Lakeland Industry & Community Association

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

Prepared By:

Maxxam Analytics Inc

Driven by Service and Science

May 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: April 2008

The monthly ambient data report:

- Prepared by Pamela Eddy
- Reviewed by Craig Snider

The monthly analytical report for passive 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 – April 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	0.03	2	1	VAR	VAR	VAR	0.4	1	100.0
TRS (PPB)	-	-	-	-	0.00	0	ALL	ALL	VAR	VAR	0.0	ALL	100.0
NO_2 (PPB)	212	106	0	0	3.11	22	24	7	0.9	104 (ESE)	5.8	9	99.7
NO (PPB)	-	-	-	-	0.23	10	10	7	0.7	83 (E)	1.0	10	99.7
NOx (PPB)	-	-	-	-	3.13	32	18	8	15	325 (NW)	6.9	8	99.7
O_3 (PPB)	82	-	0	-	41.07	63	VAR	VAR	VAR	VAR	56.4	28	99.9
THC (PPM)	-	-	-	-	1.83	2.8	12	6	1.7	132 (SE)	2.1	12	99.7
PM 2.5 (UG/M^3)	-	30	-	0	3.23	12.8	17	14	15.2	314 (NW)	6.8	30	97.8
TEMPERATURE (DEG C)	-	-	-	-	0.23	17.1	29	15	-	-	10.1	29	100.0
RELATIVE HUMIDITY (%)	-	-	-	-	62.45	94.7	10	7	-	-	86.5	21	100.0
VECTOR WS (KPH)	-	-	-	-	7.41	20.7	22	15	-	306 (NW)	13.4	30	100.0
VECTOR WD (DEGREES)	-	-	-	-	N	-	-	-	-	-	-	-	100.0

VAR-VARIOUS

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

Passive Ambient Monitoring Network – April 2008

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION PASSIVE NETWORK			
NETWORK MAXIMUM			NETWORK AVERAGE
PARAMETER	STATION	READING (PPB)	READING (PPB)
NO_2	#25	4.5	1.1
SO_2	#24	1.1	0.3
H_2S	#4	0.17	0.06
O_3	#16	52.9	42.5

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.

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 for this reason.

General Monthly Summary - Cold Lake

AQM STATION – LICA – COLD LAKE

Nitrogen Dioxide (PPB)

- Analyzer make / model - TECO 42C

A slight leak developed in the exhaust tubing/scrubber of the analyzer, this was repaired and the analyzer re-calibrated. Nod data was invalidated due to this leak. 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.

Particulate Matter 2.5 (ug/m^3)

- Analyzer make / model - TEOM 1400A

No operational issues during the month. Following the calibration and filter change, the analyzer was allowed to stabilize full conditioning of the filter was completed, as a result 15 hours of data was invalidated. One hour of data was invalidated as it was below –3.0 ug/m^3.

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

- System make / model - MET ONE 50.5

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

Relative Humidity (PERCENT)

- System make / model - Rotronic Hygroclip-S3

No operational issues observed during the month.

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

No operational issues observed during the month.

Datalogger

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

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

General Monthly Summary - Cold Lake

AQM STATION – LICA – COLD LAKE

Trailer

- No operational issues during the month.

Air Quality Index (AQI)

The AQI data was adjusted to reflect regular monthly and daily calibrations, maintenance, and downtime. There were 154 hours of fair AQI values recorded in April 2008, all of these due to Ozone. The highest hourly concentration of Ozone was 63.0 ppb and an AQI value of 36 on April 25th, hour 14, April 27th, hour 21, and April 28th, hour 16.

Passive Network

No issues with the passive network during the month.

Continuous Monitoring

Cold Lake

Monthly Summaries, Graphs & Wind Roses

Air Quality Index

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

APRIL 2008

AIR QUALITY INDEX (AQI)

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.
DAY																									
1	18	18	14	12	13	8	9	16	-	17	18	20	22	25	25	24	25	27	28	26	25	24	22	20	28
	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	**NA**	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_
2	20	21	21	20	20	20	19	-	22	23	23	25	27	28	28	28	25	25	24	24	23	22	21	21	28
	O3_	O3_	O3_	O3_	O3_	O3_	O3_	**NA**	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_
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	O3_	O3_	O3_	O3_	O3_	O3_	**NA**	O3_	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_
4	21	21	21	21	20	-	23	23	24	25	25	25	25	24	24	24	24	23	22	20	18	16	15	15	25
	O3_	O3_	O3_	O3_	O3_	**NA**	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_
5	17	16	16	11	-	13	12	15	20	21	21	22	23	23	23	23	25	23	23	24	25	25	25	25	25
	O3_	O3_	O3_	O3_	**NA**	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_
6	25	25	24	-	23	23	23	24	24	24	24	24	24	24	24	24	23	23	23	20	21	22	21	21	25
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7	21	21	-	21	21	20	20	22	23	23	23	23	23	23	23	23	23	23	22	21	21	21	20	19	23
	O3_	O3_	**NA**	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_
8	17	-	11	10	13	13	12	19	21	22	22	23	25	26	26	26	25	25	23	20	18	15	7	10	26
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11	8	7	7	6	8	9	14	-	-	-	-	-	-	-	-	28	27	27	25	22	21	-	11	10	28
	O3_	O3_	O3_	O3_	O3_	O3_	O3_	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	O3_	O3_	O3_	O3_	O3_	O3_	**NA**	O3_	O3_	O3_
12	11	10	7	5	3	8	7	13	20	23	28	28	26	25	24	23	23	23	23	20	-	13	10	9	28
	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	**NA**	O3_	O3_	O3_	O3_
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22	-	-	-	-	-	-	18	19	20	21	-	22	22	23	23	25	25	26	28	27	27	25	21	22	28
	NA	**NA**	**NA**	**NA**	**NA**	**NA**	O3_	O3_	O3_	O3_	**NA**	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_
23	23	22	22	22	21	18	18	20	21	-	25	26	28	29	30	32	31	28	28	25	22	23	24	24	32
	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	**NA**	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_
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	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	**NA**	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_
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26	13	13	11	8	5	7	-	21	24	27	28	28	28	30	33	34	35	35	33	29	22	15	12	19	35
	O3_	O3_	O3_	O3_	O3_	O3_	**NA**	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_
27	26	24	21	22	20	-	19	27	28	29	30	31	32	32	32	33	33	33	33	34	36	35	33	33	36
	O3_	O3_	O3_	O3_	O3_	**NA**	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_
28	33	33	30	29	-	26	25	24	27	28	30	33	34	34	35	36	35	34	33	34	33	25	23	28	36
	O3_	O3_	O3_	O3_	**NA**	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_
29	26	25	25	-	24	22	24	24	24	25	26	28	30	31	32	32	32	30	28	28	25	28	28	28	32
	O3_	O3_	O3_	**NA**	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_
30	28	26	-	23	23	23	23	22	22	23	23	24	24	24	28	28	28	27	28	28	27	27	26	25	28
	O3_	O3_	**NA**	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_
PEAK	33	33	30	29	24	26	25	27	28	29	31	33	34	36	35	36	35	35	34	34	36	35	33	33	
	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	

STATUS FLAG CODES	NA - NOT APPLICABLE

V - VARIOUS

AQI CLASS	OZONE (O_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)	154	21.4%	36	VAR	VAR	0	0.0%	-	-	-	0	0.0%	-	-	-	0	0.0%	-	-	-	154	21.4%
GOOD (1-25)	489	67.9%	-	-	-	2	0.3%	6	7	10	0	0.0%	-	-	-	0	0.0%	-	-	-	491	68.2%
OVERALL	643	89.3%	-	-	-	2	0.3%	-	-	-	0	0.0%	-	-	-	0	0.0%	-	-	-	645	89.6%
UNAVAILABLE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	75	10.4%

Sulphur Dioxide

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

APRIL 2008

SULPHUR DIOXIDE (SO_2) hourly averages in ppb

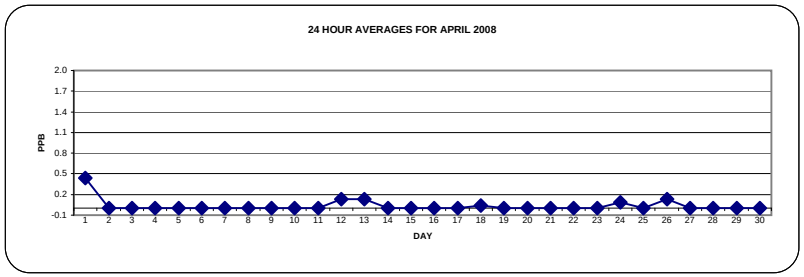
MST

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

STATUS FLAG CODES

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

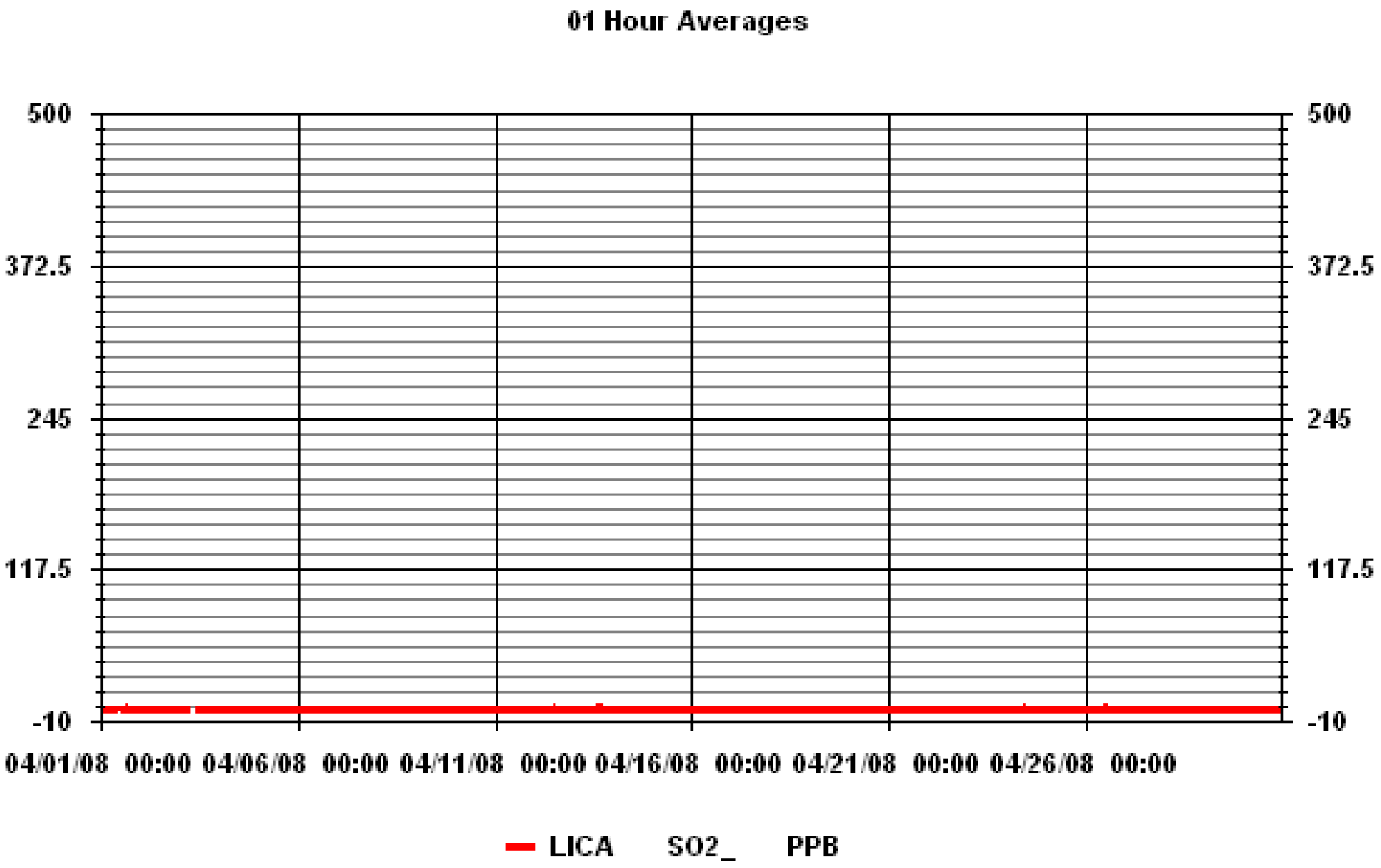
OBJECTIVE LIMIT: **ALBERTA ENVIRONMENT:** 1-HR 172 PPB | 24-HR 57 PPB



MONTHLY SUMMARY

NUMBER OF 1-HR EXCEEDENCES:	0					
NUMBER OF 24-HR EXCEEDENCES:	0					
NUMBER OF NON-ZERO READINGS:	18					
MAXIMUM 1-HR AVERAGE:	2	PPB	@ HOUR(S)	VAR	ON DAY(S)	1
MAXIMUM 24-HR AVERAGE:	0.4	PPB			ON DAY(S)	1

IZS CALIBRATION TIME:	31	HRS	OPERATIONAL TIME:	720	HRS
MONTHLY CALIBRATION TIME:	4	HRS	AMD OPERATION UPTIME:	100.0	%
STANDARD DEVIATION:	0.21		MONTHLY AVERAGE:	0.03	PPB


01 Hour Averages
500
372.5
245
117.5
-10
04/01/08 00:00
04/06/08 00:00
04/11/08 00:00
04/16/08 00:00
04/21/08 00:00
04/26/08 00:00
LICA SO2_ PPB

LICA
SO2_ / WDR Joint Frequency Distribution (Percent)

April 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	4.81	5.10	7.00	3.79	14.59	12.11	8.75	.87	1.02	1.16	12.55	10.80	7.15	3.06	5.40	1.75	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	4.81	5.10	7.00	3.79	14.59	12.11	8.75	.87	1.02	1.16	12.55	10.80	7.15	3.06	5.40	1.75	

Calm : .00 %

Total # Operational Hours : 685

Distribution By Samples

Direction

	Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
<	20	33	35	48	26	100	83	60	6	7	8	86	74	49	21	37	12	685
<	60																	
<	110																	
<	170																	
<	340																	
>=	340																	
	Totals	33	35	48	26	100	83	60	6	7	8	86	74	49	21	37	12	

Calm : .00 %

Total # Operational Hours : 685

Logger : 01 Parameter : SO2_

Class Limits (PPB)

>= 340

< 340

< 170

< 110

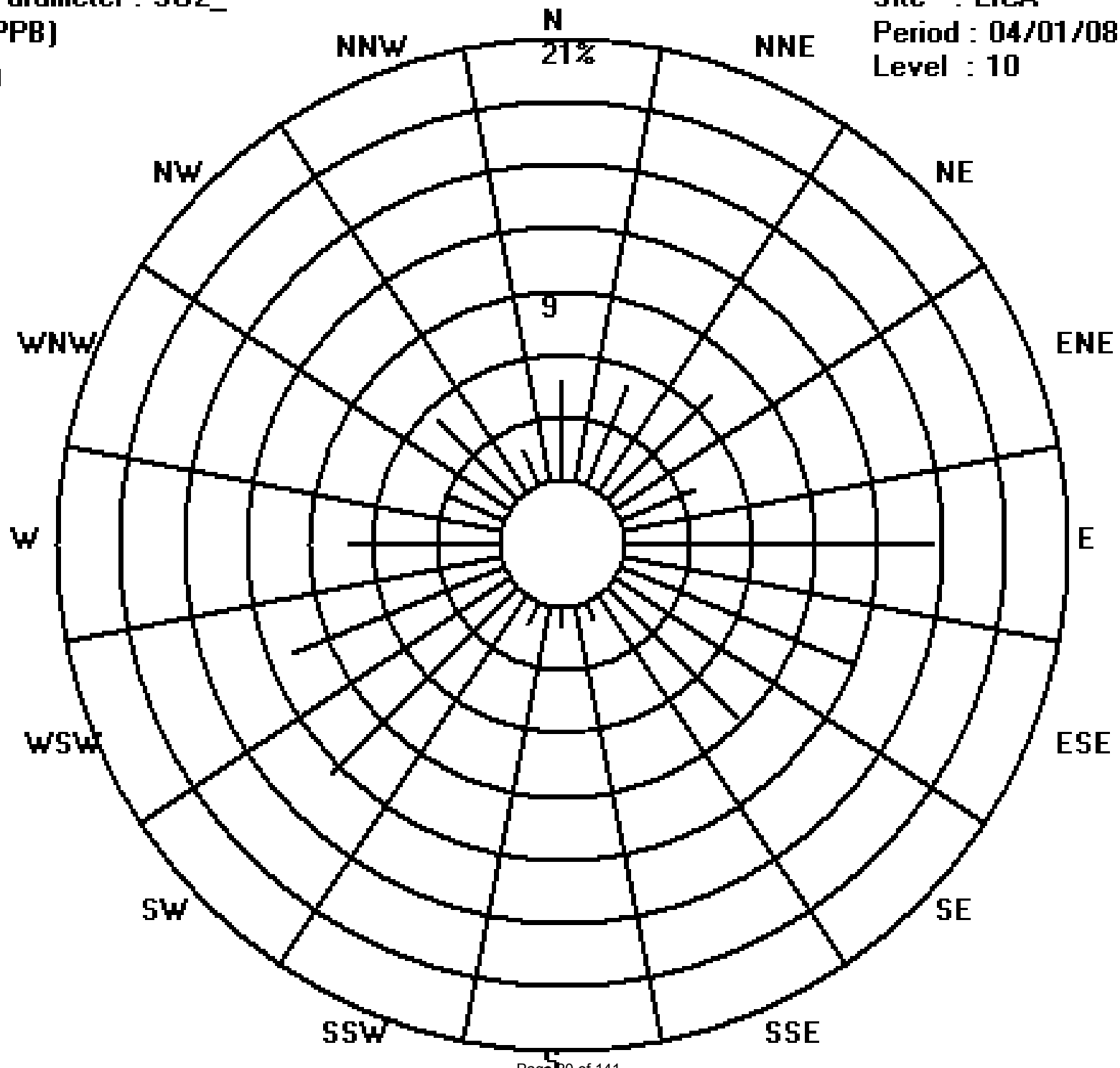
< 60

< 20

Site : LICA

Period : 04/01/08-04/30/08

Level : 10



LAKELAND INDUSTRY & COMMUNITY ASSOCIATION -*COLD LAKE*

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

STATUS FLAG CODES

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

MONTHLY SUMMARY

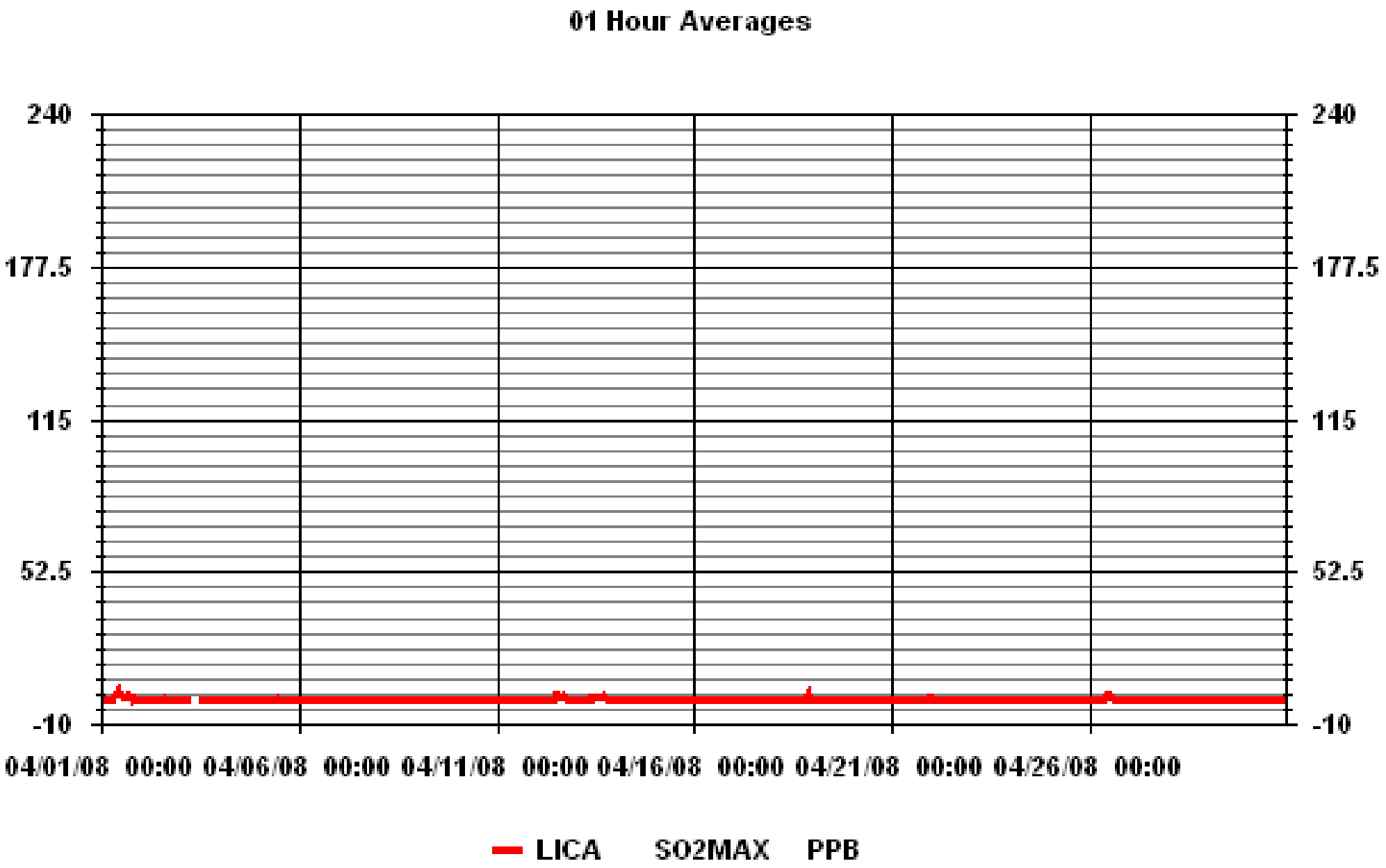
NUMBER OF NON-ZERO READINGS: 41

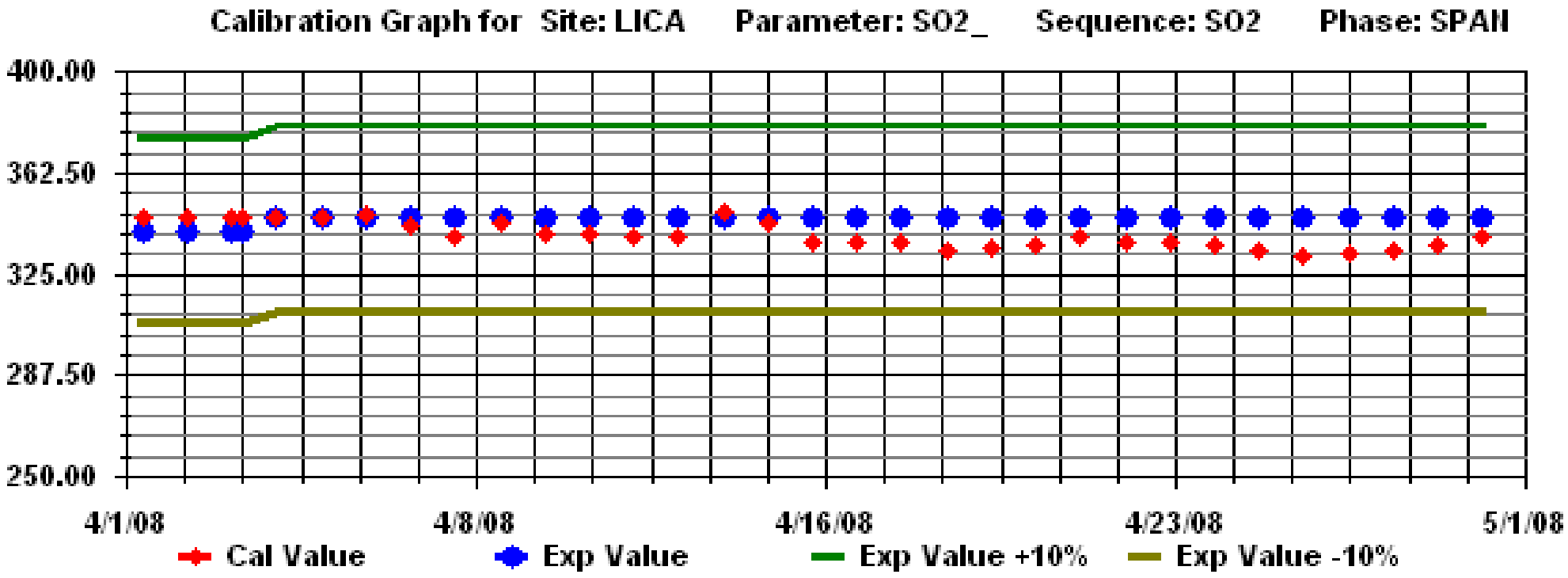
MAXIMUM INSTANTANEOUS VALUE: 4 PPB @ HOUR(S) 11 ON DAY(S) 1

IZS CALIBRATION TIME: 31 HRS OPERATIONAL TIME: 719 HRS

MONTHLY CALIBRATION TIME: 5 HRS

STANDARD DEVIATION: 0.40


01 Hour Averages
240
177.5
115
52.5
-10
04/01/08 00:00
04/06/08 00:00
04/11/08 00:00
04/16/08 00:00
04/21/08 00:00
04/26/08 00:00
LICA SO2MAX PPB


Calibration Graph for Site: LICA Parameter: SO2_ Sequence: SO2 Phase: SPAN
400.00
362.50
325.00
287.50
250.00
4/1/08
4/8/08
4/16/08
4/23/08
5/1/08
Cal Value
Exp Value
Exp Value +10%
Exp Value -10%

Total Reduced Sulphur

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

APRIL 2008

TOTAL REDUCED SULPHUR (TRS) hourly averages in ppb

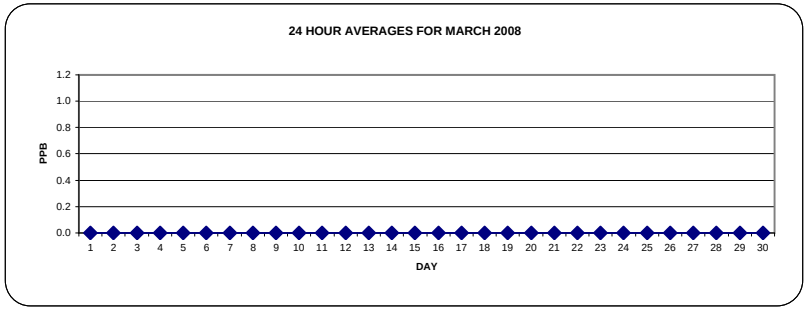
MST

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	0	**IZS**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
2	0	0	0	0	0	0	0	**IZS**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
3	0	0	0	0	0	0	**IZS**	0	**C**	**C**	**C**	**C**	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
4	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
5	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
6	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
7	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
8	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
9	**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
10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**IZS**	0	0	0.0	24
11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**IZS**	0	0	0	0.0	24
12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**IZS**	0	0	0	0	0.0	24
13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**IZS**	0	0	0	0	0	0.0	24
14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**IZS**	0	0	0	0	0	0	0.0	24
15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**IZS**	0	0	0	0	0	0	0	0.0	24
16	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
17	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
18	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
19	0	0	0	0	0	0	0	0	0	0	0	0	0	**IZS**	0	0	0	0	0	0	0	0	0	0	0	0.0	24
20	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
21	0	0	0	0	0	0	0	0	0	0	0	**IZS**	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
22	0	0	0	0	0	0	0	0	0	0	**IZS**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
23	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
24	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
25	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
26	0	0	0	0	0	0	**IZS**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
27	0	0	0	0	0	**IZS**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
28	0	0	0	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
29	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
30	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
HOURLY MAX	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
HOURLY AVG	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			

STATUS FLAG CODES

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

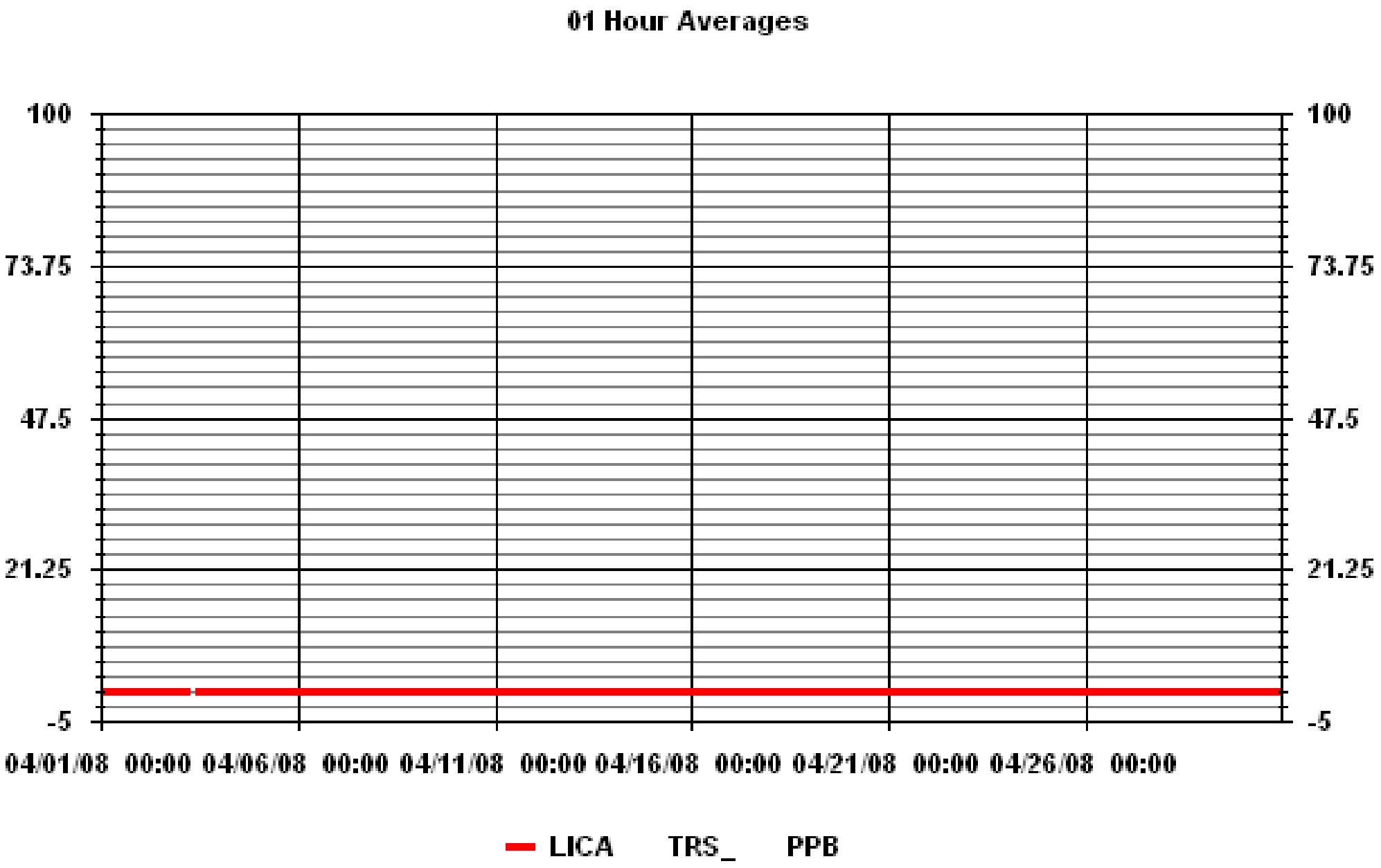
OBJECTIVE LIMIT: **ALBERTA ENVIRONMENT:** 1-HR 172 PPB | 24-HR 57 PPB



MONTHLY SUMMARY

NUMBER OF 1-HR EXCEEDENCES:	0					
NUMBER OF 24-HR EXCEEDENCES:	0					
NUMBER OF NON-ZERO READINGS:	0					
MAXIMUM 1-HR AVERAGE:	0	PPB	@ HOUR(S)	ALL	ON DAY(S)	ALL
MAXIMUM 24-HR AVERAGE:	0.0	PPB			ON DAY(S)	ALL
				VAR-VARIOUS		

IZS CALIBRATION TIME:	31	HRS	OPERATIONAL TIME:	720	HRS
MONTHLY CALIBRATION TIME:	4	HRS	AMD OPERATION UPTIME	100.0	%
STANDARD DEVIATION	0.00		MONTHLY AVERAGE	0.00	PPB


01 Hour Averages
100
73.75
47.5
21.25
-5
04/01/08 00:00
04/06/08 00:00
04/11/08 00:00
04/16/08 00:00
04/21/08 00:00
04/26/08 00:00
LICA TRS_ PPB

LICA
TRS_ / WD Joint Frequency Distribution (Percent)

April 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	4.81	5.10	7.00	3.79	14.59	12.11	8.75	.87	1.02	1.16	12.55	10.80	7.15	3.06	5.40	1.75	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	4.81	5.10	7.00	3.79	14.59	12.11	8.75	.87	1.02	1.16	12.55	10.80	7.15	3.06	5.40	1.75	

Calm : .00 %

Total # Operational Hours : 685

Distribution By Samples

Direction

	Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
<	3	33	35	48	26	100	83	60	6	7	8	86	74	49	21	37	12	685
<	10																	
<	50																	
>=	50																	
	Totals	33	35	48	26	100	83	60	6	7	8	86	74	49	21	37	12	

Calm : .00 %

Total # Operational Hours : 685

Logger : 01 Parameter : TRS_

Class Limits (PPB)

>= 50

< 50

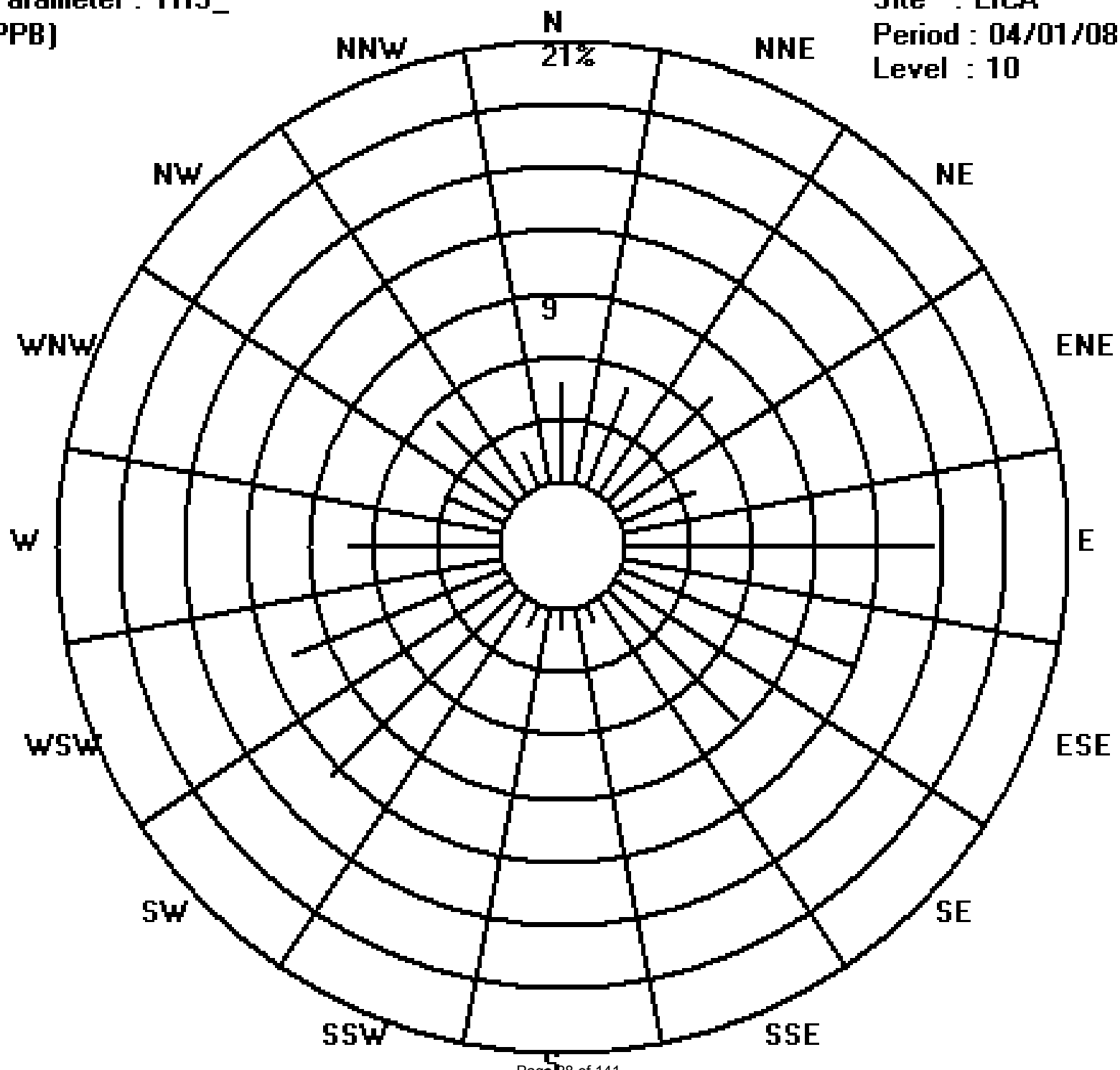
< 10

< 3

Site : LICA

Period : 04/01/08-04/30/08

Level : 10



LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

APRIL 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	1	IZS	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	1	IZS	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	24
3	1	1	1	1	1	1	IZS	1	C	C	C	C	C	1	1	1	1	1	1	1	1	1	1	1	1	1.0	24
4	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
5	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
6	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
7	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
8	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
9	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	23
10	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	IZS	1	1	1.0	24
11	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
12	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
13	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
14	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
15	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
16	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
17	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
18	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
19	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	1.0	24
20	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
21	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
22	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	1.0	24
23	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
24	1	1	1	1	1	1	1	1	IZS	1	P	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	23
25	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
26	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
27	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
28	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
29	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
30	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
HOURLY MAX	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1			
HOURLY AVG	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	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: 683

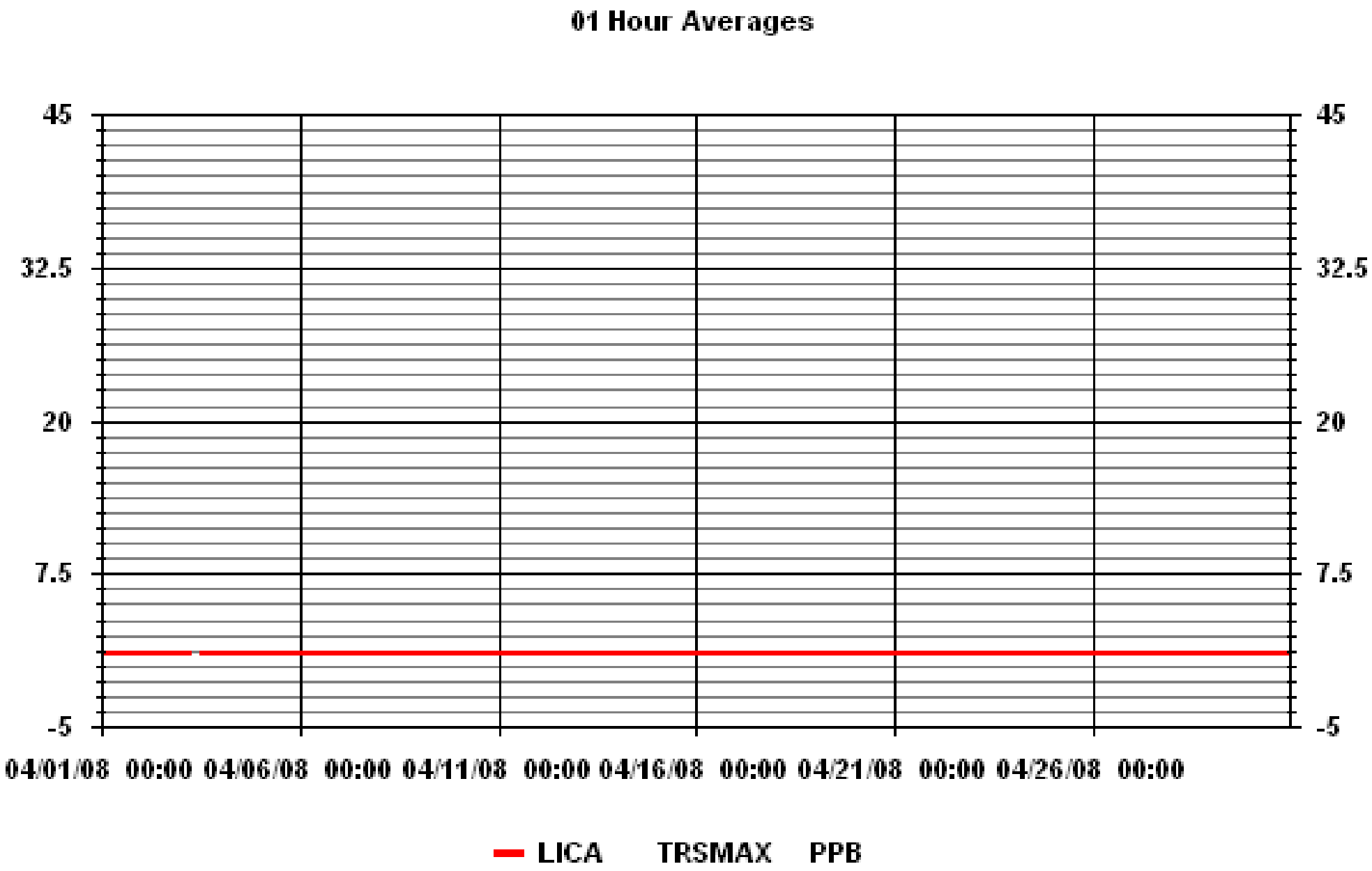
MAXIMUM INSTANTANEOUS VALUE: 1 PPB @ HOUR(S) ALL ON DAY(S) ALL

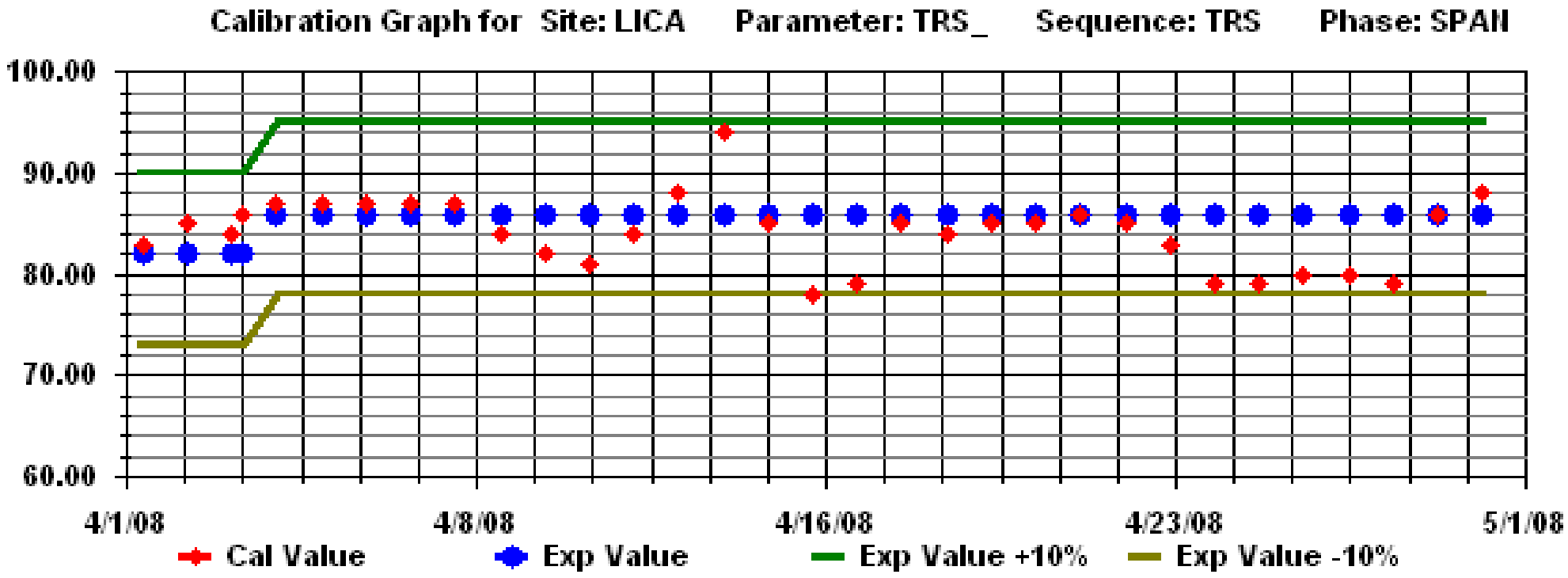
VAR - VARIOUS

IZS CALIBRATION TIME: 31 HRS OPERATIONAL TIME: 718 HRS

MONTHLY CALIBRATION TIME: 5 HRS

STANDARD DEVIATION: 0.00


01 Hour Averages
45
32.5
20
7.5
-5
04/01/08 00:00
04/06/08 00:00
04/11/08 00:00
04/16/08 00:00
04/21/08 00:00
04/26/08 00:00
LICA TRSMAX PPB


Calibration Graph for Site: LICA Parameter: TRS_ Sequence: TRS Phase: SPAN
100.00
90.00
80.00
70.00
60.00
4/1/08
4/8/08
4/16/08
4/23/08
5/1/08
Cal Value
Exp Value
Exp Value +10%
Exp Value -10%

Total Hydrocarbons

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

APRIL 2008

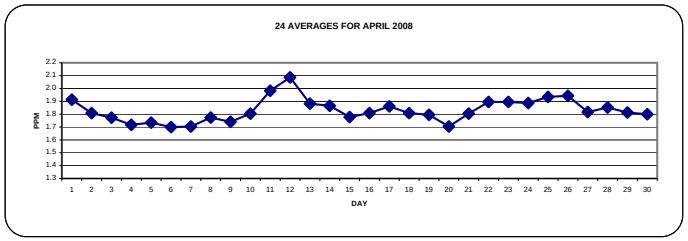
TOTAL HYDROCARBONS (THC) hourly averages in ppm

