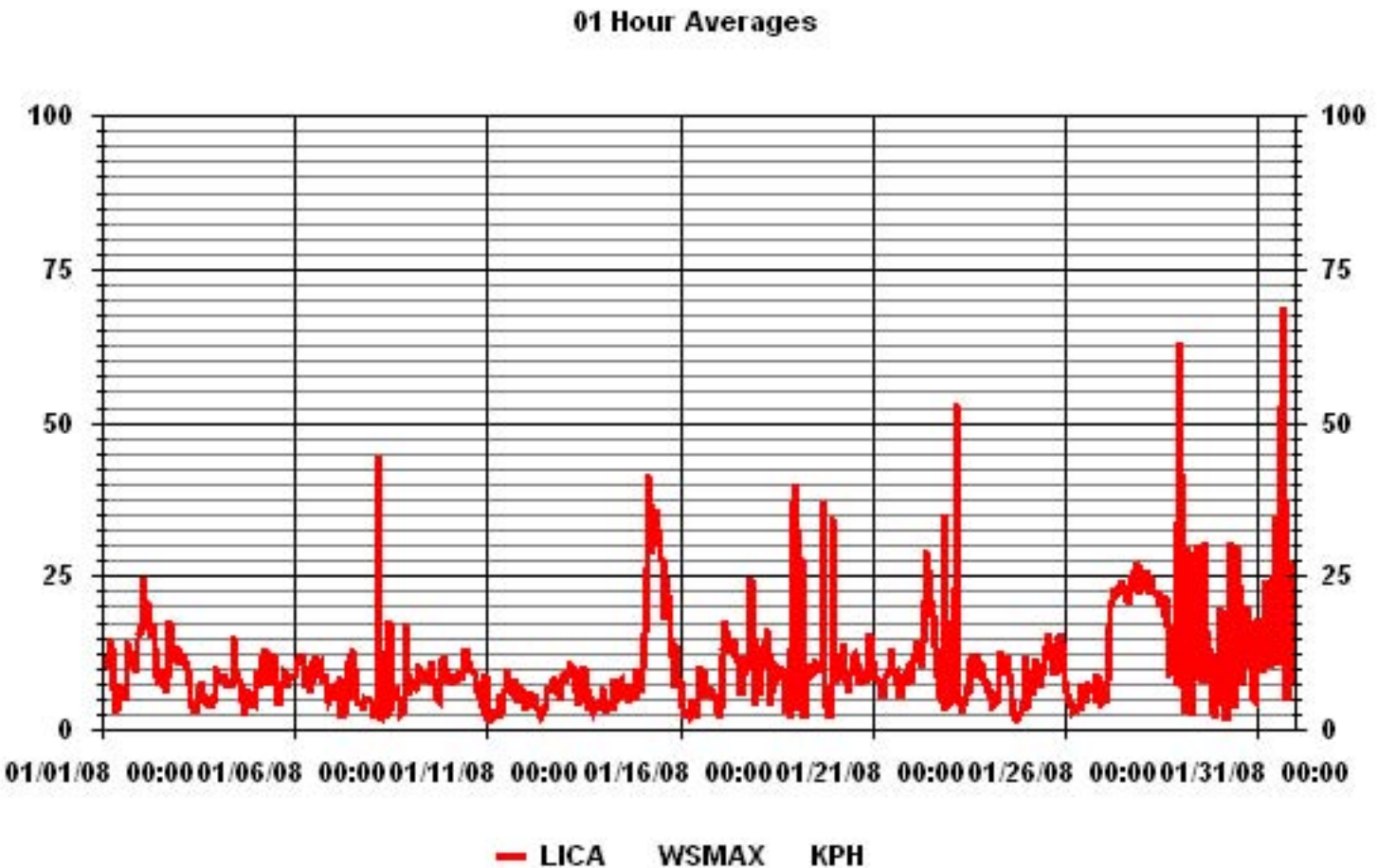
S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	- MAINTENANCE
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE

***INSTANTANEOUS MAXIUM BASED ON ONE-MINUTE AVERAGES**

NOTE: WIND DIRECTION CORRESPONDS TO WIND SPEED MAXIMUMS

MONTHLY SUMMARY

MAXIMUM INSTANTANEOUS READING	68.6	KPH	@ HOUR(S)	17
	N	DEG	ON DAY(S)	31


01 Hour Averages
100
75
50
25
0
01/01/08 00:00
01/06/08 00:00
01/11/08 00:00
01/16/08 00:00
01/21/08 00:00
01/26/08 00:00
01/31/08 00:00
LICA WSMAX KPH

Vector Wind Direction

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

JANUARY 2008

VECTOR WIND DIRECTION (WD) hourly averages in degrees

MST

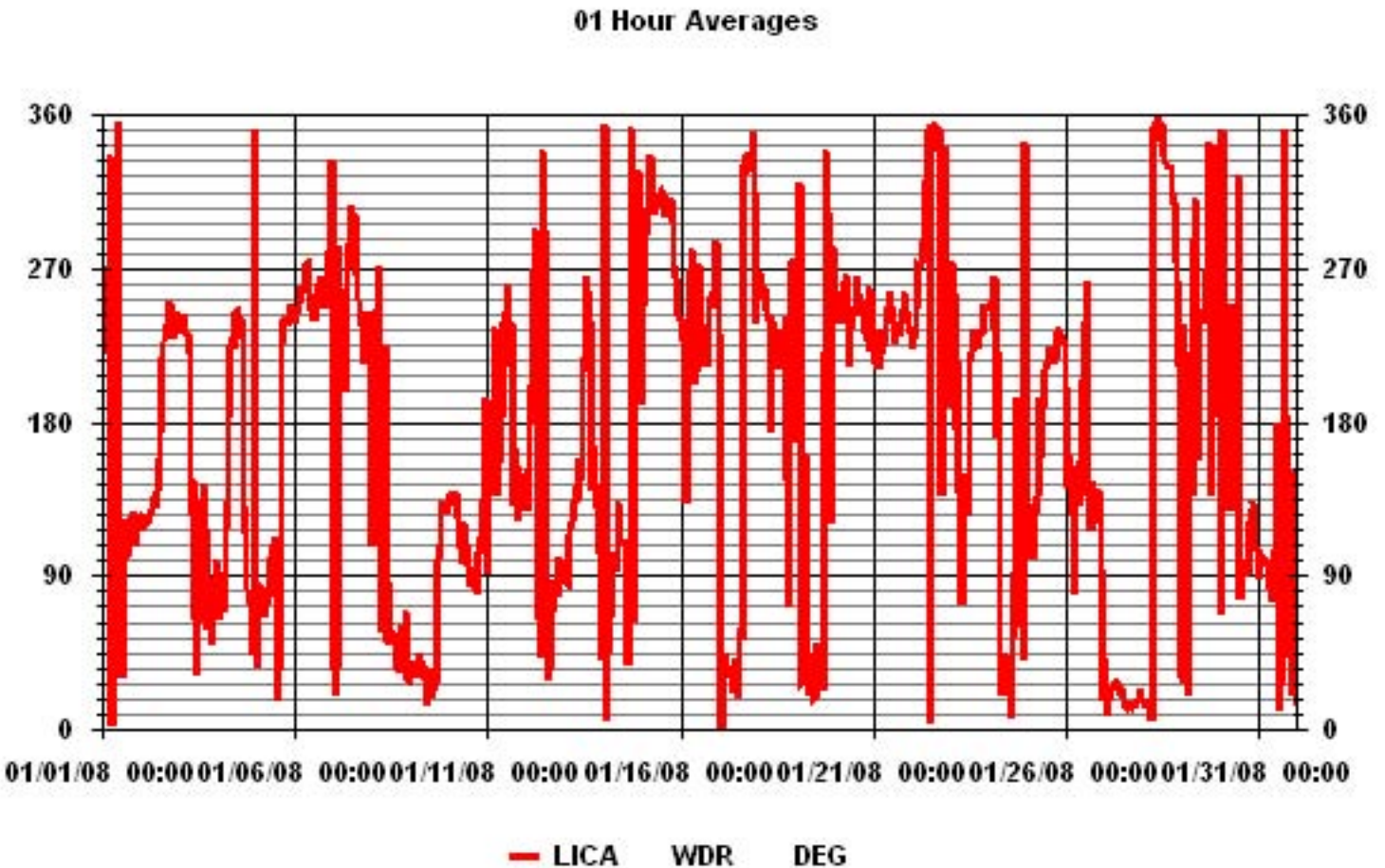
HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	24-HOUR	24-HOUR AVG	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	AVG.	QUANDRANT	RDGS.
DAY																											
1	221	244	249	257	271	336	2	36	50	102	356	42	30	61	99	123	101	119	125	123	128	107	117	119	115	ESE	24
2	119	125	124	120	121	125	126	129	134	133	140	159	174	218	227	234	233	247	251	242	228	234	239	244	162	SSE	24
3	240	232	239	240	231	233	221	124	147	94	65	32	62	98	135	144	118	58	70	81	49	89	85	100	193	S	24
4	68	65	82	68	92	118	134	182	225	229	223	244	245	236	241	230	115	130	83	75	74	54	44	351	154	SSE	24
5	36	86	71	66	83	66	83	73	77	101	106	106	112	17	35	47	226	240	242	236	239	249	247	246	121	ESE	24
6	237	244	247	249	260	257	258	272	273	257	247	247	239	252	252	261	265	253	247	258	280	257	264	333	254	WSW	24
7	36	19	36	283	202	257	209	198	258	270	284	307	303	302	267	252	240	241	214	227	224	231	245	230	278	W	24
8	107	219	246	107	272	61	57	103	226	50	87	50	56	56	53	36	33	43	40	61	56	69	31	30	43	NE	24
9	35	35	40	30	32	45	41	33	28	37	14	21	35	18	29	22	27	99	108	126	133	129	131	130	57	ENE	24
10	137	133	138	138	138	125	113	107	97	121	117	110	97	87	88	86	84	79	103	113	130	135	174	195	112	ESE	24
11	90	154	168	193	236	136	172	174	156	182	238	245	261	228	212	238	131	165	155	122	142	150	140	141	182	S	24
12	127	152	193	201	270	294	180	64	214	41	340	294	55	28	35	45	68	88	86	77	99	99	87	88	79	ENE	24
13	88	87	114	117	121	122	133	139	138	158	145	209	218	266	258	238	238	140	166	145	130	104	75	40	133	SE	24
14	48	354	4	44	66	74	100	104	92	133	129	107	109	111	56	38	43	353	63	323	224	325	327	285	60	ENE	24
15	190	247	290	305	319	336	320	301	306	307	308	314	316	314	300	309	310	309	309	298	272	265	244	240	307	NW	24
16	242	228	188	132	220	245	270	281	202	262	209	273	228	227	230	237	212	223	253	247	257	274	286	276	240	WSW	24
17	233	0	39	45	41	38	34	32	21	30	42	18	32	59	52	330	325	336	338	332	326	350	316	237	19	NNE	24
18	252	268	259	257	259	247	241	241	174	218	238	235	211	227	217	223	234	241	147	72	188	274	271	276	239	WSW	24
19	167	317	320	28	29	162	32	20	30	38	45	18	19	50	32	35	23	221	339	131	304	120	243	283	21	NNE	24
20	247	253	254	238	245	253	262	267	248	212	235	245	248	247	265	256	248	243	250	233	228	222	256	255	247	WSW	24
21	224	216	213	213	234	220	224	231	238	248	256	244	247	226	239	233	230	238	246	256	245	241	232	234	235	SW	24
22	223	228	235	246	273	272	273	286	322	351	347	3	355	347	356	343	338	353	136	226	236	341	189	237	321	NW	24
23	217	274	256	175	217	140	74	74	118	150	140	124	216	221	234	230	227	223	230	234	231	249	245	247	222	SW	24
24	249	247	234	266	194	170	221	30	19	40	45	34	30	9	6	53	92	194	162	64	61	40	344	190	28	NNE	24
25	134	115	122	100	104	127	137	194	159	188	210	215	211	215	223	221	214	217	232	236	228	229	226	229	202	SSW	24
26	202	141	160	138	126	79	154	130	157	137	205	238	235	262	118	118	146	135	140	136	141	121	95	17	152	SSE	24
27	42	8	17	22	24	26	23	29	27	20	25	20	14	13	16	11	16	14	16	17	16	18	24	19	19	NNE	24
28	17	13	18	13	14	5	350	349	356	358	352	356	337	333	330	330	329	329	316	309	274	264	213	31	352	N	24
29	28	237	125	221	19	183	137	287	311	158	196	242	245	241	238	270	251	344	136	216	245	182	204	342	257	WSW	24
30	67	352	249	141	249	128	237	201	224	249	128	325	76	91	99	92	94	90	122	128	133	123	108	106	115	ESE	24
31	88	96	101	101	97	100	83	83	75	103	105	180	10	27	27	134	352	185	44	43	40	19	151	15	79	ENE	24
HOURLY AVG	252	354	320	305	319	336	350	349	356	358	356	356	355	347	356	343	352	353	339	332	326	350	344	351			

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:	December-2006
DECLINATION :	19 DEGREES FROM MAGNETIC NORTH

MONTHLY CALIBRATION TIME:	0	HRS	OPERATIONAL TIME:	744	HRS
STANDARD DEVIATION	97.41		AMD OPERATION UPTIME	100.0	%
			MONTHLY AVERAGE	322.00	DEG


01 Hour Averages
360
270
180
90
0
01/01/08 00:00
01/06/08 00:00
01/11/08 00:00
01/16/08 00:00
01/21/08 00:00
01/26/08 00:00
01/31/08 00:00
LICA WDR DEG

