Lakeland Industry & Community Association

Cold Lake Monitoring Site
Ambient Air Monitoring
Data Report
For
January 2009
(Revised)

Prepared By:

Maxxam Analytics

Driven by Service and Science

March 10, 2009

Lakeland Industry & Community Association
Ambient Air Monitoring

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Introduction

The following Ambient Air Monitoring report was prepared for:

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Monitoring Location: Cold Lake
Data Period: January 2009

The monthly ambient data report:

- Prepared by Lily Lin
- Reviewed by Craig Snider

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

Calibration Procedure

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

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

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

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

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

MONTHLY CONTINUOUS DATA SUMMARY
LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - COLD LAKE

Continuous Ambient Monitoring – January 2009

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION COLD LAKE SITE						MAXIMUM VALUES							OPERATIONAL TIME (PERCENT)
						1-HOUR					24-HOUR		
PARAMETER	OBJECTIVES		EXCEEDENCES		MONTHLY AVERAGE	READING	DAY	HOUR	WIND SPEED (KPH)	WIND DIRECTION (DEGREES)	READING	DAY	
	1-HR	24-HR	1-HR	24-HR									
SO_2 (PPB)	172	57	0	0	0.15	5	19	13	10.8	231(SW)	0.8	19	100.0
TRS (PPB)	-	-	-	-	0.00	0	ALL	ALL	VAR	VAR	0.0	ALL	100.0
NO_2 (PPB)	212	106	0	0	8.67	38	19	10	2.2	270(W)	18.0	19	100.0
NO (PPB)	-	-	-	-	2.39	73	19	10	2.2	270(W)	12.3	19	100.0
NOx (PPB)	-	-	-	-	11.41	112	19	10	2.2	270(W)	30.8	19	100.0
O_3 (PPB)	82	-	0	-	21.07	39	28	VAR	VAR	VAR	31.9	12	94.1
THC (PPM)	-	-	-	-	2.04	3.1	11, 21	0, 11	2.1, 0.4	347(NNW), 292(WNW)	2.5	10	100.0
PM 2.5 (UG/M^3)	-	30	-	0	5.34	25.8	13	23	1.6	155(SSE)	12.6	21	96.1
TEMPERATURE (DEG C)	-	-	-	-	-16.10	8.1	18	14	7.3	273(W)	3.2	18	100.0
RELATIVE HUMIDITY (%)	-	-	-	-	70.44	96.2	30	7	1	151SSE)	83.8	29	100.0
VECTOR WS (KPH)	-	-	-	-	5.59	23.8	31	2	-	292(WNW	16.1	31	100.0
VECTOR WD (DEGREES)	-	-	-	-	265(W)	-	-	-	-	-	-	-	100.0

VAR-VARIOUS

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

Passive Ambient Monitoring Network – November 2008

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION PASSIVE NETWORK			
NETWORK MAXIMUM			NETWORK AVERAGE
PARAMETER	STATION	READING (PPB)	READING (PPB)
NO_2	#28	10.6	4.5
SO_2	#27	2.6	1.1
H_2S	#14	0.29	0.2
O_3	#17	33.8	28.3

General Monthly Summary - Cold Lake

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

AQM STATION – LICA – COLD LAKE

Sulphur Dioxide (PPB)
- Analyzer make / model – Thermo 43i

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

Total Reduced Sulphur (PPB)
- Analyzer make / model –TEI 450i
- Converter - CD NOVA CDN 101

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

Total HydroCarbon (PPM)
- Analyzer make / model -TECO 51C-LT

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

Nitrogen Dioxide (PPB)
- Analyzer make / model - TECO 42C

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

Ozone (PPB)
- Analyzer make / model - TECO 49I

The analyzer spanned 40% low on January 31st after daily calibration. The technician fixed this issue on February 1st. Due to this issue, we have to invalid the data back to the last valid calibration, which is January 30th. Thus, 44 hours of data were invalidated. The inlet filter was changed before the monthly calibration was started.

General Monthly Summary - Cold Lake

AQM STATION – LICA – COLD LAKE

Particulate Matter 2.5 (ug/m^3)

- Analyzer make / model – changed TEOM 1400A to TEOM1405F

A removal audit of the Maxxam-Supplied TEOM 1400A was performed on January 12th. The result showed that both flows were above tolerance; the difference of the readings between Measured Total and Indicated Total Flow was 1.72 L/min that was above the manufacturer recommended guideline (+/- 1.0 L/min), and the difference of the readings between Measured Bypass Flow and Indicated Bypass Flow was 0.33 L/min that was above the manufacturer recommended guideline (+/- 0.2 L/min). A replacement of a TEOM 1405F was installed on January 12th, and the analyzer was allowed time to stabilize overnight. An installation audit was performed on January 13th. Ambient pressure, temperature and analog output calibration were performed on the same day. A leak check was done and new filter were installed as well. Due to this issue, a total of 27 hours of data was invalidated. The analyzer was rechecked and an audit was re-performed on January 16th; both flows were within tolerance. One-hour 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.

Ambient Temperature (DEGC)

- System make / model - Rotronic Hygroclip-S3

No operational issues observed during the month.

General Monthly Summary - Cold Lake

AQM STATION – LICA – COLD LAKE

Trailer Temperature (DEGC)

- System make / model - R&R 61

No operational issues observed during the month.

Datalogger

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

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

Trailer

No operational issues observed during the month.

Air Quality Index (AQI)

The AQI data was adjusted to reflect regular monthly and daily calibrations, maintenance, and downtime. All AQI values recorded in January were within the good range.

Passive Network

No issue was observed during this month.

Continuous Monitoring

Cold Lake

Monthly Summaries, Graphs & Wind Roses

Air Quality Index

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

JANUARY 2009

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	12	12	13	13	13	13	11	9	6	-	8	8	9	10	9	8	5	4	5	3	5	4	7	10	13
	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	**NA**	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	PM2	O3_	O3_	O3_	O3_	O3_	O3_
2	12	12	13	12	12	12	12	13	-	-	-	-	-	-	-	12	12	12	12	11	11	9	7	7	13
	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_
3	4	5	6	6	6	7	6	-	6	7	9	9	10	10	10	9	7	4	3	3	3	3	4	3	10
	O3_	O3_	O3_	O3_	O3_	O3_	O3_	**NA**	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	PM2	PM2	PM2	PM2	PM2	O3_
4	3	4	3	4	2	3	-	4	2	5	10	10	10	10	10	8	5	5	2	4	5	8	9	10	10
	PM2	PM2	PM2	PM2	PM2	PM2	**NA**	PM2	PM2	PM2	O3_	O3_	O3_	O3_	O3_	O3_	O3_	PM2	PM2	PM2	PM2	O3_	O3_	O3_	O3_
5	11	11	11	12	13	-	13	12	11	12	13	14	14	15	15	12	11	12	15	15	15	15	16	16	16
	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_
6	16	16	16	15	-	15	14	13	11	10	9	10	9	10	10	10	9	8	5	2	1	1	1	1	16
	O3_	O3_	O3_	O3_	**NA**	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	PM2	O3_	O3_	O3_	O3_
7	1	2	1	-	2	4	4	3	2	3	8	8	8	10	10	11	10	10	9	8	6	6	10	11	11
	PM2	PM2	PM2	**NA**	PM2	PM2	PM2	PM2	PM2	PM2	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_
8	12	13	-	11	11	11	11	11	10	11	11	12	12	12	12	10	9	12	10	11	8	8	9	10	13
	O3_	O3_	**NA**	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	PM2
9	10	-	9	9	9	6	9	7	2	5	7	10	12	11	10	9	8	8	8	6	5	6	5	6	12
	O3_	**NA**	O3_	O3_	O3_	O3_	O3_	O3_	PM2	PM2	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	PM2	O3_	O3_
10	-	6	6	5	5	5	5	5	5	15	6	6	7	6	5	5	5	6	6	6	6	5	5	-	15
	NA	O3_	O3_	PM2	O3_	O3_	O3_	PM2	O3_	PM2	O3_	O3_	O3_	O3_	PM2	PM2	PM2	PM2	PM2	PM2	PM2	PM2	PM2	**NA**	O3_
11	4	7	9	8	7	6	6	6	7	8	10	10	10	12	12	13	14	14	17	18	18	17	-	17	18
	PM2	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	**NA**	O3_	O3_
12	16	16	16	15	16	16	16	16	15	15	16	-	-	-	-	-	-	-	-	-	-	-	-	-	16
	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	PM2
13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	14	14	-	12	14	22	22
	NA	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	O3_	O3_	**NA**	O3_	O3_	PM2	PM2
14	10	7	7	3	5	4	7	6	7	-	12	13	13	13	12	9	7	9	7	-	8	7	10	13	13
	O3_	O3_	PM2	O3_	O3_	PM2	PM2	O3_	O3_	**NA**	O3_	O3_	O3_	O3_	O3_	O3_	O3_	PM2	PM2	**NA**	PM2	PM2	O3_	O3_	PM2
15	13	13	13	13	13	12	12	12	11	11	11	10	10	12	11	9	11	9	-	7	8	9	7	8	13
	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	PM2	PM2	**NA**	PM2	PM2	PM2	PM2	PM2	O3_
16	7	8	9	10	9	9	8	13	14	15	18	18	19	19	18	18	16	-	16	16	14	12	7	7	19
	PM2	PM2	PM2	PM2	PM2	PM2	PM2	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	**NA**	O3_	O3_	O3_	O3_	O3_	O3_	O3_
17	9	12	15	14	14	12	11	8	9	14	15	16	16	18	18	18	-	18	17	17	17	17	16	17	18
	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	**NA**	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_
18	17	17	18	17	17	17	16	15	15	16	16	17	17	17	17	-	16	16	16	16	16	14	13	13	18
	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	**NA**	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_
19	10	12	15	12	10	7	17	10	4	7	14	14	13	15	-	12	13	10	9	11	11	12	13	14	17
	O3_	O3_	O3_	O3_	O3_	PM2	PM2	PM2	PM2	PM2	PM2	PM2	PM2	PM2	**NA**	PM2	PM2	O3_	PM2	PM2	O3_	O3_	O3_	O3_	O3_
20	14	12	12	14	12	14	14	13	11	13	12	14	16	-	16	15	15	16	13	12	12	10	10	11	16
	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	**NA**	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	PM2	O3_	PM2	O3_
21	10	11	11	14	14	11	11	12	12	14	15	14	-	15	16	13	13	10	12	13	13	13	14	14	16
	PM2	PM2	PM2	PM2	PM2	PM2	PM2	PM2	PM2	PM2	PM2	PM2	**NA**	O3_	PM2	O3_	O3_	O3_	PM2	O3_	O3_	O3_	O3_	O3_	O3_
22	14	14	14	14	14	15	16	16	16	16	16	-	18	18	18	17	17	16	16	16	16	14	14	15	18
	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	**NA**	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_
23	15	14	13	13	10	10	7	5	9	9	-	14	14	15	15	14	15	13	12	12	13	14	13	12	15
	O3_	O3_	O3_	O3_	O3_	O3_	O3_	PM2	O3_	O3_	**NA**	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_
24	13	13	13	13	13	13	13	14	14	-	16	16	17	17	17	17	16	17	15	14	14	14	14	14	17
	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_
25	15	15	15	15	15	13	11	11	-	10	13	14	15	15	15	16	15	14	12	11	9	10	11	10	16
	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_
26	9	7	7	9	13	13	9	-	4	5	9	18	15	17	17	16	14	11	11	8	9	7	7	8	18
	O3_	O3_	O3_	O3_	O3_	O3_	O3_	**NA**	PM2	O3_	O3_	PM2	O3_	O3_	O3_	O3_	O3_	PM2	O3_	O3_	O3_	O3_	PM2	PM2	O3_
27	7	7	10	12	12	11	-	12	11	13	14	13	13	14	13	11	14	10	13	13	12	12	13	15	15
	PM2	PM2	PM2	O3_	O3_	O3_	**NA**	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	PM2	O3_	PM2	PM2	PM2	PM2	O3_	O3_	O3_
28	16	17	16	18	19	-	17	15	14	18	17	18	19	20	20	20	19	10	5	8	5	5	8	13	20
	O3_	O3_	O3_	O3_	O3_	**NA**	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	PM2	PM2	PM2	PM2	O3_	O3_
29	15	16	15	15	-	15	13	7	7	5	5	11	11	16	16	12	13	9	13	13	14	15	15	16	16
	O3_	O3_	O3_	O3_	**NA**	O3_	O3_	O3_	O3_	PM2	O3_	PM2	PM2	PM2	PM2	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_
30	17	17	17	-	15	14	11	5	2	5	12	15	19	18	11	11	12	12	12	12	12	12	12	-	19
	O3_	O3_	O3_	**NA**	O3_	O3_	O3_	PM2	O3_	PM2	PM2	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	**NA**	O3_
31	13	12	-	12	12	12	11	11	11	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	13
	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	17	17	18	18	19	17	17	16	16	18	18	18	19	20	20	20	19	18	17	18	18	17	16	22	
	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)	0	0.0%	-	-	-	0	0.0%	-	-	-	0	0.0%	-	-	-	0	0.0%	-	-	-	0	0.0%
GOOD (1-25)	551	74.1%	20	VAR	28	123	16.5%	22	23	13	0	0.0%	-	-	-	0	0.0%	-	-	-	674	90.6%
OVERALL	551	74.1%	-	-	-	123	16.5%	-	-	-	0	0.0%	-	-	-	0	0.0%	-	-	-	674	90.6%
UNAVAILABLE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	70	9.4%

VAR: VARIOUS

Sulphur Dioxide

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

JANUARY 2009

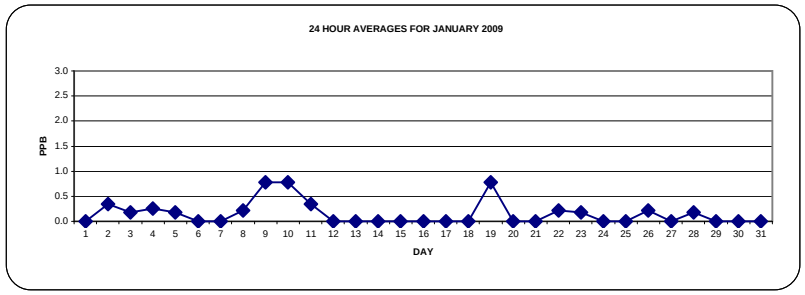
SULPHUR DIOXIDE (SO_2) hourly averages in ppb

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	0	**IZS**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
2	0	0	0	0	0	0	0	0	**IZS**	**C**	**C**	**C**	0	0	0	2	1	0	1	1	1	1	0	0	2	0.4	24
3	0	0	1	1	1	1	0	**IZS**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.2	24
4	0	0	0	0	0	0	**IZS**	0	0	0	0	0	1	1	1	1	0	0	0	0	0	0	1	1	1	0.3	24
5	1	1	1	1	0	**IZS**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.2	24
6	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
7	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
8	0	0	**IZS**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	2	2	0.2	24
9	0	**IZS**	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	2	2	2	2	2	2	2	2	0.8	24
10	**IZS**	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	**IZS**	1	0.8	24
11	0	0	0	0	0	0	0	0	0	0	1	2	2	2	1	0	0	0	0	0	0	0	**IZS**	0	2	0.3	24
12	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
13	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
14	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
15	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
16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**IZS**	0	0	0	0	0	0	0	0.0	24
17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**IZS**	0	0	0	0	0	0	0	0	0.0	24
18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**IZS**	0	0	0	0	0	0	0	0	0	0.0	24
19	0	0	0	0	0	0	0	0	0	0	0	1	3	**5**	**IZS**	3	2	2	1	1	0	0	0	0	**5**	**0.8**	24
20	0	0	0	0	0	0	0	0	0	0	0	0	0	**IZS**	0	0	0	0	0	0	0	0	0	0	0	0.0	24
21	0	0	0	0	0	0	0	0	0	0	0	0	**IZS**	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
22	0	0	0	0	1	0	0	0	1	0	0	**IZS**	0	0	0	0	0	0	0	0	0	0	0	3	3	0.2	24
23	3	1	0	0	0	0	0	0	0	0	**IZS**	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0.2	24
24	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
25	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
26	0	0	0	0	0	0	0	**IZS**	0	0	0	1	0	1	1	1	1	0	0	0	0	0	0	0	1	0.2	24
27	0	0	0	0	0	0	**IZS**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
28	0	0	0	0	0	**IZS**	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0.2	24
29	0	0	0	0	**IZS**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
30	0	0	0	**IZS**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
31	0	0	**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	3	1	1	1	1	1	NA	1	1	1	1	2	3	5	1	3	2	2	2	2	2	2	2	3			
HOURLY AVG	0.1	0.1	0.1	0.1	0.1	0.1	NA	0.1	0.1	0.0	0.1	0.2	0.2	0.4	0.2	0.3	0.2	0.2	0.1	0.1	0.1	0.1	0.2	0.3			

STATUS FLAG CODES

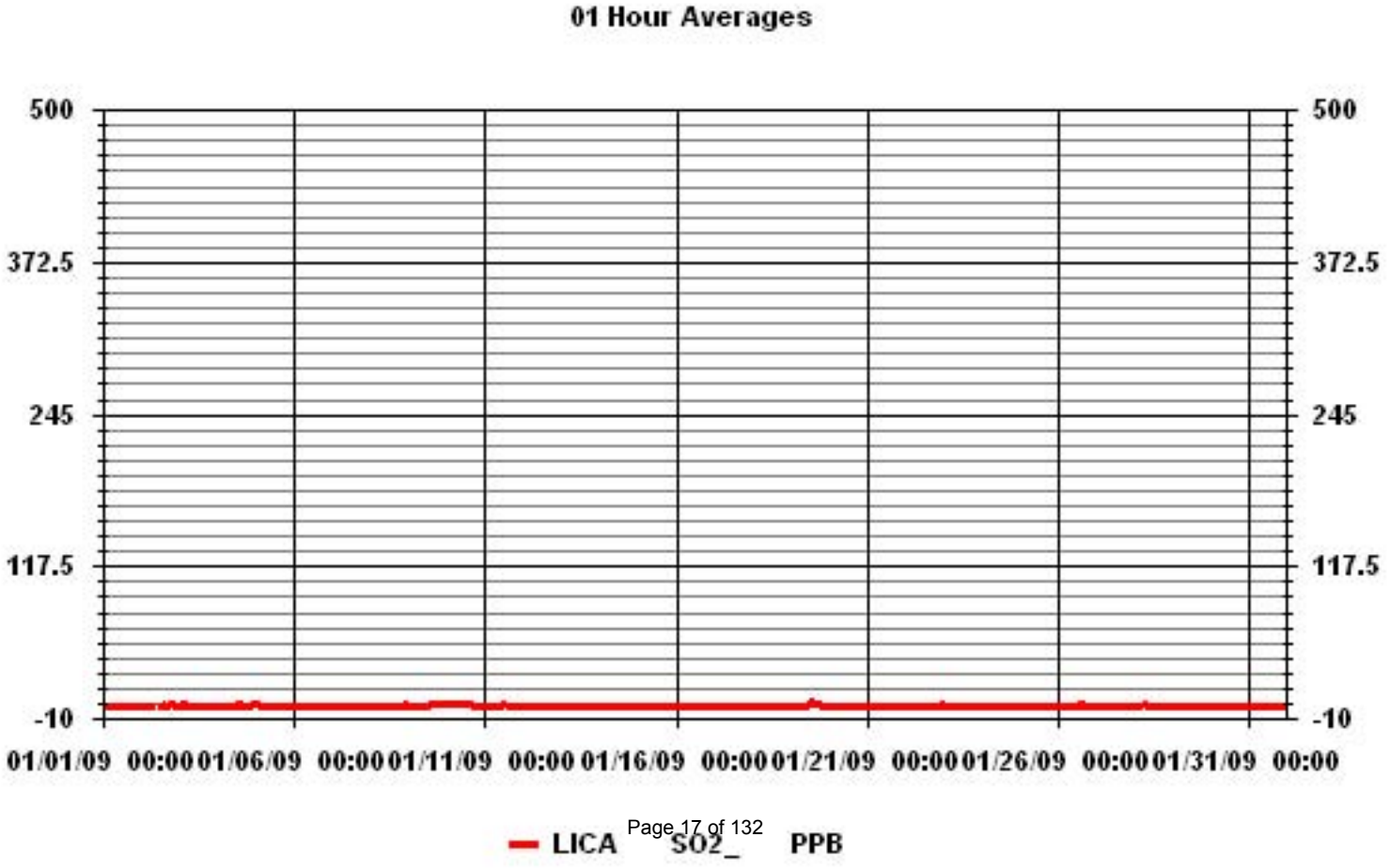
S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	- MAINTENANCE
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE



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:	77					
MAXIMUM 1-HR AVERAGE:	5	PPB	@ HOUR(S)	13	ON DAY(S)	19
MAXIMUM 24-HR AVERAGE:	0.8	PPB			ON DAY(S)	19
IZS CALIBRATION TIME:	32	HRS	OPERATIONAL TIME:		744	HRS
MONTHLY CALIBRATION TIME:	3	HRS	AMD OPERATION UPTIME:		100.0	%
STANDARD DEVIATION:	0.48		MONTHLY AVERAGE:		0.15	PPB


01 Hour Averages
500
372.5
245
117.5
-10
01/01/09 00:00
01/06/09 00:00
01/11/09 00:00
01/16/09 00:00
01/21/09 00:00
01/26/09 00:00
01/31/09 00:00
LICA SO2_ PPB

LICA
SO2_ / WDR Joint Frequency Distribution (Percent)

January 2009

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	1.83	4.37	4.51	3.38	8.60	5.78	5.92	2.25	1.97	1.97	18.61	19.04	9.30	5.92	3.52	2.96	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	1.83	4.37	4.51	3.38	8.60	5.78	5.92	2.25	1.97	1.97	18.61	19.04	9.30	5.92	3.52	2.96	

Calm : .00 %

Total # Operational Hours : 709

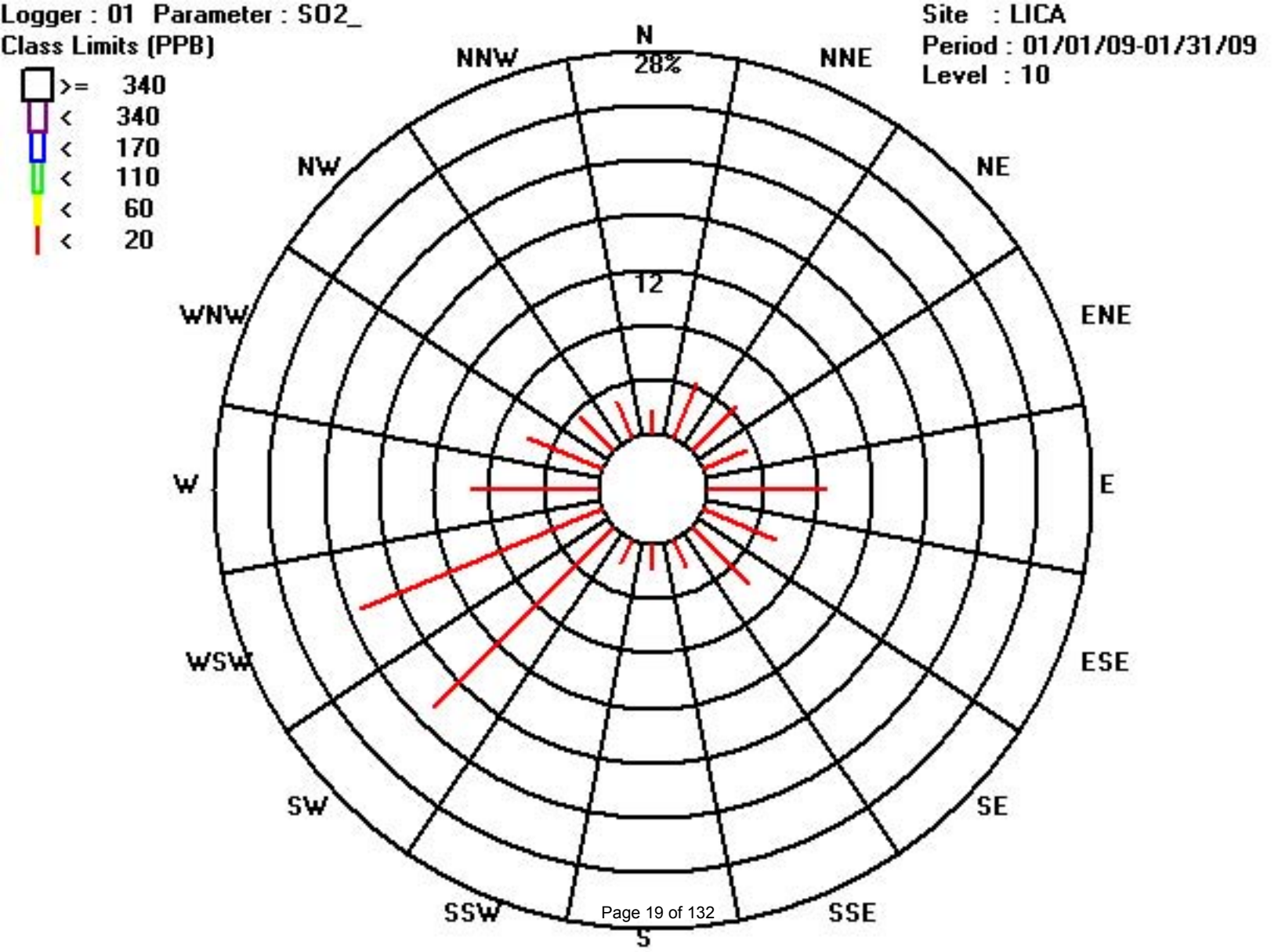
Distribution By Samples

Direction

Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 20	13	31	32	24	61	41	42	16	14	14	132	135	66	42	25	21	709
< 60																	
< 110																	
< 170																	
< 340																	
>= 340																	
Totals	13	31	32	24	61	41	42	16	14	14	132	135	66	42	25	21	

Calm : .00 %

Total # Operational Hours : 709


Logger : 01 Parameter : SO2_
Class Limits (PPB)
>= 340
< 340
< 170
< 110
< 60
< 20
Site : LICA
Period : 01/01/09-01/31/09
Level : 10
N
28%
NNE
NE
ENE
E
ESE
SE
SSE
S
SSW
SW
WSW
W
WNW
NW
NNW
12

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

JANUARY 2008

SULPHUR DIOXIDE MAX instantaneous maximum in ppb

MST

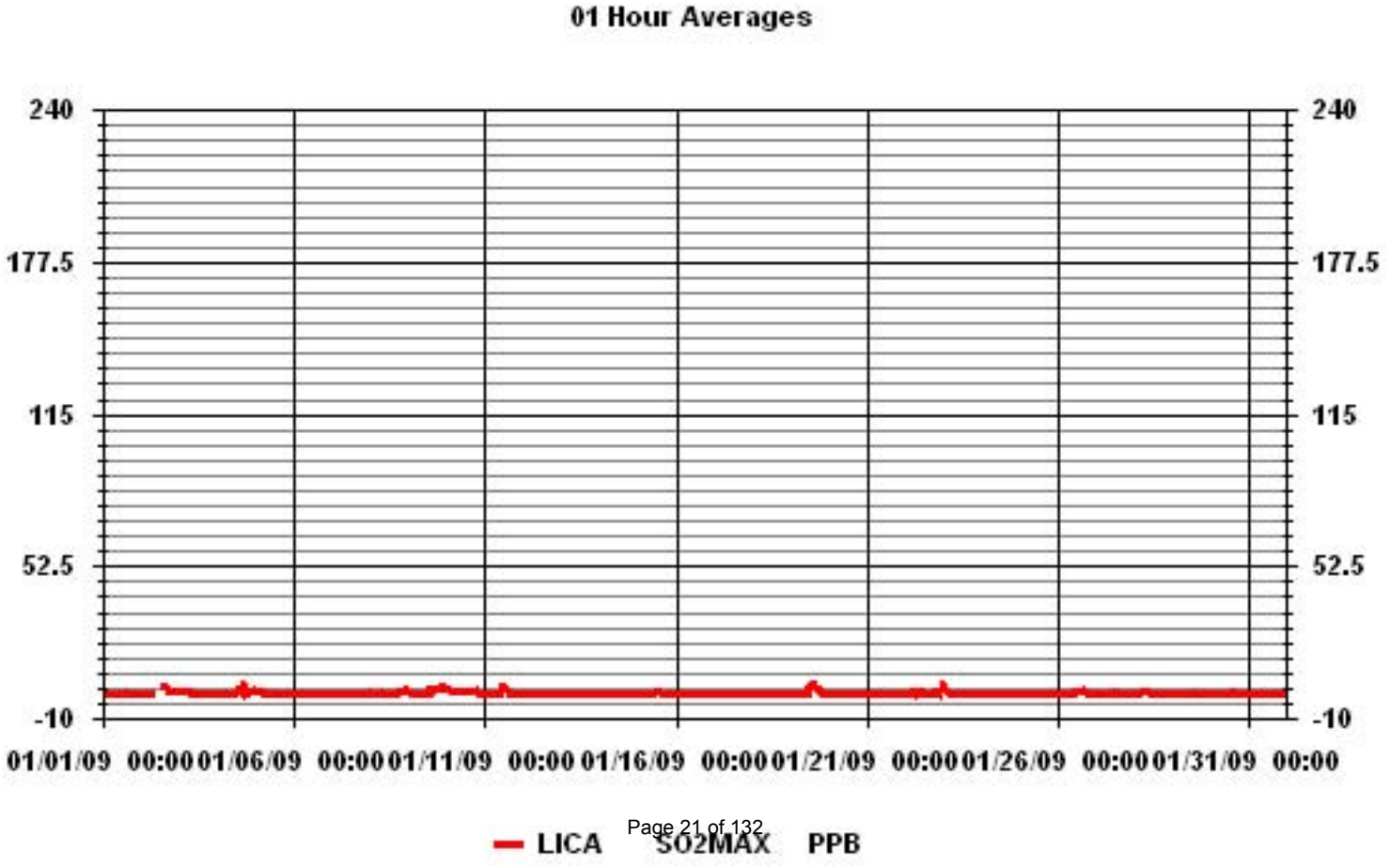
HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00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

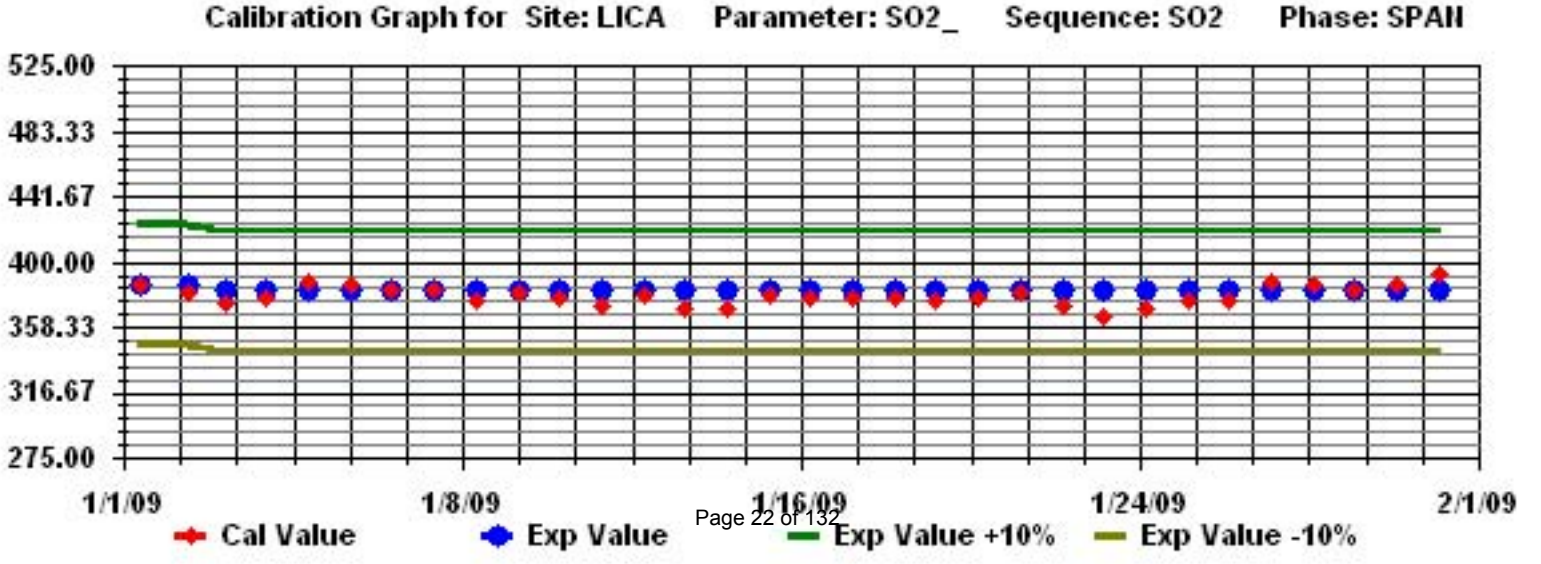
STATUS FLAG CODES

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

MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:	121					
MAXIMUM INSTANTANEOUS VALUE:	5	PPB	@ HOUR(S)	16, 13	ON DAY(S)	4, 19
IZS CALIBRATION TIME:	31	HRS	OPERATIONAL TIME:		742	HRS
MONTHLY CALIBRATION TIME:	5	HRS				
STANDARD DEVIATION:	0.68					


01 Hour Averages
240
177.5
115
52.5
-10
01/01/09 00:00
01/06/09 00:00
01/11/09 00:00
01/16/09 00:00
01/21/09 00:00
01/26/09 00:00
01/31/09 00:00
LICA SO2MAX PPB


Calibration Graph for Site: LICA Parameter: SO2_ Sequence: SO2 Phase: SPAN
525.00
483.33
441.67
400.00
358.33
316.67
275.00
1/1/09
1/8/09
1/16/09
1/24/09
2/1/09
Cal Value
Exp Value
Exp Value +10%
Exp Value -10%

Total Reduced Sulphur

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

JANUARY 2009

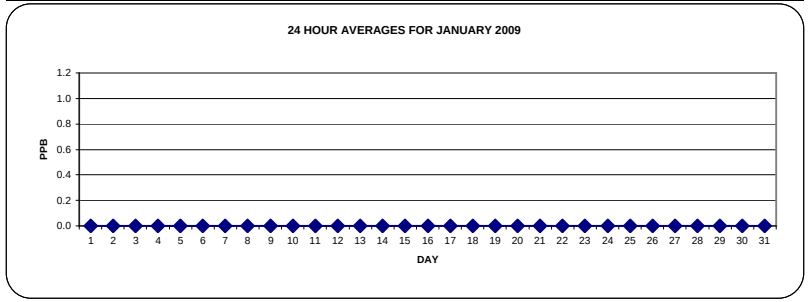
TOTAL REDUCED SULPHUR (TRS) hourly averages in ppb

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	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
2	0	0	0	0	0	0	0	0	C	C	C	C	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
3	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
4	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
5	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
6	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
7	0	0	0	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
8	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
9	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
10	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
11	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
12	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
13	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
14	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
15	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
16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0.0	24
17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0.0	24
18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0.0	24
19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0.0	24
20	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0.0	24
21	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
22	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
23	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
24	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
25	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
26	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
27	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
28	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
29	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
30	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
31	0	0	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

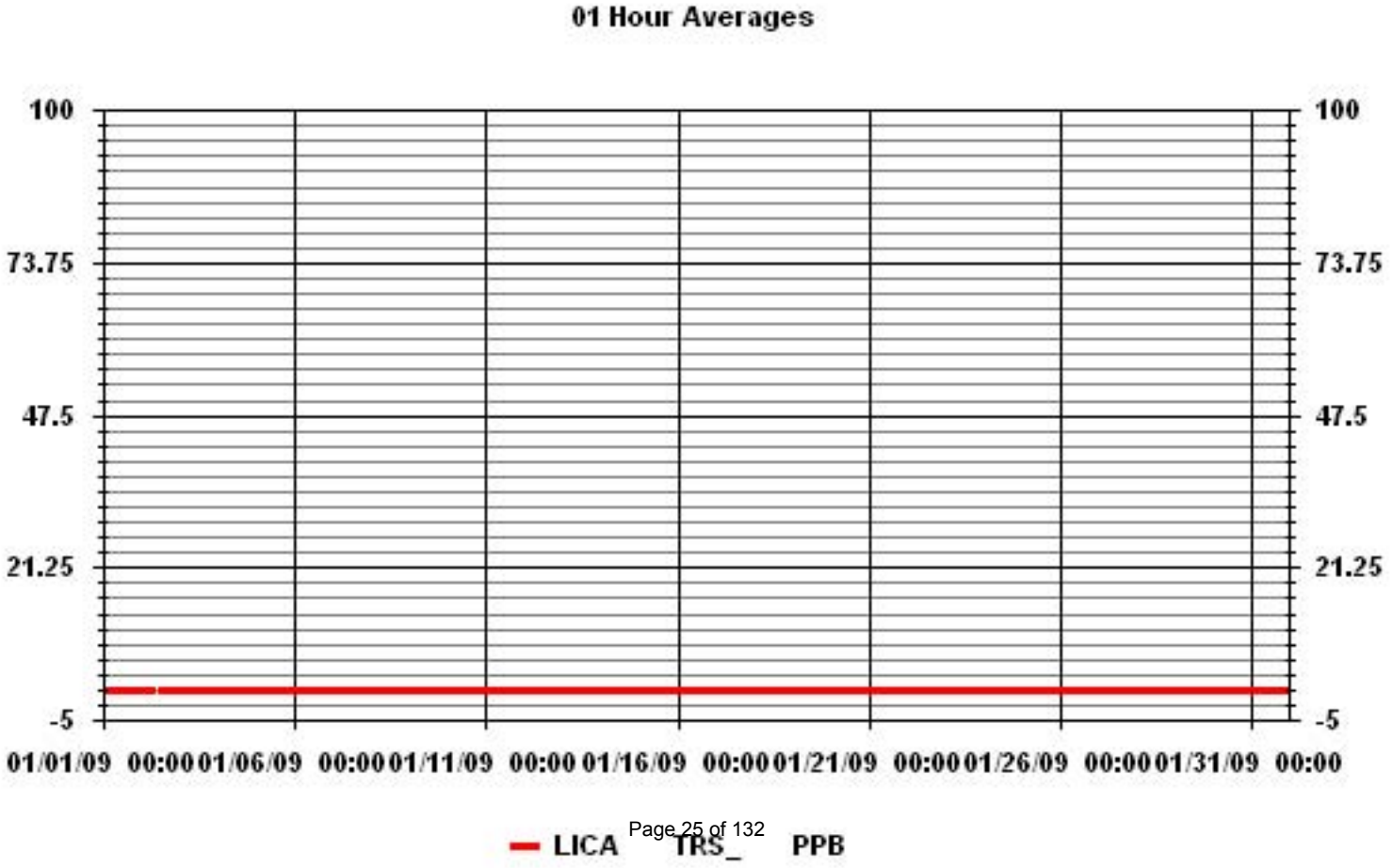


OBJECTIVE LIMIT: **ALBERTA ENVIRONMENT:** 1-HR 172 PPB | 24-HR 57 PPB

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:	744	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
01/01/09 00:00
01/06/09 00:00
01/11/09 00:00
01/16/09 00:00
01/21/09 00:00
01/26/09 00:00
01/31/09 00:00
LICA TRS_ PPB