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	2.1	2.1	2.2	2.2	2.2	**IZS**	2.1	1.9	1.9	1.8	1.8	1.7	1.7	1.8	1.7	1.7	1.8	1.8	1.9	1.8	1.8	2.2	1.9	24
2	1.9	1.9	2	2	2	1.9	2	**IZS**	1.9	1.9	1.8	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.8	1.8	2.0	1.8	24
3	1.8	1.8	1.8	1.8	1.8	1.9	**IZS**	2.3	1.8	1.7	1.7	**C**	**C**	**C**	**C**	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	2.3	1.8	24
4	1.7	1.7	1.7	1.7	1.7	**IZS**	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.8	1.8	1.7	1.8	1.8	1.8	1.7	24
5	1.8	1.8	1.7	1.8	**IZS**	1.8	1.8	1.8	1.8	1.7	1.8	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.8	1.7	24
6	1.7	1.7	1.7	**IZS**	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	24
7	1.7	1.7	**IZS**	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.8	1.8	1.7	24
8	1.8	**IZS**	1.8	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.8	1.8	1.9	1.8	1.9	1.8	24
9	**IZS**	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.8	1.8	**IZS**	1.8	1.7	24
10	1.8	1.8	1.8	1.8	1.9	1.8	1.9	1.8	1.7	1.7	1.7	1.8	1.8	2	1.8	1.7	1.7	1.7	1.7	1.8	1.9	1.9	**IZS**	2	2.0	1.8	24
11	2.1	2.2	2.2	2.2	2.2	2.3	2.3	2.1	2	1.9	1.9	1.9	1.8	1.8	1.7	1.8	1.8	1.7	1.8	1.8	2	**IZS**	2	2.1	2.3	2.0	24
12	2.2	2.2	2.3	2.3	2.5	2.8	2.6	2.3	2.2	2.1	2	2	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	**IZS**	1.9	2	2	2.8	2.1	24
13	2	2	2.1	2.1	2	2	2	2.1	2.1	2	1.8	1.8	1.8	1.8	1.7	1.7	1.7	1.7	1.8	**IZS**	2	1.7	1.7	1.7	2.1	1.9	24
14	2.3	2.2	1.9	2	2.1	2.1	2.1	2.1	2	1.9	1.8	1.7	1.7	1.7	1.7	1.7	1.7	1.7	**IZS**	1.7	1.7	1.7	1.7	1.7	2.3	1.9	24
15	1.7	1.8	1.9	1.9	1.9	2	2	1.9	1.8	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	**IZS**	1.8	1.7	1.7	1.7	1.7	1.8	2.0	1.8	24
16	1.8	1.8	1.8	1.9	2	2.1	2.1	2	1.9	1.8	1.7	1.7	1.7	1.7	1.7	1.7	**IZS**	1.7	1.7	1.7	1.7	1.7	1.8	1.9	2.1	1.8	24
17	2	2	2.1	2.2	2	2	2.1	2.2	2.1	1.9	1.7	1.7	1.7	1.7	1.7	**IZS**	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.8	2.2	1.9	24
18	1.8	1.9	1.9	2.1	2.1	1.8	1.8	1.8	1.8	1.8	1.8	1.7	1.7	1.7	**IZS**	1.7	1.7	1.7	1.8	1.8	1.8	1.8	1.8	1.8	2.1	1.8	24
19	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	**IZS**	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.7	1.8	1.8	24
20	1.8	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	**IZS**	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.8	1.7	24
21	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.8	1.8	1.8	**IZS**	1.8	**M**	**M**	2	1.9	2.1	1.9	2	1.8	1.8	1.8	1.8	2.1	1.8	22
22	1.8	1.8	1.8	1.9	1.9	1.9	1.8	1.8	1.8	1.8	**IZS**	1.9	1.9	1.9	1.9	1.8	1.9	2	2.1	2.2	1.9	1.9	1.9	2	2.2	1.9	24
23	2	2.1	2.1	2	2	2	2.1	2.1	2	**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	2.1	1.9	24
24	1.9	1.9	1.8	1.8	1.8	1.9	1.9	1.9	**IZS**	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.9	2	2	2	2	2	2.0	1.9	24
25	2	2.1	2.2	2.2	2.1	2.1	2	**IZS**	1.9	1.9	1.9	2.1	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	2.2	1.9	24
26	1.8	1.9	1.9	1.9	2	2.2	**IZS**	2.1	2.1	2.1	2	2	2	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.9	2.1	2	2.2	1.9	24
27	1.8	1.8	1.8	1.8	1.9	**IZS**	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.9	1.8	24
28	1.8	1.8	1.8	1.9	**IZS**	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.9	1.9	1.9	24
29	1.9	1.9	1.9	**IZS**	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.8	24
30	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	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	24
HOURLY MAX	2.3	2.2	2.3	2.3	2.5	2.8	2.6	2.3	2.2	2.1	2.0	2.1	2.0	2.0	1.9	2.0	1.9	2.1	2.1	2.2	2.0	2.0	2.1	2.1			
HOURLY AVG	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8			

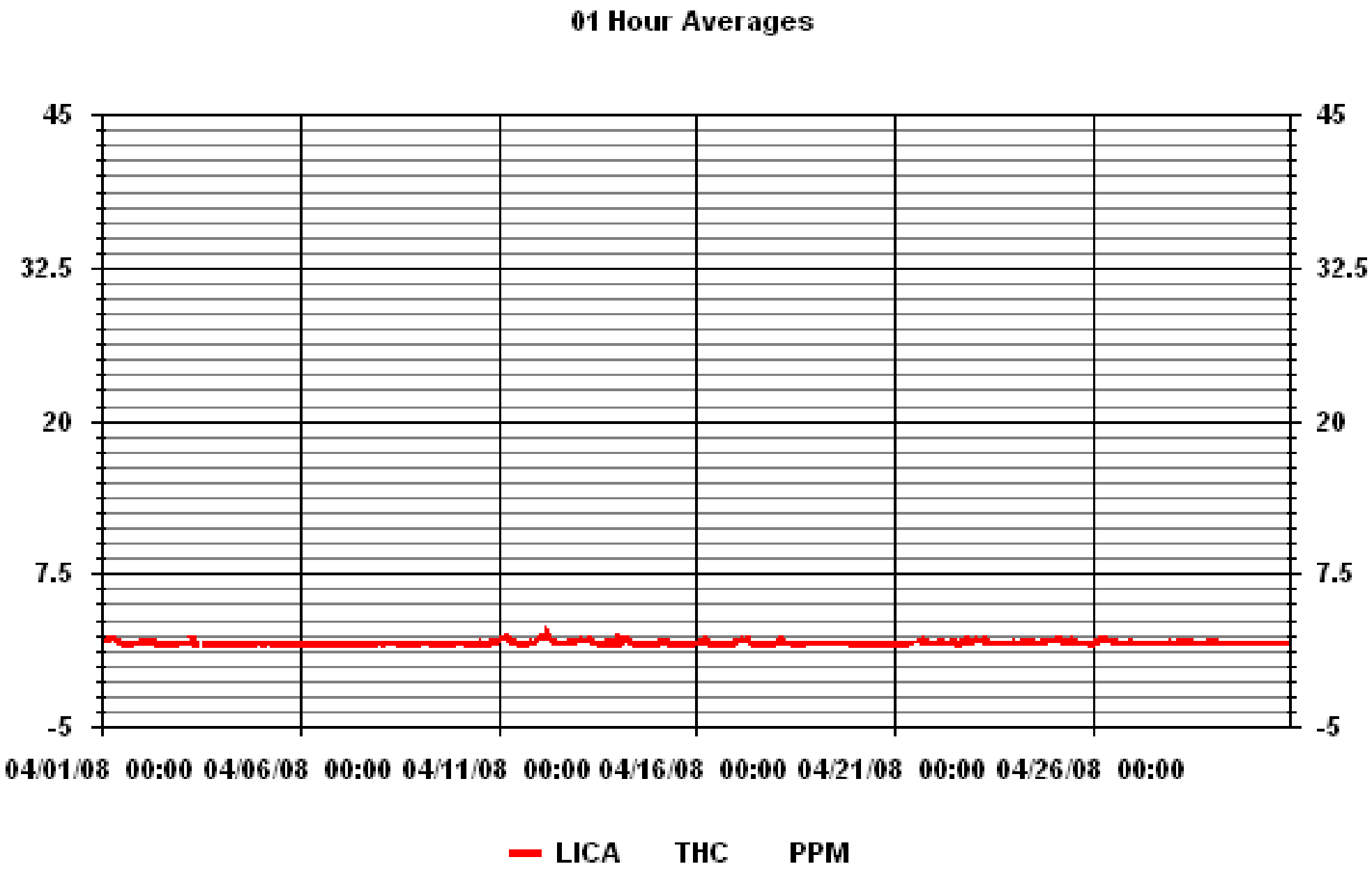
STATUS FLAG CODES

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



MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:	683					
MAXIMUM 1-HR AVERAGE:	2.8	PPM	@ HOUR(S)	6	ON DAY(S)	12
MAXIMUM 24-HR AVERAGE:	2.1	PPM			ON DAY(S)	12
IZS CALIBRATION TIME:	31	HRS	OPERATIONAL TIME:	718	HRS	
MONTHLY CALIBRATION TIME:	4	HRS	AMD OPERATION UPTIME:	99.7	%	
STANDARD DEVIATION:	0.15		MONTHLY AVERAGE:	1.83	PPM	


01 Hour Averages
45
32.5
20
7.5
-5
04/01/08 00:00
04/06/08 00:00
04/11/08 00:00
04/16/08 00:00
04/21/08 00:00
04/26/08 00:00
LICA THC PPM

LICA
THC / WD Joint Frequency Distribution (Percent)

April 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	4.97	4.97	7.02	3.80	14.64	12.15	8.78	.87	1.02	1.17	12.59	10.83	7.17	2.92	5.27	1.75	100.00
< 10.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
< 50.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
>= 50.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
Totals	4.97	4.97	7.02	3.80	14.64	12.15	8.78	.87	1.02	1.17	12.59	10.83	7.17	2.92	5.27	1.75	

Calm : .00 %

Total # Operational Hours : 683

Distribution By Samples

Direction

Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 3.0	34	34	48	26	100	83	60	6	7	8	86	74	49	20	36	12	683
< 10.0																	
< 50.0																	
>= 50.0																	
Totals	34	34	48	26	100	83	60	6	7	8	86	74	49	20	36	12	

Calm : .00 %

Total # Operational Hours : 683

Logger : 01 Parameter : THC

Class Limits (PPM)

>= 50.0

< 50.0

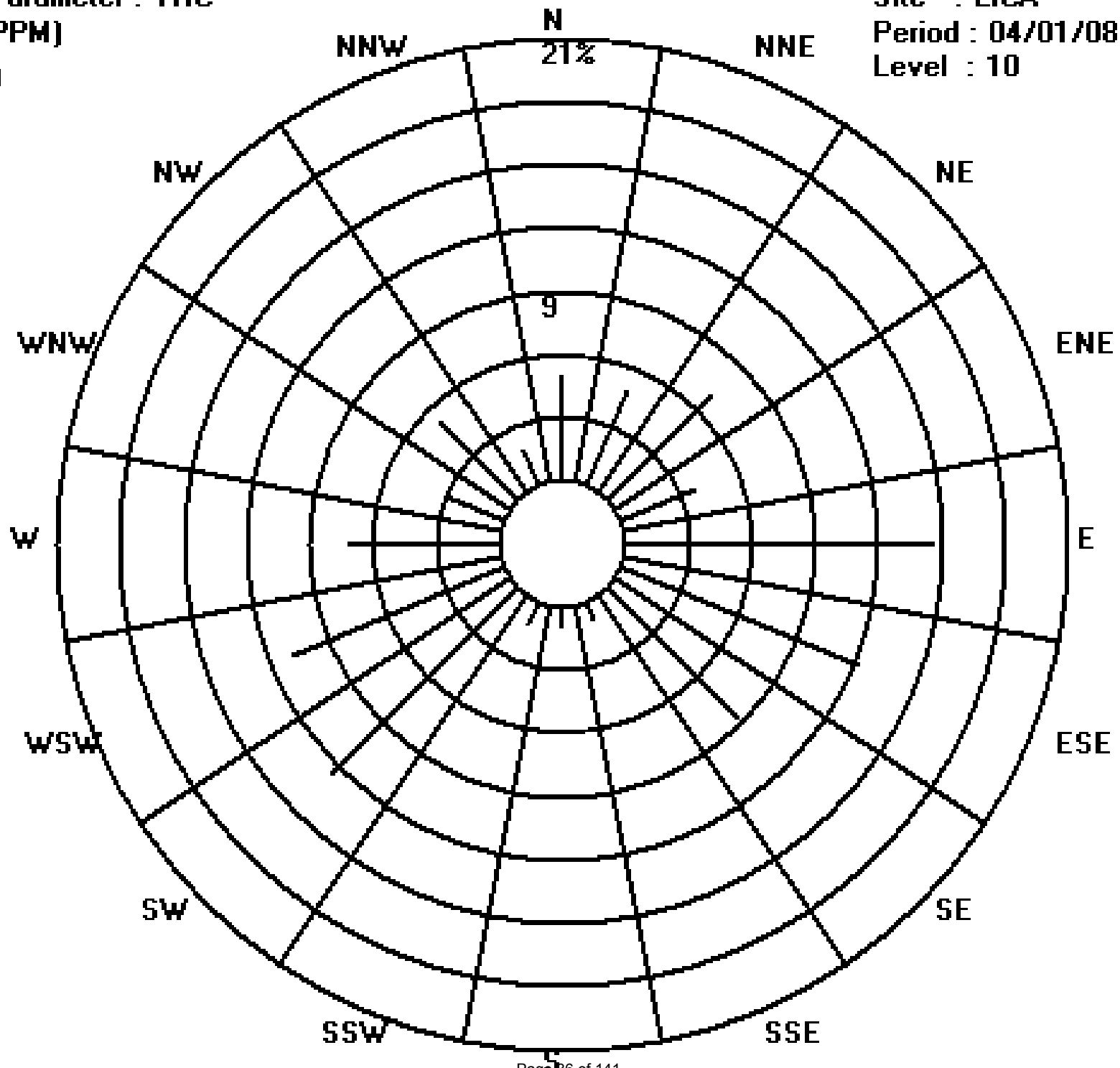
< 10.0

< 3.0

Site : LICA

Period : 04/01/08-04/30/08

Level : 10



LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

APRIL 2008

TOTAL HYDROCARBONS MAX instantaneous maximum 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	2.1	2.1	2.1	2.2	2.2	2.4	2.3	2.2	**IZS**	2.2	2	1.9	1.9	1.8	1.8	1.8	1.8	1.7	1.7	1.8	1.8	1.9	1.8	1.9	2.4	2.0	24
2	1.9	2	2	2.1	2.1	2	2.1	**IZS**	2	1.9	1.8	1.8	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.8	1.8	1.8	2.1	1.8	24
3	1.9	1.9	1.9	1.8	1.8	1.9	**IZS**	3.5	2.6	1.7	1.7	**C**	**C**	**C**	**C**	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	3.5	1.9	24
4	1.7	1.7	1.7	1.8	1.8	**IZS**	1.7	1.7	1.8	1.7	1.7	1.7	1.7	1.7	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.8	1.9	1.8	24
5	1.8	1.8	1.8	1.8	**IZS**	1.8	1.8	1.9	1.8	1.8	1.8	1.8	1.8	1.7	1.7	1.7	1.7	1.8	1.8	1.9	1.8	1.8	1.8	1.7	1.9	1.8	24
6	1.7	1.7	1.7	**IZS**	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.8	1.7	1.7	1.8	1.7	1.9	1.8	1.7	1.8	1.8	1.7	1.8	1.8	1.9	1.7	24
7	1.8	1.8	**IZS**	1.8	1.8	1.8	1.8	1.7	1.7	1.7	1.7	1.7	1.8	1.8	1.8	1.7	1.8	1.7	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.8	24
8	1.8	**IZS**	1.9	2	1.9	1.8	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.7	1.7	1.7	1.7	1.8	1.8	2	2	2	2	1.8	24
9	**IZS**	1.9	1.9	1.8	1.9	2.1	2	1.9	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.8	1.8	1.8	1.8	2	**IZS**	2.1	1.8	24
10	1.9	1.9	1.9	2	2	2	2	1.9	1.8	1.8	1.8	1.9	2.1	2.4	2.5	1.7	1.8	1.8	1.8	1.8	2	2	**IZS**	2.1	2.5	2.0	24
11	2.2	2.2	2.2	2.3	2.3	2.5	2.3	2.2	2.1	2	2	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	2	**IZS**	2.1	2.2	2.5	2.0	24
12	2.3	2.3	2.3	2.4	2.9	3	2.8	2.6	2.2	2.2	2	2.1	1.9	1.8	1.8	1.8	1.9	1.9	2	1.9	**IZS**	2.1	2.1	2.1	3	2.2	24
13	2	2.1	2.2	2.1	2.1	2	2.1	2.2	2.1	2.1	1.9	1.8	1.9	1.8	1.8	1.7	1.8	1.8	1.8	**IZS**	3.1	1.7	1.7	1.7	3.1	2.0	24
14	4.1	3.6	2.1	2.1	2.2	2.3	2.2	2.2	2	1.9	1.9	1.8	1.8	1.8	1.7	1.7	1.7	1.7	**IZS**	1.7	1.8	1.7	1.8	1.8	4.1	2.1	24
15	1.8	1.9	2	1.9	2	2.1	2.1	2	1.8	1.8	1.7	1.7	1.7	1.7	1.7	1.9	1.9	**IZS**	2.2	1.9	1.8	1.7	1.7	1.8	2.2	1.9	24
16	1.9	1.8	1.9	1.9	2.1	2.2	2.2	2.1	2	1.9	1.8	1.7	1.7	1.7	1.7	1.7	**IZS**	1.7	1.7	1.7	1.8	1.8	1.9	1.9	2.2	1.9	24
17	2.1	2.1	2.1	2.3	2.2	2	2.2	2.3	2.2	2	1.8	1.7	1.8	2.2	1.7	**IZS**	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.8	2.3	1.9	24
18	1.9	2	2	2.9	3.2	2.1	2	1.8	2	1.8	1.8	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	3.2	2.0	24
19	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	**IZS**	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	24
20	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	**IZS**	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.7	1.7	1.8	1.8	24
21	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.8	1.8	1.8	1.8	**IZS**	2.1	**M**	**M**	2.2	2.1	2.5	2.2	2.6	1.8	1.8	1.8	1.9	2.6	1.9	22
22	1.8	1.8	1.8	1.9	1.9	1.9	1.9	1.8	1.8	1.9	**IZS**	2.1	2.1	2	2.1	1.9	2.2	2.3	2.3	2.5	1.9	1.9	2	2.1	2.5	2.0	24
23	2.1	2.2	2.1	2.1	2	2.5	2.2	2.2	2	**IZS**	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2	2.7	2	2	2.7	2.0	24
24	2	2	1.9	2	2	2	2.1	2.1	**IZS**	2.1	**P**	2	2	2	2	1.9	1.9	2	2	2.1	2.1	2.1	2.2	2.3	2.3	2.0	23
25	2.2	2.3	2.4	2.5	2.2	2.3	2.1	**IZS**	2	2	2.2	2.4	2	2	2	2	1.9	1.9	1.9	1.9	1.9	2.1	2	2	2.5	2.1	24
26	2	2.1	2.1	2.2	2.3	2.4	**IZS**	2.2	2.2	2.3	2.2	2.2	2.2	2	2.1	2	2	1.9	1.9	1.9	2	2.1	2.3	2.3	2.4	2.1	24
27	2	2	2	2.1	2.1	**IZS**	2	2	1.9	1.9	1.9	2	2	1.9	1.9	1.9	1.9	1.9	2.2	2.1	2	2	2	2	2.2	2.0	24
28	1.9	2	2	2	**IZS**	2	1.9	2	2	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.9	2.1	2	1.9	2.1	1.9	24
29	1.9	1.9	1.9	**IZS**	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.8	24
30	1.8	1.8	**IZS**	1.8	1.8	1.8	1.8	1.8	1.9	1.9	2.2	1.8	1.8	1.8	1.8	1.8	1.9	1.8	1.8	1.9	1.8	1.8	1.8	1.9	2.2	1.8	24
HOURLY MAX	4	4	2	3	3	3	3	4	3	2	2	2	2	2	3	2	2	3	2	3	3	3	2	2			
HOURLY AVG	2.0	2.0	2.0	2.0	2.1	2.1	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.9	1.9	1.9	1.9	1.9	1.9			

STATUS FLAG CODES

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

MONTHLY SUMMARY

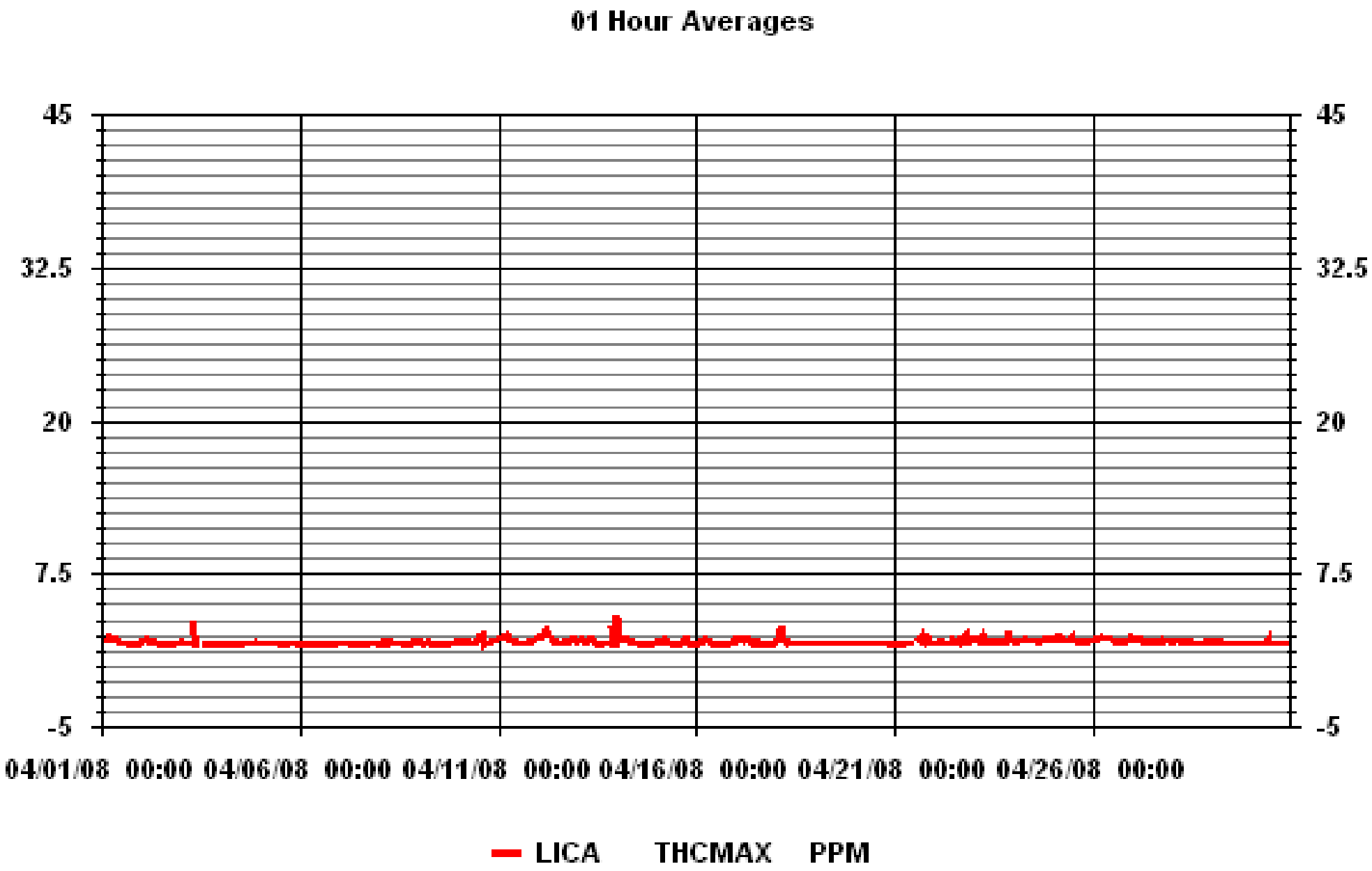
NUMBER OF NON-ZERO READINGS: 682

MAXIMUM INSTANTANEOUS VALUE: 4.1 PPM @ HOUR(S) 1 ON DAY(S) 14

IZS CALIBRATION TIME: 31 HRS OPERATIONAL TIME: 717 HRS

MONTHLY CALIBRATION TIME: 4 HRS

STANDARD DEVIATION: 0.24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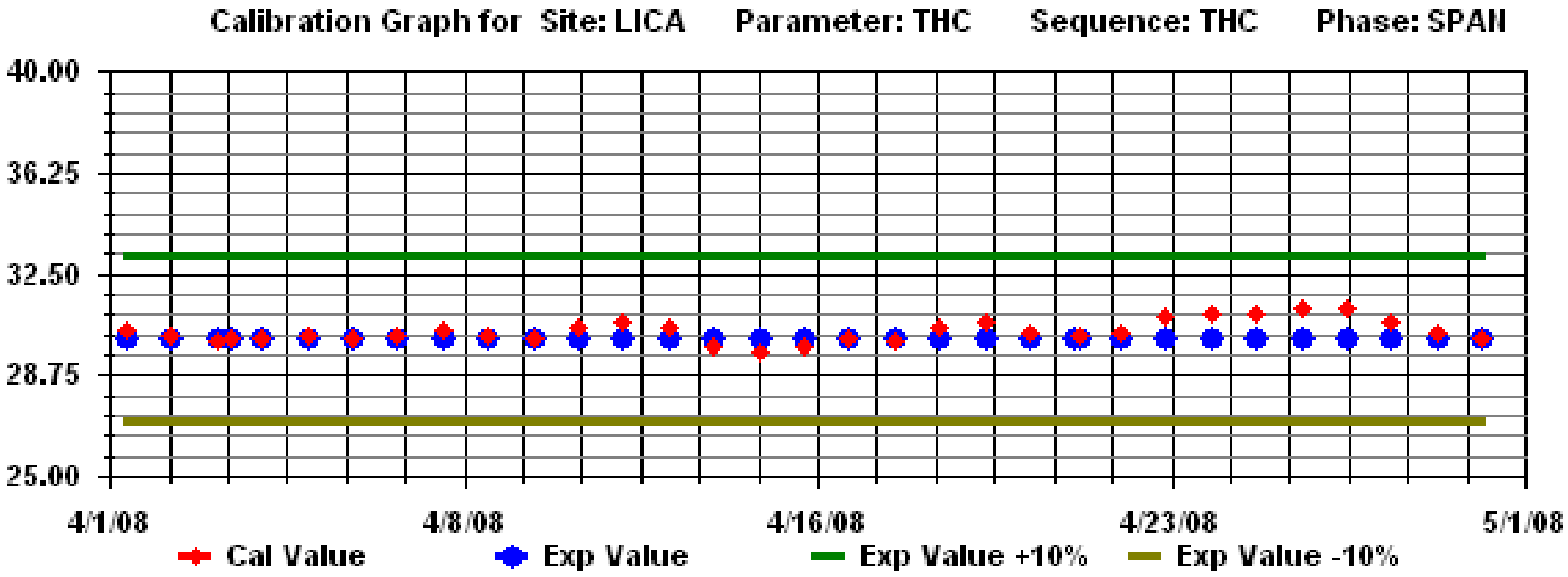
45
32.5
20
7.5
-5
04/01/08 00:00
04/06/08 00:00
04/11/08 00:00
04/16/08 00:00
04/21/08 00:00
04/26/08 00:00
LICA THCMAX PPM


Calibration Graph for Site: LICA Parameter: THC Sequence: THC Phase: SPAN
40.00
36.25
32.50
28.75
25.00
4/1/08
4/8/08
4/16/08
4/23/08
5/1/08
Cal Value
Exp Value
Exp Value +10%
Exp Value -10%

Particulate Matter 2.5

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

APRIL 2008

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

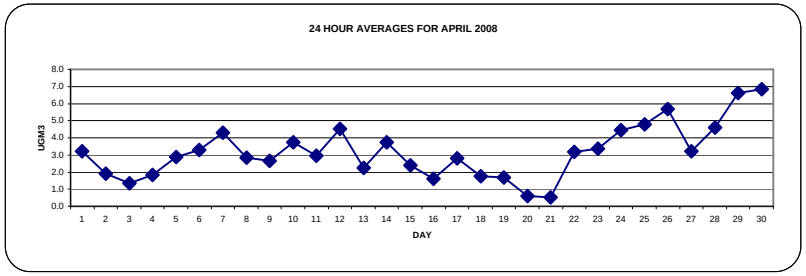
MST

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	3.2	1.6	1.8	2.3	1.6	4.1	7.5	7.2	5.5	6.6	5	4.1	3.5	1.4	1.9	2.4	3.5	1.2	1.8	2.8	2	1.8	2.2	1.8	7.5	3.2	24
2	1.2	0.5	1.5	2.7	1.9	1.8	3.1	3.8	2.3	3	2.3	2.5	1.8	2.3	1.8	2.2	0	0.5	3.4	2	2.7	1.3	1.3	0.3	3.8	1.9	24
3	0.7	0.7	0.4	0.5	1	1.6	2.1	2.2	2	0.7	2	2.3	1.2	1.2	0.3	0.3	3	1.6	0.7	0	1.8	1.9	1.4	2.4	3.0	1.3	24
4	0.8	0.8	1	2.3	1.5	2	0.5	1.9	2.5	2.4	0.6	0.8	1.4	1	0.4	1	2.3	2.2	1.9	2.6	4.3	3.8	4.2	1.9	4.3	1.8	24
5	2.2	2	1.6	2.3	1.5	2.1	3	3.1	2.3	3.7	3.7	3.1	1.9	2.4	2.8	2.4	3.3	3.1	2.9	5.4	6.4	3.5	2.3	2	6.4	2.9	24
6	2.2	1.8	2.3	1.6	2.7	2.8	3.1	3.2	3.7	3.4	3.6	3.6	3.5	4.3	4.4	2.9	3.1	3.9	4	4.3	3.8	3.1	3.6	4	4.4	3.3	24
7	4.3	4.4	5.9	6.1	5.5	5	4.2	4.4	4.5	4.4	4.3	4	4.4	5	3.3	2.9	3.7	5	3.8	4.1	4.2	3.5	3.4	2.6	6.1	4.3	24
8	2.3	2.7	4.9	3.8	2.6	2	5.5	2.1	3.3	3.1	3	2.5	1.8	1.7	1.9	1.9	0.9	0.3	4.5	4.8	4.6	2.1	3.2	2.5	5.5	2.8	24
9	1.7	0.6	0.9	1.4	1.1	1.6	5.3	4.2	2.1	2.7	2.9	3.5	3.2	3.5	3.6	1.3	3.5	3.6	4.1	3.9	3.1	2.7	1.5	1.8	5.3	2.7	24
10	1.7	0.6	0.8	1.9	2.1	1.9	7.6	7.7	2.4	4.6	4.4	3.6	3.2	2	2.3	3.2	3	3.9	3.6	5	8.1	5.6	6.3	4.5	8.1	3.8	24
11	4.9	4.4	3.5	2.7	3.1	3.9	6.3	1	2	2.1	4.2	3.6	0	0.2	2.2	0.8	1.4	2.8	3.1	3.5	3.5	3.7	3.6	4.4	6.3	3.0	24
12	4.1	3.3	3.9	5	3.6	5.4	7.7	4.3	3.8	2.6	4.2	4.5	4.9	7	3	2.7	2.1	4.9	5.6	6	4.3	5	6.2	4.5	7.7	4.5	24
13	2.7	2.3	2.8	1.9	1.7	0.9	1.9	3	1.7	2.2	1.2	2.4	3	3.7	3.1	2.3	3.3	3	2.8	4.6	1.3	0	1.4	0.9	4.6	2.3	24
14	2.1	3.8	2.8	2.5	3.7	3.5	4.5	2	2.7	1.2	2.1	0.6	1.5	2.2	5	6	7.3	3.3	4.1	4.2	6.7	7.9	5.9	4.3	7.9	3.7	24
15	3.9	3.2	3.3	3.5	3.5	3.8	3.8	1.9	1.9	2.1	1.3	0.6	2.2	1.3	2.4	6.5	0	2.8	1	5.6	1.9	0.3	0.3	0.2	6.5	2.4	24
16	1	0.7	0.3	0	0.9	0.8	2.3	1.8	0.7	0	1	0.2	0	2.2	0.1	1.1	1.7	0.8	4.3	4.8	4.3	4.2	3.8	1.8	4.8	1.6	24
17	1.9	1.2	1.4	3	3.2	4.8	4.1	3.9	1.1	1.2	0	6.1	5	12.8	2.1	0	**N**	0	0	1.8	5.9	3.8	0.1	1.3	12.8	2.8	23
18	0	0.6	0.7	0.1	0	0	2.5	0.4	1.6	2.4	2.2	1.6	1.3	2.3	1.6	3.1	2.7	2.1	2.6	4	2.8	3.6	2.9	1.5	4.0	1.8	24
19	2	2.3	1.9	1.3	2.3	2.3	2.6	2.1	1.8	1.3	1.2	0.8	0.3	1.4	1.1	2	1.1	1	2.4	2.5	3.1	1.9	1.6	0	3.1	1.7	24
20	0.9	0	0.3	0.5	0	0.5	0.8	0	0.3	0	0.4	0	1.2	1.1	1.7	1.3	1.1	1.6	0.9	0.7	0.5	0.3	0.1	0	1.7	0.6	24
21	0	0	0	0.3	0	0.8	0.8	0.7	0.4	1.1	1	1.1	**C**	**C**	**C**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	1.1	0.5	15
22	**N**	**N**	**N**	**N**	**N**	**N**	2.3	2.8	3.3	2.6	2.6	4	4	3.4	0	4.1	7.2	2.6	1.3	2.2	2.5	8.3	3.3	0.5	8.3	3.2	18
23	1.7	2.3	3.2	2.6	2.1	3.1	3.3	3	0.2	3.2	2.3	1.9	2.2	2.5	3.4	4.7	5.5	4.6	4.6	5.4	5.4	5	3.8	4.4	5.5	3.4	24
24	5.5	4.6	2.8	3.5	2.5	5.1	8.4	5.6	5.6	5.6	0.9	2.4	2.3	3.7	3	3.6	4.4	5.2	6.6	6.1	5.3	4.5	4.4	5.1	8.4	4.4	24
25	4.5	5.3	6.7	11.6	5.7	4.7	5.7	5.3	4.3	4	2.6	2.8	4	6.8	8.7	6.1	0.2	2.9	2.4	3.6	5.1	5.1	2.7	4.3	11.6	4.8	24
26	3.6	3.7	4.2	4.2	4.9	7.8	10.9	1.9	4.3	8.2	8.1	6.5	6.8	5	7.4	6.2	1.2	3.5	3.7	5	7.7	7.8	7.4	6.3	10.9	5.7	24
27	2.5	3.3	3.6	3.1	2	3.6	3.4	3.5	3.1	2.9	2.8	3.2	2.7	1.9	3.2	2.8	3.2	3.7	4.9	3.3	2.8	3.7	3.9	4	4.9	3.2	24
28	2.7	3.6	3.5	3.7	3.1	2.3	3.8	4.8	3.8	3.3	5	4.3	5	6.1	4.7	3.7	5.4	6.3	6.3	4.8	5.5	6.9	6.1	5.7	6.9	4.6	24
29	5.5	4.5	5.4	5	5.5	6.5	5.7	6.7	7.2	7.7	7.5	6.5	6.9	6.7	6.9	6.3	6.8	7.4	8	8.1	7.7	7.4	6.3	6.5	8.1	6.6	24
30	6.7	7.2	6.9	6.3	6.9	6.5	6.4	8.7	7.2	6.7	7.4	7.7	12.7	8.2	4.3	5.1	7.9	6.3	8.7	11.7	1.7	4.1	4.4	4.5	12.7	6.8	24
HOURLY MAX	7	7	7	12	7	8	11	9	7	8	8	8	13	13	9	7	8	7	9	12	8	8	7	7			
HOURLY AVG	2.6	2.5	2.7	3.0	2.6	3.1	4.3	3.4	2.9	3.2	3.0	3.0	3.2	3.6	3.0	3.1	3.2	3.1	3.6	4.2	4.1	3.9	3.4	2.9			

STATUS FLAG CODES

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

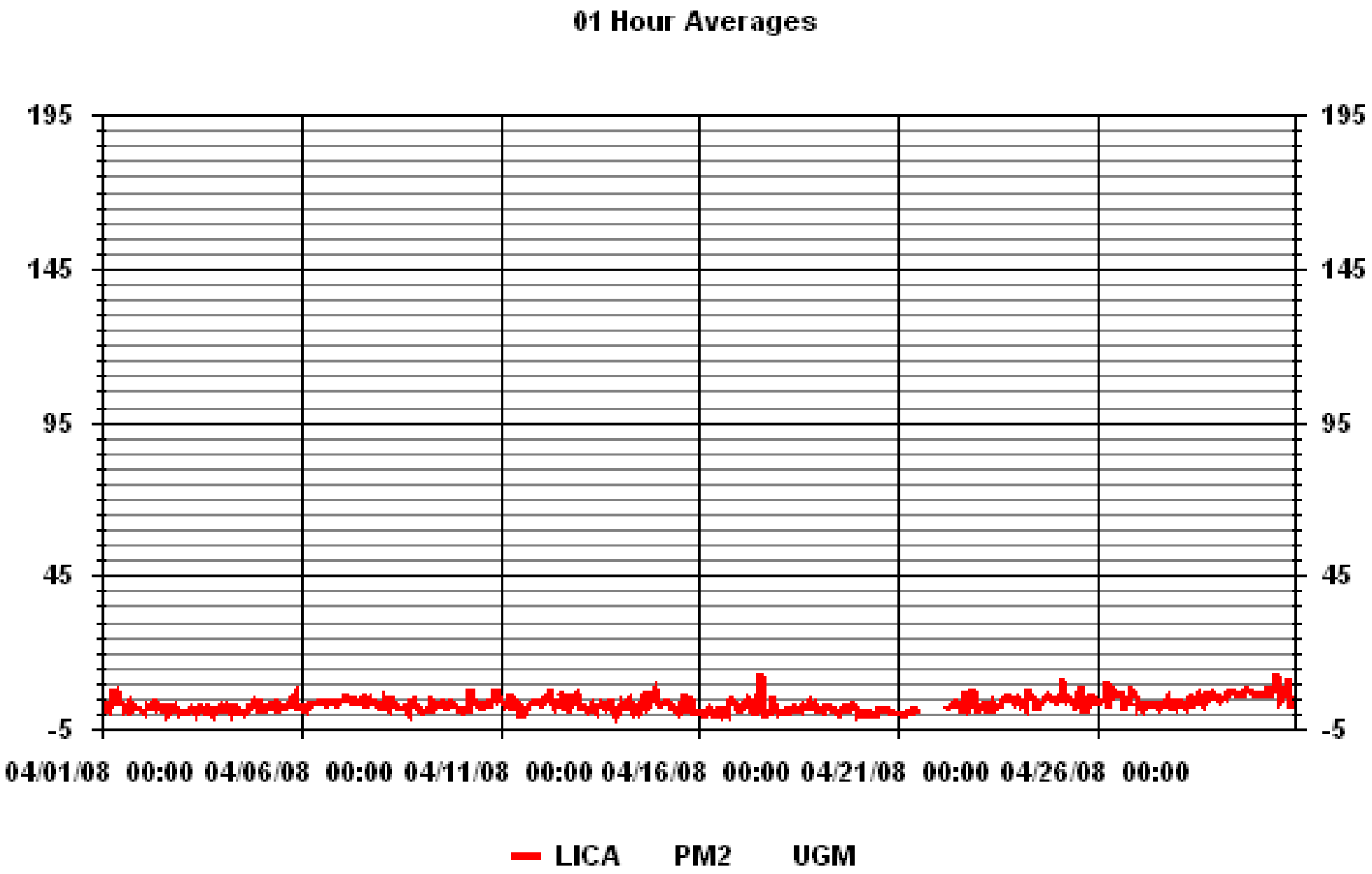
OBJECTIVE LIMIT: **ALBERTA ENVIRONMENT:** 1-HR - PPB 24-HR 30 PPB



MONTHLY SUMMARY

NUMBER OF 1-HR EXCEEDENCES:	-					
NUMBER OF 24-HR EXCEEDENCES:	0	PROPOSED CANADA WIDE GUIDELINE				
NUMBER OF NON-ZERO READINGS:	674					
MAXIMUM 1-HR AVERAGE:	12.8	UG/M^3	@ HOUR(S)	14	ON DAY(S)	17
MAXIMUM 24-HR AVERAGE:	6.8	UG/M^3			ON DAY(S)	30

IZS CALIBRATION TIME:	0	HRS	OPERATIONAL TIME:	704	HRS
MONTHLY CALIBRATION TIME:	3	HRS	AMD OPERATION UPTIME:	97.8	%
STANDARD DEVIATION:	2.13		MONTHLY AVERAGE:	3.23	UG/M^3


01 Hour Averages
195
145
95
45
-5
04/01/08 00:00
04/06/08 00:00
04/11/08 00:00
04/16/08 00:00
04/21/08 00:00
04/26/08 00:00
LICA PM2 UGM

LICA
PM2 / WD Joint Frequency Distribution (Percent)

April 2008

Distribution By % Of Samples

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

Wind Parameter : WD
Instrument Height : 10 Meters

Direction

	Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
<	30.0	4.99	5.70	7.41	3.85	14.97	12.12	8.84	.85	.99	1.14	12.55	10.69	6.99	2.28	4.70	1.85	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	4.99	5.70	7.41	3.85	14.97	12.12	8.84	.85	.99	1.14	12.55	10.69	6.99	2.28	4.70	1.85	

Calm : .00 %

Total # Operational Hours : 701

Distribution By Samples

Direction

	Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
<	30.0	35	40	52	27	105	85	62	6	7	8	88	75	49	16	33	13	701
<	60.0																	
<	80.0																	
<	120.0																	
<	240.0																	
>=	240.0																	
	Totals	35	40	52	27	105	85	62	6	7	8	88	75	49	16	33	13	

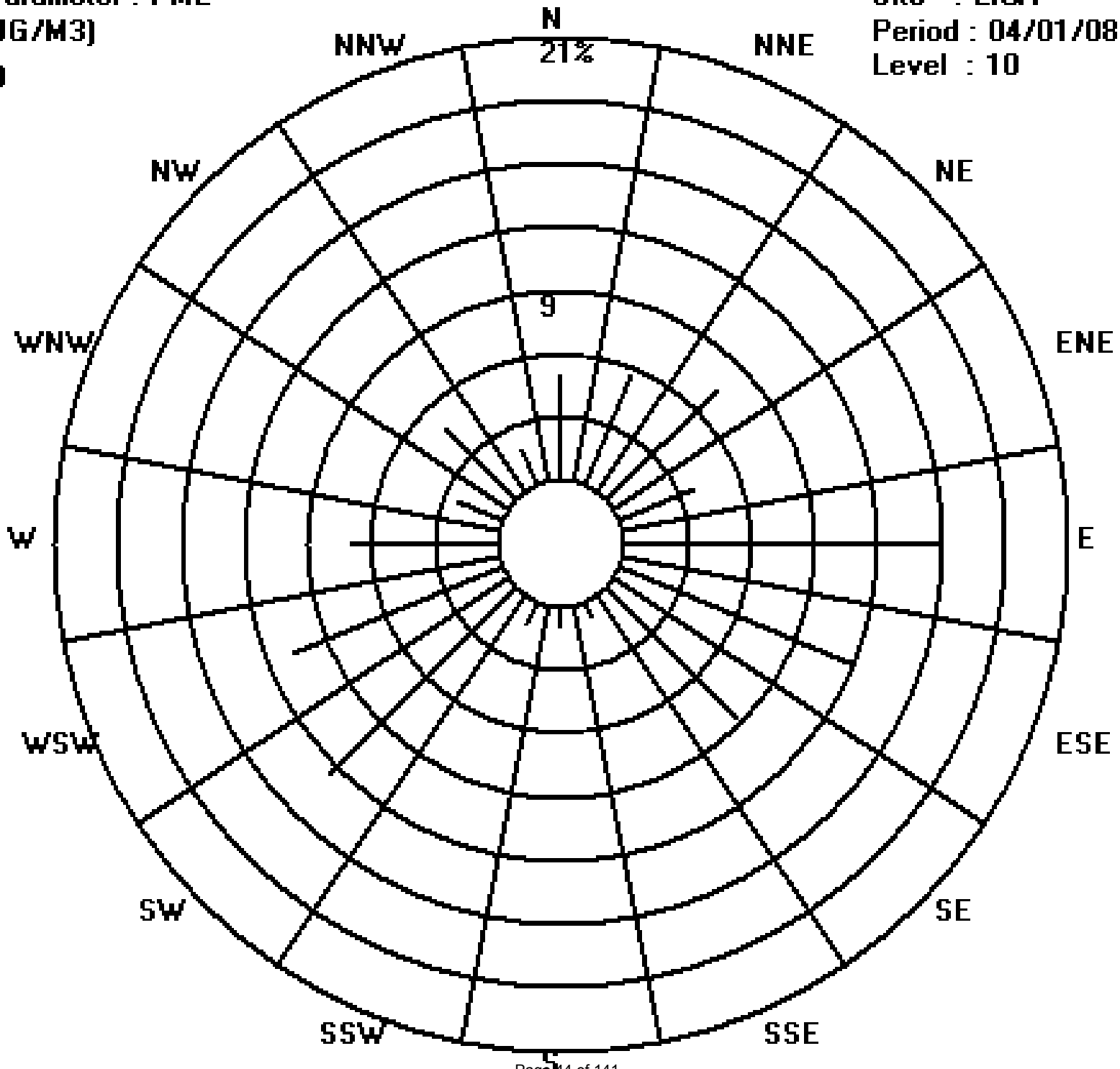
Calm : .00 %

Total # Operational Hours : 701

Logger : 01 Parameter : PM2
Class Limits (UG/M3)

>= 240.0
< 240.0
< 120.0
< 80.0
< 60.0
< 30.0

Site : LICA
Period : 04/01/08-04/30/08
Level : 10



LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

APRIL 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	6.9	4.3	4.5	5.9	5	9.2	14.2	12.6	10.3	9.3	8.5	7.1	6.5	5.4	5.9	5.9	6.6	4.2	5.4	5.7	4.4	4	5.4	4.5	14.2	6.7	24
2	4.4	3.3	4.2	5.2	5	4.8	6.4	6.4	4.4	7.3	5.6	5.5	5.1	4.4	5	4.4	4.5	2.6	6.6	6.2	6.1	4.4	4.4	3.2	7.3	5.0	24
3	3.6	4.6	3.1	3.7	3.7	4.3	4.5	6	5.5	2.4	3.6	4.1	2.9	2.6	2.3	2.7	7.3	7.1	3.4	4.9	4.2	5.4	4.4	4.5	7.3	4.2	24
4	3.2	3.3	3.2	4.8	3.5	5.8	3.3	4.5	5.3	4.9	4.2	3.8	4.9	3.7	4.6	5.1	4.9	5.1	5.1	5.1	9	8.7	9.4	5.6	9.4	5.0	24
5	6.2	5	4.9	7.5	6.1	5.5	6.1	6.2	5.4	6.8	6.2	6.1	5.9	6.8	6.8	5.2	5.6	6.2	5.6	9.8	13.2	7.1	5.1	4.2	13.2	6.4	24
6	4.3	4.6	4.6	3.9	5.4	6.2	5.9	5.6	6.5	6.1	7	6.2	6.4	8	8.7	5.7	6.7	7	7.1	7.3	7.5	5.4	7.1	7.6	8.7	6.3	24
7	7.1	8.2	9.7	8.8	8.8	7.8	6.8	7	7.1	7.8	7.3	7.2	6.4	8.4	5.9	6	7.1	8	6.4	7.1	7.2	6.2	6.1	5.4	9.7	7.2	24
8	6.4	7.2	7.7	7	5.6	5	11.1	6.3	6.2	6.1	5.7	4.5	3.8	3.3	3.4	3.6	3.2	3.2	8.9	6.6	7.7	5.4	5.7	5.6	11.1	5.8	24
9	6.1	3.3	3.8	4.9	4.3	4.2	11.2	10.5	4.4	4.9	4.9	6.4	4.9	5.7	6.1	4.2	5.5	5.4	5.9	5.1	5.4	5.5	4.4	5.6	11.2	5.5	24
10	4.9	4.3	3.7	5.1	4.8	4.8	11.5	10.2	11.7	7.1	6	5.4	6.2	4.9	4.2	4.8	6.4	6.2	5	6.7	12.2	9.9	12.5	9.2	12.5	7.0	24
11	8.7	8	7	7.2	6.4	7.5	13.9	5.6	4.7	4.8	9.4	6.1	2.9	4.2	9.2	6	8.9	5.4	5.2	6	6.4	6.7	6.7	8.2	13.9	6.9	24
12	7.6	6.2	7.2	7.6	7.1	7.6	13.9	13	5.6	5.9	6.5	7.2	7.7	9.4	4.3	5.7	4	8.7	8.1	10.3	8.2	8.7	11.5	8.2	13.9	7.9	24
13	6.8	6	5.7	4.7	5.1	4	4.4	5.1	3.3	8.1	4.3	6.3	7.4	6.5	4.9	5.9	5	5.2	4.3	9.9	6.3	1	3.2	5.1	9.9	5.4	24
14	8.8	12	6.7	5.9	7.3	6.2	9.5	5.5	4.7	3.5	4.9	3.9	6.5	5.9	9	9.8	10.5	7.6	7.5	7.5	8.3	10.2	7.3	7.6	12	7.4	24
15	8.3	7.2	6.4	7.5	7.6	6.6	7.3	7.1	3.6	5.3	3.3	4.4	6.1	5.1	7.7	19.4	6.1	6.2	4.6	10.1	6.1	3.1	3.6	3.5	19.4	6.5	24
16	3.7	4	4.8	4	4.9	3.5	8.8	5.2	4.7	3.7	4.4	4.4	4	6.9	2.8	3.2	4.4	4.3	8.2	7.7	5.8	6.5	5.7	6	8.8	5.1	24
17	8.4	5.4	4.9	5.8	6.5	9	7.8	5.8	5	3.9	4.8	14.8	17	21.3	8.7	6.2	3.7	2.3	0.9	4.4	8.9	6.4	3.8	4.8	21.3	7.1	24
18	2.4	3.8	4.5	2.8	3.8	5.1	5.1	4.6	4.9	6.6	4.7	4.4	3.8	5.7	5.4	6	7.7	5	4.9	8	5.6	6.4	5.4	4.4	8	5.0	24
19	5.5	5.4	4.4	4.2	5.5	5.1	5.7	5.9	6	5.5	6.7	3.4	3.7	4.4	4.1	7.2	4.5	5.3	7.7	4.9	7.7	5.7	5.5	2.4	7.7	5.3	24
20	2.9	2.3	4.7	3.6	3.7	4.9	3.6	4.5	3.9	2.8	3.3	3.2	4.9	3.8	6	3.7	5.9	6.7	4.5	3.2	3.2	2.9	2.8	2.2	6.7	3.9	24
21	2.6	1.8	2	3.3	3.6	3.7	3.9	3.7	3.8	3.6	3.2	4.3	**C**	**C**	**C**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	4.3	3.3	15
22	**N**	**N**	**N**	**N**	**N**	**N**	5.4	5.5	7	8.2	7	10.4	12.8	17.2	9.3	7.1	15.6	11.4	6.9	11.9	5.4	12.5	9.2	3.4	17.2	9.2	18
23	4	6.2	6	5	5.1	5.8	7.1	5.8	3.7	6.4	5	3.9	4.9	4.8	6.7	6.5	8.9	7.7	7.7	8	10.9	7.5	9.3	8	10.9	6.5	24
24	9.8	7.7	5.5	6.5	5.5	8.1	16.5	16	8.8	8.4	0	6.9	4.5	8.8	6.6	6.5	6.5	7.2	8.9	9	8.4	8.6	8	9.4	16.5	8.0	23
25	7.6	7.6	10.4	27.2	8.1	7	8.4	7.6	6.7	7.2	6.7	7.6	8.1	9.9	11.4	13	4.4	5.8	10.2	8.3	8.3	8.5	4.9	7.4	27.2	8.8	24
26	6.5	6.3	7.5	6.7	7.1	12.7	16.3	11.7	8.2	10.6	11	9.4	8.9	8.2	11.5	7.6	8.6	5.5	5.6	9	9.7	11.3	13.3	13.5	16.3	9.4	24
27	6.5	5.4	7.5	10.3	5.9	8.2	7.3	6	5.4	5.6	6.4	5.3	5	4.4	6.9	5.3	6.7	6.7	8.1	8.1	4.9	5.3	5.4	7.1	10.3	6.4	24
28	5.1	8.2	7.4	7.1	6	6.1	7.8	8	7.1	6	7.1	8.2	8.8	10.1	9.3	6.6	10.6	8.7	8.2	6.4	6.7	9.8	11.7	7.7	11.7	7.9	24
29	7.2	6.6	8.9	9.2	8.9	8.3	8.3	8.3	10.1	9.8	11.1	10.7	11.7	10.5	10.4	9.3	10.5	10	12.1	10.4	10.4	9.4	7.8	7.6	12.1	9.5	24
HOURLY MAX	10	12	10	27	9	13	17	16	12	11	11	15	17	21	12	19	16	11	12	12	13	13	13	14			
HOURLY AVG	5.9	5.7	5.7	6.6	5.7	6.3	8.3	7.2	6.0	6.2	5.8	6.2	6.5	7.2	6.7	6.5	6.8	6.2	6.5	7.4	7.4	6.9	6.8	6.1			