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

JANUARY 2008

STANDARD DEVIATION WIND DIRECTION (STDWDIR) hourly averages in degrees

MST

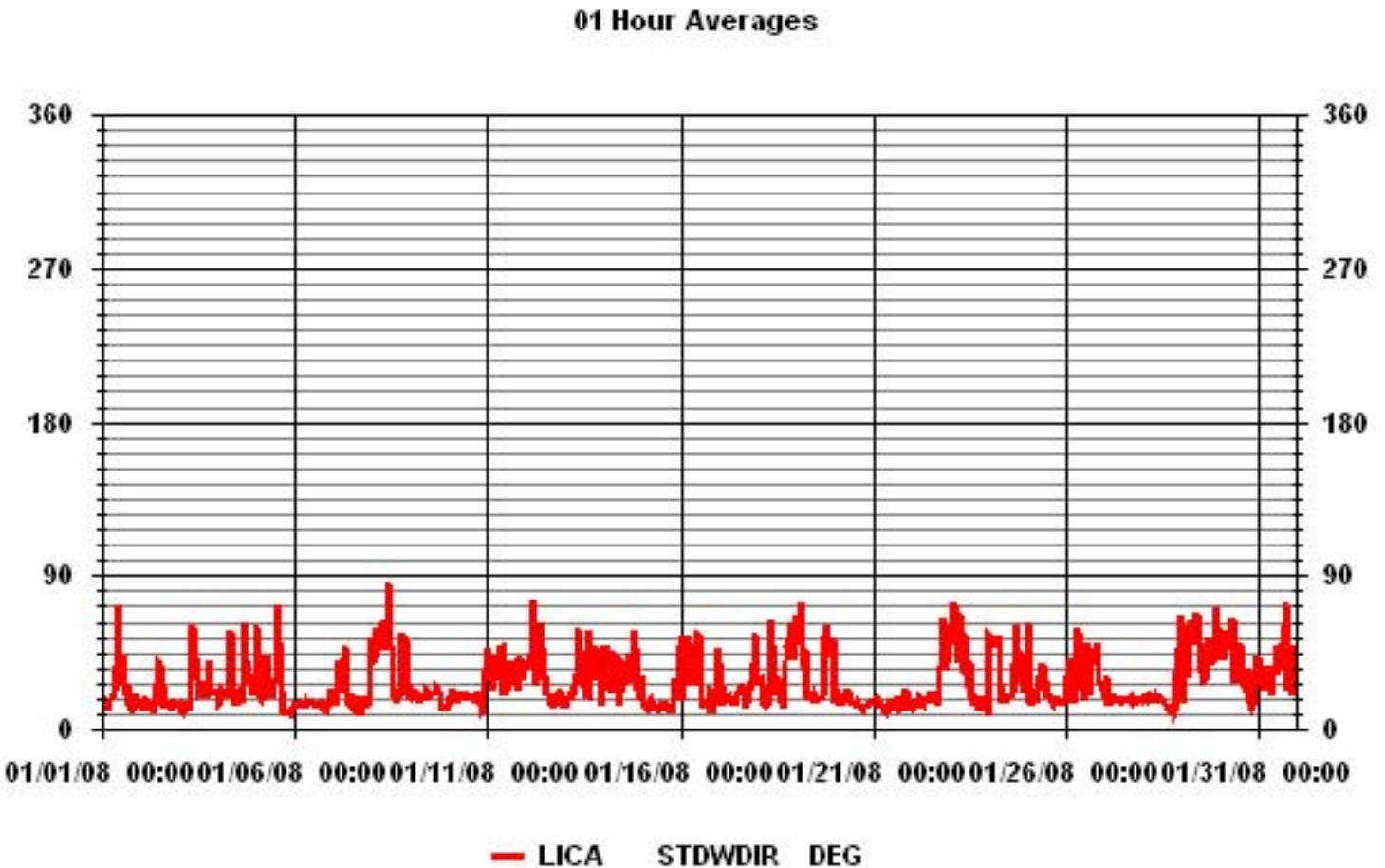
HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00
DAY																								
1	16	19	14	14	16	18	20	21	23	38	72	25	39	41	27	20	27	16	12	13	13	20	17	16
2	16	14	13	17	16	14	15	13	12	14	27	40	38	21	26	12	15	14	14	14	18	14	15	15
3	13	14	12	14	15	14	13	28	61	51	38	42	22	23	18	29	18	25	32	41	19	23	20	24
4	16	18	24	23	21	21	19	32	58	26	24	16	16	**M**	17	25	50	62	41	34	26	28	20	32
5	60	36	20	18	21	19	44	38	19	21	21	29	27	72	35	51	23	12	10	10	11	9	11	13
6	15	15	15	16	15	14	14	17	15	16	14	17	14	14	14	15	16	13	12	16	14	16	16	23
7	18	17	22	38	38	21	41	48	41	18	19	15	13	15	19	14	10	9	19	12	16	13	20	53
8	42	41	42	59	54	53	62	46	64	46	85	50	48	25	20	15	21	19	20	57	27	53	28	19
9	18	19	22	23	20	16	18	19	20	19	25	23	20	21	21	26	26	23	22	13	13	13	14	13
10	19	16	23	18	19	15	19	22	20	19	19	21	21	20	19	20	19	18	23	20	12	13	36	31
11	48	29	36	22	33	43	29	41	48	49	20	25	22	33	40	26	38	40	37	22	43	40	28	34
12	39	36	41	39	76	52	26	28	50	62	50	32	21	21	17	18	13	15	17	14	19	24	18	15
13	15	19	18	20	17	20	25	33	60	47	35	28	26	20	19	58	49	42	38	49	29	38	26	13
14	22	50	44	47	28	22	46	29	29	43	13	22	25	38	37	31	44	27	38	58	48	24	16	23
15	32	14	13	12	14	16	13	13	13	14	13	14	14	13	14	12	12	11	11	15	21	29	24	49
16	16	55	39	33	55	25	50	35	48	40	58	26	55	15	15	16	14	13	25	9	13	17	15	48
17	40	26	16	16	17	17	19	17	17	17	17	22	20	25	26	23	12	15	18	23	28	38	56	42
18	28	27	29	17	16	13	14	25	64	50	35	20	31	23	18	16	13	40	50	49	42	62	40	49
19	66	51	66	74	36	47	20	19	18	18	18	22	20	17	18	18	19	54	42	61	53	52	42	54
20	15	23	21	16	15	16	17	22	24	17	16	15	15	15	17	16	12	11	13	14	14	15	15	17
21	17	16	18	17	15	14	12	11	13	12	17	14	15	17	16	13	10	20	16	13	23	13	14	15
22	18	14	15	15	19	17	16	15	17	18	18	18	22	19	18	19	14	37	37	65	35	59	39	61
23	49	67	74	60	38	69	48	33	37	57	33	25	40	19	14	17	15	13	13	20	12	17	19	8
24	55	54	53	49	52	51	55	28	18	16	16	18	20	19	19	21	39	60	42	27	32	22	42	41
25	63	17	14	19	19	15	23	30	35	39	23	18	27	22	20	18	15	18	18	16	16	16	16	17
26	25	31	41	33	15	30	60	58	23	44	27	17	20	51	20	37	45	45	47	50	29	27	23	25
27	18	31	15	17	18	18	18	17	17	18	17	17	18	18	19	18	17	19	17	16	18	18	17	19
28	17	18	20	18	19	17	17	20	17	17	20	17	18	16	13	14	12	13	9	11	34	39	48	66
29	28	16	61	30	54	64	51	63	49	68	59	51	34	29	29	37	53	50	46	38	53	71	47	58
30	58	40	56	58	47	51	51	66	53	27	46	47	51	33	26	24	27	36	17	13	15	19	25	43
31	36	28	33	23	30	38	31	35	20	37	31	49	34	38	51	60	47	74	23	28	20	40	49	22

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: December-2006

CALIBRATION TIME: 0 HRS OPERATIONAL TIME: 743 HRS

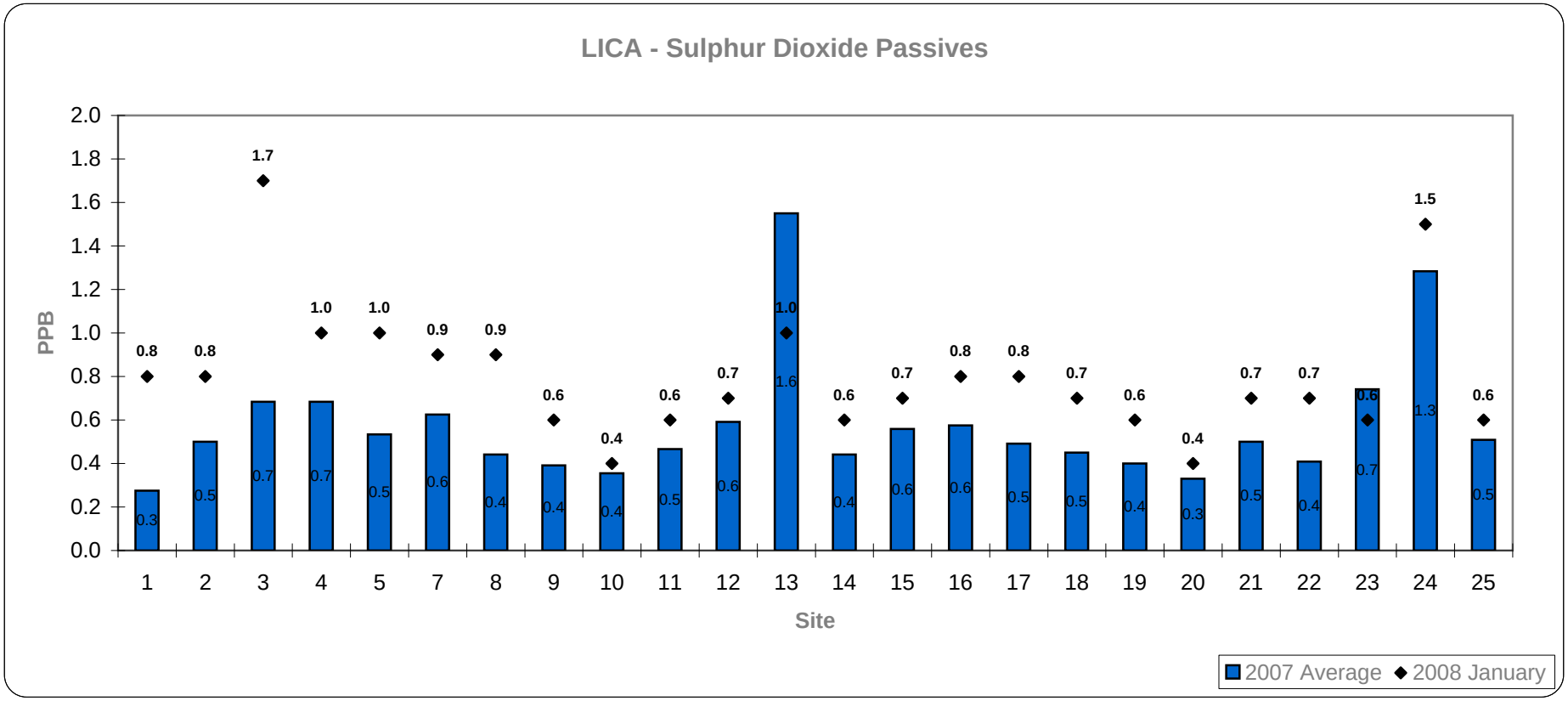

01 Hour Averages
360
270
180
90
0
01/01/08 00:00
01/06/08 00:00
01/11/08 00:00
01/16/08 00:00
01/21/08 00:00
01/26/08 00:00
01/31/08 00:00
LICA STDWDIR DEG

Non-Continuous Monitoring

Passive Summary Results for January 2008

Lakeland Industry & Community Association

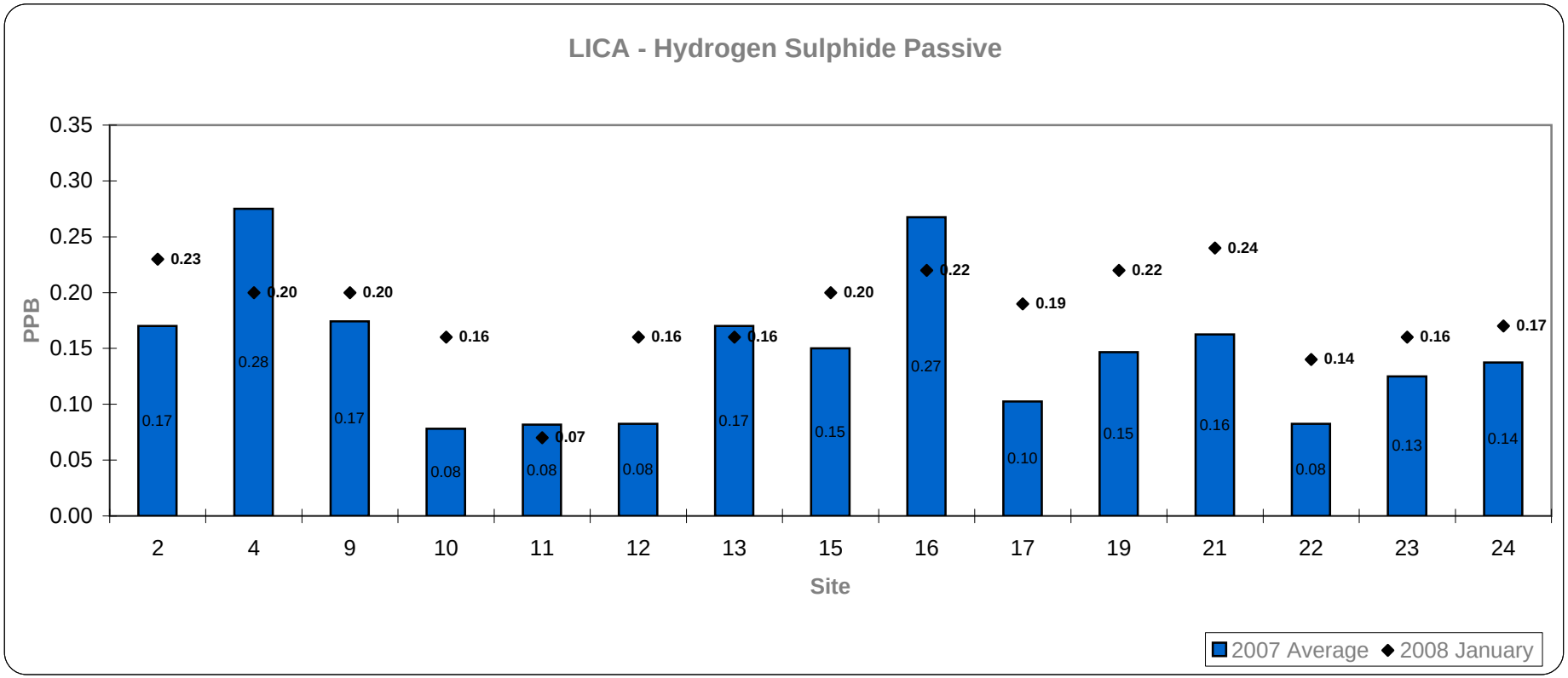
	Sulphur Dioxide ppb	
	2008	**2007**
Mean	0.8	0.6
Minimum	0.4	0.1
Maximum	1.7	2.6