LICA
TRS_ / WD Joint Frequency Distribution (Percent)

January 2009

Distribution By % Of Samples

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

Wind Parameter : WD
Instrument Height : 10 Meters

		Direction																
	Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
<	3	1.83	4.37	4.51	3.38	8.60	5.78	5.92	2.25	1.97	1.97	18.61	19.04	9.30	5.92	3.52	2.96	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	1.83	4.37	4.51	3.38	8.60	5.78	5.92	2.25	1.97	1.97	18.61	19.04	9.30	5.92	3.52	2.96	

Calm : .00 %

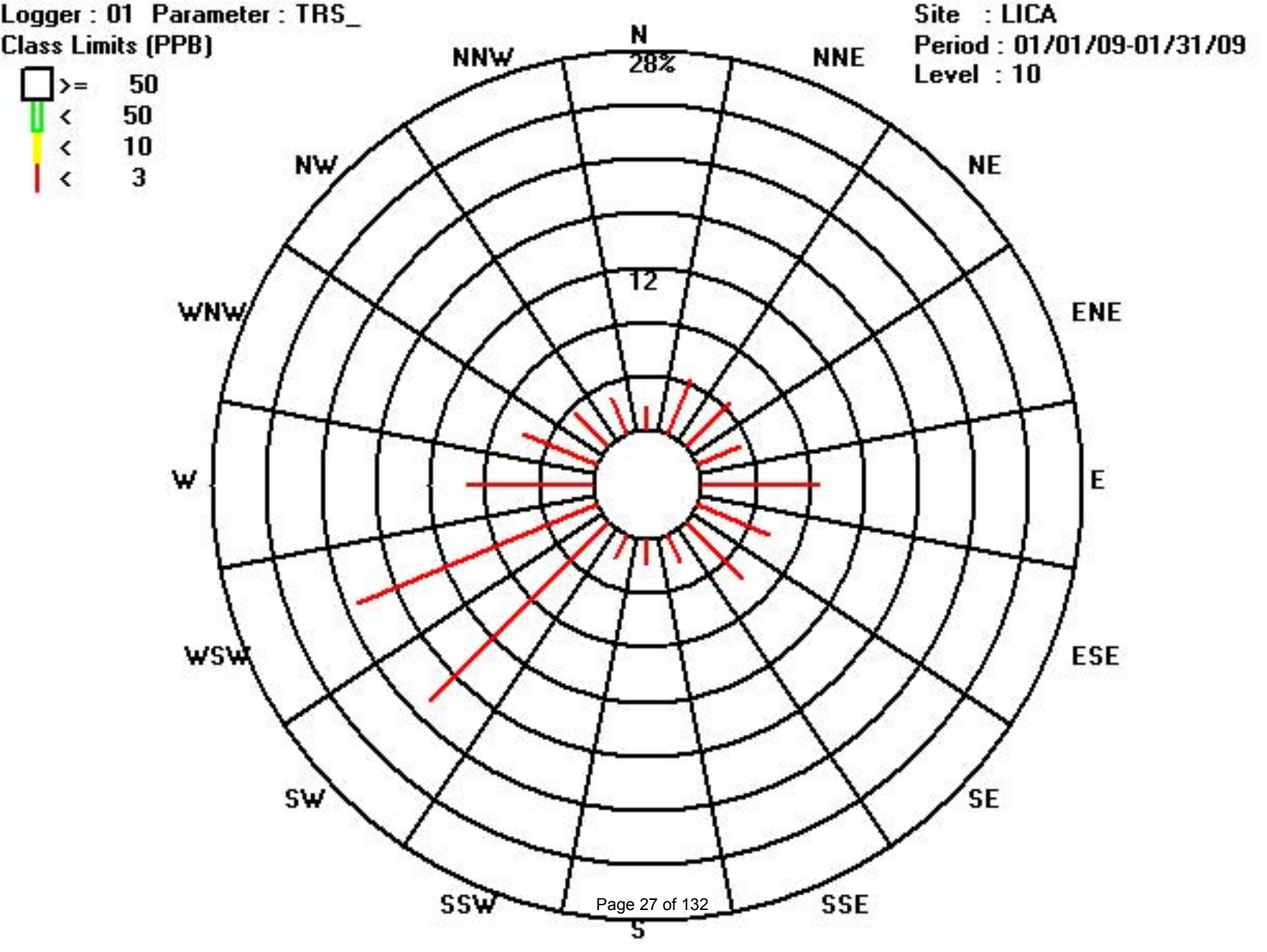
Total # Operational Hours : 709

Distribution By Samples

		Direction																
	Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
<	3	13	31	32	24	61	41	42	16	14	14	132	135	66	42	25	21	709
<	10																	
<	50																	
>=	50																	
	Totals	13	31	32	24	61	41	42	16	14	14	132	135	66	42	25	21	

Calm : .00 %

Total # Operational Hours : 709


Logger : 01 Parameter : TRS_
Class Limits (PPB)
>= 50
< 50
< 10
< 3
Site : LICA
Period : 01/01/09-01/31/09
Level : 10
N
28%
NNE
NE
ENE
E
ESE
SE
SSE
S
SSW
SW
WSW
W
WNW
NW
NNW
12

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

JANUARY 2009

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

MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS: 2

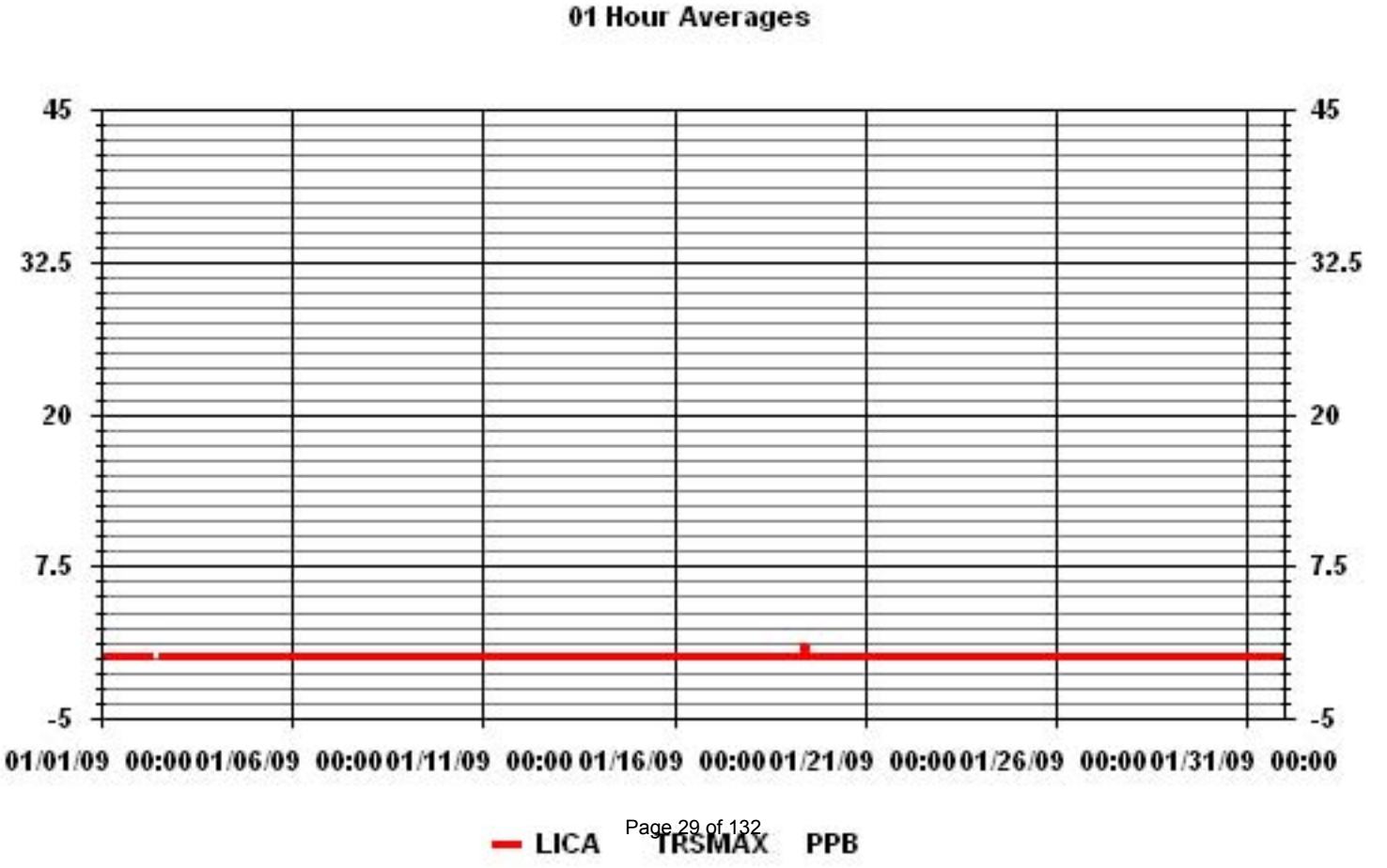
MAXIMUM INSTANTANEOUS VALUE: 1 PPB @ HOUR(S) 9, 10 ON DAY(S) 19

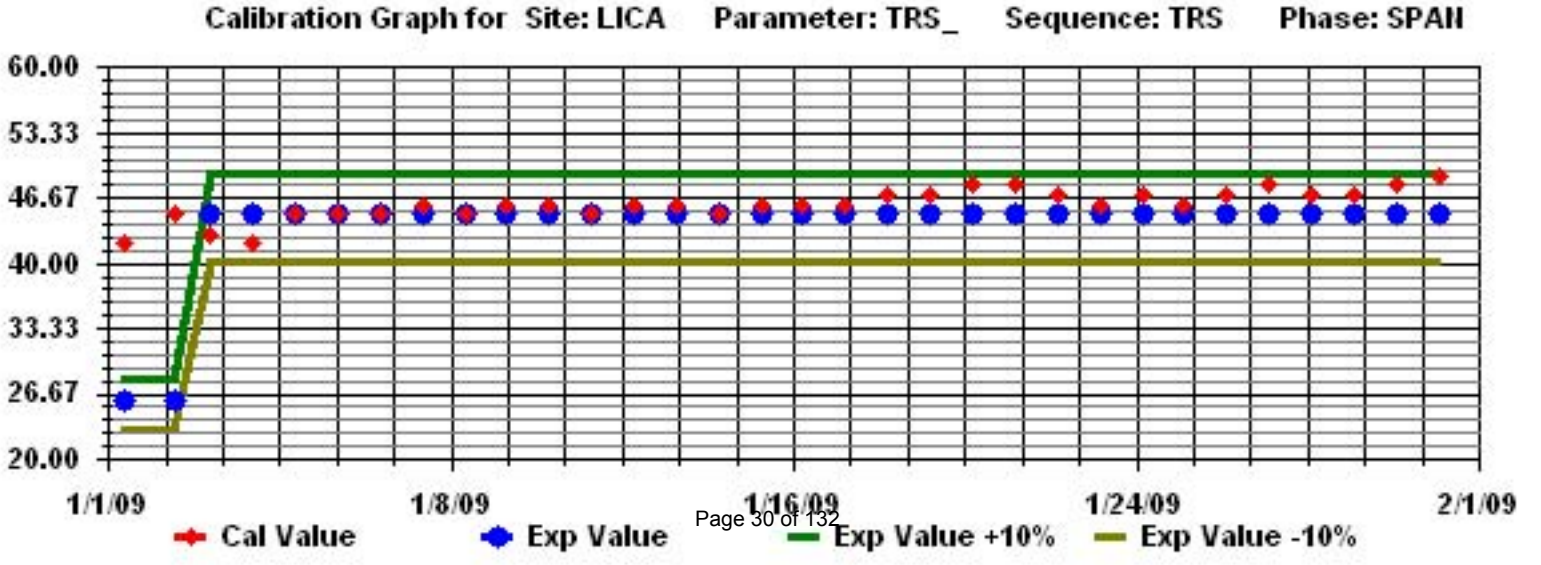
VAR - VARIOUS

IZS CALIBRATION TIME: 31 HRS OPERATIONAL TIME: 742 HRS

MONTHLY CALIBRATION TIME: 5 HRS

STANDARD DEVIATION: 0.05


01 Hour Averages
45
32.5
20
7.5
-5
01/01/09 00:00
01/06/09 00:00
01/11/09 00:00
01/16/09 00:00
01/21/09 00:00
01/26/09 00:00
01/31/09 00:00
LICA
TRSMAX
PPB


Calibration Graph for Site: LICA Parameter: TRS_ Sequence: TRS Phase: SPAN
60.00
53.33
46.67
40.00
33.33
26.67
20.00
1/1/09
1/8/09
1/16/09
1/24/09
2/1/09
Cal Value
Exp Value
Exp Value +10%
Exp Value -10%

Total Hydrocarbons

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

JANUARY 2009

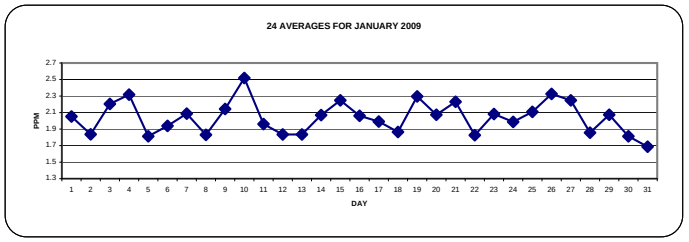
TOTAL HYDROCARBONS (THC) hourly averages in ppm

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	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	2.2	**IZS**	2.4	2.4	2.2	2	2.1	2.2	2.2	2.2	2.4	2.1	2.1	2.2	2.1	1.9	2.4	2.1	24
2	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	**IZS**	1.9	1.9	**C**	**C**	**C**	**C**	1.8	1.8	1.8	1.8	1.9	1.9	1.8	1.9	2	2.0	1.8	24
3	2	2	2	2	2	2	2	**IZS**	2.6	2.6	2.4	2.3	2.3	2.3	2.1	2.1	2.2	2.2	2.2	2.2	2.3	2.3	2.3	2.3	2.6	2.2	24
4	2.3	2.4	2.4	2.5	2.5	2.5	**IZS**	2.3	2.3	2.3	2.3	2.2	2.3	2.3	2.4	2.4	2.3	2.3	2.4	2.4	2.4	2.1	2	2	2.5	2.3	24
5	1.9	1.9	1.8	1.8	1.8	**IZS**	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.8	1.8	1.8	1.9	1.8	24
6	1.8	1.8	1.8	1.8	**IZS**	1.8	1.8	1.9	2.1	2.3	2.3	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2	2	2	2	2	2.3	1.9	24
7	2	2.1	2.1	**IZS**	2.2	2.4	2.6	2.5	2.7	2.5	2.1	2.1	2.1	1.9	1.8	1.8	1.9	1.9	1.8	1.8	2.1	1.9	1.9	1.8	2.7	2.1	24
8	1.8	1.8	**IZS**	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.8	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	24
9	1.9	**IZS**	1.9	2	2	2.1	2.1	2.2	2.3	2.3	2.1	2.1	2.1	2.2	2.2	2.1	2.1	2.2	2.3	2.2	2.2	2.2	2.2	2.3	2.3	2.1	24
10	**IZS**	2.3	2.3	2.3	2.4	2.4	2.3	2.3	2.4	2.5	2.4	2.4	2.4	2.5	2.5	2.5	2.6	2.8	2.8	2.7	2.8	2.9	2.9	**IZS**	2.9	**2.5**	24
11	**3.1**	2.4	1.9	2	2	2	2	2	2	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	**IZS**	1.9	**3.1**	24
12	1.8	1.9	1.9	1.8	1.9	1.9	1.8	1.8	1.9	1.9	1.9	1.8	1.8	1.8	1.9	1.8	1.8	1.8	1.8	1.8	1.8	**IZS**	1.8	1.8	1.9	1.8	24
13	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	1.9	1.9	1.9	**IZS**	1.9	2	1.9	2.0	1.8	24
14	1.9	2	2	2.1	2.1	2.1	2.1	2	2	2	2	2	2	2	2	2	2.1	2.1	2.2	**IZS**	2.4	2.3	2.1	2.1	2.4	2.1	24
15	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.3	2.3	2.2	2.3	2.3	2.3	2.3	2.3	2.3	**IZS**	2.4	2.4	2.4	2.4	2.4	2.4	2.2	24
16	2.4	2.4	2.5	2.5	2.7	2.7	2.3	2.1	2.2	2	1.7	1.7	1.7	1.7	1.7	1.7	1.8	**IZS**	1.9	1.9	1.9	2	2	1.9	2.7	2.1	24
17	2.1	2.1	2.2	2.2	2.1	1.9	1.9	1.9	2.1	2	2.1	2.1	1.9	1.9	1.9	1.9	**IZS**	1.9	2	2	1.9	1.8	2	1.9	2.2	2.0	24
18	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	2	2	2	1.9	1.9	1.8	**IZS**	1.8	1.8	1.8	1.8	1.9	1.9	1.9	2	2.0	1.9	24
19	2.1	2.2	2.2	2.3	2.3	2.6	2.8	2.6	2.8	2.9	2.8	2.4	2.1	2	**IZS**	2	2.1	2.2	2.2	2.1	2.1	2	2	2	2.9	2.3	24
20	2	2	2	2	2	2	2	2	2.2	2.2	2.2	2.1	2	**IZS**	2	2	2	2	2.1	2.1	2.2	2.2	2.2	2.2	2.2	2.1	24
21	2.2	2.4	2.6	2.9	2.5	2.6	2.8	2.6	2.5	2.6	2.9	**3.1**	**IZS**	1.9	1.8	1.8	1.8	1.9	1.8	1.8	1.7	1.7	1.7	1.7	**3.1**	2.2	24
22	1.7	1.7	1.7	1.7	1.8	1.8	1.8	1.8	1.8	1.8	1.8	**IZS**	1.8	1.8	1.8	1.8	1.9	1.9	1.9	1.9	1.9	2	2	1.9	2.0	1.8	24
23	1.9	1.9	2.1	2.1	2.1	2	2	2.2	2.4	2.5	**IZS**	2.1	2	2	2	2	2	2.1	2.1	2.1	2.1	2.1	2	2.1	2.5	2.1	24
24	2.1	2.1	2.1	2	2	2	2	2	2	**IZS**	2	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2	2	2	2	2.1	2	2.1	2.0	24
25	2	2	2	2	2.1	2.1	2.1	2.1	**IZS**	2.1	2.2	2.1	2.2	2.2	2.2	2.1	2	2	2.1	2.1	2.1	2.2	2.2	2.3	2.3	2.1	24
26	2.4	2.4	2.4	2.3	2.3	2.3	2.4	**IZS**	2.4	2.4	2.4	2.5	2.4	2.3	2.2	2.1	2.2	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.5	2.3	24
27	2.3	2.3	2.2	2.1	2.2	2.1	**IZS**	2.1	2.1	2.2	2.3	2.3	2.3	2.3	2.4	2.4	2.3	2.3	2.4	2.4	2.4	2.3	2	2	2.4	2.2	24
28	1.9	1.8	1.9	1.8	1.8	**IZS**	1.8	1.8	1.8	1.8	1.9	1.8	1.8	1.8	1.7	1.8	1.8	1.8	2	1.9	1.9	1.9	2.1	2.1	2.1	1.9	24
29	2.1	2	2	2.1	**IZS**	2	2.1	2.2	2.1	2.2	2.2	2.2	2.3	2.3	2.1	1.9	2	2.1	2	1.9	1.9	2	2	2	2.3	2.1	24
30	1.9	1.9	1.8	**IZS**	1.8	1.8	1.9	1.9	2	2.1	2	1.8	1.7	1.7	1.8	1.8	1.8	1.7	1.8	1.7	1.7	1.8	1.7	1.6	2.1	1.8	24
31	1.6	1.6	**IZS**	1.6	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
HOURLY MAX	3.1	2.4	2.6	2.9	2.7	2.7	2.8	2.6	2.8	2.9	2.9	3.1	2.4	2.5	2.5	2.5	2.6	2.8	2.8	2.7	2.8	2.9	2.9	2.4			
HOURLY AVG	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.1	2.2	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.0			

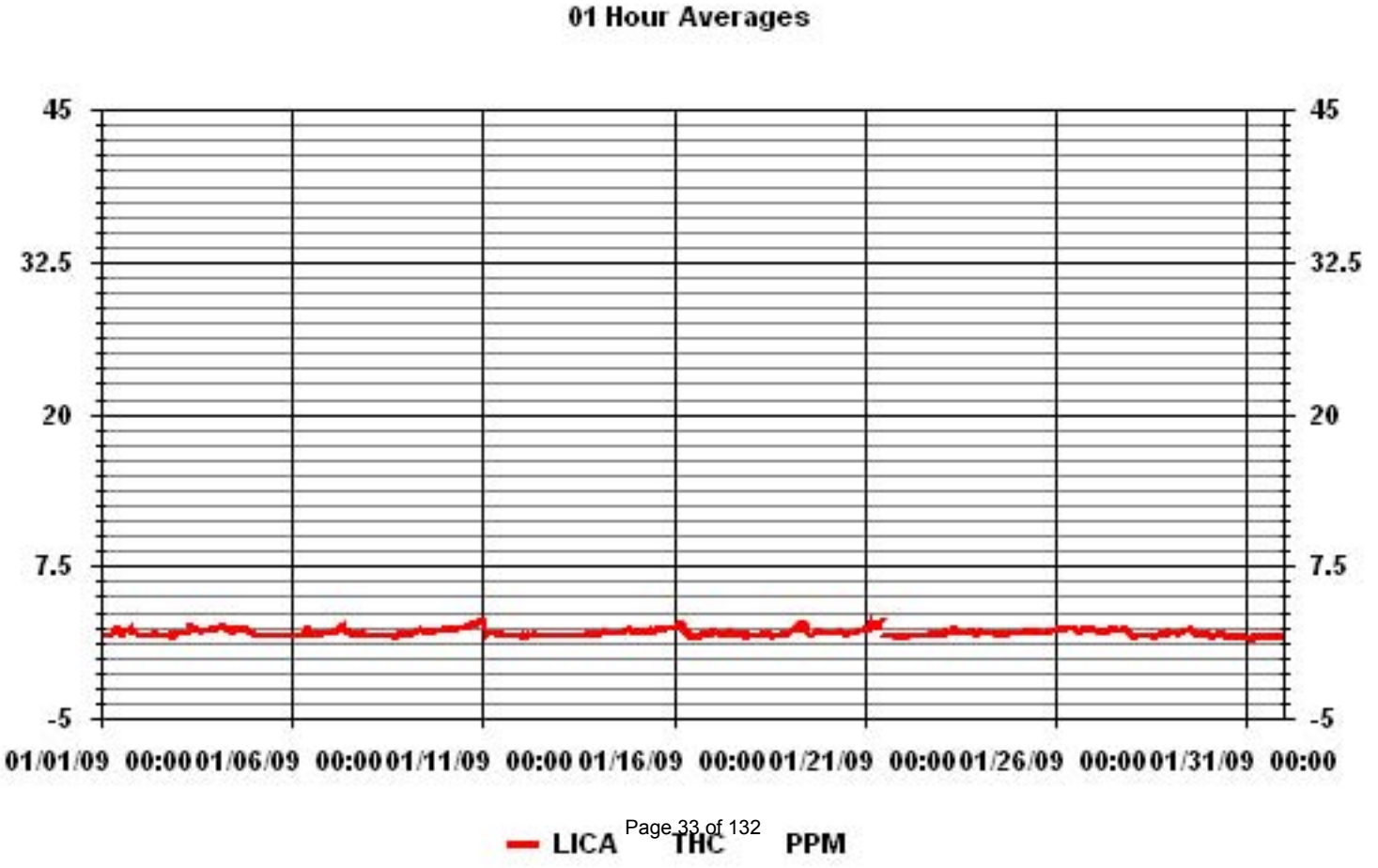
STATUS FLAG CODES

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
BB	- BELOW BACKGROUND OF 1.5 PPM		



MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:	708					
MAXIMUM 1-HR AVERAGE:	3.1	PPM	@ HOUR(S)	0, 11	ON DAY(S)	11, 21
MAXIMUM 24-HR AVERAGE:	2.5	PPM			ON DAY(S)	10
IZS CALIBRATION TIME:	32	HRS	OPERATIONAL TIME:		744	HRS
MONTHLY CALIBRATION TIME:	4	HRS	AMD OPERATION UPTIME:		100.0	%
STANDARD DEVIATION:	0.26		MONTHLY AVERAGE:		2.04	PPM


01 Hour Averages
45
32.5
20
7.5
-5
01/01/09 00:00
01/06/09 00:00
01/11/09 00:00
01/16/09 00:00
01/21/09 00:00
01/26/09 00:00
01/31/09 00:00
LICA THC PPM

LICA
THC / WD Joint Frequency Distribution (Percent)

January 2009

Distribution By % Of Samples

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

Wind Parameter : WD
Instrument Height : 10 Meters

Direction

	Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
<	3.0	1.83	4.23	4.51	3.38	8.61	5.79	5.93	2.25	1.97	1.97	18.64	19.06	9.32	5.79	3.53	2.82	99.71
<	10.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.14	.00	.14	.28
<	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	1.83	4.23	4.51	3.38	8.61	5.79	5.93	2.25	1.97	1.97	18.64	19.06	9.32	5.93	3.53	2.96	

Calm : .00 %

Total # Operational Hours : 708

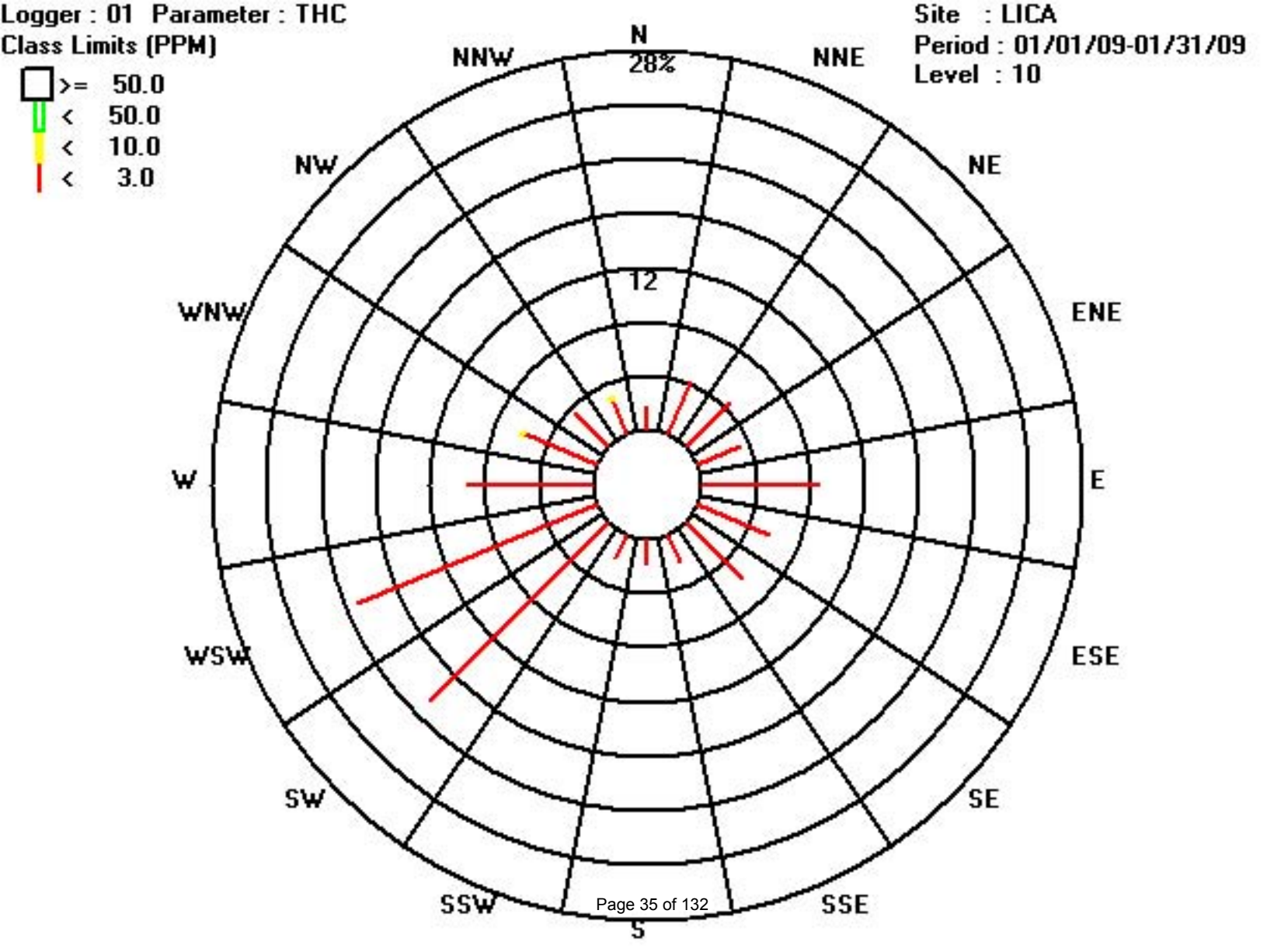
Distribution By Samples

Direction

	Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
<	3.0	13	30	32	24	61	41	42	16	14	14	132	135	66	41	25	20	706
<	10.0														1		1	2
<	50.0																	
>=	50.0																	
	Totals	13	30	32	24	61	41	42	16	14	14	132	135	66	42	25	21	

Calm : .00 %

Total # Operational Hours : 708


Logger : 01 Parameter : THC
Class Limits (PPM)
>= 50.0
< 50.0
< 10.0
< 3.0
Site : LICA
Period : 01/01/09-01/31/09
Level : 10
N
28%
NNE
NE
ENE
E
ESE
SE
SSE
S
SSW
SW
WSW
W
WNW
NW
NNW
12

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

JANUARY 2009

TOTAL HYDROCARBONS MAX instantaneous maximum in ppm

MST

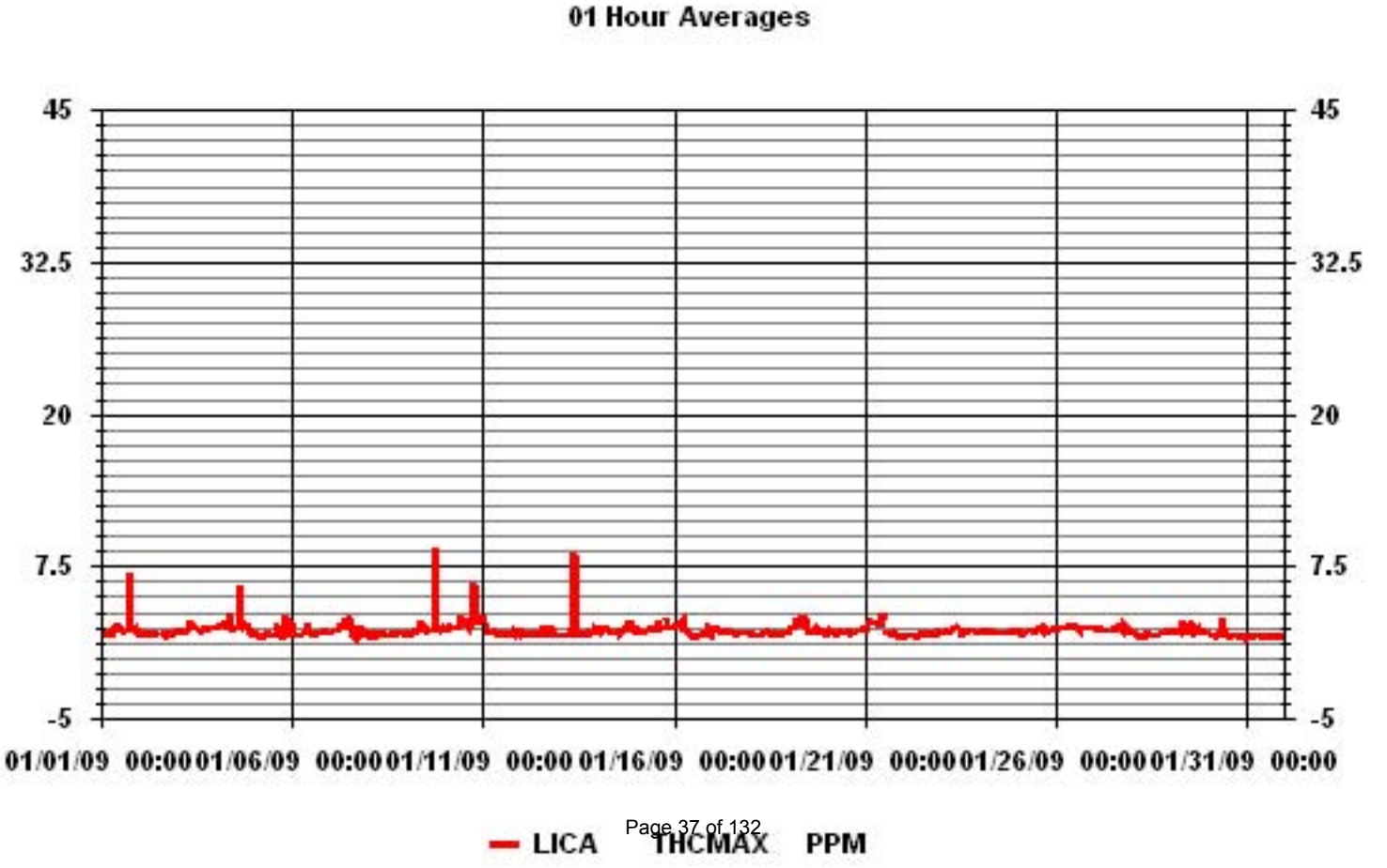
HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.2	2.3	**IZS**	2.7	2.6	2.5	2.2	2.3	2.3	2.4	2.4	6.9	2.3	2.3	2.5	2.2	2.3	6.9	2.4	24
2	2	1.9	1.9	2	2	1.9	1.9	1.9	**IZS**	1.9	1.9	**C**	**C**	**C**	**C**	2	1.8	1.9	1.9	2	1.9	1.9	2	2.1	2.1	1.9	24
3	2.1	2.1	2.1	2.1	2.1	2.1	2.2	**IZS**	2.7	2.7	2.6	2.4	2.4	2.4	2.2	2.3	2.3	2.3	2.3	2.3	2.5	2.4	2.4	2.4	2.7	2.3	24
4	2.4	2.5	2.5	2.6	2.6	2.8	**IZS**	2.5	2.3	3.7	2.4	2.3	2.4	2.4	2.7	6	2.8	2.5	2.7	2.7	2.6	2.2	2.4	2.3	6	2.7	24
5	2	1.9	1.9	1.9	1.8	**IZS**	1.8	1.9	1.9	1.9	1.9	1.8	1.8	2	2.7	1.9	1.9	1.9	1.8	2.7	3.4	1.8	2	3.1	3.4	2.1	24
6	1.8	1.8	1.8	1.8	**IZS**	1.9	2	2	2.2	2.6	2.6	2.1	1.9	1.9	1.9	1.9	2	2	2	2.1	2.1	2.1	2.1	2.1	2.6	2.0	24
7	2.1	2.2	2.2	**IZS**	2.3	2.6	2.7	2.6	2.9	2.9	2.5	2.5	3.5	2.5	2	1.8	2.5	2.2	1.9	2	2.6	2	1.9	1.9	3.5	2.4	24
8	1.9	1.8	**IZS**	1.9	1.9	1.8	1.9	2	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.9	2	1.9	2	2	2.1	2	2	1.9	2.1	1.9	24
9	1.9	**IZS**	2	2.1	2.2	2.3	2.2	2.3	2.4	3	2.4	2.5	2.2	2.3	2.3	2.2	2.2	2.4	**9**	2.2	2.5	2.3	2.5	2.3	**9**	2.6	24
10	**IZS**	2.5	2.4	2.6	2.4	2.4	2.4	2.4	2.5	3.5	2.6	2.9	2.5	2.9	2.9	2.5	2.8	3	6.2	2.9	2.9	3.1	3.1	**IZS**	6.2	2.9	24
11	3.3	3	2	2	2	2	2	2.1	2.1	2	1.9	1.9	1.9	2	2	1.9	1.9	1.9	1.9	2.2	1.9	2.1	**IZS**	2.2	3.3	2.1	24
12	1.9	2	1.9	1.9	2	1.9	1.9	1.9	2	1.9	**P**	2	1.9	1.9	2.5	2.1	2	1.9	1.9	2.5	1.9	**IZS**	1.8	1.8	2.5	2.0	23
13	1.8	1.8	1.8	1.8	1.8	1.8	2.1	1.9	1.9	8.6	2	1.9	1.9	1.9	1.9	1.9	2	2	2.2	2	**IZS**	2.1	2.5	2.3	8.6	2.3	24
14	2	2.6	2.1	2.2	2.2	2.4	2.5	2.3	2	2	2	2	2.4	2	2.2	2.1	2.2	2.6	2.4	**IZS**	2.9	2.5	2.4	2.1	2.9	2.3	24
15	2.1	2.4	2.4	2.2	2.2	2.1	2.2	2.2	2.3	2.3	2.3	2.3	2.3	2.3	3	2.4	2.4	2.4	**IZS**	3.1	2.6	2.4	2.4	2.5	3.1	2.4	24
16	2.5	2.6	2.6	2.6	2.9	3.1	2.4	2.3	2.2	2.2	1.8	1.8	1.7	1.7	1.7	1.8	1.8	**IZS**	1.9	1.9	1.9	2.8	2.2	2	3.1	2.2	24
17	2.5	2.2	2.2	2.3	2.3	2.1	2	2	2.2	2.1	2.2	2.1	2.1	2	2	1.9	**IZS**	2	2	2	2	2	2.1	2	2.5	2.1	24
18	1.9	1.9	1.9	1.8	1.8	1.8	1.9	1.9	2	2	2.1	2.1	2	1.9	1.9	**IZS**	2	1.9	2	1.9	1.9	2	2	2.1	2.1	1.9	24
19	2.3	2.3	2.4	2.4	2.6	3	3.1	2.9	3.2	3.3	3.2	2.6	2.2	2.1	**IZS**	2.1	2.1	2.4	2.2	2.2	2.1	2.1	2.1	2.1	3.3	2.5	24
20	2	2.3	2.1	2.1	2.1	2.1	2	2.1	2.2	2.2	2.2	2.1	2.2	**IZS**	2	2.2	2.1	2.1	2.2	2.2	2.2	2.3	2.3	2.3	2.3	2.2	24
21	2.3	2.5	2.9	3.1	3	2.9	3	2.9	2.8	3.2	3	3.5	**IZS**	2	2	2	1.9	2.1	1.9	2	1.8	1.8	1.7	1.7	3.5	2.4	24
22	1.7	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.8	1.9	**IZS**	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.2	2.2	2	2.2	1.9	24
23	2	2	2.2	2.2	2.1	2.1	2.2	2.4	2.5	2.6	**IZS**	2.3	2.1	2	2.1	2.1	2.1	2.2	2.2	2.2	2.2	2.2	2.1	2.2	2.6	2.2	24
24	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	**IZS**	2	2	2	2	2	2	2	2	2.1	2.1	2.1	2.1	2.2	2.1	2.2	2.1	24
25	2.1	2.1	2	2.1	2.1	2.2	2.2	2.2	**IZS**	2.2	2.3	2.2	2.3	2.3	2.4	2.2	2.7	2.1	2.1	2.2	2.2	2.3	2.3	2.4	2.7	2.2	24
26	2.5	2.4	2.5	2.4	2.4	2.4	2.5	**IZS**	2.6	2.5	2.5	2.7	2.6	2.5	2.4	2.2	2.4	2.5	2.4	2.4	2.4	2.4	2.4	2.4	2.7	2.5	24
27	2.5	2.4	2.3	2.3	2.4	2.3	**IZS**	2.3	2.2	2.2	2.3	2.4	2.3	2.3	2.5	2.5	2.5	2.3	2.8	2.6	2.5	2.4	2.1	2.1	2.8	2.4	24
28	2.1	1.9	1.9	1.9	1.8	**IZS**	1.9	1.8	1.9	1.9	2	1.9	1.8	1.8	1.8	1.8	1.8	1.9	2.1	2	2	2.2	2.3	2.2	2.3	1.9	24
29	2.2	2.1	2.1	2.2	**IZS**	2.1	2.2	3.1	2.3	2.5	2.3	2.4	2.5	3	2.2	2	2.1	2.4	2.1	2	2	2.1	2.1	2	3.1	2.3	24
30	2	2	1.9	**IZS**	1.8	1.9	1.9	2	3.2	2.5	2.1	2	1.7	1.7	1.9	1.8	1.8	1.8	1.9	1.7	1.7	1.8	1.8	1.6	3.2	1.9	24
31	1.7	1.7	**IZS**	1.7	1.7	1.8	1.8	1.8	1.8	1.8	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.8	1.8	1.8	1.8	1.7	1.7	1.7	1.8	1.7	24
HOURLY MAX	3	3	3	3	3	3	3	3	3	9	3	4	4	3	3	6	3	3	9	3	3	3	3	3			
HOURLY AVG	2.1	2.2	2.1	2.1	2.1	2.2	2.2	2.2	2.3	2.6	2.3	2.2	2.2	2.1	2.2	2.2	2.1	2.2	2.6	2.2	2.2	2.2	2.2	2.1			