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

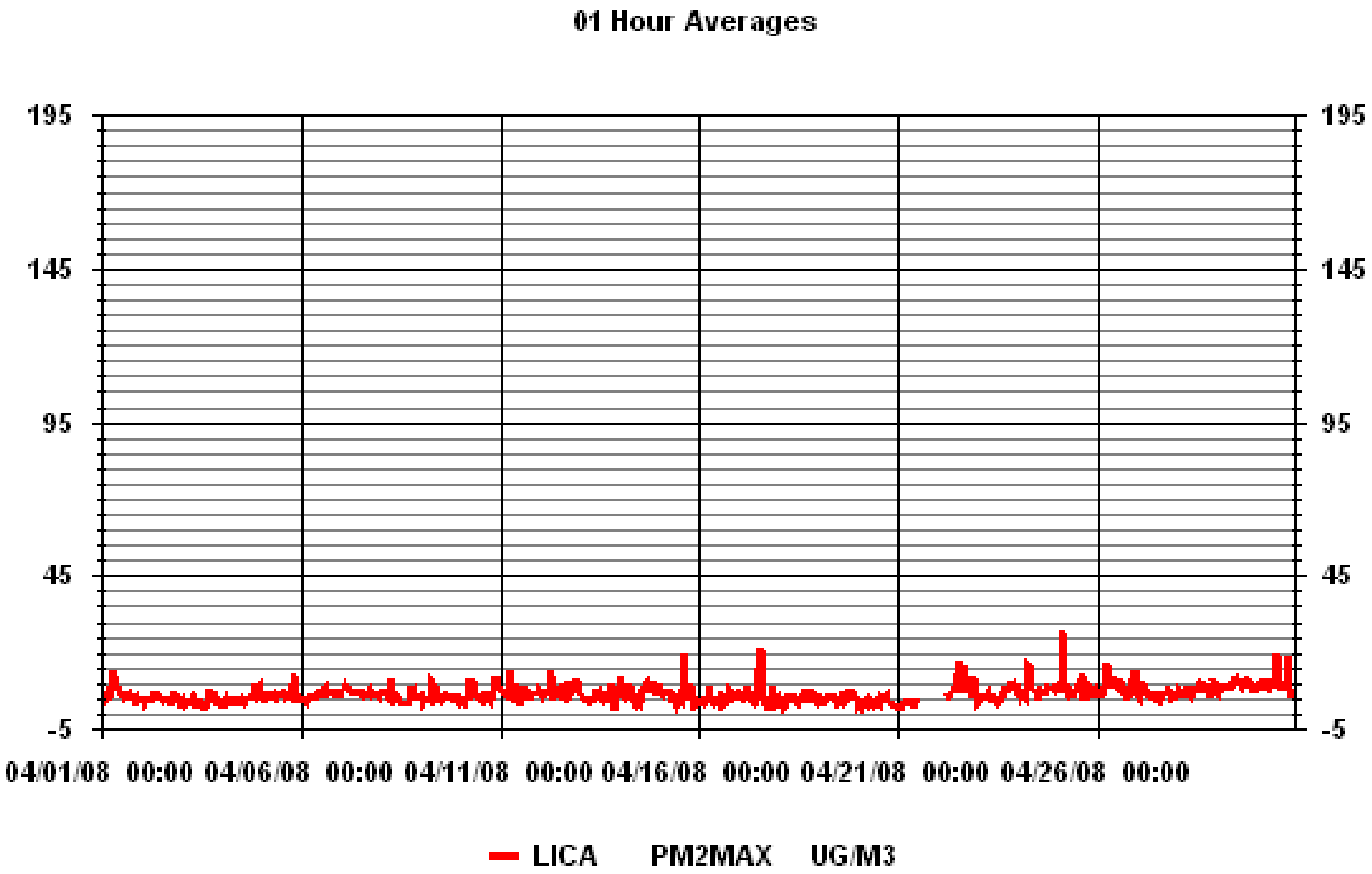
NUMBER OF NON-ZERO READINGS: 677

MAXIMUM INSTANTANEOUS VALUE: 27.2 UG/M^3 @ HOUR(S) 4 ON DAY(S) 25

IZS CALIBRATION TIME: 0 HRS OPERATIONAL TIME: 680 HRS

MONTHLY CALIBRATION TIME: 3 HRS

STANDARD DEVIATION: 2.73


01 Hour Averages
195
145
95
45
-5
04/01/08 00:00
04/06/08 00:00
04/11/08 00:00
04/16/08 00:00
04/21/08 00:00
04/26/08 00:00
LICA PM2MAX UG/M3

Nitrogen Dioxide

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

APRIL 2008

NITROGEN DIOXIDE hourly averages in ppb

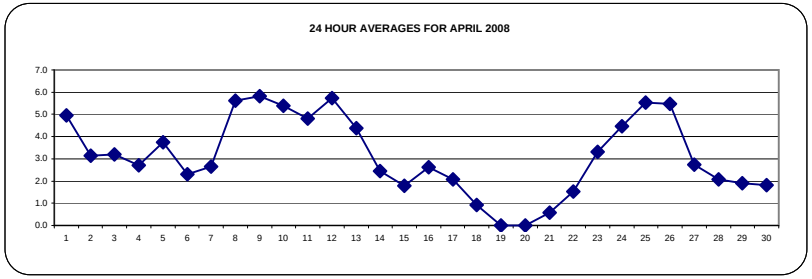
MST

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	6	3	5	9	6	14	15	5	**IZS**	4	4	3	3	2	3	3	4	3	2	3	3	4	4	6	15	5.0	24
2	4	4	4	4	6	5	7	**IZS**	5	3	4	2	2	1	1	2	1	1	2	2	3	3	3	3	7	3.1	24
3	7	3	5	5	4	6	**IZS**	5	**C**	**C**	**C**	**C**	**C**	**C**	**C**	2	1	1	2	3	1	1	2	3	7	3.2	24
4	2	2	2	2	4	**IZS**	2	2	1	1	1	1	1	3	3	1	1	1	3	4	6	4	6	9	9	2.7	24
5	8	6	5	13	**IZS**	11	13	10	2	1	1	1	1	0	1	1	1	2	2	2	1	1	1	2	13	3.7	24
6	2	2	2	**IZS**	3	2	2	2	2	2	1	1	1	1	1	1	2	2	2	6	5	3	4	4	6	2.3	24
7	3	2	**IZS**	2	3	6	6	4	2	2	2	2	1	2	2	2	2	1	2	4	4	3	2	2	6	2.7	24
8	2	**IZS**	9	12	8	7	14	5	2	2	2	1	1	2	1	1	3	1	4	8	10	10	16	8	16	5.6	24
9	**IZS**	9	7	8	15	15	16	10	5	2	1	2	1	2	3	2	1	1	3	5	6	7	7	**IZS**	16	5.8	24
10	7	8	6	5	8	4	15	10	5	4	3	3	2	2	1	2	1	2	2	7	10	10	**IZS**	7	15	5.4	24
11	8	7	5	5	7	8	8	**C**	**M**	**C**	**C**	**C**	**C**	**C**	**C**	1	1	1	2	3	4	**IZS**	5	7	8	4.8	23
12	4	3	5	7	12	8	19	14	4	4	2	2	2	2	2	2	3	4	4	6	**IZS**	6	8	9	19	5.7	24
13	6	5	11	9	5	3	4	16	7	4	2	2	2	2	2	3	3	3	4	**IZS**	5	1	1	1	16	4.4	24
14	1	3	3	4	3	5	5	**C**	**M**	**C**	**C**	**C**	**C**	**C**	**C**	**C**	**C**	1	**IZS**	1	2	1	1	2	5	2.5	23
15	3	2	4	4	4	5	5	4	2	1	0	0	0	0	0	0	0	**IZS**	0	1	1	1	1	3	5	1.8	24
16	4	4	3	2	3	5	6	4	3	2	1	1	1	1	1	0	**IZS**	0	1	2	2	4	7	3	7	2.6	24
17	2	3	4	6	3	4	4	4	4	3	2	1	1	1	2	**IZS**	0	0	0	1	0	1	1	1	6	2.1	24
18	2	3	3	3	2	2	1	0	0	0	0	0	0	0	**IZS**	0	0	0	0	1	1	2	1	0	3	0.9	24
19	0	0	0	0	0	0	0	0	0	0	0	0	0	**IZS**	0	0	0	0	0	0	0	0	0	0	0	0.0	24
20	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
21	0	0	0	0	0	0	0	0	0	0	0	**IZS**	0	0	1	1	1	1	1	1	2	1	2	2	2	0.6	24
22	1	1	1	2	2	4	2	1	0	0	**IZS**	0	0	0	0	0	0	1	1	2	1	3	7	6	7	1.5	24
23	2	3	2	2	2	8	9	6	4	**IZS**	1	0	2	0	0	1	2	2	2	5	8	6	4	5	9	3.3	24
24	6	6	2	4	7	16	22	12	**IZS**	3	2	1	1	0	0	1	0	1	1	1	1	2	4	10	22	4.5	24
25	6	10	20	18	14	10	8	**IZS**	3	3	1	2	2	2	2	2	1	1	1	1	2	4	6	8	20	5.5	24
26	6	4	4	8	12	11	**IZS**	3	3	3	2	3	3	3	3	4	2	1	1	3	6	11	18	12	18	5.5	24
27	5	5	7	5	10	**IZS**	11	2	1	1	1	1	1	1	1	1	1	1	2	2	1	1	1	1	11	2.7	24
28	1	1	2	2	**IZS**	3	4	7	2	1	1	1	1	1	1	1	1	1	1	1	2	6	5	2	7	2.1	24
29	2	2	2	**IZS**	3	6	3	3	2	1	2	1	1	1	1	1	1	1	2	2	3	2	1	1	6	1.9	24
30	1	1	**IZS**	2	1	1	2	2	2	2	2	2	2	2	2	2	3	3	2	2	3	1	1	1	3	1.8	24
HOURLY MAX	8	10	20	18	15	16	22	16	7	4	4	3	3	3	3	4	4	4	4	8	10	11	18	12			
HOURLY AVG	3.5	3.5	4.4	5.1	5.3	6.0	7.3	5.0	2.4	1.9	1.5	1.3	1.2	1.2	1.3	1.3	1.3	1.3	1.7	2.7	3.2	3.4	4.1	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

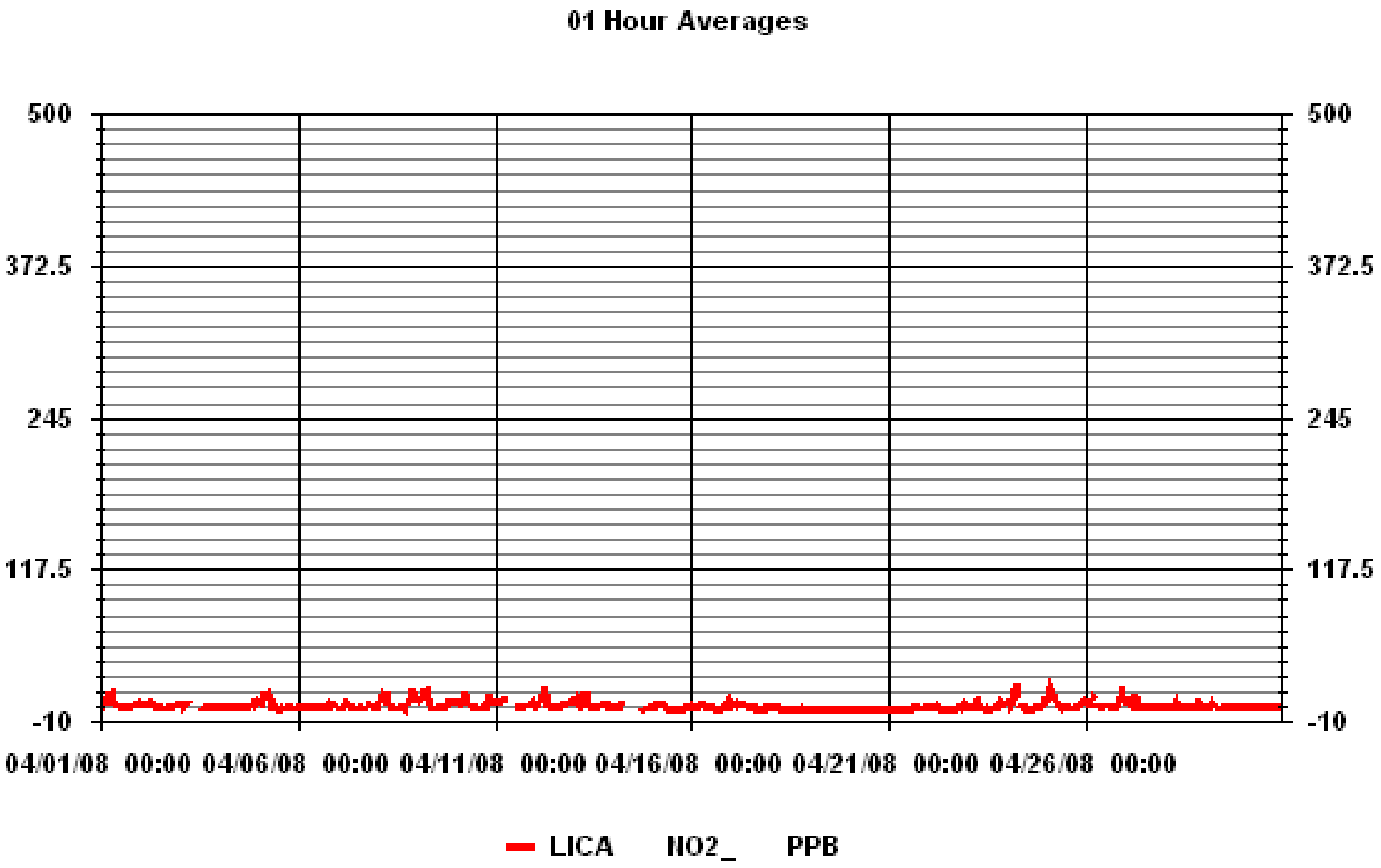
OBJECTIVE LIMIT: **ALBERTA ENVIRONMENT:** 1-HR 212 PPB | 24-HR 106 PPB



MONTHLY SUMMARY

NUMBER OF 1-HR EXCEEDENCES:	0					
NUMBER OF 24-HR EXCEEDENCES:	0					
NUMBER OF NON-ZERO READINGS:	564					
MAXIMUM 1-HR AVERAGE:	22	PPB	@ HOUR(S)	7	ON DAY(S)	24
MAXIMUM 24-HR AVERAGE:	5.8	PPB			ON DAY(S)	9

IZS CALIBRATION TIME:	31	HRS	OPERATIONAL TIME:	718	HRS
MONTHLY CALIBRATION TIME:	23	HRS	AMD OPERATION UPTIME	99.7	%
STANDARD DEVIATION	3.39		MONTHLY AVERAGE	3.11	PPB


01 Hour Averages
500
372.5
245
117.5
-10
04/01/08 00:00
04/06/08 00:00
04/11/08 00:00
04/16/08 00:00
04/21/08 00:00
04/26/08 00:00
LICA NO2_ PPB

LICA
NO2_ / WD Joint Frequency Distribution (Percent)

April 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	4.96	5.12	6.92	3.91	15.06	12.50	9.03	.90	1.05	1.20	12.04	10.24	6.47	3.16	5.57	1.80	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	4.96	5.12	6.92	3.91	15.06	12.50	9.03	.90	1.05	1.20	12.04	10.24	6.47	3.16	5.57	1.80	

Calm : .00 %

Total # Operational Hours : 664

Distribution By Samples

Direction

Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 50	33	34	46	26	100	83	60	6	7	8	80	68	43	21	37	12	664
< 110																	
< 210																	
>= 210																	
Totals	33	34	46	26	100	83	60	6	7	8	80	68	43	21	37	12	

Calm : .00 %

Total # Operational Hours : 664

Logger : 01 Parameter : NO2_

Class Limits (PPB)

>= 210

< 210

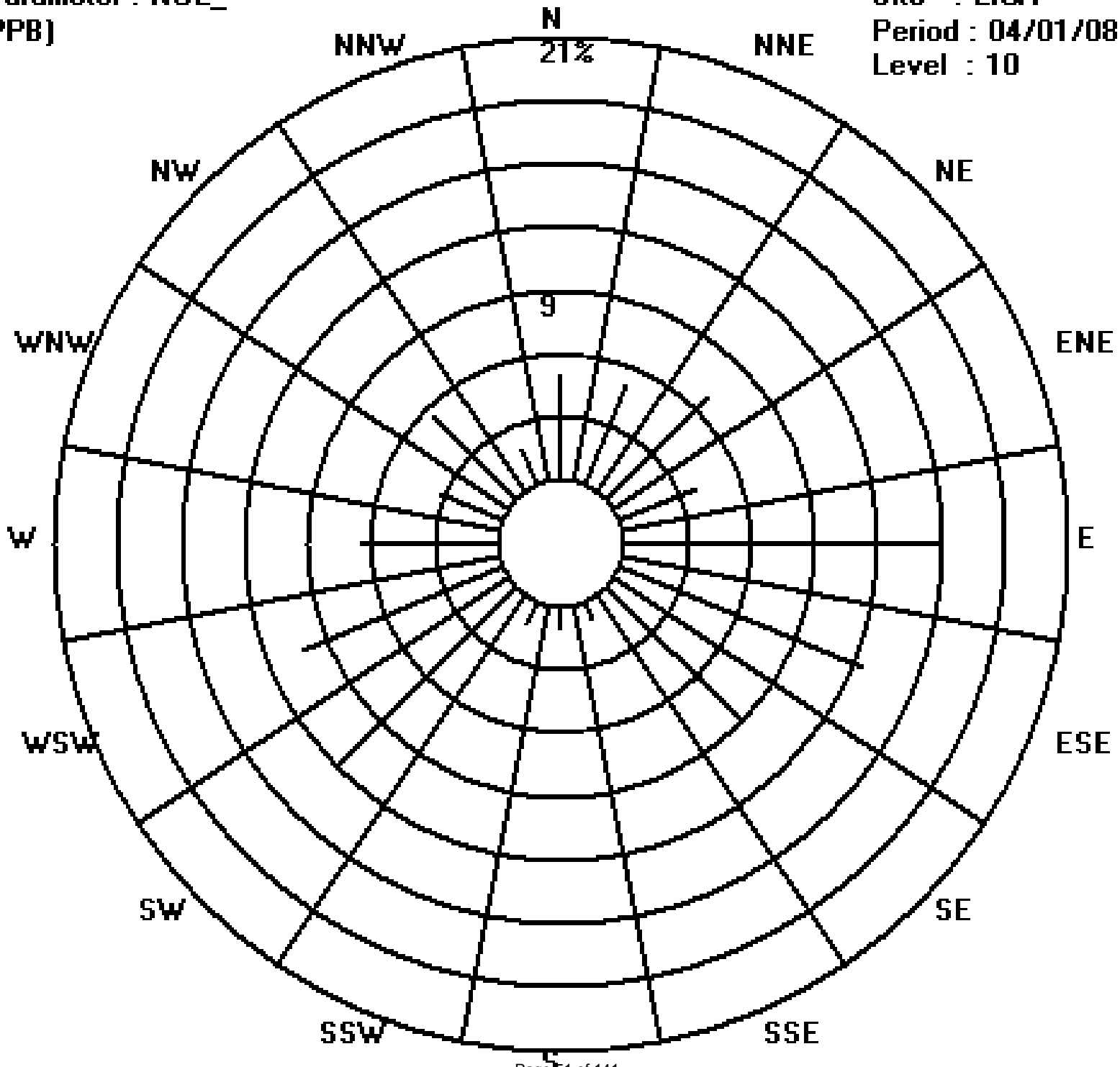
< 110

< 50

Site : LICA

Period : 04/01/08-04/30/08

Level : 10



LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

APRIL 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	4	20	19	10	32	22	11	**IZS**	9	5	4	4	4	8	7	5	4	2	3	4	6	7	8	32	9.0	24
2	7	4	5	8	10	8	10	**IZS**	75	5	6	10	2	2	2	3	2	2	3	3	4	4	4	8	75	8.1	24
3	11	4	10	10	10	9	**IZS**	11	**C**	**C**	**C**	**C**	**C**	**C**	**C**	8	4	2	4	6	4	4	4	5	11	6.6	24
4	4	4	4	11	12	**IZS**	7	7	7	2	2	4	2	54	46	6	4	5	9	8	13	14	12	12	54	10.8	24
5	11	10	11	53	**IZS**	16	18	15	4	4	5	3	2	1	2	3	6	6	7	6	2	1	3	3	53	8.3	24
6	3	5	6	**IZS**	8	5	3	3	3	3	3	4	2	3	2	3	5	4	6	10	8	5	6	6	10	4.6	24
7	4	4	**IZS**	3	5	9	11	6	4	6	6	4	3	9	8	7	3	3	5	6	6	7	3	5	11	5.5	24
8	5	**IZS**	13	27	14	10	27	24	4	3	3	3	2	10	4	5	13	4	8	14	14	25	24	13	27	11.7	24
9	**IZS**	14	12	22	36	27	29	21	10	4	4	7	4	6	16	8	4	2	4	12	8	10	13	**IZS**	36	12.4	24
10	12	13	10	9	15	9	26	17	7	6	9	4	11	4	3	3	2	3	9	13	27	14	**IZS**	9	27	10.2	24
11	10	10	6	13	23	48	**M**	**M**	**C**	**C**	**C**	**C**	**C**	**C**	**C**	5	3	1	2	6	5	**IZS**	7	11	48	10.7	22
12	13	4	9	14	17	22	43	27	7	16	3	6	4	5	2	9	5	9	6	20	**IZS**	10	15	14	43	12.2	24
13	9	10	16	15	12	4	15	25	17	9	2	3	2	3	3	5	3	4	8	**IZS**	12	1	1	2	25	7.9	24
14	3	4	6	6	4	7	10	**C**	**M**	**C**	**C**	**C**	**C**	**C**	**C**	**C**	**C**	3	**IZS**	3	4	2	2	3	10	4.4	23
15	4	4	5	4	6	7	7	5	3	2	1	1	2	1	1	1	0	**IZS**	1	1	3	2	2	5	7	3.0	24
16	6	7	5	4	4	8	7	5	4	4	3	2	1	3	6	2	**IZS**	1	3	3	3	7	9	6	9	4.5	24
17	3	5	6	9	6	10	7	8	4	8	5	2	2	2	4	**IZS**	1	1	1	1	1	2	2	2	10	4.0	24
18	3	7	5	5	4	4	2	1	1	2	1	0	0	3	**IZS**	1	2	0	1	2	2	3	3	1	7	2.3	24
19	0	0	0	0	1	1	0	4	1	2	1	1	4	**IZS**	1	1	5	3	1	1	1	1	0	0	5	1.3	24
20	0	0	0	0	0	1	1	1	2	1	2	1	**IZS**	2	6	1	6	1	1	1	0	0	0	0	6	1.2	24
21	0	0	0	0	0	0	0	0	0	0	0	**IZS**	0	1	1	1	2	2	2	2	3	2	3	3	3	1.0	24
22	2	1	1	2	5	5	4	2	1	1	**IZS**	1	0	0	0	1	1	2	2	2	3	5	12	11	12	2.8	24
23	4	4	3	4	5	61	16	8	6	**IZS**	2	1	49	2	1	2	5	4	8	9	18	9	8	7	61	10.3	24
24	15	13	3	7	15	35	42	74	**IZS**	6	**P**	3	3	2	2	2	2	1	2	3	3	3	8	42	74	13.0	23
25	9	25	28	25	25	19	11	**IZS**	8	5	3	3	4	3	3	3	2	2	1	14	3	9	29	14	29	10.8	24
26	16	5	5	11	19	24	**IZS**	4	4	5	3	4	4	4	4	7	4	1	11	19	10	19	35	29	35	10.7	24
27	18	8	13	10	14	**IZS**	18	10	2	5	2	3	2	6	2	1	5	3	21	12	1	1	2	1	21	7.0	24
28	2	2	5	5	**IZS**	5	20	19	4	3	2	3	2	4	4	1	3	2	2	3	4	10	11	6	20	5.3	24
29	4	3	5	**IZS**	7	26	11	5	8	2	11	2	3	2	7	2	1	1	7	5	6	3	2	1	26	5.4	24
30	2	1	**IZS**	4	2	3	2	4	6	3	5	2	3	4	3	4	5	5	4	6	5	3	1	1	6	3.4	24
HOURLY MAX	18	25	28	53	36	61	43	74	75	16	11	10	49	54	46	9	13	9	21	20	27	25	35	42			
HOURLY AVG	6.6	6.0	7.6	10.7	10.3	14.8	13.7	12.2	7.7	4.5	3.6	3.1	4.5	5.4	5.4	3.6	3.7	2.8	4.9	6.7	6.1	6.3	7.9	7.9			

STATUS FLAG CODES

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

MONTHLY SUMMARY

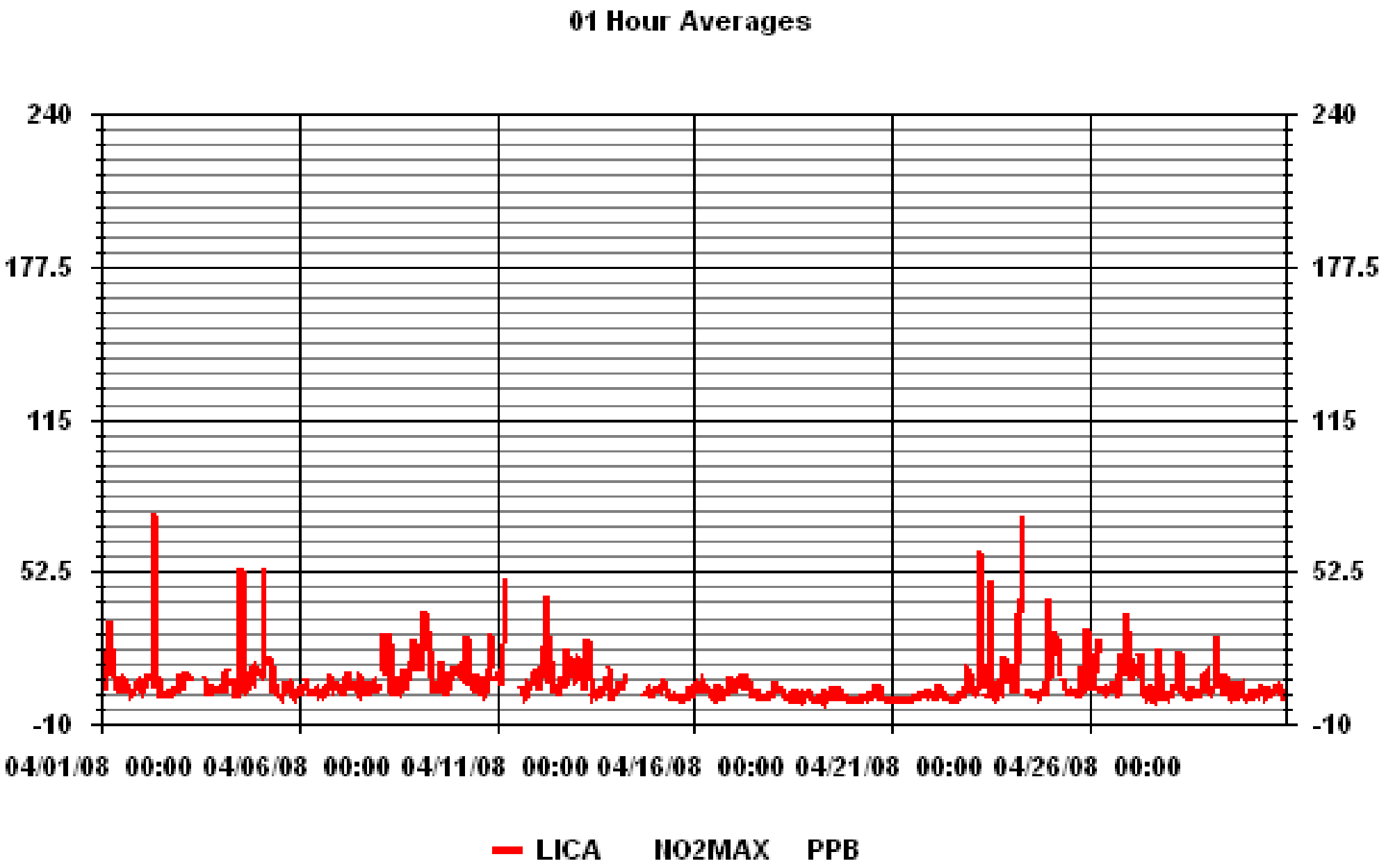
NUMBER OF NON-ZERO READINGS: 627

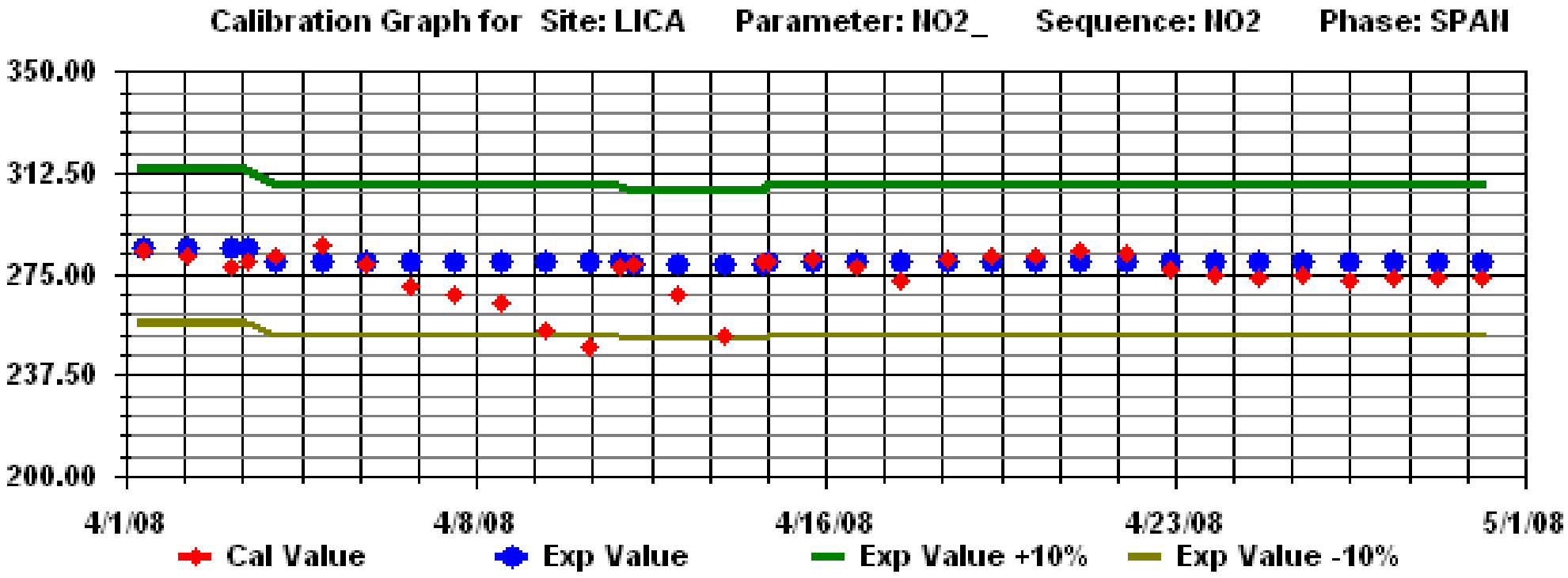
MAXIMUM INSTANTANEOUS VALUE: 75 PPB @ HOUR(S) 9 ON DAY(S) 2

IZS CALIBRATION TIME: 31 HRS OPERATIONAL TIME: 716 HRS

MONTHLY CALIBRATION TIME: 23 HRS

STANDARD DEVIATION: 8.70


01 Hour Averages
240
177.5
115
52.5
-10
04/01/08 00:00
04/06/08 00:00
04/11/08 00:00
04/16/08 00:00
04/21/08 00:00
04/26/08 00:00
LICA NO2MAX PPB


Calibration Graph for Site: LICA Parameter: NO2_ Sequence: NO2 Phase: SPAN
350.00
312.50
275.00
237.50
200.00
4/1/08
4/8/08
4/16/08
4/23/08
5/1/08
Cal Value
Exp Value
Exp Value +10%
Exp Value -10%

Nitric Oxide

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

APRIL 2008

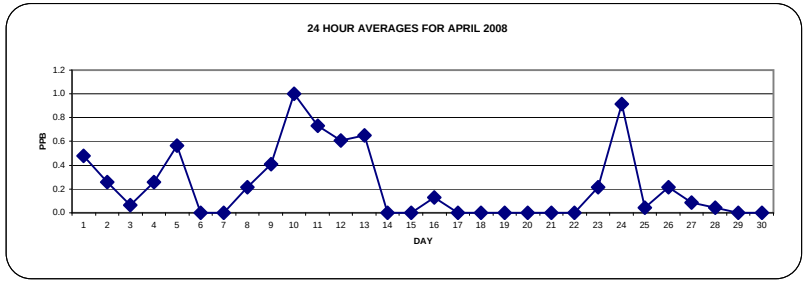
NITRIC OXIDE hourly averages in ppb

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	1	3	1	IZS	2	2	1	1	0	0	0	0	0	0	0	0	0	0	0	3	0.5	24
2	0	0	0	0	0	0	0	IZS	4	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0.3	24
3	0	0	0	0	0	0	IZS	1	C	C	C	C	C	C	C	0	0	0	0	0	0	0	0	0	1	0.1	24
4	0	0	0	0	0	IZS	0	0	0	0	0	0	0	3	3	0	0	0	0	0	0	0	0	0	3	0.3	24
5	0	0	0	8	IZS	0	2	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	0.6	24
6	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
7	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
8	0	IZS	0	0	0	0	3	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	3	0.2	24
9	IZS	0	0	0	0	0	4	3	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	IZS	4	0.4	24
10	0	0	0	0	2	0	10	5	2	2	1	0	0	0	0	0	0	0	0	0	1	0	IZS	0	10	1.0	24
11	0	0	0	0	5	5	1	C	M	C	C	C	C	C	C	0	0	0	0	0	0	IZS	0	0	5	0.7	23
12	0	0	0	0	0	0	7	5	1	1	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	7	0.6	24
13	0	0	0	0	0	0	0	9	4	2	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	9	0.7	24
14	0	0	0	0	0	0	0	C	M	C	C	C	C	C	C	C	C	0	IZS	0	0	0	0	0	0	0.0	23
15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0.0	24
16	0	0	0	0	0	0	2	1	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	2	0.1	24
17	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
18	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
19	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0.0	24
20	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
21	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
22	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
23	0	0	0	0	0	1	1	1	1	IZS	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0.2	24
24	0	0	0	0	0	5	9	6	IZS	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9	0.9	24
25	0	0	0	0	1	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.0	24
26	0	0	0	0	1	2	IZS	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0.2	24
27	0	0	0	0	0	IZS	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0.1	24
28	0	0	0	0	IZS	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.0	24
29	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
30	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
HOURLY MAX	0	0	0	8	5	5	10	9	4	2	2	1	1	3	3	0	1	0	0	0	1	0	0	0			
HOURLY AVG	0.0	0.0	0.0	0.3	0.3	0.5	1.6	1.5	0.6	0.3	0.2	0.0	0.1	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			

STATUS FLAG CODES

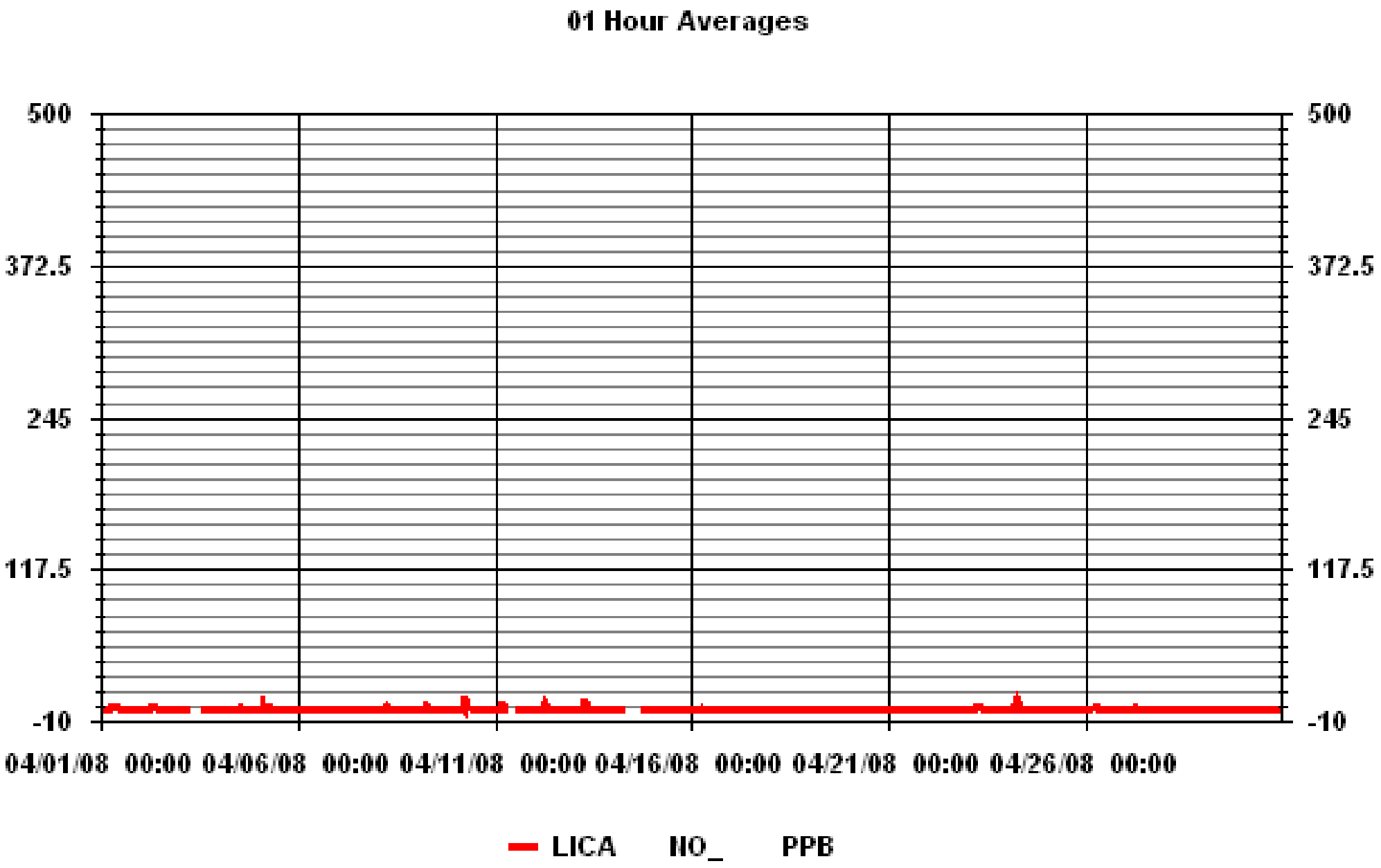
S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	- MISSING DATA
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE



MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:	58					
MAXIMUM 1-HR AVERAGE:	10	PPB	@ HOUR(S)	7	ON DAY(S)	10
MAXIMUM 24-HR AVERAGE:	1.0	PPB			ON DAY(S)	10

IZS CALIBRATION TIME:	31	HRS	OPERATIONAL TIME:	718	HRS
MONTHLY CALIBRATION TIME:	23	HRS	AMD OPERATION UPTIME	99.7	%
STANDARD DEVIATION	1.01		MONTHLY AVERAGE	0.23	PPB


01 Hour Averages
500
372.5
245
117.5
-10
04/01/08 00:00
04/06/08 00:00
04/11/08 00:00
04/16/08 00:00
04/21/08 00:00
04/26/08 00:00
LICA NO_ PPB

LICA
NO_ / WD Joint Frequency Distribution (Percent)

April 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	4.96	5.12	6.92	3.91	15.06	12.50	9.03	.90	1.05	1.20	12.04	10.24	6.47	3.16	5.57	1.80	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	4.96	5.12	6.92	3.91	15.06	12.50	9.03	.90	1.05	1.20	12.04	10.24	6.47	3.16	5.57	1.80	

Calm : .00 %

Total # Operational Hours : 664

Distribution By Samples

Direction

Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 50	33	34	46	26	100	83	60	6	7	8	80	68	43	21	37	12	664
< 110																	
< 210																	
>= 210																	
Totals	33	34	46	26	100	83	60	6	7	8	80	68	43	21	37	12	

Calm : .00 %

Total # Operational Hours : 664

Logger : 01 Parameter : NO_

Class Limits (PPB)

>= 210

< 210

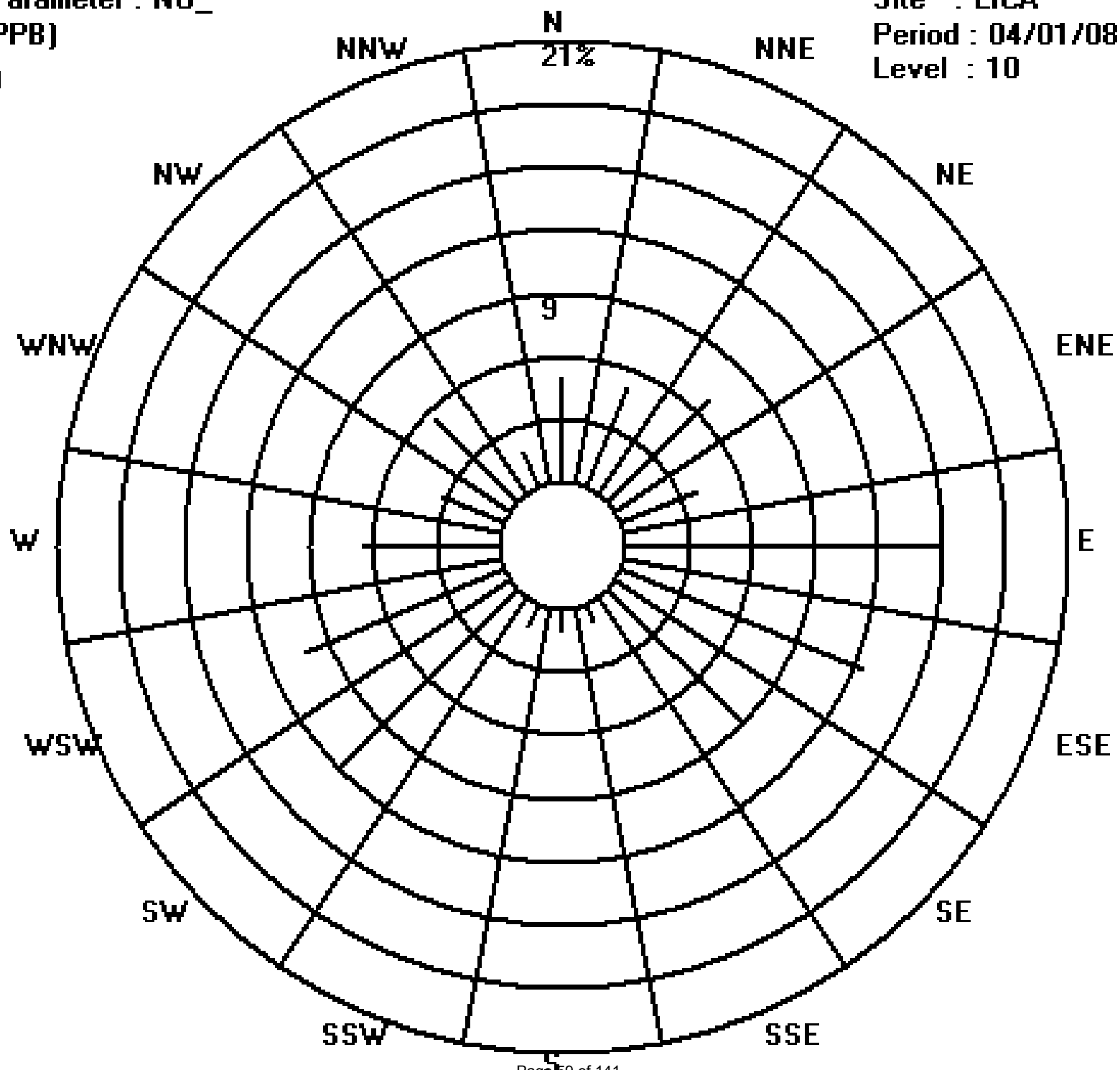
< 110

< 50

Site : LICA

Period : 04/01/08-04/30/08

Level : 10



LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

APRIL 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	18	11	3	IZS	5	2	2	5	1	4	1	1	0	0	0	0	0	0	0	18	2.3	24
2	0	0	0	0	0	0	0	IZS	67	2	3	2	0	0	0	0	0	0	0	0	0	0	0	0	67	3.2	24
3	0	0	0	0	0	0	IZS	7	C	C	C	C	C	C	C	4	3	6	0	1	0	0	1	1	7	1.4	24
4	0	0	0	1	10	IZS	1	5	3	0	1	3	1	72	41	2	1	3	3	1	1	0	0	0	72	6.5	24
5	0	0	1	88	IZS	1	5	5	1	4	4	3	1	1	2	0	1	6	1	9	2	0	0	0	88	5.9	24
6	0	0	6	IZS	0	0	0	0	1	1	0	2	0	0	0	2	1	3	2	1	0	1	0	1	6	0.9	24
7	1	0	IZS	0	3	0	1	5	0	3	1	1	0	2	1	3	0	0	0	1	0	0	0	0	5	1.0	24
8	0	IZS	1	4	0	0	13	8	1	1	0	0	0	12	2	1	13	4	21	3	1	4	1	0	21	3.9	24
9	IZS	4	3	6	26	9	18	16	4	1	0	3	1	1	6	3	1	0	1	6	3	3	2	IZS	26	5.3	24
10	0	2	1	1	12	4	26	10	3	3	5	1	5	1	0	0	1	4	0	0	64	1	IZS	0	64	6.3	24
11	0	0	0	4	58	87	M	M	C	C	C	C	C	C	C	7	0	0	0	0	0	IZS	0	0	87	11.1	22
12	5	0	0	1	3	13	34	15	3	12	0	2	2	0	0	5	0	3	2	4	IZS	1	0	1	34	4.6	24
13	1	0	1	0	1	1	4	18	14	6	0	0	0	0	0	3	0	0	0	IZS	0	0	0	0	18	2.1	24
14	0	0	0	0	0	0	0	C	M	C	C	C	C	C	C	C	C	1	IZS	0	0	0	0	0	1	0.1	23
15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0.0	24
16	0	0	0	0	0	1	43	1	1	1	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	43	2.0	24
17	0	0	0	1	0	5	0	2	1	3	1	0	0	0	0	IZS	0	0	0	0	0	0	0	0	5	0.6	24
18	0	0	0	0	0	0	0	0	0	1	0	0	8	2	IZS	2	0	0	0	0	0	0	0	0	8	0.6	24
19	0	0	0	0	1	4	0	0	1	6	0	0	6	IZS	0	6	0	1	1	0	0	0	0	0	6	1.1	24
20	0	0	0	0	0	0	0	1	0	0	3	0	IZS	0	2	2	1	0	0	0	0	0	0	0	3	0.4	24
21	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
22	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
23	0	0	0	0	0	30	3	2	2	IZS	1	2	27	0	0	0	1	1	3	0	12	0	1	1	30	3.7	24
24	0	0	0	0	4	28	30	34	IZS	2	P	0	2	1	3	5	1	0	0	0	0	0	0	7	34	5.3	23
25	0	2	0	2	14	7	1	IZS	1	1	0	0	1	0	0	0	0	0	0	4	0	0	27	1	27	2.7	24
26	8	0	0	0	36	24	IZS	1	1	1	1	1	2	1	1	1	0	0	0	0	0	0	39	1	39	5.1	24
27	26	0	0	0	0	IZS	6	2	0	1	0	0	0	1	1	0	8	2	2	1	0	0	0	0	26	2.2	24
28	0	0	0	0	IZS	0	5	5	0	0	0	0	0	1	1	0	1	0	3	6	0	0	0	2	6	1.0	24
29	0	0	0	IZS	0	16	2	3	12	0	2	0	0	2	1	0	1	0	0	22	0	0	0	0	22	2.7	24
30	0	0	IZS	2	0	0	0	1	6	0	10	0	0	0	0	0	0	6	0	0	0	0	0	0	10	1.1	24
HOURLY MAX	26	4	6	88	58	87	43	34	67	12	10	3	27	72	41	7	13	6	21	22	64	4	39	7			
HOURLY AVG	1.4	0.3	0.5	3.9	6.0	8.9	7.5	5.5	4.9	2.1	1.4	0.8	2.3	3.8	2.5	1.7	1.3	1.4	1.3	2.0	2.9	0.3	2.4	0.5			