Passive Summary Results for January 2008

Lakeland Industry & Community Association

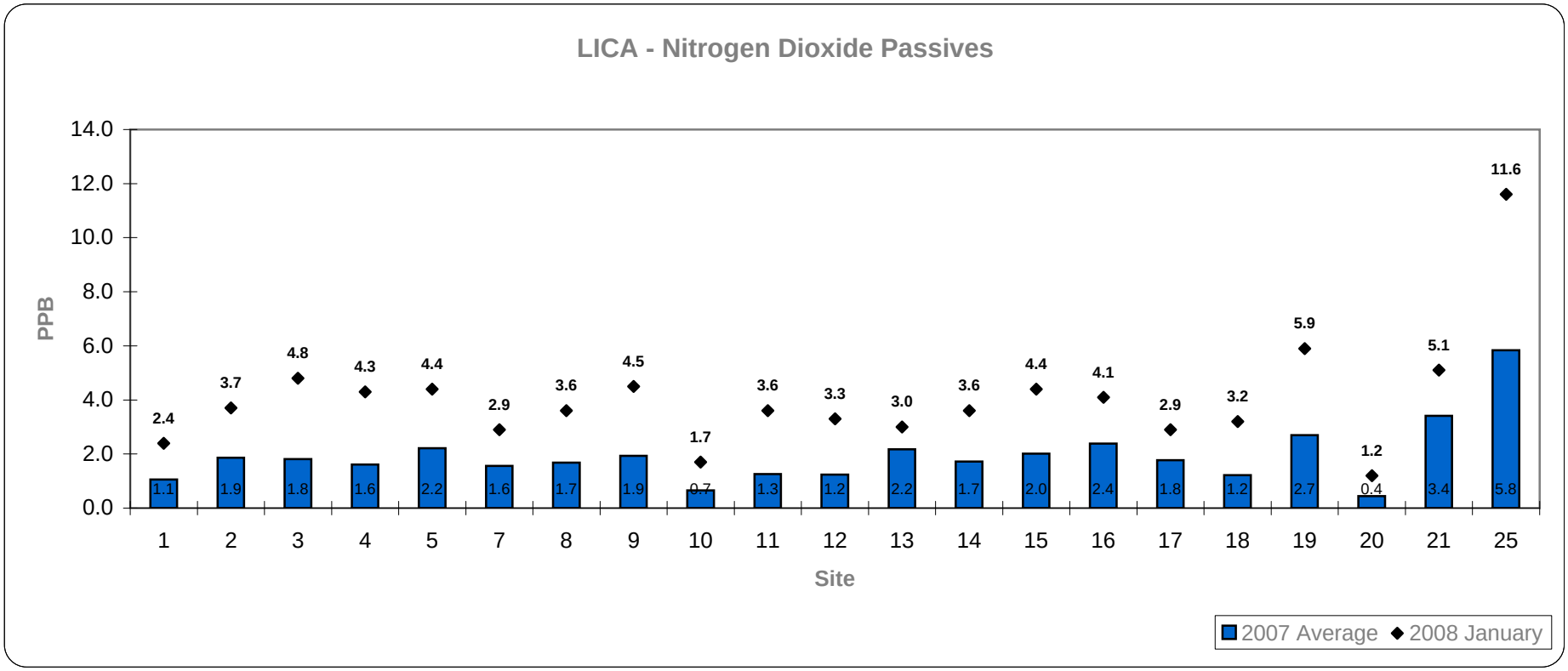
	Hydrogen Sulphide ppb	
	2008	**2007**
Mean	0.18	0.15
Minimum	0.07	0.02
Maximum	0.24	0.89



Passive Summary Results for January 2008

Lakeland Industry & Community Association

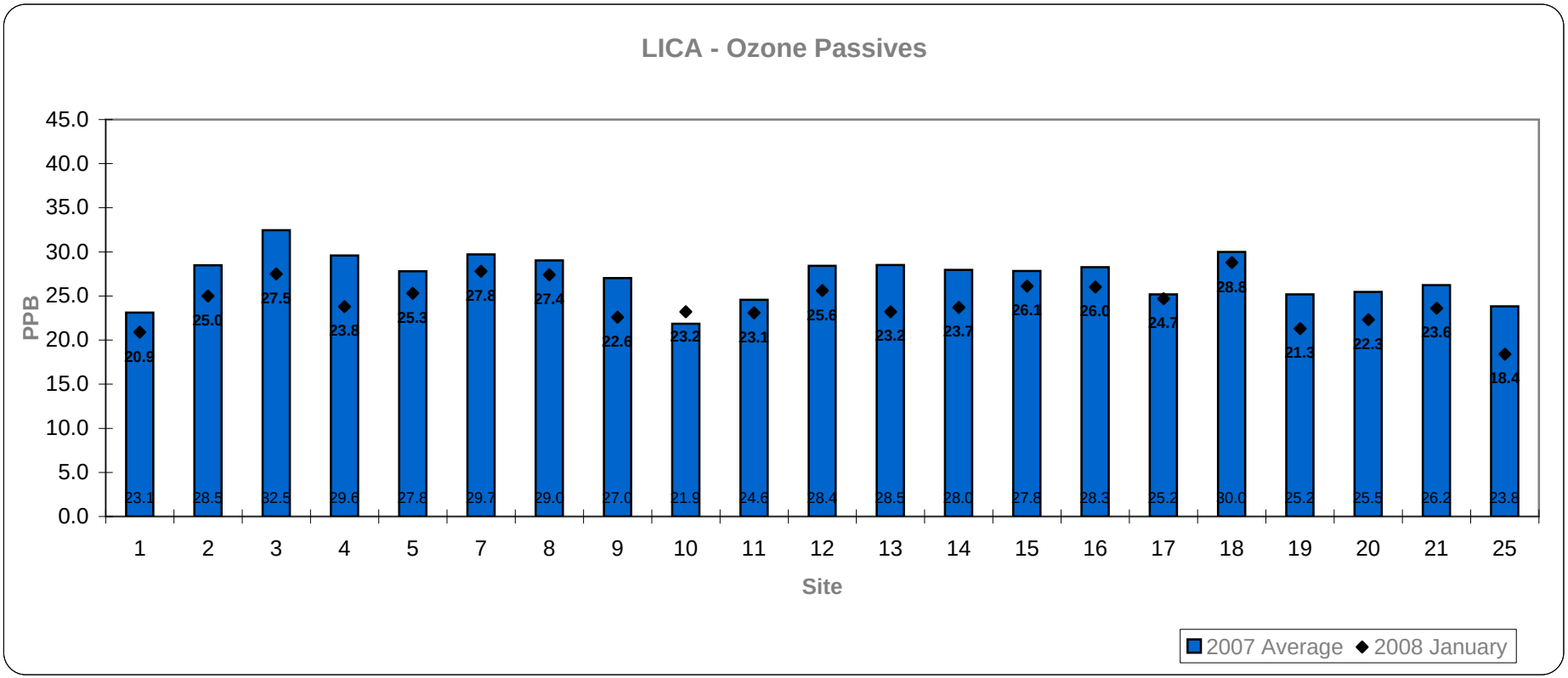
	Nitrogen Dioxide ppb	
	2008	**2007**
Mean	4.0	2.0
Minimum	1.2	0.1
Maximum	11.6	10.7



Passive Summary Results for January 2008

Lakeland Industry & Community Association

	Ozone ppb	
	2008	**2007**
Mean	24.3	27.2
Minimum	18.4	10.9
Maximum	28.8	51.4



Calibration Reports

Cold Lake

Sulphur Dioxide

SO_2 Calibration Report

Station Information

Calibration Date	January 3, 2008	Previous Calibration	December 3, 2007
Company	**Lakeland Industry & Community Association**		
Plant / Location	**LICA 1 - Cold Lake South**		
Start Time (MST)	8:45	End Time (MST)	12:35
Reason:		Monthly Calibration	
Barometric Pressure	703 mmHg	Station Temperature	24 Deg C
Cal Gas	50.2 ppm	Cal Gas Expiry date	06/18/2009
DAS Output Voltage	0 - 10 Volts		

Equipment Information

Analyzer Make / Model:	TECO 43A	S/N :	43A-4468-272	Method:	Fluorescent
Converter Make / Model:	-	S/N :	-		
Calibrator Make / Model:	Environics 2000	S/N :	1991	Method:	Dilution
DAS Make / Model:	ESC 8832	S/N :	263		
Flow Meter:	Environics 2000	S/N :	1991		

Analyzer Settings

	Before Calibration		After Calibration	
Concentration Range	0 - 500 ppb			
Sample Flow / Box Temp	700 ccm	OK Deg C	700 ccm	OK Deg C
HVPS / Lamp Setting	OK	850	OK	845
PMT / RxCell Temp	OK Deg C	OK Deg C	OK Deg C	OK Deg C
Converter / IZS Temp	NA Deg C	OK Deg C	NA Deg C	OK Deg C
Offset / Slope	103	906	103	938

Calibration Data

Dilution Flow Rate	Source Gas Flow Rate	Calculated Concentration	Indicated Conc. (DAS)	Correction Factor
5000	0	0	0	N/A
4959	40.2	404	398	1.0143
4959	40.2	404	403	1.0017
4974	25.2	253	252	1.0042
4984	15.1	152	150	1.0109
5000	0	0	1	N/A
			Sum of Least Squares	1.0031
			New Correction Factor	1.0017

	Before Calibration	After Calibration
Auto Zero	0	0
Auto Span	339	345
Sample Lines Connected		**YES**
Percent Change from Previous Calibration		-1.7%

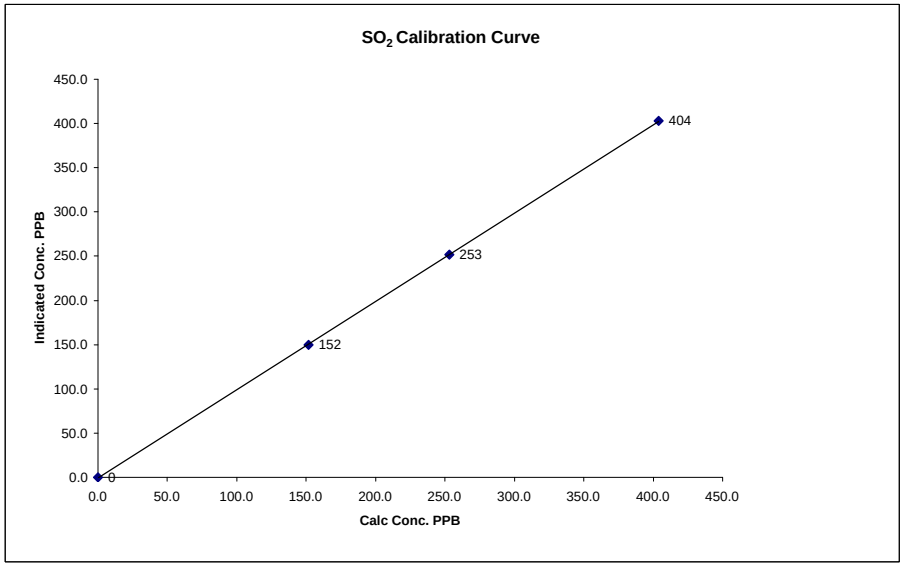
Calibration Performed by: Shea Beaton

SO_2 Calibration Curve

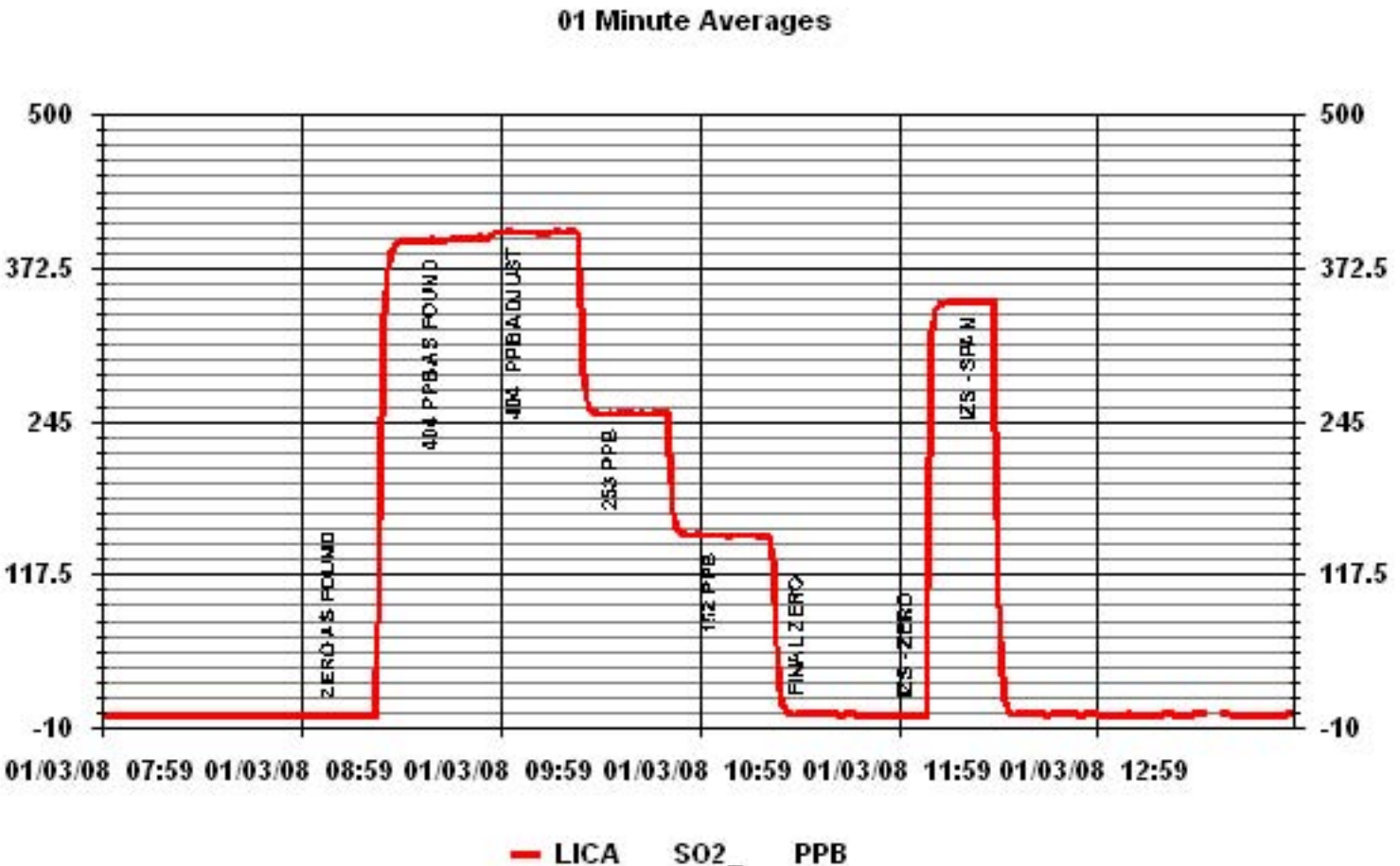
Calibration Date	January 3, 2008		
Company	**Lakeland Industry & Community Association**		
Plant / Location	**LICA 1 - Cold Lake South**		
Start Time (MST)	8:45	End Time (MST)	12:35