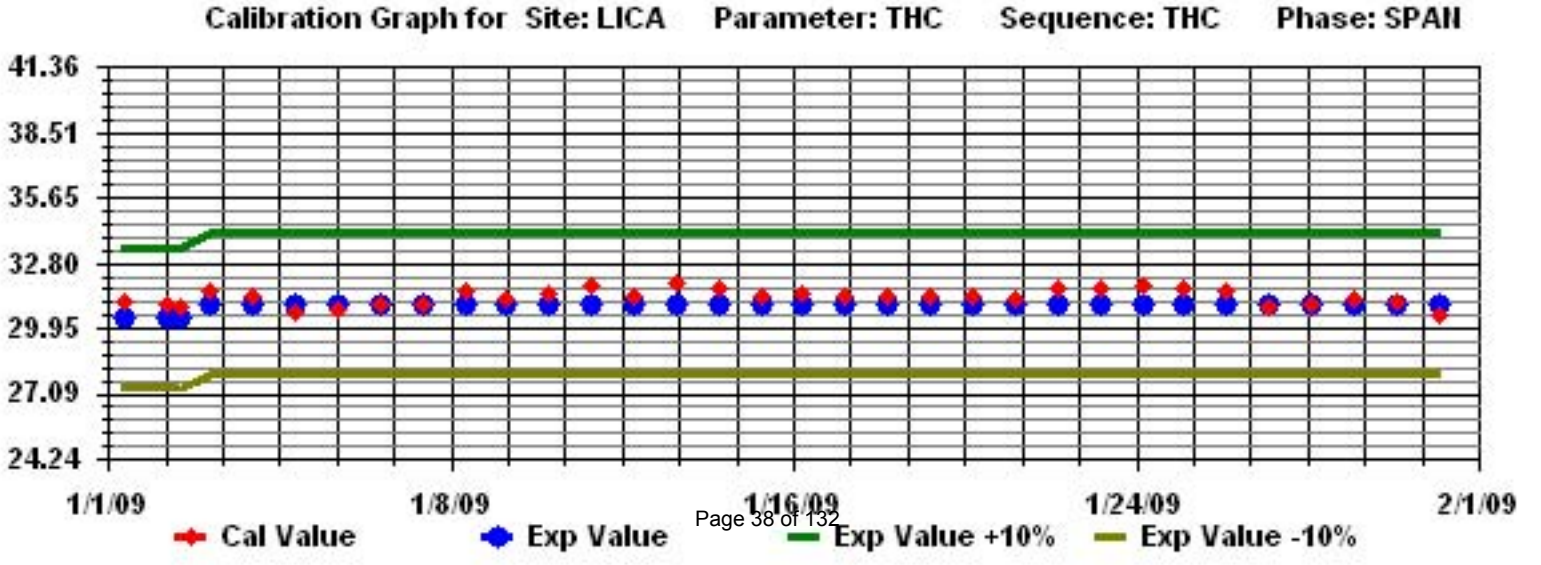
STATUS FLAG CODES

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

MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:		707					
MAXIMUM INSTANTANEOUS VALUE:		9.0	PPM	@ HOUR(S)	18	ON DAY(S)	9
IZS CALIBRATION TIME:	32	HRS		OPERATIONAL TIME:		743	HRS
MONTHLY CALIBRATION TIME:	4	HRS					
STANDARD DEVIATION:	0.56						


01 Hour Averages
45
32.5
20
7.5
-5
01/01/09 00:00
01/06/09 00:00
01/11/09 00:00
01/16/09 00:00
01/21/09 00:00
01/26/09 00:00
01/31/09 00:00
LICA THCMAX PPM


Calibration Graph for Site: LICA Parameter: THC Sequence: THC Phase: SPAN
41.36
38.51
35.65
32.80
29.95
27.09
24.24
1/1/09
1/8/09
1/16/09
1/24/09
2/1/09
Cal Value
Exp Value
Exp Value +10%
Exp Value -10%

Particulate Matter 2.5

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

JANUARY 2009

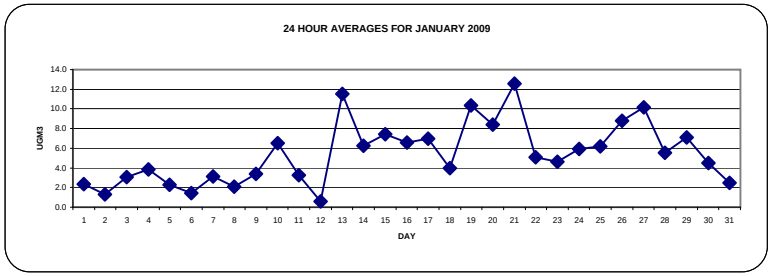
PARTICULATE MATTER 2.5 (PM2.5) hourly averages in ug/m^3

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	2.1	2.1	2.4	1.9	1.6	1.1	0	0	1	5.7	4.2	4	2.4	2.2	1.5	1.7	2.1	2.6	5.4	3.3	3.5	2.7	1.7	0.9	5.7	2.3	24
2	0.3	2	1.2	0	0.2	0.4	0.8	1	1.1	1.8	1.2	0.9	1.5	1.8	1.3	2.9	2.1	2.8	1	0.8	1.4	1.4	1.7	1.2	2.9	1.3	24
3	2.7	3.6	3.2	2.1	3.4	2.6	2.2	2.5	2	3.2	3.8	4.3	3.7	3	2.5	2.7	2.2	2.1	2.5	3.2	3.7	4.1	4.2	3.7	4.3	3.1	24
4	3.8	4.7	4	4.4	2.9	3.1	5.2	4.6	2.4	5.9	4.6	2.3	3	3.5	2.6	2.7	3.6	6	2.8	4.8	6.3	2	2.8	4.8	6.3	3.9	24
5	2.7	0.1	1	0.3	0.6	0.4	3	2	2.8	3.6	2.7	2.7	4.8	2.4	3.6	1.3	3.2	4	2.7	2.2	3.2	2.1	1.4	1.4	4.8	2.3	24
6	2.3	2	2.2	1.9	2.4	2.5	2.1	2.1	3.8	4.4	2.7	0.5	1.2	0.4	0.7	0	0.3	0.4	0	0.4	0.8	0.5	0	0.4	4.4	1.4	24
7	1	2.6	1.6	1.3	2.4	5.2	4.6	3	2.4	3.5	4.4	6.2	2.5	7	1.3	2.3	8.4	4.5	1.2	1.1	4.6	2.5	0.7	1	8.4	3.1	24
8	0	0.9	0.7	1.2	1.2	1.4	1.4	2.4	1.1	2.1	2.9	2.2	1.7	2.7	3.3	3.5	3.2	3.4	3.3	2.4	2.4	2.5	1.8	2	3.5	2.1	24
9	1	0.3	1.5	1.2	2.1	0.7	1.7	0.9	1.9	5.8	4.2	3	2.6	2.9	4.4	4.3	4.5	5	6	4.3	5.6	5.5	6.1	5.8	6.1	3.4	24
10	3.9	3.9	6	6.4	5	5.6	5.5	6.1	4.5	17.5	4.7	6.8	6.1	6.8	6.4	6.1	6.5	7.6	7.5	7	7.1	5.4	6.1	7.9	17.5	6.5	24
11	4.7	1.2	2	0.9	2.9	3.9	5.4	5.1	5.6	5	1.8	2.2	2.9	3.9	3.4	3.3	3.8	3.8	2.4	1	1.7	2.5	1.1	7	7.0	3.2	24
12	0.8	0.4	0.4	0.7	1.6	0	0.6	0	0	0	2.3	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	2.3	0.6	11
13	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**C**	**C**	**C**	**C**	1.7	9.3	11	5.4	16	**25.8**	**25.8**	11.5	10
14	6.9	6.8	8.9	0.9	3.7	5.3	8.8	4.6	2.8	**P**	4.4	2.2	2.4	6.8	4	7.9	6	10.3	8.8	11.6	9.1	8.7	7.2	5.5	11.6	6.2	23
15	2.1	5.9	5.4	5.1	7.3	9.2	6.3	6.8	6.9	4.1	4.9	6	6.8	8.5	6.9	10.5	13.5	10.4	6.3	8.3	9.7	10.3	8.5	9	13.5	7.4	24
16	8.7	9.8	10.9	12	11.4	10.8	10	8.8	6.6	5.1	3.4	7.4	4.8	0	**C**	**C**	**C**	5.3	0	5.5	4.7	6	2.5	4.8	12.0	6.6	24
17	8.8	9.1	6.6	8.5	12.3	3.9	4.9	2	6.8	8.6	3.2	4.1	4.2	4.4	9	12.3	12.7	2.4	7.9	4.6	9.5	9.4	7.2	5.3	12.7	7.0	24
18	6.5	7.5	4.7	3.9	9.3	7.4	6	5.6	1.9	0	0.2	1.1	0.8	2.1	2.7	7	0	5.5	3.8	2.3	0	4.1	3.7	10	10.0	4.0	24
19	4.6	0	3.3	5	4.9	8.6	20.1	12.5	5.2	8.3	17.1	16.3	15	17.8	17.1	14.8	15.8	9.9	10.3	13.6	12.7	8.3	3.2	4.1	20.1	10.4	24
20	6.8	5.3	7.8	6.6	3.2	8.5	8	10.2	11.3	8.5	8.6	7.6	2.9	12.5	4.5	8.2	6	4.5	9.8	9.8	13.4	12.2	11.9	13.5	13.5	8.4	24
21	11.5	13.5	12.6	16.5	17.1	12.9	13.3	14.3	14.1	16.8	18	16.9	17.3	11.3	19.6	9	4.7	11.8	14.9	10.4	9.6	6.9	3.7	5	19.6	**12.6**	24
22	7.9	3.4	5.3	4.7	0	4.3	0	4.9	3.2	5.9	4.7	6.2	6.1	6.7	9.2	6.2	5.7	7.1	7.7	7.8	3.9	4.3	3.9	2.3	9.2	5.1	24
23	2.2	3.3	5.2	6.9	2.7	0	3.9	6.3	1.4	3.2	5.5	7.3	7.1	8	6.2	0.7	7.5	2.4	8.4	7.8	6.6	4.9	2.1	1.9	8.4	4.6	24
24	8.6	7.1	3.7	0	5.5	7.4	6.8	6.2	1.3	5.4	5	7.5	6.9	1.7	2.7	5	8	5	4.4	13.3	8	8.3	9.4	4.8	13.3	5.9	24
25	8.3	7.8	6.5	6	5	4.9	5.9	4.4	3.9	10.6	5.7	9.7	7.1	8.4	7.3	4	4.9	0.5	6.8	7.3	6.8	6.4	5.3	5.3	10.6	6.2	24
26	5	6.8	3.3	3.1	6.2	9.9	8.1	9.6	4.9	0	8.2	21.4	17	2.8	16.1	11.4	17.1	12.1	6.7	6.3	7.8	8.9	8.9	9.2	21.4	8.8	24
27	8.7	7.9	11.5	7.6	8.3	8.3	8.8	8.3	7.2	6.3	5.8	14.2	7.5	9.9	8	9.1	16.2	11.5	15	15.6	14.9	14.4	13.2	6.3	16.2	10.2	24
28	2.8	4.8	4.8	3.4	5.4	2.2	4.2	6.7	9.5	3.9	2.1	7.3	9.8	6.6	2.7	11.7	1.4	2.7	3.6	9.2	5.9	5.9	9.1	7.4	11.7	5.5	24
29	5.8	4.4	4.8	2.6	5.4	5.9	2.4	5.4	6.5	6.5	4.8	13.1	13.7	19.7	19.1	5.2	6.1	7.9	8.6	8.4	6.2	1.2	2.3	4.4	19.7	7.1	24
30	2.9	2.5	5.2	1.3	4.2	0	1.3	5.4	0.8	5.7	14.3	3.3	6.8	2.4	5.2	8.3	9.8	3.3	1.8	4.9	3.3	9.9	**N**	0	14.3	4.5	23
31	12	3.8	1.1	0	0	5.2	5	2.5	0.9	2.9	4	0	2.6	1.6	2.1	0	0	1.1	4.7	5.9	3	0.6	0	0	12.0	2.5	24
HOURLY MAX	12	14	13	17	17	13	20	14	14	18	18	21	17	20	20	15	17	12	15	16	15	14	16	26			
HOURLY AVG	4.8	4.5	4.6	3.9	4.6	4.7	5.2	5.1	4.1	5.5	5.3	6.4	5.9	5.8	6.2	5.8	6.3	5.4	5.5	6.4	6.2	5.6	5.0	5.4			

STATUS FLAG CODES

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

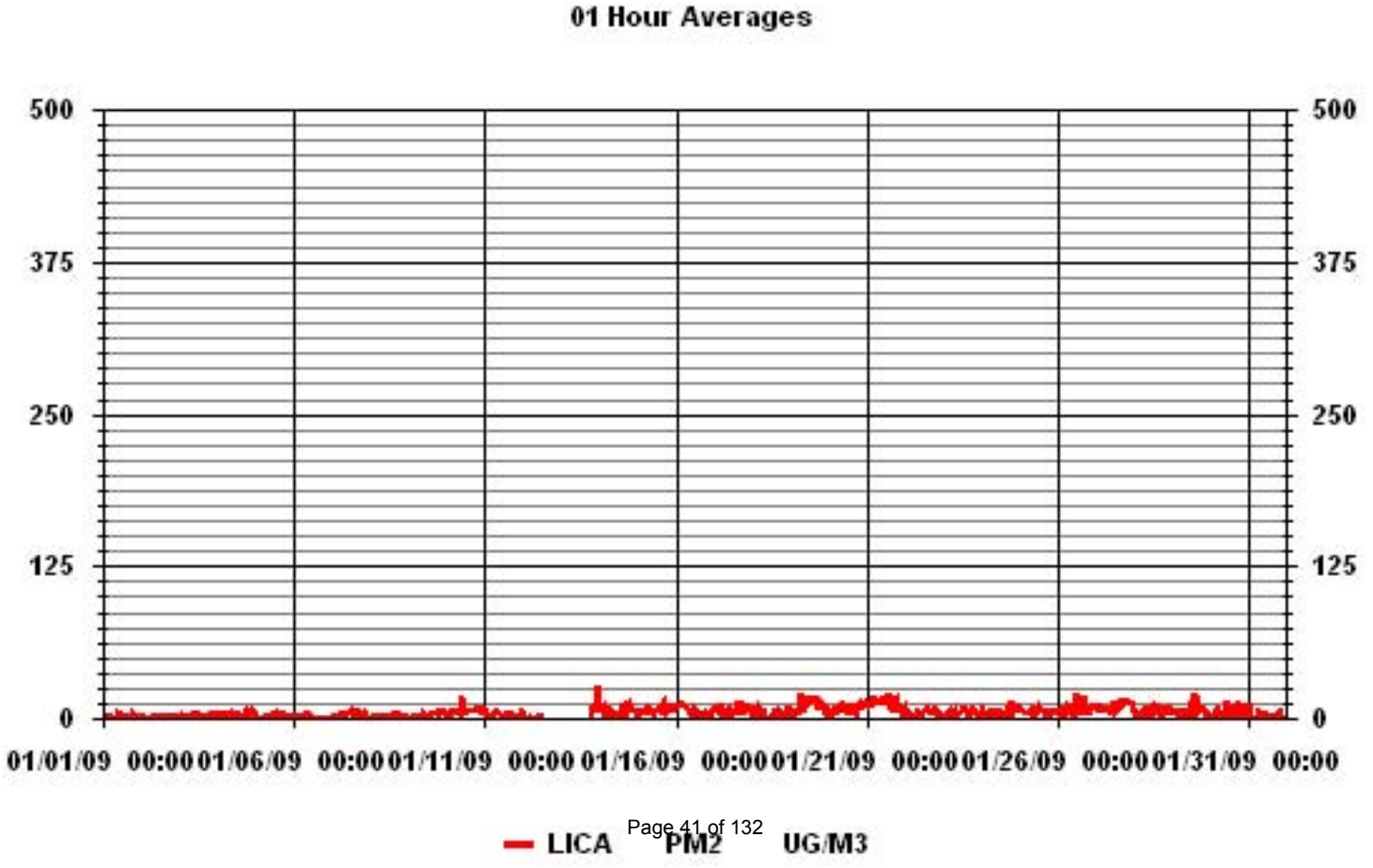


OBJECTIVE LIMIT: **ALBERTA ENVIRONMENT:** 1-HR - PPB | 24-HR 30 PPB

MONTHLY SUMMARY

NUMBER OF 1-HR EXCEEDENCES:	-					
NUMBER OF 24-HR EXCEEDENCES:	0	PROPOSED CANADA WIDE GUIDELINE				
NUMBER OF NON-ZERO READINGS:	677					
MAXIMUM 1-HR AVERAGE:	25.8	UG/M^3	@ HOUR(S)	23	ON DAY(S)	13
MAXIMUM 24-HR AVERAGE:	12.6	UG/M^3			ON DAY(S)	21

IZS CALIBRATION TIME:	0	HRS	OPERATIONAL TIME:	715	HRS
MONTHLY CALIBRATION TIME:	7	HRS	AMD OPERATION UPTIME:	96.1	%
STANDARD DEVIATION:	4.11		MONTHLY AVERAGE:	5.34	UG/M^3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500
375
250
125
0
01/01/09 00:00
01/06/09 00:00
01/11/09 00:00
01/16/09 00:00
01/21/09 00:00
01/26/09 00:00
01/31/09 00:00
LICA PM2 UG/M3

LICA
PM2 / WD Joint Frequency Distribution (Percent)

January 2009

Distribution By % Of Samples

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

Wind Parameter : WD
Instrument Height : 10 Meters

		Direction																
	Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
<	30.0	2.54	4.09	4.09	2.68	7.34	4.94	6.35	2.54	2.11	1.97	19.35	20.05	8.75	6.35	3.67	3.10	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	2.54	4.09	4.09	2.68	7.34	4.94	6.35	2.54	2.11	1.97	19.35	20.05	8.75	6.35	3.67	3.10	

Calm : .00 %

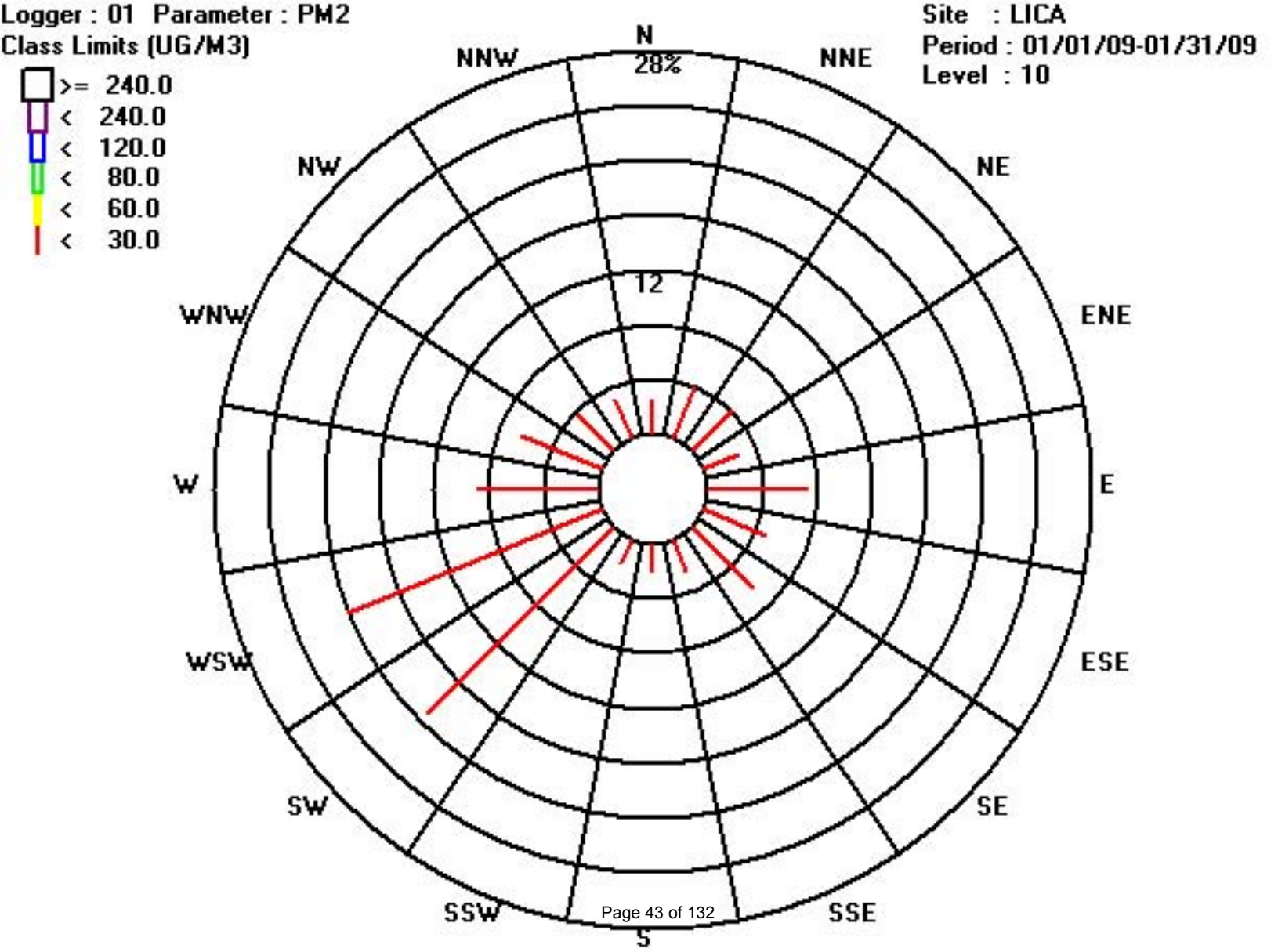
Total # Operational Hours : 708

Distribution By Samples

		Direction																
	Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
<	30.0	18	29	29	19	52	35	45	18	15	14	137	142	62	45	26	22	708
<	60.0																	
<	80.0																	
<	120.0																	
<	240.0																	
>=	240.0																	
	Totals	18	29	29	19	52	35	45	18	15	14	137	142	62	45	26	22	

Calm : .00 %

Total # Operational Hours : 708


Logger : 01 Parameter : PM2
Class Limits (UG/M3)
>= 240.0
< 240.0
< 120.0
< 80.0
< 60.0
< 30.0
Site : LICA
Period : 01/01/09-01/31/09
Level : 10
N
28%
NNE
NE
ENE
E
ESE
SE
SSE
S
SSW
SW
WSW
W
WNW
NW
NNW
12

Nitrogen Dioxide

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

JANUARY 2009

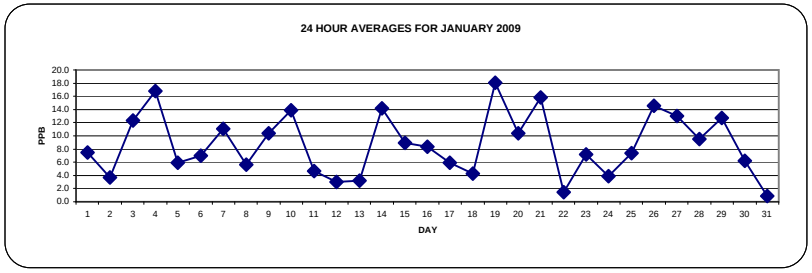
NITROGEN DIOXIDE hourly averages in ppb

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	2	3	1	1	1	1	2	5	9	**IZS**	8	7	6	5	6	9	13	15	19	17	14	15	9	5	19	7.5	24
2	3	2	1	2	2	2	2	1	**C**	**C**	**C**	**C**	**C**	**C**	**C**	11	2	3	2	4	3	5	9	9	11	3.7	24
3	13	13	12	12	13	11	11	**IZS**	12	10	7	7	6	5	6	8	11	16	17	16	18	19	20	20	20	12.3	24
4	21	23	23	24	24	25	**IZS**	23	21	17	6	5	6	8	8	13	18	25	23	25	17	12	10	10	25	16.8	24
5	8	7	6	7	5	**IZS**	5	6	9	8	5	4	4	4	4	9	13	10	4	4	4	4	3	3	13	5.9	24
6	2	2	1	2	**IZS**	2	3	4	7	8	6	3	2	2	2	3	4	5	12	17	20	20	18	16	20	7.0	24
7	16	16	14	**IZS**	14	17	19	19	18	15	7	8	8	5	5	3	8	7	8	9	12	15	6	5	19	11.0	24
8	3	2	**IZS**	4	4	4	4	5	7	7	7	6	6	5	5	10	12	6	7	5	7	6	5	3	12	5.7	24
9	4	**IZS**	4	6	7	13	8	13	22	20	13	9	3	4	6	8	11	10	10	12	15	14	14	13	22	10.4	24
10	**IZS**	11	10	13	13	12	12	11	12	11	10	10	9	10	11	14	15	19	20	19	20	21	22	**IZS**	22	13.9	24
11	21	11	5	6	6	7	7	7	5	5	3	3	3	3	2	1	1	1	1	2	2	2	**IZS**	3	21	4.7	24
12	2	1	1	3	3	4	3	3	6	5	4	3	2	4	3	3	3	4	3	3	3	**IZS**	2	2	6	3.0	24
13	1	1	2	2	2	5	5	6	8	4	2	3	2	1	1	1	2	4	2	2	**IZS**	5	6	7	8	3.2	24
14	8	14	17	20	14	29	27	18	17	11	4	3	2	4	6	11	17	21	25	**IZS**	29	18	7	4	29	14.2	24
15	4	3	3	3	3	4	4	5	5	7	8	10	9	4	5	9	11	14	**IZS**	22	19	18	16	20	22	9.0	24
16	16	13	14	16	20	18	18	10	9	7	2	1	1	1	2	2	5	**IZS**	5	4	5	8	10	5	20	8.3	24
17	6	4	4	5	5	17	5	5	11	5	6	6	6	3	4	5	**IZS**	6	7	7	5	4	6	4	17	5.9	24
18	3	2	2	3	2	2	3	5	4	4	4	3	4	4	5	**IZS**	6	5	5	5	4	7	8	8	8	4.3	24
19	8	4	5	7	13	22	36	34	32	33	**38**	22	13	12	**IZS**	18	16	18	22	21	13	12	9	7	**38**	**18.0**	24
20	7	11	9	5	8	7	7	9	12	12	17	12	7	**IZS**	9	11	10	8	12	13	11	15	14	14	17	10.4	24
21	20	25	28	29	25	25	32	26	23	26	25	21	**IZS**	6	5	7	8	12	10	5	2	1	1	1	32	15.8	24
22	0	0	0	1	1	2	2	2	3	3	2	**IZS**	0	0	0	1	0	1	1	1	2	4	4	3	4	1.4	24
23	3	3	4	4	8	10	16	19	14	13	**IZS**	5	4	2	3	5	4	7	9	8	7	4	6	7	19	7.2	24
24	6	5	5	5	5	4	4	4	4	**IZS**	2	1	1	1	2	2	3	3	5	6	6	5	5	5	6	3.9	24
25	4	4	5	5	5	6	8	9	**IZS**	9	7	6	5	5	6	5	5	8	10	12	14	11	11	10	14	7.4	24
26	11	11	11	12	8	9	11	**IZS**	23	19	18	18	10	8	9	9	20	16	15	21	17	19	19	21	23	14.6	24
27	19	17	12	10	11	12	**IZS**	9	10	7	7	10	11	10	11	15	15	14	18	22	27	18	8	6	27	13.0	24
28	6	4	5	2	1	**IZS**	5	9	11	4	6	4	2	1	1	1	2	19	26	27	28	23	23	9	28	9.5	24
29	8	5	6	6	**IZS**	5	9	16	17	21	24	18	22	25	18	15	11	17	14	12	8	6	5	4	25	12.7	24
30	3	3	2	**IZS**	2	2	5	14	18	18	14	7	3	3	8	9	6	5	5	4	3	4	3	1	18	6.2	24
31	1	0	**IZS**	0	1	1	2	2	2	2	1	1	1	1	0	0	1	1	1	1	0	1	0	0	2	0.9	24
HOURLY MAX	21	25	28	29	25	29	36	34	32	33	38	22	22	25	18	18	20	25	26	27	29	23	23	21			
HOURLY AVG	7.6	7.3	7.3	7.4	7.8	9.6	9.5	10.3	12.1	11.1	9.1	7.4	5.4	5.0	5.3	7.3	8.4	10.0	10.6	10.9	11.2	10.5	9.3	7.5			

STATUS FLAG CODES

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

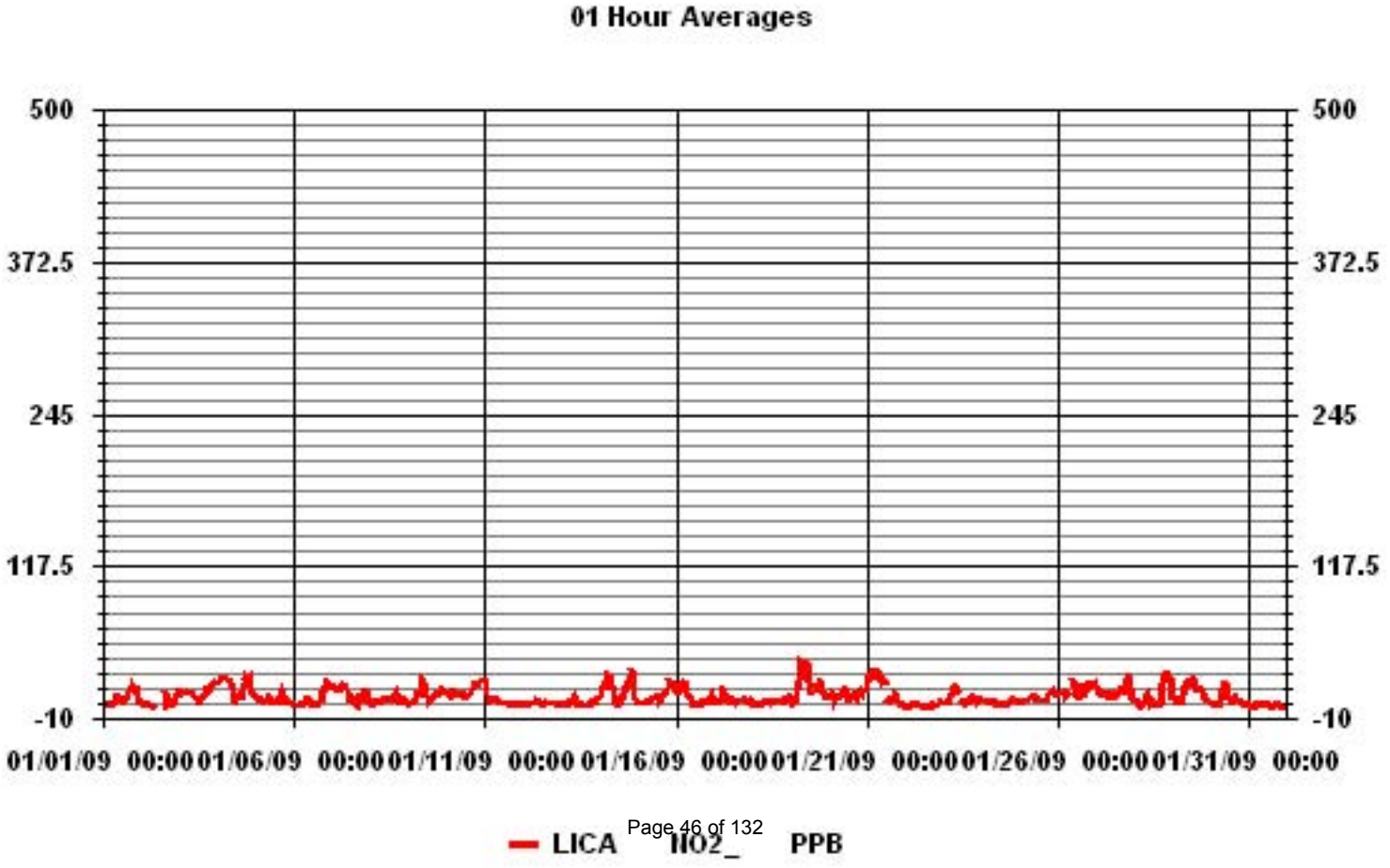


OBJECTIVE LIMIT: **ALBERTA ENVIRONMENT:** 1-HR 212 PPB | 24-HR 106 PPB

MONTHLY SUMMARY

NUMBER OF 1-HR EXCEEDENCES:	0					
NUMBER OF 24-HR EXCEEDENCES:	0					
NUMBER OF NON-ZERO READINGS:	692					
MAXIMUM 1-HR AVERAGE:	38	PPB	@ HOUR(S)	10	ON DAY(S)	19
MAXIMUM 24-HR AVERAGE:	18.0	PPB			ON DAY(S)	19

IZS CALIBRATION TIME:	31	HRS	OPERATIONAL TIME:	744	HRS
MONTHLY CALIBRATION TIME:	7	HRS	AMD OPERATION UPTIME:	100.0	%
STANDARD DEVIATION:	7.02		MONTHLY AVERAGE:	8.67	PPB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500
372.5
245
117.5
-10
01/01/09 00:00
01/06/09 00:00
01/11/09 00:00
01/16/09 00:00
01/21/09 00:00
01/26/09 00:00
01/31/09 00:00
LICA NO2_ PPB

LICA
NO2_ / WD Joint Frequency Distribution (Percent)

January 2009

Distribution By % Of Samples

Logger Id : 01
Site Name : LICA
Parameter : NO2_
Units : PPB

Wind Parameter : WD
Instrument Height : 10 Meters

Direction

Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 50	1.55	4.24	4.53	3.39	8.64	5.80	5.94	2.26	1.98	1.98	18.69	19.12	9.34	5.94	3.54	2.97	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	1.55	4.24	4.53	3.39	8.64	5.80	5.94	2.26	1.98	1.98	18.69	19.12	9.34	5.94	3.54	2.97	

Calm : .00 %

Total # Operational Hours : 706

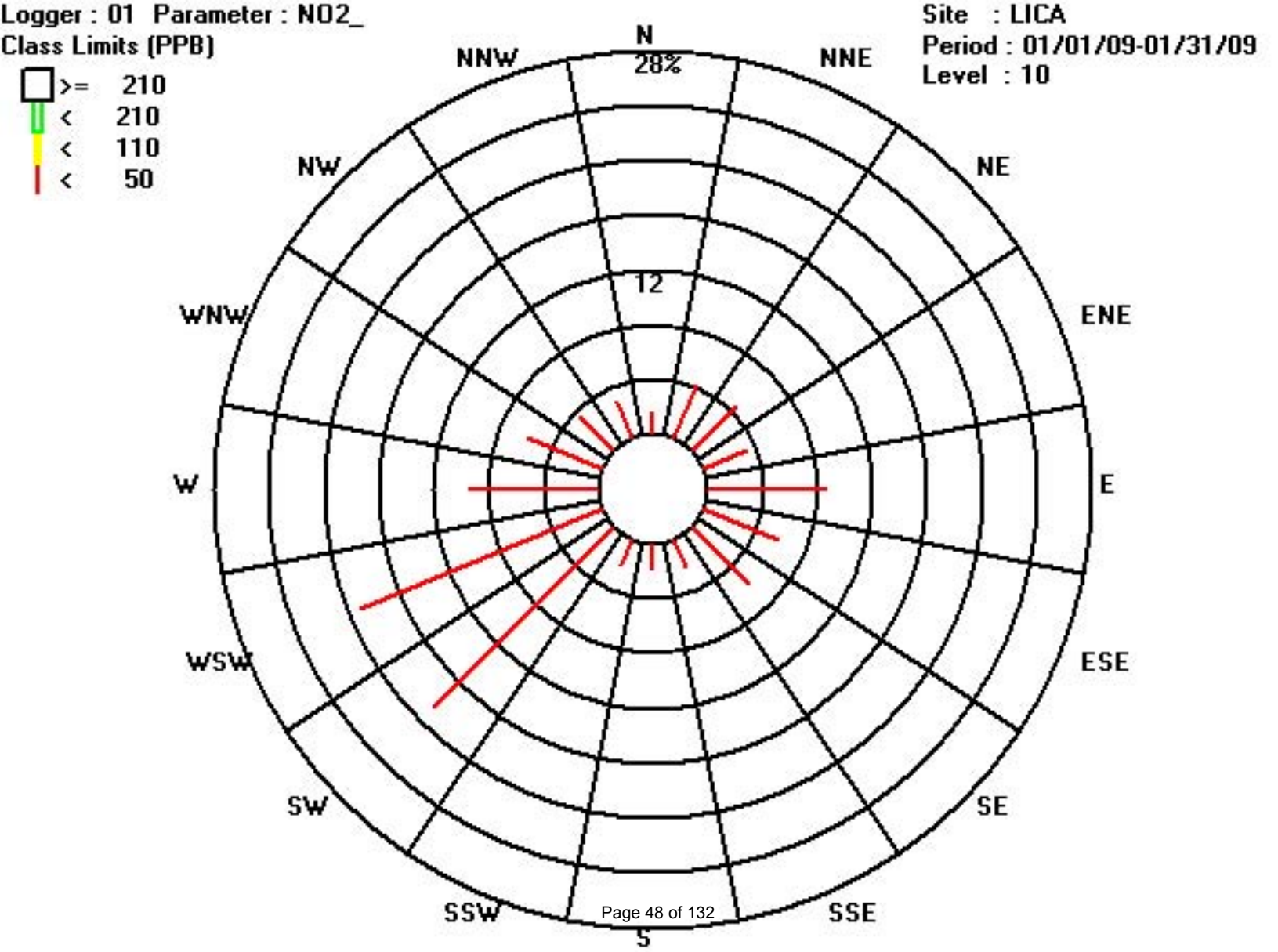
Distribution By Samples

Direction

Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 50	11	30	32	24	61	41	42	16	14	14	132	135	66	42	25	21	706
< 110																	
< 210																	
>= 210																	
Totals	11	30	32	24	61	41	42	16	14	14	132	135	66	42	25	21	