STATUS FLAG CODES

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

MONTHLY SUMMARY

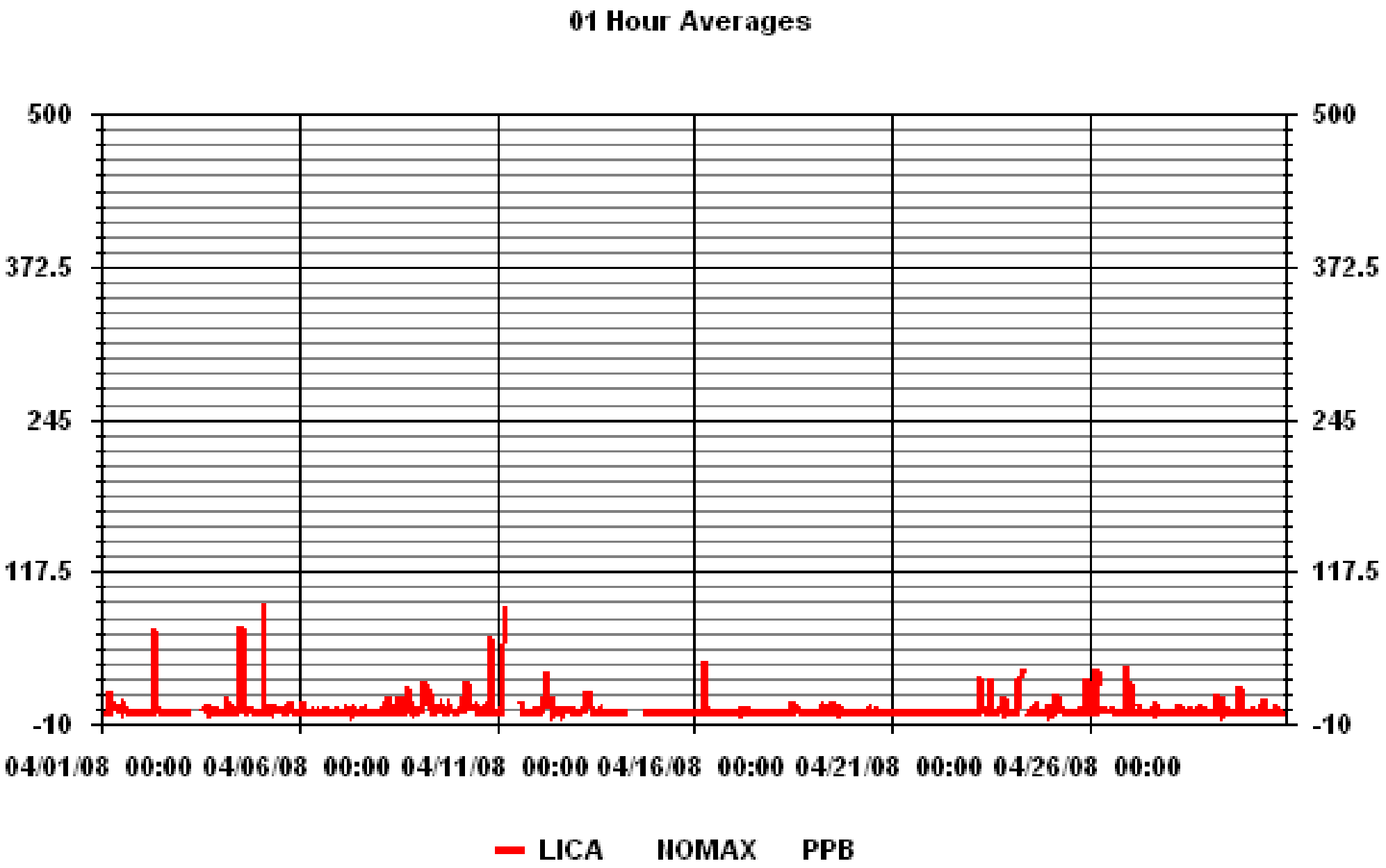
NUMBER OF NON-ZERO READINGS: 269

MAXIMUM INSTANTANEOUS VALUE: 88 PPB @ HOUR(S) 4 ON DAY(S) 5

IZS CALIBRATION TIME: 31 HRS OPERATIONAL TIME: 716 HRS

MONTHLY CALIBRATION TIME: 23 HRS

STANDARD DEVIATION: 8.68


01 Hour Averages
500
372.5
245
117.5
-10
04/01/08 00:00
04/06/08 00:00
04/11/08 00:00
04/16/08 00:00
04/21/08 00:00
04/26/08 00:00
LICA NOMAX PPB

Oxides of Nitrogen

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

APRIL 2008

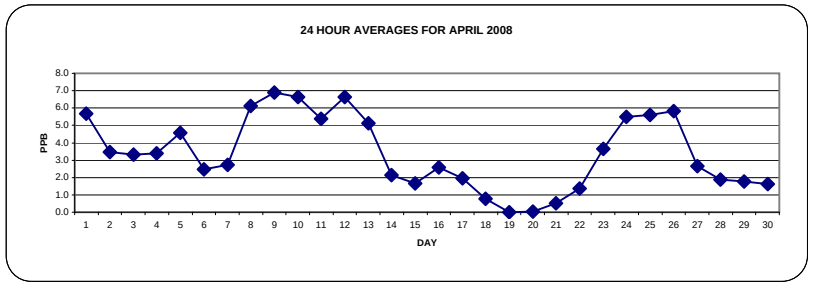
OXIDES OF NITROGEN hourly averages in ppb

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	6	3	5	9	6	15	18	7	**IZS**	7	6	5	5	3	4	4	5	3	2	2	3	3	4	6	18	5.7	24
2	4	3	4	4	6	5	8	**IZS**	10	5	6	3	2	1	1	2	1	1	2	2	2	2	3	3	10	3.5	24
3	6	3	5	5	4	6	**IZS**	7	**C**	**C**	**C**	**C**	**C**	**C**	**C**	2	2	1	2	3	1	1	2	3	7	3.3	24
4	2	2	2	2	5	**IZS**	3	3	2	1	1	1	1	7	6	2	2	2	4	5	6	4	6	9	9	3.4	24
5	8	6	4	22	**IZS**	11	15	14	3	2	2	1	1	1	1	1	2	2	3	2	1	1	1	1	22	4.6	24
6	2	2	3	**IZS**	3	2	2	2	2	2	2	2	1	1	1	1	2	2	3	6	5	3	4	4	6	2.5	24
7	3	2	**IZS**	2	4	6	6	4	2	2	2	2	1	2	2	3	2	1	2	4	4	3	2	2	6	2.7	24
8	2	**IZS**	9	13	8	7	18	7	3	2	2	1	1	2	1	2	4	1	5	8	10	11	16	8	18	6.1	24
9	**IZS**	9	7	8	20	16	22	14	6	2	2	3	2	3	4	3	1	2	3	5	6	7	7	**IZS**	22	6.9	24
10	7	8	6	5	11	5	26	15	7	6	5	3	3	3	1	2	1	2	2	7	11	10	**IZS**	7	26	6.7	24
11	8	7	5	5	13	14	9	**C**	**M**	**C**	**C**	**C**	**C**	**C**	**C**	1	1	1	1	3	3	**IZS**	4	6	14	5.4	23
12	4	3	5	7	13	9	27	20	5	6	2	2	2	3	2	3	3	4	4	6	**IZS**	6	8	9	27	6.7	24
13	6	5	11	9	5	3	5	26	11	7	2	2	2	3	3	3	3	3	4	**IZS**	5	0	0	0	26	5.1	24
14	1	3	3	4	3	4	4	**C**	**M**	**C**	**C**	**C**	**C**	**C**	**C**	**C**	**C**	0	**IZS**	1	1	1	1	2	4	2.2	23
15	2	2	4	4	3	5	6	4	2	1	0	0	0	0	0	0	0	**IZS**	0	0	1	1	1	2	6	1.7	24
16	4	3	3	2	3	5	8	5	4	2	2	1	0	1	1	0	**IZS**	0	0	1	1	3	7	3	8	2.6	24
17	2	2	4	6	3	4	4	5	5	3	2	1	1	0	2	**IZS**	0	0	0	0	0	0	1	0	6	2.0	24
18	2	3	2	2	1	2	1	0	0	0	0	0	0	0	**IZS**	0	0	0	0	1	1	2	1	0	3	0.8	24
19	0	0	0	0	0	0	0	0	0	0	0	0	0	**IZS**	0	0	0	0	0	0	0	0	0	0	0	0.0	24
20	0	0	0	0	0	0	0	0	1	0	0	0	**IZS**	0	0	0	0	0	0	0	0	0	0	0	1	0.0	24
21	0	0	0	0	0	0	0	0	0	0	0	**IZS**	0	0	1	1	1	1	1	1	1	1	2	2	2	0.5	24
22	1	1	0	1	2	4	2	1	0	0	**IZS**	0	0	0	0	0	0	1	1	1	1	3	7	5	7	1.3	24
23	2	2	2	2	2	10	10	8	6	**IZS**	1	0	3	0	0	1	2	2	2	5	9	6	4	5	10	3.7	24
24	6	6	2	4	7	22	32	19	**IZS**	5	3	1	1	0	0	1	0	0	1	1	1	1	3	10	32	5.5	24
25	5	10	20	18	16	11	8	**IZS**	4	4	1	2	2	2	2	2	1	1	0	1	1	3	7	8	20	5.6	24
26	6	4	3	7	13	14	**IZS**	4	4	4	3	4	4	4	3	4	2	1	1	3	5	10	19	12	19	5.8	24
27	6	4	7	5	9	**IZS**	13	2	1	1	1	1	1	1	1	0	1	1	2	2	1	0	1	0	13	2.7	24
28	1	0	2	2	**IZS**	3	4	8	2	1	1	1	0	1	1	0	0	0	1	1	2	5	5	2	8	1.9	24
29	2	2	2	**IZS**	3	6	3	3	2	1	2	1	1	1	1	0	0	1	1	2	3	2	1	1	6	1.8	24
30	0	1	**IZS**	2	1	1	1	3	2	2	2	2	1	2	1	2	3	3	2	2	3	1	0	0	3	1.6	24
HOURLY MAX	8	10	20	22	20	22	32	26	11	7	6	5	5	7	6	4	5	4	5	8	11	11	19	12			
HOURLY AVG	3.4	3.3	4.3	5.4	5.9	6.8	9.1	7.0	3.4	2.5	1.9	1.5	1.3	1.6	1.5	1.4	1.4	1.2	1.7	2.6	3.0	3.1	4.0	3.8			

STATUS FLAG CODES

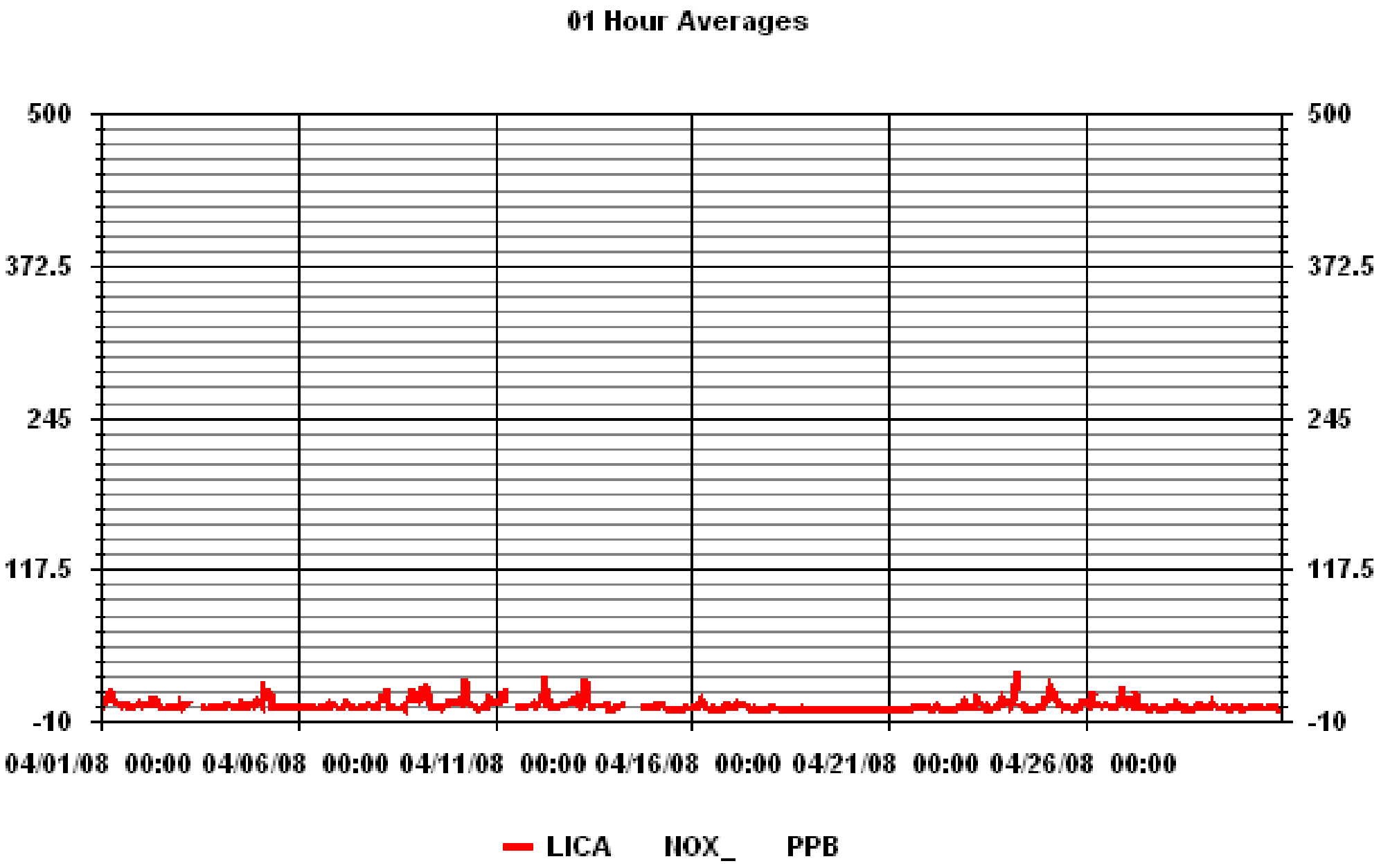
S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	- MISSING DATA
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE



MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:	539					
MAXIMUM 1-HR AVERAGE:	32	PPB	@ HOUR(S)	8	ON DAY(S)	18
MAXIMUM 24-HR AVERAGE:	6.9	PPB			ON DAY(S)	8

IZS CALIBRATION TIME:	31	HRS	OPERATIONAL TIME:	718	HRS
MONTHLY CALIBRATION TIME:	23	HRS	AMD OPERATION UPTIME	99.7	%
STANDARD DEVIATION	4.19		MONTHLY AVERAGE	3.39	PPB


01 Hour Averages
500
372.5
245
117.5
-10
04/01/08 00:00
04/06/08 00:00
04/11/08 00:00
04/16/08 00:00
04/21/08 00:00
04/26/08 00:00
LICA NOX_ PPB

LICA
NOX_ / WD Joint Frequency Distribution (Percent)

April 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	4.96	5.12	6.92	3.91	15.06	12.50	9.03	.90	1.05	1.20	12.04	10.24	6.47	3.16	5.57	1.80	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	4.96	5.12	6.92	3.91	15.06	12.50	9.03	.90	1.05	1.20	12.04	10.24	6.47	3.16	5.57	1.80	

Calm : .00 %

Total # Operational Hours : 664

Distribution By Samples

Direction

Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 50	33	34	46	26	100	83	60	6	7	8	80	68	43	21	37	12	664
< 110																	
< 210																	
>= 210																	
Totals	33	34	46	26	100	83	60	6	7	8	80	68	43	21	37	12	

Calm : .00 %

Total # Operational Hours : 664

Logger : 01 Parameter : NOX_

Class Limits (PPB)

>= 210

< 210

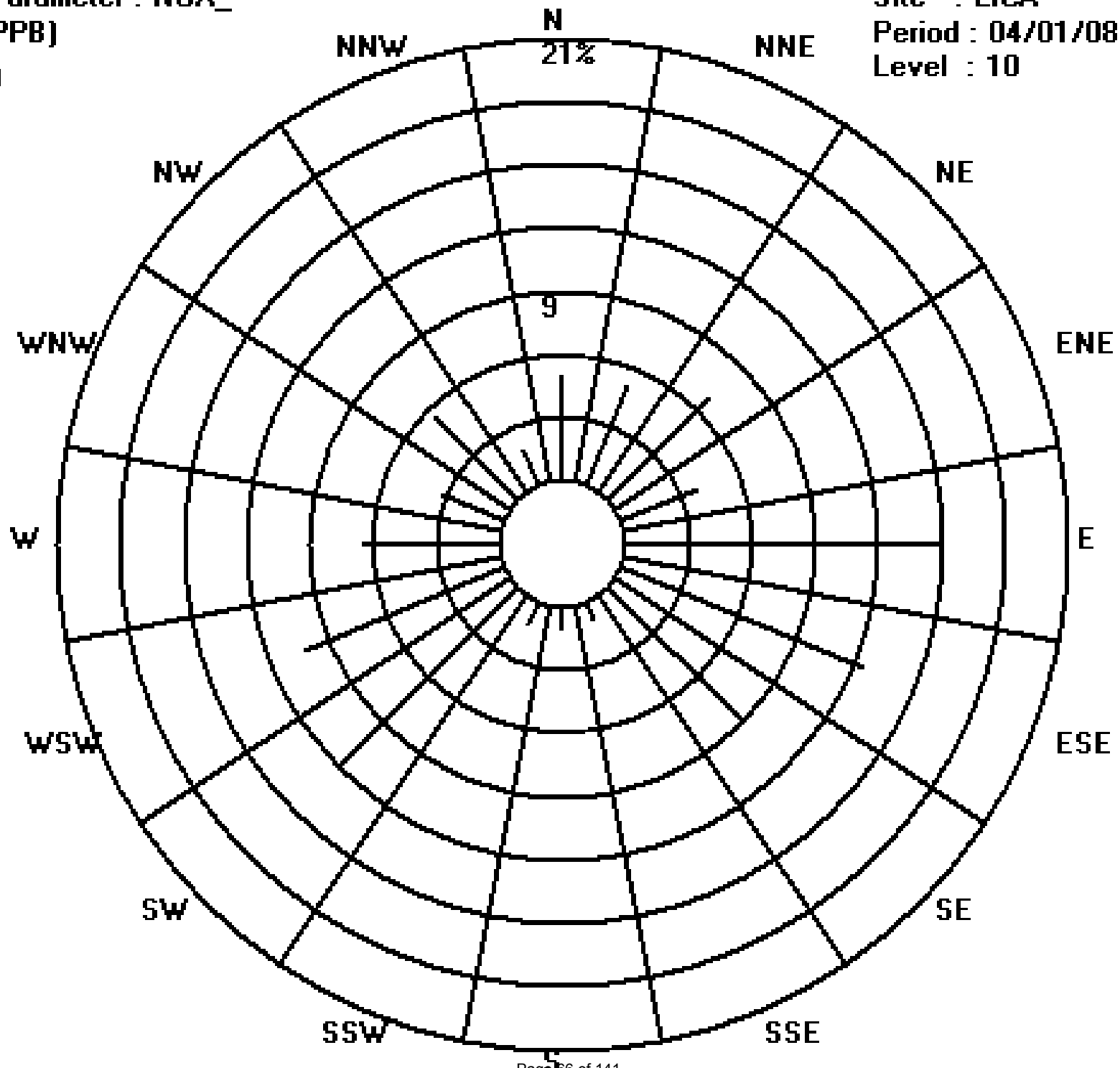
< 110

< 50

Site : LICA

Period : 04/01/08-04/30/08

Level : 10



LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

APRIL 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	4	20	19	10	49	33	14	IZS	14	8	6	8	5	11	9	6	4	2	3	4	5	7	8	49	11.3	24
2	7	4	5	8	10	8	11	IZS	127	8	10	13	3	2	2	4	3	2	3	3	3	3	4	8	127	10.9	24
3	11	4	10	10	10	8	IZS	17	C	C	C	C	C	C	C	11	5	5	4	6	5	5	5	6	17	7.6	24
4	4	4	5	13	22	IZS	9	12	9	2	3	8	2	94	59	6	6	6	13	9	14	14	12	13	94	14.7	24
5	12	11	11	137	IZS	18	21	21	6	8	10	5	4	2	4	3	7	12	8	7	3	1	3	3	137	13.8	24
6	4	6	12	IZS	8	5	4	4	5	3	3	7	3	4	3	4	7	5	9	12	8	6	7	7	12	5.9	24
7	5	5	IZS	4	8	10	12	8	4	7	7	6	4	12	9	10	3	3	5	7	7	7	3	5	12	6.6	24
8	5	IZS	14	31	14	10	41	32	5	4	4	4	2	17	5	5	16	7	18	15	14	29	25	13	41	14.3	24
9	IZS	16	13	26	57	43	48	35	14	4	5	10	6	7	21	11	6	3	4	18	8	10	14	IZS	57	17.2	24
10	13	14	10	10	28	12	51	28	10	10	14	5	17	5	4	4	2	6	9	13	84	14	IZS	10	84	16.2	24
11	11	10	7	16	78	134	M	M	C	C	C	C	C	C	C	13	3	1	2	6	5	IZS	7	11	134	21.7	22
12	17	4	10	16	20	36	76	44	10	29	4	9	6	6	2	14	5	13	8	25	IZS	10	16	16	76	17.2	24
13	9	10	18	15	12	5	20	43	29	15	3	4	3	3	4	8	4	4	8	IZS	12	1	1	2	43	10.1	24
14	3	4	6	6	4	7	11	C	M	C	C	C	C	C	C	C	C	5	IZS	2	4	2	2	3	11	4.5	23
15	3	4	5	4	6	7	7	6	3	3	2	2	2	1	1	0	0	IZS	1	1	3	3	3	4	7	3.1	24
16	6	7	5	4	4	8	42	7	5	5	4	3	2	3	7	2	IZS	1	2	3	2	6	9	6	42	6.2	24
17	3	4	6	10	6	14	8	11	6	11	7	2	2	1	5	IZS	1	0	0	1	1	1	2	1	14	4.5	24
18	3	6	4	5	3	3	1	1	1	3	1	0	1	4	IZS	2	2	1	1	3	2	4	3	1	6	2.4	24
19	0	0	0	1	2	1	1	6	3	4	1	1	7	IZS	1	4	5	3	2	1	1	1	0	0	7	2.0	24
20	0	0	0	0	0	1	1	2	3	2	5	1	IZS	2	9	1	8	1	1	1	0	0	0	0	9	1.7	24
21	0	0	0	0	0	0	0	0	0	0	0	IZS	0	1	2	2	3	2	2	2	3	2	3	3	3	1.1	24
22	1	1	1	2	4	5	4	3	1	1	IZS	1	1	0	0	1	1	2	2	2	3	5	12	11	12	2.8	24
23	4	4	4	4	4	91	19	11	9	IZS	4	3	75	3	1	2	7	5	11	9	27	9	10	8	91	14.1	24
24	15	13	4	8	20	54	73	105	IZS	9	P	4	3	3	4	2	3	1	2	2	2	3	8	50	105	17.6	23
25	8	27	28	28	34	26	12	IZS	9	7	3	3	5	4	3	3	2	2	1	18	4	9	56	15	56	13.3	24
26	19	5	5	11	51	47	IZS	6	5	6	4	6	7	5	4	8	5	1	11	19	10	18	74	31	74	15.6	24
27	45	8	14	11	15	IZS	24	13	3	7	2	4	3	8	2	2	10	3	22	14	1	1	1	1	45	9.3	24
28	2	1	5	5	IZS	6	26	24	5	3	2	4	2	6	5	1	3	1	2	6	4	9	11	8	26	6.1	24
29	4	3	5	IZS	7	40	13	8	17	3	13	2	3	3	8	2	2	1	7	8	6	2	2	1	40	7.0	24
30	2	1	IZS	6	2	3	3	5	8	4	10	3	3	5	3	4	5	8	5	6	6	3	1	1	10	4.2	24
HOURLY MAX	45	27	28	137	78	134	76	105	127	29	14	13	75	94	59	14	16	13	22	25	84	29	74	50			
HOURLY AVG	7.8	6.2	8.1	14.6	15.7	23.3	21.1	17.9	11.9	6.6	5.2	4.5	6.7	7.9	6.9	4.9	4.6	3.7	5.7	7.7	8.5	6.3	10.4	8.5			

STATUS FLAG CODES

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

MONTHLY SUMMARY

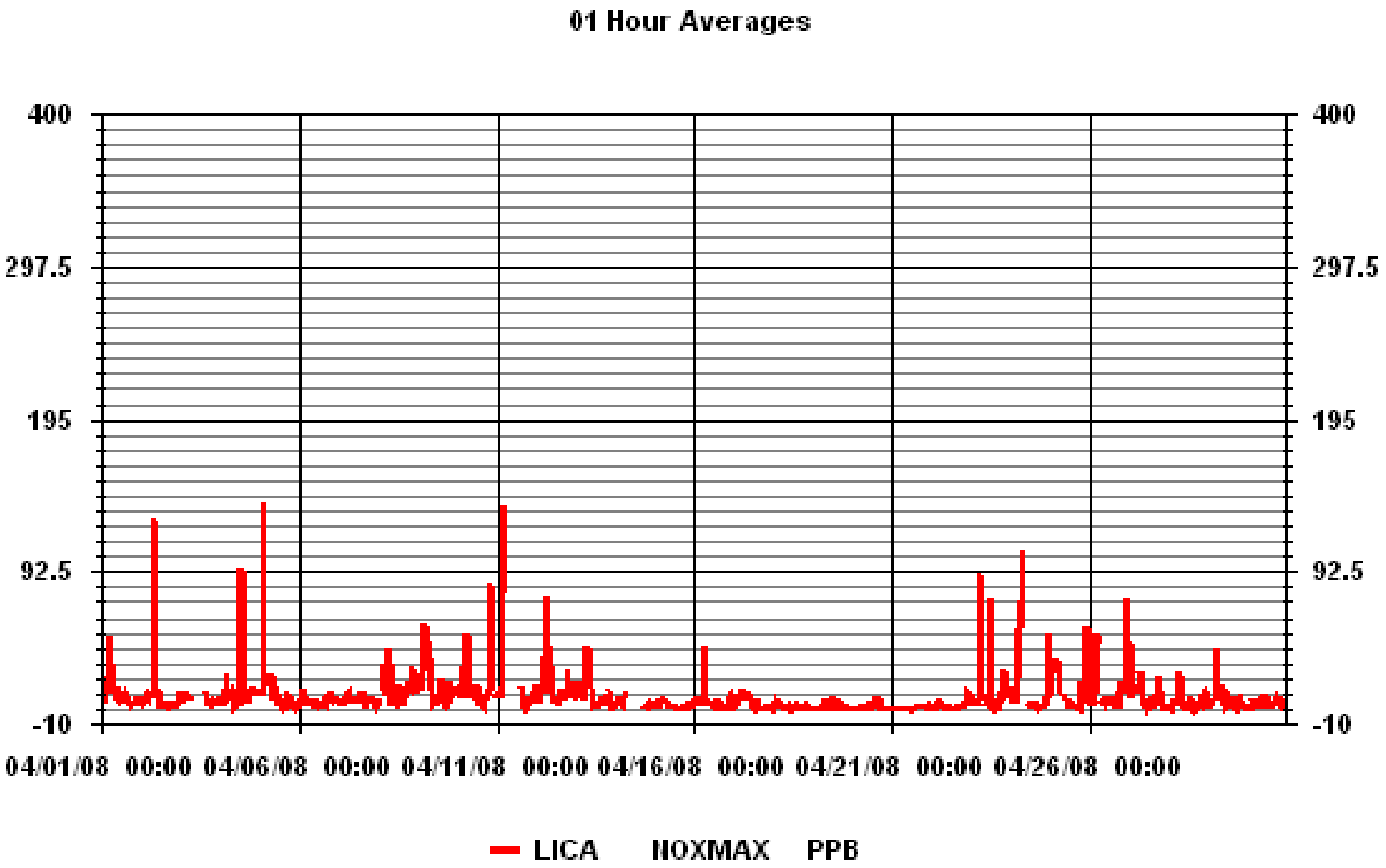
NUMBER OF NON-ZERO READINGS: 629

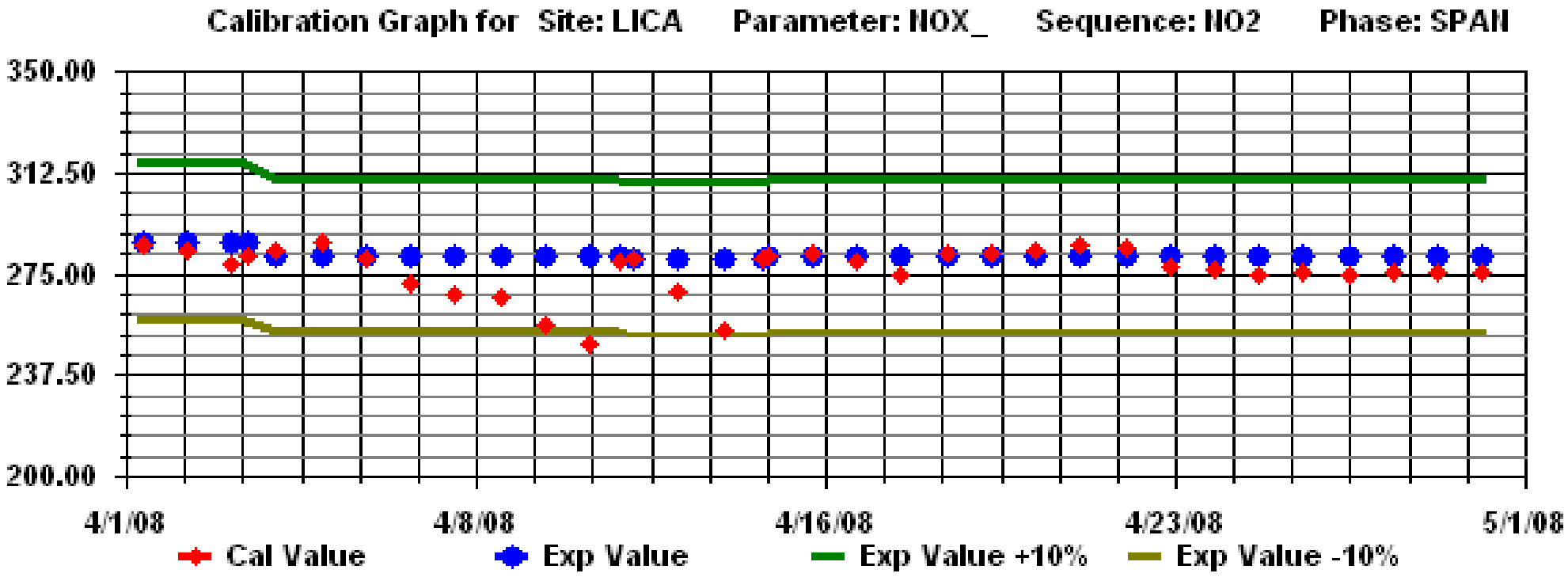
MAXIMUM INSTANTANEOUS VALUE: 137 PPB @ HOUR(S) 4 ON DAY(S) 5

IZS CALIBRATION TIME: 31 HRS OPERATIONAL TIME: 716 HRS

MONTHLY CALIBRATION TIME: 23 HRS

STANDARD DEVIATION: 15.16


01 Hour Averages
400
297.5
195
92.5
-10
04/01/08 00:00
04/06/08 00:00
04/11/08 00:00
04/16/08 00:00
04/21/08 00:00
04/26/08 00:00
LICA NOXMAX PPB


Calibration Graph for Site: LICA Parameter: NOX_ Sequence: NO2 Phase: SPAN
350.00
312.50
275.00
237.50
200.00
4/1/08
4/8/08
4/16/08
4/23/08
5/1/08
Cal Value
Exp Value
Exp Value +10%
Exp Value -10%

Ozone

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

APRIL 2008

OZONE (O_3) hourly averages in ppb

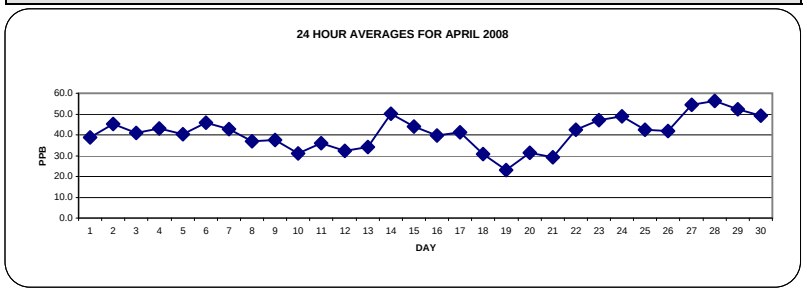
MST

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	35	35	28	23	25	16	17	32	**IZS**	34	36	39	43	49	49	48	49	52	53	51	49	47	44	40	53	38.9	24
2	40	41	42	40	39	39	38	**IZS**	43	46	46	50	52	53	53	53	50	49	48	48	46	44	41	41	53	45.3	24
3	36	40	37	36	37	36	**IZS**	37	39	42	43	44	44	43	44	44	44	43	41	41	44	44	43	41	44	41.0	24
4	42	42	42	42	40	**IZS**	45	46	47	49	49	50	49	47	48	48	47	46	43	40	36	32	30	30	50	43.0	24
5	33	31	32	22	**IZS**	25	24	30	40	42	42	43	45	46	46	46	**N**	45	46	47	49	50	50	50	50	40.2	23
6	49	49	47	**IZS**	46	46	46	47	47	47	47	47	48	48	48	47	46	46	45	40	41	43	41	41	49	45.7	24
7	42	42	**IZS**	42	41	39	40	43	45	45	46	45	46	45	45	45	45	45	44	42	41	41	40	37	46	42.9	24
8	33	**IZS**	22	20	25	26	24	38	41	43	44	46	49	51	51	51	49	50	45	40	36	30	14	19	51	36.8	24
9	**IZS**	21	25	29	18	14	15	33	43	49	51	50	51	50	49	50	51	50	48	43	38	29	19	**IZS**	51	37.5	24
10	18	13	11	8	3	6	6	20	30	34	40	44	47	47	51	53	54	54	52	40	31	28	**IZS**	22	54	31.0	24
11	16	14	14	12	15	17	27	35	41	49	51	49	53	52	52	53	52	52	50	44	41	**IZS**	22	20	53	36.1	24
12	22	19	13	9	6	15	14	25	39	45	53	53	51	50	48	46	46	46	45	39	**IZS**	26	19	17	53	32.4	24
13	19	25	19	20	26	32	31	20	27	31	37	38	40	39	39	39	38	37	34	**IZS**	30	51	56	55	56	34.0	24
14	49	46	46	44	44	41	41	42	46	49	50	52	53	55	57	60	60	59	**IZS**	55	54	53	51	47	60	50.2	24
15	41	35	39	35	36	34	36	43	48	49	51	52	53	52	52	50	49	**IZS**	48	46	43	42	40	36	53	43.9	24
16	32	33	30	30	29	27	25	29	36	42	44	46	49	53	51	53	**IZS**	53	52	50	48	43	34	24	53	39.7	24
17	27	20	15	12	19	32	32	32	38	43	50	54	55	54	54	**IZS**	59	59	61	56	49	46	43	40	61	41.3	24
18	34	26	30	32	36	36	36	36	36	36	36	35	35	34	**IZS**	33	32	31	29	25	22	20	18	17	36	30.7	24
19	15	15	16	20	21	21	21	22	22	23	25	26	27	**IZS**	28	28	28	28	27	24	24	24	25	24	28	23.2	24
20	25	30	32	32	32	32	33	34	35	36	36	36	**IZS**	35	34	33	32	30	28	27	27	27	27	28	36	31.3	24
21	28	28	29	29	29	29	30	30	30	30	30	**IZS**	**C**	**C**	**C**	**C**	28	27	27	27	28	31	31	32	32	29.1	24
22	33	34	35	35	34	33	36	37	40	41	**IZS**	43	43	45	46	49	50	51	53	52	52	50	42	43	53	42.5	24
23	45	43	44	43	42	36	35	39	42	**IZS**	49	51	53	55	56	58	57	54	53	49	43	45	47	47	58	47.2	24
24	43	38	45	42	38	29	26	40	**IZS**	52	57	60	59	59	59	58	57	57	60	59	56	53	46	33	60	49.0	24
25	31	26	16	20	24	31	41	**IZS**	48	50	54	57	61	63	61	55	51	50	49	48	48	39	32	25	63	42.6	24
26	26	26	22	16	10	13	**IZS**	41	47	52	54	54	54	56	59	61	62	62	60	55	43	29	24	37	62	41.9	24
27	51	48	42	43	39	**IZS**	38	52	54	55	56	57	58	58	58	59	59	59	60	61	63	62	60	60	63	54.4	24
28	60	59	56	55	**IZS**	51	50	47	52	54	56	59	61	61	62	63	62	61	60	61	59	50	46	53	63	56.4	24
29	51	50	50	**IZS**	48	44	47	47	48	49	51	54	56	57	58	58	58	56	54	53	50	53	54	54	58	52.2	24
30	53	51	**IZS**	46	46	46	45	44	44	45	46	47	47	47	54	53	53	52	54	54	52	52	51	49	54	49.2	24
HOURLY MAX	60	59	56	55	48	51	50	52	54	55	57	60	61	63	62	63	62	62	61	61	63	62	60	60			
HOURLY AVG	35.5	33.8	31.4	29.9	30.3	30.2	32.1	36.5	41.0	43.5	45.9	47.6	49.4	50.1	50.4	49.8	48.9	48.4	47.2	45.4	42.9	40.8	37.6	36.6			

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

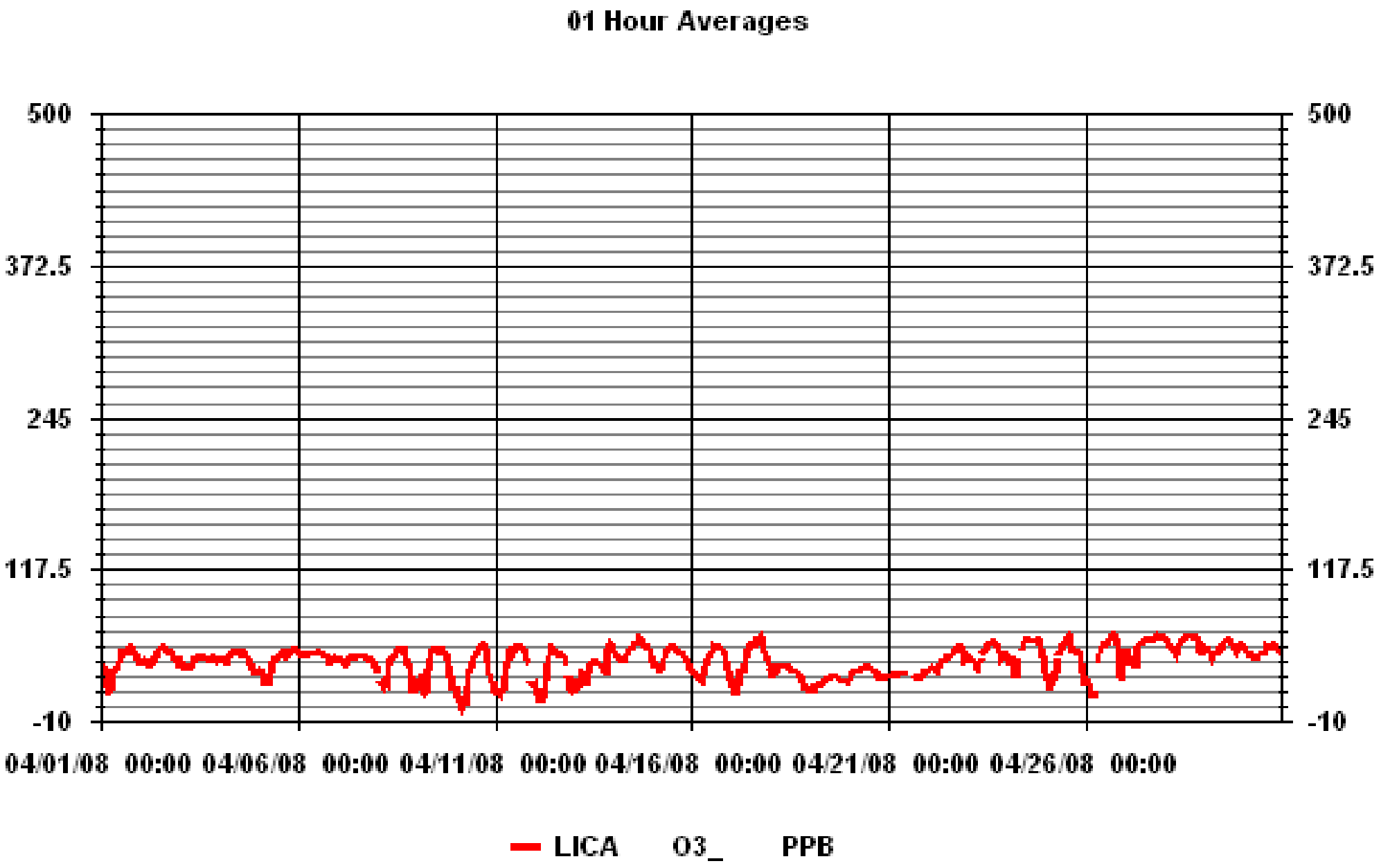
OBJECTIVE LIMIT: **ALBERTA ENVIRONMENT:** 1-HR 82 PPB



MONTHLY SUMMARY

NUMBER OF 1-HR EXCEEDENCES:	0					
NUMBER OF NON-ZERO READINGS:	684					
MAXIMUM 1-HR AVERAGE:	63	PPB	@ HOUR(S)	VAR	ON DAY(S)	VAR
MAXIMUM 24-HR AVERAGE:	56.4	PPB			ON DAY(S)	28
					VAR-VARIOUS	

IZS CALIBRATION TIME:	31	HRS	OPERATIONAL TIME:	719	HRS
MONTHLY CALIBRATION TIME:	4	HRS	AMD OPERATION UPTIME	99.9	%
STANDARD DEVIATION	12.33		MONTHLY AVERAGE	41.07	PPB


01 Hour Averages
500
372.5
245
117.5
-10
04/01/08 00:00
04/06/08 00:00
04/11/08 00:00
04/16/08 00:00
04/21/08 00:00
04/26/08 00:00
LICA O3_ PPB

LICA
O3_ / WD Joint Frequency Distribution (Percent)

April 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	4.81	4.67	6.27	3.50	9.92	7.00	5.54	.72	.87	.87	8.32	8.32	4.52	1.45	3.79	1.31	71.97
<	110	.14	.58	1.02	.29	4.67	5.10	3.21	.14	.14	.29	4.23	2.48	2.62	1.31	1.31	.43	28.02
<	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	4.96	5.25	7.29	3.79	14.59	12.11	8.75	.87	1.02	1.16	12.55	10.80	7.15	2.77	5.10	1.75	

Calm : .00 %

Total # Operational Hours : 685

Distribution By Samples

Direction

	Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
<	50	33	32	43	24	68	48	38	5	6	6	57	57	31	10	26	9	493
<	110	1	4	7	2	32	35	22	1	1	2	29	17	18	9	9	3	192
<	210																	
>=	210																	
	Totals	34	36	50	26	100	83	60	6	7	8	86	74	49	19	35	12	

Calm : .00 %

Total # Operational Hours : 685

Logger : 01 Parameter : O3_

Class Limits (PPB)