Calculated Conc. ppb	Indicated Response ppb	Correction Factor
0	0	n/a
152	150	1.0109
253	252	1.0042
404	403	1.0017

Correlation Coefficient	(≥ 0.995)	0.999985
Slope	(0.85 to 1.15)	0.998768
Intercept	(± 3% F.S.)	-0.589142



Notes:


01 Minute Averages
500
372.5
245
117.5
-10
ZERO AS FOUND
404 PPB AS FOUND
404 PPB ADJUST
253 PPB
112 PPB
FINAL ZERO
ZS - ZERO
IZS - SPAN
01/03/08 07:59
01/03/08 08:59
01/03/08 09:59
01/03/08 10:59
01/03/08 11:59
01/03/08 12:59
LICA SO2_ PPB

Total Reduced Sulphur

TRS Calibration Report

Station Information

Calibration Date	January 3, 2008	Previous Calibration	December 3, 2007
Company	**Lakeland Industry & Community Association**		
Plant / Location	**LICA 1 - Cold Lake South**		
Start Time (MST)	8:45	End Time (MST)	12:10
Reason:		Monthly Calibration	
Barometric Pressure	703 mm Hg	Station Temperature	24 Deg C
Cal Gas	10.2 ppm	Cal Gas Expiry date	07/03/2008
DAS Output Voltage	0 - 10 Volts		

Equipment Information

Analyzer Make / Model:	TECO 43A	S/N :	43A-35786-254	Method:	Fluorescent
Converter Make / Model:	CD Nova CDN 101	S/N :	250		
Calibrator Make / Model:	API 700	S/N :	690	Method:	Dilution
DAS Make / Model:	ESC 8832	S/N :	263		
Flow Meter:	API 700	S/N :	690		

Analyzer Settings

	Before Calibration				After Calibration			
Concentration Range	0 -100 ppb							
Sample Flow / Box Temp	400	ccm	OK	Deg C	400	ccm	OK	Deg C
HVPS / Lamp Setting	OK		890		OK		882	
PMT / RxCell Temp	OK	Deg C	OK	Deg C	OK	Deg C	OK	Deg C
Converter / IZS Temp	850	Deg C	OK	Deg C	850	Deg C	OK	Deg C
Offset / Slope	879		764		879		764	

Calibration Data

Dilution Flow Rate	Source Gas Flow Rate	Calculated Concentration	Indicated Conc. (DAS)	Correction Factor
5000	0	0	0	N/A
4960	39.2	80	79	1.0124
4980	22.1	45	45	1.0014
4990	12.3	25	25	1.0032
5000	0	0	0	N/A
			Sum of Least Squares	1.0093
			New Correction Factor	1.0124

	Before Calibration	After Calibration
Auto Zero	0	0
Auto Span	89	89
Sample Lines Connected		YES
Percent Change from Previous Calibration		-1.0%

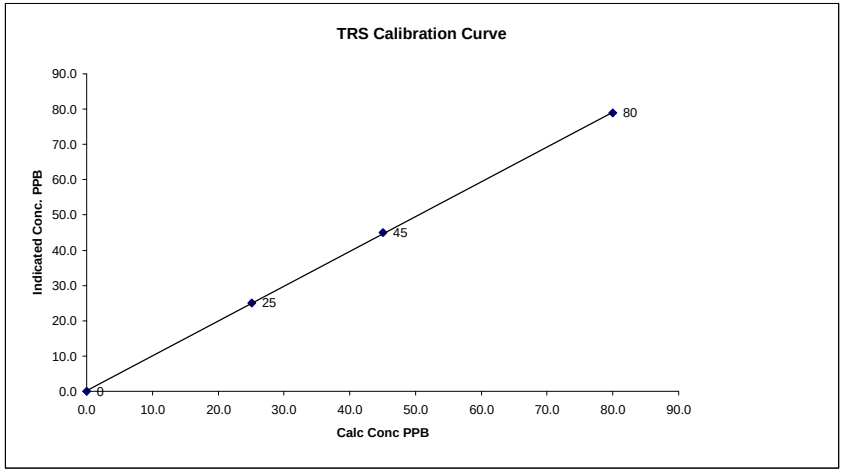
Calibration Performed by: Shea Beaton

TRS Calibration Curve

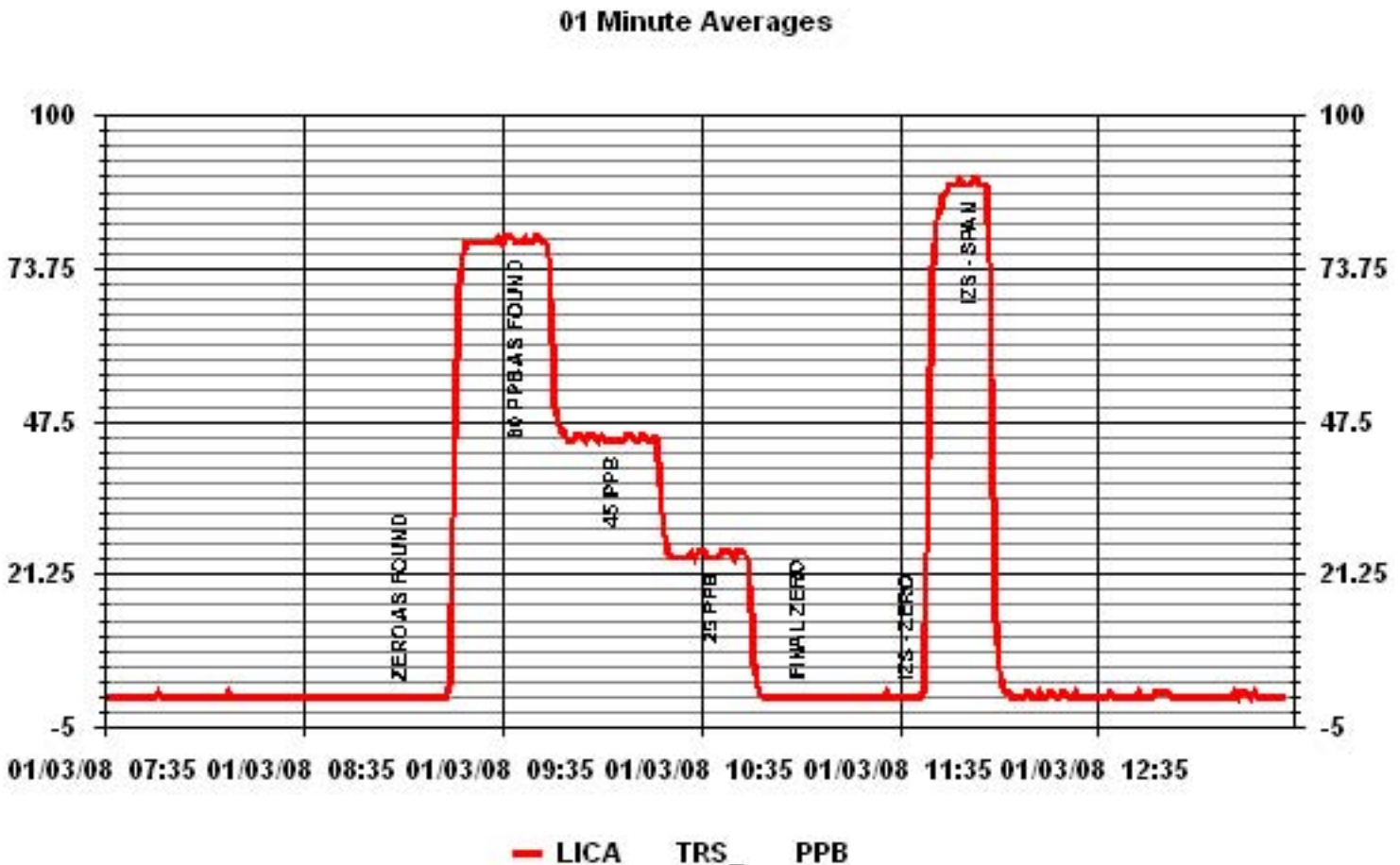
Calibration Date	January 3, 2008		
Company	**Lakeland Industry & Community Association**		
Plant / Location	**LICA 1 - Cold Lake South**		
Start Time (MST)	8:45	End Time (MST)	12:10

Calculated Conc. ppb	Indicated Response ppb	Correction Factor
0	0	n/a
25	25	1.0032
45	45	1.0014
80	79	1.0124

Correlation Coefficient	(≥ 0.995)	0.999952
Slope	(0.85 to 1.15)	0.987984
Intercept	(± 3% F.S.)	0.169392



Notes:


01 Minute Averages
100
73.75
47.5
21.25
-5
ZEROAS FOUND
80 PPBAS FOUND
45 PPB
25 PPB
FINAL ZERO
IZS - ZERO
IZS - SPAN
01/03/08 07:35
01/03/08 08:35
01/03/08 09:35
01/03/08 10:35
01/03/08 11:35
01/03/08 12:35
LICA TRS_ PPB

Total Hydrocarbons

THC Calibration Report

Station Information

Calibration Date:	January 3, 2008	Previous Calibration	December 18, 2007
Company:	**Lakeland Industry and Community Association**		
Plant / Location:	**LICA1/Cold Lake**		
Start Time (MST)	11:50	End Time (MST)	15:05
Reason:	Monthly Calibration		
Barometric Pressure:	703 mmHg	Station Temperature:	24 Deg C
Calibrator:	API 700	S/N:	690
Cal Gas Concentration:	1010 ppm	Cal Gas Expiry Date:	Jan-10
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

Analyzer Settings

	Before Calibration		After Calibration	
Concentration Range	0 - 50	ppm	0 - 50	ppm
Sample Pressure	6.5	psi	6.5	psi
Hydrogen Pressure	9	psi	9	psi
Air Pressure	18	psi	18	psi

Calibration Data

Dilution Flow	Source Gas Flow	Calculated Concentration	Indicated Concentration	Correction Factor
2000	0	0.0	0.0	N/A
2000	80.0	38.8	39.0	0.9961
2000	40.0	19.8	19.3	1.0261
2000	20.0	10.0	9.6	1.0417
2000	0	0.0	0.0	N/A
			Correction Factor:	0.9961

Percent Change

Previous Calibration Correction Factor:	0.9961
Current Correction Factor Before Span Adjust:	0.9961
Percent Change:	0.0%

IZS Calibration Data

	Before Calibration	After Calibration
Auto Zero	0.0	0.0
Auto Span	30.5	30.0
Sample Lines Connected		**YES**

Cylinder Pressures	
Span	1350 psi
Hydrogen	1050 psi
Zero Air	Maxxam-owned API 701 zero air supply with catalytic oxidizer

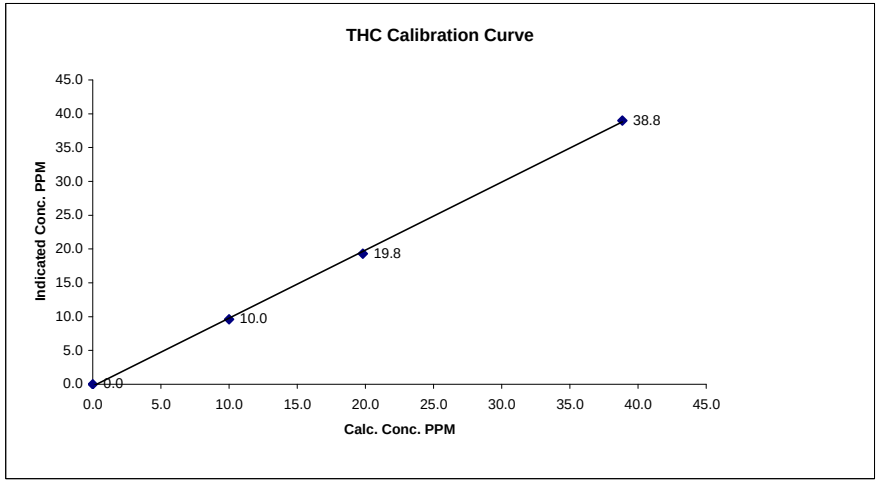
Calibration Performed by: Shea Beaton

THC Calibration Curve

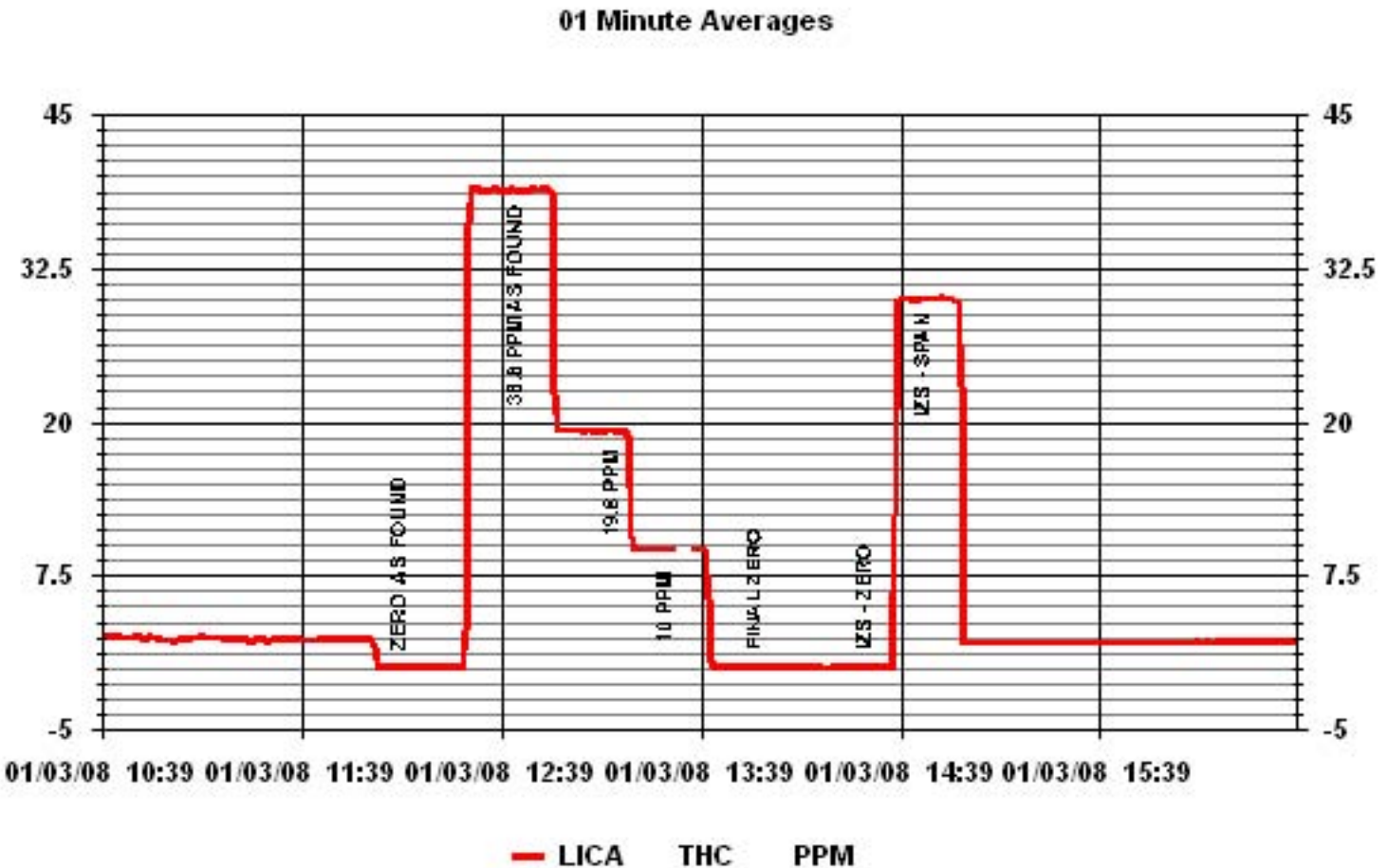
Calibration Date	January 3, 2008		
Company	**Lakeland Industry and Community Association**		
Plant / Location	**LICA1/Cold Lake**		
Start Time (MST)	11:50	End Time (MST)	15:05