Calm : .00 %

Total # Operational Hours : 706


Logger : 01 Parameter : NO2_
Class Limits (PPB)
>= 210
< 210
< 110
< 50
Site : LICA
Period : 01/01/09-01/31/09
Level : 10
N
28%
NNE
NE
ENE
E
ESE
SE
SSE
S
SSW
SW
WSW
W
WNW
NW
NNW
12

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

JANUARY 2009

NITROGEN DIOXIDE MAX instantaneous maximum in ppb

MST

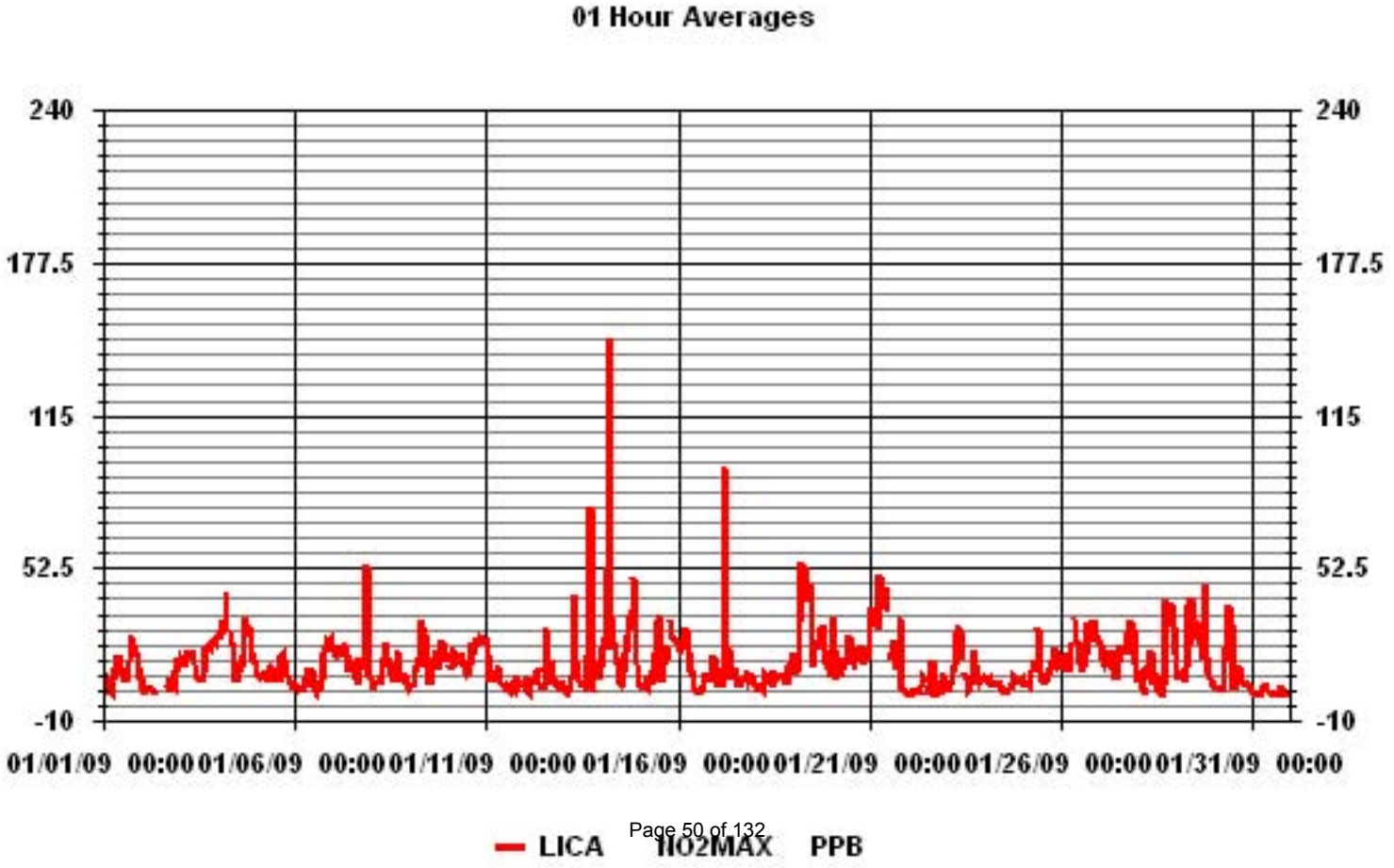
HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	9	7	3	1	3	2	7	11	16	**IZS**	16	10	7	7	7	11	15	24	24	22	18	17	13	8	24	11.2	24
2	4	2	2	3	3	3	3	2	**C**	**C**	**C**	**C**	**C**	**C**	**P**	**N**	5	7	2	5	4	10	16	12	16	5.2	22
3	16	15	13	13	16	18	16	**IZS**	18	14	9	8	7	7	7	10	19	20	21	20	22	23	22	24	24	15.6	24
4	24	26	26	31	26	41	**IZS**	26	22	21	10	6	12	11	12	17	24	32	27	29	26	19	15	14	41	21.6	24
5	9	9	8	9	8	**IZS**	7	10	12	11	11	6	8	7	7	16	17	13	13	9	6	6	4	4	17	9.1	24
6	5	4	3	4	**IZS**	3	4	7	10	10	10	5	3	2	5	4	5	7	18	21	23	22	23	19	23	9.4	24
7	18	19	17	**IZS**	17	20	21	21	20	18	10	14	13	12	8	5	14	14	11	15	16	54	9	8	54	16.3	24
8	4	4	**IZS**	6	7	5	8	14	14	22	17	13	10	9	6	14	19	9	8	7	8	8	6	4	22	9.7	24
9	5	**IZS**	5	10	12	16	12	31	29	26	21	14	5	7	16	11	19	12	12	17	23	16	19	15	31	15.3	24
10	**IZS**	12	11	20	17	15	16	14	18	14	12	13	10	11	13	22	19	20	24	21	24	23	24	**IZS**	24	17.0	24
11	23	18	6	8	8	9	9	13	7	6	5	4	5	4	3	2	4	3	8	3	4	6	**IZS**	5	23	7.1	24
12	6	3	2	6	6	6	6	6	10	11	0	4	4	28	5	12	5	15	6	6	4	**IZS**	6	3	28	7.0	23
13	3	2	3	2	4	8	9	42	15	8	7	5	5	6	2	17	4	78	4	3	**IZS**	8	8	13	78	11.1	24
14	13	20	24	53	19	**147**	33	23	21	16	14	6	5	6	10	18	25	33	34	**IZS**	47	28	14	5	**147**	26.7	24
15	5	4	4	5	4	8	6	6	11	18	20	31	33	6	8	13	21	16	**IZS**	30	24	24	22	24	33	14.9	24
16	22	19	20	20	27	27	24	19	11	9	3	2	2	2	3	3	8	**IZS**	8	6	9	13	17	11	27	12.4	24
17	13	5	5	5	6	94	12	11	20	7	10	11	12	5	5	6	**IZS**	8	9	9	6	7	9	7	94	12.3	24
18	5	4	2	4	4	3	9	8	8	6	5	5	10	8	9	**IZS**	9	8	8	6	5	12	13	9	13	7.0	24
19	18	9	10	13	30	55	51	54	39	45	47	41	20	13	**IZS**	22	19	28	27	29	20	14	12	9	55	27.2	24
20	8	32	20	7	10	8	10	11	15	16	24	24	14	**IZS**	12	17	14	19	20	21	13	19	16	17	32	16.0	24
21	28	36	32	36	31	27	50	36	37	45	39	36	**IZS**	16	16	23	11	17	16	32	4	3	2	2	50	25.0	24
22	1	1	1	2	2	2	2	3	4	8	7	**IZS**	2	4	1	15	1	1	1	2	2	6	9	4	15	3.5	24
23	3	3	5	6	10	13	26	29	27	16	**IZS**	9	8	3	4	8	5	19	13	12	9	6	7	8	29	10.8	24
24	7	6	6	7	5	5	5	5	6	**IZS**	4	2	2	2	2	3	4	4	8	7	7	6	6	7	8	5.0	24
25	5	5	5	6	5	10	13	13	**IZS**	27	11	7	6	6	9	6	9	11	14	15	20	16	13	14	27	10.7	24
26	13	16	17	17	10	11	21	**IZS**	31	23	21	23	14	10	12	17	30	25	22	31	29	31	25	24	31	20.6	24
27	23	22	16	13	14	17	**IZS**	18	12	8	8	15	15	20	20	20	21	17	26	30	30	28	14	7	30	18.0	24
28	7	9	10	4	2	**IZS**	8	11	19	5	8	8	3	2	1	1	5	39	33	37	34	38	29	18	39	14.4	24
29	10	7	9	8	**IZS**	7	12	37	21	40	35	23	30	31	22	22	15	29	46	17	10	8	7	5	46	19.6	24
30	4	4	3	**IZS**	3	3	14	20	37	23	36	30	3	4	11	13	7	6	6	5	5	4	4	2	37	10.7	24
31	1	1	**IZS**	1	1	2	3	3	5	3	2	1	1	1	1	1	1	3	3	2	1	1	1	1	5	1.7	24
HOURLY MAX	28	36	32	53	31	147	51	54	39	45	47	41	33	31	22	23	30	78	46	37	47	54	29	24			
HOURLY AVG	10.4	10.8	9.9	11.0	10.7	20.2	14.4	17.4	17.8	17.0	14.6	13.0	9.3	8.6	8.2	12.0	12.5	17.9	15.7	15.6	15.1	15.9	12.8	10.1			

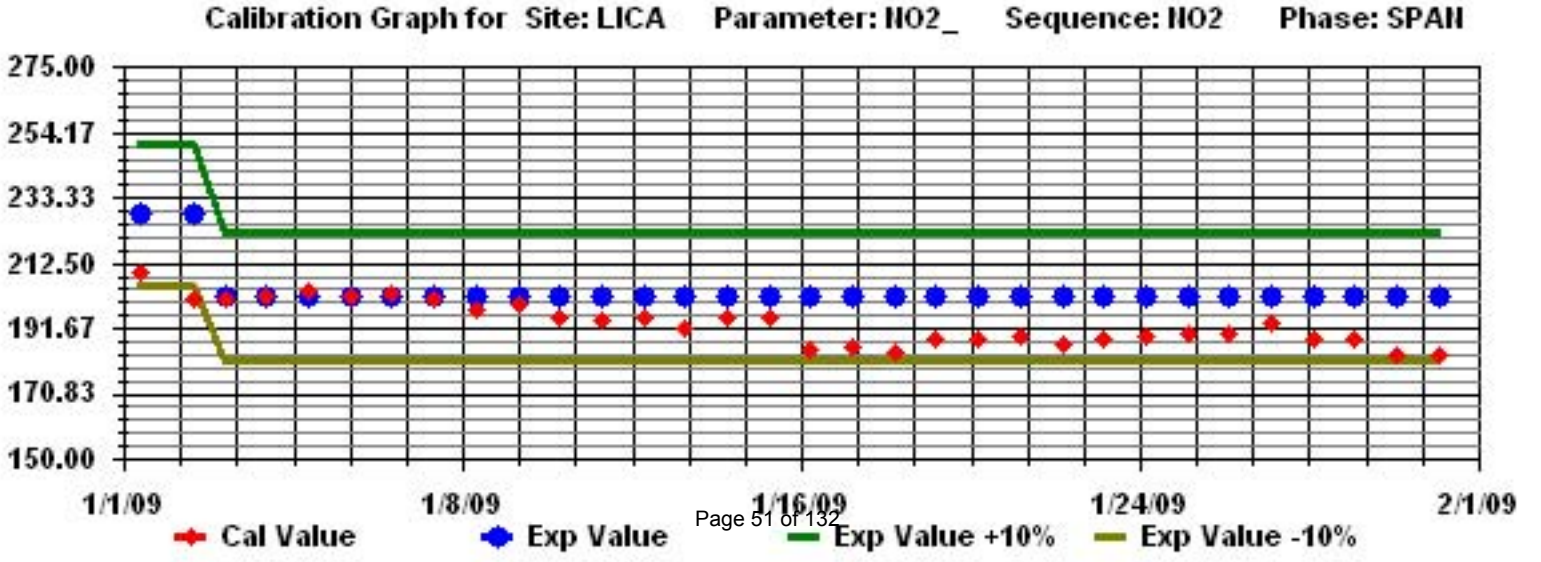
STATUS FLAG CODES

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:	704					
MAXIMUM INSTANTANEOUS VALUE:	147	PPB	@ HOUR(S)	5	ON DAY(S)	14
IZS CALIBRATION TIME:	31	HRS	OPERATIONAL TIME:		741	HRS
MONTHLY CALIBRATION TIME:	6	HRS				
STANDARD DEVIATION	11.93					


01 Hour Averages
240
177.5
115
52.5
-10
01/01/09 00:00
01/06/09 00:00
01/11/09 00:00
01/16/09 00:00
01/21/09 00:00
01/26/09 00:00
01/31/09 00:00
LICA
NO2MAX
PPB


Calibration Graph for Site: LICA Parameter: NO2_ Sequence: NO2 Phase: SPAN
275.00
254.17
233.33
212.50
191.67
170.83
150.00
1/1/09
1/8/09
1/16/09
1/24/09
2/1/09
Cal Value
Exp Value
Exp Value +10%
Exp Value -10%

Nitric Oxide

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

JANUARY 2009

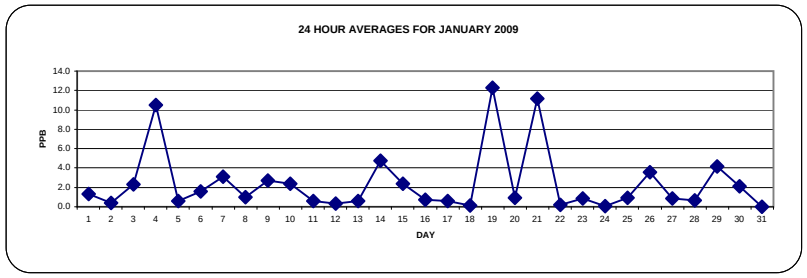
NITRIC OXIDE hourly averages in ppb

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	0	1	0	0	0	0	0	0	2	**IZS**	6	6	4	2	2	2	0	2	3	0	0	0	0	0	6	1.3	24
2	0	0	0	0	0	0	0	0	**C**	**C**	**C**	**C**	**C**	**C**	**C**	7	0	0	0	0	0	0	0	0	7	0.4	24
3	0	0	0	0	0	0	0	**IZS**	0	3	5	7	6	4	3	2	1	1	2	1	3	5	6	4	7	2.3	24
4	8	19	20	32	30	37	**IZS**	13	3	11	4	4	6	8	4	4	3	10	7	12	3	2	1	1	37	10.5	24
5	1	0	0	0	0	**IZS**	0	0	1	2	1	1	2	1	1	2	1	1	0	0	0	0	0	0	2	0.6	24
6	0	0	0	0	**IZS**	0	0	0	0	1	1	1	0	0	1	0	0	0	2	4	5	9	9	3	9	1.6	24
7	2	3	2	**IZS**	1	5	8	4	4	12	4	7	7	4	2	0	1	1	1	0	0	3	0	0	12	3.1	24
8	0	0	**IZS**	0	0	0	0	8	1	2	4	3	2	1	1	1	0	0	0	0	0	0	0	0	8	1.0	24
9	0	**IZS**	0	0	0	0	0	1	11	19	12	6	2	3	5	1	1	0	0	0	1	0	0	0	19	2.7	24
10	**IZS**	0	0	0	0	1	1	0	1	3	5	6	5	7	6	5	1	0	3	1	2	2	3	**IZS**	7	2.4	24
11	3	0	1	0	0	0	1	2	0	1	1	1	1	1	1	0	0	0	0	0	0	0	**IZS**	0	3	0.6	24
12	0	0	0	0	0	0	0	0	0	1	1	1	1	2	1	0	0	0	0	0	0	**IZS**	0	0	2	0.3	24
13	0	0	0	0	0	0	1	1	1	1	1	1	1	0	0	0	0	4	0	0	**IZS**	1	0	1	4	0.6	24
14	0	2	1	5	1	13	12	3	3	4	2	2	1	3	3	4	2	7	14	**IZS**	22	5	0	0	22	4.7	24
15	0	0	0	0	0	0	0	0	0	3	9	12	12	2	2	2	1	0	**IZS**	4	2	1	1	3	12	2.3	24
16	0	0	0	1	7	9	0	0	0	0	0	0	0	0	0	0	0	**IZS**	0	0	0	0	0	0	9	0.7	24
17	0	0	0	0	0	7	0	0	1	0	1	2	2	1	0	0	**IZS**	0	0	0	0	0	0	0	7	0.6	24
18	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	**IZS**	0	0	0	0	0	0	0	0	1	0.1	24
19	0	0	0	0	0	6	24	28	48	70	**73**	18	7	5	**IZS**	4	0	0	0	0	0	0	0	0	**73**	**12.3**	24
20	0	1	0	0	0	0	0	0	0	2	7	6	2	**IZS**	2	1	0	0	0	0	0	0	0	0	7	0.9	24
21	0	1	5	17	5	8	36	25	29	56	41	22	**IZS**	5	3	3	0	0	0	1	0	0	0	0	56	11.2	24
22	0	0	0	0	0	0	0	0	0	1	2	**IZS**	0	0	0	1	0	0	0	0	0	0	0	0	2	0.2	24
23	0	0	0	0	0	0	1	3	2	4	**IZS**	4	3	1	1	1	0	0	0	0	0	0	0	0	4	0.9	24
24	0	0	0	0	0	0	0	0	0	**IZS**	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.0	24
25	0	0	0	0	0	0	0	0	**IZS**	3	4	4	3	3	3	1	0	0	0	0	0	0	0	0	4	0.9	24
26	0	0	0	0	0	0	0	**IZS**	10	17	17	17	7	4	3	2	2	0	0	1	1	1	0	0	17	3.6	24
27	0	0	0	0	0	0	**IZS**	0	0	0	1	3	3	3	2	3	1	0	0	0	3	0	0	0	3	0.8	24
28	0	0	0	0	0	**IZS**	0	0	0	0	1	1	0	0	0	0	0	0	2	1	7	2	1	0	7	0.7	24
29	0	0	0	0	**IZS**	0	0	1	2	14	26	8	14	20	7	3	0	0	1	0	0	0	0	0	26	4.2	24
30	0	0	0	**IZS**	0	0	0	2	12	16	14	4	0	0	1	0	0	0	0	0	0	0	0	0	16	2.1	24
31	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	8	19	20	32	30	37	36	28	48	70	73	22	14	20	7	7	3	10	14	12	22	9	9	4			
HOURLY AVG	0.5	0.9	1.0	1.9	1.5	3.0	2.9	3.1	4.5	8.8	8.4	5.1	3.2	2.8	1.9	1.6	0.5	0.9	1.2	0.8	1.6	1.0	0.7	0.4			

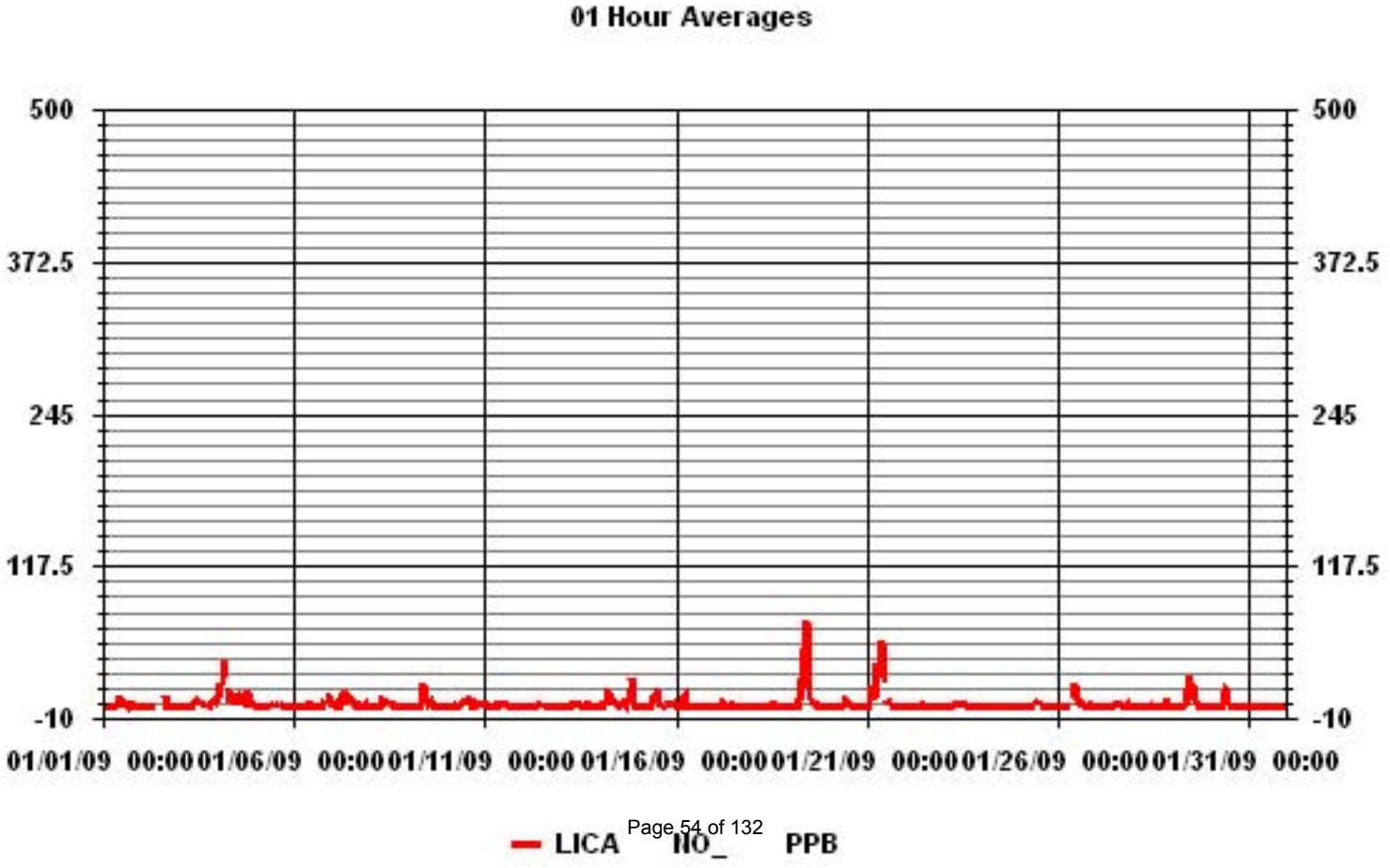
STATUS FLAG CODES

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



MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:		290					
MAXIMUM 1-HR AVERAGE:		73	PPB	@ HOUR(S)	10	ON DAY(S)	19
MAXIMUM 24-HR AVERAGE:		12.3	PPB			ON DAY(S)	19
IZS CALIBRATION TIME:	31	HRS	OPERATIONAL TIME:			744	HRS
MONTHLY CALIBRATION TIME:	7	HRS	AMD OPERATION UPTIME:			100.0	%
STANDARD DEVIATION:	6.66		MONTHLY AVERAGE:			2.39	PPB


01 Hour Averages
500
372.5
245
117.5
-10
01/01/09 00:00
01/06/09 00:00
01/11/09 00:00
01/16/09 00:00
01/21/09 00:00
01/26/09 00:00
01/31/09 00:00
LICA NO_ PPB

LICA
NO_ / WD Joint Frequency Distribution (Percent)

January 2009

Distribution By % Of Samples

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

Wind Parameter : WD
Instrument Height : 10 Meters

Direction

	Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
<	50	1.55	4.24	4.53	3.25	8.49	5.80	5.94	2.26	1.98	1.98	18.69	19.12	9.20	5.94	3.54	2.97	99.57
<	110	.00	.00	.00	.14	.14	.00	.00	.00	.00	.00	.00	.00	.14	.00	.00	.00	.42
<	210	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
>=	210	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
	Totals	1.55	4.24	4.53	3.39	8.64	5.80	5.94	2.26	1.98	1.98	18.69	19.12	9.34	5.94	3.54	2.97	

Calm : .00 %

Total # Operational Hours : 706

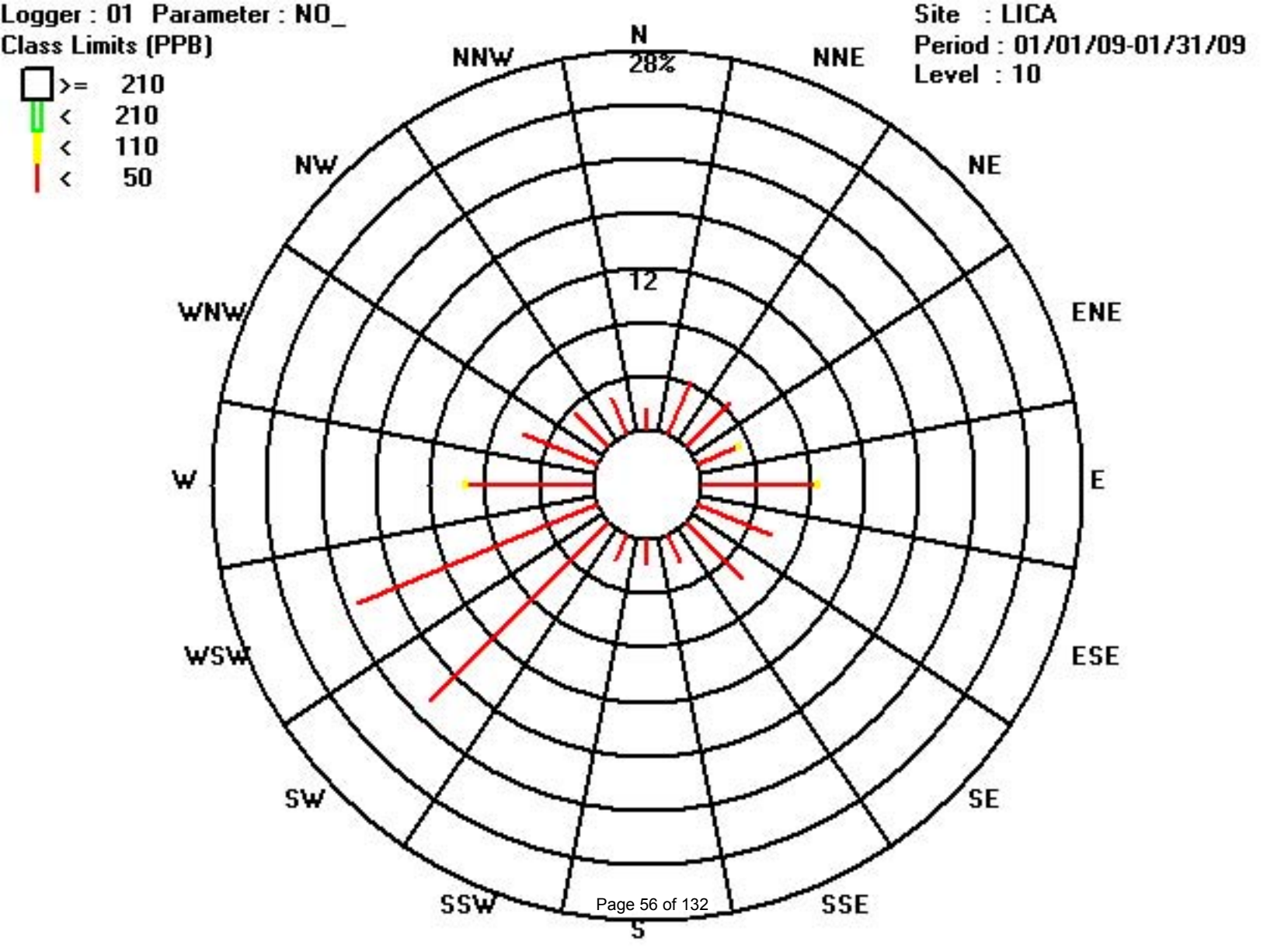
Distribution By Samples

Direction

	Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
<	50	11	30	32	23	60	41	42	16	14	14	132	135	65	42	25	21	703
<	110				1	1								1				3
<	210																	
>=	210																	
	Totals	11	30	32	24	61	41	42	16	14	14	132	135	66	42	25	21	

Calm : .00 %

Total # Operational Hours : 706


Logger : 01 Parameter : NO_
Class Limits (PPB)
>= 210
< 210
< 110
< 50
Site : LICA
Period : 01/01/09-01/31/09
Level : 10
N
28%
NNE
NE
ENE
E
ESE
SE
SSE
S
SSW
SW
WSW
W
WNW
NW
NNW
12

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

JANUARY 2009

NITRIC OXIDE MAX instantaneous maximum in ppb

MST

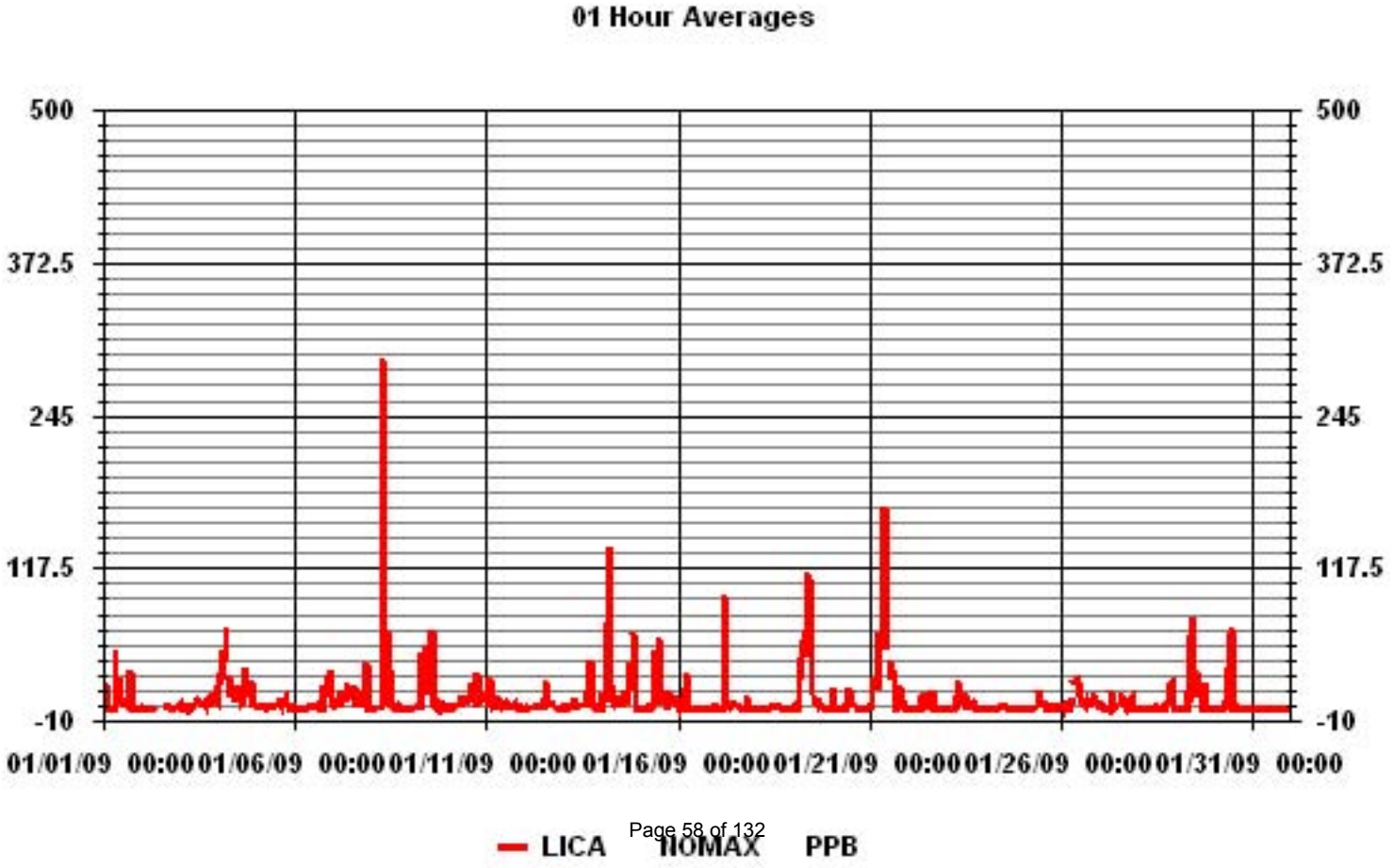
HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	7	21	1	0	0	0	0	0	46	**IZS**	24	11	6	3	3	2	1	31	28	2	1	0	0	0	46	8.1	24
2	2	0	0	0	0	0	0	1	**C**	**C**	**C**	**C**	**C**	**C**	**P**	**N**	2	2	0	1	0	1	2	2	2	0.8	22
3	1	4	1	1	0	5	0	**IZS**	2	4	7	9	7	6	3	3	6	3	7	6	10	10	9	7	10	4.8	24
4	19	29	23	49	38	65	**IZS**	25	10	16	8	5	20	12	6	8	16	34	19	23	9	24	4	4	65	20.3	24
5	2	1	1	1	1	**IZS**	1	3	3	3	3	2	3	3	6	6	3	7	9	1	5	0	0	0	9	2.8	24
6	4	0	0	1	**IZS**	0	0	0	1	2	2	3	1	1	3	1	0	0	20	9	22	20	32	5	32	5.5	24
7	4	9	3	**IZS**	4	12	12	5	11	21	7	16	16	16	5	4	4	12	10	4	1	38	1	2	38	9.4	24
8	0	1	**IZS**	1	2	1	2	**292**	4	9	65	35	4	3	1	2	4	1	0	0	0	0	0	0	**292**	18.6	24
9	0	**IZS**	1	2	1	1	1	46	36	39	54	11	25	31	66	2	10	2	0	4	4	1	2	2	66	14.8	24
10	**IZS**	0	0	2	2	3	4	1	8	8	9	8	7	9	7	22	8	1	30	3	10	6	11	**IZS**	30	7.2	24
11	8	1	25	4	1	2	2	10	4	1	2	2	5	3	2	1	1	1	4	0	1	1	**IZS**	0	25	3.5	24
12	2	0	0	1	2	1	1	2	3	4	**P**	2	8	23	2	6	2	7	4	2	1	**IZS**	1	0	23	3.4	23
13	4	0	0	1	1	1	3	8	3	2	3	3	3	3	5	14	2	40	3	1	**IZS**	2	1	3	40	4.6	24
14	2	12	6	71	5	135	22	7	5	8	8	3	3	6	6	14	4	39	23	**IZS**	60	17	1	0	135	19.9	24
15	0	0	1	0	0	1	1	0	2	13	49	33	60	4	8	4	16	1	**IZS**	13	7	10	4	11	60	10.3	24
16	4	1	5	4	18	29	1	0	0	1	0	0	0	0	0	0	0	**IZS**	0	0	0	0	3	2	29	3.0	24
17	3	0	1	0	0	96	1	1	7	1	2	5	4	3	2	1	**IZS**	0	0	11	0	0	0	0	96	6.0	24
18	0	0	0	0	0	0	0	0	0	0	1	1	2	3	3	**IZS**	1	1	0	0	0	0	0	1	3	0.6	24
19	3	0	0	0	23	42	58	54	66	113	110	44	13	7	**IZS**	7	2	3	1	1	0	0	0	0	113	23.8	24
20	0	17	0	0	0	0	0	0	0	5	14	14	5	**IZS**	4	3	0	1	0	0	0	1	0	1	17	2.8	24
21	1	5	17	26	22	16	64	49	92	168	98	51	**IZS**	37	24	32	1	0	3	20	1	7	0	0	168	31.9	24
22	0	0	0	0	0	0	0	0	10	6	12	**IZS**	3	2	0	15	0	0	0	0	0	0	0	0	15	2.1	24
23	0	0	0	1	0	1	10	24	15	5	**IZS**	7	13	2	2	3	4	6	4	1	0	0	0	0	24	4.3	24
24	0	0	0	0	0	0	0	0	0	**IZS**	1	1	1	1	1	0	0	0	0	0	0	0	0	0	1	0.2	24
25	0	0	0	0	0	0	0	1	**IZS**	14	6	4	4	4	5	1	0	0	1	1	1	1	0	1	14	1.9	24
26	1	3	0	3	0	0	6	**IZS**	23	24	25	23	11	5	5	3	8	6	2	6	12	7	5	1	25	7.8	24
27	1	6	1	1	0	1	**IZS**	12	0	1	2	4	5	10	10	4	4	1	3	8	10	1	0	0	12	3.7	24
28	0	0	0	0	0	**IZS**	0	0	1	0	1	2	0	0	0	0	0	3	6	4	21	22	5	0	22	2.8	24
29	0	0	0	0	**IZS**	0	0	15	4	61	76	13	30	30	10	16	1	2	22	0	0	0	0	0	76	12.2	24
30	0	0	0	**IZS**	0	0	1	6	34	31	63	68	0	0	2	1	0	0	0	0	0	0	0	0	68	9.0	24
31	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	19	29	25	71	38	135	64	292	92	168	110	68	60	37	66	32	16	40	30	23	60	38	32	11			
HOURLY AVG	2.3	3.7	3.0	5.8	4.1	14.2	6.6	19.4	13.4	20.0	23.3	13.1	8.9	7.8	6.6	6.0	3.3	6.8	6.6	4.0	5.9	5.6	2.7	1.4			