>= 210

< 210

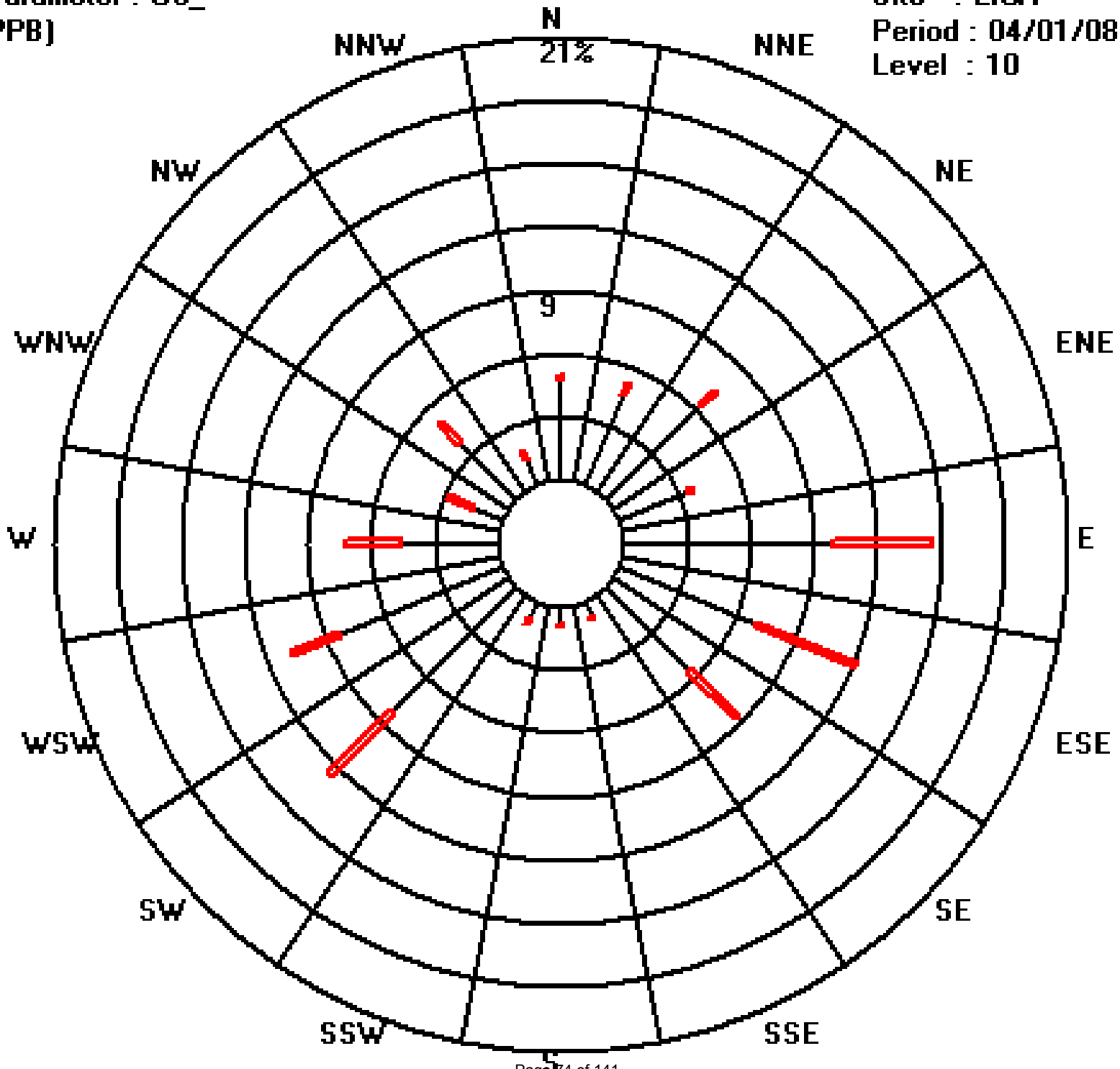
< 110

< 50

Site : LICA

Period : 04/01/08-04/30/08

Level : 10



LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

APRIL 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	41	38	35	31	31	23	29	35	**IZS**	35	38	41	44	51	51	49	50	53	53	53	51	49	47	43	53	42.2	24
2	42	43	42	42	41	41	40	**IZS**	45	47	49	51	54	54	54	54	51	51	49	49	49	45	42	43	54	46.9	24
3	41	41	40	39	39	38	**IZS**	40	41	43	44	44	45	44	44	45	45	44	43	44	45	44	44	44	45	42.7	24
4	43	43	43	43	42	**IZS**	47	47	48	50	51	51	50	49	49	49	48	48	45	43	41	37	33	35	51	45.0	24
5	36	34	36	32	**IZS**	30	29	39	42	44	44	44	46	46	47	48	**N**	46	47	49	50	51	51	51	51	42.8	23
6	50	50	49	**IZS**	48	47	47	48	48	48	47	49	49	49	49	48	47	47	47	44	44	44	43	43	50	47.2	24
7	43	43	**IZS**	43	42	42	44	45	46	47	47	47	47	47	47	47	46	46	45	44	42	42	42	40	47	44.5	24
8	37	**IZS**	27	29	32	29	34	41	42	44	45	48	51	52	52	52	52	52	47	45	39	40	21	27	52	40.8	24
9	**IZS**	28	28	37	33	25	21	43	48	50	52	52	52	52	52	52	53	51	50	47	42	36	28	**IZS**	53	42.4	24
10	25	15	18	11	11	11	9	27	32	39	44	46	49	50	54	54	55	55	54	47	43	34	**IZS**	30	55	35.3	24
11	20	18	20	17	25	32	34	38	47	51	53	52	54	54	54	54	53	53	53	48	44	**IZS**	28	25	54	40.3	24
12	29	27	19	12	12	19	23	38	42	53	54	54	52	52	49	47	48	47	47	45	**IZS**	40	30	27	54	37.7	24
13	28	32	28	27	33	33	33	29	33	36	38	39	41	41	40	40	40	38	36	**IZS**	45	56	58	58	58	38.3	24
14	56	51	50	46	46	45	46	47	49	50	51	55	55	56	62	62	61	60	**IZS**	57	55	55	53	48	62	52.9	24
15	46	41	41	38	38	36	39	47	49	51	53	53	54	53	53	52	50	**IZS**	49	47	46	43	42	40	54	46.1	24
16	36	36	36	34	32	28	28	32	41	46	46	48	50	57	52	54	**IZS**	54	53	51	50	47	39	35	57	42.8	24
17	35	28	20	17	34	36	34	34	41	46	56	55	57	56	56	**IZS**	61	61	63	59	54	47	44	43	63	45.1	24
18	37	31	34	36	37	37	37	37	37	37	36	36	36	35	**IZS**	34	33	33	30	28	23	22	20	17	37	32.3	24
19	16	16	17	22	22	22	22	23	23	24	25	27	27	**IZS**	29	28	29	28	28	26	24	24	26	25	29	24.0	24
20	26	32	33	33	33	33	33	36	36	36	36	36	**IZS**	35	35	34	33	31	29	28	27	27	28	28	36	32.1	24
21	29	29	29	30	30	30	30	30	31	31	31	**IZS**	**C**	**C**	**C**	**C**	29	28	28	28	31	32	32	33	33	30.1	24
22	34	35	35	35	36	34	37	39	40	42	**IZS**	43	44	45	48	49	51	52	54	53	53	51	49	46	54	43.7	24
23	46	44	44	44	44	42	41	41	47	**IZS**	51	52	55	56	57	58	59	56	55	52	47	46	50	50	59	49.4	24
24	46	45	46	44	41	40	32	46	**IZS**	54	**P**	60	60	60	60	59	58	58	61	61	58	55	50	49	61	52.0	23
25	36	34	23	31	30	38	43	**IZS**	50	53	58	62	64	64	63	61	52	51	50	49	50	45	39	30	64	46.8	24
26	32	29	26	23	13	23	**IZS**	43	51	53	55	54	56	57	63	63	63	63	61	61	55	43	31	53	63	46.6	24
27	54	54	47	49	44	**IZS**	41	55	55	56	58	58	59	59	59	60	61	61	62	63	63	63	61	61	63	56.7	24
28	61	60	58	56	**IZS**	53	53	52	54	55	58	61	62	62	64	64	64	62	62	62	61	56	57	56	64	58.8	24
29	53	52	52	**IZS**	49	47	48	48	49	50	53	56	57	58	60	59	59	57	55	55	53	54	55	55	60	53.7	24
30	54	53	**IZS**	48	47	46	46	46	46	46	48	49	49	56	56	55	54	54	56	57	54	52	52	50	57	51.0	24
HOURLY MAX	61	60	58	56	49	53	53	55	55	56	58	62	64	64	64	64	64	63	63	63	63	63	61	61			
HOURLY AVG	39.0	37.3	34.9	33.9	34.5	34.3	35.7	40.2	43.3	45.4	47.2	49.1	50.7	51.8	52.1	51.1	50.2	49.7	48.7	48.1	46.2	44.1	41.2	40.9			

STATUS FLAG CODES

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

MONTHLY SUMMARY

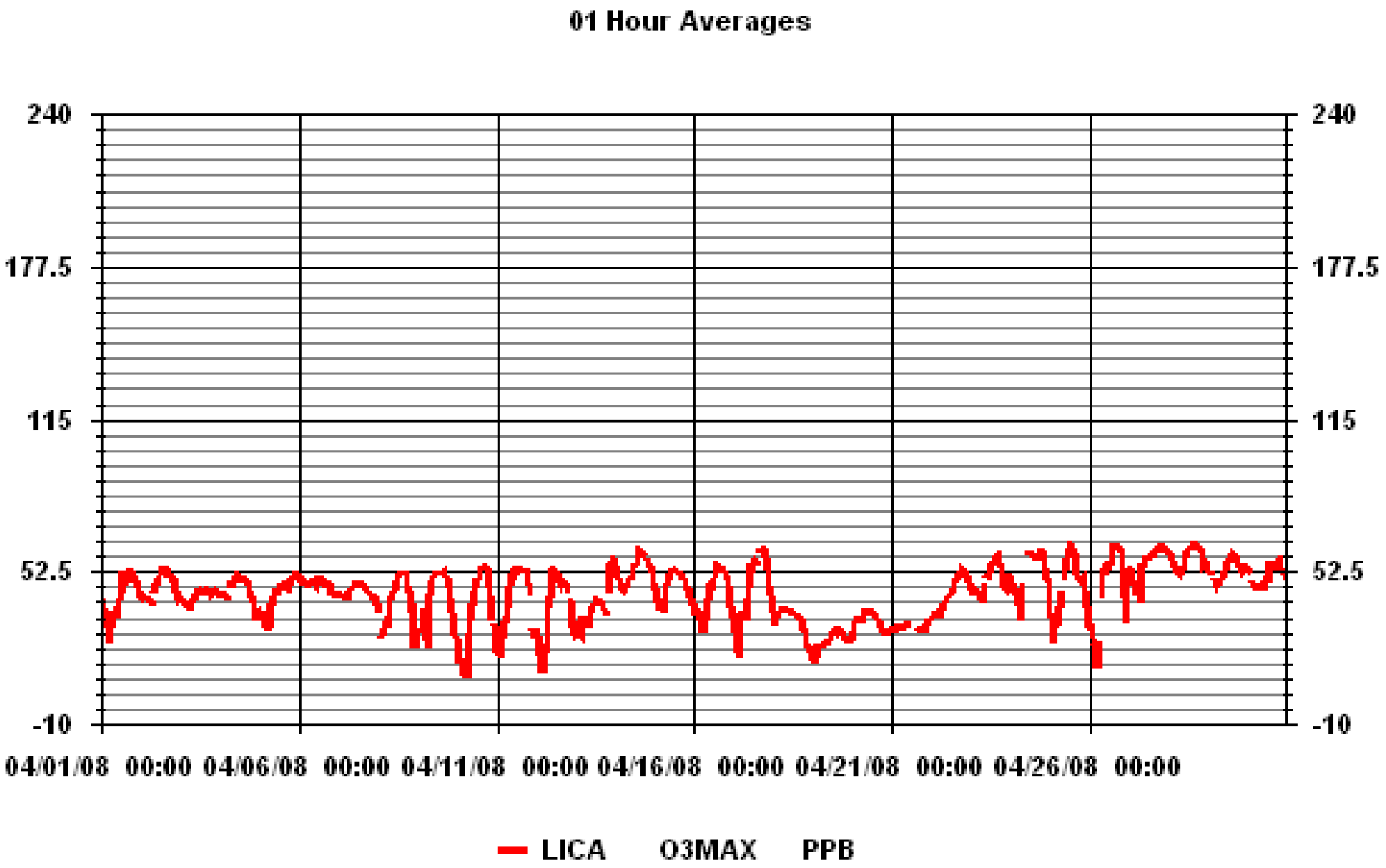
NUMBER OF NON-ZERO READINGS: 683

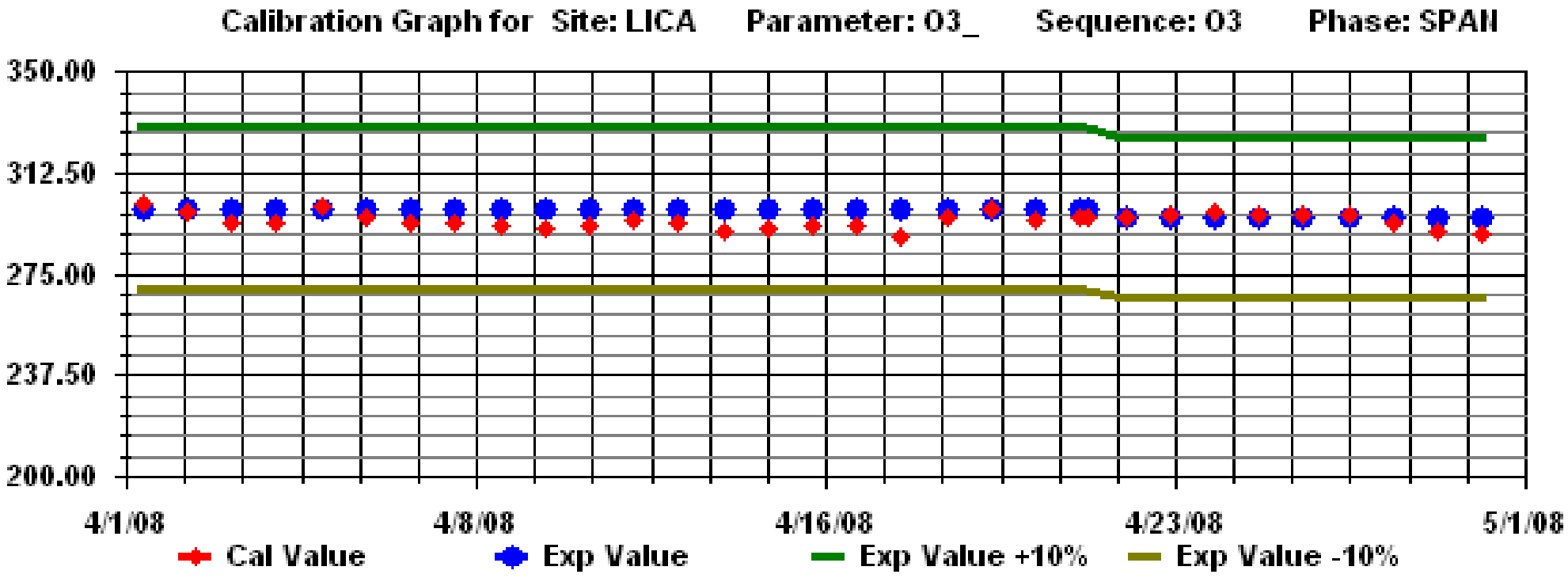
MAXIMUM INSTANTANEOUS VALUE: 64 PPB @ HOUR(S) VAR ON DAY(S) VAR

IZS CALIBRATION TIME: 31 HRS OPERATIONAL TIME: 718 HRS

MONTHLY CALIBRATION TIME: 4 HRS

STANDARD DEVIATION: 11.35


01 Hour Averages
240
177.5
115
52.5
-10
04/01/08 00:00
04/06/08 00:00
04/11/08 00:00
04/16/08 00:00
04/21/08 00:00
04/26/08 00:00
LICA O3MAX PPB


Calibration Graph for Site: LICA Parameter: O3_ Sequence: O3 Phase: SPAN
350.00
312.50
275.00
237.50
200.00
4/1/08
4/8/08
4/16/08
4/23/08
5/1/08
Cal Value
Exp Value
Exp Value +10%
Exp Value -10%

Ambient Temperature

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

APRIL 2008

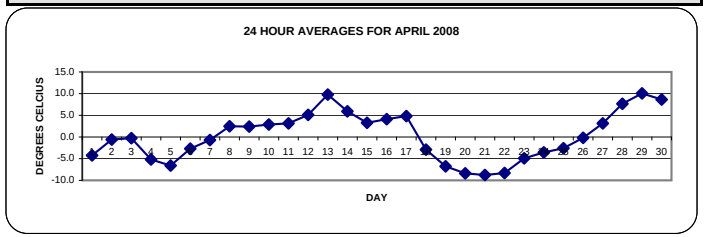
AMBIENT TEMPERATURE hourly averages (Degrees C)

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	-8.9	-10.5	-11.7	-12.6	-13.7	-14.1	-13.1	-8.6	-5.6	-3	-1.6	-0.5	1.3	2.5	2.8	2.3	2.2	1.9	0.9	-0.6	-1.3	-2.2	-3.3	-4.3	2.8	-4.2	24
2	-4.5	-4.7	-5	-5.3	-5.6	-6.6	-6.7	-4.8	-2.7	-1.2	-0.3	0.9	2.2	3.2	3.3	3.9	4.6	4.8	3.1	2.3	1.7	1.1	1.2	0.9	4.8	-0.6	24
3	0.5	0.1	0.1	-0.1	-0.6	-0.6	-0.4	0.2	0.3	0.2	0.2	-0.1	0	-0.2	0.3	1.1	1.1	0.7	0.3	-0.3	-2.1	-2.4	-2.3	-2.5	1.1	-0.3	24
4	-2.6	-2.9	-3.2	-3.3	-3.7	-4.4	-6	-7.1	-7.2	-7.4	-7	-5.8	-4.5	-3.9	-3.1	-3.1	-2.8	-3.3	-3.9	-5.1	-6.4	-8.2	-9.5	-10	-2.6	-5.2	24
5	-10.8	-12	-12.6	-12.9	-14.3	-14.5	-13.8	-10.9	-8.5	-6.3	-4.8	-3.7	-2.7	-1.7	-1.2	-1.1	-1.3	-1.8	-2.2	-2.6	-3.7	-4.7	-5	-5.1	-1.1	-6.6	24
6	-5.3	-5.4	-5.5	-5.6	-5.6	-5.4	-5.2	-4.9	-4.4	-3.6	-3	-1.9	-0.9	0	-0.4	-0.4	-0.3	-0.3	-0.8	-1.2	-1.1	-1	-1.1	-1.2	0.0	-2.7	24
7	-1.4	-1.6	-1.5	-1.6	-1.6	-1.6	-1.6	-1.6	-1.4	-1.2	-1	-0.7	-0.5	-0.2	0.6	0.6	0.7	0.2	0	0	0	-0.2	-0.4	-0.8	0.7	-0.7	24
8	-1.8	-2.2	-1.6	-1.3	-1.6	-2.9	-2.2	-0.8	0	1.6	3.5	5.2	7	8.1	8.9	9.1	8.8	8.4	6.7	4.8	3.2	1.4	-0.8	-2.1	9.1	2.5	24
9	-2.5	-3.3	-3.6	-3.9	-4.8	-5.4	-4.1	-0.2	1.6	3.9	5.5	6.8	8.3	9.9	9.7	9	8.8	7.8	6.1	4.6	3.1	1.5	0	-1.1	9.9	2.4	24
10	-1.4	-2.1	-2.7	-3.3	-3.7	-4.2	-3.2	-1	2	4.1	5.4	6.5	8.6	9.7	8.3	8.1	8.7	9.1	7.9	4.4	3.4	2.8	1	0.7	9.7	2.9	24
11	-0.3	-1.5	-2.3	-2.8	-3.4	-3.5	-1.8	0.5	3.3	6.5	7.4	7.4	8.3	8.7	9.1	9.1	8.9	8.7	7.5	5.1	2.8	1	-1.2	-2.2	9.1	3.1	24
12	-2.9	-3.6	-4	-3.1	-3	-2.8	-1.2	1.7	5	8.5	10.3	11	11.1	10.9	11.4	11.6	11.7	11.9	11.4	9.3	6.3	5.2	2.9	2.8	11.9	5.1	24
13	2.4	3.6	2.6	1.8	2.5	3.9	5.5	6.5	8.3	11.7	15.1	16	16.5	16.9	16.6	16.2	15.3	15.9	14.9	10.4	8.6	9.4	7.9	6.3	16.9	9.8	24
14	5	5.1	4.8	4.6	4.4	4	4.1	4.5	5.4	6.9	7.5	8.3	8.6	8.4	8	7.7	7.8	7.7	7.3	5.5	4.7	4.8	4	2.9	8.6	5.9	24
15	1.9	0	0.2	-1	-1.3	-1.4	-0.6	1.6	3.3	4.9	6.2	6.9	7.7	8.1	7.9	6.5	7	6.2	5.7	4.3	2.5	1.4	0.6	0	8.1	3.3	24
16	-0.4	-0.5	-1.3	-1.9	-2.2	-2.4	-1.8	-0.1	2.2	4	5.6	7.3	8.8	10	9.5	9.9	10.6	9.9	9.2	7.8	6.6	4.9	2.9	0.2	10.6	4.1	24
17	-0.1	-1.6	-2.2	-2.4	-2	0.1	1.9	4.4	7.9	10.6	12.2	11	9.8	6	7.3	10.3	10.3	8.7	7.6	5.8	4.8	3.3	1.7	0.4	12.2	4.8	24
18	-1	-2.3	-2.1	-2.2	-2.4	-3.6	-4.1	-4.9	-4.8	-4.1	-2.8	-1.9	-1	0	0.2	0	-0.4	-1.1	-1.9	-3.2	-4.9	-6.1	-7.2	-8.1	0.2	-2.9	24
19	-9	-9.3	-9.5	-9.6	-9.6	-9.5	-9.5	-9.3	-9	-8.2	-6.7	-5.6	-5.2	-4.8	-4.2	-4.3	-3.5	-3.3	-3.8	-4.6	-5.6	-6	-6	-6.2	-3.3	-6.8	24
20	-6.3	-6.3	-6.5	-6.6	-6.9	-7.1	-7.3	-7.8	-8.3	-8.7	-9	-9.2	-8.8	-8.9	-9.2	-9.3	-9.2	-9.2	-9.3	-9.3	-9.4	-9.6	-9.5	-9.5	-6.3	-8.4	24
21	-9.5	-9.6	-9.5	-9.2	-9.3	-9.3	-9.1	-8.9	-8.7	-8.2	-7.9	-7.6	-7.3	-7	-7.1	-7.3	-7.9	-8.6	-8.6	-9	-9.4	-10.1	-10.5	-10.9	-7.0	-8.8	24
22	-11.3	-11.6	-11.8	-12.3	-13	-12.9	-12	-10.9	-9.5	-8	-7.7	-7.8	-7	-6	-5.6	-4.4	-4	-4.1	-4.2	-5.1	-5.8	-6.2	-8.4	-9.7	-4.0	-8.3	24
23	-10.2	-10.6	-9.6	-9.1	-9.1	-9.2	-8.5	-7.2	-5.3	-4.3	-3.6	-2.9	-2.2	-1.4	-1.2	-1	-0.8	-1.8	-2	-2.6	-3.1	-3.6	-4.1	-4.7	-0.8	-4.9	24
24	-6	-8	-9.5	-10.8	-11.6	-12.1	-10.5	-6.3	-4.5	-2.7	-0.9	0.1	0.9	1.4	2.1	1.6	1.6	1.5	1	-0.3	-1.2	-2	-3.9	-5.3	2.1	-3.6	24
25	-6.3	-6	-5.6	-5.2	-5	-5.2	-4.7	-3.5	-2.5	-1.3	0.2	0.6	2	2.1	1.6	0.7	0.4	-0.1	-0.8	-1.9	-2.9	-4.6	-6.2	-7.9	2.1	-2.6	24
26	-8.9	-10	-10.9	-11.6	-12.1	-11.7	-7.2	-3.5	-0.6	1.7	2.5	3.6	4.8	6.2	7	7.9	9.2	10.2	9.4	7.3	2.4	0.1	-0.3	0	10.2	-0.2	24
27	0.2	-2	-3.3	-3.9	-5	-5.2	-2.7	0.1	1.7	3.1	4.3	5.6	6.7	7.9	8.8	9.3	9.7	9.4	8.4	6.7	5.4	4.2	3.2	2.7	9.7	3.1	24
28	2.6	2.2	2.2	1.9	1.8	2.3	3.3	4.4	5.9	7.8	10.2	12.2	13.1	14.1	14.2	13.8	13.9	12.9	11.4	9.9	8.1	5.9	4.8	5	14.2	7.7	24
29	4	3.3	3	2.7	2.1	2.5	4	6	7.6	9.4	11.9	14.2	15.6	16.4	17.1	16.9	16.3	15.8	15.9	14.1	12	11	10.3	9.5	17.1	10.1	24
30	8.4	7.4	6.5	5.9	5.4	5	5	5.1	5.5	6	6.9	8.5	8.9	9.9	12.2	13.2	13.4	13.2	12.8	11.5	11	9.9	8.6	7.4	13.4	8.7	24
HOURLY MAX	8.4	7.4	6.5	5.9	5.4	5.0	5.5	6.5	8.3	11.7	15.1	16.0	16.5	16.9	17.1	16.9	16.3	15.9	15.9	14.1	12.0	11.0	10.3	9.5			
HOURLY AVG	-2.9	-3.5	-3.9	-4.2	-4.5	-4.6	-3.8	-2.2	-0.8	0.8	2.0	2.8	3.7	4.2	4.5	4.6	4.7	4.4	3.7	2.3	1.0	0.0	-1.0	-1.8			

STATUS FLAG CODES

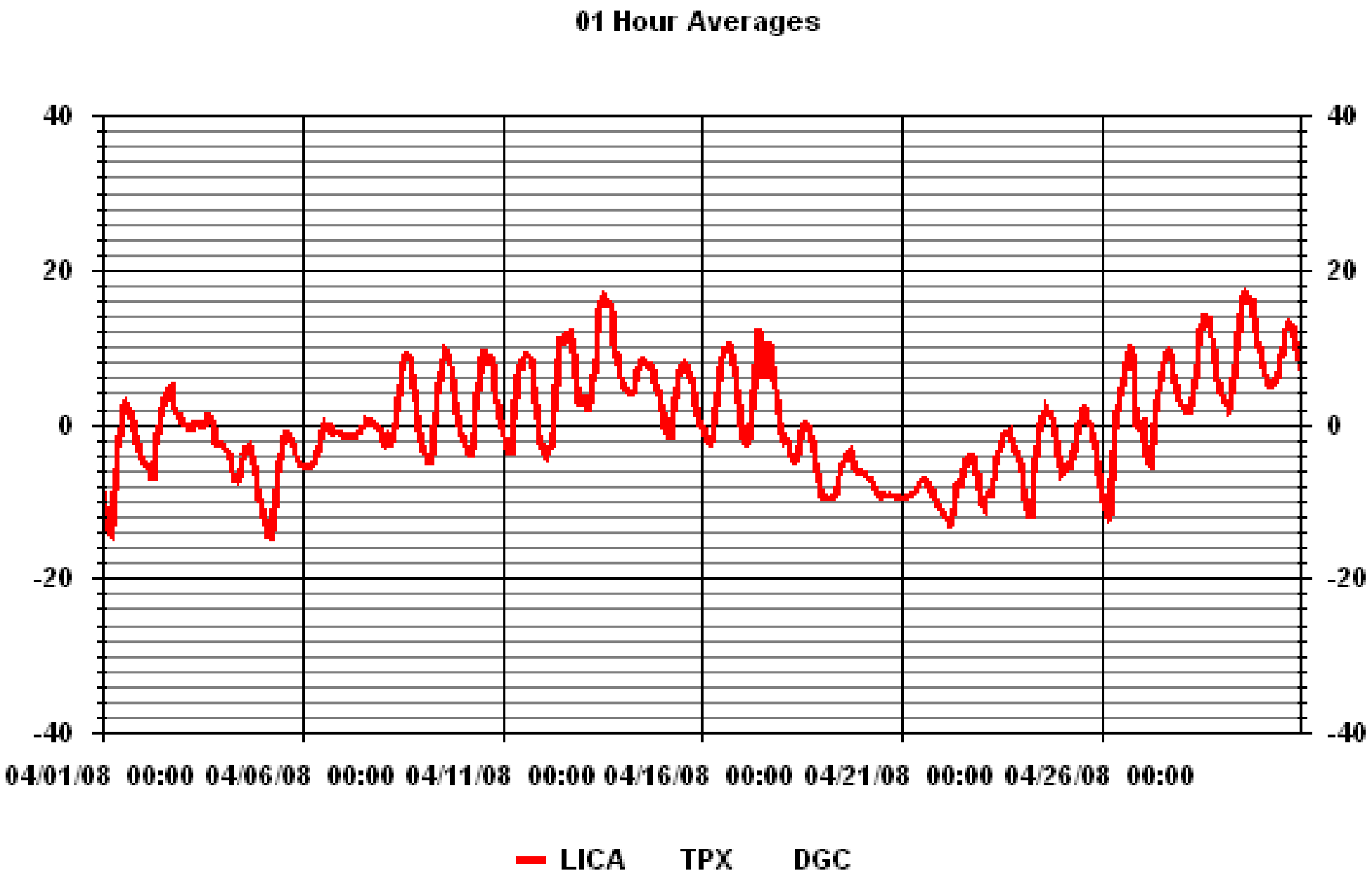
S	- OUT OF SERVICE	OD	- OUTSIDE DECTECTION LIMITS
N	- INVALID DATA	M	- MISSING DATA
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE



MONTHLY SUMMARY

MINIMUM 1-HR AVERAGE:	-14.5	^{o}C	@ HOUR(S)	6	ON DAY(S)	5
MAXIMUM 1-HR AVERAGE:	17.1	^{o}C	@ HOUR(S)	15	ON DAY(S)	29
MAXIMUM 24-HR AVERAGE:	10.1	^{o}C			ON DAY(S)	29
					VAR-VARIOUS	

CALIBRATION TIME:	0	HRS	OPERATIONAL TIME:	720	HRS
			AMD OPERATION UPTIME:	100.0	%
STANDARD DEVIATION:	6.78		MONTHLY AVERAGE:	0.23	^{o}C


01 Hour Averages
40
20
0
-20
-40
04/01/08 00:00
04/06/08 00:00
04/11/08 00:00
04/16/08 00:00
04/21/08 00:00
04/26/08 00:00
LICA
TPX
DGC

Relative Humidity

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

APRIL 2008

RELATIVE HUMIDITY hourly averages (%)

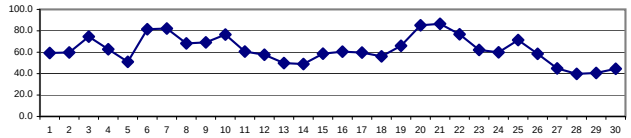
MST

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	71.6	78.8	80.7	82.4	83.2	83.6	81.5	71.8	63.4	59.6	55.2	50.3	45.5	40.1	35.9	37.4	39.7	38.5	43.0	49.6	51.6	55.1	60.8	63.4	83.6	59.3	24
2	62.9	60.2	59.5	65.9	70.1	74.0	75.4	70.6	62.0	56.3	54.9	52.8	52.6	53.0	53.6	48.7	42.7	43.4	56.0	60.4	63.0	65.0	66.0	66.1	75.4	59.8	24
3	66.9	67.8	67.0	68.3	69.5	70.6	72.5	69.1	70.3	69.5	72.1	78.6	81.3	83.7	74.8	66.2	69.3	77.8	78.3	78.7	80.0	84.2	83.6	89.5	89.5	74.6	24
4	86.1	85.2	84.8	86.8	89.7	89.5	86.8	81.9	79.1	78.1	68.0	58.0	50.9	46.1	38.5	33.4	32.2	32.5	34.5	37.7	45.7	60.6	63.4	57.7	89.7	62.8	24
5	57.7	63.6	65.1	70.2	70.9	68.9	64.6	51.1	39.3	34.1	31.1	30.0	28.3	27.0	28.2	29.9	31.3	34.0	35.8	44.5	67.1	82.3	84.3	85.9	85.9	51.1	24
6	86.7	85.9	86.6	85.9	85.4	85.2	84.5	83.3	80.4	77.7	76.0	71.8	69.1	68.0	74.1	78.4	76.1	77.4	83.9	89.4	88.2	87.4	86.9	87.1	89.4	81.5	24
7	86.3	85.4	84.7	84.6	84.4	83.1	81.2	80.7	80.2	79.2	78.1	77.0	75.7	77.9	73.8	73.4	74.7	82.4	85.1	85.6	87.5	88.9	89.9	91.4	91.4	82.1	24
8	93.5	93.8	94.1	93.5	93.7	94.0	87.2	78.0	74.1	67.4	61.0	55.3	48.8	45.2	42.2	43.4	42.1	37.5	45.5	56.1	61.6	67.6	78.5	83.7	94.1	68.2	24
9	82.8	84.7	84.8	85.4	88.7	89.0	84.1	74.3	66.2	55.9	50.7	48.9	45.4	42.6	45.1	46.0	48.7	55.8	65.4	74.1	80.1	84.9	87.5	90.0	90.0	69.2	24
10	91.3	91.8	92.4	92.9	93.0	92.7	94.7	92.5	81.4	75.0	73.3	69.5	61.2	54.8	59.6	60.4	56.6	54.3	57.7	70.1	74.6	77.6	83.5	84.9	94.7	76.5	24
11	87.8	91.1	92.6	91.8	91.6	89.1	79.0	65.5	54.5	43.7	44.0	48.1	40.6	37.2	34.9	35.6	32.8	33.8	38.2	46.2	54.8	64.6	77.0	80.2	92.6	60.6	24
12	83.9	86.4	87.7	85.9	85.9	85.2	78.8	63.7	50.0	38.3	33.8	34.5	36.7	38.4	37.9	37.4	36.9	37.6	40.4	47.3	56.5	61.6	69.4	69.4	87.7	57.7	24
13	71.0	67.5	72.3	75.0	71.7	65.2	59.8	56.6	51.5	43.1	34.4	33.8	33.6	33.9	35.6	36.3	38.4	37.6	41.4	56.3	57.0	41.4	40.1	43.1	75.0	49.9	24
14	48.1	48.5	49.2	50.6	53.0	56.4	57.8	55.9	51.4	44.6	42.5	36.3	33.2	34.1	37.1	43.2	46.8	46.2	45.5	50.5	54.0	57.1	63.4	70.2	70.2	49.0	24
15	74.1	79.5	76.7	84.5	83.8	78.5	67.9	53.0	42.8	39.6	36.5	34.3	33.1	32.5	34.3	46.8	43.4	47.2	50.9	59.6	72.6	76.0	79.1	80.5	84.5	58.6	24
16	81.8	82.2	85.7	89.1	90.7	91.5	88.9	82.7	67.2	54.8	50.1	47.8	40.5	34.5	34.8	32.5	30.3	30.7	35.2	45.3	51.3	58.2	68.5	78.7	91.5	60.5	24
17	81.0	85.3	87.2	88.0	88.8	83.4	77.5	68.4	53.4	43.5	34.7	40.3	51.0	79.6	74.3	50.1	34.2	31.8	25.5	27.4	39.2	54.7	63.4	69.3	88.8	59.7	24
18	75.9	81.4	79.8	77.6	67.6	58.0	59.5	57.9	53.8	50.6	48.0	44.9	42.5	41.2	41.2	42.5	42.8	43.7	46.9	54.6	57.2	57.3	61.3	61.5	81.4	56.2	24
19	62.3	64.6	66.5	66.7	66.9	68.3	69.1	68.6	68.9	66.5	60.3	56.3	55.1	54.6	54.2	56.0	54.2	54.4	58.8	65.1	80.8	88.4	89.4	88.0	89.4	66.0	24
20	89.1	89.2	88.6	87.5	88.4	88.6	87.4	87.9	87.6	82.8	84.2	83.2	79.8	80.6	82.2	83.0	83.8	81.4	85.3	84.1	84.1	85.5	84.8	85.1	89.2	85.2	24
21	87.6	88.3	88.1	86.4	87.9	88.6	87.9	87.2	86.5	86.3	87.3	88.3	89.0	88.9	85.3	85.9	86.7	87.0	86.4	83.9	81.9	80.8	85.1	85.5	89.0	86.5	24
22	84.8	84.4	83.7	83.8	83.0	81.6	80.4	79.4	76.1	69.2	67.4	72.7	69.8	69.1	64.8	59.8	72.0	76.1	73.9	78.5	77.5	81.8	87.5	85.0	87.5	76.8	24
23	82.6	83.6	82.3	82.0	82.9	84.7	82.4	75.0	59.6	53.3	50.6	49.5	46.1	42.5	41.9	41.8	43.0	49.6	51.9	55.6	59.8	62.9	64.9	63.5	84.7	62.2	24
24	69.8	78.7	80.3	83.3	86.0	86.2	80.4	67.4	62.3	57.1	50.6	43.3	38.6	35.9	34.7	36.0	36.4	39.0	46.0	54.9	58.9	62.6	71.7	78.0	86.2	59.9	24
25	82.4	84.3	84.9	83.7	86.3	88.2	87.5	86.5	82.9	75.2	64.1	58.2	48.3	47.1	56.6	64.6	55.0	55.0	54.7	59.9	64.1	75.5	81.5	86.4	88.2	71.4	24
26	86.7	87.1	87.3	87.3	85.9	84.6	73.3	59.1	50.7	49.8	53.5	50.9	48.3	43.1	41.6	39.6	33.5	27.2	29.4	35.2	53.7	66.6	68.1	62.2	87.3	58.5	24
27	53.6	61.5	67.1	67.7	71.0	72.2	60.0	48.1	44.8	41.8	38.9	36.3	33.2	30.3	29.0	28.0	27.1	28.5	33.9	37.5	37.5	39.9	43.1	45.8	72.2	44.9	24
28	47.0	47.8	48.1	50.2	51.8	50.0	46.7	44.4	41.4	38.1	34.4	29.6	27.3	27.6	26.8	26.3	26.0	29.5	34.1	36.2	40.6	48.4	52.0	50.1	52.0	39.8	24
29	53.3	54.7	56.3	57.1	58.8	57.5	51.7	46.2	42.7	39.8	35.0	30.4	28.0	26.2	24.8	25.6	26.3	28.8	30.5	34.7	40.2	41.3	42.1	42.7	58.8	40.6	24
30	44.1	45.6	46.6	47.1	48.6	50.2	50.4	50.8	50.7	50.4	48.9	46.5	53.9	56.4	40.1	35.6	34.5	34.3	35.9	45.6	40.4	35.4	37.2	39.6	56.4	44.5	24
HOURLY MAX	93.5	93.8	94.1	93.5	93.7	94.0	94.7	92.5	87.6	86.3	87.3	88.3	89.0	88.9	85.3	85.9	86.7	87.0	86.4	89.4	88.2	88.9	89.9	91.4			
HOURLY AVG	74.4	76.3	77.0	78.0	78.6	78.0	74.6	68.6	62.5	57.4	54.0	51.9	49.6	49.1	47.9	47.5	46.6	47.8	51.0	56.8	62.1	66.5	70.5	72.2			

STATUS FLAG CODES

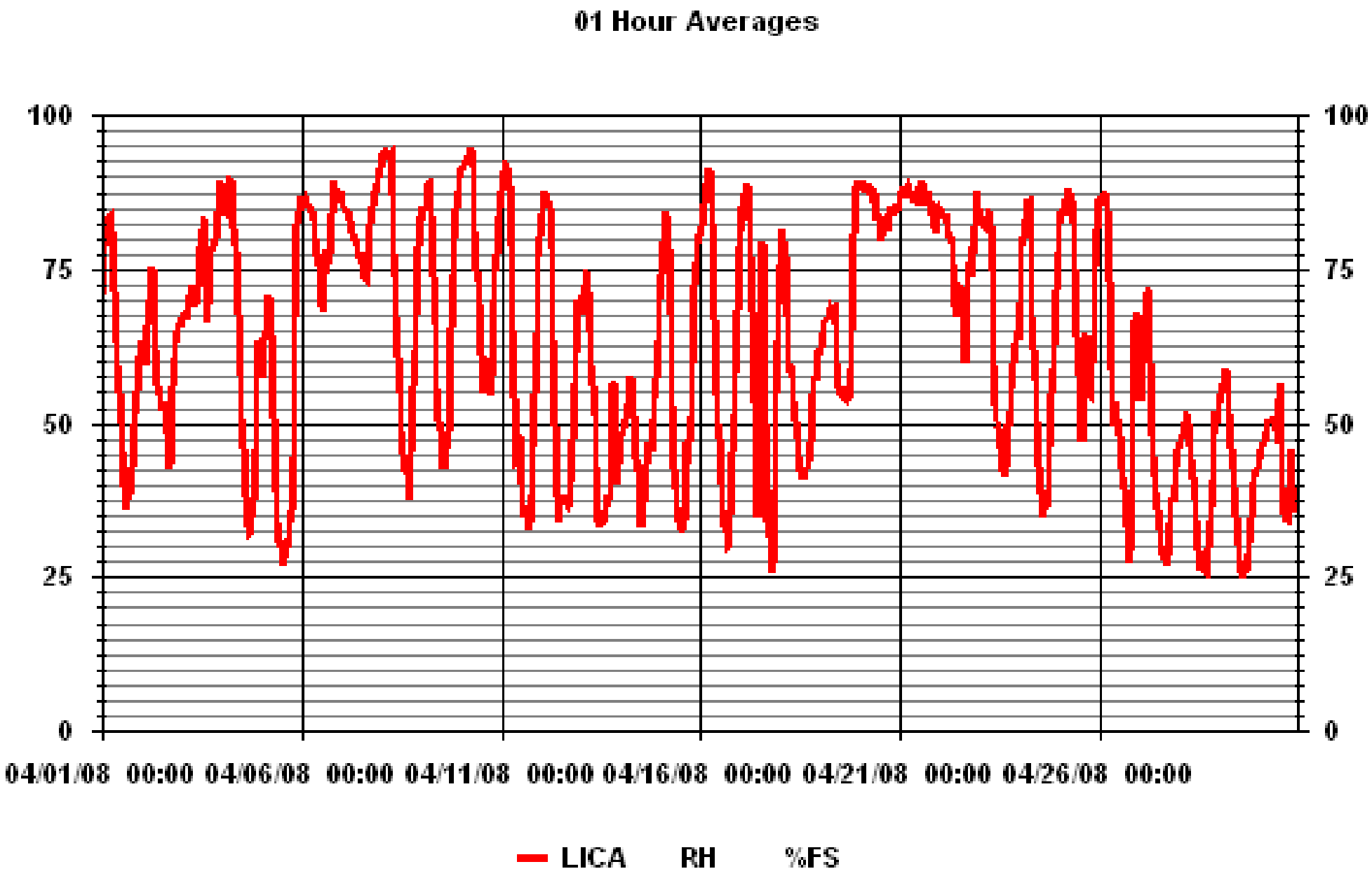
S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	- MISSING DATA
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE

24 HOUR AVERAGES FOR APRIL 2008



MONTHLY SUMMARY

MAXIMUM 1-HR AVERAGE:	94.7	%	@ HOUR(S)	7	ON DAY(S)	10	
MAXIMUM 24-HR AVERAGE:	86.5	%			ON DAY(S)	21	
CALIBRATION TIME:	0	HRS	OPERATIONAL TIME:		720	HRS	
			AMD OPERATION UPTIME:		100.0	%	
STANDARD DEVIATION:	19.45		MONTHLY AVERAGE:		62.45	%	


01 Hour Averages
100
75
50
25
0
04/01/08 00:00
04/06/08 00:00
04/11/08 00:00
04/16/08 00:00
04/21/08 00:00
04/26/08 00:00
LICA RH %FS

Vector Wind Speed

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

APRIL 2008

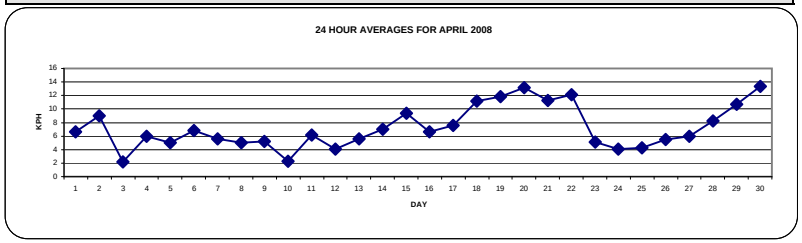
VECTOR WIND SPEED (WS) hourly averages (km/hr)

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	1.2	0.3	0.9	0.5	0.2	0.5	0.8	2.1	5.7	8.2	11.6	11.6	11.8	14	15	15.4	13.7	12.4	9.9	7	6.3	6.4	5.5	5.1	15.4	6.6	24
2	5.2	5.7	6.1	6.5	7.2	6.7	6.3	6.3	7.2	8.3	10	11.8	13.9	15	15.6	13.7	14.6	12.4	9.7	9.1	9.8	6.8	6.7	6.3	15.6	9	24
3	6.9	7.9	6.5	6.1	6.9	8	3.6	2.8	5.5	7.3	7.3	8.3	9.1	9.2	9.1	8	5.4	6.1	3.7	3.9	8.4	6.6	5.2	3.8	9.2	2.2	24
4	4.3	5	4.1	3.4	4.3	6.6	10.3	11.2	10.7	11.4	11.3	10.7	8.6	8.9	8.8	9.2	8.4	7.6	5.5	4	1.4	0.4	0.7	1.5	11.4	6	24
5	2.1	1.1	0.6	1	0.5	0.8	1.6	3.5	6.1	5.9	5.7	6	6.6	6.7	7.8	8.2	7.1	5.4	5.1	7.2	9	8.5	6.6	7.5	9.0	5.0	24
6	6.9	7	7.4	8.2	7.7	8.1	8.2	8	8.2	8.8	7.9	7.8	7.1	7.4	8.8	7.4	7.2	6.8	5.9	3.3	4.4	3.7	3.1	4	8.8	6.8	24
7	4.7	4.4	4.3	4.2	4.3	4.4	6.9	7	6.8	6.4	7.8	8.1	7.4	6.9	7.2	6.5	5.5	6.2	5.3	3.9	4.1	4.2	4.2	3.1	8.1	5.6	24
8	1.6	0.6	1.4	1.3	2.3	3.2	3.8	9.2	10.4	8.4	7	7.7	8.5	8.7	7.1	7.2	8.7	7.6	3.5	3.7	3.3	3.1	1.3	0.3	10.4	5.0	24
9	1.4	2	2.1	1.3	0.4	0.2	1.5	4.1	6.7	6.9	7.4	8.4	8.5	9.4	13.1	13.5	11.6	9.6	6.6	3.8	2	1.9	1.2	1	13.5	5.2	24
10	1.2	0.4	0.3	0.4	0.3	0.7	0.7	1.2	1.7	0.8	2	3.7	1.7	3.3	9.8	9.4	6.6	3	1.2	2.6	1.6	2.1	0	0.7	9.8	2.3	24
11	1.1	0.5	2.1	0.9	1.8	2.7	2.7	5.8	5.4	3.4	9.3	12	14	14.1	13	13.1	12.3	11.2	7.2	5.5	5	2.9	0.4	0.3	14.1	6.1	24
12	1	0.5	0.5	0.2	1	1.7	1.8	2.6	2.9	6.2	6.8	12.6	12.6	9.7	7.5	6.3	4.3	4.1	3.9	2.3	1.8	2.3	1.8	3.2	12.6	4.1	24
13	2.5	2.7	2.1	2	4.2	7.2	4.6	7.8	7.7	7.1	5.9	5.9	7.7	9.1	9	5.7	6.6	6.1	4	0.7	6.6	11.4	5.5	2.4	11.4	5.6	24
14	3.6	3.4	5.8	4.3	4	4.5	3.1	4.2	6.6	8.6	8.4	7.6	10.6	11.1	11	10.2	10.6	9.3	8.5	4.8	6.6	8.1	7.6	6.2	11.1	7.0	24
15	3.2	3.9	5.9	5.1	5.9	6	5.8	8.6	11.4	11.3	12.9	14.5	15.9	15.7	16.8	16.3	13	13.4	11.4	7.8	5.3	5.5	5.6	3.5	16.8	9.4	24
16	2.8	4.5	4.1	4.1	5.9	4.7	4.9	5.8	4.3	7.8	9.2	7	12.9	12.9	11.3	9.9	9.5	6.6	8.4	6.9	4.6	3.8	5	1.8	12.9	6.6	24
17	2.9	0.8	0.3	0.9	1.4	1.4	2.1	2.7	7	8.9	12.8	13.4	9	15.2	5.3	5.3	17	16.8	15.7	11.4	11.9	8.3	4.8	5.9	17.0	7.6	24
18	3.9	3	4.4	3.7	7.7	12.1	11.9	15	13	12	12.1	13.7	14.3	12	13.3	12.7	13.6	12.7	11.1	12.6	13.2	14.3	12.9	12.7	15.0	11.2	24
19	12.4	12.6	11.3	11.2	11.4	10.9	10	10.1	10.6	11.3	12	12.1	13.1	11.4	12.5	10.8	11.6	13.5	13.8	13.3	12.2	11.3	12.1	12.3	13.8	11.8	24
20	11.8	13.8	13.9	13.1	14.6	13.5	15.3	15.7	12.8	14.3	14.1	12.9	14.6	13.4	14.4	13.8	14.2	12.2	11.7	10.8	10.5	11	11	11.7	15.7	13.1	24
21	11.2	10.6	9.2	10.8	9.7	8.5	10.3	10	10.7	11	12.4	13.2	12.1	11.6	14.5	13.9	13.3	13.6	10.4	11.7	11.2	11.2	10.5	9.1	14.5	11.3	24
22	10.3	11	11.4	10.5	9.6	10	10.1	10.3	12	13	17.8	17.8	17.7	15.7	20.7	17.9	11.9	15.3	15.4	10	7	4.1	5.1	6	20.7	12.1	24
23	5.6	5.6	5.4	4.7	3.9	0.7	3.2	4	3.5	5.7	7.2	11.9	11.9	8.5	8	4	2.6	7.7	5.1	2.6	1.8	2	3.6	3.1	11.9	5.1	24
24	2.4	2.3	5.1	2.7	1.6	1.3	0.9	3.5	4.4	3.8	5.4	4.9	6.8	6.4	6.1	6.5	7.3	3.3	6.9	6.3	4.6	3.3	1.6	0.3	7.3	4.1	24
25	0.2	1.2	0.6	1.3	1.2	1.6	2	2.4	1.6	2.1	1.8	1.4	5.3	7.5	11.7	8.7	13	14.1	12.8	5.9	2.7	1.2	0.6	0.5	14.1	4.2	24
26	0.6	0.4	0.4	0.6	0.2	0.9	1.5	1.4	6.6	9.1	10.9	10.8	11.8	12.7	15.1	13.5	8.6	10.9	7	1.5	2.2	0.5	2	3.7	15.1	5.5	24
27	2.5	1.8	1.7	1	1.6	0.1	2.1	7.2	6.3	7.4	8.5	8.1	8	8.5	8.8	8.8	9.1	7.3	5.7	8.3	8.6	7.2	8.1	6.5	9.1	6.0	24
28	6.5	6	3.5	3.8	4.5	5.5	4.7	3.7	4.9	5.8	8	14.1	14.8	12.2	14.9	19.1	15.4	14.9	11.5	8.2	4.3	3	4.3	3.8	19.1	8.2	24
29	4.6	4.7	4.7	5.7	5.3	4.6	7.6	8.2	10.2	10.9	12.2	13.2	14.5	16.1	16.6	17.4	18.7	12.6	10.2	10.4	10.2	12.2	13.3	13.6	18.7	10.7	24
30	13.5	12.9	14.4	16.1	14	15.4	18.1	17.5	13.6	13.9	16.9	17.2	12.9	9.8	13.6	14.6	10.5	12.3	10.5	7.1	9.7	11.9	13.4	11	18.1	13.4	24
HOURLY MAX	13.5	13.8	14.4	16.1	14.6	15.4	18.1	17.5	13.6	14.3	17.8	17.8	17.7	16.1	20.7	19.1	18.7	16.8	15.7	13.3	13.2	14.3	13.4	13.6			
HOURLY AVG	4.6	4.6	4.7	4.5	4.8	5.1	5.5	6.7	7.5	8.2	9.4	10.3	10.8	10.8	11.5	10.9	10.4	9.8	8.3	6.6	6.3	6.0	5.5	5.0			