Calculated Conc. ppm	Indicated Response ppm	Correction Factor
0.0	0.0	
10.0	9.6	1.0417
19.8	19.3	1.0261
38.8	39.0	0.9961

Correlation Coefficient	(≥ 0.995)	0.999678
Slope	(0.85 to 1.15)	1.005917
Intercept	(± 3% F.S.)	-0.289072



Notes:


01 Minute Averages
45
32.5
20
7.5
-5
ZERO AS FOUND
38.8 PPM AS FOUND
19.8 PPM
10 PPM
FINAL ZERO
LZS - ZERO
LZS - SPAN
01/03/08 10:39
01/03/08 11:39
01/03/08 12:39
01/03/08 13:39
01/03/08 14:39
01/03/08 15:39
LICA THC PPM

Particulate Matter 2.5

TEOM® Calibration

Station		Transfer Standard	
Date:	January 3, 2008	Make/Model:	Bios DC-2
Station Name:	LICA	Serial Number:	1193
Location:	Cold Lake - South	Cell s/n:	2272
Operator:	Maxxam Analytics	Thermometer s/n:	2178

Sampler		Set-up and current Sampler readings	
Make/Model	R & P Series 1400 a TEOM	F-Main Set Pt (l/min)	3.00
Unit #	AMU 1494	F-Aux Set Pt (l/min)	13.67
Control unit s/n	140AB213859701	Filter Load (%)	40
Transducer s/n	140AB213859701	K_o Factor	11095
Parameter	PM 2.5	Temp (^oC)	-2.8
		Press (ATM)	0.926

Note: Tolerances are noted as BOLD in Brackets

Calibration

Zero flow

	Pump Off		Pump On (Time to reach set points)	
F-Main (l/min)	0.07		**(45-60 Sec)**	38
F-Aux (l/min)	0.18		**(45-60 Sec)**	52

Temperature/Pressure

Measured Temp **(± 1 ^oC)**	-3.2	**Δ ^oC**	-0.4
Measured Press **(± 1.5% ATM)**	0.925	**Δ % ATM**	-0.1%

Flow Audit

			Δ % from Set-pt
Indicated Main/Aux Flow (l/min)	3.00 / 13.64	**(± 2%)**	0.0% / 0.2%
Total Flow = Main + Aux (l/min)	16.64	**(± 2%)**	0.2%
Measured Total Flow (l/min)	16.58	**(± 1.0 l/min. (5.65%))**	0.4%
Measured Main Flow (l/min)	2.95	**(± 0.2 l/min. (6.25%))**	1.7%

Leak Check

		Actual leakage = Pump On - Pump Off
Main **(< 0.15 l/min)**	0.13	0.06
Aux **(< 0.15 l/min)**	0.07	0.11

K_o Factor

Measured	NA
K_o Difference **(± 2.5%)**	NA

Start Time: **12:00** **Finish Time:** **15:00**

Sample Inlet Cleaned: **YES** **Sample Inlet Connected:** **YES**

Comments:

Calibrator/s: Shea Beaton

Nitrogen Dioxide

NOx - NO- NO_2 Calibration Report

Station Information

Calibration Date	January 3, 2008	Previous Calibration	December 18, 2007
Company	**Lakeland Ind & Comm. Assoc.**	Plant/Location	**LICA 1 - Cold Lake South**
Start Time (MST)	8:50	End Time (MST)	15:25
Reason:	Monthly Calibration		
Barometric Pressure	703 mmHg	Station Temperature	24.0 Deg C
Cal Gas Concentration	NOx 49.8 ppm NO 49.7 ppm	Cal Gas Expiry date	06/18/2009
DAS Output Voltage	0 - 5 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 - 500	ppb		
Sample Flow/Conv. Temp	736	ccm	317	Deg C	735	ccm	317	Deg C
Ozone Flow / Vacuum	OK	ccm	173.1	"Hg-A	OK	ccm	172.1	"Hg-A
HVPS	-821		Volts		-821		Volts	
Rx/ Temp / PMT Temp	49.7	Deg C	-2.4	Deg C	49.7	Deg C	-2.5	Deg C
Box Temp / IZS Temp	29.4	Deg C	OK	Deg C	32.1	Deg C	OK	Deg C
Offset	2.6	NOx	2.5	NO	2.6	NOx	2.5	NO
Slope	1	NOx	0.69	NO	1.002	NOx	0.686	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
5000	N/A	N/A	0	0	0	0	0	N/A	N/A
4959	40.2	N/A	400	400	402	402	0	0.9962	0.9942
4959	40.2	N/A	400	400	400	399	0	1.0011	1.0016
4974	25.2	N/A	251	251	250	249	0	1.0041	1.0061
4984	15.1	N/A	150	150	150	149	0	1.0028	1.0075
5000	N/A	N/A	0	0	0	0	0	N/A	N/A
								Converter Efficiency	
4959	40.2	350	400	N/A	397	396	0	N/A	
4959	40.2	350	400	N/A	394	92	302	99%	
4959	40.2	200	400	N/A	395	167	228	100%	
4959	40.2	100	400	N/A	396	253	143	100%	
4959	40.2	N/A	400	400	397	396	0	N/A	
								Correction Factor	
5000	N/A	N/A	0	0	0	0	0	N/A	N/A

Linearity OK?	**Yes**	No	Sum of Least Squares	1.0021	1.0033
Flows Checked on-site?	Yes	**No**	New Correction Factor	1.0011	1.0016
			Average Converter Efficiency	100%	

	Before Calibration				After Calibration			
Auto Zero	0	NOx	0	NO2	1	NOx	0	NO2
Auto Span	297	NOx	295	NO2	294	NOx	292	NO2
Sample Lines Connected					**YES**			
Percent Change from Previous Calibration					*NOx*	0.2%	*NO*	0.2%

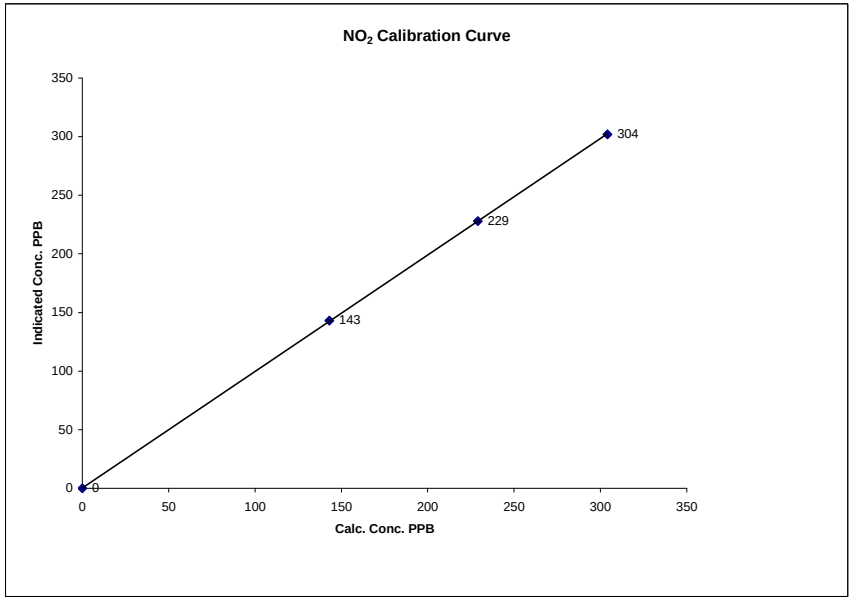
Calibration Performed by: Shea Beaton

NO_2 Calibration Curve

Calibration Date	January 3, 2008		
Company	**Lakeland Ind & Comm. Assoc.**		
Plant / Location	**LICA 1 - Cold Lake South**		
Start Time (MST)	8:50	End Time (MST)	15:25

Calculated Conc. ppb	Indicated Response ppb	Correction Factor
0	0	N/A
143	143	1.0000
229	228	1.0044
304	302	1.0066

Correlation Coefficient	(≥ 0.995)	0.999988
Slope	(0.85 to 1.15)	0.993537
Intercept	(± 3% F.S.)	0.342202



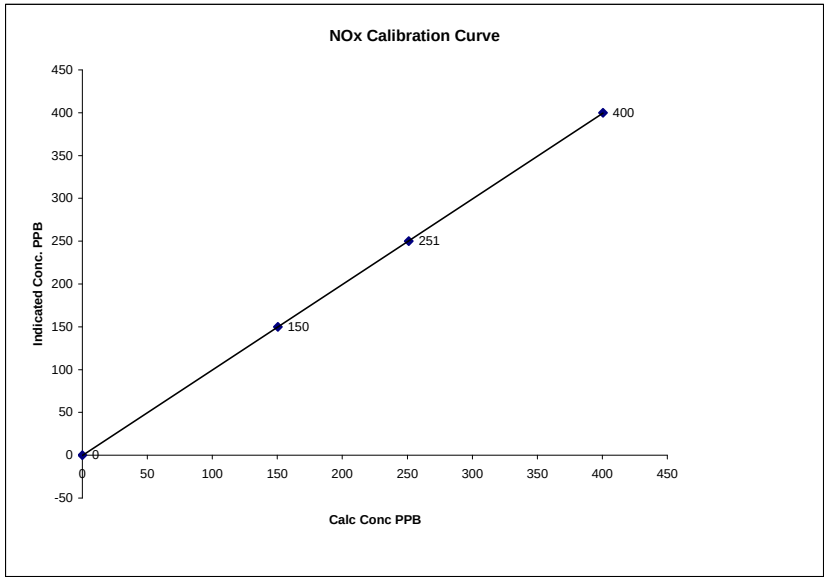
Notes: Power supply voltages +15 @ 15.1v, +5 @ 5.0v, -15. @ -15.1v, battery at 0.6v

NOx Calibration Curve

Calibration Date	January 3, 2008		
Company	**Lakeland Ind & Comm. Assoc.**		
Plant / Location	**LICA 1 - Cold Lake South**		
Start Time (MST)	8:50	End Time (MST)	15:25

Calculated Conc. ppb	Indicated Response ppb	Correction Factor
0	0	N/A
150	150	1.0028
251	250	1.0041
400	400	1.0011

Correlation Coefficient	(≥ 0.995)	0.999996
Slope	(0.85 to 1.15)	0.998566
Intercept	(± 3% F.S.)	-0.190418