STATUS FLAG CODES

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

MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:	469					
MAXIMUM INSTANTANEOUS VALUE:	292	PPB	@ HOUR(S)	7	ON DAY(S)	8
IZS CALIBRATION TIME:	31	HRS	OPERATIONAL TIME:		741	HRS
MONTHLY CALIBRATION TIME:	6	HRS				
STANDARD DEVIATION	19.68					


01 Hour Averages
500
372.5
245
117.5
-10
01/01/09 00:00
01/06/09 00:00
01/11/09 00:00
01/16/09 00:00
01/21/09 00:00
01/26/09 00:00
01/31/09 00:00
LICA
NOMAX
PPB

Oxides of Nitrogen

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

JANUARY 2008

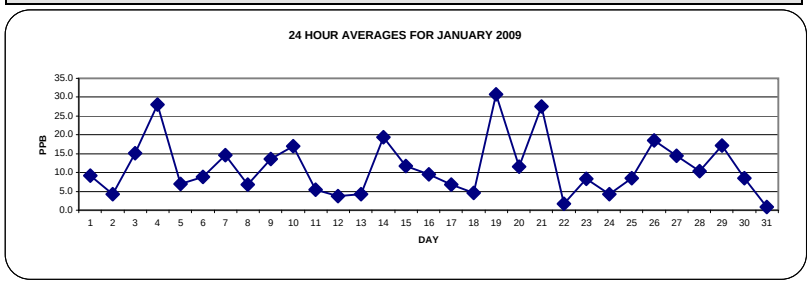
OXIDES OF NITROGEN hourly averages in ppb

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	3	4	1	1	2	1	2	5	11	**IZS**	14	14	10	8	9	11	14	18	22	17	14	15	9	5	22	9.1	24
2	3	2	1	2	2	2	2	2	**C**	**C**	**C**	**C**	**C**	**C**	**C**	18	2	3	2	4	3	5	10	9	18	4.2	24
3	13	13	12	12	13	12	12	**IZS**	13	14	12	15	12	10	9	10	12	17	20	18	21	25	26	25	26	15.0	24
4	30	42	43	57	54	63	**IZS**	37	24	28	11	10	13	17	13	18	22	36	30	37	21	14	12	12	63	28.0	24
5	9	8	7	7	6	**IZS**	5	7	11	10	7	6	6	6	6	12	15	11	5	4	4	4	3	3	15	7.0	24
6	2	2	1	2	**IZS**	2	3	4	8	9	8	4	3	3	3	4	4	6	15	21	26	29	27	19	29	8.9	24
7	18	20	16	**IZS**	16	23	28	23	22	27	11	16	16	9	7	4	10	8	9	10	13	19	7	5	28	14.7	24
8	4	3	**IZS**	5	5	4	5	7	8	10	12	9	8	7	6	12	13	6	7	5	7	6	5	3	13	6.8	24
9	4	**IZS**	4	6	7	14	9	14	34	39	25	15	6	7	12	10	12	11	11	13	16	14	15	13	39	13.5	24
10	**IZS**	11	10	14	14	14	13	12	14	15	15	16	15	18	18	20	16	20	24	20	23	24	26	**IZS**	26	16.9	24
11	24	11	6	6	6	8	8	10	6	6	4	4	5	4	3	2	1	2	2	2	2	2	**IZS**	3	24	5.5	24
12	2	1	1	3	3	4	4	3	7	6	6	4	3	6	4	4	4	5	4	4	3	**IZS**	3	2	7	3.7	24
13	2	1	2	2	3	6	6	8	10	5	3	4	3	2	1	2	3	8	3	3	**IZS**	7	7	8	10	4.3	24
14	9	16	19	25	16	42	39	21	20	16	6	5	4	7	9	16	19	29	39	**IZS**	52	24	8	4	52	19.3	24
15	4	3	3	4	3	4	5	5	6	11	18	22	22	6	7	11	13	14	**IZS**	26	21	20	17	23	26	11.7	24
16	17	14	15	18	27	28	19	10	9	7	2	2	2	2	2	2	5	**IZS**	5	4	6	8	11	5	28	9.6	24
17	6	4	4	5	5	25	6	5	12	5	7	8	9	4	5	6	**IZS**	6	7	7	5	4	6	4	25	6.7	24
18	3	2	2	3	2	2	3	5	4	4	5	4	6	6	6	**IZS**	6	5	5	5	4	7	8	8	8	4.6	24
19	8	4	5	7	14	29	60	63	81	104	**112**	40	21	18	**IZS**	22	17	18	22	22	13	12	9	8	**112**	**30.8**	24
20	7	12	9	5	8	7	7	9	13	14	24	19	10	**IZS**	12	13	10	8	12	13	11	15	14	14	24	11.6	24
21	21	27	34	47	30	33	68	51	53	82	66	44	**IZS**	11	8	11	9	13	11	7	3	2	1	1	82	27.5	24
22	0	0	0	1	1	2	2	2	3	4	5	**IZS**	0	1	0	3	0	1	1	1	2	4	4	3	5	1.7	24
23	3	3	4	4	8	10	17	23	17	18	**IZS**	9	7	4	4	7	4	7	9	8	7	4	6	7	23	8.3	24
24	6	6	5	5	5	4	4	4	5	**IZS**	3	2	2	2	3	3	3	3	5	6	6	5	5	5	6	4.2	24
25	4	4	5	5	5	7	8	9	**IZS**	13	12	10	8	8	9	6	6	8	10	12	14	12	11	10	14	8.5	24
26	11	12	11	12	8	9	12	**IZS**	33	37	35	35	18	12	13	12	22	17	16	23	19	20	19	21	37	18.6	24
27	20	18	12	11	11	12	**IZS**	10	10	8	9	14	15	14	14	18	16	14	19	23	31	18	8	6	31	14.4	24
28	6	5	5	2	1	**IZS**	5	9	12	4	7	5	3	1	1	1	2	19	28	28	36	25	24	9	36	10.3	24
29	8	5	6	6	**IZS**	5	9	18	19	35	51	26	36	46	25	18	12	18	16	12	8	6	5	4	51	17.1	24
30	3	3	2	**IZS**	2	2	5	16	30	35	29	12	3	3	9	10	7	5	5	4	3	4	3	1	35	8.5	24
31	1	0	**IZS**	0	0	1	2	2	2	2	2	1	1	1	0	0	1	1	1	1	0	1	0	0	2	0.9	24
HOURLY MAX	30	42	43	57	54	63	68	63	81	104	112	44	36	46	25	22	22	36	39	37	52	29	27	25			
HOURLY AVG	8.4	8.5	8.4	9.6	9.6	12.9	12.7	13.6	17.1	20.3	18.0	12.9	9.2	8.4	7.5	9.5	9.3	11.2	12.2	12.0	13.1	11.8	10.3	8.0			

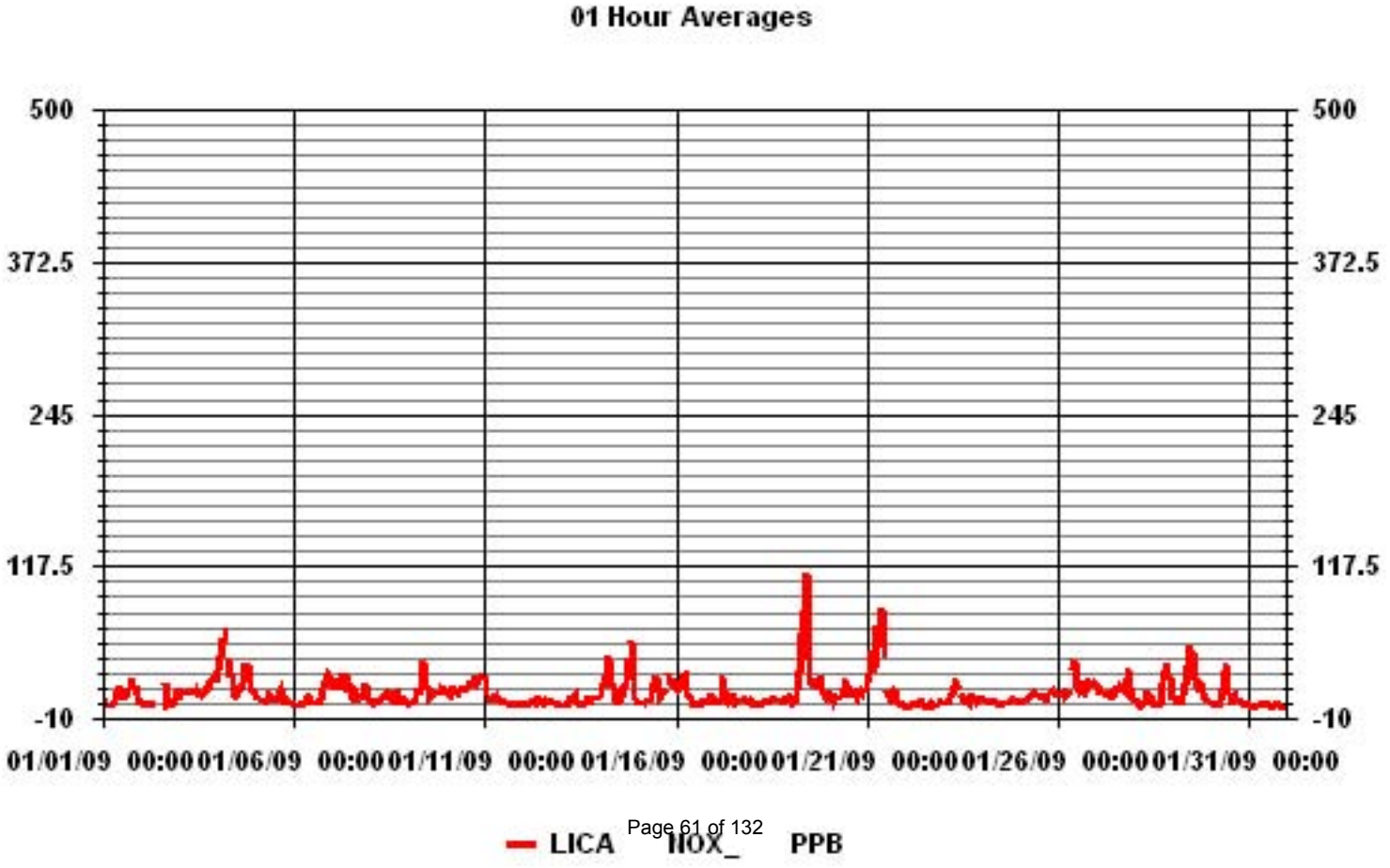
STATUS FLAG CODES

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:	692					
MAXIMUM 1-HR AVERAGE:	112	PPB	@ HOUR(S)	10	ON DAY(S)	19
MAXIMUM 24-HR AVERAGE:	30.8	PPB			ON DAY(S)	19
IZS CALIBRATION TIME:	31	HRS	OPERATIONAL TIME:		744	HRS
MONTHLY CALIBRATION TIME:	7	HRS	AMD OPERATION UPTIME:		100.0	%
STANDARD DEVIATION:	12.30		MONTHLY AVERAGE:		11.41	PPB


01 Hour Averages
500
372.5
245
117.5
-10
01/01/09 00:00
01/06/09 00:00
01/11/09 00:00
01/16/09 00:00
01/21/09 00:00
01/26/09 00:00
01/31/09 00:00
LICA NOX_ PPB

LICA
NOX_ / WD Joint Frequency Distribution (Percent)

January 2009

Distribution By % Of Samples

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

Wind Parameter : WD
Instrument Height : 10 Meters

Direction

Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 50	1.55	4.24	4.53	3.11	8.49	5.38	5.94	2.26	1.69	1.98	18.27	19.12	8.78	5.94	3.54	2.97	97.87
< 110	.00	.00	.00	.28	.14	.42	.00	.00	.28	.00	.42	.00	.42	.00	.00	.00	1.98
< 210	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.14	.00	.00	.00	.14
>= 210	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
Totals	1.55	4.24	4.53	3.39	8.64	5.80	5.94	2.26	1.98	1.98	18.69	19.12	9.34	5.94	3.54	2.97	

Calm : .00 %

Total # Operational Hours : 706

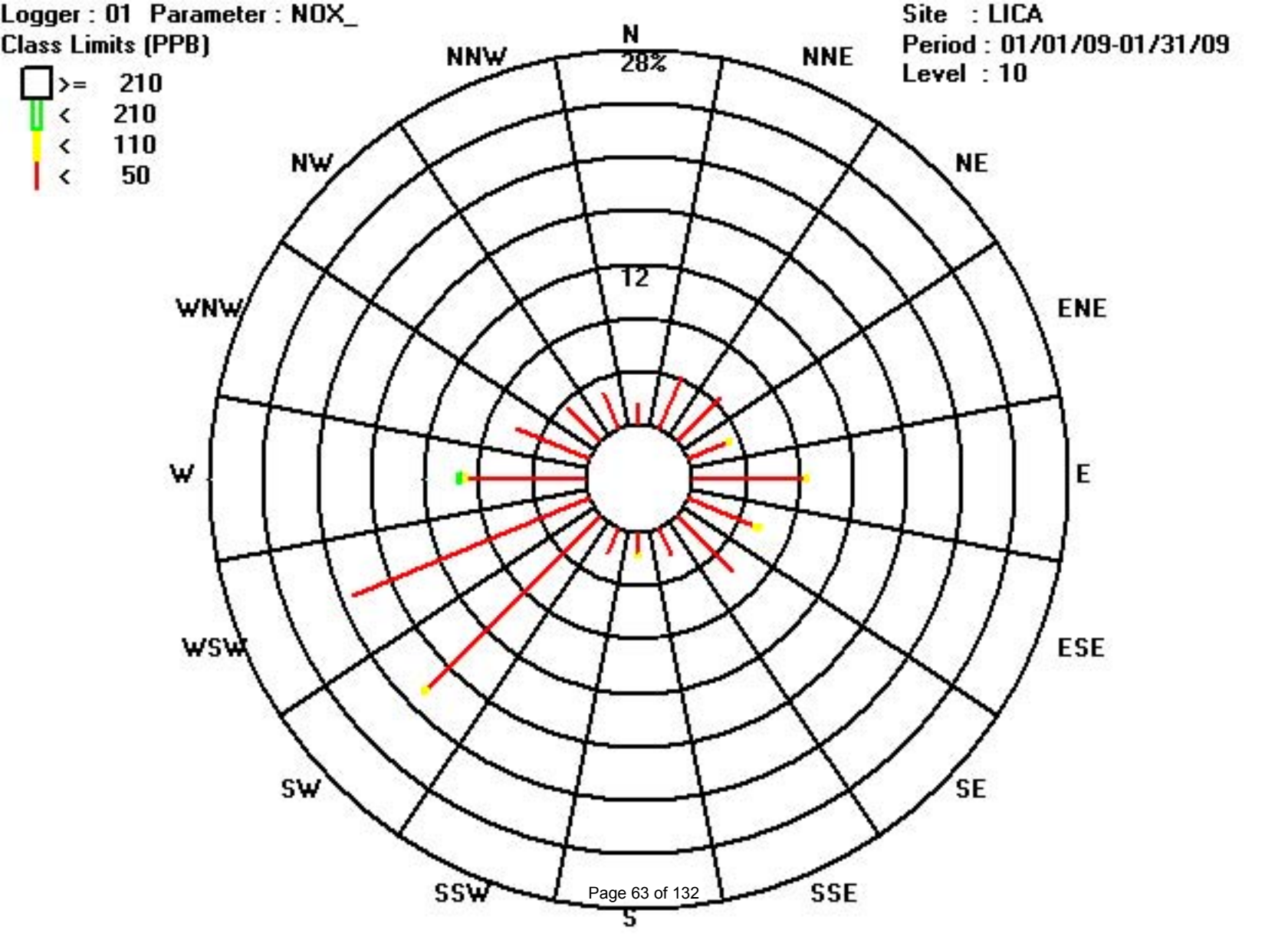
Distribution By Samples

Direction

Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 50	11	30	32	22	60	38	42	16	12	14	129	135	62	42	25	21	691
< 110				2	1	3			2		3		3				14
< 210													1				1
>= 210																	
Totals	11	30	32	24	61	41	42	16	14	14	132	135	66	42	25	21	

Calm : .00 %

Total # Operational Hours : 706


Logger : 01 Parameter : NOX_
Class Limits (PPB)
>= 210
< 210
< 110
< 50
Site : LICA
Period : 01/01/09-01/31/09
Level : 10
N
28%
NNE
NE
ENE
E
ESE
SE
SSE
S
SSW
SW
WSW
W
WNW
NW
NNW
12

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

JANUARY 2009

OXIDES OF NITROGEN MAX instantaneous maximum in ppb

MST

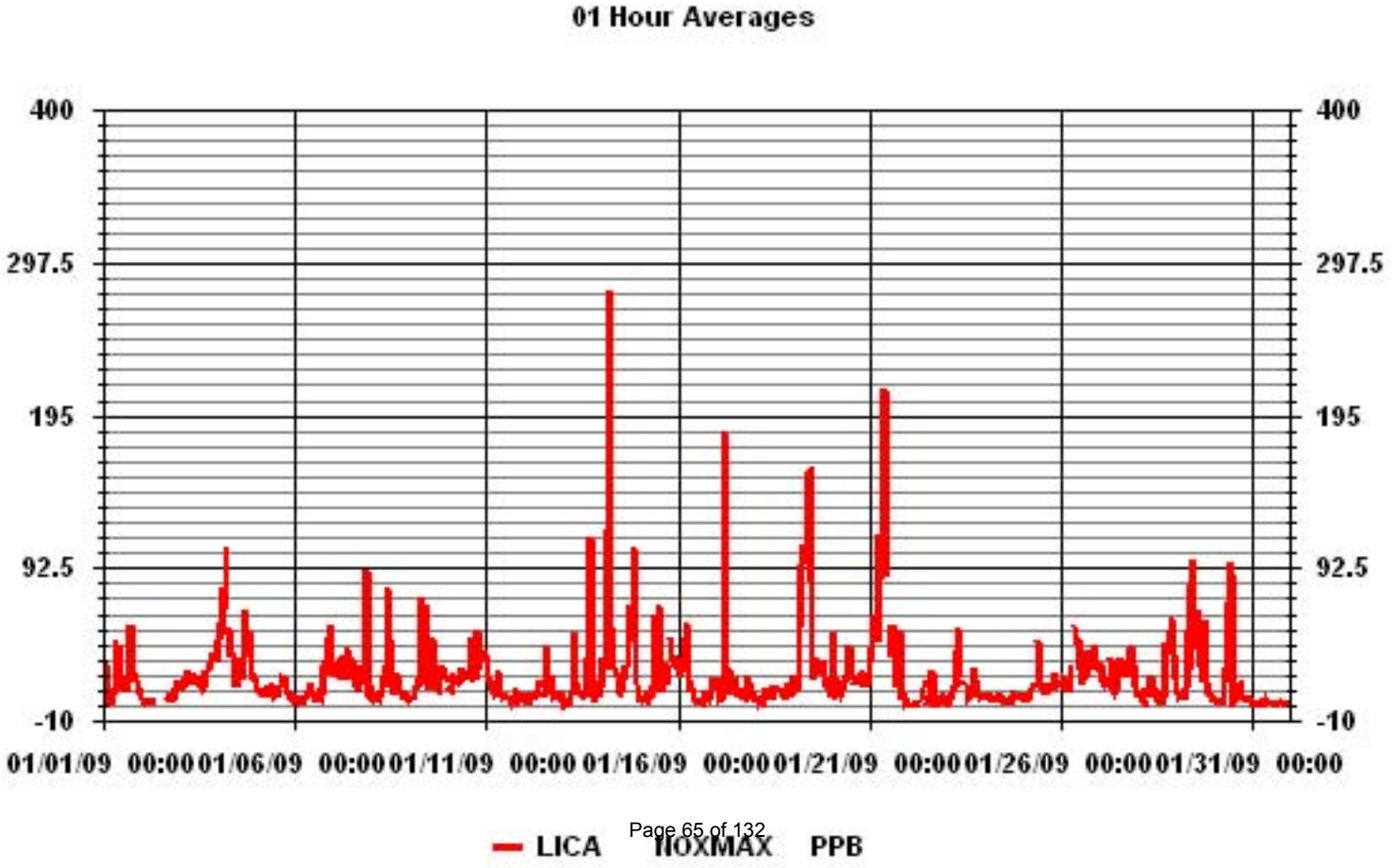
HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	16	28	4	2	3	3	8	12	42	**IZS**	39	22	13	11	11	14	16	55	52	24	18	17	13	9	55	18.8	24
2	6	3	2	3	3	4	3	3	**C**	**C**	**C**	**C**	**C**	**C**	**P**	**N**	7	9	3	6	4	11	17	13	17	6.1	22
3	16	17	13	14	16	24	17	**IZS**	20	18	17	18	15	13	11	13	23	24	29	24	33	32	31	31	33	20.4	24
4	44	56	48	80	65	105	**IZS**	51	33	35	19	12	32	24	18	26	40	64	46	50	34	24	19	17	105	41.0	24
5	11	11	9	10	9	**IZS**	8	13	14	14	14	9	11	10	13	20	19	19	15	11	9	6	5	4	20	11.5	24
6	8	5	3	5	**IZS**	3	5	7	10	13	13	8	4	4	8	6	5	8	27	31	45	41	55	24	55	14.7	24
7	23	28	21	**IZS**	20	32	34	26	30	39	17	30	30	23	14	9	16	27	17	18	18	92	10	11	92	25.4	24
8	6	4	**IZS**	7	8	6	10	18	17	27	79	46	14	14	7	16	22	10	9	7	8	8	6	4	79	15.3	24
9	5	**IZS**	6	12	13	18	13	73	61	62	67	25	10	15	46	13	28	13	12	21	27	18	21	18	73	26.0	24
10	**IZS**	13	12	22	19	17	20	15	26	21	20	21	17	21	20	45	23	22	50	24	34	29	35	**IZS**	50	23.9	24
11	32	18	17	12	9	11	10	23	9	8	6	7	7	7	6	3	5	5	12	4	5	7	**IZS**	5	32	9.9	24
12	8	3	3	6	7	8	7	9	12	16	**P**	7	7	41	7	18	7	21	7	8	6	**IZS**	8	3	41	10.0	23
13	5	2	4	3	5	10	12	49	17	10	10	8	7	9	7	32	6	114	7	5	**IZS**	10	9	15	114	15.5	24
14	15	32	29	118	24	**278**	54	28	26	23	21	10	9	12	17	26	28	68	56	**IZS**	105	45	15	5	**278**	45.4	24
15	5	4	5	6	5	9	6	7	13	32	61	55	67	9	16	18	28	17	**IZS**	44	29	34	26	33	67	23.0	24
16	26	20	25	25	45	56	25	19	12	11	4	2	2	3	4	3	8	**IZS**	8	6	10	13	19	14	56	15.7	24
17	15	5	6	5	6	185	13	13	26	8	12	16	17	8	8	7	**IZS**	9	9	20	6	7	10	7	185	18.2	24
18	5	4	2	4	4	3	9	9	9	7	6	6	13	11	12	**IZS**	10	8	8	7	5	13	13	9	13	7.7	24
19	21	10	11	13	53	95	108	105	100	156	157	85	33	20	**IZS**	30	21	30	28	31	21	14	12	9	157	50.6	24
20	8	49	21	7	11	8	10	11	16	21	38	38	20	**IZS**	16	19	14	20	21	21	13	19	16	17	49	18.9	24
21	30	39	45	61	53	43	115	84	121	213	133	88	**IZS**	52	33	54	12	17	18	50	5	9	2	3	213	55.7	24
22	1	1	1	2	2	3	2	3	4	12	16	**IZS**	3	7	1	23	1	1	1	2	2	6	9	4	23	4.7	24
23	4	3	5	8	10	13	37	53	43	21	**IZS**	16	15	5	6	12	6	25	18	12	9	6	7	8	53	14.9	24
24	7	7	6	7	5	5	5	5	7	**IZS**	5	3	3	3	3	4	5	4	8	7	7	6	6	7	8	5.4	24
25	5	5	5	6	6	11	14	14	**IZS**	42	17	12	10	10	15	8	10	11	15	17	21	18	14	15	42	13.1	24
26	14	19	18	17	10	12	26	**IZS**	52	45	46	45	25	15	18	20	38	28	24	36	38	38	28	25	52	27.7	24
27	24	29	17	14	15	18	**IZS**	30	13	9	11	20	21	30	30	24	25	19	29	38	40	29	14	7	40	22.0	24
28	7	9	10	4	2	**IZS**	8	11	21	6	9	11	4	3	2	2	5	43	39	42	51	60	35	19	60	17.5	24
29	10	7	9	8	**IZS**	7	12	51	24	82	98	37	60	61	31	32	16	31	58	17	10	8	7	5	98	29.6	24
30	4	4	3	**IZS**	3	3	16	26	70	54	96	90	4	5	14	15	8	6	6	5	5	4	4	2	96	19.4	24
31	1	1	**IZS**	1	1	2	4	3	5	3	3	2	2	2	1	1	2	3	3	2	1	1	1	1	5	2.0	24
HOURLY MAX	44	56	48	118	65	278	115	105	121	213	157	90	67	61	46	54	40	114	58	50	105	92	55	33			
HOURLY AVG	12.7	14.5	12.4	16.6	14.9	34.2	21.1	26.6	29.4	36.0	36.9	25.8	16.4	15.4	13.6	17.7	15.1	24.4	21.2	19.7	20.6	20.8	15.6	11.5			

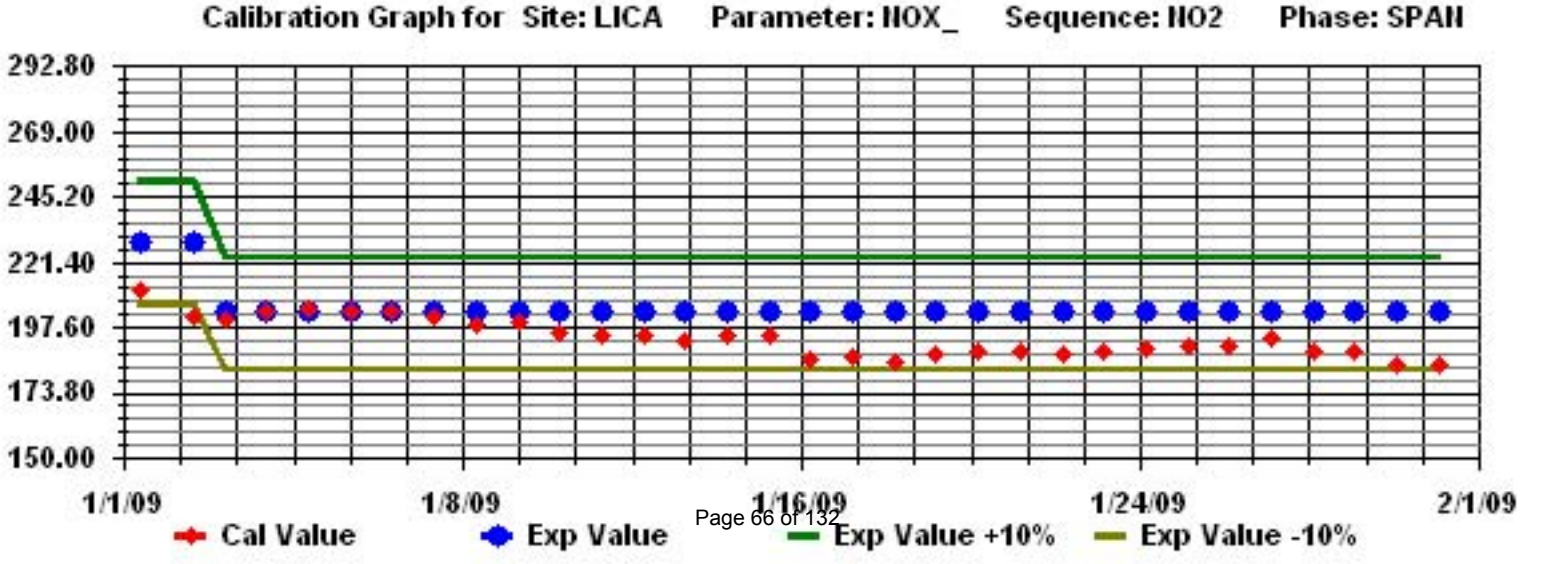
STATUS FLAG CODES

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:	704					
MAXIMUM INSTANTANEOUS VALUE:	278	PPB	@ HOUR(S)	5	ON DAY(S)	14
IZS CALIBRATION TIME:	31	HRS	OPERATIONAL TIME:		741	HRS
MONTHLY CALIBRATION TIME:	6	HRS				
STANDARD DEVIATION	25.41					


01 Hour Averages
400
297.5
195
92.5
-10
01/01/09 00:00
01/06/09 00:00
01/11/09 00:00
01/16/09 00:00
01/21/09 00:00
01/26/09 00:00
01/31/09 00:00
LICA
NOXMAX
PPB


Calibration Graph for Site: LICA Parameter: NOX_ Sequence: NO2 Phase: SPAN
292.80
269.00
245.20
221.40
197.60
173.80
150.00
1/1/09
1/8/09
1/16/09
1/24/09
2/1/09
Cal Value
Exp Value
Exp Value +10%
Exp Value -10%

Ozone

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

JANUARY 2009

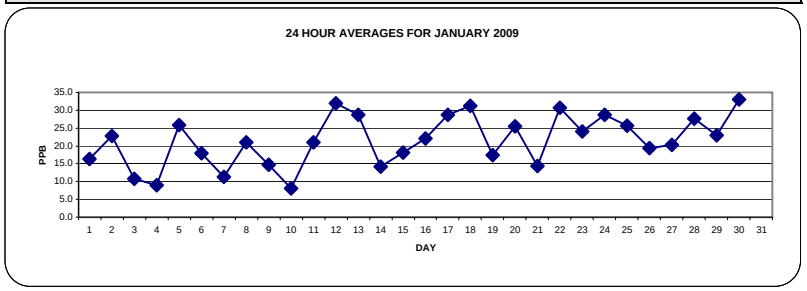
OZONE (O_3) hourly averages in ppb

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	23	24	25	25	25	25	22	18	12	**IZS**	16	16	18	19	17	15	10	7	4	6	9	7	13	19	25	16.3	24
2	23	24	25	24	24	23	24	25	**IZS**	25	25	25	26	26	26	24	24	23	23	21	21	18	14	13	26	22.9	24
3	8	9	11	12	11	13	12	**IZS**	11	13	17	17	19	20	20	18	14	8	5	5	3	1	0	0	20	10.7	24
4	0	0	0	0	0	1	**IZS**	2	3	7	19	20	20	19	19	15	9	4	2	3	10	15	18	20	20	9.0	24
5	21	22	22	23	25	**IZS**	26	24	21	23	26	28	28	29	29	24	21	23	29	29	29	30	31	31	31	25.8	24
6	31	31	31	30	**IZS**	30	28	26	22	20	18	20	18	19	19	19	18	16	9	4	1	1	1	1	31	18.0	24
7	1	1	2	**IZS**	1	1	1	2	2	5	15	16	15	20	20	22	19	20	18	15	12	12	19	22	22	11.3	24
8	23	25	**IZS**	22	22	22	22	21	20	21	22	24	23	24	24	19	18	23	20	22	16	16	17	19	25	21.1	24
9	19	**IZS**	18	17	18	12	17	13	3	6	14	19	23	22	19	17	15	16	15	12	10	11	10	12	23	14.7	24
10	**IZS**	12	12	10	9	10	10	10	9	12	11	12	13	12	10	8	7	3	1	2	2	1	1	**IZS**	13	8.0	24
11	1	13	18	16	13	12	12	12	13	15	19	20	20	23	23	26	28	28	33	35	35	34	**IZS**	33	35	21.0	24
12	32	32	31	30	32	32	31	32	30	30	31	32	33	32	33	34	34	32	32	32	32	**IZS**	32	32	34	**31.9**	24
13	32	33	32	32	31	29	28	28	26	29	31	31	32	**C**	**C**	**C**	**C**	26	27	27	**IZS**	23	27	22	33	28.7	24
14	20	14	9	6	9	6	3	12	13	18	24	25	26	25	23	18	13	6	3	**IZS**	1	9	20	25	26	14.3	24
15	25	25	25	25	25	24	24	23	22	21	21	20	20	23	21	18	16	13	**IZS**	5	5	5	7	2	25	18.0	24
16	4	5	4	2	1	5	13	25	27	30	35	36	37	37	36	36	32	**IZS**	31	31	28	23	14	14	37	22.0	24
17	17	23	29	28	27	23	21	15	17	28	29	31	32	35	35	35	**IZS**	35	34	33	33	34	32	33	35	28.7	24
18	34	34	35	34	33	33	31	29	30	31	31	33	33	33	33	**IZS**	31	32	31	31	31	27	25	25	35	31.3	24
19	20	23	30	24	20	10	2	1	1	3	7	21	24	26	**IZS**	21	21	19	15	15	22	23	26	27	30	17.4	24
20	27	24	24	27	24	27	27	25	22	25	23	27	32	**IZS**	31	30	30	31	26	24	24	19	20	17	32	25.5	24
21	11	4	1	1	1	0	1	0	1	4	8	15	**IZS**	29	31	26	25	20	21	25	26	26	27	27	31	14.3	24
22	28	27	27	27	27	29	31	31	31	32	31	**IZS**	35	36	36	34	33	32	32	32	31	28	28	29	36	30.7	24
23	29	28	26	25	20	19	14	10	17	18	**IZS**	27	28	29	29	28	29	26	24	24	25	27	26	24	29	24.0	24
24	25	25	25	25	26	26	26	27	27	**IZS**	31	32	33	33	33	33	32	33	30	27	27	28	28	28	33	28.7	24
25	30	30	29	29	29	26	22	21	**IZS**	19	26	28	29	29	29	31	30	27	24	22	18	20	22	20	31	25.7	24
26	17	14	14	18	26	25	18	**IZS**	5	10	18	23	29	33	33	32	21	21	22	15	18	14	10	8	33	19.3	24
27	9	13	18	23	23	22	**IZS**	23	22	26	27	25	26	27	26	22	21	20	14	9	3	14	25	30	30	20.3	24
28	31	33	31	36	38	**IZS**	33	30	28	35	33	36	37	39	39	39	37	20	10	8	3	6	8	26	**39**	27.7	24
29	29	32	30	30	**IZS**	30	26	13	13	9	10	18	16	17	20	24	26	17	25	25	28	29	29	32	32	23.0	24
30	33	33	33	**IZS**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	33	33.0	4
31	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**			0
HOURLY MAX	34	34	35	36	38	33	33	32	31	35	35	36	37	39	39	39	37	35	34	35	35	34	32	33			
HOURLY AVG	20.8	21.1	21.3	21.5	20.0	19.1	19.4	18.4	16.6	19.1	22.1	24.2	25.9	26.5	26.4	24.7	22.7	20.8	20.0	19.3	18.0	17.9	18.9	21.1			

STATUS FLAG CODES

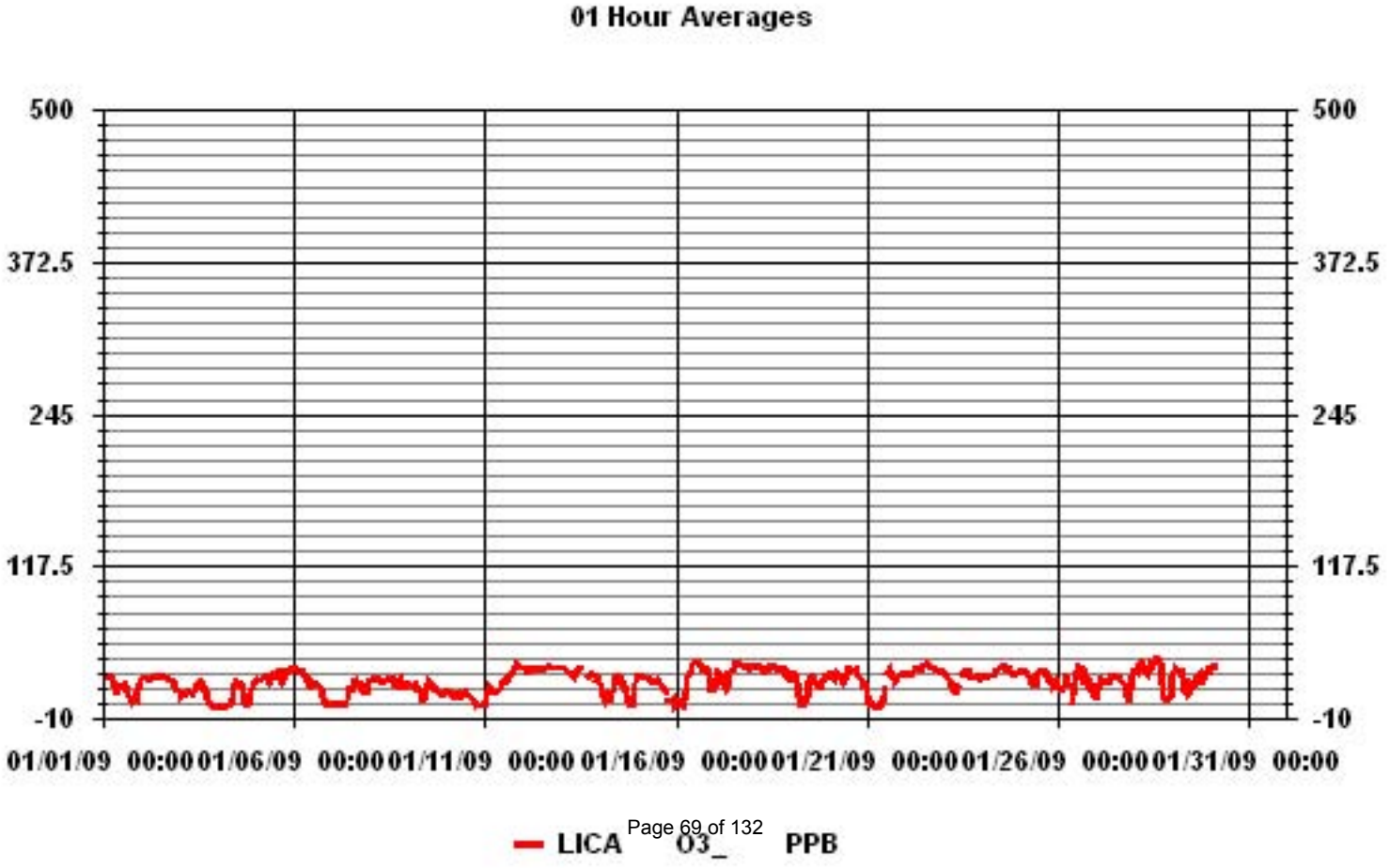
S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	- MISSING DATA
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE



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

MONTHLY SUMMARY

NUMBER OF 1-HR EXCEEDENCES:	0					
NUMBER OF NON-ZERO READINGS:	656					
MAXIMUM 1-HR AVERAGE:	39	PPB	@ HOUR(S)	VAR	ON DAY(S)	28
MAXIMUM 24-HR AVERAGE:	33.0	PPB			ON DAY(S)	12
					VAR-VARIOUS	
IZS CALIBRATION TIME:	31	HRS	OPERATIONAL TIME:		700	HRS
MONTHLY CALIBRATION TIME:	4	HRS	AMD OPERATION UPTIME		94.1	%
STANDARD DEVIATION	9.69		MONTHLY AVERAGE		21.07	PPB