STATUS FLAG CODES

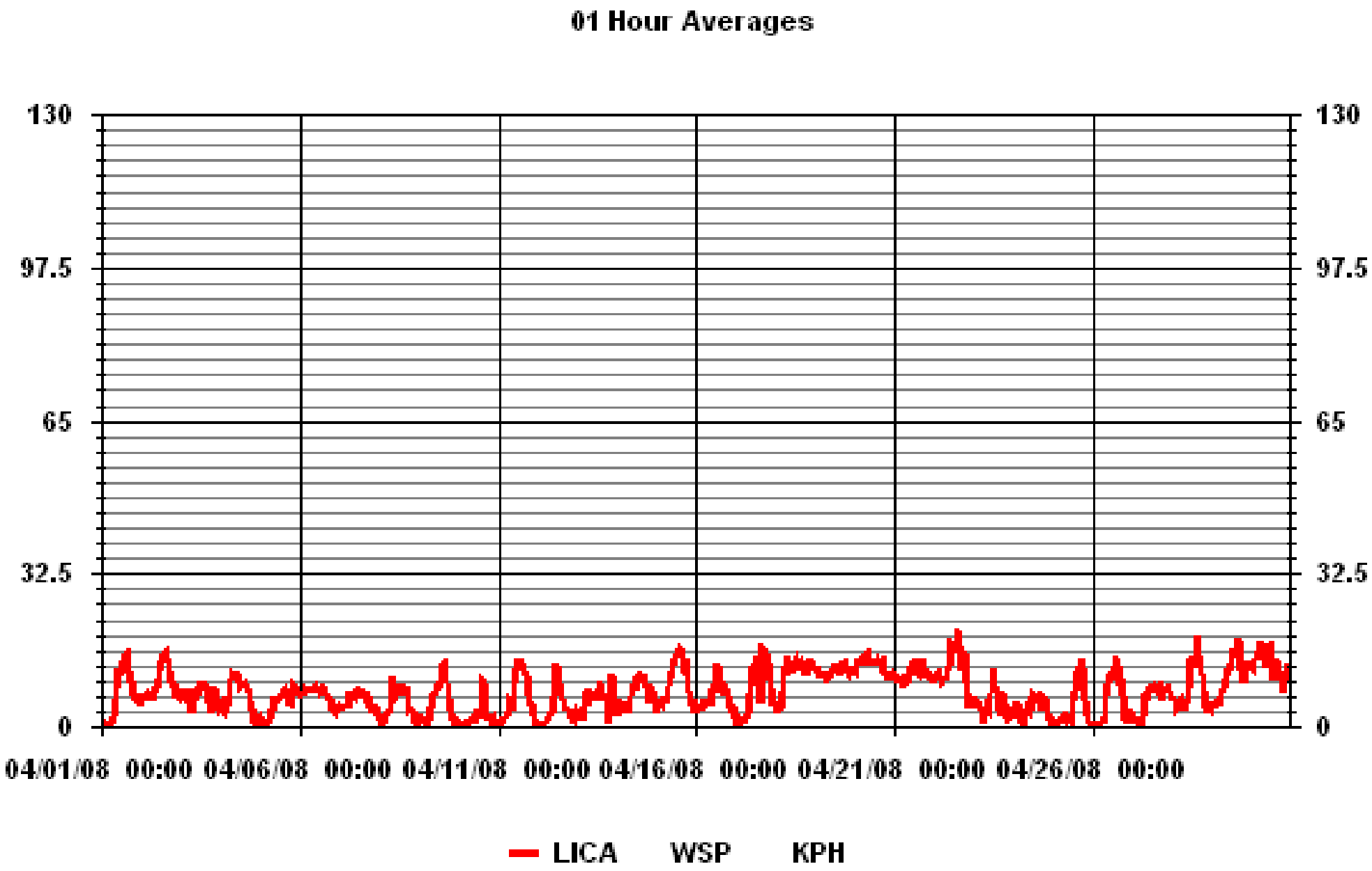
S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	- MISSING DATA
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE



LAST CALIBRATION: December-2006

MONTHLY SUMMARY

MAXIMUM 1-HR AVERAGE:	20.7	KPH	@ HOUR(S)	15	ON DAY(S)	22	
MAXIMUM 24-HR AVERAGE:	13.4	KPH			ON DAY(S)	30	
CALMS (≤ 0 KPH)	1.88	%	OPERATIONAL TIME:		720	HRS	
MONTHLY CALIBRATION TIME:	0	HRS	AMD OPERATION UPTIME		100.0	%	
STANDARD DEVIATION:	4.53		MONTHLY AVERAGE:		7.41	KPH	


01 Hour Averages
130
97.5
65
32.5
0
04/01/08 00:00
04/06/08 00:00
04/11/08 00:00
04/16/08 00:00
04/21/08 00:00
04/26/08 00:00
LICA WSP KPH

LICA
WSP / WD Joint Frequency Distribution (Percent)

April 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	.83	1.38	4.58	2.22	5.55	5.55	3.33	.69	.83	.97	4.72	4.58	3.05	.13	.55	.27	39.30
<	12.0	1.94	1.80	1.66	1.38	6.11	4.30	3.61	.13	.13	.13	5.00	5.27	3.19	1.38	1.94	1.11	39.16
<	20.0	2.08	2.36	.97	.00	2.50	1.52	1.11	.00	.00	.00	2.50	.83	.97	1.66	2.63	.27	19.44
<	29.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.13	.00	.13
<	39.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
>=	39.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
	Totals	4.86	5.55	7.22	3.61	14.16	11.38	8.05	.83	.97	1.11	12.22	10.69	7.22	3.19	5.27	1.66	

Calm : 1.94 %

Total # Operational Hours : 720

Distribution By Samples

Direction

	Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
<	6.0	6	10	33	16	40	40	24	5	6	7	34	33	22	1	4	2	283
<	12.0	14	13	12	10	44	31	26	1	1	1	36	38	23	10	14	8	282
<	20.0	15	17	7		18	11	8				18	6	7	12	19	2	140
<	29.0															1		1
<	39.0																	
>=	39.0																	
	Totals	35	40	52	26	102	82	58	6	7	8	88	77	52	23	38	12	

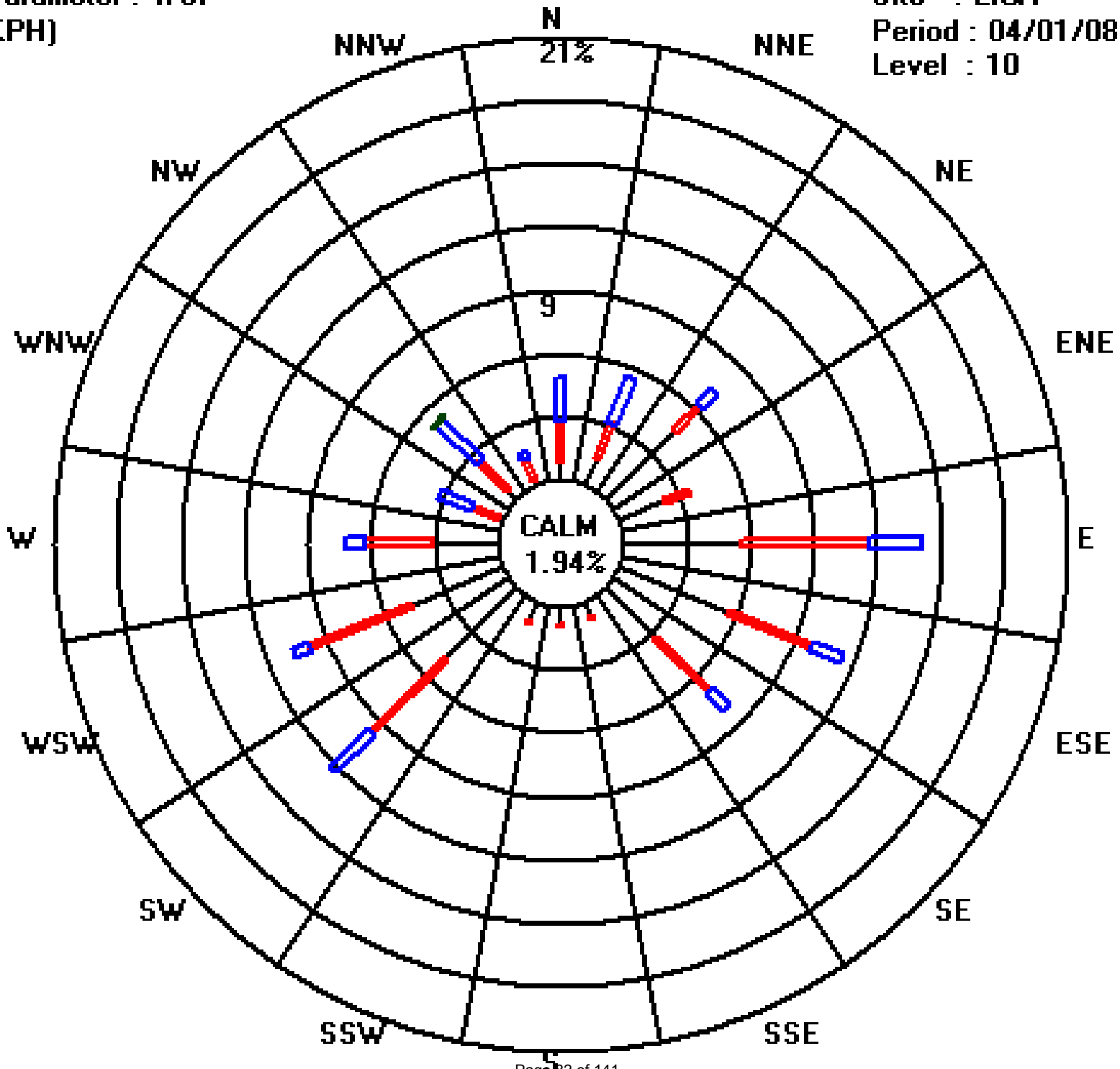
Calm : 1.94 %

Total # Operational Hours : 720

Logger : 01 Parameter : WSP
Class Limits (KPH)

>= 39.0
< 39.0
< 29.0
< 20.0
< 12.0
< 6.0

Site : LICA
Period : 04/01/08-04/30/08
Level : 10



LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

APRIL 2008

VECTOR WIND SPEED MAX instantaneous maximum in km/hr

MST

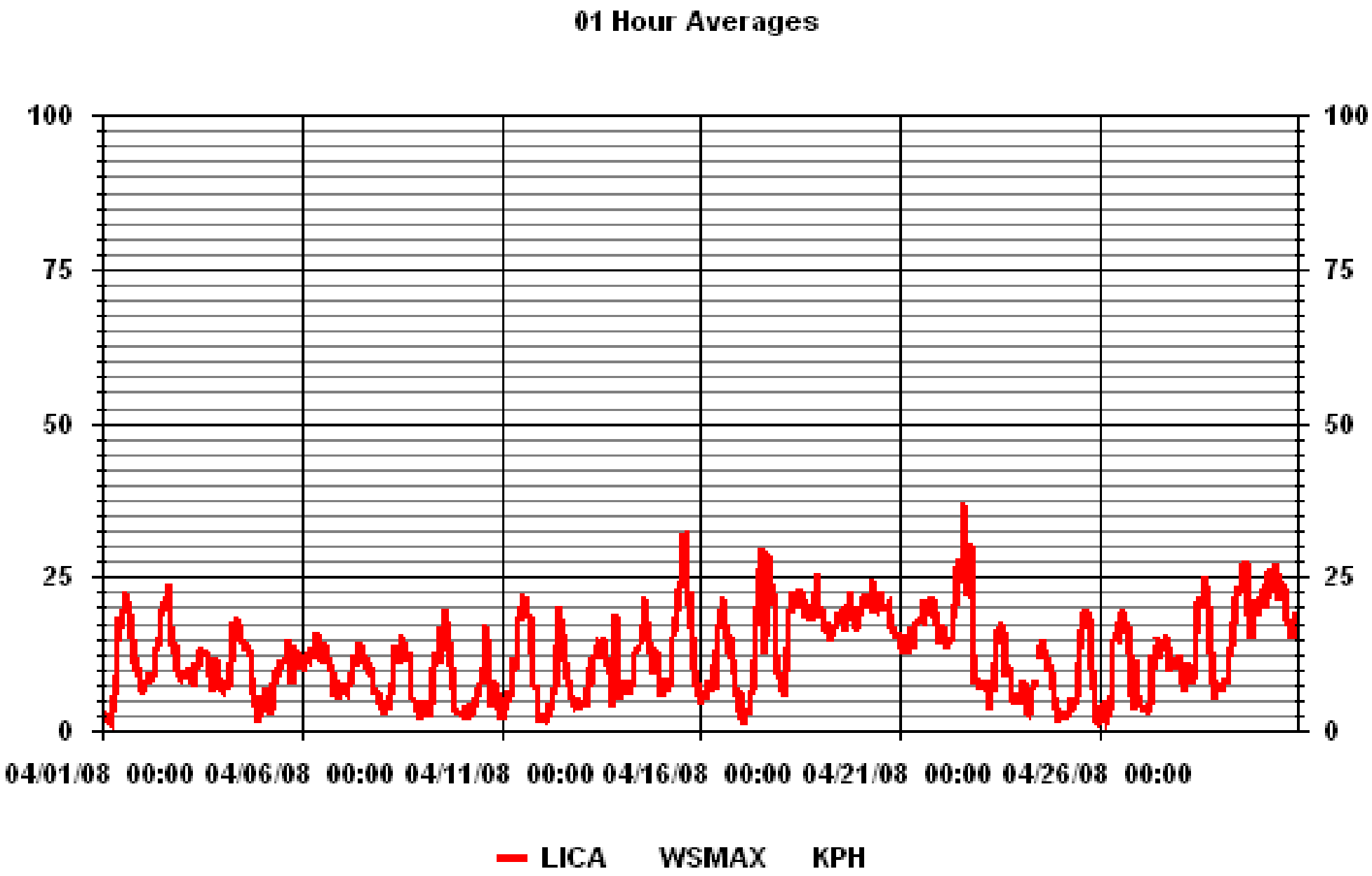
HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.
DAY																									
1	2.9	1.2	3	2	2	1.5	2.9	5.8	9	14.6	18.4	16.4	19.1	19.8	22.5	21.5	20.4	19.2	15.4	11.4	10.1	10.6	9.2	6.7	22.5
2	6.2	7.8	8.1	8	9.2	7.8	9	9.1	13	13.6	15.4	18.7	19.7	20.7	21.3	20.4	23.9	17.4	14.2	12.6	14.6	10	9.1	8.6	23.9
3	9.3	9.9	8.7	8.7	8.7	10.1	7.9	7.2	11	10.5	10.7	12.9	13.3	13	12.7	12.5	9.6	9.8	6.4	10.7	11.7	10.6	8.4	7.3	13.3
4	6.9	8.1	7.9	7.9	6.9	11.1	17.6	15.8	15.3	18.4	17.6	15	14	14.9	13	14.5	13.3	12.6	9	6.3	4	1.5	5.7	2.9	18.4
5	3.3	4.9	7.1	3.3	6.8	2.9	3.5	7.7	9.8	9.2	10.2	11.3	11.2	11.4	12	15	12.6	9.8	7.6	14.2	13.6	12.5	12.8	12.6	15
6	10.5	10.3	11.2	12	11.5	12.3	13.7	12.2	12.2	16	11.5	12.6	11.8	11.1	14.4	12.5	12	11.2	9.9	5.4	7.6	8.1	5	7.6	16
7	6.8	7.7	6.3	6	7.5	7.7	9.5	11	12.4	10.4	11.5	14.2	12.7	10.8	12.3	10.6	9.5	10.1	9.2	6.6	6.8	6.7	6.3	4.6	14.2
8	4	2.5	4.7	3.8	3.8	5.9	8	14	13.6	11.9	10.8	13.6	15.6	12.8	14.5	11.1	12.1	12.6	5.4	5	5	4.8	3.6	1.9	15.6
9	3.7	3.3	4.3	4.3	3.9	2.1	4.2	10.2	12.6	11.3	10.9	16.7	12.9	15.3	19.7	17.8	17.1	14.7	10.8	7.1	3.6	3.3	3	3.1	19.7
10	2.7	3.1	1.6	4.1	1.9	4.3	3.2	3.7	4.1	5.4	6.9	7.7	7.9	10.5	17.3	15.3	13.1	7.3	3.9	5.6	8.3	6.7	3.4	5	17.3
11	2.5	2.4	4.5	4.2	4.6	6.4	5.7	11.9	10.3	10.6	18.4	17.9	20.2	22.2	19.4	22	18.3	18.9	12.9	7.7	7.3	7.1	2.4	1.3	22.2
12	3	2.4	2.3	1.9	2.4	4.4	3.5	6.1	7.2	14.2	13.3	20.2	18.6	16	11.6	11.2	8.6	7.5	5.9	5.4	4.2	4.6	3.5	4.8	20.2
13	4.7	4.6	4.3	3.9	7.1	10.3	7.6	11.7	12.4	14.1	11.7	14.3	14	14.9	14.9	10.5	10.9	9.7	6.1	3.6	13.5	19.1	8.4	5	19.1
14	7.7	6.6	8	7.3	6.8	6.7	8	7.1	12.8	13.3	13.4	14.1	16.3	16	21.8	17.6	17.4	14.7	12.7	9.3	10.7	12.8	12.5	9	21.8
15	5.5	6.9	8.1	6.4	8.4	7.7	8.2	15.3	16.2	18.4	19.6	23.1	24.2	24.5	31.7	31.9	21.4	21.7	17.1	15.7	10.2	7.4	8	6	31.9
16	4.2	6.4	5.7	5.7	8.3	7.1	6.6	10.5	6.7	13	16.9	17.4	19.7	21.8	20.2	17.6	15.2	12.3	15.6	12.1	9.6	5.6	6.9	4.6	21.8
17	5	2.1	1.2	3.2	3.2	3.4	5.8	6.7	11.6	16.9	20.3	26.4	18.3	29.7	12.6	15.2	28.8	26.3	24.1	21	21.3	12.9	9.6	8.7	29.7
18	6.6	6.1	6.1	9.4	13.4	19.8	19.1	22.3	22.3	19.9	22.1	22	23.2	20	21.7	18.2	20.6	19.3	18	19.2	20.2	22.7	25.4	18.2	25.4
19	20.3	18.6	16.6	16.4	17.4	17.3	14.8	15.6	16.8	17.2	19.1	19.3	19.2	19.6	17.9	16	19.7	19.4	22.7	17.9	19.2	17	16.5	20.2	22.7
20	18.7	21.6	20.2	22	21.2	19.8	21.9	24.9	19.2	20.8	20.1	20.8	22.7	20	20.7	19.4	20.3	20.7	19.4	17	15.8	16.5	14.9	15.6	24.9
21	15.5	13.6	12.6	15.7	13.4	12.7	16.8	13.1	15.1	17.2	17.7	18.3	18.1	17.9	21.3	19.6	19.4	**P**	19.5	21.7	18.2	19.6	17.3	14.4	21.7
22	15.2	14.9	17.1	15.3	13.2	14.6	14.8	15.3	18.2	20.4	26.5	26.4	28.1	24.1	36.9	28.1	21.9	23.4	30.5	21.7	12.9	7.7	8.1	7.5	36.9
23	7.6	7.5	8	8.1	6.8	3.2	6.2	6.9	6.3	10.9	13.9	16.4	17.1	17.1	16.4	9	9.7	10.1	9.6	5.1	4.9	4.4	6	5	17.1
24	4.1	5.5	8	5.7	3.4	2.8	3.3	7	7.6	7.6	**M**	12	13.7	13.6	14.5	13.6	12.1	9.8	11	9.8	7	5.6	3.6	1.3	14.5
25	3.7	2.8	1.8	2.6	2.4	3.1	5.4	4.5	4	4.3	5.4	11.2	13.2	16.6	18.8	18.8	19.6	18.6	18.3	10.3	7	2.9	1.7	1.3	19.6
26	1.7	3.8	4.1	2.5	1.5	2.1	3.4	5.6	14.7	15.7	15.7	15.4	17.7	19.1	19.9	17.2	17.6	17.1	12.8	5.8	4.2	4.3	11.6	6.2	19.9
27	4.7	4.4	3.3	3.3	3.6	2.9	4.4	12.4	10	11.8	13.9	15.3	11.5	13.2	14	13.1	15.5	14.1	9.6	12.4	11.2	10	11.1	10.2	15.5
28	12.1	11.1	8	6.1	7.6	11	10.6	7.6	8.4	9.3	15.5	21	21.7	19.7	21.5	25.1	23.7	20.5	17.1	13	7.9	5	8.2	7.3	25.1
29	7.2	6.7	6.7	8.7	8.2	7.5	11.9	13.6	17.9	17.2	21.8	23.6	22.4	23.1	27	26.2	27.7	18.7	19.1	15.7	15.6	19.7	21.2	18.5	27.7
30	21.9	21	22.8	23.7	19.8	21.6	26	26.5	22.2	25.1	27.2	25.8	21.1	24.1	23.8	23.3	18.1	17.5	18	15.2	16.1	18.1	19.3	15.2	27.2
PEAK	21.9	21.6	22.8	23.7	21.2	21.6	26.0	26.5	22.3	25.1	27.2	26.4	28.1	29.7	36.9	31.9	28.8	26.3	30.5	21.7	21.3	22.7	25.4	20.2	

STATUS FLAG CODES

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

MONTHLY SUMMARY

MAXIMUM INSTANTANEOUS READING	36.9	KPH	@ HOUR(S)	15
			ON DAY(S)	22


01 Hour Averages
100
75
50
25
0
04/01/08 00:00
04/06/08 00:00
04/11/08 00:00
04/16/08 00:00
04/21/08 00:00
04/26/08 00:00
LICA WSMAX KPH

Vector Wind Direction

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

APRIL 2008

VECTOR WIND DIRECTION (WD) hourly averages in degrees

MST

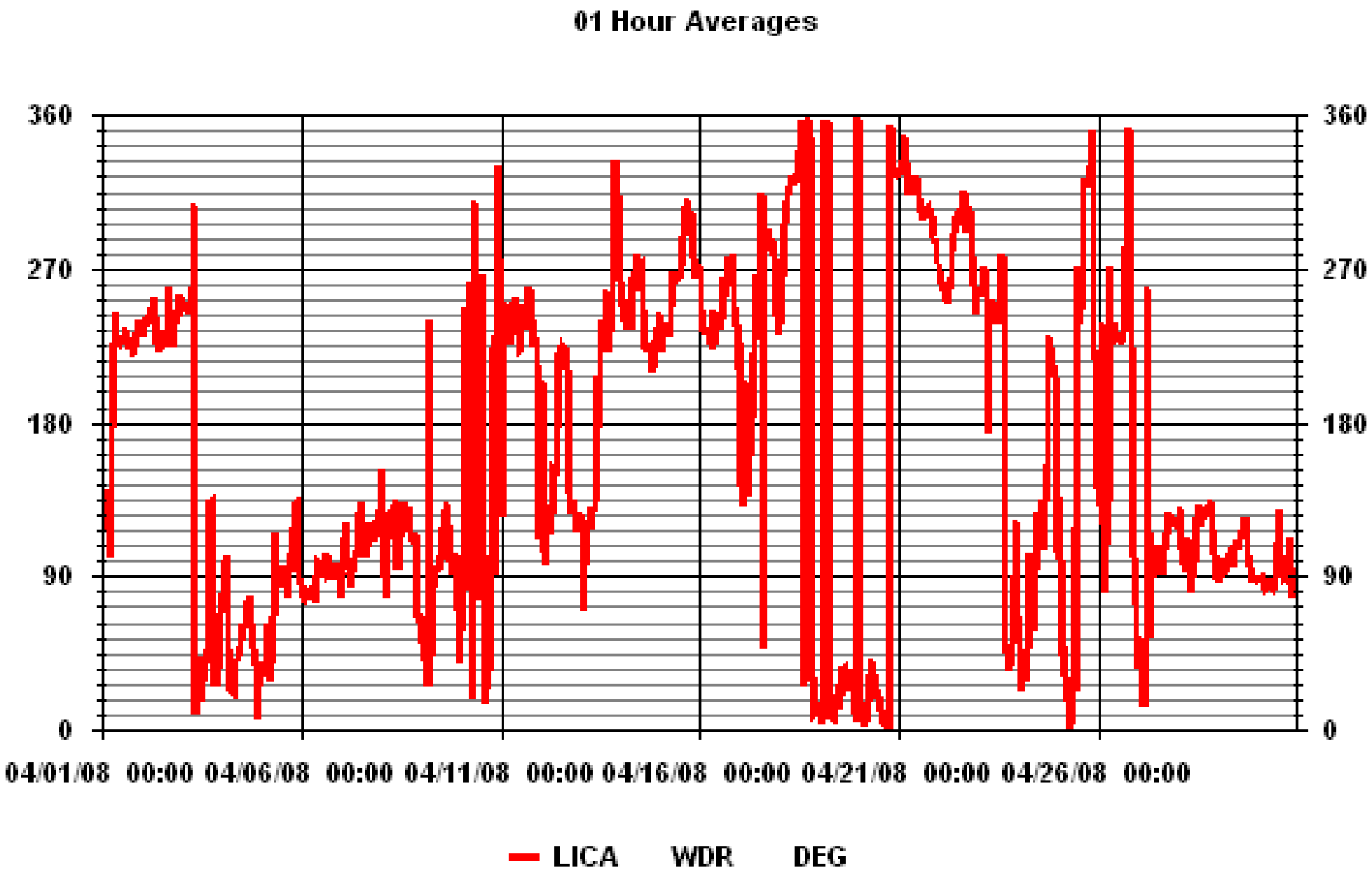
HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	24-HOUR	24-HOUR AVG	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	AVG.	QUANDRANT	RDGS.
DAY																											
1	127	137	117	120	141	101	177	227	244	229	229	227	230	228	235	227	228	224	221	222	224	233	240	238	227	SW	24
2	233	230	236	241	243	237	247	254	243	227	221	228	233	233	227	228	259	248	225	228	239	239	242	255	236	SW	24
3	250	246	250	247	243	249	260	309	9	40	34	16	43	29	39	48	102	134	135	51	25	37	37	68	19	NNE	24
4	80	95	99	103	49	24	23	22	27	41	43	48	52	61	62	76	72	78	64	49	39	6	26	40	52	ENE	24
5	36	35	40	63	41	28	39	67	116	94	96	89	84	94	94	78	94	103	92	118	132	133	104	90	96	E	24
6	86	80	78	81	81	79	76	85	75	91	99	98	90	97	90	103	91	92	97	89	89	98	92	78	87	E	24
7	88	100	113	121	95	92	84	92	101	105	127	129	133	120	102	104	107	122	112	112	114	123	127	127	110	ESE	24
8	153	111	91	78	112	126	127	128	132	135	94	128	113	125	133	116	131	128	112	111	114	116	68	66	122	ESE	24
9	68	52	40	59	26	240	43	85	86	97	93	102	100	119	129	133	122	100	94	91	102	104	72	39	104	ESE	24
10	58	86	97	248	116	263	83	18	310	125	76	261	237	267	15	30	24	34	102	224	91	232	331	278	8	N	24
11	124	182	250	226	231	226	235	231	250	253	238	223	224	235	249	235	248	259	251	241	224	230	215	112	237	SW	24
12	182	204	105	96	121	132	115	126	154	153	176	221	225	223	224	224	212	140	129	126	135	116	120	124	187	S	24
13	127	119	70	97	117	123	118	131	128	134	208	177	223	239	240	258	221	225	233	251	320	334	332	315	199	SSW	24
14	264	248	253	241	235	250	235	265	266	268	278	257	273	274	247	224	221	224	225	210	212	222	236	245	245	WSW	24
15	222	226	236	237	237	235	230	248	268	262	264	266	266	272	289	307	311	295	297	304	277	265	268	272	272	W	24
16	269	247	235	234	234	235	227	223	246	225	237	239	238	241	265	254	260	277	265	266	278	249	238	211	246	WSW	24
17	229	144	130	204	152	137	161	183	221	228	267	258	289	314	48	280	286	293	285	287	279	277	243	231	273	W	24
18	243	242	265	297	310	313	319	325	319	321	326	340	336	358	25	36	28	359	349	35	32	9	10	14	349	NNW	24
19	12	4	6	358	355	357	351	8	7	16	20	12	26	20	36	37	23	30	35	33	36	11	5	359	15	NNE	24
20	5	10	8	2	5	17	32	41	34	33	25	20	12	12	5	4	8	7	0	354	339	330	328	325	8	N	24
21	326	329	334	349	334	314	317	315	315	323	323	317	313	304	299	301	306	304	306	302	289	286	286	274	310	NW	24
22	269	264	263	258	252	250	259	266	280	291	300	302	300	296	306	316	290	308	305	302	279	261	244	256	286	WNW	24
23	254	259	267	271	263	173	241	250	252	240	243	238	243	256	278	245	51	46	35	38	50	91	123	68	257	WSW	24
24	55	22	38	34	28	47	104	96	88	58	93	128	111	124	135	106	133	155	231	225	220	214	208	104	121	ESE	24
25	138	101	43	50	33	18	0	11	4	119	23	271	238	246	254	323	319	322	318	330	351	223	218	142	310	NW	24
26	130	215	238	122	80	109	134	271	226	232	239	233	232	229	227	233	283	340	353	313	225	102	75	56	244	WSW	24
27	37	39	53	13	40	259	54	115	102	90	95	102	108	101	91	100	106	115	128	126	124	122	123	123	104	ESE	24
28	118	130	107	98	93	113	107	81	89	93	98	124	132	119	123	128	128	130	132	135	127	119	104	90	119	ESE	24
29	87	90	101	94	99	95	96	103	107	95	108	111	106	111	116	117	125	123	104	96	87	91	90	88	104	ESE	24
30	89	89	90	84	82	83	85	89	85	83	85	90	109	129	104	89	90	89	99	113	77	88	88	93	90	E	24
HOURLY AVG	326	329	334	358	355	357	351	325	319	323	326	340	336	358	306	323	319	359	353	354	351	334	332	359			

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:	720	HRS
STANDARD DEVIATION	97.05		AMD OPERATION UPTIME	96.8	%
			MONTHLY AVERAGE	356.00	DEG


01 Hour Averages
360
270
180
90
0
04/01/08 00:00
04/06/08 00:00
04/11/08 00:00
04/16/08 00:00
04/21/08 00:00
04/26/08 00:00
LICA WDR DEG

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

APRIL 2008

STANDARD DEVIATION WIND DIRECTION (STDWDIR) hourly averages in degrees

MST

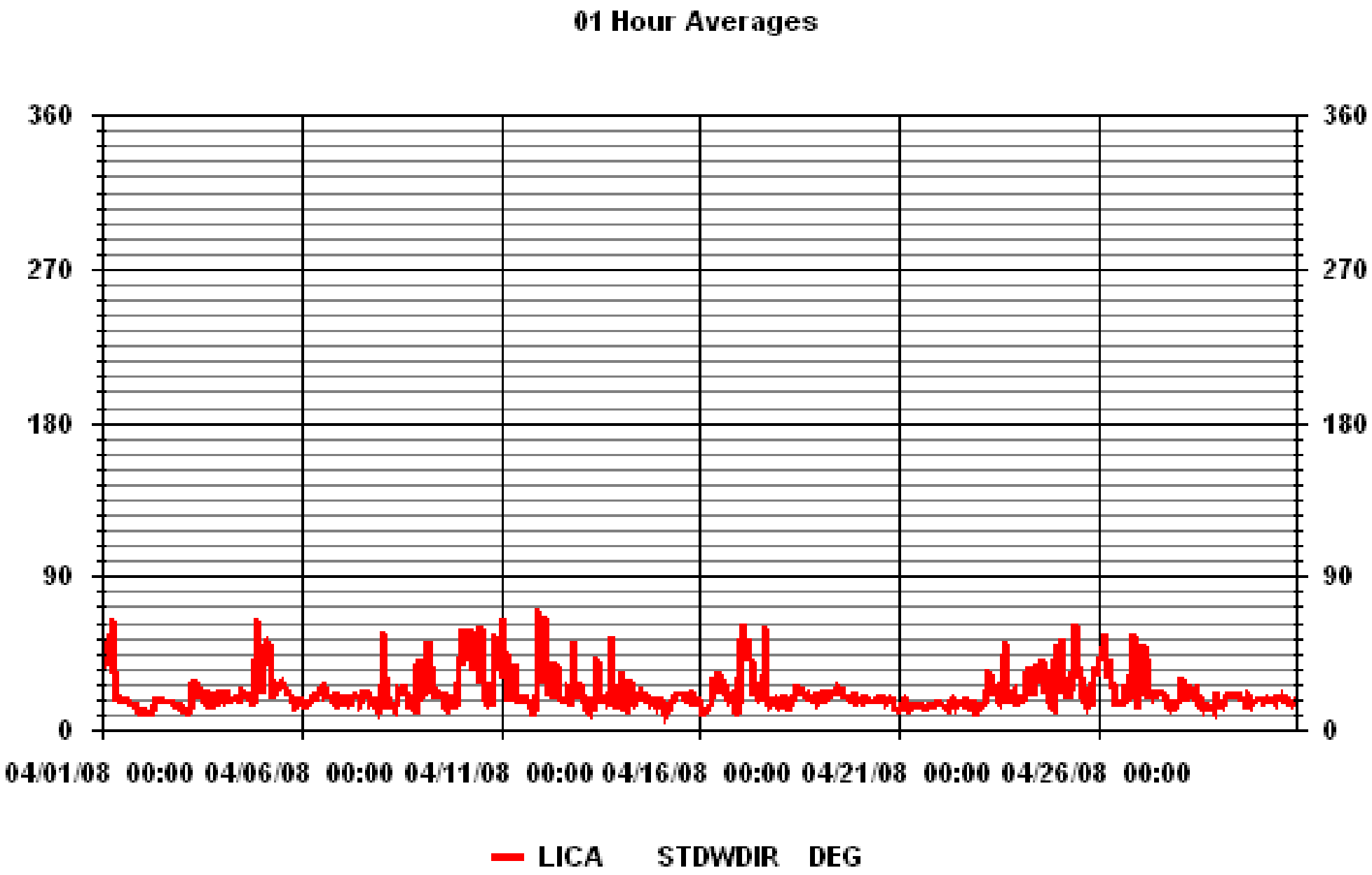
HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00
DAY									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

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: 720 HRS


01 Hour Averages
360
270
180
90
0
04/01/08 00:00
04/06/08 00:00
04/11/08 00:00
04/16/08 00:00
04/21/08 00:00
04/26/08 00:00
LICA STDWDIR DEG

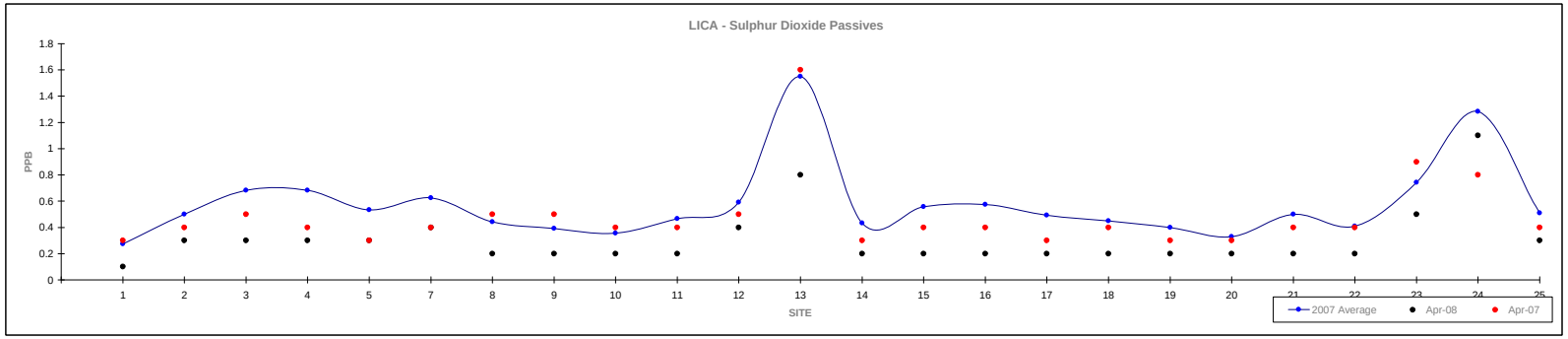
Non-Continuous Monitoring

Passive Summary Results for April 2008

Lakeland Industry & Community Association

Sulphur Dioxide
ppb

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	Reading	Site
													2007													2008	
Mean	0.3	0.5	0.7	0.7	0.5	0.6	0.4	0.4	0.4	0.5	0.6	1.6	0.4	0.6	0.6	0.5	0.5	0.4	0.3	0.5	0.4	0.7	1.3	0.5	0.4	0.3	-
Minimum	0.1	0.3	0.4	0.3	0.2	0.3	0.3	0.2	0.2	0.2	0.2	0.8	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.4	0.5	0.2	0.0	0.1	#1
Maximum	0.4	1.0	1.3	1.1	1.0	1.1	0.8	0.7	0.7	0.8	1.6	2.6	0.8	1.1	1.1	1.0	0.8	0.6	0.5	0.8	0.8	1.2	2.1	0.8	0.0	1.1	#24

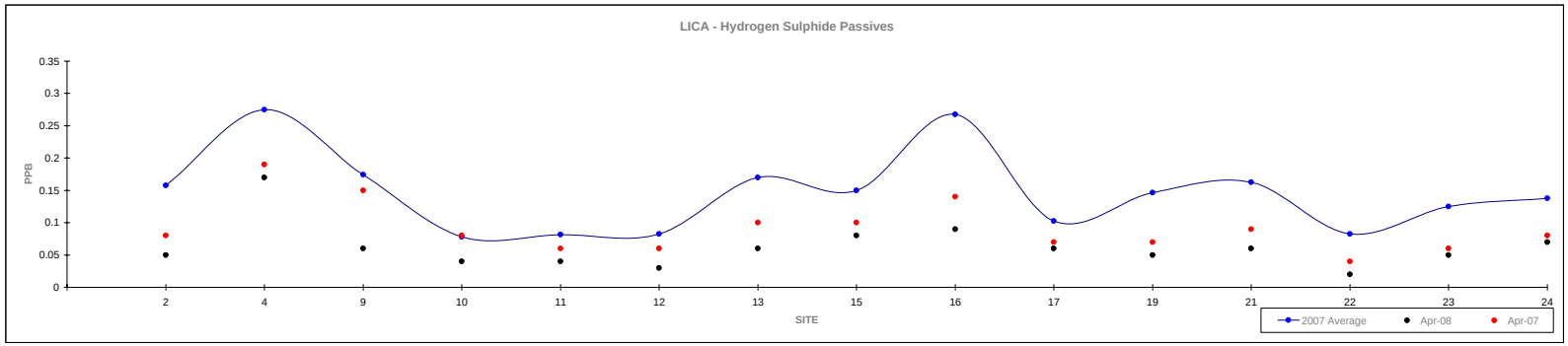


Passive Summary Results for April 2008

Lakeland Industry & Community Association

Hydrogen Sulphide
ppb

	2007															2008	
	2	**4**	**9**	**10**	**11**	**12**	**13**	**15**	**16**	**17**	**19**	**21**	**22**	**23**	**24**	**Reading**	**Site**
Mean	0.2	0.3	0.2	0.1	0.1	0.1	0.2	0.2	0.3	0.1	0.1	0.2	0.1	0.1	0.1	0.06	-
Minimum	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.1	0.1	0.0	0.1	0.1	0.02	#22
Maximum	0.5	0.7	0.5	0.1	0.1	0.2	0.4	0.4	0.9	0.2	0.4	0.4	0.2	0.2	0.4	0.17	#4

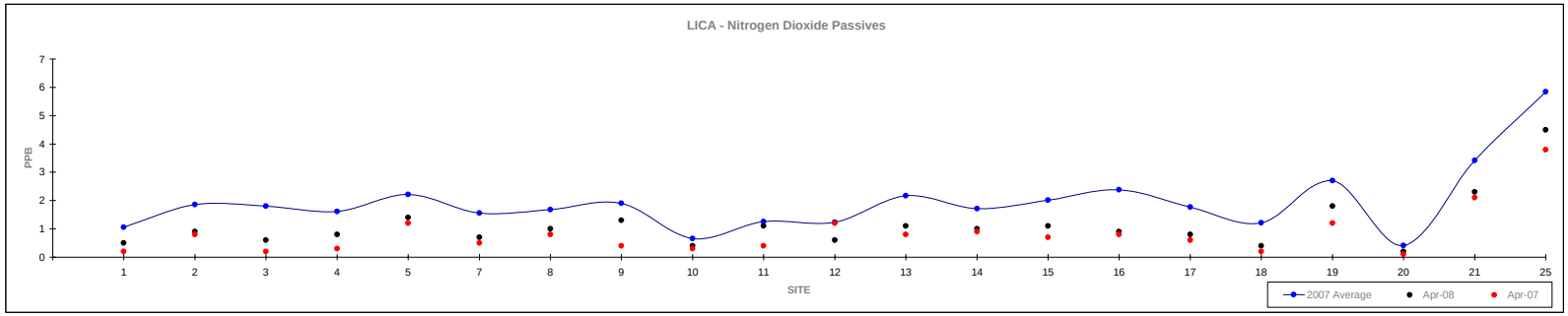


Passive Summary Results for April 2008

Lakeland Industry & Community Association

Nitrogen Dioxide
ppb

	2007																					2008	
	1	**2**	**3**	**4**	**5**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**	**25**	**Reading**	**Site**
Mean	1.1	1.9	1.8	1.6	2.2	1.6	1.7	1.9	0.7	1.3	1.2	2.2	1.7	2.0	2.4	1.8	1.2	2.7	0.4	3.4	5.8	1.1	-
Minimum	0.2	0.8	0.2	0.3	1.2	0.5	0.6	0.4	0.3	0.3	0.6	0.8	0.8	0.7	0.8	0.6	0.2	1.2	0.1	2.1	3.3	0.2	#20
Maximum	4.1	3.5	4.0	3.8	5.3	3.6	3.8	3.9	1.4	3.2	2.5	5.3	3.4	4.5	4.8	3.9	3.0	5.8	1.2	6.4	10.7	4.5	#25

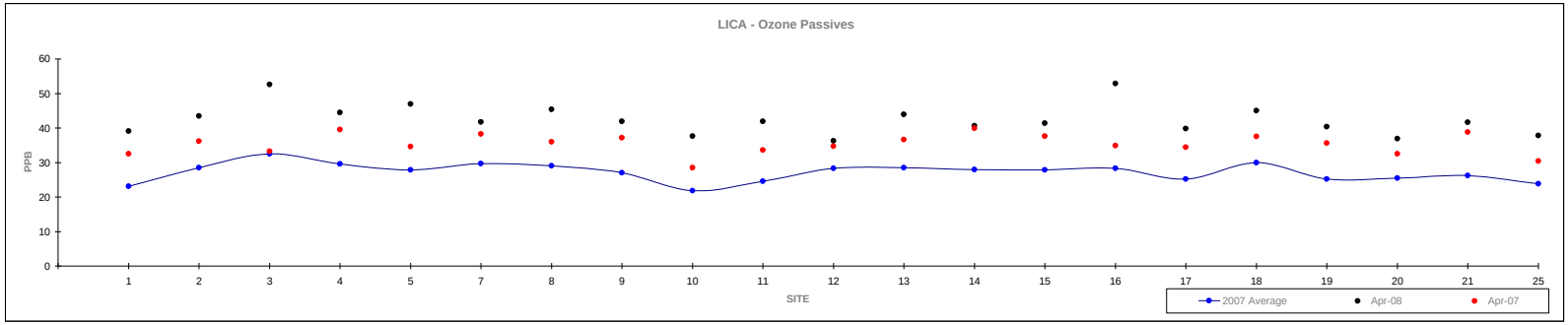


Passive Summary Results for April 2008

Lakeland Industry & Community Association

Ozone ppb

	2007																					2008	
	1	2	3	4	5	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	25	Reading	Site
Mean	23.1	28.5	32.5	29.6	27.8	29.7	29.0	27.0	21.9	24.6	28.3	28.5	28.0	27.8	28.3	25.2	30.0	25.2	25.5	26.2	23.8	42.5	-
Minimum	12.9	18.6	20.6	19.3	17.6	19.5	18.7	16.2	12.2	15.3	16.8	19.9	19.0	18.9	17.4	14.7	19.4	15.8	10.9	17.7	16.9	36.3	#12
Maximum	37.3	41.1	51.4	48.0	46.3	42.3	44.1	44.6	29.5	33.6	41.2	38.6	39.9	41.6	44.7	38.6	46.5	39.2	39.0	41.6	33.2	52.9	#16



Calibration Reports

Cold Lake

Sulphur Dioxide

SO_2 Calibration Report

Station Information

Calibration Date	April 3, 2008	Previous Calibration	March 15, 2008
Company	**Lakeland Industry & Community Association**		
Plant / Location	**LICA 1 - Cold Lake South**		
Start Time (MST)	8:20	End Time (MST)	12:05
Reason:	Monthly Calibration		
Barometric Pressure	709 mmHg	Station Temperature	26 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	854	OK	852
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	106	984	106	964

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	407	0.9918
4959	40.2	404	405	0.9967
4974	25.2	253	253	1.0002
4984	15.1	152	153	0.9911
5000	0	0	0	N/A
			Sum of Least Squares	0.9971
			New Correction Factor	0.9967

	Before Calibration	After Calibration
Auto Zero	0	-1
Auto Span	347	346
Sample Lines Connected		**YES**
Percent Change from Previous Calibration		0.5%