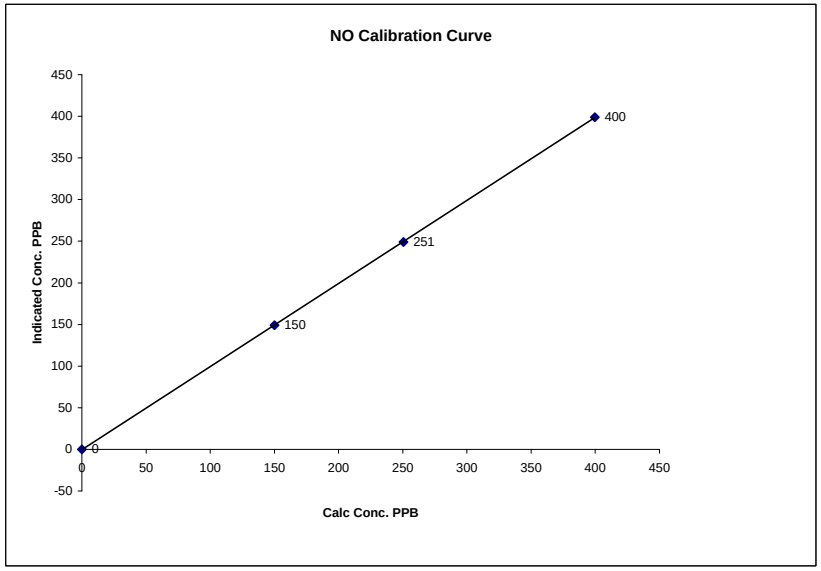


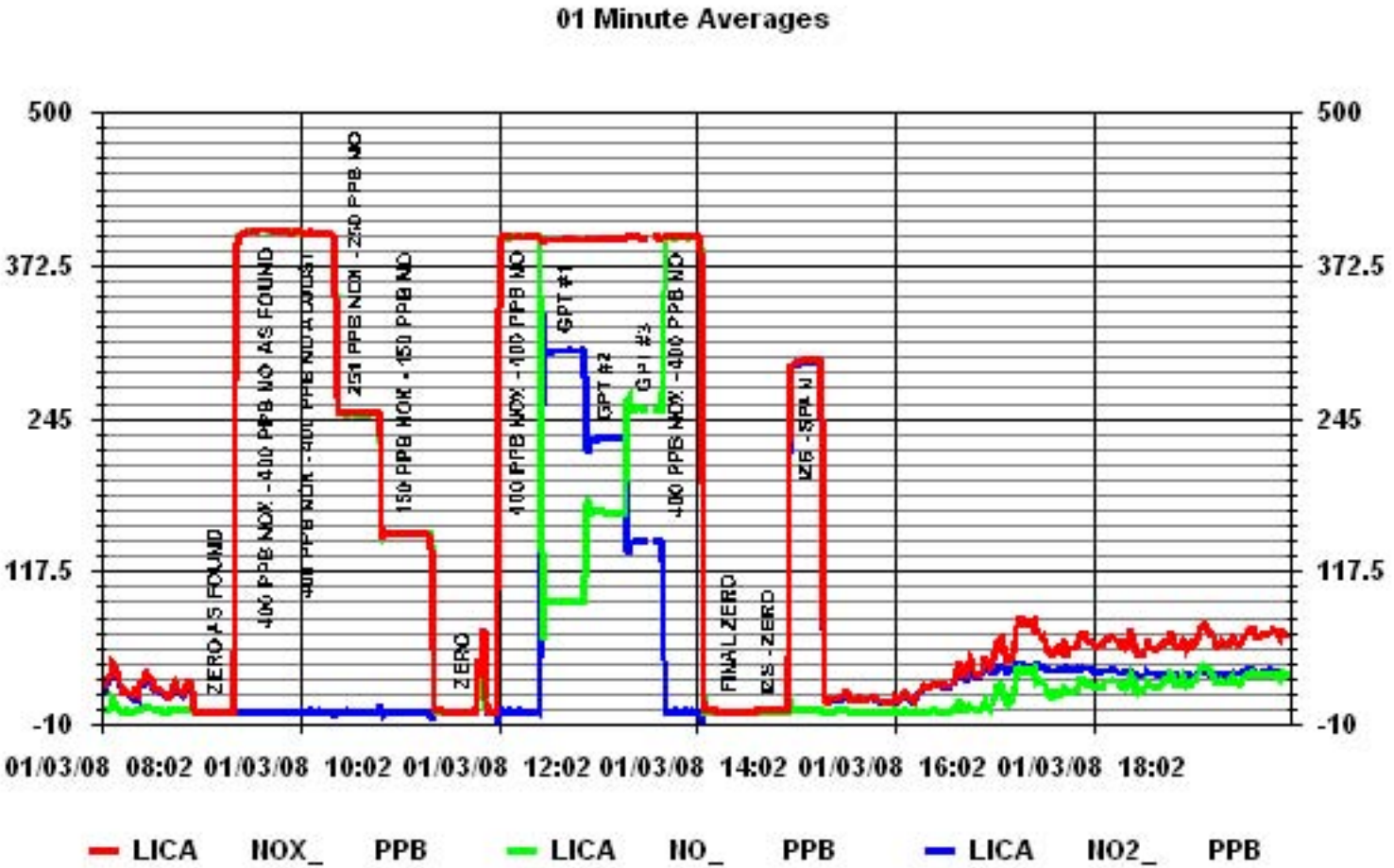
NO Calibration Curve

Calibration Date	January 3, 2008		
Company	**Lakeland Ind & Comm. Assoc.**		
Plant / Location	**LICA 1 - Cold Lake South**		
Start Time (MST)	8:50	End Time (MST)	15:25

Calculated Conc. ppb	Indicated Response ppb	Correction Factor
0	0	N/A
150	149	1.0075
251	249	1.0061
400	399	1.0016

Correlation Coefficient	(≥ 0.995)	0.999988
Slope	(0.85 to 1.15)	0.998219
Intercept	(± 3% F.S.)	-0.468931




01 Minute Averages
500
372.5
245
117.5
-10
ZERO AS FOUND
400 PPB NOX - 400 PPB NO AS FOUND
400 PPB NOX - 400 PPB NO AS FOUND
250 PPB NOX - 250 PPB NO
150 PPB NOX - 150 PPB NO
ZERO
100 PPB NOX - 100 PPB NO
GPT #1
GPT #2
GPT #3
400 PPB NOX - 400 PPB NO
FINAL ZERO
ZERO
01/03/08 08:02
01/03/08 10:02
01/03/08 12:02
01/03/08 14:02
01/03/08 16:02
01/03/08 18:02
LICA NOX_ PPB
LICA NO_ PPB
LICA NO2_ PPB

Ozone

O_3 Calibration Report

Station Information

Calibration Date	January 3, 2008	Previous Calibration	December 18, 2007
Company	**Lakeland Industry & Community Association**		
Plant / Location	**LICA 1 - Cold Lake South**		
Start Time (MST)	14:40	End Time (MST)	18:05
Reason:		Monthly Calibration	
Barometric Pressure	703 mm Hg	Station Temperature	24 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:	Dilution
DAS Make / Model:	ESC 8832	S/N :	263		

Analyzer Settings

	Before Calibration		After Calibration	
Concentration Range	0 - 500 ppb			
Bench Temp/ Pressure	29.6	691.7	29.9	691.7
O_3 Set Level	29%		29%	
Bench Lamp/O3 Lamp	53.6	67.7	53.6	67.7
Sample Flow A/B	0.731 LPM	0.743 LPM	0.732 LPM	0.743 LPM
Offset / Slope	0.8	1.102	0.8	1.081

Calibration Data

Dilution Flow Rate	Ozone Set Point	Calculated Concentration	Indicated Conc. (DAS)	Correction Factor
5000	0	0	0	N/A
5000	350	344	351	0.9801
5000	350	344	345	0.9971
5000	200	197	199	0.9899
5000	100	97	98	0.9898
5000	0	0	0	N/A
			Sum of Least Squares	N/A
			New Correction Factor	0.9971

	Before Calibration	After Calibration
Auto Zero	0	0
Auto Span	308	302
Sample Lines Connected		YES
Percent Change from Previous Calibration		1.7%

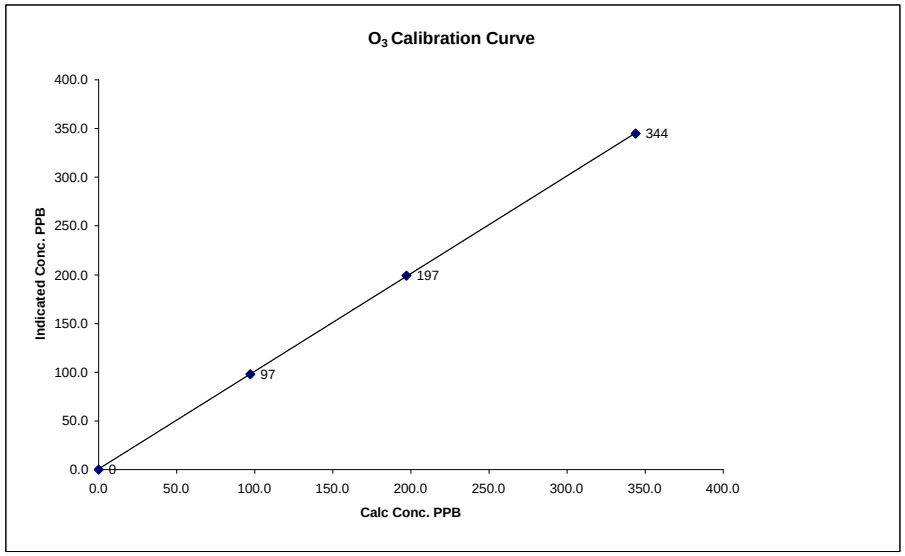
Calibration Performed by: Shea Beaton

O_3 Calibration Curve

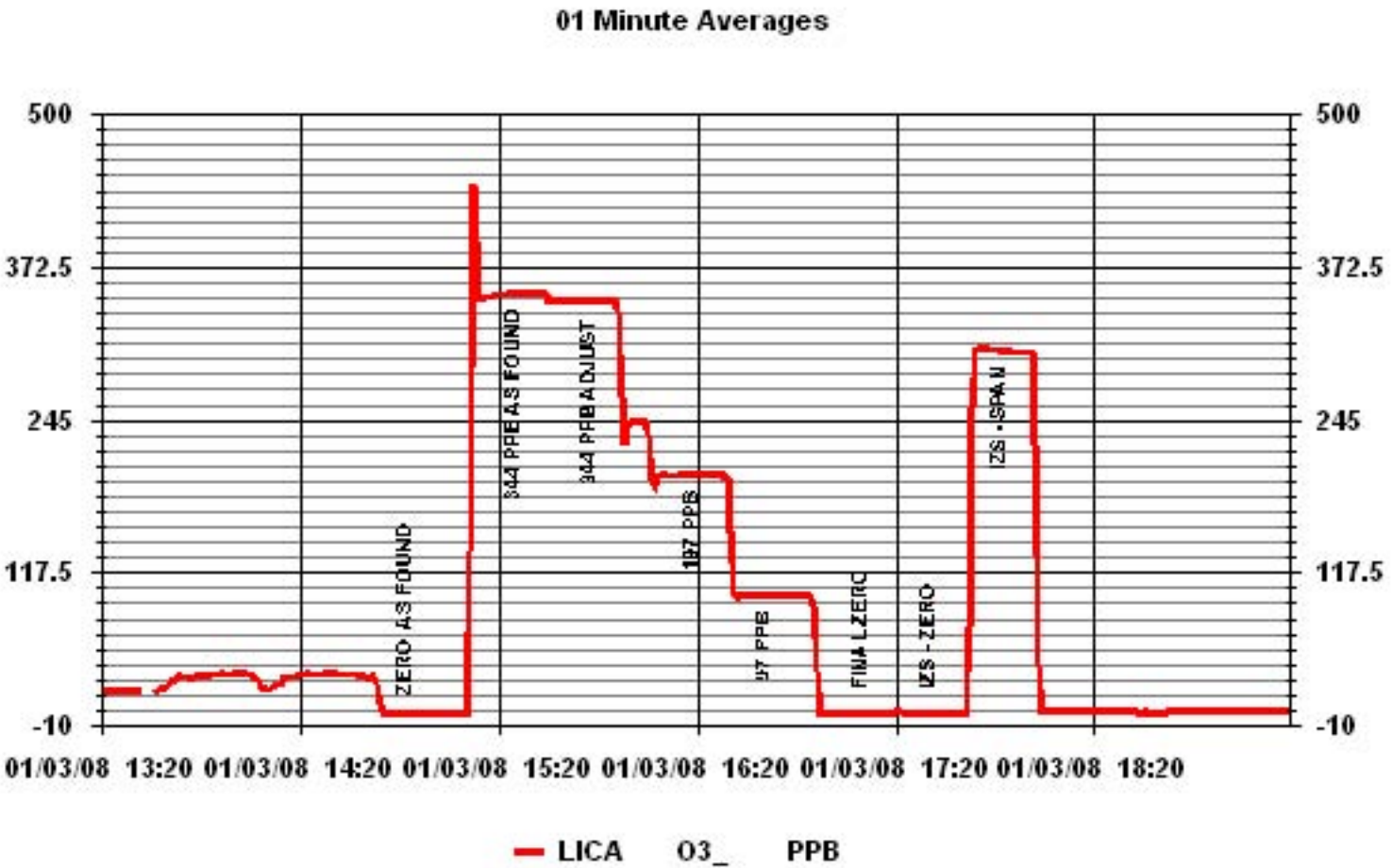
Calibration Date	January 3, 2008		
Company	**Lakeland Industry & Community Association**		
Plant / Location	**LICA 1 - Cold Lake South**		
Start Time (MST)	14:40	End Time (MST)	18:05

Calculated Conc. ppb	Indicated Response ppb	Correction Factor
0	0	n/a
97	98	0.9898
197	199	0.9899
344	345	0.9971

Correlation Coefficient	(≥ 0.995)	0.999979
Slope	(0.85 to 1.15)	1.003040
Intercept	(± 3% F.S.)	0.515048



Notes:


01 Minute Averages
500
372.5
245
117.5
-10
ZERO AS FOUND
344 PPB AS FOUND
344 PPB ADJUST
187 PPB
97 PPB
FINAL ZERO
IZS - ZERO
ZS - SPAN
01/03/08 13:20
01/03/08 14:20
01/03/08 15:20
01/03/08 16:20
01/03/08 17:20
01/03/08 18:20
LICA O3_ PPB

Passive Bubble Maps

Lakeland Industry & Community Association
SO_2 Passive Bubble Map

January 2008

PASSIVE STATIONS

1 – Sand River	0.8 PPB
2 – Therien	0.8 PPB
3 – Flat Lake	1.7 PPB
4 – Lake Eliza	1.0 PPB
5 – Telegraph Creek	1.0 PPB
7 – Muriel-Kehewin	0.9 PPB
8 – Dupre	0.9 PPB
9 – La Corey	0.6 PPB
10 – Wolf Lake	0.4 PPB
11 – Foster Creek	0.6 PPB
12 – Primrose	0.7 PPB
13 – Maskwa	1.0 PPB
14 – Ardmore	0.6 PPB
15 – Frog Lake	0.7 PPB
16 – Clear Range	0.8 PPB
17 – Fishing Lake	0.8 PPB
17D – Fishing Lake	0.7 PPB
18 – Beaverdam	0.7 PPB
19 – Cold Lake South	0.6 PPB
19D – Cold Lake South	0.5 PPB
20 – Medley-Martineau	0.4 PPB
21 – Fort George	0.7 PPB
22 – Burnt Lake	0.7 PPB
23 – Mahihkan	0.6 PPB
24 – Hilda Lake	1.5 PPB
25 – Town of Bonnyville	0.6 PPB

Summary

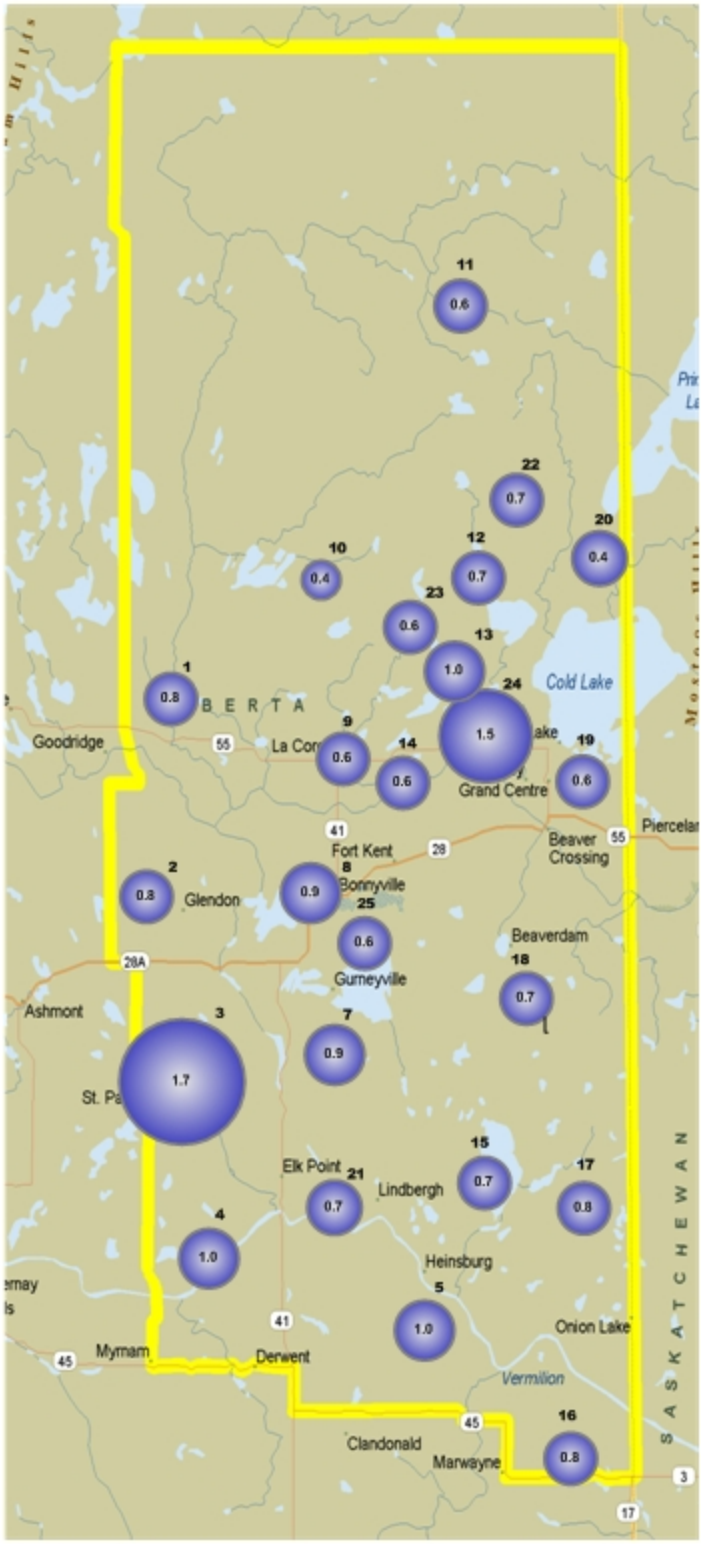
Minimum : 0.4 PPB – Wolf Lake
– Medley-Martineau
Maximum: 1.7 PPB – Flat Lake
Average: 0.8 PPB *Includes Duplicates