01 Hour Averages
500
372.5
245
117.5
-10
01/01/09 00:00
01/06/09 00:00
01/11/09 00:00
01/16/09 00:00
01/21/09 00:00
01/26/09 00:00
01/31/09 00:00
LICA O3_ PPB

LICA
O3_ / WD Joint Frequency Distribution (Percent)

January 2009

Distribution By % Of Samples

Logger Id : 01
Site Name : LICA
Parameter : O3_
Units : PPB

Wind Parameter : WD
Instrument Height : 10 Meters

Direction

	Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
<	50	2.40	4.21	4.66	3.60	9.17	6.01	6.16	1.95	1.95	1.95	18.34	19.24	8.12	5.26	3.75	3.15	100.00
<	110	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
<	210	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
>=	210	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
	Totals	2.40	4.21	4.66	3.60	9.17	6.01	6.16	1.95	1.95	1.95	18.34	19.24	8.12	5.26	3.75	3.15	

Calm : .00 %

Total # Operational Hours : 665

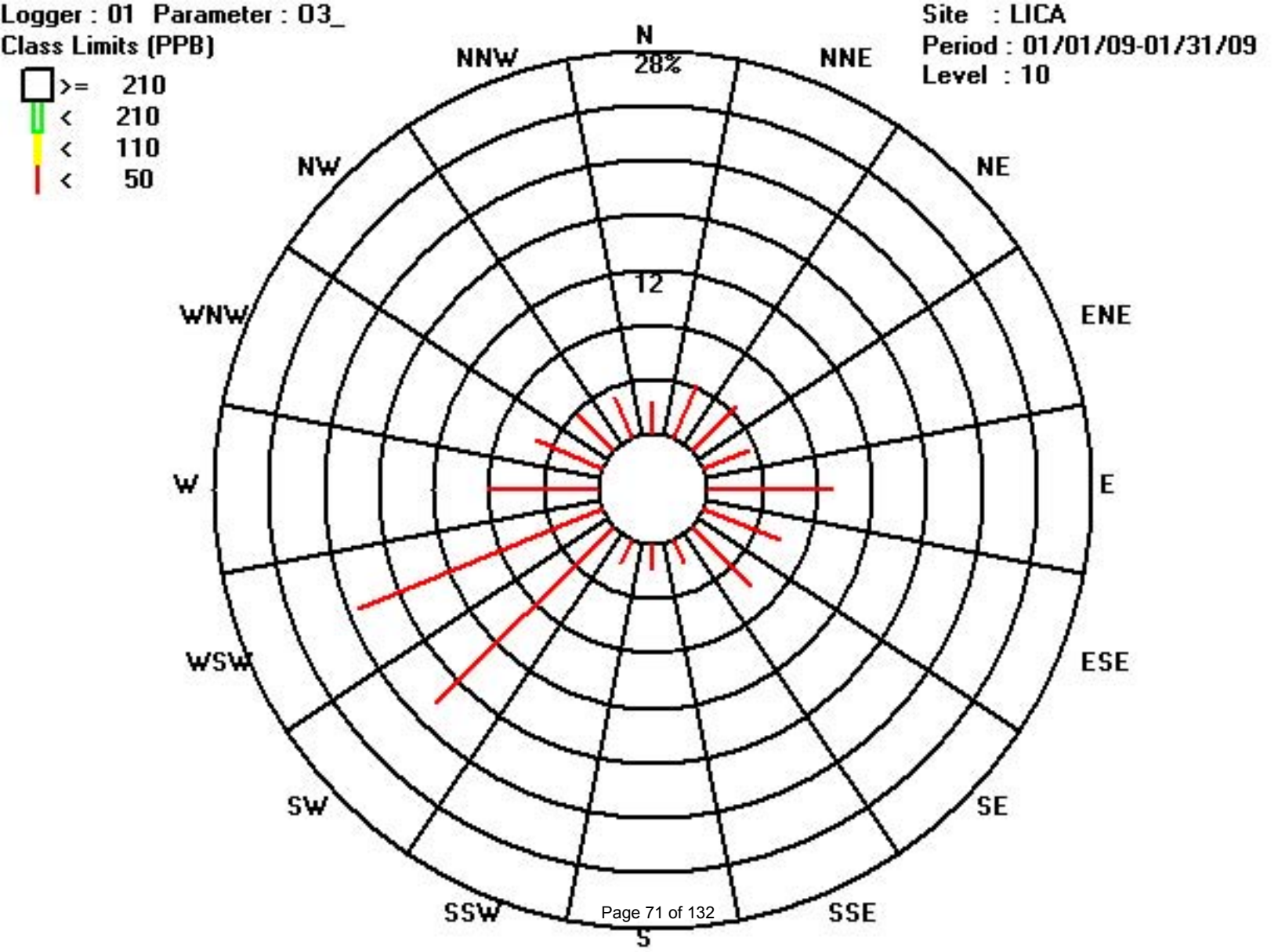
Distribution By Samples

Direction

	Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
<	50	16	28	31	24	61	40	41	13	13	13	122	128	54	35	25	21	665
<	110																	
<	210																	
>=	210																	
	Totals	16	28	31	24	61	40	41	13	13	13	122	128	54	35	25	21	

Calm : .00 %

Total # Operational Hours : 665


Logger : 01 Parameter : 03_
Class Limits (PPB)
>= 210
< 210
< 110
< 50
Site : LICA
Period : 01/01/09-01/31/09
Level : 10
N
28%
NNE
NE
ENE
E
ESE
SE
SSE
S
SSW
SW
WSW
W
WNW
NW
NNW
12

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

JANUARY 2009

OZONE MAX instantaneous maximum in ppb

MST

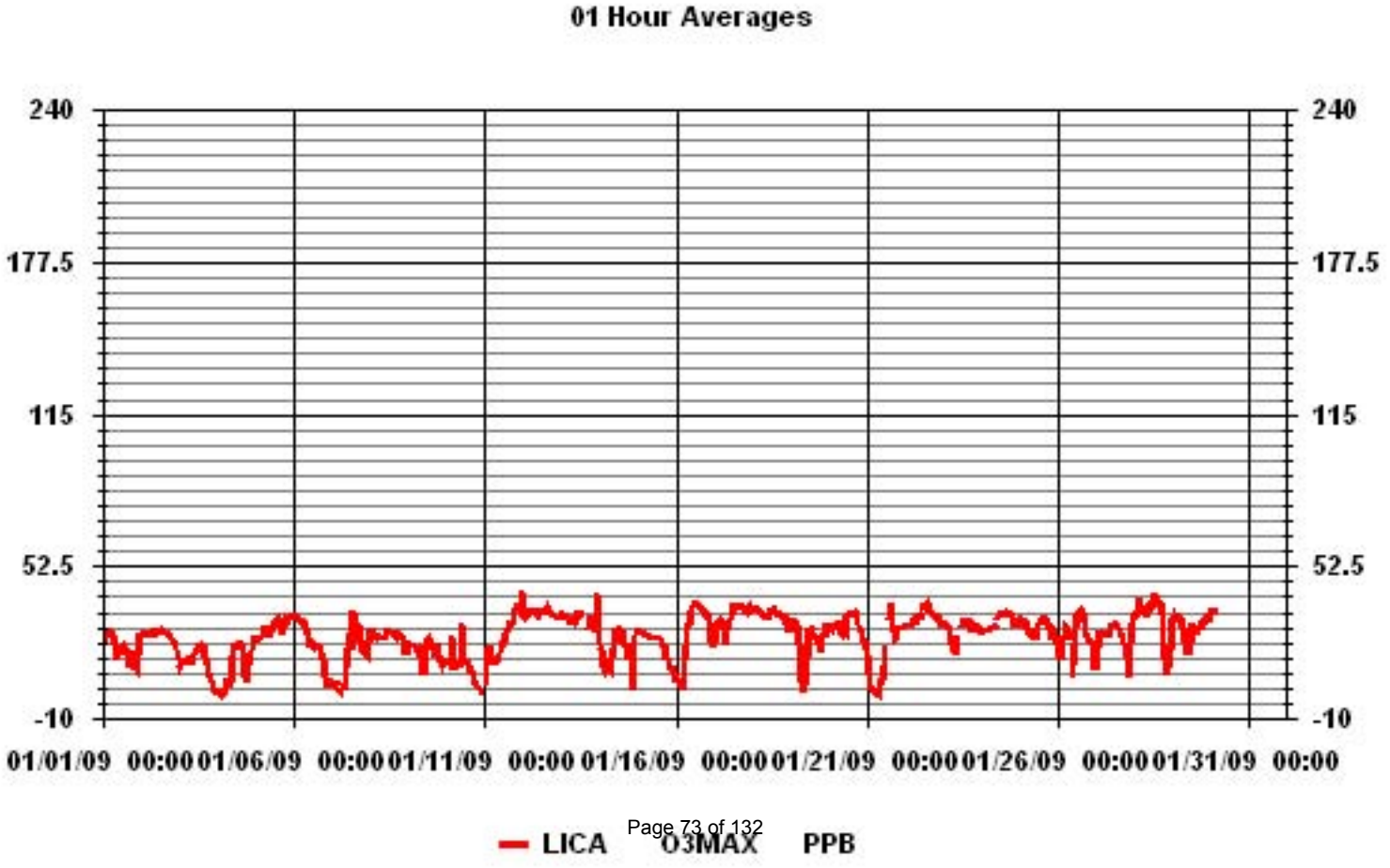
HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	25	24	26	26	26	26	25	21	15	**IZS**	17	17	19	20	19	17	13	11	18	11	11	10	16	24	26	19.0	24
2	24	25	25	25	24	24	25	26	**IZS**	25	26	26	26	27	**P**	25	25	25	24	23	21	21	19	15	27	23.9	23
3	11	12	13	13	13	14	14	**IZS**	13	16	18	18	20	20	21	20	16	13	9	8	6	2	1	1	21	12.7	24
4	1	1	0	1	1	5	**IZS**	4	5	16	20	20	21	20	21	20	13	8	5	12	16	18	23	23	23	11.9	24
5	22	22	23	24	26	**IZS**	27	27	23	25	28	29	29	30	31	29	24	27	31	30	31	32	32	32	32	27.6	24
6	32	32	32	31	**IZS**	30	30	28	25	22	19	21	20	19	20	20	20	18	15	8	4	4	4	5	32	20.0	24
7	5	4	5	**IZS**	2	1	2	3	3	11	19	25	18	34	22	23	29	25	21	18	18	17	22	25	34	15.3	24
8	24	26	**IZS**	24	23	24	24	23	23	23	25	27	25	25	25	25	24	26	22	24	23	17	17	20	27	23.4	24
9	21	**IZS**	20	20	20	18	19	18	9	9	17	23	24	23	21	19	16	16	21	14	14	12	13	13	24	17.4	24
10	**IZS**	13	13	24	11	11	12	12	11	29	13	15	13	13	12	10	9	5	5	4	3	1	1	**IZS**	29	10.9	24
11	5	18	19	20	13	13	13	14	14	17	20	21	22	25	27	28	29	30	35	36	36	35	**IZS**	41	41	23.1	24
12	33	32	33	33	34	34	34	34	33	32	P	34	34	34	34	36	35	34	33	33	32	**IZS**	32	33	36	33.5	23
13	33	33	32	32	32	30	30	31	30	31	33	33	33	**C**	**C**	**C**	**C**	28	32	29	**IZS**	27	41	26	41	31.4	24
14	21	19	12	10	11	11	10	15	19	21	26	26	27	26	26	21	20	14	16	**IZS**	3	21	24	26	27	18.5	24
15	26	26	26	25	25	25	24	24	23	23	23	23	23	23	23	21	20	15	**IZS**	14	11	10	10	5	26	20.3	24
16	8	7	6	4	2	14	20	28	29	34	36	37	37	37	36	36	35	**IZS**	33	33	31	26	22	19	37	24.8	24
17	21	29	30	28	28	29	27	20	26	30	31	33	36	36	36	36	**IZS**	36	36	33	35	36	34	35	36	31.3	24
18	35	35	35	35	34	33	33	32	32	32	33	34	34	35	35	**IZS**	33	33	33	32	32	30	28	27	35	32.8	24
19	25	29	31	28	29	21	6	2	2	4	15	26	26	27	**IZS**	24	23	21	17	22	24	24	28	28	31	21.0	24
20	28	28	27	29	27	29	29	26	25	27	26	32	33	**IZS**	33	33	34	33	29	27	26	23	22	19	34	28.0	24
21	17	9	3	2	2	1	2	1	4	6	12	19	**IZS**	32	36	37	26	23	24	27	27	27	27	28	37	17.0	24
22	28	28	28	28	29	31	32	31	32	32	33	**IZS**	36	36	37	35	34	33	33	32	32	31	29	29	37	31.7	24
23	29	29	28	27	22	21	18	16	23	23	**IZS**	29	30	30	30	29	30	30	25	27	27	28	27	25	30	26.2	24
24	25	26	26	26	26	27	27	27	28	**IZS**	32	33	33	33	33	34	33	33	33	28	28	29	29	30	34	29.5	24
25	31	31	29	30	30	28	26	25	**IZS**	24	27	29	30	30	31	31	31	30	27	24	22	26	25	21	31	27.7	24
26	21	16	15	24	28	27	24	**IZS**	8	12	21	27	33	34	35	34	30	25	24	21	23	21	13	10	35	22.9	24
27	14	19	25	25	25	25	**IZS**	24	24	28	28	28	29	29	28	26	24	21	17	16	7	21	29	31	31	23.6	24
28	33	34	32	38	38	**IZS**	35	32	34	36	36	39	38	40	40	39	38	33	21	15	8	11	18	31	40	31.3	24
29	30	33	32	32	**IZS**	31	28	22	20	16	20	21	29	25	25	26	28	27	27	29	30	31	31	33	33	27.2	24
30	34	34	34	**IZS**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**34**	34.0	4
31	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**			0
HOURLY MAX	35	35	35	38	38	34	35	34	34	36	36	39	38	40	40	39	38	36	36	36	36	36	41	41			
HOURLY AVG	22.8	23.2	22.8	23.7	21.5	21.6	22.1	21.0	19.7	22.4	24.2	26.6	27.8	28.3	28.3	27.2	25.6	24.0	23.8	22.5	20.8	21.1	22.0	23.4			

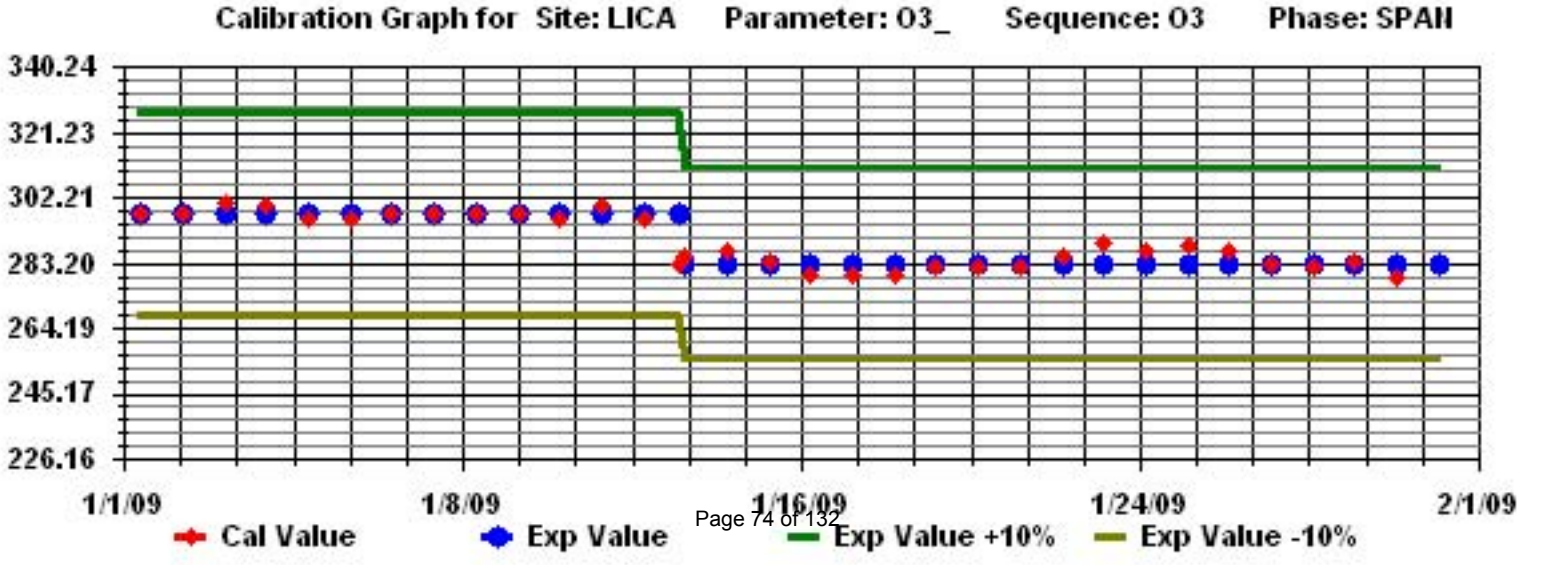
STATUS FLAG CODES

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

MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:	662					
MAXIMUM INSTANTANEOUS VALUE:	41	PPB	@ HOUR(S)	13	ON DAY(S)	30
IZS CALIBRATION TIME:	31	HRS	OPERATIONAL TIME:		698	HRS
MONTHLY CALIBRATION TIME:	4	HRS				
STANDARD DEVIATION	9.12					


01 Hour Averages
240
177.5
115
52.5
-10
01/01/09 00:00
01/06/09 00:00
01/11/09 00:00
01/16/09 00:00
01/21/09 00:00
01/26/09 00:00
01/31/09 00:00
LICA O3MAX PPB


Calibration Graph for Site: LICA Parameter: O3_ Sequence: O3 Phase: SPAN
340.24
321.23
302.21
283.20
264.19
245.17
226.16
1/1/09
1/8/09
1/16/09
1/24/09
2/1/09
Cal Value
Exp Value
Exp Value +10%
Exp Value -10%

Ambient Temperature

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

JANUARY 2009

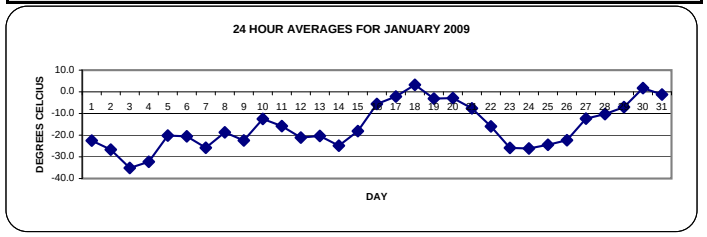
AMBIENT TEMPERATURE hourly averages (Degrees C)

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	-21.6	-21.7	-21.6	-21.3	-21.1	-20.8	-22.8	-25.7	-27.2	-26.8	-25.1	-23.2	-21.6	-21.5	-21.4	-21.3	-22.9	-22.9	-22.2	-21.6	-21.5	-21.3	-21.5	-21.8	-20.8	-22.5	24
2	-22.3	-22.9	-23.6	-24.1	-24.7	-24.9	-25.1	-25.4	-25.8	-25.9	-25.9	-25.9	-25.8	-25.6	-25.5	-25.3	-25.8	-27.1	-28.6	-29.9	-30.8	-31.6	-32.9	-34.9	-22.3	-26.7	24
3	-35.6	-35.1	-33.2	-33.1	-33.4	-33.9	-35.6	-36.2	-36.9	-36.3	-35.4	-33.9	-31.9	-31	-31.1	-31.9	-33.3	-35	-36.3	-37.5	-38.2	-38.9	-39.5	-39.8	-31.0	-35.1	24
4	-39.9	-39.8	**-40**	-39.8	**-40**	-39.7	-38.4	-35.5	-34.9	-34.1	-31.7	-29.6	-27.6	-26.6	-25.6	-26.2	-28.3	-29.3	-30.3	-29.6	-27.9	-27	-26.5	-26.1	-25.6	-32.3	24
5	-25	-24.6	-24.2	-23.6	-23.3	-23.2	-22.3	-22.6	-21.4	-20.6	-19.9	-19.3	-18.4	-17.7	-17.3	-18	-18.6	-18.4	-17.7	-17.6	-17.5	-17.4	-17.6	-17.9	-17.3	-20.2	24
6	-18	-17.9	-17.7	-17.4	-17.4	-17.2	-17.2	-17.1	-16.9	-16.3	-15.8	-16.1	-17	-17.9	-18.2	-19.1	-21	-22.5	-24.1	-26.6	-28.2	-29.8	-31.2	-32.4	-15.8	-20.5	24
7	-33.2	-33.8	-34.4	-34.7	-34.5	-32.1	-29.5	-28	-27.7	-27.2	-25.4	-24.3	-23	-21.6	-21.1	-21.6	-21.4	-20.9	-20.6	-20.9	-21.2	-21	-20.6	-20.6	-20.6	-25.8	24
8	-20.7	-20.6	-20.5	-20.5	-20	-19.9	-19.9	-19.6	-19.4	-19.1	-18.7	-18.4	-18.4	-18.1	-17.2	-17	-16.6	-16.6	-16	-15.8	-16.7	-18	-19.6	-21.5	-15.8	-18.7	24
9	-23.1	-24.6	-25.9	-27	-27.9	-28.4	-28.9	-29.6	-30.9	-29.1	-25.9	-24.2	-20.5	-19.1	-18.9	-18.4	-17.6	-17	-17	-17.6	-17.2	-17	-16.6	-16.2	-16.2	-22.4	24
10	-15.9	-15.9	-15.5	-15.2	-14.9	-14.6	-14.3	-14.2	-14	-13.8	-13.2	-12.4	-11.7	-10.8	-10.8	-10.5	-10.6	-10.7	-10.6	-10.4	-10.1	-10	-10	-9.8	-9.8	-12.5	24
11	-9.9	-10	-11	-11.7	-13	-13.6	-13.4	-13.4	-13.7	-14.4	-15.9	-16.3	-16	-15.5	-16.4	-17.4	-17.9	-18.1	-18.4	-19.1	-19.9	-20.8	-21.3	-22.6	-9.9	-15.8	24
12	-22.5	-22.1	-21.8	-21.6	-21.5	-21.6	-21.5	-21.5	-21.7	-21.7	-21.4	-20.9	-20.7	-20.4	-20.1	-20	-20.1	-20.4	-20.8	-21.2	-21.2	-20.9	-20.8	-20.5	-20.0	-21.1	24
13	-20.2	-19.8	-19.7	-19.9	-19.9	-19.8	-19.9	-20.3	-20.7	-19.9	-19.6	-19.4	-19.3	-19.2	-19.4	-19.9	-20.3	-20.7	-21	-21.7	-22.4	-22.2	-21.6	-21.9	-19.2	-20.4	24
14	-23.5	-25.6	-27.1	-28.3	-28.9	-29.3	-27.3	-25	-25.2	-24.3	-23.4	-22.6	-21.3	-20.1	-19.5	-19.9	-22.8	-25.3	-26.3	-26.9	-27.8	-26.8	-25.5	-23.8	-19.5	-24.9	24
15	-23.1	-22.8	-22.3	-21.9	-21.6	-21	-20.8	-20.2	-19.4	-18.9	-18.5	-17.5	-16.4	-15.4	-14.6	-14.3	-14.2	-14.2	-14.3	-15.5	-17	-17.1	-16.8	-17.3	-14.2	-18.1	24
16	-18.4	-19.5	-19.9	-19.9	-19.5	-15.9	-8.1	-5	-3.4	-2.4	0.6	1.9	2.8	3.3	3	2.5	1.3	0.4	0	-0.5	-1.9	-3.8	-5.5	-6.8	3.3	-5.6	24
17	-8	-6.9	-4.7	-5.3	-6.2	-4.9	-6.6	-8.8	-7.9	-3.8	-1.9	-0.5	0.4	1.4	1.4	2	0.2	0	-0.3	0.1	0.8	2.1	2.1	3	3.0	-2.2	24
18	3.6	4.3	4.1	3.7	3.2	3.2	3	1	1.3	2	2.3	3.6	4.4	5.8	**8.1**	7.9	6.4	5.3	3.9	2.6	2	0	-1.3	-2.8	**8.1**	**3.2**	24
19	-4.9	-4.9	-2.6	-5.5	-6	-8.4	-9.6	-10.5	-11.2	-8.8	-4.1	-0.3	1.4	2.3	2.4	2.5	0.5	-0.6	-1.6	-0.6	-0.4	-0.5	-1.2	-2.7	2.5	-3.1	24
20	-2.2	-3.4	-6.4	-5.4	-7.4	-5.1	-5	-5.2	-6.3	-3.8	-2.1	-0.1	1	2.7	3.2	3	0.8	-0.8	-1.9	-2.7	-3.9	-5.6	-5	-7.6	3.2	-2.9	24
21	-8.2	-9.5	-9.8	-9.9	-10.4	-10.4	-10.6	-12	-13.2	-11.5	-7.1	-3.5	-2.6	-2.1	-1.7	-1.8	-3.7	-5.3	-6.6	-6.7	-7.9	-9.1	-9.6	-9.7	-1.7	-7.6	24
22	-9.4	-9.1	-8.5	-8.1	-8.6	-10.9	-13	-14.7	-15.9	-16.5	-16.5	-16.4	-16.2	-16.1	-16.4	-17.2	-18.2	-19.3	-20.3	-21	-21.7	-22.9	-23	-22.7	-8.1	-15.9	24
23	-22.9	-23.7	-24.7	-25.9	-28.2	-28.2	-29.2	-30.5	-29.9	-28.4	-26.2	-24.5	-23.2	-22	-21.4	-21.7	-22.6	-24.3	-25.8	-26.4	-26.6	-27.2	-28.4	-29.1	-21.4	-25.9	24
24	-29.3	-29.6	-30	-30.5	-30.7	-30.7	-30.7	-30.9	-29.7	-28.8	-26.5	-24.6	-23.1	-21.6	-20.4	-20.1	-20.4	-21.2	-23.3	-25.6	-25.1	-24.4	-24.9	-25.1	-20.1	-26.1	24
25	-24.6	-24.9	-25.8	-25.8	-25.6	-27.2	-30.1	-30.6	-30.7	-28.1	-24.3	-21.4	-19.8	-18.8	-18.6	-18.2	-19.4	-21.2	-22.5	-24.2	-25.9	-26.1	-25.3	-27.3	-18.2	-24.4	24
26	-28.8	-30	-31.2	-29.1	-26.3	-26.9	-29.7	-31.1	-31.6	-28.2	-22.5	-19.8	-16.3	-13.8	-12.8	-12.6	-14.4	-17.3	-18.3	-19.2	-18.9	-18.7	-19.2	-19.4	-12.6	-22.3	24
27	-19	-17.7	-17	-16.2	-15.3	-15.1	-15.1	-15.2	-14.9	-13.8	-12.7	-11.9	-11.7	-10.5	-9.7	-9	-9.1	-8.7	-9.2	-9.8	-10.1	-9.2	-8.4	-7.6	-7.6	-12.4	24
28	-7.3	-7.2	-7.6	-7.6	-8.7	-9.8	-10	-10	-10.2	-9.8	-8.9	-7.7	-7.4	-6.7	-6.7	-6.5	-7	-10.9	-14.1	-16.9	-18.3	-18.6	-16.2	-12.6	-6.5	-10.3	24
29	-10.8	-11.3	-12.3	-12.4	-12	-12.2	-12.2	-13.4	-13.5	-12.1	-8.9	-7	-6	-3.4	-2.1	-1.5	-1.4	-2.4	-2.2	-2.2	-2.3	-2.5	-2.8	-2.2	-1.4	-7.0	24
30	-2.1	-1.9	-1.5	-1.4	-1.1	-0.8	-1.4	-2.5	-2.9	-2.4	-1.1	2.4	5.1	6.2	6.1	5.3	4.7	3.7	4.3	5.3	4.7	4.1	4.8	3.5	6.2	1.7	24
31	2.8	2.1	1	-0.1	-0.6	-1.4	-2.2	-2.7	-2.7	-2.6	-1.5	-0.3	-0.9	-0.2	0.1	-1.3	-1.8	-2	-1.8	-1.7	-1.7	-2.8	-3.6	-4.2	2.8	-1.3	24
HOURLY MAX	3.6	4.3	4.1	3.7	3.2	3.2	3.0	1.0	1.3	2.0	2.3	3.6	5.1	6.2	8.1	7.9	6.4	5.3	5.3	4.7	4.1	4.8	3.5				
HOURLY AVG	-17.5	-17.8	-17.9	-18.0	-18.2	-18.2	-18.3	-18.6	-18.7	-17.7	-16.0	-14.6	-13.6	-12.7	-12.3	-12.5	-13.4	-14.3	-15.0	-15.5	-16.0	-16.3	-16.4	-16.8			

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

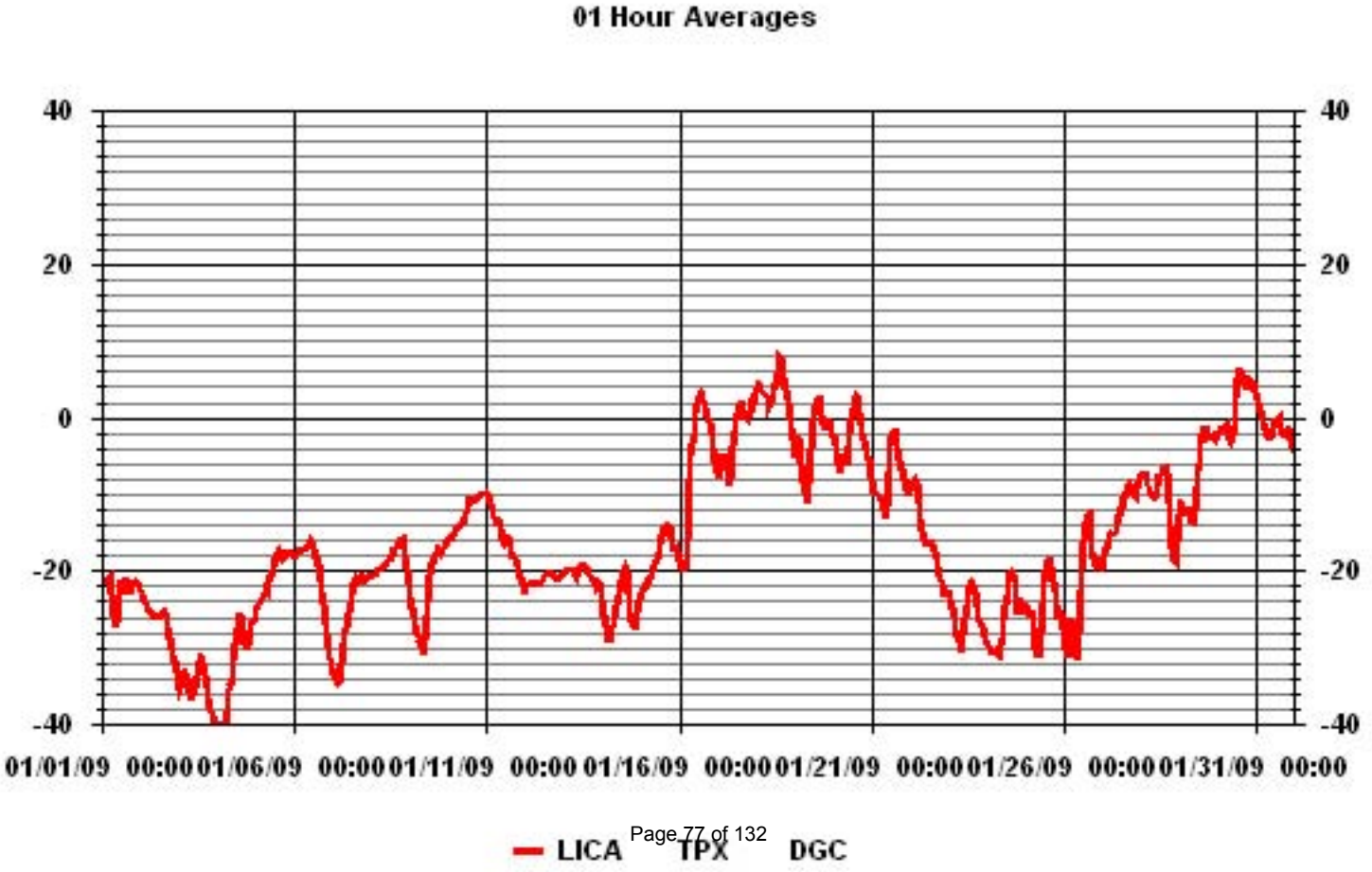


MONTHLY SUMMARY

MINIMUM 1-HR AVERAGE:	-40	^{O}C	@ HOUR(S)	2, 4	ON DAY(S)	4
MAXIMUM 1-HR AVERAGE:	8.1	^{O}C	@ HOUR(S)	14	ON DAY(S)	18
MAXIMUM 24-HR AVERAGE:	3.2	^{O}C			ON DAY(S)	18
					VAR-VARIOUS	

CALIBRATION TIME:	0	HRS	OPERATIONAL TIME:	744	HRS
			AMD OPERATION UPTIME:	100.0	%
STANDARD DEVIATION:	10.79		MONTHLY AVERAGE:	-16.10	^{O}C

*** Outside detection limits of sensor.**


01 Hour Averages
40
20
0
-20
-40
01/01/09 00:00
01/06/09 00:00
01/11/09 00:00
01/16/09 00:00
01/21/09 00:00
01/26/09 00:00
01/31/09 00:00
LICA
TPX
DGC

Relative Humidity

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

JANUARY 2009

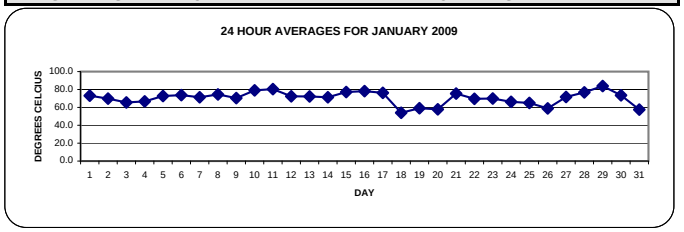
RELATIVE HUMIDITY hourly averages (%)

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	74.9	74.4	75.1	74.9	73.7	73.0	75.1	73.8	73.1	72.6	73.5	70.4	68.1	68.5	69.0	69.7	73.9	74.8	74.9	73.9	73.7	73.5	74.8	73.9	75.1	73.1	24
2	72.7	70.6	68.1	68.4	70.1	72.7	73.1	72.7	71.2	68.3	68.2	68.8	68.9	69.3	69.7	69.5	67.2	69.3	70.7	70.7	69.9	69.1	68.8	67.4	73.1	69.8	24
3	68.0	67.8	68.3	67.8	67.7	67.2	67.4	67.2	67.2	66.0	65.2	64.4	61.7	59.6	58.8	61.8	65.8	68.0	67.1	65.9	65.6	64.9	64.5	64.2	68.3	65.5	24
4	64.6	64.7	64.2	64.8	64.4	64.8	66.2	68.0	67.7	67.0	66.7	64.9	62.4	61.2	58.2	62.2	69.4	72.7	70.9	72.9	71.3	70.0	70.1	71.2	72.9	66.7	24
5	70.8	70.9	71.3	71.5	72.1	72.9	73.0	72.9	72.6	72.2	70.5	70.9	69.9	68.3	68.6	71.7	74.7	75.3	75.1	75.5	75.7	76.4	76.4	75.1	76.4	72.7	24
6	74.6	75.6	76.5	76.6	76.4	76.3	77.0	77.4	78.2	78.6	77.2	72.8	70.8	70.0	66.6	64.0	69.2	73.1	73.9	74.1	74.5	72.7	72.2	70.4	78.6	73.7	24
7	69.5	69.2	68.3	68.5	68.8	70.2	72.1	72.1	71.5	71.2	71.0	70.9	71.7	69.9	68.9	71.5	73.5	72.9	72.9	74.3	75.3	73.9	71.7	70.9	75.3	71.3	24
8	72.3	73.6	73.5	73.4	73.4	72.8	72.9	73.1	73.4	73.4	76.2	76.6	77.3	77.7	76.4	77.3	78.7	80.1	78.5	74.0	71.9	70.9	69.7	69.4	80.1	74.4	24
9	70.7	74.0	75.3	73.9	74.0	73.4	73.3	72.4	71.4	70.4	70.3	69.0	61.5	61.7	65.8	67.4	69.4	69.1	70.7	72.1	70.2	70.8	71.6	71.4	75.3	70.4	24
10	72.3	76.6	75.9	77.2	77.8	79.4	81.5	81.9	82.6	80.4	78.3	76.0	73.9	73.0	76.0	75.6	77.4	79.4	81.3	81.6	82.8	84.4	85.6	86.3	86.3	79.1	24
11	86.8	85.0	83.9	83.7	84.4	86.3	88.1	87.5	86.8	84.7	81.0	78.9	80.2	80.6	79.5	79.1	77.6	75.9	73.7	74.6	72.5	74.0	72.5	73.1	88.1	80.4	24
12	71.4	71.9	71.7	69.5	69.4	72.1	72.5	71.7	72.4	72.3	70.8	69.3	69.3	69.9	71.3	72.7	74.1	74.9	75.3	75.2	75.0	74.2	75.3	75.3	75.3	72.4	24
13	75.7	75.4	76.4	75.4	75.6	76.0	75.0	73.4	73.7	70.8	67.7	67.5	69.5	69.8	69.4	69.0	70.4	70.2	69.9	71.2	72.9	73.4	72.3	72.7	76.4	72.2	24
14	75.1	76.2	74.8	74.7	73.9	72.7	75.3	76.2	75.9	73.7	70.0	67.1	62.7	59.2	58.5	59.9	69.6	75.1	74.6	72.7	73.5	74.1	73.0	72.4	76.2	71.3	24
15	71.9	71.5	71.4	72.5	75.7	76.1	76.4	76.5	77.3	77.1	77.4	77.4	77.3	77.0	77.0	77.3	78.5	79.4	80.0	82.2	81.0	80.2	80.3	80.6	82.2	77.2	24
16	79.7	78.0	77.1	77.3	77.4	82.8	84.9	78.3	74.1	75.5	71.7	70.1	66.5	65.5	67.8	70.3	75.5	78.1	79.4	82.2	86.6	90.5	93.0	93.3	93.3	78.2	24
17	92.1	92.0	90.2	89.6	90.0	88.1	90.3	90.3	89.8	83.3	76.5	71.1	67.0	62.3	63.6	62.5	69.8	69.1	69.9	68.6	67.7	63.8	62.9	59.0	92.1	76.2	24
18	56.3	52.9	53.9	55.4	56.6	56.4	56.6	63.8	61.0	57.1	55.9	48.9	47.1	43.7	38.3	39.0	45.1	47.7	51.3	54.8	55.4	62.5	66.7	69.3	69.3	54.0	24
19	74.8	74.2	62.1	72.7	72.1	80.5	83.7	84.7	84.7	72.0	58.7	46.6	41.5	39.9	40.6	39.7	44.8	48.4	51.7	47.0	46.4	46.1	48.9	55.2	84.7	59.0	24
20	53.5	58.1	67.5	64.6	71.4	64.5	64.2	64.1	66.9	58.6	52.9	47.0	45.1	41.7	41.8	43.2	50.3	54.6	56.5	58.2	60.9	66.5	63.9	71.9	71.9	57.8	24
21	74.2	76.9	78.7	79.9	80.2	80.6	82.3	84.5	86.4	77.9	65.9	56.4	58.5	58.3	58.8	61.4	69.1	74.5	78.4	79.3	81.9	86.3	89.4	91.1	91.1	75.5	24
22	90.6	88.5	86.3	83.2	74.6	73.4	69.7	67.2	65.7	66.1	63.2	61.4	61.7	61.9	59.6	59.1	60.6	61.9	64.4	67.3	68.5	73.2	72.6	69.7	90.6	69.6	24
23	70.3	72.4	73.9	74.8	74.3	73.8	74.2	72.5	74.0	71.7	69.0	66.1	62.7	58.4	56.0	57.5	63.1	68.0	71.8	73.9	74.9	74.9	75.3	74.8	75.3	69.9	24
24	74.8	74.1	73.1	73.4	72.9	72.4	72.3	72.2	72.3	71.2	70.4	68.0	64.6	58.5	53.8	52.3	53.0	54.4	59.7	64.7	64.3	63.9	65.8	67.3	74.8	66.2	24
25	67.2	68.4	70.4	71.2	71.0	73.0	72.8	73.2	73.1	65.1	65.1	58.1	52.8	48.9	49.6	50.3	54.1	59.5	63.5	68.1	70.4	71.4	70.7	71.6	73.2	65.0	24
26	71.9	71.7	70.2	73.6	72.2	72.0	71.7	71.3	69.6	65.9	61.0	54.0	44.0	37.8	36.2	35.6	41.1	46.3	48.6	54.3	56.3	58.4	63.1	65.7	73.6	58.9	24
27	66.1	64.0	63.6	59.3	59.5	59.3	57.8	60.0	61.5	58.1	54.7	60.6	76.3	78.7	82.0	82.3	82.7	80.5	83.2	84.6	85.4	87.5	87.2	83.9	87.5	71.6	24
28	81.6	80.8	84.1	79.9	77.3	75.1	75.7	76.1	77.1	76.9	76.7	73.0	73.8	69.1	65.8	64.4	64.0	77.0	83.1	82.2	81.3	79.9	81.8	85.8	85.8	76.8	24
29	85.6	85.4	86.1	85.8	84.8	84.3	84.3	82.1	83.0	82.6	81.9	85.2	83.2	78.6	79.5	83.2	82.4	84.9	84.6	83.8	84.2	85.0	85.9	85.9	86.1	**83.8**	24
30	88.3	92.3	94.9	95.6	95.9	95.8	95.8	**96.2**	96.0	95.5	93.9	73.8	58.4	50.0	50.1	52.7	53.9	57.1	54.8	49.9	52.5	54.7	56.2	60.0	**96.2**	73.5	24
31	56.5	45.3	51.6	58.7	58.4	59.2	52.8	51.5	51.1	51.6	49.4	53.5	63.3	57.6	49.1	67.9	72.2	64.7	53.0	48.2	53.7	66.8	80.8	63.9	80.8	57.5	24
HOURLY MAX	92.1	92.3	94.9	95.6	95.9	95.8	95.8	96.2	96.0	95.5	93.9	85.2	83.2	80.6	82.0	83.2	82.7	84.9	84.6	84.6	86.6	90.5	93.0	93.3			
HOURLY AVG	73.4	73.3	73.5	73.8	73.7	74.1	74.5	74.3	74.2	71.9	69.4	66.4	64.9	62.8	62.1	63.6	66.8	68.9	69.8	70.3	70.8	72.1	73.0	73.0			