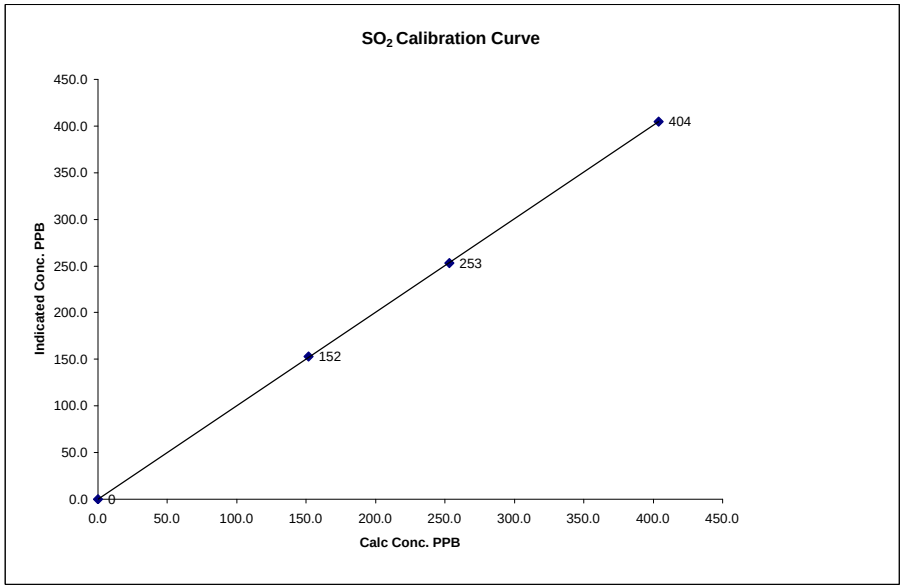
Calibration Performed by: Shea Beaton

SO_2 Calibration Curve

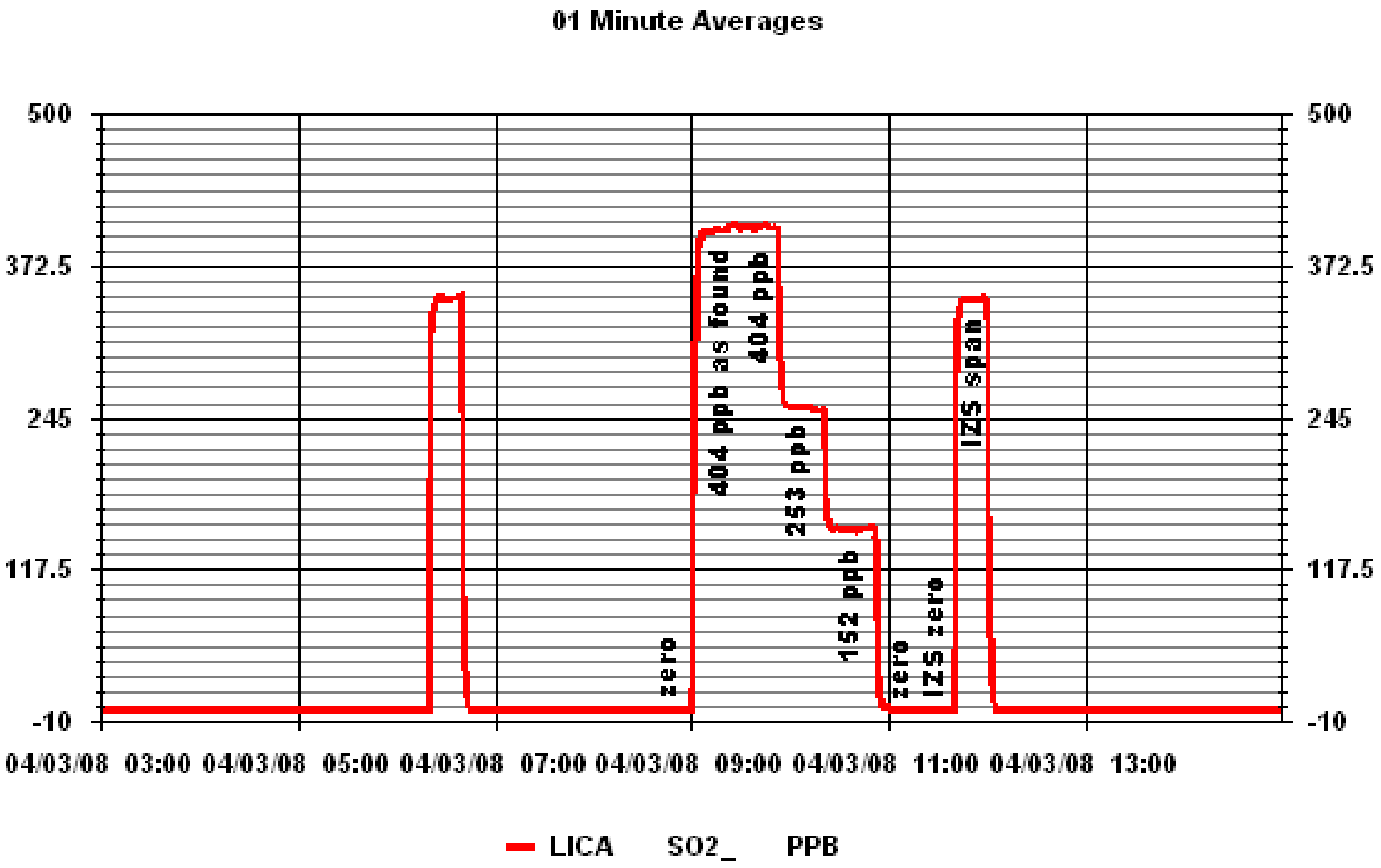
Calibration Date	April 3, 2008		
Company	**Lakeland Industry & Community Association**		
Plant / Location	**LICA 1 - Cold Lake South**		
Start Time (MST)	8:20	End Time (MST)	12:05

Calculated Conc. ppb	Indicated Response ppb	Correction Factor
0	0	n/a
152	153	0.9911
253	253	1.0002
404	405	0.9967

Correlation Coefficient	(≥ 0.995)	0.999983
Slope	(0.85 to 1.15)	1.002263
Intercept	(± 3% F.S.)	0.204498



Notes:


01 Minute Averages
500
372.5
245
117.5
-10
zero
404 ppb as found
404 ppb
253 ppb
152 ppb
zero
IZS zero
IZS span
04/03/08 03:00
04/03/08 05:00
04/03/08 07:00
04/03/08 09:00
04/03/08 11:00
04/03/08 13:00
LICA SO2_ PPB

Total Reduced Sulphur

TRS Calibration Report

Station Information

Calibration Date	April 3, 2008	Previous Calibration	March 15, 2008
Company	**Lakeland Industry & Community Association**		
Plant / Location	**LICA 1 - Cold Lake South**		
Start Time (MST)	8:20	End Time (MST)	12:05
Reason:	Monthly Calibration		
Barometric Pressure	709 mm Hg	Station Temperature	26 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	425	ccm	OK	Deg C	425	ccm	OK	Deg C
HVPS / Lamp Setting	OK		890		OK		892	
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	897		701		897		701	

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	81	0.9874
4980	22.1	45	46	0.9797
4990	12.3	25	26	0.9646
5000	0	0	0	N/A
			Sum of Least Squares	0.9841
			New Correction Factor	0.9874

	Before Calibration	After Calibration
Auto Zero	0	0
Auto Span	84	87
Sample Lines Connected		YES
Percent Change from Previous Calibration		2.5%

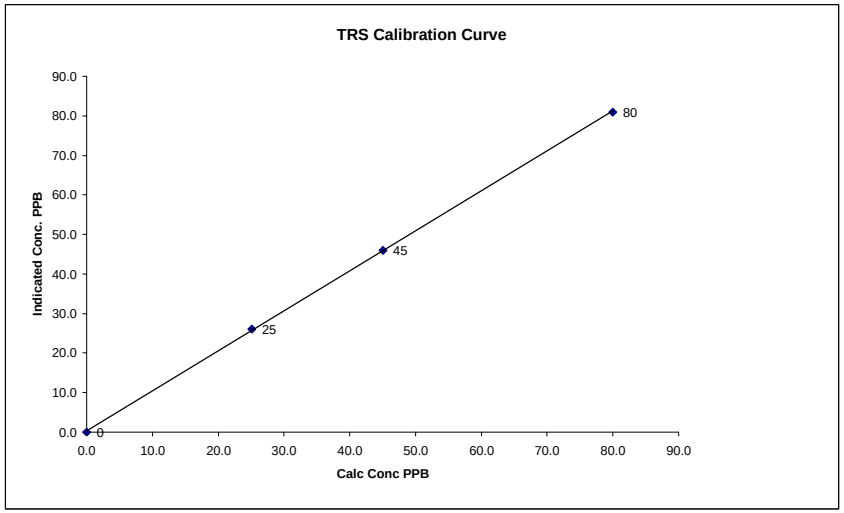
Calibration Performed by: Shea Beaton

TRS Calibration Curve

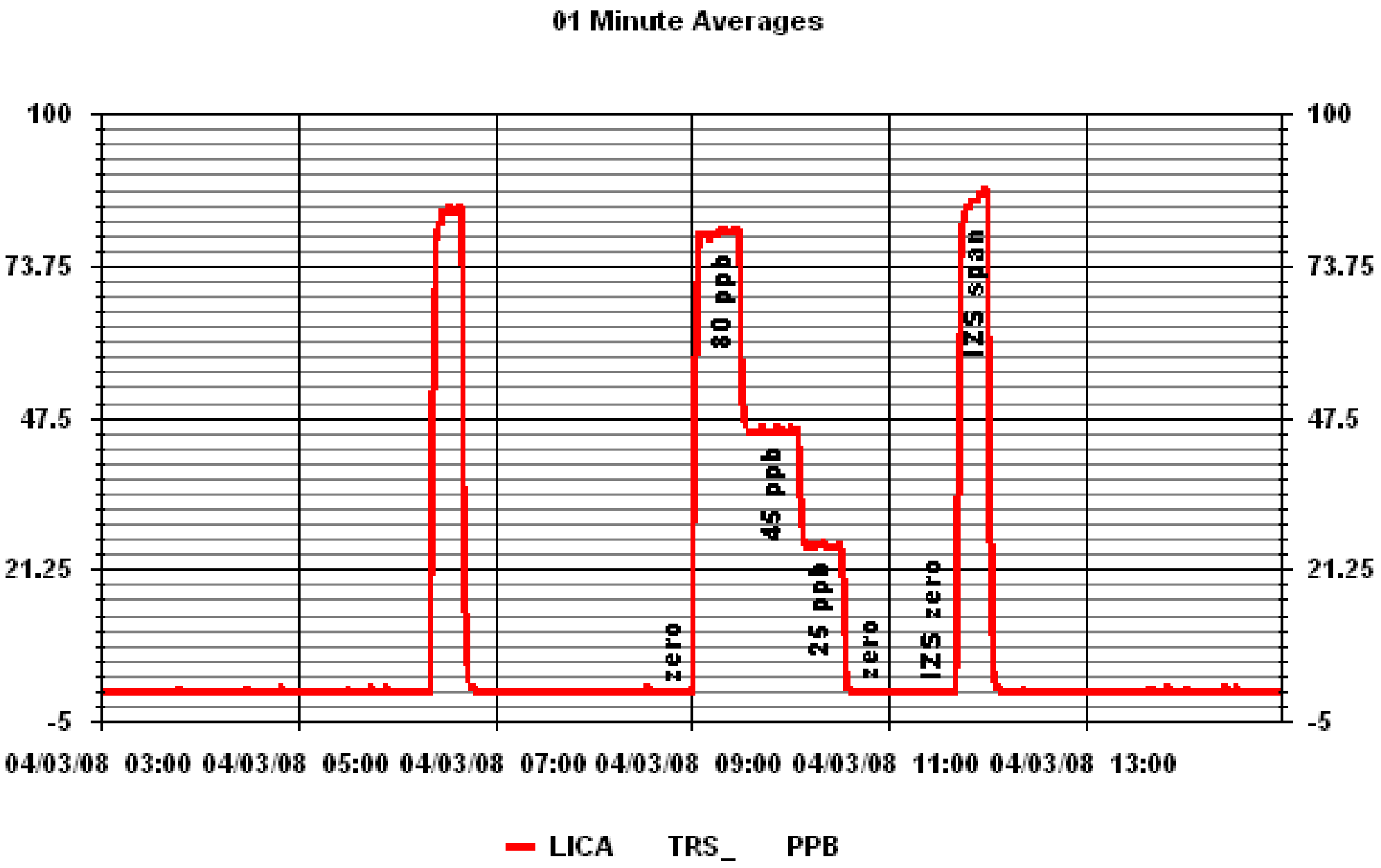
Calibration Date	April 3, 2008		
Company	**Lakeland Industry & Community Association**		
Plant / Location	**LICA 1 - Cold Lake South**		
Start Time (MST)	8:20	End Time (MST)	12:05

Calculated Conc. ppb	Indicated Response ppb	Correction Factor
0	0	n/a
25	26	0.9646
45	46	0.9797
80	81	0.9874

Correlation Coefficient	(≥ 0.995)	0.999928
Slope	(0.85 to 1.15)	1.011354
Intercept	(± 3% F.S.)	0.292271



Notes:


01 Minute Averages
100
73.75
47.5
21.25
-5
zero
80 ppb
45 ppb
25 ppb
zero
IZS zero
IZS span
04/03/08 03:00
04/03/08 05:00
04/03/08 07:00
04/03/08 09:00
04/03/08 11:00
04/03/08 13:00
LICA TRS_ PPB

Total Hydrocarbons

THC Calibration Report

Station Information

Calibration Date:	April 3, 2008	Previous Calibration	March 15, 2008
Company:	**Lakeland Industry and Community Association**		
Plant / Location:	**LICA1/Cold Lake**		
Start Time (MST)	11:20	End Time (MST)	14:25
Reason:	Monthly Calibration		
Barometric Pressure:	709 mmHg	Station Temperature:	26 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	8.5	psi	8	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	38.7	1.0038
2000	40.0	19.8	19.2	1.0315
2000	20.0	10.0	9.4	1.0638
2000	0	0.0	0.0	N/A
			Correction Factor:	1.0038

Percent Change

Previous Calibration Correction Factor:	0.9986
Current Correction Factor Before Span Adjust:	1.0038
Percent Change:	-0.5%

IZS Calibration Data

	Before Calibration	After Calibration
Auto Zero	0.0	0.0
Auto Span	30.1	30.1
Sample Lines Connected		**YES**

Cylinder Pressures	
Span	350 psi
Hydrogen	600 psi
Zero Air	Maxxam-owned API 701 zero air supply with catalytic oxidizer

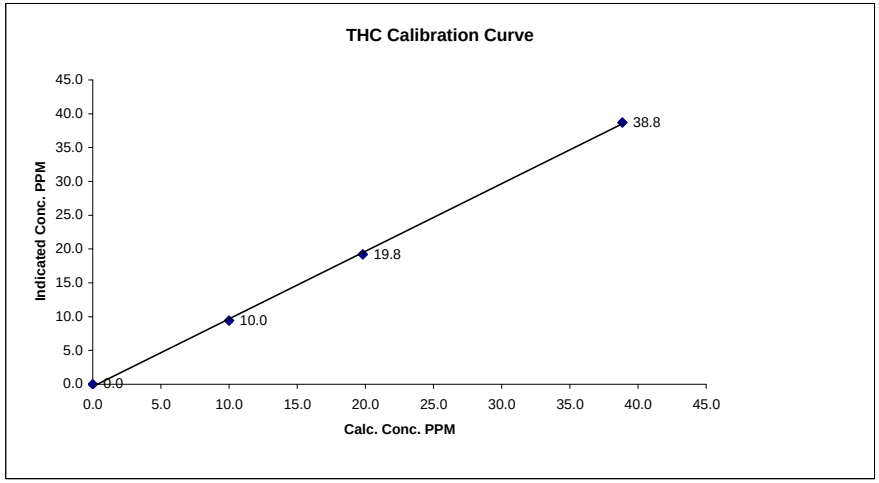
Calibration Performed by: Shea Beaton

THC Calibration Curve

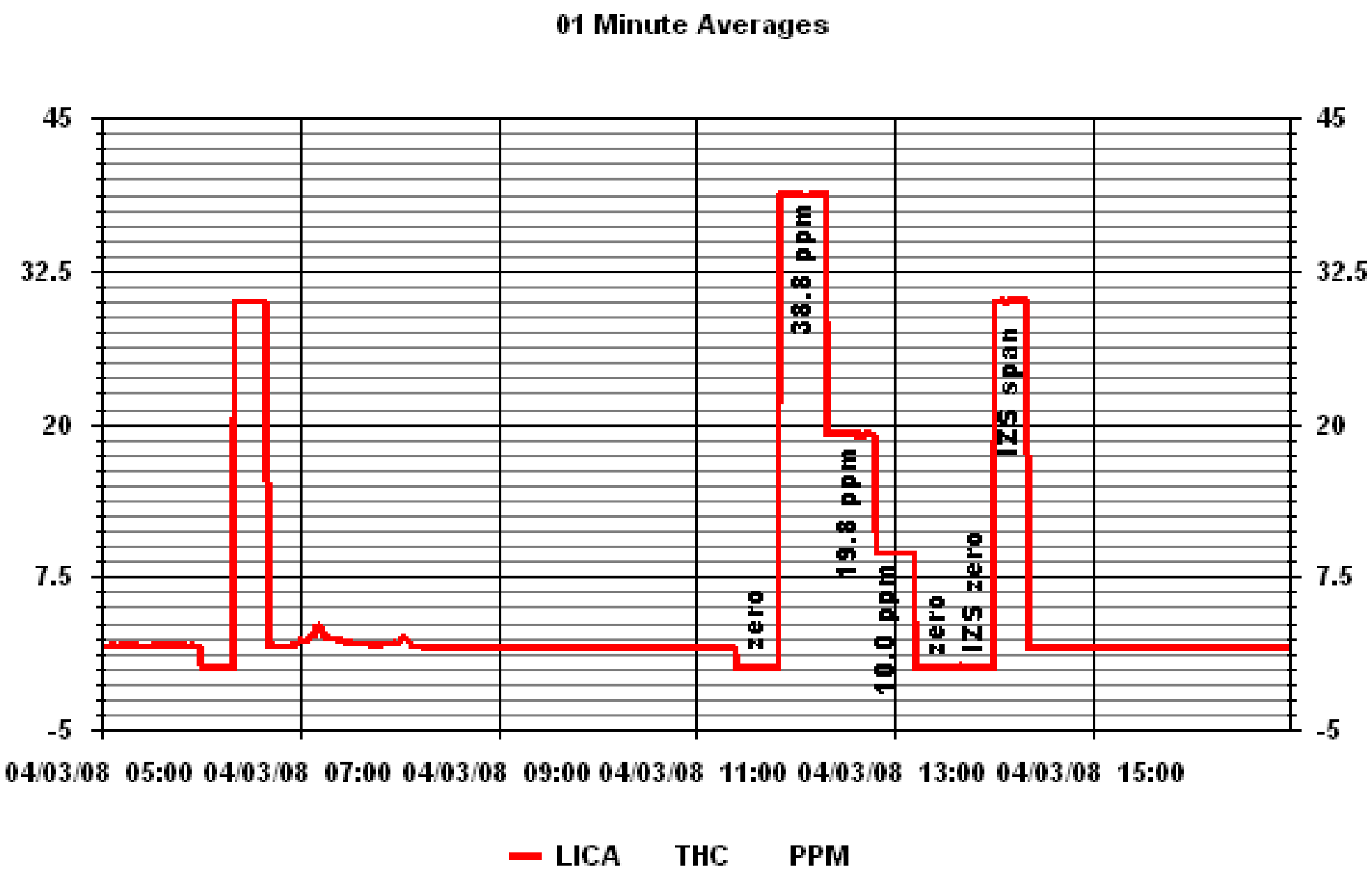
Calibration Date	April 3, 2008		
Company	**Lakeland Industry and Community Association**		
Plant / Location	**LICA1/Cold Lake**		
Start Time (MST)	11:20	End Time (MST)	14:25

Calculated Conc. ppm	Indicated Response ppm	Correction Factor
0.0	0.0	
10.0	9.4	1.0638
19.8	19.2	1.0315
38.8	38.7	1.0038

Correlation Coefficient	(≥ 0.995)	0.999647
Slope	(0.85 to 1.15)	0.999433
Intercept	(± 3% F.S.)	-0.327784



Notes:


01 Minute Averages
45
32.5
20
7.5
-5
zero
38.8 ppm
19.8 ppm
10.0 ppm
zero
IZS zero
IZS span
04/03/08 05:00
04/03/08 07:00
04/03/08 09:00
04/03/08 11:00
04/03/08 13:00
04/03/08 15:00
LICA THC PPM

Particulate Matter 2.5

TEOM® Calibration

Station		Transfer Standard	
Date:	April 21, 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 (%)	42
Transducer s/n	140AB213859701	K_o Factor	11095
Parameter	PM 2.5	Temp (^oC)	-7.3
		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)**	59

Temperature/Pressure

Measured Temp **(± 1 ^oC)**	-7.1	**Δ ^oC**	0.2
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 / 13.65	**(± 2%)**	0.0% / 0.1%
Total Flow = Main + Aux (l/min)	16.65	**(± 2%)**	0.1%
Measured Total Flow (l/min)	16.68	**(± 1.0 l/min. (5.65%))**	-0.2%
Measured Main Flow (l/min)	2.91	**(± 0.2 l/min. (6.25%))**	3.1%

Leak Check

		Actual leakage = Pump On - Pump Off
Main **(< 0.15 l/min)**	0.12	0.05
Aux **(< 0.15 l/min)**	0.09	0.09

K_o Factor

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

Start Time: 13:10 **Finish Time:** 15:10

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	April 3, 2008	Previous Calibration	March 15, 2008
Company	**Lakeland Ind & Comm. Assoc.**	Plant/Location	**LICA 1 - Cold Lake South**
Start Time (MST)	8:20	End Time (MST)	14:52
Reason:	Monthly Calibration		
Barometric Pressure	709 mmHg	Station Temperature	26.0 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	725	ccm	317	Deg C	737	ccm	317	Deg C
Ozone Flow / Vacuum	OK	ccm	180.2	"Hg-A	OK	ccm	180.5	"Hg-A
HVPS	-821		Volts		-821		Volts	
Rx/ Temp / PMT Temp	49.7	Deg C	-2.5	Deg C	49.6	Deg C	-2.5	Deg C
Box Temp / IZS Temp	31.5	Deg C	OK	Deg C	32.4	Deg C	OK	Deg C
Offset	2.9	NOx	2.8	NO	3	NOx	2.9	NO
Slope	1.002	NOx	0.697	NO	1.002	NOx	0.718	NO

Gas Phase Titration Calibration Data

Dilution Air Flow Rate	Source Flow Rate	O3 Set Point	Calculated Concentration NOx	Calculated Concentration NO	Indicated Concentration NOx	Indicated Concentration NO	Indicated Concentration NO2	Correction Factor NOx	Correction Factor NO
5000	N/A	N/A	0	0	0	0	0	N/A	N/A
4959	40.2	N/A	400	400	390	389	1	1.0268	1.0274
4959	40.2	N/A	400	400	400	400	0	1.0011	0.9991
4974	25.2	N/A	251	251	250	250	0	1.0041	1.0021
4984	15.1	N/A	150	150	150	150	0	1.0028	1.0008
5000	N/A	N/A	0	0	0	0	0	N/A	N/A
								Converter Efficiency	
4959	40.2	N/A	400	400	400	399	0	N/A	
4959	40.2	300	400	N/A	397	130	267	99%	
4959	40.2	200	400	N/A	397	209	189	99%	
4959	40.2	100	400	N/A	397	255	143	99%	
4959	40.2	N/A	400	400	398	398	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	1.0000
Flows Checked on-site?	Yes	**No**	New Correction Factor	1.0011	0.9991
			Average Converter Efficiency	99%	

	Before Calibration				After Calibration			
Auto Zero	0	NOx	0	NO2	0	NOx	0	NO2
Auto Span	280	NOx	278	NO2	283	NOx	281	NO2
Sample Lines Connected					**YES**			
Percent Change from Previous Calibration					*NOx*	-2.5%	*NO*	-2.5%

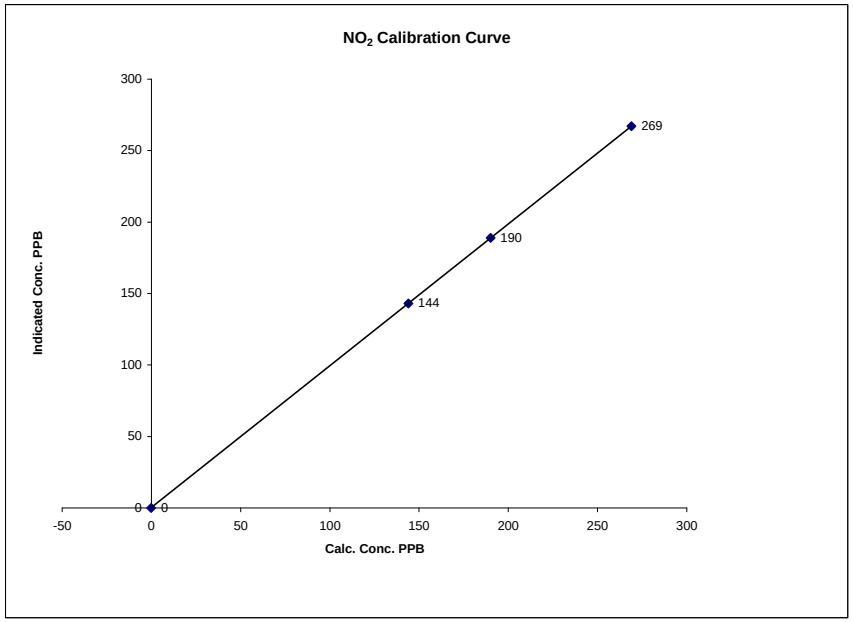
Calibration Performed by: Shea Beaton

NO_2 Calibration Curve

Calibration Date	April 3, 2008		
Company	**Lakeland Ind & Comm. Assoc.**		
Plant / Location	**LICA 1 - Cold Lake South**		
Start Time (MST)	8:20	End Time (MST)	14:52

Calculated Conc. ppb	Indicated Response ppb	Correction Factor
0	0	N/A
144	143	1.0070
190	189	1.0053
269	267	1.0075

Correlation Coefficient	(≥ 0.995)	0.999998
Slope	(0.85 to 1.15)	0.992191
Intercept	(± 3% F.S.)	0.226956

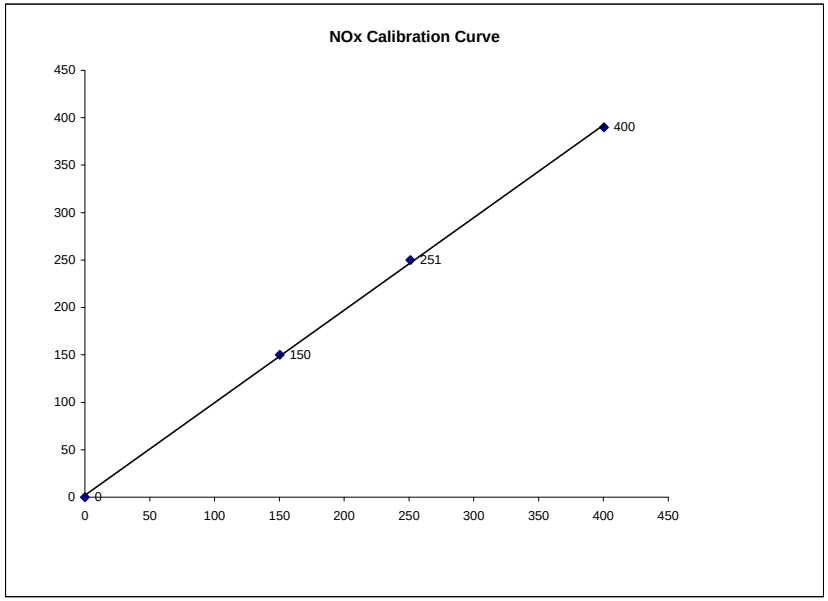


Notes:

NOx Calibration Curve

Calibration Date	April 3, 2008		
Company	**Lakeland Ind & Comm. Assoc.**		
Plant / Location	**LICA 1 - Cold Lake South**		
Start Time (MST)	8:20	End Time (MST)	14:52

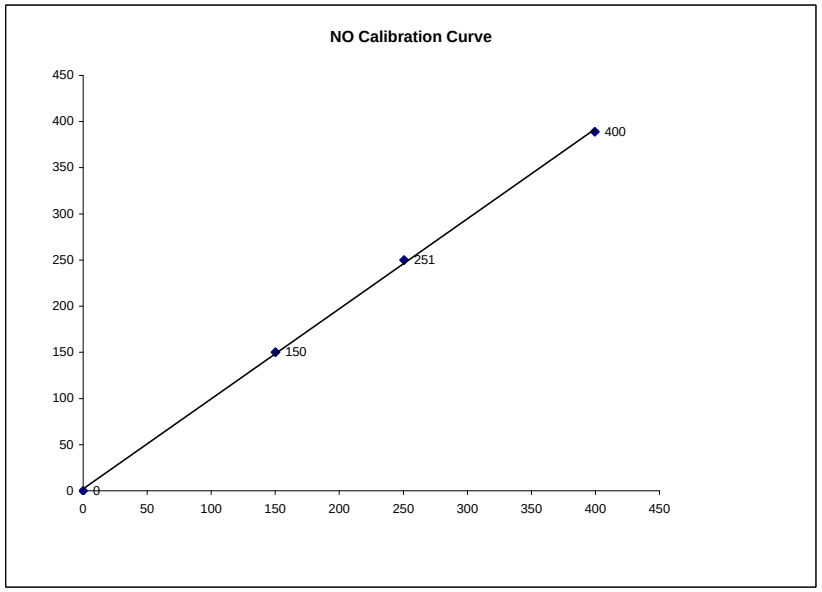
Calculated Conc. ppb	Indicated Response ppb	Correction Factor	Correlation Coefficient	(≥ 0.995)	0.999725
			Slope	(0.85 to 1.15)	0.975107
0	0	N/A	Intercept	(± 3% F.S.)	2.012701
150	150	1.0028			
251	250	1.0041			
400	390	1.0268			

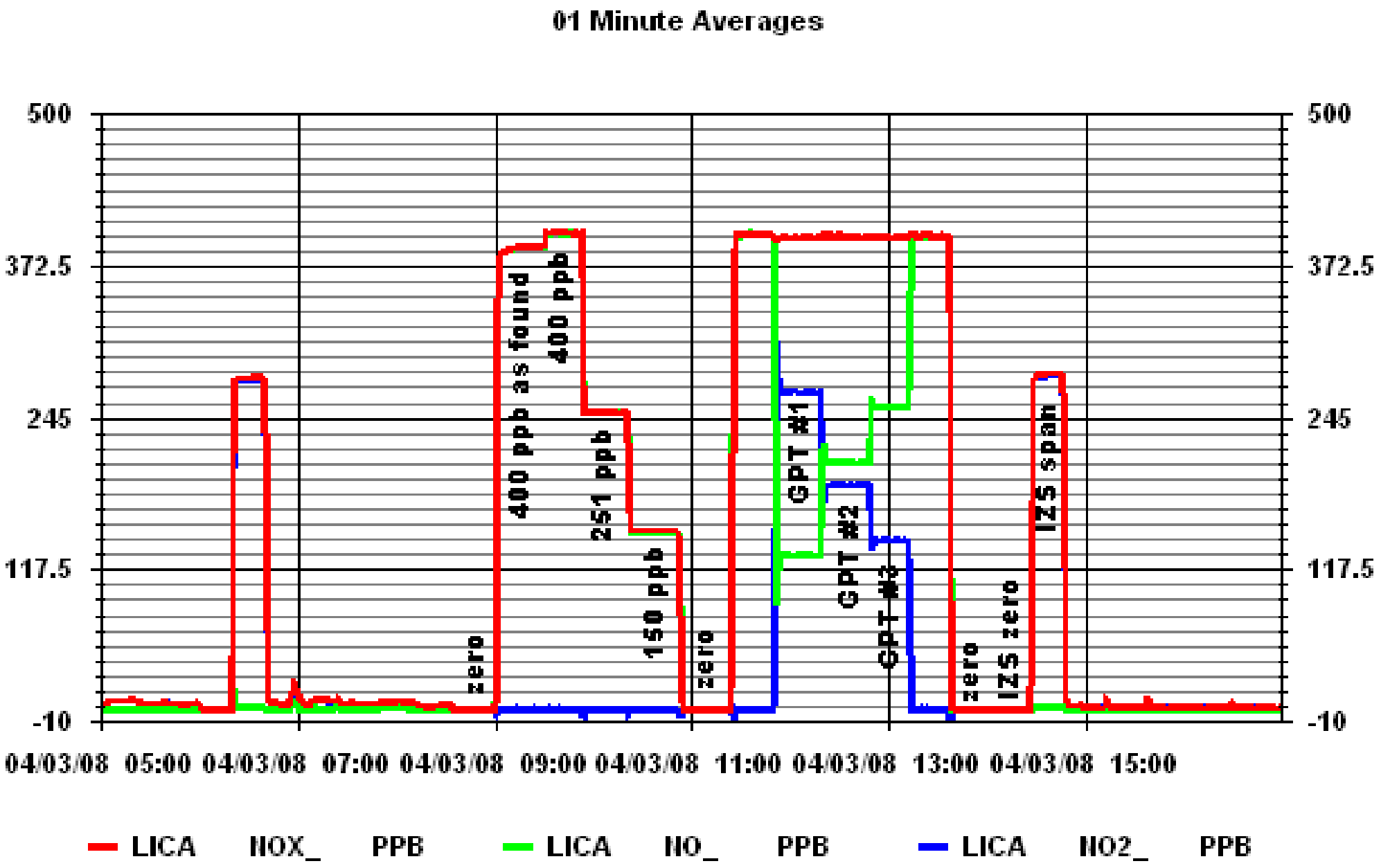


NO Calibration Curve

Calibration Date	April 3, 2008		
Company	**Lakeland Ind & Comm. Assoc.**		
Plant / Location	**LICA 1 - Cold Lake South**		
Start Time (MST)	8:20	End Time (MST)	14:52

Calculated Conc. ppb	Indicated Response ppb	Correction Factor	Correlation Coefficient	(≥ 0.995)	0.999658
			Slope	(0.85 to 1.15)	0.974718
0	0	N/A	Intercept	(± 3% F.S.)	2.233013
150	150	1.0008			
251	250	1.0021			
400	389	1.0274			




01 Minute Averages
500
372.5
245
117.5
-10
zero
400 ppb as found
400 ppb
251 ppb
150 ppb
zero
GPT #1
GPT #2
GPT #3
zero
IZS zero
IZS span
04/03/08 05:00
04/03/08 07:00
04/03/08 09:00
04/03/08 11:00
04/03/08 13:00
04/03/08 15:00
LICA NOX_ PPB
LICA NO_ PPB
LICA NO2_ PPB

NOx - NO- NO_2 Calibration Report

Station Information

Calibration Date	April 11, 2008	Previous Calibration	April 3, 2008
Company	**Lakeland Ind & Comm. Assoc.**	Plant/Location	**LICA 1 - Cold Lake South**
Start Time (MST)	6:50	End Time (MST)	14:40
Reason:	Leak Repair		
Barometric Pressure	717 mmHg	Station Temperature	26.0 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	680	ccm	317	Deg C	697	ccm	317	Deg C
Ozone Flow / Vacuum	OK	ccm	208	"Hg-A	OK	ccm	195	"Hg-A
HVPS	-821		Volts		-821		Volts	
Rx/ Temp / PMT Temp	49.8	Deg C	-2.5	Deg C	49.8	Deg C	-2.4	Deg C
Box Temp / IZS Temp	32.4	Deg C	OK	Deg C	32.3	Deg C	OK	Deg C
Offset	3	NOx	2.9	NO	3.5	NOx	3.7	NO
Slope	1.002	NOx	0.718	NO	1.003	NOx	0.880	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	359	358	1	1.1155	1.1163
5000	N/A	N/A	0	0	0	0	0	N/A	N/A
4959	40.2	N/A	400	400	401	400	1	0.9986	0.9991
4974	25.2	N/A	251	251	250	250	0	1.0041	1.0021
4984	15.1	N/A	150	150	151	150	1	0.9962	1.0008
5000	N/A	N/A	0	0	0	0	0	N/A	N/A
								Converter Efficiency	
4959	40.2	N/A	400	400	400	399	1	N/A	
4959	40.2	300	400	N/A	398	121	277	99%	
4959	40.2	200	400	N/A	399	202	197	100%	
4959	40.2	100	400	N/A	400	250	149	99%	
4959	40.2	N/A	400	400	400	399	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	0.9998	1.0000
Flows Checked on-site?	Yes	**No**	New Correction Factor	0.9986	0.9991
			Average Converter Efficiency	99%	

	Before Calibration				After Calibration			
Auto Zero	0	NOx	0	NO2	0	NOx	0	NO2
Auto Span	250	NOx	248	NO2	281	NOx	279	NO2
Sample Lines Connected					**YES**			
Percent Change from Previous Calibration					*NOx*	-10.3%	*NO*	-10.5%

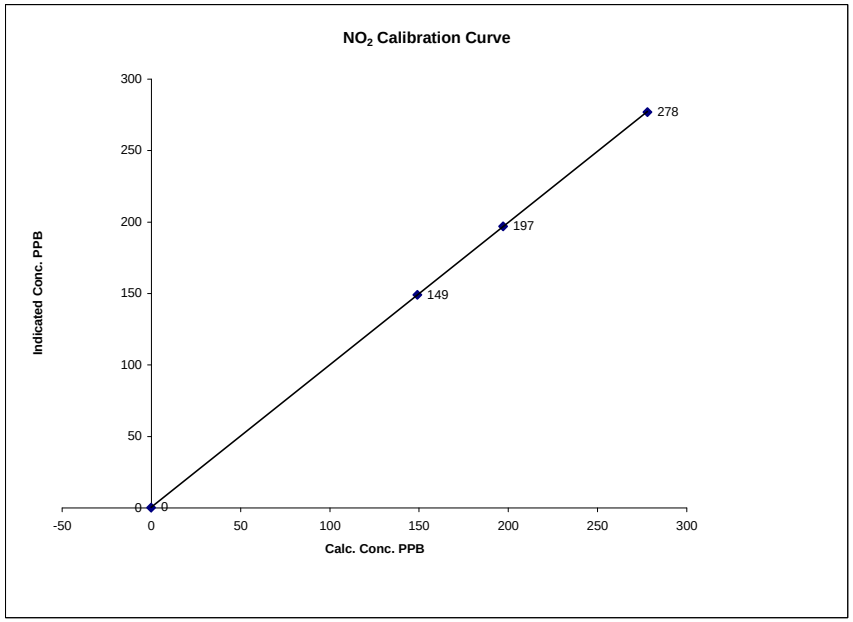
Calibration Performed by: Shea Beaton

NO_2 Calibration Curve

Calibration Date	April 11, 2008		
Company	**Lakeland Ind & Comm. Assoc.**		
Plant / Location	**LICA 1 - Cold Lake South**		
Start Time (MST)	6:50	End Time (MST)	14:40

Calculated Conc. ppb	Indicated Response ppb	Correction Factor
0	0	N/A
149	149	1.0000
197	197	1.0000
278	277	1.0036

Correlation Coefficient	(≥ 0.995)	0.999994
Slope	(0.85 to 1.15)	0.995499
Intercept	(± 3% F.S.)	0.552038

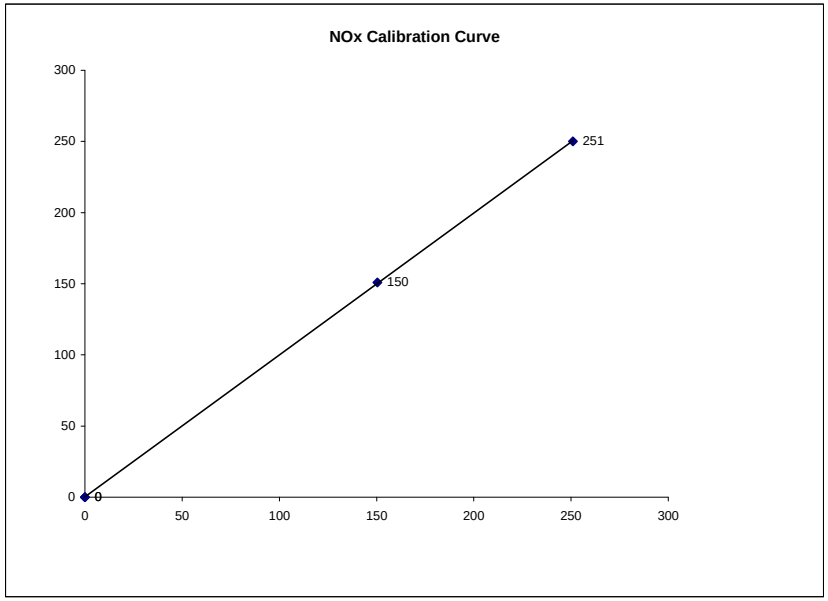


Notes: Repaired leak in exhausst scrubber following as found points.

NOx Calibration Curve

Calibration Date	April 11, 2008		
Company	**Lakeland Ind & Comm. Assoc.**		
Plant / Location	**LICA 1 - Cold Lake South**		
Start Time (MST)	6:50	End Time (MST)	14:40

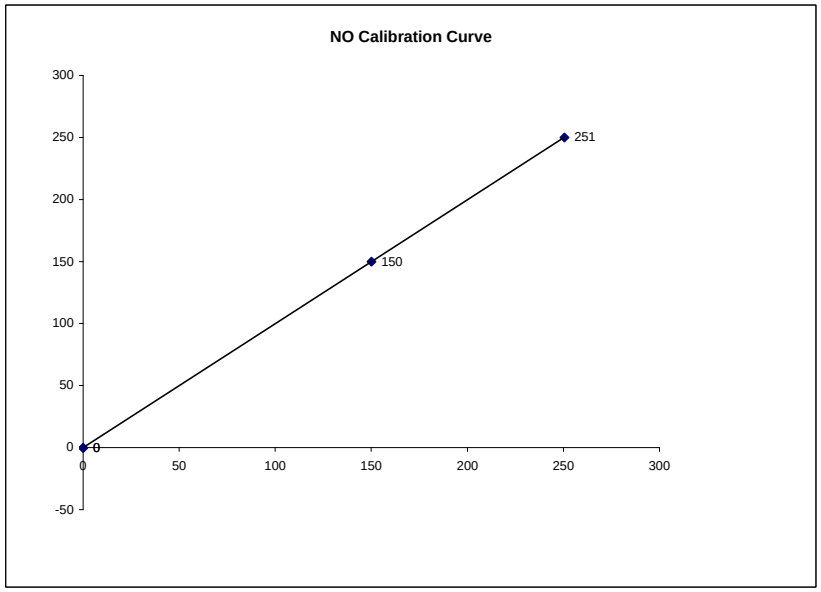
Calculated Conc. ppb	Indicated Response ppb	Correction Factor	Correlation Coefficient	(≥ 0.995)	0.999979
			Slope	(0.85 to 1.15)	0.996765
0	0	N/A	Intercept	(± 3% F.S.)	0.260847
150	151	0.9962			
251	250	1.0041			
0	0	0.0000			

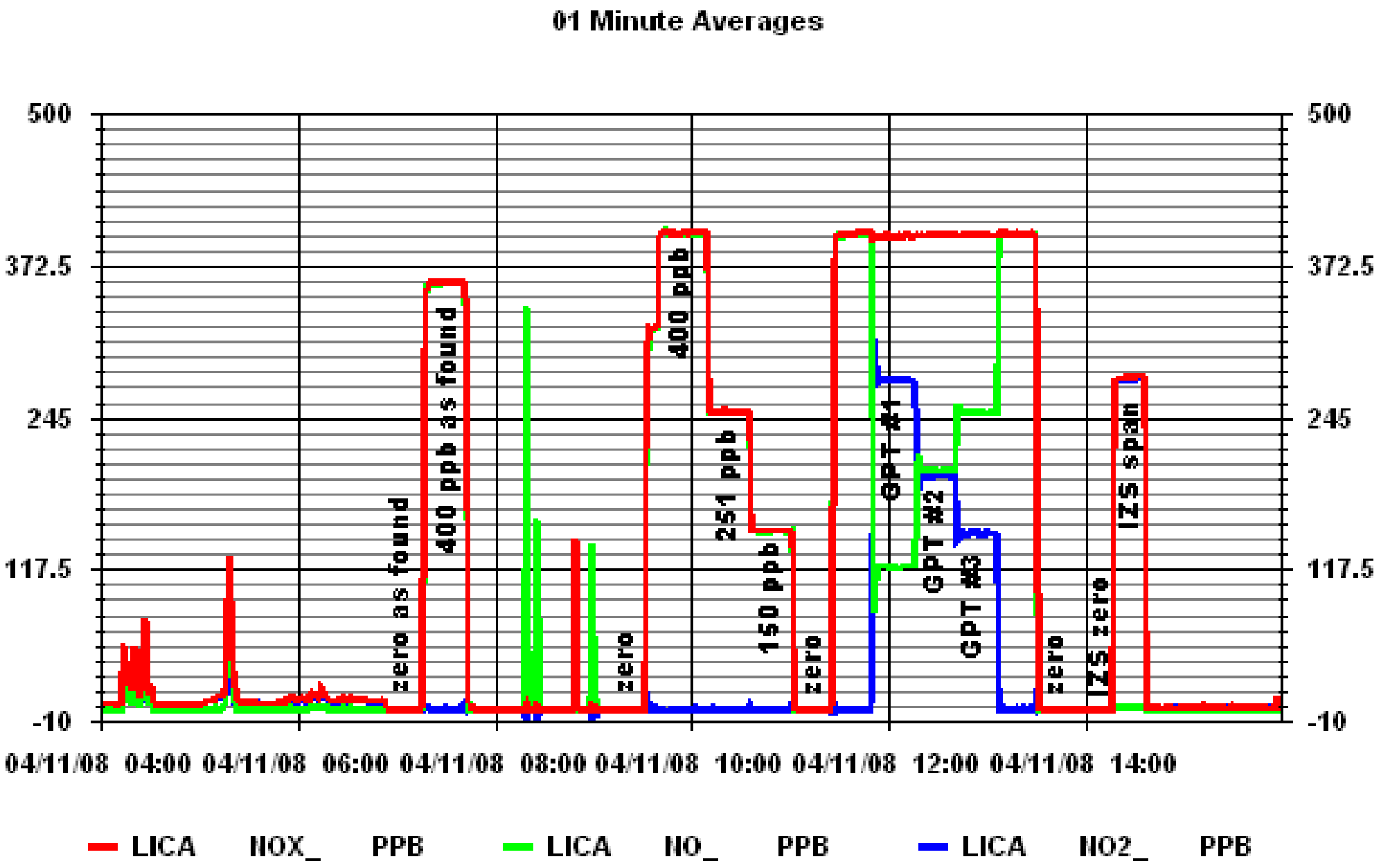


NO Calibration Curve

Calibration Date	April 11, 2008		
Company	**Lakeland Ind & Comm. Assoc.**		
Plant / Location	**LICA 1 - Cold Lake South**		
Start Time (MST)	6:50	End Time (MST)	14:40

Calculated Conc. ppb	Indicated Response ppb	Correction Factor	Correlation Coefficient	(≥ 0.995)	0.999999
			Slope	(0.85 to 1.15)	0.998552
0	0	N/A	Intercept	(± 3% F.S.)	-0.067214
150	150	1.0008			
251	250	1.0021			
0	0	0.0000			




01 Minute Averages
500
372.5
245
117.5
-10
04/11/08 04:00
04/11/08 06:00
04/11/08 08:00
04/11/08 10:00
04/11/08 12:00
04/11/08 14:00
zero as found
400 ppb as found
zero
400 ppb
251 ppb
150 ppb
zero
GPT #1
GPT #2
GPT #3
zero
IZS zero
IZS span
LICA NOX_ PPB
LICA NO_ PPB
LICA NO2_ PPB

NOx - NO- NO_2 Calibration Report

Station Information

Calibration Date	April 14, 2008	Previous Calibration	April 11, 2008
Company	**Lakeland Ind & Comm. Assoc.**	Plant/Location	**LICA 1 - Cold Lake South**
Start Time (MST)	7:30	End Time (MST)	16:35
Reason:	Leak Repair		
Barometric Pressure	701 mmHg	Station Temperature	25.0 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	654	ccm	317	Deg C	690	ccm	317	Deg C
Ozone Flow / Vacuum	OK	ccm	208	"Hg-A	OK	ccm	189.3	"Hg-A
HVPS	-821		Volts		-821		Volts	
Rx/ Temp / PMT Temp	49.8	Deg C	-2.5	Deg C	49.9	Deg C	-2.5	Deg C
Box Temp / IZS Temp	31.2	Deg C	OK	Deg C	32.3	Deg C	OK	Deg C
Offset	3.5	NOx	3.7	NO	4.3	NOx	3.9	NO
Slope	1.003	NOx	0.88	NO	1.005	NOx	0.947	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	356	355	1	1.1249	1.1258
5000	N/A	N/A	0	0	0	0	0	N/A	N/A
4959	40.2	N/A	400	400	401	400	1	0.9986	0.9991
4980	20.1	N/A	200	200	201	201	0	0.9960	0.9940
4985	15.1	N/A	150	150	151	151	1	0.9960	0.9940
5000	N/A	N/A	0	0	0	0	0	N/A	N/A
								Converter Efficiency	
4959	40.2	N/A	400	400	400	399	1	N/A	
4959	40.2	300	400	N/A	397	126	272	99%	
4959	40.2	200	400	N/A	398	165	233	99%	
4959	40.2	100	400	N/A	398	253	145	99%	
4959	40.2	N/A	400	400	399	397	2	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	0.9979	0.9977
Flows Checked on-site?	Yes	**No**	New Correction Factor	0.9986	0.9991
			Average Converter Efficiency	99%	

	Before Calibration				After Calibration			
Auto Zero	0	NOx	0	NO2	0	NOx	0	NO2
Auto Span	255	NOx	253	NO2	282	NOx	280	NO2
Sample Lines Connected					**YES**			
Percent Change from Previous Calibration					*NOx*	-11.2%	*NO*	-11.3%

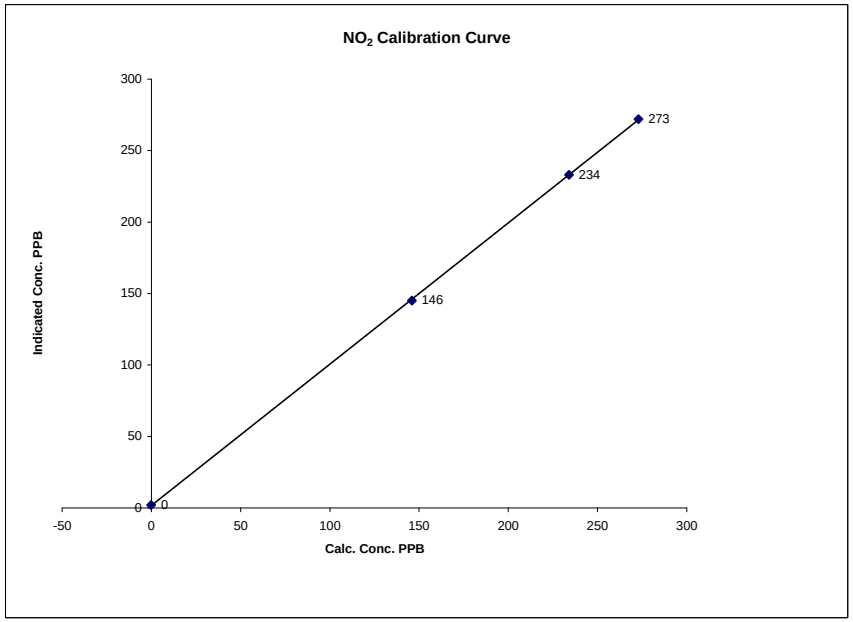
Calibration Performed by: Shea Beaton

NO_2 Calibration Curve

Calibration Date	April 14, 2008		
Company	**Lakeland Ind & Comm. Assoc.**		
Plant / Location	**LICA 1 - Cold Lake South**		
Start Time (MST)	7:30	End Time (MST)	16:35

Calculated Conc. ppb	Indicated Response ppb	Correction Factor
0	2	N/A
146	145	1.0069
234	233	1.0043
273	272	1.0037

Correlation Coefficient	(≥ 0.995)	0.999968
Slope	(0.85 to 1.15)	0.988501
Intercept	(± 3% F.S.)	1.651888



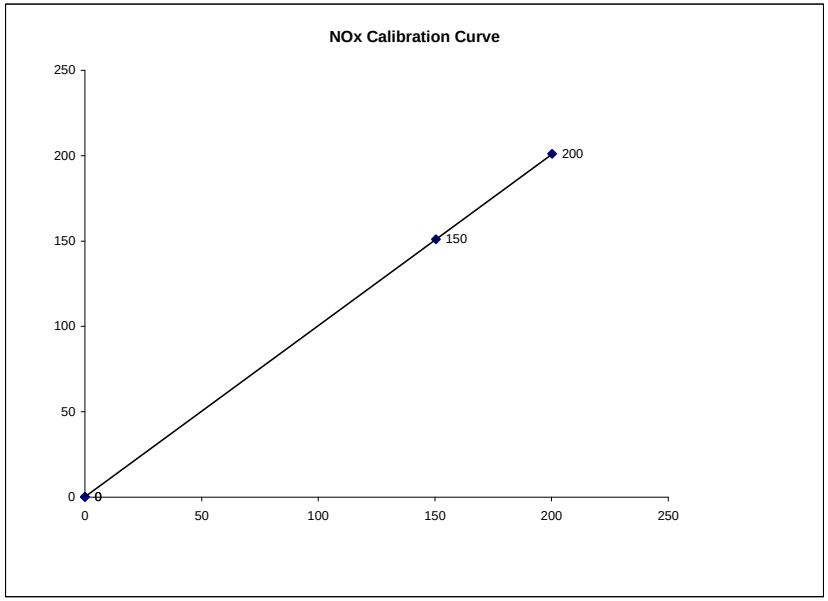
Notes: Replaced exhaust tubing as it was cracked and leaking.