Duplicates: 17 – Fishing Lake 0.8 PPB
17D – Fishing Lake 0.7 PPB

19 – Cold Lake South 0.6 PPB
19D – Cold Lake South 0.5 PPB

Comparison of Continuous and Passive Monitoring

19 – Cold Lake South Passive – 0.6 PPB & 0.5 PPB
19 – Cold Lake South Station – 0.34 PPB

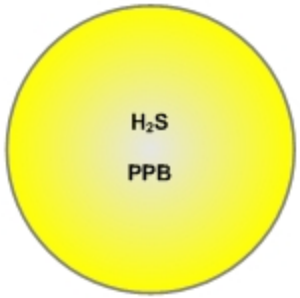


Lakeland Industry & Community Association
H_2S Passive Bubble Map

January 2008

PASSIVE STATIONS

2 – Therien	0.23 PPB
4 – Lake Eliza	0.20 PPB
9 – La Corey	0.20 PPB
10 – Wolf Lake	0.14 PPB
11 – Foster Creek	0.07 PPB
12 – Primrose	0.16 PPB
13 – Maskwa	0.16 PPB
15 – Frog Lake	0.20 PPB
16 – Clear Range	0.22 PPB
17 – Fishing Lake	0.18 PPB
17D – Fishing Lake	0.20 PPB
19 – Cold Lake South	0.21 PPB
19D – Cold Lake South	0.22 PPB
21 – Fort George	0.24 PPB
22 – Burnt Lake	0.14 PPB
23 – Mahihkan	0.16 PPB
24 – Hilda Lake	0.17 PPB

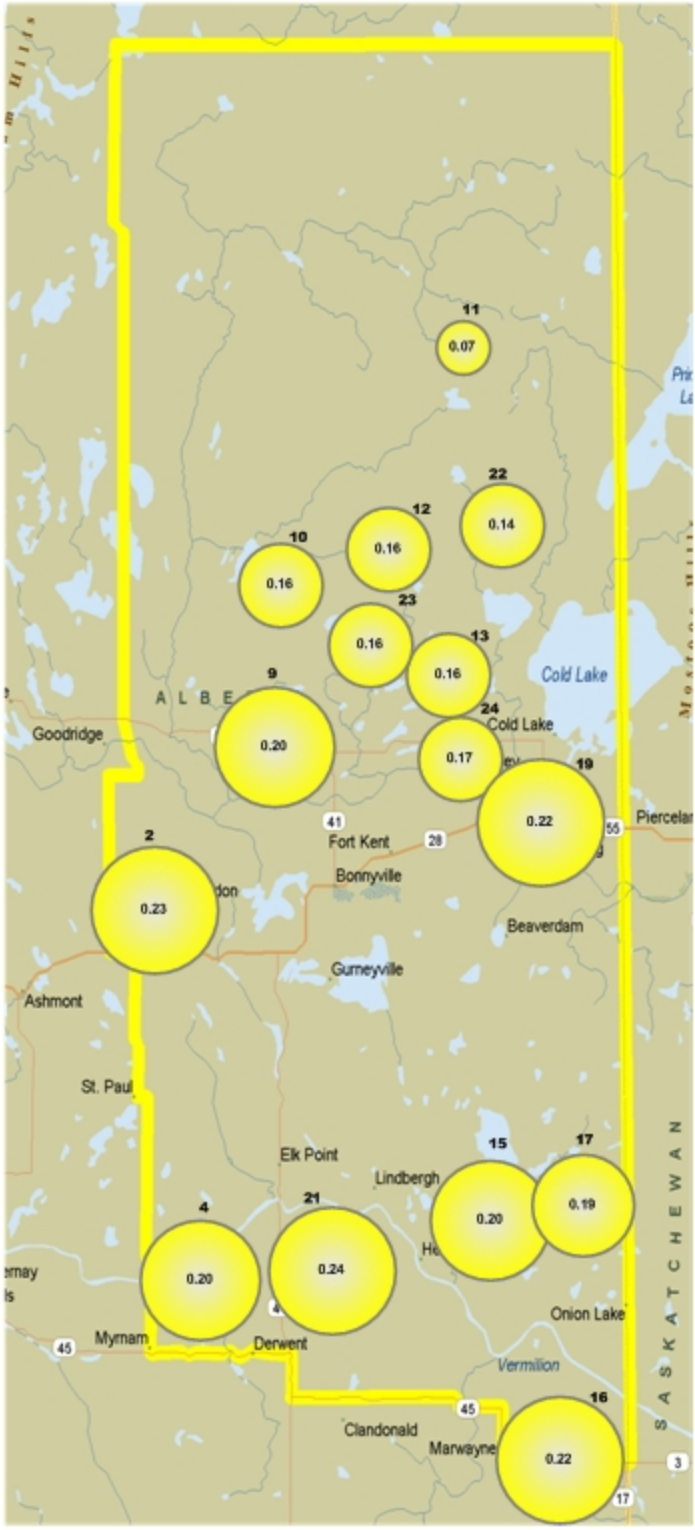


Summary

Minimum : 0.07 PPB – Foster Creek
Maximum: 0.24 PPB – Fort George
Average: 0.18 PPB *Includes Duplicates

Duplicates: 17 – Fishing Lake 0.18 PPB
17D – Fishing Lake 0.20 PPB

19 – Cold Lake South 0.21 PPB
19D – Cold Lake South 0.22 PPB

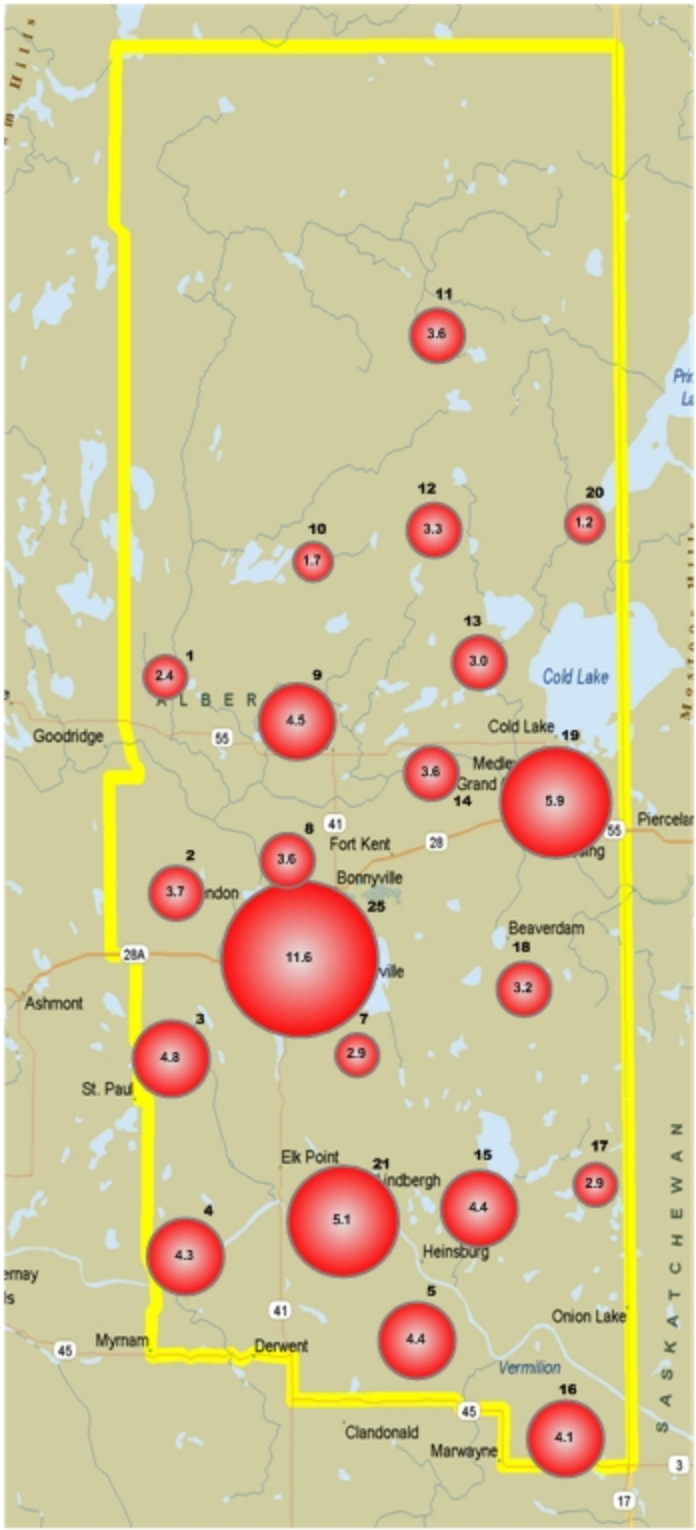


Lakeland Industry & Community Association
NO_2 Passive Bubble Map

January 2008

PASSIVE STATIONS

1 – Sand River	2.4 PPB
2 – Therien	3.7 PPB
3 – Flat Lake	4.8 PPB
4 – Lake Eliza	4.3 PPB
5 – Telegraph Creek	4.4 PPB
7 – Muriel-Kehewin	2.9 PPB
8 – Dupre	3.6 PPB
9 – La Corey	4.5 PPB
10 – Wolf Lake	1.7 PPB
11 – Foster Creek	3.6 PPB
12 – Primrose	3.3 PPB
13 – Maskwa	3.0 PPB
14 – Ardmore	3.6 PPB
15 – Frog Lake	4.4 PPB
16 – Clear Range	4.1 PPB
17 – Fishing Lake	3.0 PPB
17D – Fishing Lake	2.7 PPB
18 – Beaverdam	3.2 PPB
19 – Cold Lake South	5.9 PPB
19D – Cold Lake South	5.8 PPB
20 – Medley-Martineau	1.2 PPB
21 – Fort George	5.1 PPB
25 – Town of Bonnyville	11.6 PPB



Summary

Minimum : 1.2 PPB – Medley-Martineau
Maximum: 11.6 PPB – Town of Bonnyville
Average: 4.0 PPB *Includes Duplicates

Duplicates: 17 – Fishing Lake 3.0 PPB
17D – Fishing Lake 2.7 PPB

19 – Cold Lake South 5.9 PPB
19D – Cold Lake South 5.8 PPB

Comparison of Continuous and Passive Monitoring

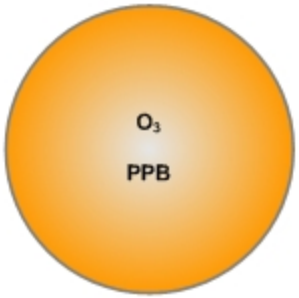
19 – Cold Lake South Passive – 5.9 PPB & 5.8 PPB
19 – Cold Lake South Station – 10.5 PPB

Lakeland Industry & Community Association
O_3 Passive Bubble Map

January 2008

PASSIVE STATIONS

1 – Sand River	20.9 PPB
2 – Therien	25.0 PPB
3 – Flat Lake	27.5 PPB
4 – Lake Eliza	23.8 PPB
5 – Telegraph Creek	25.3 PPB
7 – Muriel-Kehewin	27.8 PPB
8 – Dupre	27.4 PPB
9 – La Corey	22.6 PPB
10 – Wolf Lake	23.2 PPB
11 – Foster Creek	23.1 PPB
12 – Primrose	25.6 PPB
13 – Maskwa	23.2 PPB
14 – Ardmore	23.7 PPB
15 – Frog Lake	26.1 PPB
16 – Clear Range	26.0 PPB
17 – Fishing Lake	23.5 PPB
17D – Fishing Lake	25.9 PPB
18 – Beaverdam	28.8 PPB
19 – Cold Lake South	20.3 PPB
19D – Cold Lake South	22.2 PPB
20 – Medley-Martineau	22.3 PPB
21 – Fort George	23.6 PPB
25 – Town of Bonnyville	18.4 PPB