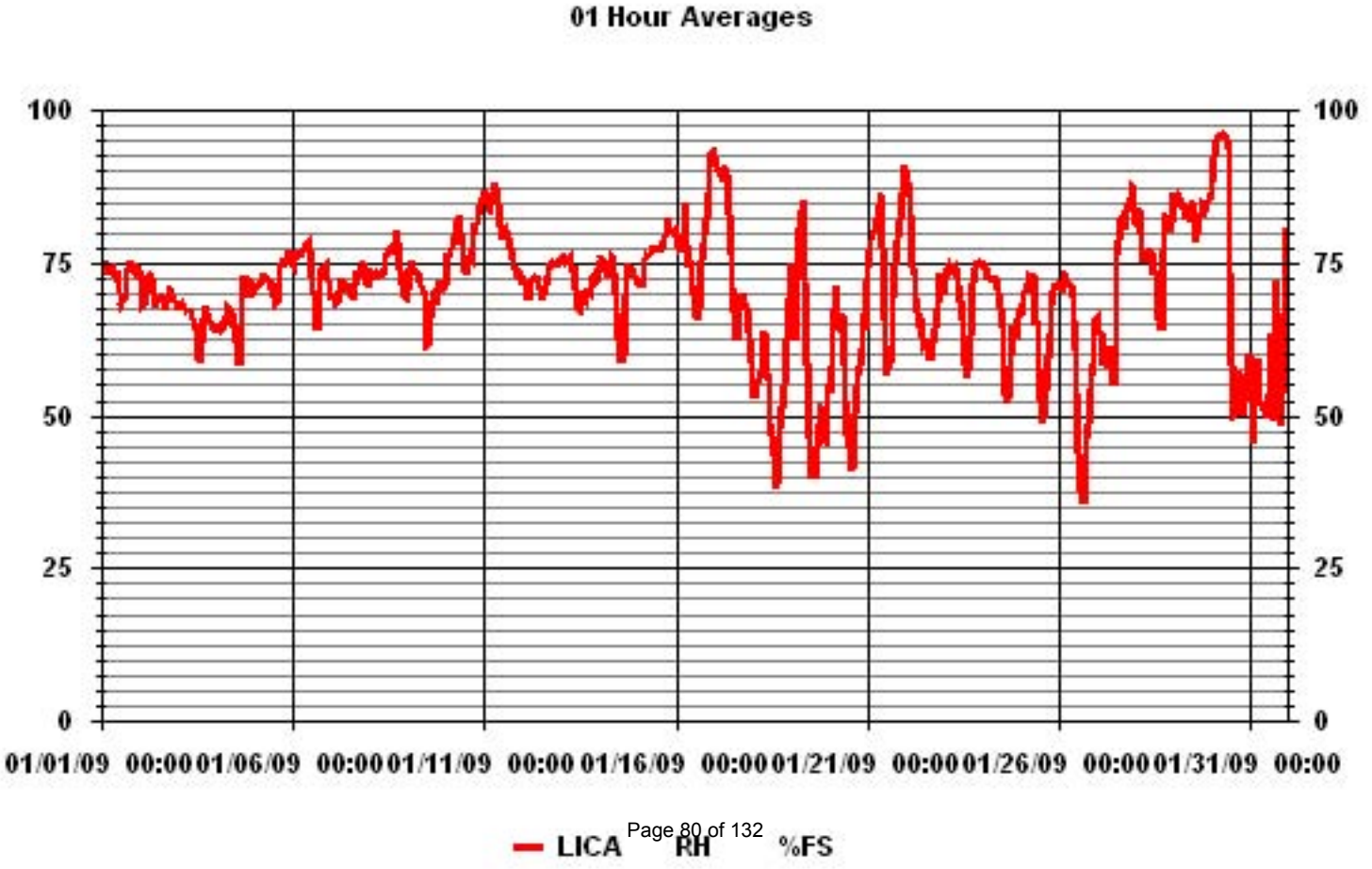
STATUS FLAG CODES

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

MAXIMUM 1-HR AVERAGE:	96.2	%	@ HOUR(S)	7	ON DAY(S)	30
MAXIMUM 24-HR AVERAGE:	83.8	%			ON DAY(S)	29
CALIBRATION TIME:	0	HRS	OPERATIONAL TIME:		744	HRS
			AMD OPERATION UPTIME:		100.0	%
STANDARD DEVIATION:	10.56		MONTHLY AVERAGE:		70.44	%


01 Hour Averages
100
75
50
25
0
01/01/09 00:00
01/06/09 00:00
01/11/09 00:00
01/16/09 00:00
01/21/09 00:00
01/26/09 00:00
01/31/09 00:00
LICA RH %FS

Vector Wind Speed

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

JANUARY 2009

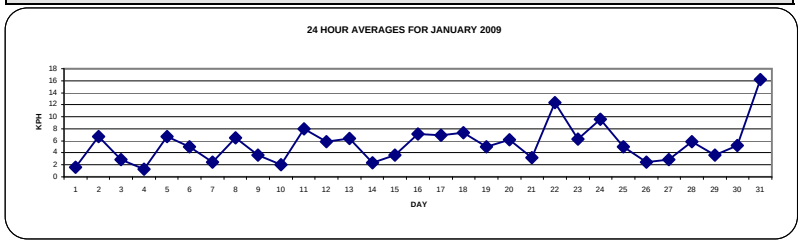
VECTOR WIND SPEED (WS) hourly averages (km/hr)

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	5.6	5	4.1	2.1	1.9	1.6	1.1	2.5	3.6	3.2	4.7	2.9	1.7	2.8	4.4	2.4	0.8	0.6	0.8	1.5	2.9	3.2	4.3	7.3	7.3	1.6	24
2	9	9	9.7	8.6	9.6	6.7	5.4	7.2	8.6	9.3	10.8	12.1	11.5	10.4	8.9	7.2	6.3	3.3	5.2	4.2	5.2	3.7	2.4	3.8	12.1	6.7	24
3	3.5	5	3.6	3.5	3.2	3.6	4.2	4.9	5.4	4.3	5	4.9	4.1	3.5	4.6	4.6	2.3	0.6	0.4	0.2	0.3	0.9	0.6	0.6	5.4	2.9	24
4	0.5	0.3	0.8	0.4	1.5	0.1	0.4	2.1	1.2	0.5	2.8	0.3	2	3	2.4	1.4	1.8	1.9	0.7	1.3	4.5	6.5	7.2	6.2	7.2	1.3	24
5	5.2	7.1	9.2	8.4	8.6	8.3	4.3	5.5	9.2	7.4	7.1	8.9	7.4	7.9	6.7	6.4	5.8	4.4	7	5.8	5	5.3	5.5	5.2	9.2	6.7	24
6	5	5.2	3.8	2.6	2.2	1.4	1.6	3.5	4.4	7.3	9.4	10.8	11.7	10	8.2	7.7	6	5.1	3.1	3.2	2.4	3.2	0.5	0.6	11.7	5.0	24
7	0.7	0.3	0.7	0	1.5	3	1.6	2.9	1.7	1.5	1.1	2.4	3.3	1.7	2.6	3.2	4.3	3.8	3.7	1.4	1.3	3.4	5.7	6.1	6.1	2.4	24
8	6.9	6.5	5.6	7.2	6.6	6.4	7.8	5.8	6.2	4.8	4.3	3.4	3.7	1.6	1.5	2.4	3.6	5.8	5.7	9.1	12.3	12.5	11.8	14.2	14.2	6.5	24
9	9.2	6.1	5.8	6.5	6.8	4.9	5	1.3	0.6	0.6	1.3	1.2	4.2	5.3	4.3	2.9	3.5	4.5	1.7	1.6	2.1	2.3	2.7	2	9.2	3.6	24
10	2	2.2	0.3	1.6	2.1	4	3.5	3.7	2.5	1.7	1.6	0.9	1.8	1	1	2.6	4	3.8	1.2	3.1	0.5	0.9	0.7	2.7	4.0	2.1	24
11	2.1	6.1	5	6	8.1	6.5	4.8	6.2	7.9	9.1	12.1	12	9.2	9.5	11.8	12.9	12.2	12.8	11	7.7	5.6	5.5	5.5	3	12.9	8.0	24
12	1.5	2.3	2.7	3.4	4.2	4.3	3.4	3	5.4	5.4	5.5	5.1	7	7.4	6.9	7.5	7	8.3	9	8.6	7.8	8.3	8.7	8.9	9.0	5.9	24
13	8.9	9	7.3	7.7	7.4	6.4	6.3	4.3	5.7	5.9	6.5	5	6	7.3	8.8	9	7.8	7.9	7.6	6.6	5.2	3.3	2.9	1.6	9.0	6.4	24
14	1.1	1.2	0.5	1.2	1	0.2	2.5	3	3.8	1.9	4.7	4.9	4.5	3.9	4.4	2	0.9	0.4	1.5	0.6	1.4	2.5	3.2	4.6	4.9	2.3	24
15	4.9	4	3.7	4.9	5.7	5.7	7.8	6.4	6.4	5.6	6.6	4.6	4	4.2	2.4	2.2	2.4	0.9	1	1.2	1.3	0.6	0.6	0.5	7.8	3.7	24
16	0.9	0.9	0.8	0.2	0.9	4.3	6.4	8.4	10.1	7.9	16.8	20.9	16.9	14	12	9.2	5.8	8.9	7.7	4.9	5.2	3.9	2	3.2	20.9	7.2	24
17	2	6.2	7.3	6.6	7.3	2.4	3	2.6	6.1	7.5	6.1	8.6	10.8	9.3	8.3	8.2	5.5	7.5	8.1	8.7	7.8	8.4	8.4	9.1	10.8	6.9	24
18	11.6	9.2	9.8	6.9	7.2	10.6	7.6	6.5	7.3	6.4	6.5	9	8.1	6.9	7.3	7.1	7.5	6.1	7.3	5.7	5.2	5.7	5	5.4	11.6	7.3	24
19	2.3	3.7	4	1.9	1.3	0	0.5	0.8	0.1	0.6	2.2	6.7	9.7	10.8	8.2	8.8	8.6	8.8	6.9	7.3	6.9	7.1	7.2	5	10.8	5.0	24
20	7.9	4.1	3.2	4.6	3.8	7.6	6.9	7.4	6.5	5.6	5	7.3	8	6.4	7.5	7.6	6.8	7.1	7.6	7.5	6.1	4.4	5.6	2.9	8.0	6.1	24
21	4.7	2	0.9	0.7	2.7	0.4	0.7	0	0.4	0.7	0.6	0.4	4.5	4.1	3.7	3.5	3.2	2.2	3.7	5.8	7.4	8.7	8.5	7.1	8.7	3.2	24
22	7	5.2	11.9	10.5	18.6	18.2	17.1	18.2	17	17.5	17.3	15.8	14.2	14.4	13.2	13.5	12.6	12.7	9.2	8	6.8	4.7	5.7	6.1	18.6	12.3	24
23	7.1	3.9	4	4.8	3.7	4.4	5.6	3.6	6.4	5.5	4.7	6.4	7.4	7.6	7.7	7.3	9.6	6.8	6.9	7.2	7.5	6.3	7.8	7.5	9.6	6.2	24
24	8.1	6.8	5.2	6.7	8	6.8	8	10	10.7	9	13.2	14.7	15.1	13.8	12.8	13.5	12.1	10.6	7.8	8.5	6.5	6.8	7.3	8.3	15.1	9.6	24
25	6.8	6.7	7.1	6.8	6.8	2.6	1.3	3.9	2.1	1.6	5.3	4.6	4.5	6.1	8	7.4	6.7	5.9	6.1	5.3	3.1	4.8	4.6	2.6	8.0	5.0	24
26	1.5	0.2	1.5	6.7	6.3	5.8	1	0.4	0.2	0.2	1.7	3.7	3.9	5.2	6.4	6	2.5	1.4	1.5	1.2	1.1	0.4	0.6	0.5	6.7	2.5	24
27	1	1.1	1.2	1.6	1.1	2.1	3	1.7	2	2.8	2.6	3.3	3.9	4.1	4.8	4.5	4.8	1	0.2	2	2.5	5.1	5.7	5.9	5.9	2.8	24
28	5.6	5.5	3.6	8.9	12.2	9.2	3.9	2.6	4.2	4.1	5.8	8.5	12.2	13	12.8	10.3	4.7	1.9	0.6	2.2	0.4	0.8	2.7	5.7	13.0	5.9	24
29	5.6	5.7	6.8	6.3	5.3	4.6	4.3	0.4	0.5	0.1	0.5	2	1.6	1	3.1	3.2	3	2.6	6	4.8	4.5	4.4	5.1	5.1	6.8	3.6	24
30	4.1	4.1	3.4	2.2	2.2	1.8	1	1	0.9	1.5	1.6	6.2	6.6	8.9	7.1	6.2	6.3	5.8	5.1	5.5	4.1	4.9	20.7	15.3	20.7	5.3	24
31	18.2	21.5	**23.8**	16.5	13.4	13.9	13	13.3	12.3	10.7	12.7	15.7	18.9	14.3	18.8	15.4	13.9	13.1	15.2	16.1	19.1	15	19.1	23.5	**23.8**	**16.1**	24
HOURLY MAX	18.2	21.5	23.8	16.5	18.6	18.2	17.1	18.2	17.0	17.5	17.3	20.9	18.9	14.4	18.8	15.4	13.9	13.1	15.2	16.1	19.1	15.0	20.7	23.5			
HOURLY AVG	5.2	5.0	5.1	5.0	5.5	5.1	4.6	4.6	5.1	4.8	6.0	6.9	7.4	7.1	7.1	6.6	5.9	5.4	5.1	5.1	4.9	5.0	5.8	5.8			

STATUS FLAG CODES

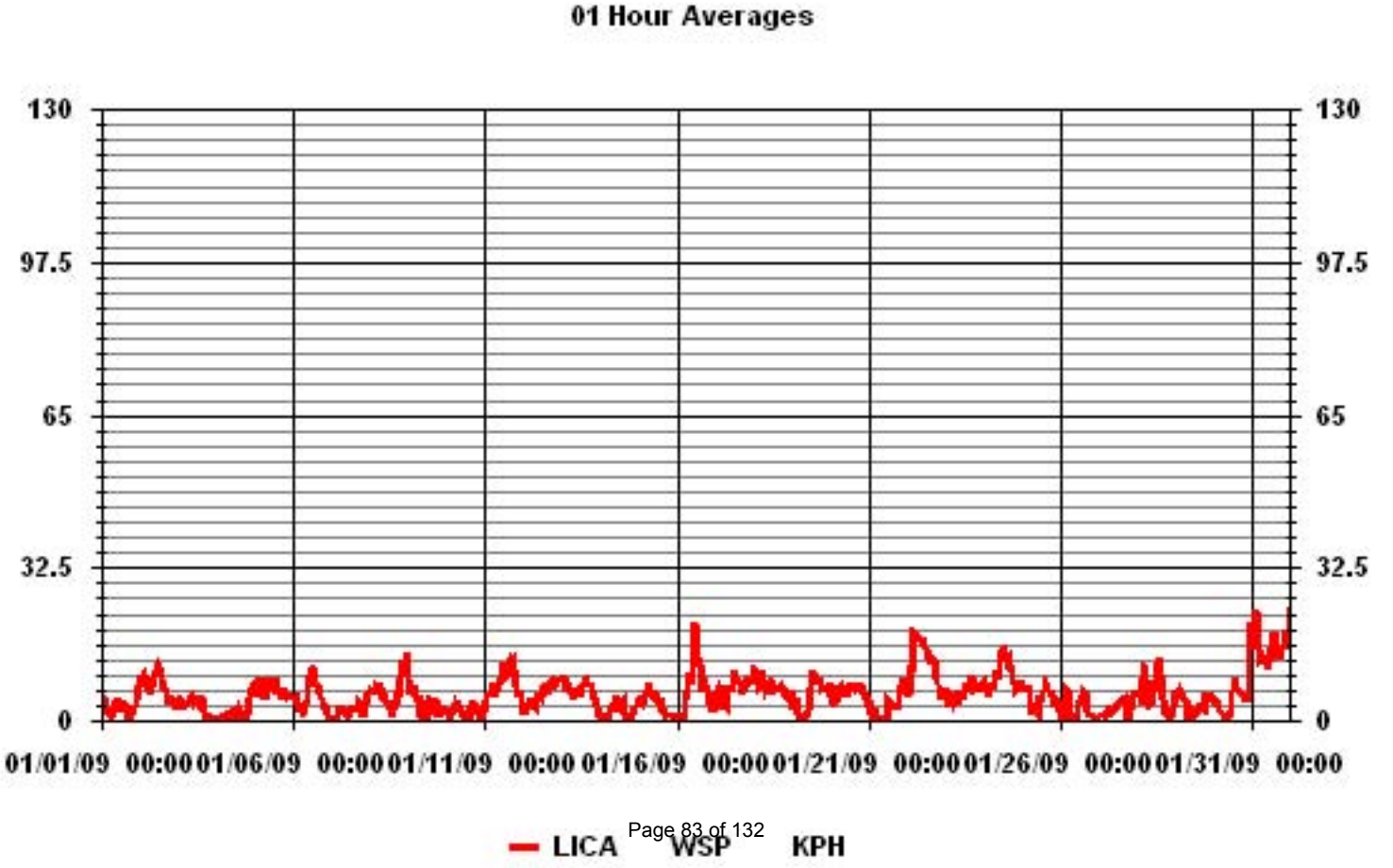
S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	- MISSING DATA
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE



LAST CALIBRATION: November 5, 2008

MONTHLY SUMMARY

MAXIMUM 1-HR AVERAGE:	23.8	KPH	@ HOUR(S)	2	ON DAY(S)	31	
MAXIMUM 24-HR AVERAGE:	16.1	KPH			ON DAY(S)	31	
CALMS (≤ 1 KPH)	2.42	%	OPERATIONAL TIME:		744	HRS	
MONTHLY CALIBRATION TIME:	0	HRS	AMD OPERATION UPTIME		100.0	%	
STANDARD DEVIATION:	4.09		MONTHLY AVERAGE:		5.59	KPH	


01 Hour Averages
130
97.5
65
32.5
0
01/01/09 00:00
01/06/09 00:00
01/11/09 00:00
01/16/09 00:00
01/21/09 00:00
01/26/09 00:00
01/31/09 00:00
LICA WSP KPH

LICA
WSP / WD Joint Frequency Distribution (Percent)

January 2009

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	.80	1.74	3.36	2.28	3.36	4.70	5.51	2.41	1.74	1.47	9.13	10.21	4.70	2.95	.94	1.20	56.58
<	12.0	1.07	2.01	1.07	.80	4.70	.94	.53	.00	.00	.13	9.13	6.98	2.01	.67	1.20	1.07	32.39
<	20.0	.40	.40	.00	.00	.26	.00	.00	.00	.00	.00	.00	1.74	1.47	1.74	1.20	.67	7.93
<	29.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.26	.40	.00	.00	.67
<	39.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
>=	39.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
	Totals	2.28	4.16	4.43	3.09	8.33	5.64	6.04	2.41	1.74	1.61	18.27	18.95	8.46	5.77	3.36	2.95	

Calm : 2.41 %

Total # Operational Hours : 744

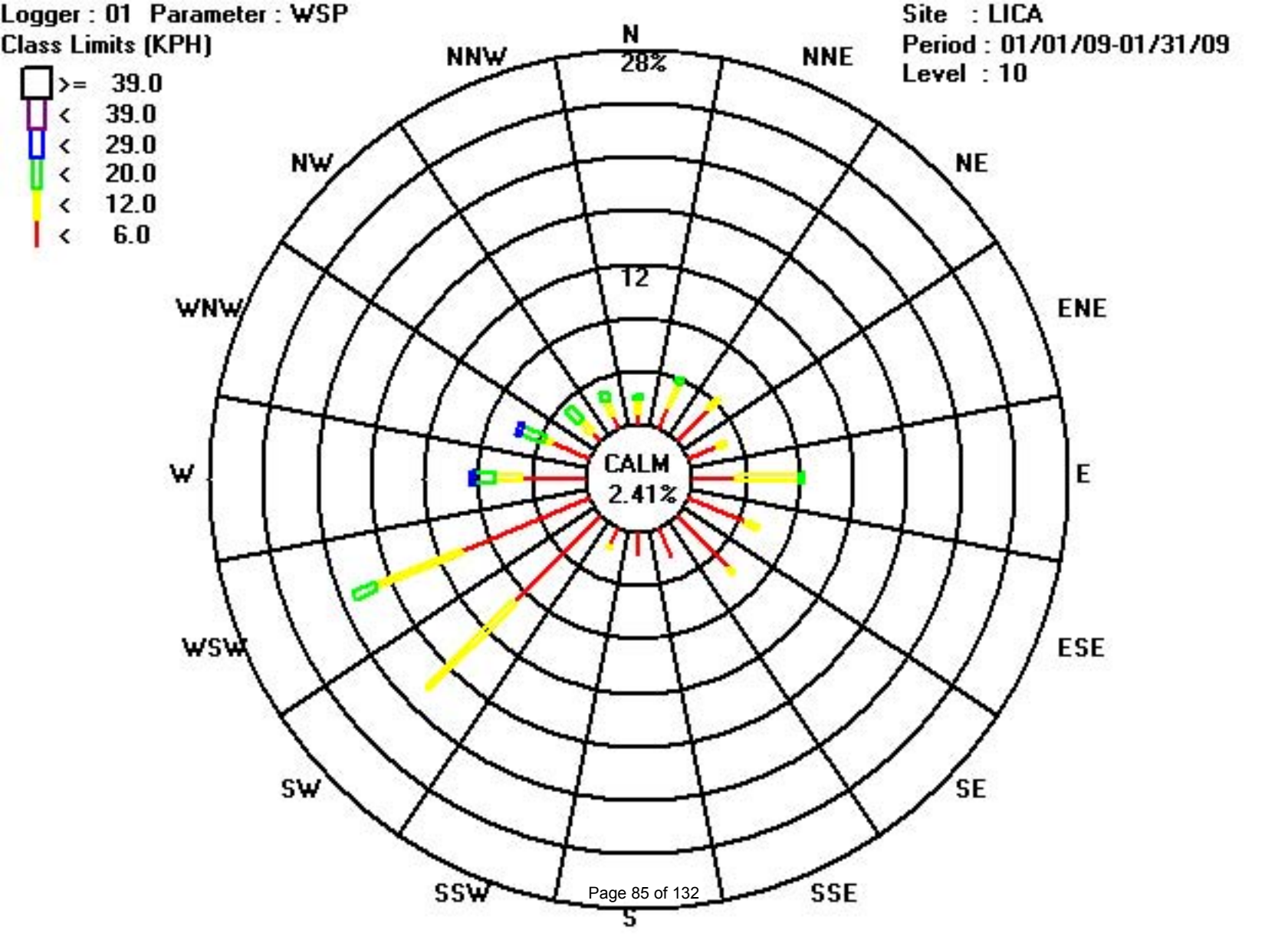
Distribution By Samples

Direction

	Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
<	6.0	6	13	25	17	25	35	41	18	13	11	68	76	35	22	7	9	421
<	12.0	8	15	8	6	35	7	4			1	68	52	15	5	9	8	241
<	20.0	3	3			2							13	11	13	9	5	59
<	29.0													2	3			5
<	39.0																	
>=	39.0																	
	Totals	17	31	33	23	62	42	45	18	13	12	136	141	63	43	25	22	

Calm : 2.41 %

Total # Operational Hours : 744


Logger : 01 Parameter : WSP
Class Limits (KPH)
>= 39.0
< 39.0
< 29.0
< 20.0
< 12.0
< 6.0
Site : LICA
Period : 01/01/09-01/31/09
Level : 10
N
28%
NNE
NE
ENE
E
ESE
SE
SSE
S
SSW
SW
WSW
W
WNW
NW
NNW
12
CALM
2.41%

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

JANUARY 2009

VECTOR WIND SPEED MAX instantaneous maximum in km/hr

MST

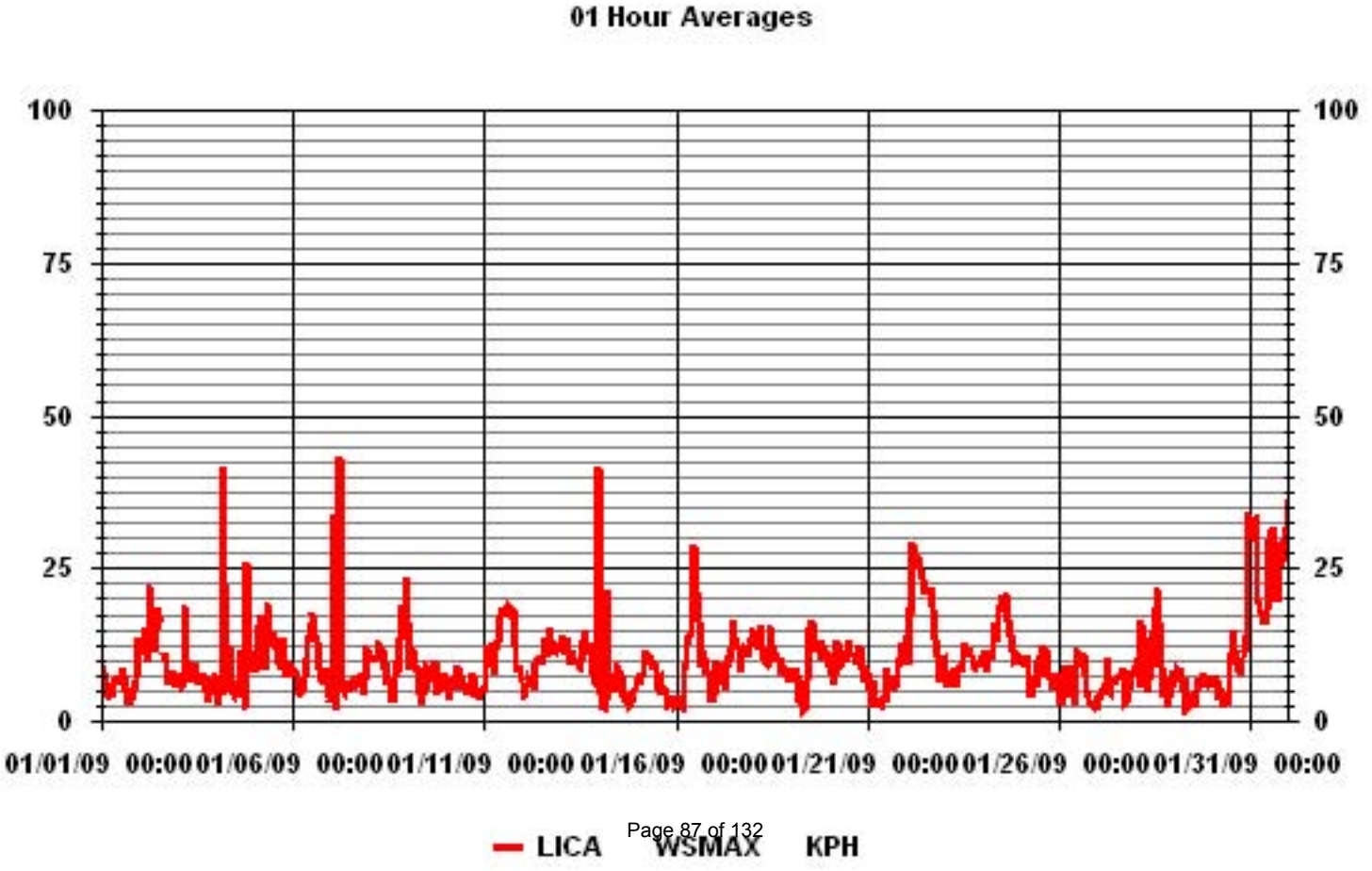
HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.
DAY																									
1	8.8	8	7	4.3	4.1	5.4	3.8	6.2	7	5.9	7.4	5.9	6.8	8.6	7.7	5.1	2.7	3.2	2.5	3.5	5.2	6.6	7.1	13.5	13.5
2	12.2	11.8	13.6	12.3	15.4	9.6	22.2	11.4	13	12.6	14.8	18.4	16.5	16.8	0	10.7	9.8	5.8	7.8	6.2	7.8	7.7	5.5	7.3	22.2
3	6.9	7.8	5.8	6.1	18.8	6.3	9.7	7.5	8.5	6.1	7.8	9.4	7.3	6	7.4	7.5	8	5.2	4.5	3.1	6.4	6.1	4.5	7.6	18.8
4	4.6	2.7	4.7	4.7	41.6	6.2	22.1	5.1	12.4	5.2	5.2	4.5	5.1	6.7	5.7	11.6	4.7	4.3	1.9	26.1	12.4	11.8	10.3	8.6	41.6
5	8.5	11.3	15.7	14.1	17.3	14.7	8.5	10.2	19.4	13.2	12.4	14.6	12.8	12.5	13.6	9.3	10	8.3	13.6	9.7	7.2	8.7	9.7	8	19.4
6	9	8.4	7.5	6.1	4.9	4.5	4.7	7	10.3	14.1	13.1	15.9	17.7	15.4	14.1	13.1	8.6	7.5	6.7	6.5	6.3	8.6	4.4	3.1	17.7
7	6	3	33.8	1.5	34.5	**43.4**	25.6	5.3	4.9	6.4	4.6	6.2	6.4	5	6.7	6.1	7.4	6.8	7.4	7.6	4.3	6.6	11.8	11.6	**43.4**
8	11.1	10.3	9.6	10.4	10.5	12.5	12.3	10.4	11.8	8.9	9	5.9	6.7	5.6	3	5.2	7.1	9.9	7.8	13.4	18.3	18.3	17.3	23.5	23.5
9	16.5	8.5	9.2	11.9	10.6	7.9	8.9	4.6	2.7	4.1	6.9	5	9	8.7	8.3	6.4	7.5	9.8	5	5.1	7.1	5.4	5.7	7.9	16.5
10	6.3	6.3	3.4	6.2	5.2	7.2	7.9	8.9	6.8	5.1	7.2	5.1	6	4.2	5.6	7	6.7	7.7	4.6	4.8	4.2	4.3	4.9	5.5	8.9
11	5	12.5	9.6	9.8	12.6	9.7	7.6	11.5	12.7	12.9	17.1	18.4	17.3	18.2	17.9	19.2	18.9	17.5	17.6	12.4	9.2	8.1	9.2	6.5	19.2
12	4.3	4.5	6	7.1	6.6	7.1	6.7	5.2	9.5	10.3	0	9.6	10.6	13.4	10.5	13.5	10.7	15.3	13.2	12.8	12.2	11.6	12.3	12.3	15.3
13	13.5	14	10.7	12.4	12.7	9.2	10.1	11.4	10.6	9.8	9.9	9.1	8.9	9.9	13	14.7	10.8	12.1	12.8	10.9	8	6.4	6.1	41.8	41.8
14	4.8	4.9	2.4	2.2	3.3	21.4	6.5	6.6	7.7	4.4	7.5	9.3	8.5	6.6	7.8	4.4	3.5	3.1	4.5	2.8	3.2	4.7	5.3	6.5	21.4
15	7.1	5.8	7.7	7.2	9.1	11.2	11.2	11	9.7	8.3	9.7	8.6	6.5	6.9	4.4	4.9	5.4	5	2.8	3	4	2.9	4	2.8	11.2
16	3.2	3.6	3.6	2.9	2.6	8.8	8.8	12.4	14	14.6	25.9	28.6	28.2	21.4	16.4	13.9	8.6	11.3	10.6	7.6	8.3	5.9	2.9	4.4	28.6
17	4	9.2	9.2	7.8	9.4	7.3	6.3	5.2	10.9	10.4	11.7	12.6	16.6	13.9	12.3	11.8	8	11.4	12	11.5	10.6	11.4	12.3	13.7	16.6
18	15.1	12.6	13.7	12.6	12.8	15.5	12.5	10.4	9.6	9.3	9.6	15.5	12.6	10.2	11.3	10.1	9.9	8.8	9.2	8	8.1	7.3	7.7	8.4	15.5
19	6.4	8.1	8.2	6.4	7.7	3.5	2.7	3.9	1.6	1.8	6.5	15.4	13.2	16.4	12.4	12.6	12.1	11.7	10	13.1	11.1	11.5	10.9	8.7	16.4
20	11.2	8.1	5.8	7.5	9.8	13	9.2	9.3	9.7	11	9.7	11.5	13.3	11.2	11	10.9	9.6	9.6	10	12.3	8.7	6.2	9.2	7.3	13.3
21	7.4	5.6	2	4	6.6	2.3	3.8	2.9	2.6	3.4	4.2	2.9	8.5	7.5	6.9	6	5.5	5.8	7.4	8.8	10.3	12.6	11.8	11.3	12.6
22	14.1	9.1	18.4	17.2	29.3	25.7	27.5	24.9	26.9	25.1	23.6	23.4	20.7	21.5	21.2	21.3	19.3	18.6	13.6	10.9	9.8	6.2	10.3	10.3	29.3
23	10.5	6.6	5.4	8.4	5.5	6.3	8.6	5.5	8.6	8.9	8.1	9.6	12.9	12	10.9	10.9	11.7	10.9	9.1	8.9	9.8	9	10.1	9.9	12.9
24	11.1	11.1	8	10.8	11.5	10.2	11.2	16.1	13.7	13.2	17.7	18.8	20.4	20.6	18.4	21	16.7	14	14.5	11.8	9.8	10.1	9.3	10.4	21
25	10.1	9.5	10.6	8.8	10.5	7.5	3.7	7	6.9	6.6	9.7	10.5	7	9.4	12.3	11	11.1	7.5	7.3	6.8	5	7.3	7.4	5.6	12.3
26	6.1	2.7	7	8.3	8.9	7.8	5.4	3.9	9.2	2.5	4	11.8	8.8	10.3	10	11	7.7	5.4	4.3	3.1	2.9	2.5	3	1.9	11.8
27	4.1	4.6	4.4	5.3	5.7	4.6	10.1	4.8	4.5	6.1	6.5	6.4	7.2	7.5	6.8	8	8.5	3	3.3	4.5	5	7.1	8	9.1	10.1
28	7.6	10.3	5.5	16.6	15.8	13.8	7	4.6	7.1	7.4	8.7	15	18.5	21.6	19.4	16.3	9	3.6	7.4	4.1	2.2	3.8	5.4	8.3	21.6
29	7.8	7.5	8.7	8.4	8.2	5.7	6	2	2.2	2.4	3.8	4	3.3	2.3	5.1	6.9	5.4	6.4	7.8	6.3	6	6.6	7.1	7.2	8.7
30	6.2	6.3	7.4	5.1	5.5	4	3.5	2.2	3.3	2.6	4.7	9.9	11.1	15	11.9	9.7	8.5	8.1	8.6	10.4	11.3	14.1	34.3	29.7	34.3
31	31	32.9	33.1	29.7	19.4	19.3	17.8	17.3	16.4	16.4	18.2	29.5	31.4	21.7	31.8	29.7	20.3	20.2	25	26	29.7	26	31.9	35.9	35.9
PEAK	31.0	32.9	33.8	29.7	41.6	43.4	27.5	24.9	26.9	25.1	25.9	29.5	31.4	21.7	31.8	29.7	20.3	20.2	25.0	26.1	29.7	26.0	34.3	41.8	