NOx Calibration Curve

Calibration Date	April 14, 2008		
Company	**Lakeland Ind & Comm. Assoc.**		
Plant / Location	**LICA 1 - Cold Lake South**		
Start Time (MST)	7:30	End Time (MST)	16:35

Calculated Conc. ppb	Indicated Response ppb	Correction Factor
0	0	N/A
150	151	0.9960
200	201	0.9960
0	0	0.0000

Correlation Coefficient	(≥ 0.995)	1.000000
Slope	(0.85 to 1.15)	1.003488
Intercept	(± 3% F.S.)	0.098061

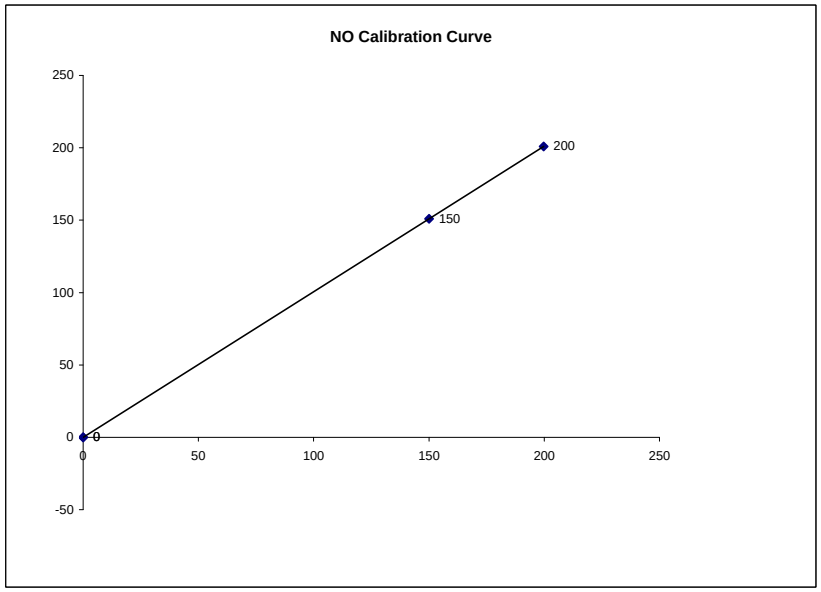


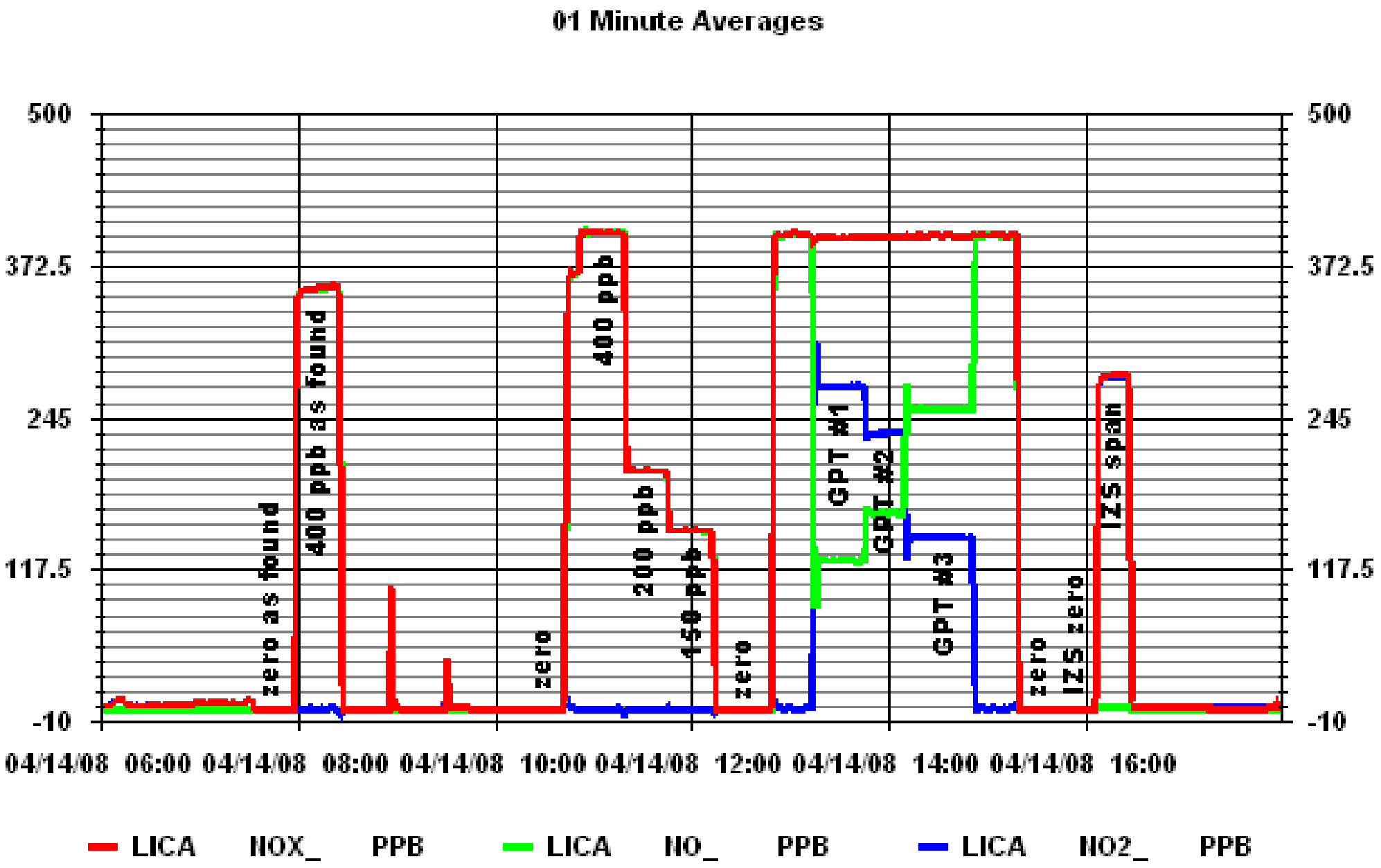
NO Calibration Curve

Calibration Date	April 14, 2008		
Company	**Lakeland Ind & Comm. Assoc.**		
Plant / Location	**LICA 1 - Cold Lake South**		
Start Time (MST)	7:30	End Time (MST)	16:35

Calculated Conc. ppb	Indicated Response ppb	Correction Factor
0	0	N/A
150	151	0.9940
200	201	0.9940
0	0	0.0000

Correlation Coefficient	(≥ 0.995)	1.000000
Slope	(0.85 to 1.15)	1.006606
Intercept	(± 3% F.S.)	-0.098061




01 Minute Averages
500
372.5
245
117.5
-10
zero as found
400 ppb as found
zero
400 ppb
200 ppb
150 ppb
zero
GPT #1
GPT #2
GPT #3
zero
IZS zero
IZS span
04/14/08 06:00
04/14/08 08:00
04/14/08 10:00
04/14/08 12:00
04/14/08 14:00
04/14/08 16:00
LICA NOX_ PPB
LICA NO_ PPB
LICA NO2_ PPB

Ozone

O_3 Calibration Report

Station Information

Calibration Date	April 21, 2008	Previous Calibration	March 16, 2008
Company	**Lakeland Industry & Community Association**		
Plant / Location	**LICA 1 - Cold Lake South**		
Start Time (MST)	12:35	End Time (MST)	15:50
Reason:		Monthly Calibration	
Barometric Pressure	703 mm Hg	Station Temperature	25 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	30.1	694.4	30.7	694.4
O_3 Set Level	29%		29%	
Bench Lamp/O3 Lamp	53.6	67.7	53.6	67.7
Sample Flow A/B	0.732 LPM	0.744 LPM	0.731 LPM	0.744 LPM
Offset / Slope	0.7	1.049	0.7	1.049

Calibration Data

Dilution Flow Rate	Ozone Set Point	Calculated Concentration	Indicated Conc. (DAS)	Correction Factor
5000	0	0	0.1	N/A
5000	300	291	289	1.0069
5000	200	198	196	1.0102
5000	100	97	96	1.0104
5000	0	0	0	N/A
			Sum of Least Squares	N/A
			New Correction Factor	1.0069

	Before Calibration	After Calibration
Auto Zero	0	0
Auto Span	296	296
Sample Lines Connected		YES
Percent Change from Previous Calibration		-0.7%

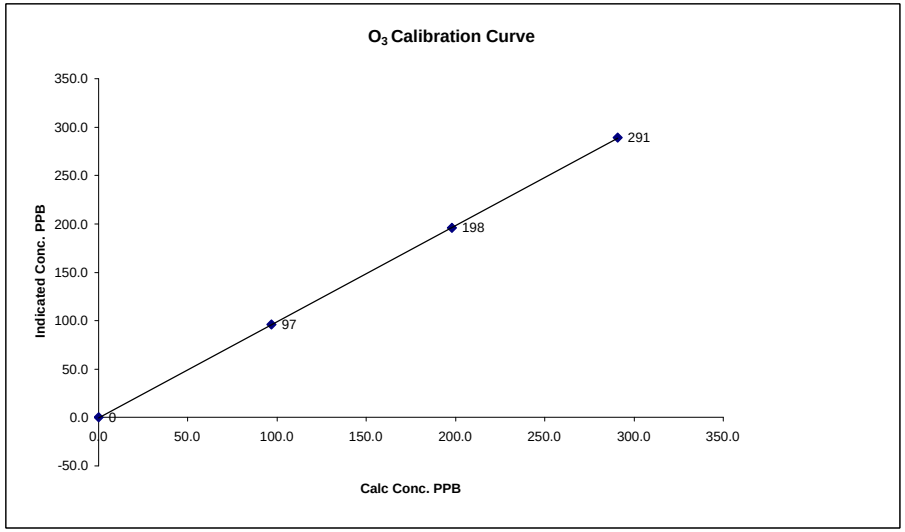
Calibration Performed by: Shea Beaton

O_3 Calibration Curve

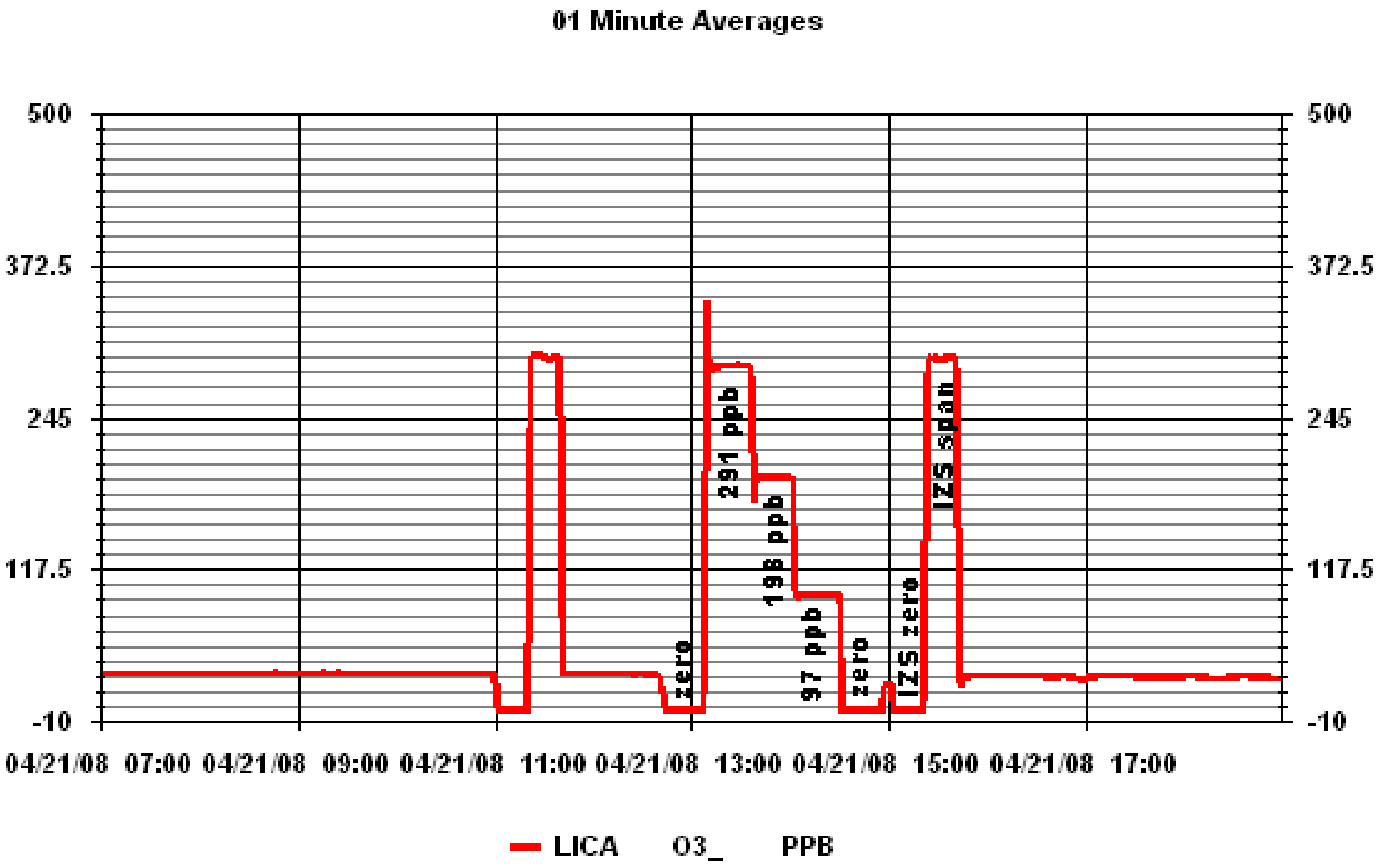
Calibration Date	April 21, 2008		
Company	**Lakeland Industry & Community Association**		
Plant / Location	**LICA 1 - Cold Lake South**		
Start Time (MST)	12:35	End Time (MST)	15:50

Calculated Conc. ppb	Indicated Response ppb	Correction Factor
0	0	n/a
97	96	1.0104
198	196	1.0102
291	289	1.0069

Correlation Coefficient	(≥ 0.995)	0.999993
Slope	(0.85 to 1.15)	0.992472
Intercept	(± 3% F.S.)	-0.122197



Notes:


01 Minute Averages
500
372.5
245
117.5
-10
zero
291 ppb
198 ppb
97 ppb
zero
IZS zero
IZS span
04/21/08 07:00
04/21/08 09:00
04/21/08 11:00
04/21/08 13:00
04/21/08 15:00
04/21/08 17:00
LICA O3_ PPB

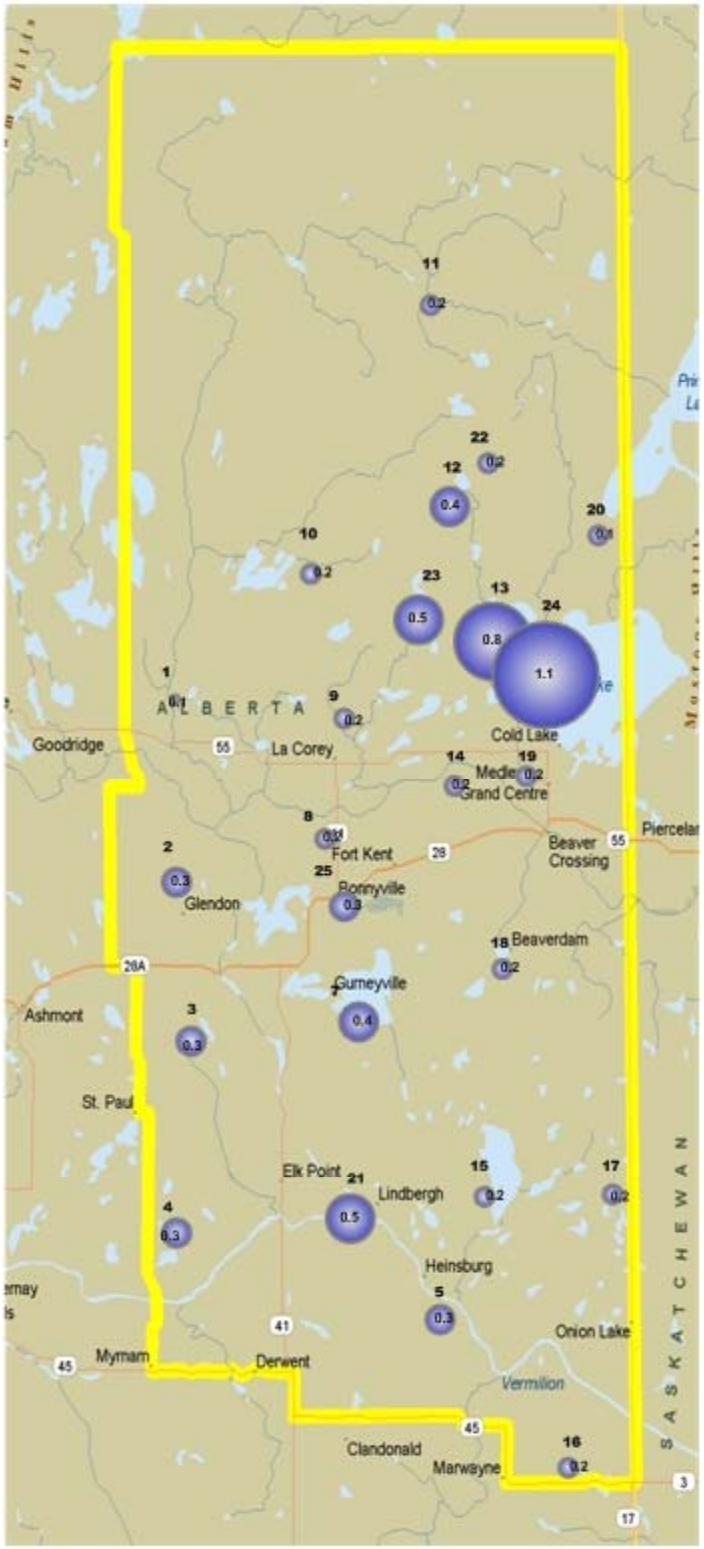
Passive Bubble Maps

Lakeland Industry & Community Association
SO_2 Passive Bubble Map

April 2008

PASSIVE STATIONS

1 – Sand River	0.1 PPB
2 – Therien	0.2 PPB
2A – Therien	0.4 PPB
3 – Flat Lake	0.3 PPB
4 – Lake Eliza	0.3 PPB
5 – Telegraph Creek	0.3 PPB
7 – Muriel-Kehewin	0.4 PPB
8 – Dupre	0.2 PPB
9 – La Corey	0.2 PPB
9A – La Corey	0.2 PPB
10 – Wolf Lake	0.2 PPB
11 – Foster Creek	0.2 PPB
12 – Primrose	0.4 PPB
13 – Maskwa	0.8 PPB
14 – Ardmore	0.2 PPB
15 – Frog Lake	0.2 PPB
16 – Clear Range	0.2 PPB
17 – Fishing Lake	0.2 PPB
18 – Beaverdam	0.2 PPB
19 – Cold Lake South	0.2 PPB
20 – Medley-Martineau	0.2 PPB
21 – Fort George	0.2 PPB
22 – Burnt Lake	0.2 PPB
23 – Mahihkan	0.5 PPB
24 – Hilda Lake	1.1 PPB
25 – Town of Bonnyville	0.3 PPB



Summary

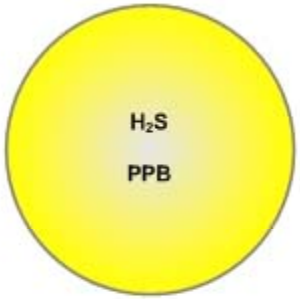
Minimum : 0.1 PPB – Sand River
Maximum: 1.1 PPB – Hilda Lake
Average: 0.3 PPB *Includes Duplicates

Lakeland Industry & Community Association
H_2S Passive Bubble Map

April 2008

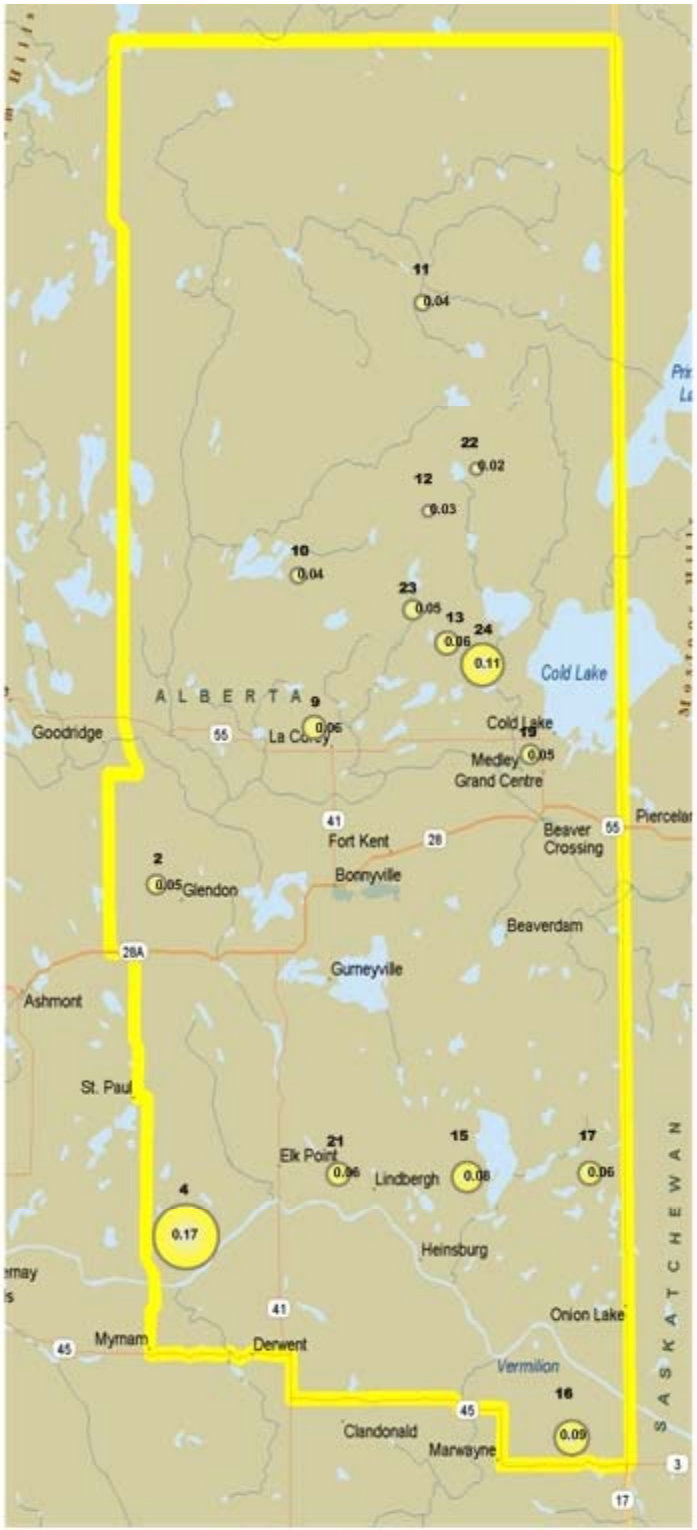
PASSIVE STATIONS

2 – Therien	0.04 PPB
2A – Therien	0.05 PPB
4 – Lake Eliza	0.17 PPB
9 – La Corey	0.06 PPB
9A – La Corey	0.06 PPB
10 – Wolf Lake	0.04 PPB
11 – Foster Creek	0.04 PPB
12 – Primrose	0.03 PPB
13 – Maskwa	0.06 PPB
15 – Frog Lake	0.08 PPB
16 – Clear Range	0.09 PPB
17 – Fishing Lake	0.06 PPB
19 – Cold Lake South	0.05 PPB
21 – Fort George	0.06 PPB
21D – Fort George	0.11 PPB
22 – Burnt Lake	0.02 PPB
23 – Mahihkan	0.05 PPB
24 – Hilda Lake	0.07 PPB



Summary

Minimum : 0.02 PPB – Burnt Lake
Maximum: 0.17 PPB – Lake Eliza
Average: 0.06 PPB *Includes Duplicates



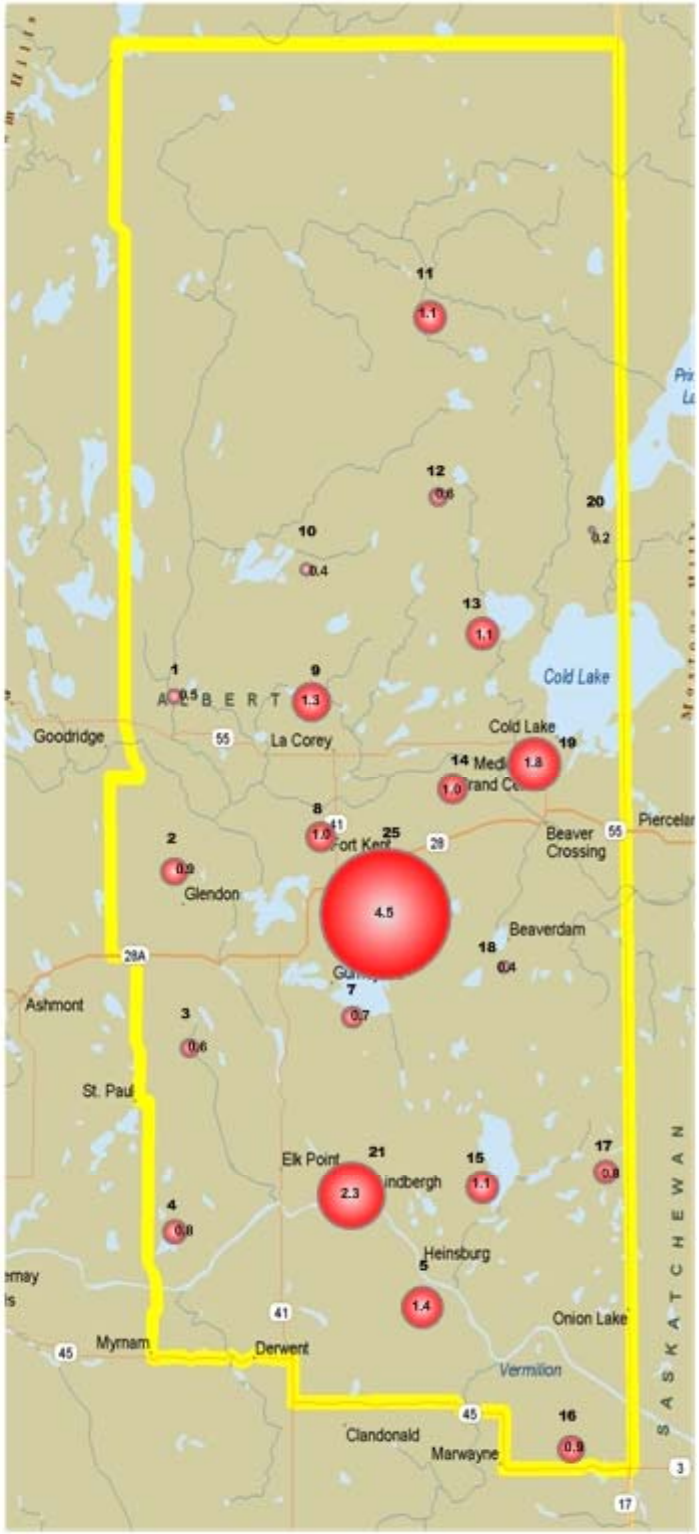
0.09

Lakeland Industry & Community Association
NO_2 Passive Bubble Map

April 2008

PASSIVE STATIONS

1 – Sand River	0.5 PPB
2 – Therien	0.9 PPB
2A – Therien	0.8 PPB
3 – Flat Lake	0.6 PPB
4 – Lake Eliza	0.8 PPB
5 – Telegraph Creek	1.4 PPB
7 – Muriel-Kehewin	0.7 PPB
8 – Dupre	1.0 PPB
9 – La Corey	1.3 PPB
9A – La Corey	1.3 PPB
10 – Wolf Lake	0.4 PPB
11 – Foster Creek	1.1 PPB
12 – Primrose	0.6 PPB
13 – Maskwa	1.1 PPB
14 – Ardmore	1.0 PPB
15 – Frog Lake	1.1 PPB
16 – Clear Range	0.9 PPB
17 – Fishing Lake	0.8 PPB
18 – Beaverdam	0.4 PPB
19 – Cold Lake South	1.8 PPB
20 – Medley-Martineau	0.2 PPB
21 – Fort George	2.3 PPB
25 – Town of Bonnyville	4.5 PPB



Summary

Minimum : 0.2 PPB – Medley-Martineau
Maximum: 4.5 PPB – Town of Bonnyville
Average: 1.1 PPB *Includes Duplicates

Lakeland Industry & Community Association
O_3 Passive Bubble Map

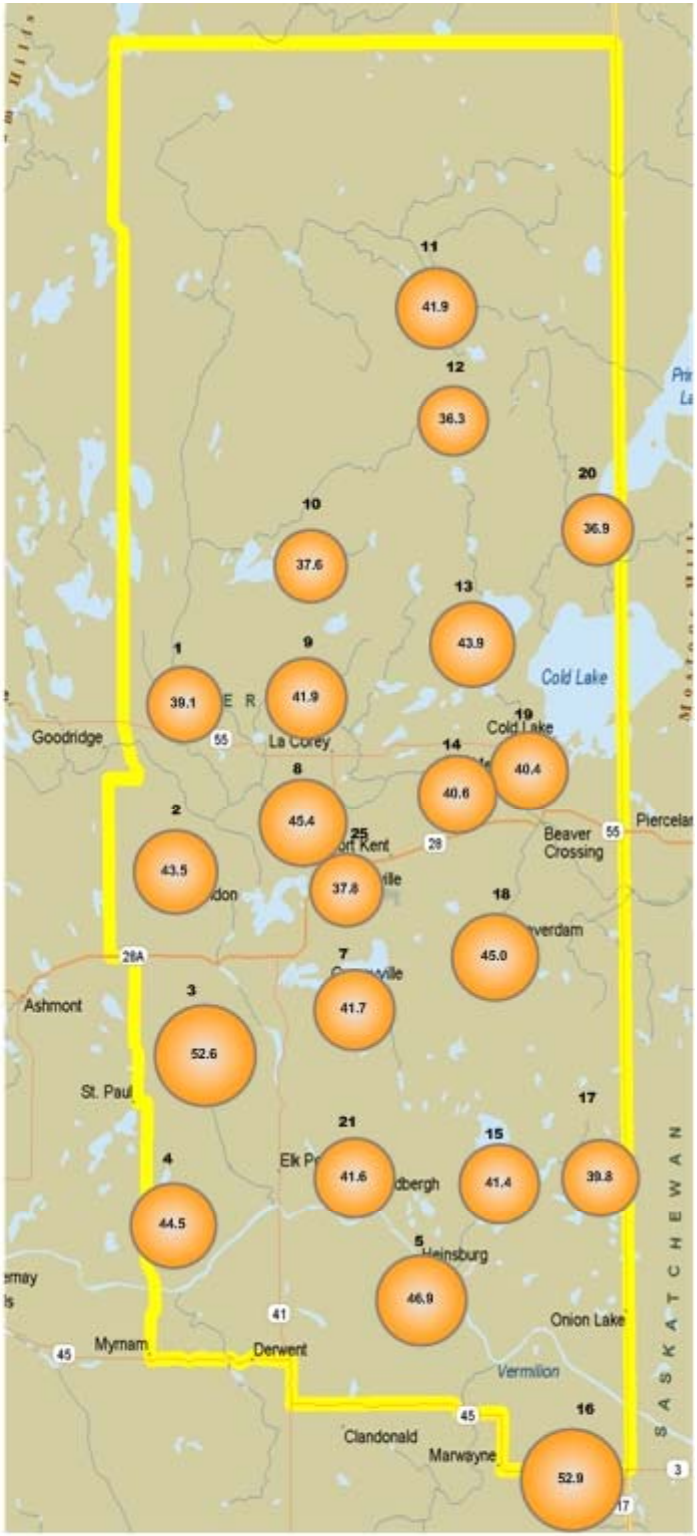
April 2008

PASSIVE STATIONS

1 – Sand River	39.1 PPB
2 – Therien	43.6 PPB
2A – Therien	43.4 PPB
3 – Flat Lake	52.6 PPB
4 – Lake Eliza	44.5 PPB
5 – Telegraph Creek	46.9 PPB
7 – Muriel-Kehewin	41.7 PPB
8 – Dupre	45.4 PPB
9 – La Corey	42.5 PPB
9A – La Corey	41.3 PPB
10 – Wolf Lake	37.6 PPB
11 – Foster Creek	41.9 PPB
12 – Primrose	36.3 PPB
13 – Maskwa	43.9 PPB
14 – Ardmore	40.6 PPB
15 – Frog Lake	41.4 PPB
16 – Clear Range	52.9 PPB
17 – Fishing Lake	39.8 PPB
18 – Beaverdam	45.0 PPB
19 – Cold Lake South	40.4 PPB
20 – Medley-Martineau	36.9 PPB
21 – Fort George	41.6 PPB
25 – Town of Bonnyville	37.8 PPB

Summary

Minimum : 36.3 PPB – Primrose
Maximum: 52.9 PPB – Clear Range
Average: 42.5 PPB *Includes Duplicates



Passive Network Laboratory Analysis

Your Project #: 2008/03/27 - 2008/04/29
Site:LICA

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

Report Date: 2008/05/22

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: A820393
Received: 2008/05/02, 13:59

Sample Matrix: Air
Samples Received: 1

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
H2S Passive Analysis (1)	1	2008/05/22	2008/05/22		EDM SOP-0320
NO2 Passive Analysis (1)	1	2008/05/22	2008/05/22		EDM SOP-0318
O3 Passive Analysis (1)	1	2008/05/09	2008/05/09		EDM SOP-0317
SO2 Passive Analysis (1)	1	2008/05/22	2008/05/22		EDM SOP-0319

Sample Matrix: Air
Samples Received: 25

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
H2S Passive Analysis (1)	16	2008/05/22	2008/05/22		EDM SOP-0320
NO2 Passive Analysis (1)	22	2008/05/22	2008/05/22		EDM SOP-0318
O3 Passive Analysis (1)	22	2008/05/09	2008/05/09		EDM SOP-0317
SO2 Passive Analysis (1)	25	2008/05/22	2008/05/22		EDM SOP-0319

(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

==========
Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section

Your Project #: 2008/03/27 - 2008/04/29
Site:LICA

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

Report Date: 2008/05/22

CERTIFICATE OF ANALYSIS

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 #: A820393
Report Date: 2008/05/22

LAKELAND INDUSTRY AND COMMUNITY ASSOCIATION
Client Project #: 2008/03/27 - 2008/04/29
Site Reference: LICA
Sampler Initials: SB

RESULTS OF CHEMICAL ANALYSES OF AIR

Maxxam ID		J69549		
Sampling Date		2008/03/27 10:20		
	Units	**2A**	**RDL**	**QC Batch**
Passive Montioring				
Calculated H2S	ppb	0.05	0.02	2321852
Calculated NO2	ppb	0.8	0.1	2321783
Calculated O3	ppb	43.4	0.1	2298872
Calculated SO2	ppb	0.4	0.1	2321777

RDL = Reportable Detection Limit

Maxxam Job #: A820393
Report Date: 2008/05/22

LAKELAND INDUSTRY AND COMMUNITY ASSOCIATION
Client Project #: 2008/03/27 - 2008/04/29
Site Reference: LICA
Sampler Initials: SB

RESULTS OF CHEMICAL ANALYSES OF AIR

Maxxam ID		J69528	J69529	J69530	J69531		
Sampling Date		2008/03/27 10:55	2008/03/27 10:20	2008/03/28 11:35	2008/03/28 12:10		
	Units	**1**	**2**	**3**	**4**	**RDL**	**QC Batch**
Passive Montioring							
Calculated H2S	ppb		0.04		0.17	0.02	2321852
Calculated NO2	ppb	0.5	0.9	0.6	0.8	0.1	2321783
Calculated O3	ppb	39.1	43.6	52.6	44.5	0.1	2298872
Calculated SO2	ppb	0.1	0.2	0.3	0.3	0.1	2321777

RDL = Reportable Detection Limit

Maxxam ID		J69532	J69533	J69534	J69535		
Sampling Date		2008/03/28 13:30	2008/03/28 10:45	2008/03/27 08:45	2008/03/27 11:45		
	Units	**5**	**7**	**8**	**9**	**RDL**	**QC Batch**
Passive Montioring							
Calculated H2S	ppb				0.06	0.02	2321852
Calculated NO2	ppb	1.4	0.7	1.0	1.3	0.1	2321783
Calculated O3	ppb	46.9	41.7	45.4	42.5	0.1	2298872
Calculated SO2	ppb	0.3	0.4	0.2	0.2	0.1	2321777

RDL = Reportable Detection Limit

Maxxam ID		J69536	J69537	J69538	J69539		
Sampling Date		2008/03/27 12:20	2008/03/28 08:35	2008/03/27 13:45	2008/03/28 06:55		
	Units	**10**	**11**	**12**	**13**	**RDL**	**QC Batch**
Passive Montioring							
Calculated H2S	ppb	0.04	0.04	0.03	0.06	0.02	2321852
Calculated NO2	ppb	0.4	1.1	0.6	1.1	0.1	2321783
Calculated O3	ppb	37.6	41.9	36.3	43.9	0.1	2298872
Calculated SO2	ppb	0.2	0.2	0.4	0.8	0.1	2321777

RDL = Reportable Detection Limit

Maxxam Analytics Inc

Maxxam Job #: A820393
Report Date: 2008/05/22

LAKELAND INDUSTRY AND COMMUNITY ASSOCIATION
Client Project #: 2008/03/27 - 2008/04/29
Site Reference: LICA
Sampler Initials: SB

RESULTS OF CHEMICAL ANALYSES OF AIR

Maxxam ID		J69540	J69541	J69542	J69543		
Sampling Date		2008/03/27 08:00	2008/03/28 14:55	2008/03/28 14:10	2008/03/28 15:35		
	Units	**14**	**15**	**16**	**17**	**RDL**	**QC Batch**
Passive Montioring							
Calculated H2S	ppb		0.08	0.09	0.06	0.02	2321852
Calculated NO2	ppb	1.0	1.1	0.9	0.8	0.1	2321783
Calculated O3	ppb	40.6	41.4	52.9	39.8	0.1	2298872
Calculated SO2	ppb	0.2	0.2	0.2	0.2	0.1	2321777

RDL = Reportable Detection Limit

Maxxam ID		J69544	J69545	J69547	J69548		
Sampling Date		2008/03/28 16:35	2008/03/27 17:20	2008/03/27 15:45	2008/03/28 12:50		
	Units	**18**	**19**	**20**	**21**	**RDL**	**QC Batch**
Passive Montioring							
Calculated H2S	ppb		0.05		0.06	0.02	2321852
Calculated NO2	ppb	0.4	1.8	0.2	2.3	0.1	2321783
Calculated O3	ppb	45.0	40.4	36.9	41.6	0.1	2298872
Calculated SO2	ppb	0.2	0.2	0.2	0.2	0.1	2321777

RDL = Reportable Detection Limit

Maxxam ID		J69550	J69554	J69555	J69556		
Sampling Date		2008/03/27 11:45	2008/03/28 07:25	2008/03/27 14:29	2008/03/27 14:50		
	Units	**9A**	**22**	**23**	**24**	**RDL**	**QC Batch**
Passive Montioring							
Calculated H2S	ppb	0.06	<0.02	0.05	0.07	0.02	2321852
Calculated NO2	ppb	1.3				0.1	2321783
Calculated O3	ppb	41.3				0.1	2298872
Calculated SO2	ppb	0.2	0.2	0.5	1.1	0.1	2321777

RDL = Reportable Detection Limit

Maxxam Job #: A820393
Report Date: 2008/05/22

LAKELAND INDUSTRY AND COMMUNITY ASSOCIATION
Client Project #: 2008/03/27 - 2008/04/29
Site Reference: LICA
Sampler Initials: SB

RESULTS OF CHEMICAL ANALYSES OF AIR

Maxxam ID		J69557		
Sampling Date		2008/03/27 08:25		
	Units	**25**	**RDL**	**QC Batch**
Passive Montioring				
Calculated NO2	ppb	4.5	0.1	2321783
Calculated O3	ppb	37.8	0.1	2298872
Calculated SO2	ppb	0.3	0.1	2321777

RDL = Reportable Detection Limit

General Comments

Results relate only to the items tested.

LAKELAND INDUSTRY AND COMMUNITY ASSOCIATION
Attention: MICHAEL BISAGA
Client Project #: 2008/03/27 - 2008/04/29
P.O. #:
Site Reference: LICA

Quality Assurance Report

Maxxam Job Number: PA820393

QA/QC Batch Num Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
2298872 LM1	Calibration Check	Calculated O3	2008/05/09		97	%	91 - 107
	SPIKE	Calculated O3	2008/05/09		101	%	N/A
	BLANK	Calculated O3	2008/05/09	0.3, RDL=0.1		ppb	
2321777 DF4	Calibration Check	Calculated SO2	2008/05/22		99	%	95 - 105
	SPIKE	Calculated SO2	2008/05/22		102	%	N/A
	BLANK	Calculated SO2	2008/05/22	<0.1		ppb	
2321783 DF4	Calibration Check	Calculated NO2	2008/05/22		97	%	76 - 118
	SPIKE	Calculated NO2	2008/05/22		100	%	N/A
	BLANK	Calculated NO2	2008/05/22	<0.1		ppb	
2321852 SS6	Calibration Check	Calculated H2S	2008/05/22		112	%	80 - 120
	SPIKE	Calculated H2S	2008/05/22		101	%	N/A

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	03/27/08	10:55	04/28/08	11:25	
$H_2S/SO_2/NO_2/O_3$		2	03/27/08	10:20	04/28/08	10:50	
$SO_2/NO_2/O_3$		3	03/28/08	11:35	04/29/08	15:30	
$H_2S/SO_2/NO_2/O_3$		4	03/28/08	12:10	04/29/08	14:45	
$SO_2/NO_2/O_3$		5	03/28/08	13:30	04/29/08	13:30	
$SO_2/NO_2/O_3$		7	03/28/08	10:45	04/29/08	16:20	
$SO_2/NO_2/O_3$		8	03/27/08	08:45	04/28/08	10:15	
$H_2S/SO_2/NO_2/O_3$		9	03/27/08	11:45	04/28/08	12:30	
$H_2S/SO_2/NO_2/O_3$		10	03/27/08	12:20	04/28/08	13:05	
$H_2S/SO_2/NO_2/O_3$		11	03/28/08	08:35	04/28/08	14:35	
$H_2S/SO_2/NO_2/O_3$		12	03/27/08	13:45	04/29/08	08:55	
$H_2S/SO_2/NO_2/O_3$		13	03/28/08	06:55	04/28/08	16:50	
$SO_2/NO_2/O_3$		14	03/27/08	08:00	04/28/08	09:05	
$H_2S/SO_2/NO_2/O_3$		15	03/28/08	14:55	04/29/08	11:50	
$H_2S/SO_2/NO_2/O_3$		16	03/28/08	14:10	04/29/08	12:35	
$H_2S/SO_2/NO_2/O_3$		17	03/28/08	15:35	04/29/08	11:10	
$SO_2/NO_2/O_3$		18	03/28/08	16:35	04/29/08	10:20	
$H_2S/SO_2/NO_2/O_3$		19	03/27/08	17:20	04/29/08	06:50	
$SO_2/NO_2/O_3$		20	03/27/08	15:45	04/29/08	07:45	
$H_2S/SO_2/NO_2/O_3$		21	03/28/08	12:50	04/29/08	14:00	
H_2S/SO_2		22	03/28/08	07:25	04/28/08	15:45	
H_2S/SO_2		23	03/27/08	14:35	04/28/08	16:30	
H_2S/SO_2		24	03/27/08	14:50	04/28/08	17:10	
$SO_2/NO_2/O_3$		25	03/27/08	08:25	04/28/08	09:55	
$H_2S/SO_2/NO_2/O_3$		2A	03/28/08	12:50	04/28/08	10:50	
$H_2S/SO_2/NO_2/O_3$		9A	03/28/08	12:10	04/28/08	12:30	