Summary

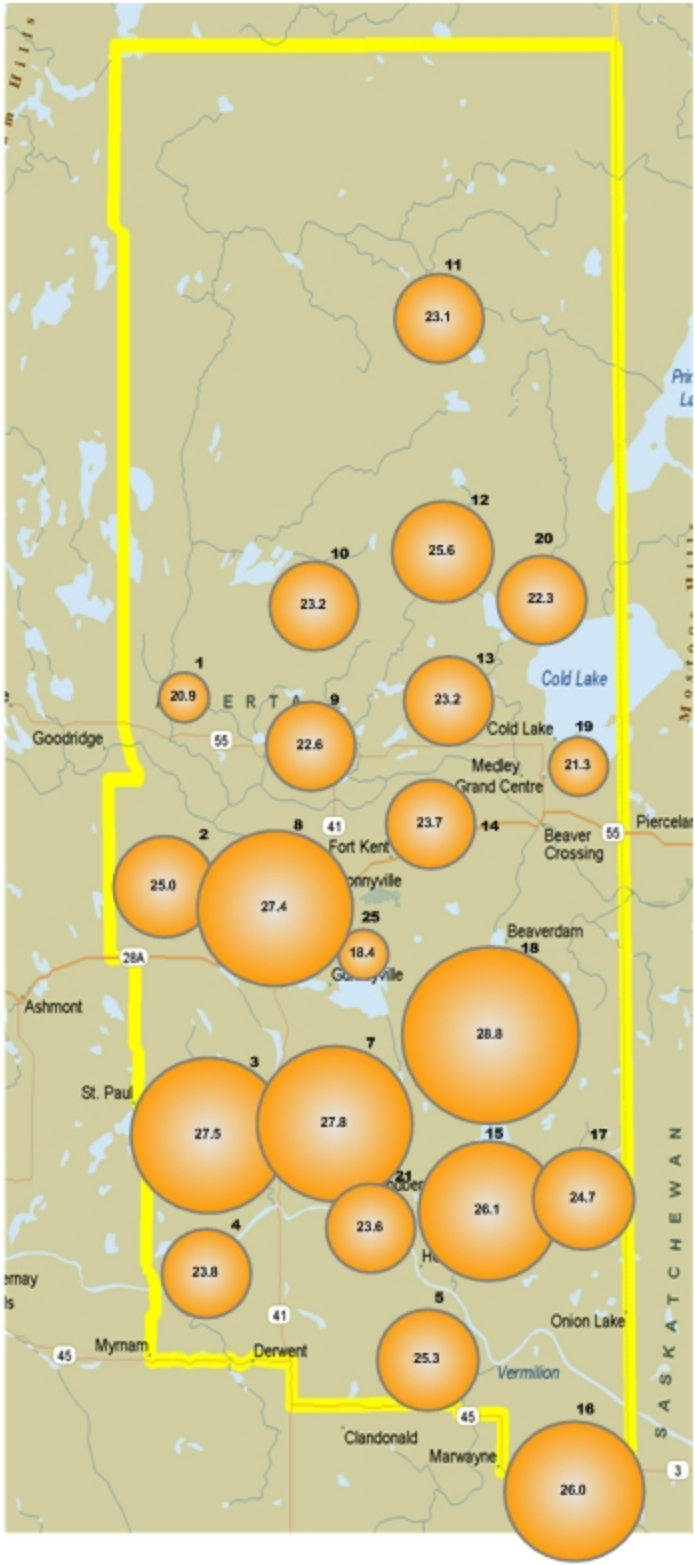
Minimum : 18.4 PPB – Town of Bonnyville
Maximum: 28.8 PPB – Beaverdam
Average: 24.3 PPB *Includes Duplicates

Duplicates: 17 – Fishing Lake 23.5 PPB
17D – Fishing Lake 25.9 PPB

19 – Cold Lake South 20.3 PPB
19D – Cold Lake South 22.2 PPB

Comparison of Continuous and Passive Monitoring

19 – Cold Lake South Passive – 20.3 PPB & 22.2 PPB
19 – Cold Lake South Station – 19.9 PPB



Passive Network Laboratory Analysis

Your Project #: JANUARY 2008
Site:LICA

Attention: MICHAEL BISAGA
LAKELAND INDUSTRY AND COMMUNITY ASSOCIATION
PO BOX 8237
5006 - 50TH AVENUE
BONNYVILLE, AB
CANADA T9N 2J5

Report Date: 2008/02/20

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: A804865
Received: 2008/02/05, 12:52

Sample Matrix: Air
Samples Received: 1

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
H2S Passive Analysis (1)	1	2008/02/20	2008/02/20		EDM SOP-0320
NO2 Passive Analysis (1)	1	2008/02/20	2008/02/20		EDM SOP-0318
O3 Passive Analysis (1)	1	2008/02/07	2008/02/07		EDM SOP-0317
SO2 Passive Analysis (1)	1	2008/02/20	2008/02/20		EDM SOP-0319

Sample Matrix: Air
Samples Received: 25

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
H2S Passive Analysis (1)	16	2008/02/20	2008/02/20		EDM SOP-0320
NO2 Passive Analysis (1)	22	2008/02/20	2008/02/20		EDM SOP-0318
O3 Passive Analysis (1)	22	2008/02/07	2008/02/07		EDM SOP-0317
SO2 Passive Analysis (1)	25	2008/02/20	2008/02/20		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.

JODI HANSON, Project Manager, Customer Service
Email: jodi.hanson@maxxamanalytics.com
Phone# (780) 468-3500

Your Project #: JANUARY 2008
Site:LICA

Attention: MICHAEL BISAGA
LAKELAND INDUSTRY AND COMMUNITY ASSOCIATION
PO BOX 8237
5006 - 50TH AVENUE
BONNYVILLE, AB
CANADA T9N 2J5

Report Date: 2008/02/20

CERTIFICATE OF ANALYSIS

-2-

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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 CAEAL have approved this reporting process and electronic report format.

Total cover pages: 2

Maxxam Job #: A804865
Report Date: 2008/02/20

LAKELAND INDUSTRY AND COMMUNITY ASSOCIATION
Client Project #: JANUARY 2008
Site Reference: LICA
Sampler Initials: SB

RESULTS OF CHEMICAL ANALYSES OF AIR

Maxxam ID		I75889		
Sampling Date		2007/12/29 11:10		
	Units	**17A**	**RDL**	**QC Batch**
Passive Montioring				
Calculated H2S	ppb	0.20	0.02	2128654
Calculated NO2	ppb	2.7	0.1	2128658
Calculated O3	ppb	25.9	0.1	2107200
Calculated SO2	ppb	0.7	0.1	2128677

RDL = Reportable Detection Limit

Maxxam Job #: A804865
Report Date: 2008/02/20

LAKELAND INDUSTRY AND COMMUNITY ASSOCIATION
Client Project #: JANUARY 2008
Site Reference: LICA
Sampler Initials: SB

RESULTS OF CHEMICAL ANALYSES OF AIR

Maxxam ID		I75869	I75870	I75871	I75872		
Sampling Date		2007/12/28 09:45	2007/12/28 09:05	2007/12/29 15:15	2007/12/29 14:35		
	Units	**1**	**2**	**3**	**4**	**RDL**	**QC Batch**
Passive Montioring							
Calculated H2S	ppb		0.23		0.20	0.02	2128654
Calculated NO2	ppb	2.4	3.7	4.8	4.3	0.1	2128658
Calculated O3	ppb	20.9	25.0	27.5	23.8	0.1	2107200
Calculated SO2	ppb	0.3	0.8	1.7	1.0	0.1	2128677

RDL = Reportable Detection Limit

Maxxam ID		I75873	I75874	I75875	I75876		
Sampling Date		2007/12/29 13:15	2007/12/29 16:00	2007/12/28 08:30	2007/12/28 10:25		
	Units	**5**	**7**	**8**	**9**	**RDL**	**QC Batch**
Passive Montioring							
Calculated H2S	ppb				0.20	0.02	2128654
Calculated NO2	ppb	4.4	2.9	3.6	4.5	0.1	2128658
Calculated O3	ppb	25.3	27.8	27.4	22.6	0.1	2107200
Calculated SO2	ppb	1.0	0.9	0.9	0.6	0.1	2128677

RDL = Reportable Detection Limit

Maxxam ID		I75877	I75878	I75879	I75880		
Sampling Date		2007/12/28 11:05	2007/12/28 12:20	2007/12/28 14:00	2007/12/28 15:00		
	Units	**10**	**11**	**12**	**13**	**RDL**	**QC Batch**
Passive Montioring							
Calculated H2S	ppb	0.16	0.07	0.16	0.16	0.02	2128654
Calculated NO2	ppb	1.7	3.6	3.3	3.0	0.1	2128658
Calculated O3	ppb	23.2	23.1	25.6	23.2	0.1	2107200
Calculated SO2	ppb	0.4	0.6	0.7	1.0	0.1	2128677

RDL = Reportable Detection Limit

Maxxam Job #: A804865
Report Date: 2008/02/20

LAKELAND INDUSTRY AND COMMUNITY ASSOCIATION
Client Project #: JANUARY 2008
Site Reference: LICA
Sampler Initials: SB

RESULTS OF CHEMICAL ANALYSES OF AIR

Maxxam ID		I75881	I75882	I75883	I75884		
Sampling Date		2007/12/28 07:10	2007/12/29 11:50	2007/12/29 12:30	2007/12/29 11:10		
	Units	**14**	**15**	**16**	**17**	**RDL**	**QC Batch**
Passive Montioring							
Calculated H2S	ppb		0.20	0.22	0.18	0.02	2128654
Calculated NO2	ppb	3.6	4.4	4.1	3.0	0.1	2128658
Calculated O3	ppb	23.7	26.1	26.0	23.5	0.1	2107200
Calculated SO2	ppb	0.6	0.7	0.8	0.6	0.1	2128677

RDL = Reportable Detection Limit

Maxxam ID		I75885	I75886	I75887	I75888		
Sampling Date		2007/12/29 10:15	2007/12/29 08:15	2007/12/28 16:20	2007/12/29 13:46		
	Units	**18**	**19**	**20**	**21**	**RDL**	**QC Batch**
Passive Montioring							
Calculated H2S	ppb		0.21		0.24	0.02	2128654
Calculated NO2	ppb	3.2	5.9	1.2	5.1	0.1	2128658
Calculated O3	ppb	28.8	20.3	22.3	23.6	0.1	2107200
Calculated SO2	ppb	0.7	0.6	0.4	0.7	0.1	2128677

RDL = Reportable Detection Limit

Maxxam ID		I75890	I75893	I75894	I75895		
Sampling Date		2007/12/29 08:15	2007/12/28 13:40	2007/12/28 14:35	2007/12/28 15:25		
	Units	**19A**	**22**	**23**	**24**	**RDL**	**QC Batch**
Passive Montioring							
Calculated H2S	ppb	0.22	0.14	0.16	0.17	0.02	2128654
Calculated NO2	ppb	5.8				0.1	2128658
Calculated O3	ppb	22.2				0.1	2107200
Calculated SO2	ppb	0.5	0.7	0.6	1.5	0.1	2128677

RDL = Reportable Detection Limit

Maxxam Job #: A804865
Report Date: 2008/02/20

LAKELAND INDUSTRY AND COMMUNITY ASSOCIATION
Client Project #: JANUARY 2008
Site Reference: LICA
Sampler Initials: SB

RESULTS OF CHEMICAL ANALYSES OF AIR

Maxxam ID		I75896		
Sampling Date		2007/12/28 07:40		
	Units	**25**	**RDL**	**QC Batch**
Passive Montioring				
Calculated NO2	ppb	11.6	0.1	2128658
Calculated O3	ppb	18.4	0.1	2107200
Calculated SO2	ppb	0.6	0.1	2128677

RDL = Reportable Detection Limit

General Comments

Results relate only to the items tested.

LAKELAND INDUSTRY AND COMMUNITY ASSOCIATION
Attention: MICHAEL BISAGA
Client Project #: JANUARY 2008
P.O. #:
Site Reference: LICA

Quality Assurance Report

Maxxam Job Number: PA804865

QA/QC Batch Num Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
2107200 LM1	Calibration Check	Calculated O3	2008/02/07		100	%	91 - 107
	SPIKE	Calculated O3	2008/02/07		100	%	N/A
	BLANK	Calculated O3	2008/02/07	<0.1		ppb	
2128654 SY	Calibration Check	Calculated H2S	2008/02/20		114	%	80 - 120
	SPIKE	Calculated H2S	2008/02/20		104	%	N/A
2128658 DF4	Calibration Check	Calculated NO2	2008/02/20		99	%	76 - 118
	SPIKE	Calculated NO2	2008/02/20		100	%	N/A
	BLANK	Calculated NO2	2008/02/20	<0.1		ppb	
2128677 DF4	Calibration Check	Calculated SO2	2008/02/20		99	%	95 - 105
	SPIKE	Calculated SO2	2008/02/20		97	%	N/A
	BLANK	Calculated SO2	2008/02/20	<0.1		ppb	

N/A = Not Applicable

Edmonton: 9331 - 48th Street T6B 2R4 Telephone(780) 468-3500 FAX(780) 466-3332

Passive Field Data

Field Notes

SAMPLER	SITE	ID	START		END		NOTES
			DATE	TIME	DATE	TIME	
$SO_2/NO_2/O_3$		1	12/28/07	09:45	02/01/08	09:45	
$H_2S/SO_2/NO_2/O_3$		2	1228/07	09:05	02/01/08	09:10	
$SO_2/NO_2/O_3$		3	12/29/07	15:15	02/02/08	14:45	
$H_2S/SO_2/NO_2/O_3$		4	12/29/07	14:35	02/02/08	14:10	
$SO_2/NO_2/O_3$		5	12/29/07	13:15	02/02/08	11:55	
$SO_2/NO_2/O_3$		7	12/29/07	16:00	02/02/08	15:35	
$SO_2/NO_2/O_3$		8	12/28/07	08:30	02/01/08	08:30	
$H_2S/SO_2/NO_2/O_3$		9	12/28/07	10:25	02/01/08	10:35	
$H_2S/SO_2/NO_2/O_3$		10	12/28/07	11:05	02/01/08	11:15	
$H_2S/SO_2/NO_2/O_3$		11	12/28/07	12:20	02/01/08	12:30	Service Rig near site
$H_2S/SO_2/NO_2/O_3$		12	12/28/07	14:00	02/01/08	14:00	
$H_2S/SO_2/NO_2/O_3$		13	12/28/07	15:00	02/01/08	15:05	
$SO_2/NO_2/O_3$		14	12/28/07	07:10	02/01/08	07:10	
$H_2S/SO_2/NO_2/O_3$		15	12/29/07	11:50	02/02/08	10:20	
$H_2S/SO_2/NO_2/O_3$		16	12/29/07	12:30	02/02/08	11:05	
$H_2S/SO_2/NO_2/O_3$		17	12/29/07	11:10	02/02/08	09:30	
$SO_2/NO_2/O_3$		18	12/29/07	10:15	02/02/08	08:35	
$H_2S/SO_2/NO_2/O_3$		19	12/29/07	08:15	02/02/08	16:35	
$SO_2/NO_2/O_3$		20	12/28/07	16:20	02/01/08	16:45	
$H_2S/SO_2/NO_2/O_3$		21	12/29/07	13:46	02/02/08	13:15	
H_2S/SO_2		22	12/28/07	13:40	02/01/08	13:40	
H_2S/SO_2		23	12/28/07	14:35	02/01/08	14:40	
H_2S/SO_2		24	12/28/07	15:25	02/01/08	15:50	
$SO_2/NO_2/O_3$		25	12/28/07	07:40	02/01/08	08:00	
$H_2S/SO_2/NO_2/O_3$		12A	12/29/07	11:10	02/01/08	09:30	
$H_2S/SO_2/NO_2/O_3$		13A	12/29/07	08:15	02/02/08	16:35	