STATUS FLAG CODES

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

MONTHLY SUMMARY

MAXIMUM INSTANTANEOUS READING	43.4	KPH	@ HOUR(S)	5
			ON DAY(S)	7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50
25
0
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01/06/09 00:00
01/11/09 00:00
01/16/09 00:00
01/21/09 00:00
01/26/09 00:00
01/31/09 00:00
LICA WSMAX KPH

Vector Wind Direction

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

JANUARY 2009

VECTOR WIND DIRECTION (WD) hourly averages in degrees

MST

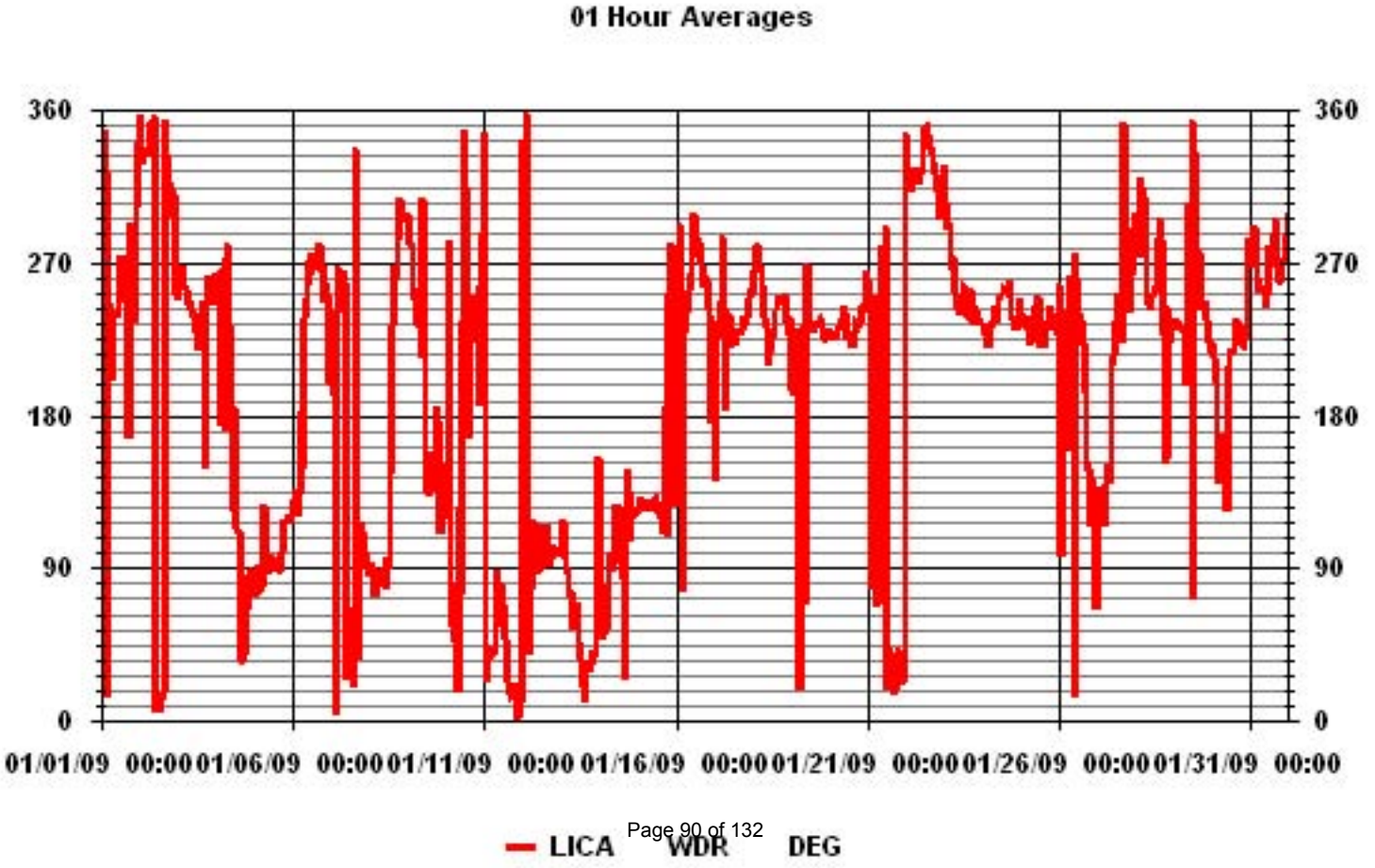
HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	24-HOUR	24-HOUR AVG	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	AVG.	QUANDRANT	RDGS.
DAY																											
1	17	36	349	325	13	248	201	234	238	239	242	246	275	265	250	250	252	166	293	272	235	270	303	341	285	WNW	24
2	358	332	328	336	335	333	342	352	354	358	7	7	6	6	12	17	354	335	319	296	314	311	287	253	346	NNW	24
3	248	258	265	268	257	255	247	247	243	239	239	230	223	219	224	226	248	148	263	259	254	245	251	248	241	WSW	24
4	263	264	245	174	218	273	171	282	234	177	123	185	115	111	113	36	34	53	38	66	86	88	87	77	90	E	24
5	73	85	91	87	79	80	127	112	86	91	97	88	93	92	94	93	87	100	117	117	120	120	117	120	96	E	24
6	130	122	136	120	134	183	148	237	249	257	268	267	276	271	269	268	280	280	270	246	260	252	201	200	254	WSW	24
7	235	192	241	3	268	244	240	266	256	260	24	63	64	59	19	338	36	48	94	117	113	101	91	88	61	ENE	24
8	89	93	83	73	81	88	87	79	88	87	77	97	89	146	233	269	265	264	283	308	306	298	297	296	9	N	24
9	300	282	281	256	249	234	238	233	213	308	284	144	135	133	159	144	135	139	186	178	110	125	120	121	212	SSW	24
10	130	151	283	55	81	46	54	16	126	74	236	348	244	314	166	240	223	251	235	233	256	186	237	287	220	SW	24
11	347	22	44	36	39	40	42	55	89	79	81	80	70	49	24	17	14	15	18	22	9	1	17	16	38	NE	24
12	342	333	359	39	56	77	111	118	94	93	87	116	89	92	97	116	105	91	95	103	98	102	100	98	93	E	24
13	104	118	96	91	88	75	75	54	62	67	70	48	37	21	13	13	35	28	35	33	41	37	56	155	57	ENE	24
14	111	47	80	53	54	78	100	88	96	108	127	124	127	93	83	100	24	149	137	105	121	126	122	123	107	ESE	24
15	124	126	131	126	128	124	131	129	128	130	131	124	130	124	121	118	110	186	252	108	181	282	272	126	129	SE	24
16	144	215	294	205	75	229	247	240	254	264	290	300	289	286	273	281	270	256	264	260	244	240	175	178	270	W	24
17	141	228	228	236	248	286	244	183	238	238	220	230	226	225	229	229	229	230	238	233	237	248	250	254	233	SW	24
18	250	265	280	282	265	268	258	239	233	232	210	217	227	227	242	249	249	249	245	250	252	236	227	238	246	WSW	24
19	196	192	221	224	231	18	115	233	102	68	270	236	231	231	233	234	234	235	237	235	227	226	229	224	229	SW	24
20	231	226	226	228	226	230	232	237	234	245	242	225	229	220	225	224	236	235	233	235	244	245	241	266	233	SW	24
21	260	251	77	126	251	67	69	172	280	99	228	292	18	43	41	26	15	19	24	43	31	21	23	25	22	NN E	24
22	347	327	320	311	322	326	324	319	316	323	326	339	349	350	346	339	336	331	323	314	312	295	300	315	327	NW	24
23	327	307	290	293	266	274	254	243	243	252	240	242	256	255	239	238	255	241	242	244	242	234	237	235	252	WSW	24
24	231	232	234	220	233	233	235	237	244	234	248	250	252	255	254	253	255	260	238	232	232	232	238	249	243	WSW	24
25	241	234	233	236	238	228	222	238	245	228	248	248	220	224	220	227	230	236	245	242	230	232	228	230	233	SW	24
26	258	97	242	240	234	238	263	158	218	14	276	263	241	221	237	224	194	154	149	115	144	125	99	65	230	SW	24
27	89	131	138	119	115	139	150	150	139	210	215	235	252	227	229	223	353	284	286	256	241	263	290	300	237	SW	24
28	296	293	273	320	315	310	280	252	246	243	250	252	257	285	283	296	285	229	152	245	154	222	232	233	278	W	24
29	230	235	235	231	233	229	233	197	229	306	264	355	71	336	245	256	277	242	244	245	237	224	221	222	237	SW	24
30	224	215	200	140	144	169	165	151	164	123	209	220	218	219	224	237	234	233	223	222	229	228	281	285	235	SW	24
31	267	279	292	290	263	254	254	254	255	244	251	280	267	270	287	297	287	261	260	261	271	272	286	297	273	W	24
HOURLY AVG	358	333	359	336	335	333	342	352	354	358	326	355	349	350	346	339	354	335	323	314	314	311	303	341			

STATUS FLAG CODES

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

LAST CALIBRATION:	November 5, 2008
DECLINATION :	NA

MONTHLY CALIBRATION TIME:	0	HRS	OPERATIONAL TIME:	744	HRS
STANDARD DEVIATION	89.78		AMD OPERATION UPTIME	100.0	%
			MONTHLY AVERAGE	265	DEG


01 Hour Averages
360
270
180
90
0
01/01/09 00:00
01/06/09 00:00
01/11/09 00:00
01/16/09 00:00
01/21/09 00:00
01/26/09 00:00
01/31/09 00:00
LICA WDR DEG

Standard Deviation Wind Direction

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

JANUARY 2009

STANDARD DEVIATION WIND DIRECTION (STDWDIR) hourly averages in degrees

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00
DAY																								
1	17	20	24	28	40	55	26	43	12	30	17	27	57	38	22	25	56	37	56	38	19	22	12	15
2	17	15	13	14	16	16	28	18	20	17	17	19	18	19	20	20	21	29	12	14	13	26	33	27
3	25	30	34	30	38	38	15	16	14	14	20	21	25	24	19	17	38	70	65	63	66	73	58	73
4	79	73	57	68	72	69	61	42	60	55	25	66	57	32	32	37	30	20	48	48	37	22	19	20
5	22	19	18	18	18	18	31	27	19	20	20	19	21	21	20	18	20	22	17	18	17	20	20	17
6	15	18	30	30	31	34	29	17	19	17	17	18	18	17	18	15	16	16	27	19	46	34	49	47
7	51	44	49	68	61	41	66	36	34	56	45	38	31	36	28	24	17	21	25	33	45	24	22	21
8	21	21	22	18	18	20	18	20	20	20	24	27	23	50	30	26	20	14	15	12	13	13	13	12
9	11	15	18	19	11	11	17	59	51	45	49	42	25	20	38	31	30	28	47	53	49	51	34	44
10	41	46	65	41	37	23	32	24	34	55	53	33	55	48	46	27	23	22	69	23	32	44	46	20
11	19	16	19	17	17	18	16	16	19	16	17	16	18	16	18	18	17	17	17	19	18	20	20	30
12	44	30	27	23	23	24	26	25	23	22	21	22	19	20	21	19	21	18	20	21	21	21	20	20
13	21	19	21	19	19	19	21	32	17	21	18	21	19	19	18	17	18	19	19	18	17	25	28	48
14	62	41	71	36	27	42	37	32	28	35	20	19	22	26	23	42	34	46	56	42	24	24	21	16
15	14	15	20	16	12	17	12	14	14	14	12	19	23	19	29	25	25	44	35	33	23	41	42	40
16	49	67	42	54	33	21	9	12	14	17	14	12	16	16	17	17	16	14	16	14	21	16	20	20
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18	13	17	16	18	18	16	17	12	12	14	16	15	17	17	16	13	11	13	12	11	16	9	12	11
19	26	20	30	48	36	45	41	49	43	43	35	15	15	16	16	15	14	13	10	21	14	14	13	16
20	10	21	28	14	14	13	12	11	10	20	25	16	17	18	17	15	13	11	11	16	13	9	11	18
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22	18	14	12	12	13	12	15	14	13	12	14	19	19	18	19	19	16	14	14	11	10	12	19	13
23	12	13	18	19	26	28	23	16	9	14	19	19	20	18	15	15	13	12	11	10	11	13	13	13
24	14	14	13	14	16	17	16	13	13	15	14	15	15	15	15	15	15	16	17	15	15	16	12	10
25	11	14	14	13	12	24	43	17	38	35	17	23	20	19	17	17	14	9	7	8	15	14	13	24
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28	12	15	16	16	13	11	20	18	14	17	16	18	16	17	17	16	18	15	56	18	46	61	22	13
29	13	11	11	12	12	11	12	53	53	42	52	26	30	29	19	24	20	16	10	12	11	12	12	15
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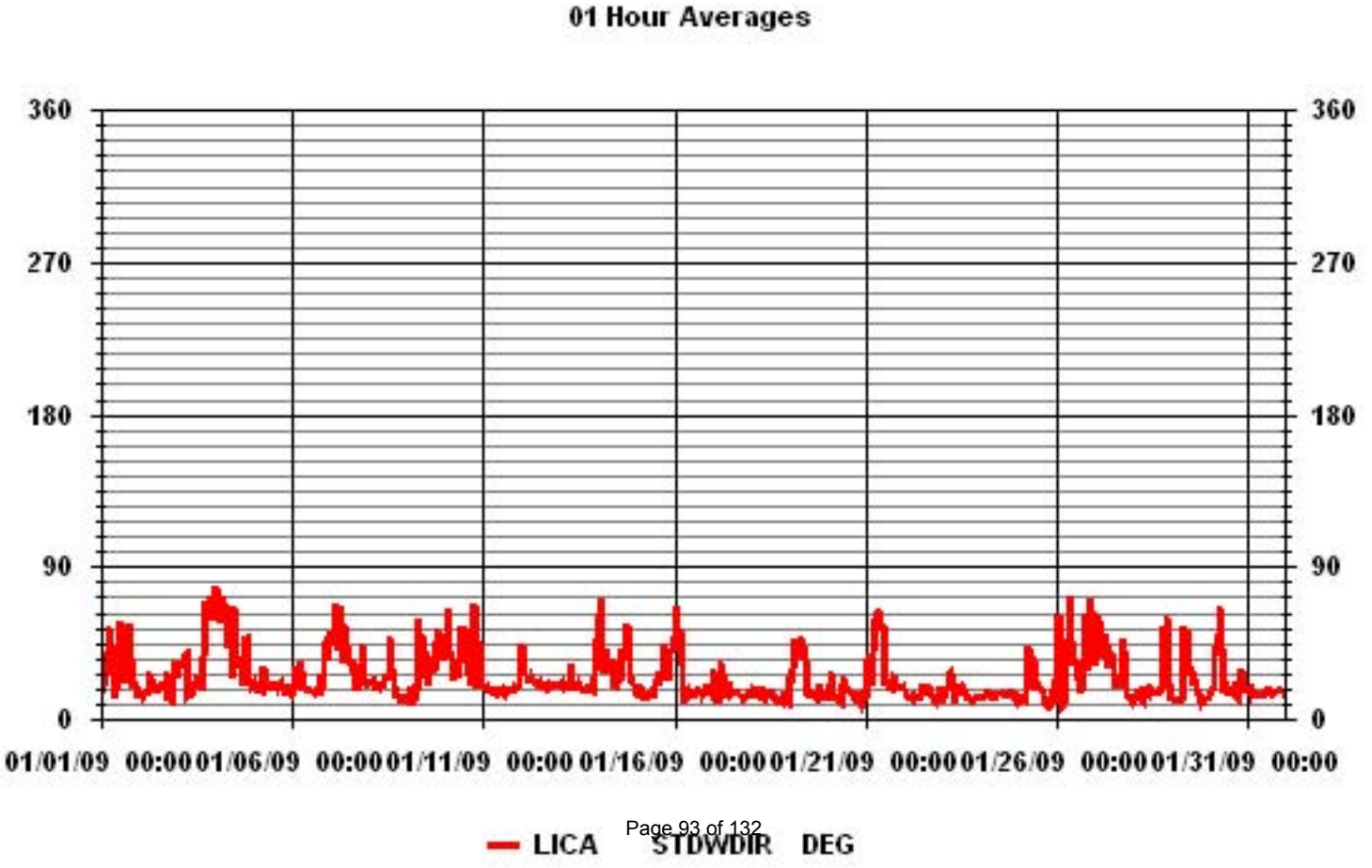
31	18	18	14	16	16	16	14	15	14	16	15	18	17	18	18	15	15	16	17	17	18	18	17	15

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 5, 2008

CALIBRATION TIME: 0 HRS OPERATIONAL TIME: 744 HRS


01 Hour Averages
360
270
180
90
0
01/01/09 00:00
01/06/09 00:00
01/11/09 00:00
01/16/09 00:00
01/21/09 00:00
01/26/09 00:00
01/31/09 00:00
LICA STDWDIR DEG

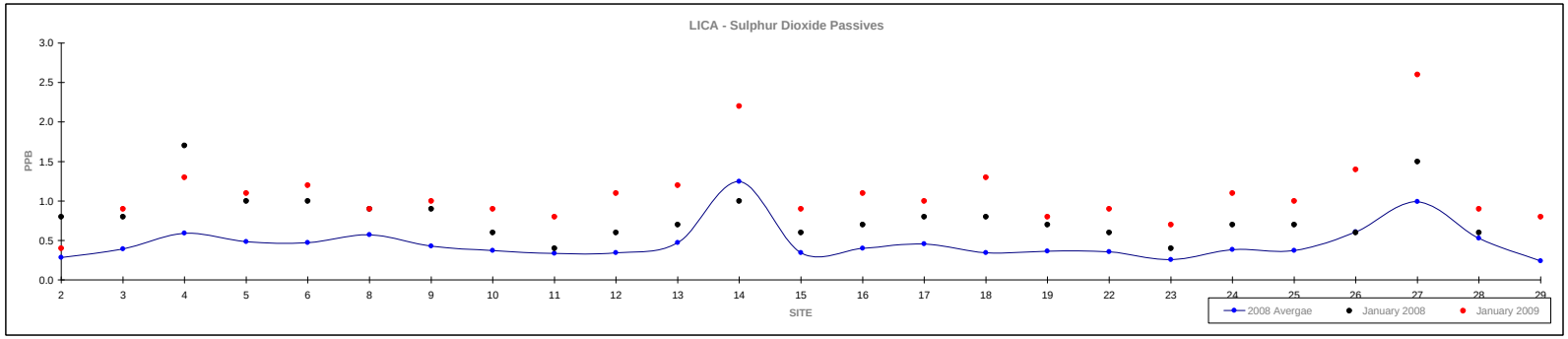
Non-Continuous Monitoring

Passive Summary Results for January 2009

Lakeland Industry & Community Association

Sulphur Dioxide
ppb

	2008																									January 2009	
	2	**3**	**4**	**5**	**6**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**22**	**23**	**24**	**25**	**26**	**27**	**28**	**29**	**Reading**	**Site**
Mean	0.3	0.4	0.6	0.5	0.5	0.6	0.4	0.4	0.3	0.3	0.5	1.2	0.3	0.4	0.5	0.3	0.4	0.4	0.3	0.4	0.4	0.6	1.0	0.5	0.2	1.1	-
Minimum	0.1	0.1	0.2	0.3	0.2	0.3	0.1	0.1	0.1	0.1	0.1	0.7	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.4	0.6	0.3	0.1	0.4	#2
Maximum	0.3	0.4	0.5	0.4	0.6	1.4	1.3	1.1	1.0	1.0	1.3	2.1	1.0	1.3	1.2	1.2	1.2	0.8	0.8	1.1	1.3	1.3	1.9	1.1	0.5	2.6	#27

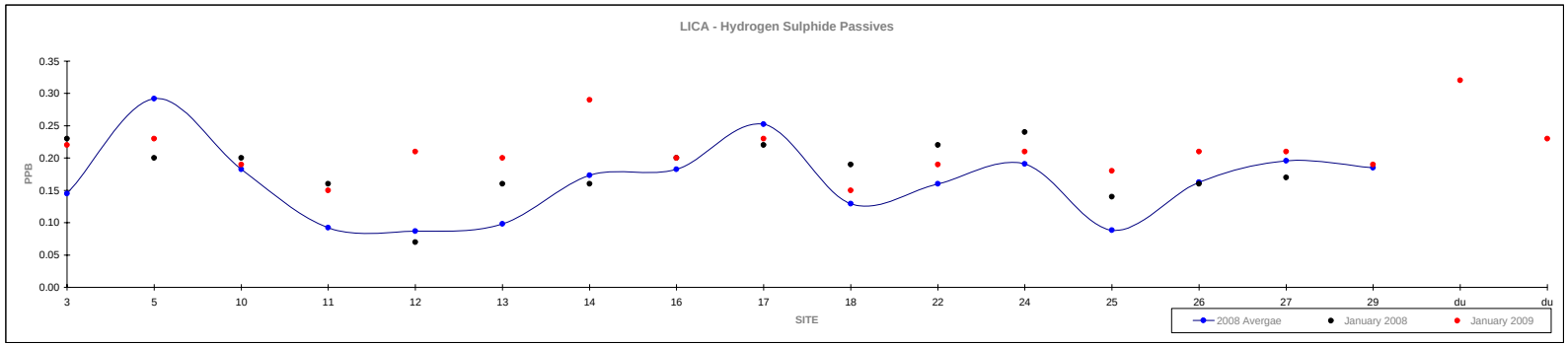


Passive Summary Results for January 2009

Lakeland Industry & Community Association

Hydrogen Sulphide
ppb

	2008																January 2009	
	2	**4**	**10**	**11**	**12**	**13**	**14**	**16**	**17**	**18**	**22**	**24**	**25**	**26**	**27**	**29**	**Reading**	**Site**
Mean	0.1	0.3	0.2	0.1	0.1	0.1	0.2	0.2	0.3	0.1	0.2	0.2	0.1	0.2	0.2	0.2	0.20	-
Minimum	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.15	#11
Maximum	0.3	1.0	0.5	0.2	0.2	0.2	0.3	0.4	0.5	0.2	0.3	0.4	0.2	0.3	0.3	0.3	0.29	#14

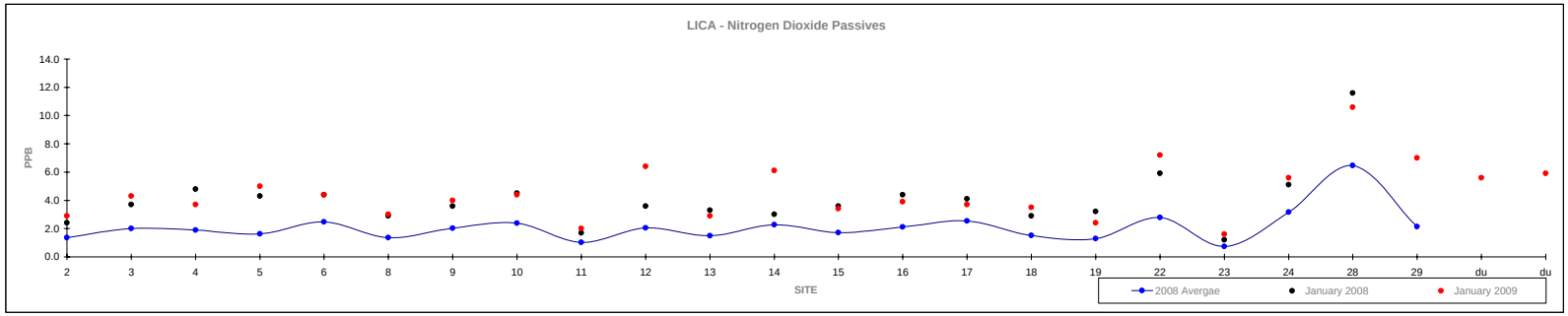


Passive Summary Results for January 2009

Lakeland Industry & Community Association

Nitrogen Dioxide
ppb

	2008																					January 2009	
	2	**3**	**4**	**5**	**6**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**22**	**23**	**24**	**28**	**29**	**Reading**	**Site**
Mean	1.4	2.0	1.9	1.6	2.5	1.4	2.0	2.4	1.0	2.0	1.5	2.3	1.7	2.1	2.5	1.5	1.3	2.8	0.7	3.2	6.5	2.1	4.5	-
Minimum	0.5	0.9	0.4	0.6	1.2	0.6	1.0	1.1	0.3	0.9	0.5	1.1	0.8	1.1	0.9	0.8	0.4	0.9	0.2	1.7	3.1	1.2	1.6	#23
Maximum	2.9	4.3	4.8	4.3	4.8	2.9	4.4	5.5	2.3	6.0	3.4	3.8	4.4	4.4	5.1	3.2	3.2	6.8	2.8	6.6	13.2	3.5	10.6	#28



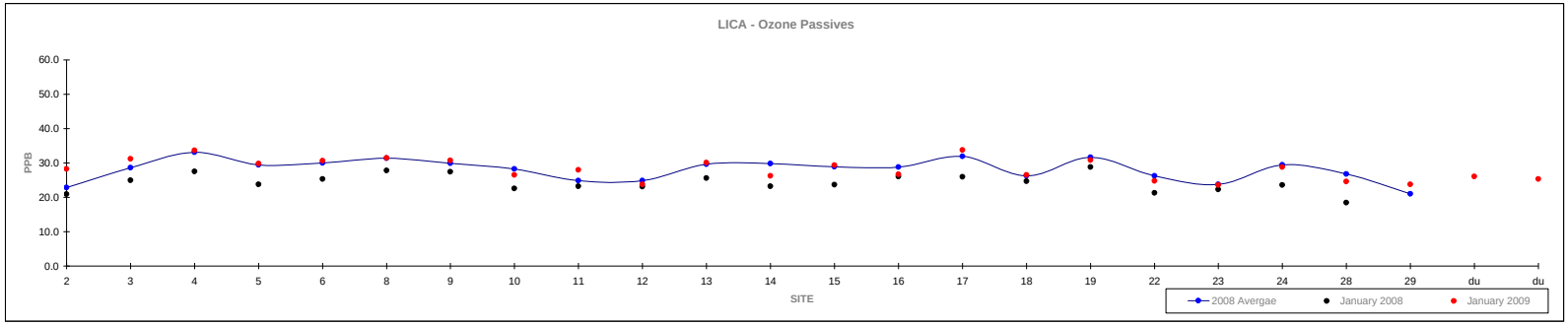
Passive Summary Results for January 2009

Lakeland Industry & Community Association

Ozone ppb

2008

	1	2	3	4	5	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	25	26	January 2009 Reading	Site
Mean	22.9	28.6	33.1	29.5	30.0	31.4	29.9	28.3	24.9	24.9	29.6	29.8	28.9	28.8	32.0	26.2	31.7	26.2	23.8	29.5	26.8	21.0	28.3	-
Minimum	12.8	17.8	20.8	17.8	18.2	18.5	19.3	16.3	12.6	14.1	17.2	17.8	16.9	18.8	16.6	13.7	20.9	15.7	13.4	17.7	15.5	17.7	23.6	#23
Maximum	39.1	47.6	54.5	46.9	47.6	47.2	45.4	44.3	40.1	41.9	48.2	43.9	50.3	47.7	52.9	45.4	46.8	40.4	36.9	51.1	45.9	26.8	33.8	#17



Calibration Reports

Cold Lake

Sulphur Dioxide

SO_2 Calibration Report

Station Information

Calibration Date	January 2, 2009	Previous Calibration	December 31, 2008
Company	+		
Plant / Location	LICA 1 - Cold Lake South		
Start Time (MST)	8:00	End Time (MST)	12:02
Reason:	Monthly Calibration		
Barometric Pressure	708 mmHg	Station Temperature	23 Deg C
Cal Gas	52.2 ppm	Cal Gas Expiry date	March 12, 2010
DAS Output Voltage	0 - 10 Volts		

Equipment Information

Analyzer Make / Model:	Thermon 43i	S/N :	806528242	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	448 ccm		29.6 Deg C		448 ccm		29.5 Deg C	
HVPS / Lamp Setting	-630.9		805		-630.9		805	
PMT / RxCell Temp	OK Deg C		44.9 Deg C		OK Deg C		44.9 Deg C	
Converter / IZS Temp	NA Deg C		45 Deg C		NA Deg C		45 Deg C	
Offset / Slope	5.8		1.086		5.7		1.074	

Calibration Data

Dilution Flow Rate	Source Gas Flow Rate	Calculated Concentration	Indicated Conc. (DAS)	Correction Factor
4994.3	0	0	0	N/A
4961.9	38.8	405	408	0.9927
4961.9	38.8	405	404	1.0025
4975.4	24.3	254	254	0.9988
4986.2	14.6	152	153	0.9961
5002.3	0	0	0	N/A
			Sum of Least Squares	1.0010
			New Correction Factor	1.0025

	Before Calibration	After Calibration
Auto Zero	-0.4	-0.5
Auto Span	386.8	381.8
Sample Lines Connected		**YES**
Percent Change from Previous Calibration		-0.8%

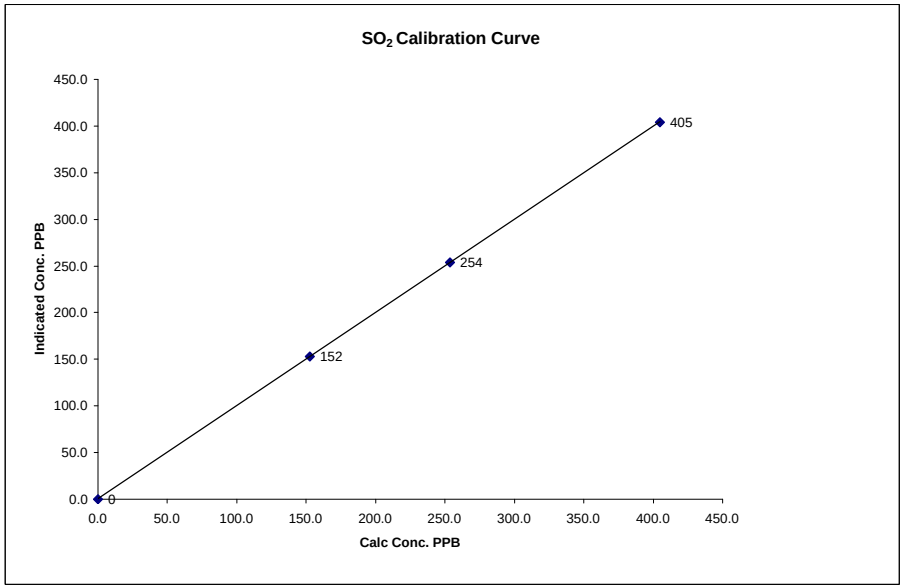
Calibration Performed by: Shea Beaton

SO_2 Calibration Curve

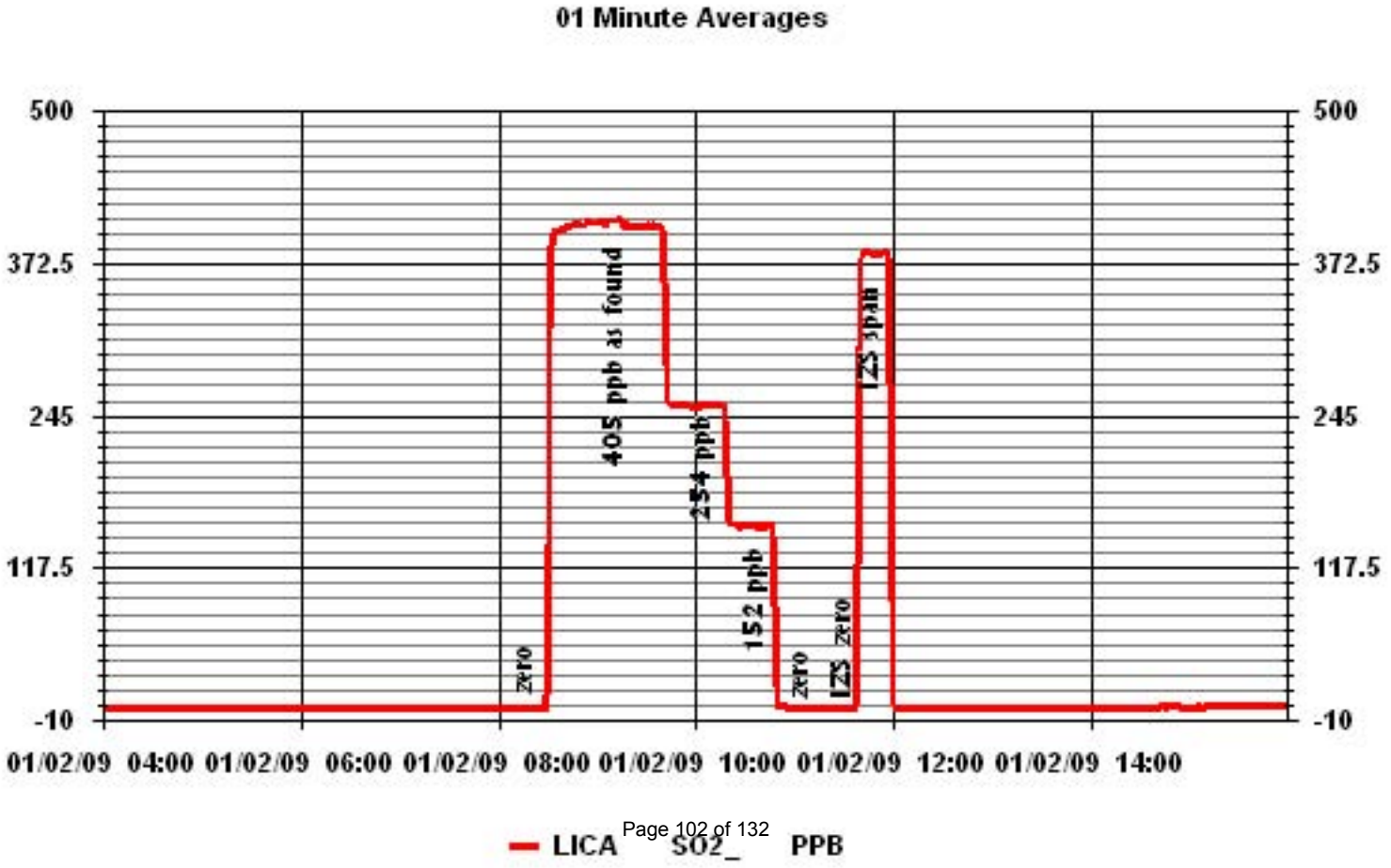
Calibration Date	January 2, 2009		
Company	+		
Plant / Location	LICA 1 - Cold Lake South		
Start Time (MST)	8:00	End Time (MST)	12:02

Calculated Conc. ppb	Indicated Response ppb	Correction Factor
0	0	n/a
152	153	0.9961
254	254	0.9988
405	404	1.0025

Correlation Coefficient	(≥ 0.995)	0.999989
Slope	(0.85 to 1.15)	0.997468
Intercept	(± 3% F.S.)	0.482908



Notes: Pressure=673.2, Lamp intensity=74%


01 Minute Averages
500
372.5
245
117.5
-10
zero
405 ppb as found
254 ppb
152 ppb
zero
IZS zero
IZS span
01/02/09 04:00
01/02/09 06:00
01/02/09 08:00
01/02/09 10:00
01/02/09 12:00
01/02/09 14:00
LICA SO2_ PPB

Total Reduced Sulphur

TRS Calibration Report

Station Information

Calibration Date	January 2, 2009		Previous Calibration	December 19, 2008	
Company	Lakeland Industry & Community Association				
Plant / Location	LICA 1 - Cold Lake South				
Start Time (MST)	8:00		End Time (MST)	12:02	
Reason:			Post- Repair Calibration		
Barometric Pressure	708	mm Hg	Station Temperature	25	Deg C
Cal Gas	10.6	ppm	Cal Gas Expiry date	April 3, 2009	
DAS Output Voltage	0 - 10	Volts			

Equipment Information

Analyzer Make / Model:	TEI 450i	S/N :	812728560	Method:	Fluorescent
Converter Make / Model:	CD Nova CDN 101	S/N :	250		
Calibrator Make / Model:	API 700	S/N :	631	Method:	Dilution
DAS Make / Model:	ESC 8832	S/N :	263		
Flow Meter:	API 700	S/N :	631		

Analyzer Settings

	Before Calibration				After Calibration			
Concentration Range	0 -100 ppb							
Sample Flow / Box Temp	358	ccm	32.4	Deg C	358	ccm	32.1	Deg C
HVPS / Lamp Setting	-622		792		-622		791	
PMT / RxCell Temp	OK	Deg C	45.2	Deg C	OK	Deg C	45	Deg C
Converter / IZS Temp	850	Deg C	45	Deg C	850	Deg C	45	Deg C
Offset / Slope	12.1		1.200		11.7		1.216	

Calibration Data

Dilution Flow Rate	Source Gas Flow Rate	Calculated Concentration	Indicated Conc. (DAS)	Correction Factor
4996	0	0	-1	N/A
4996	0	0	0	N/A
4960	37.7	80	79	1.0122
4960	37.7	80	80	0.9995
4976	21.2	45	45	0.9993
4986	11.7	25	25	0.9926
4996	0	0	0	N/A
			Sum of Least Squares	0.9990
			New Correction Factor	0.9995

	Before Calibration	After Calibration
Auto Zero	-0.5	0.1
Auto Span	42.4	45.2
Sample Lines Connected		YES
Percent Change from Previous Calibration		0.0%

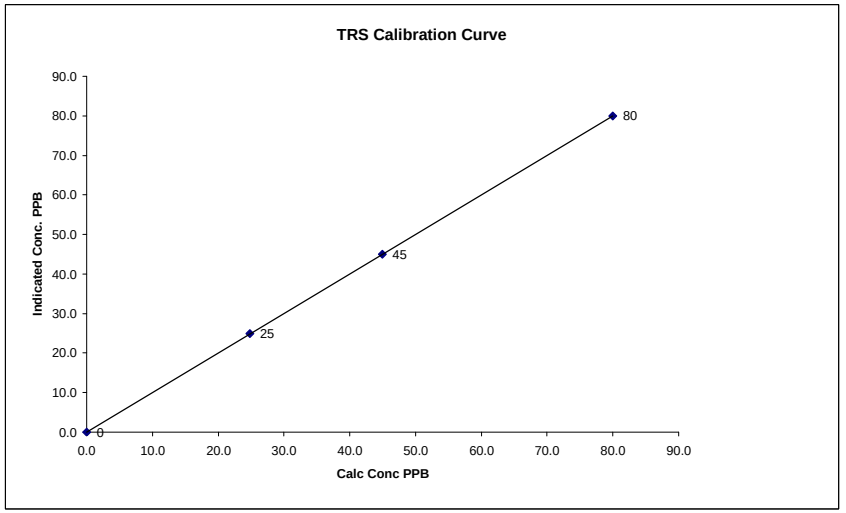
Calibration Performed by: Shea Beaton

TRS Calibration Curve

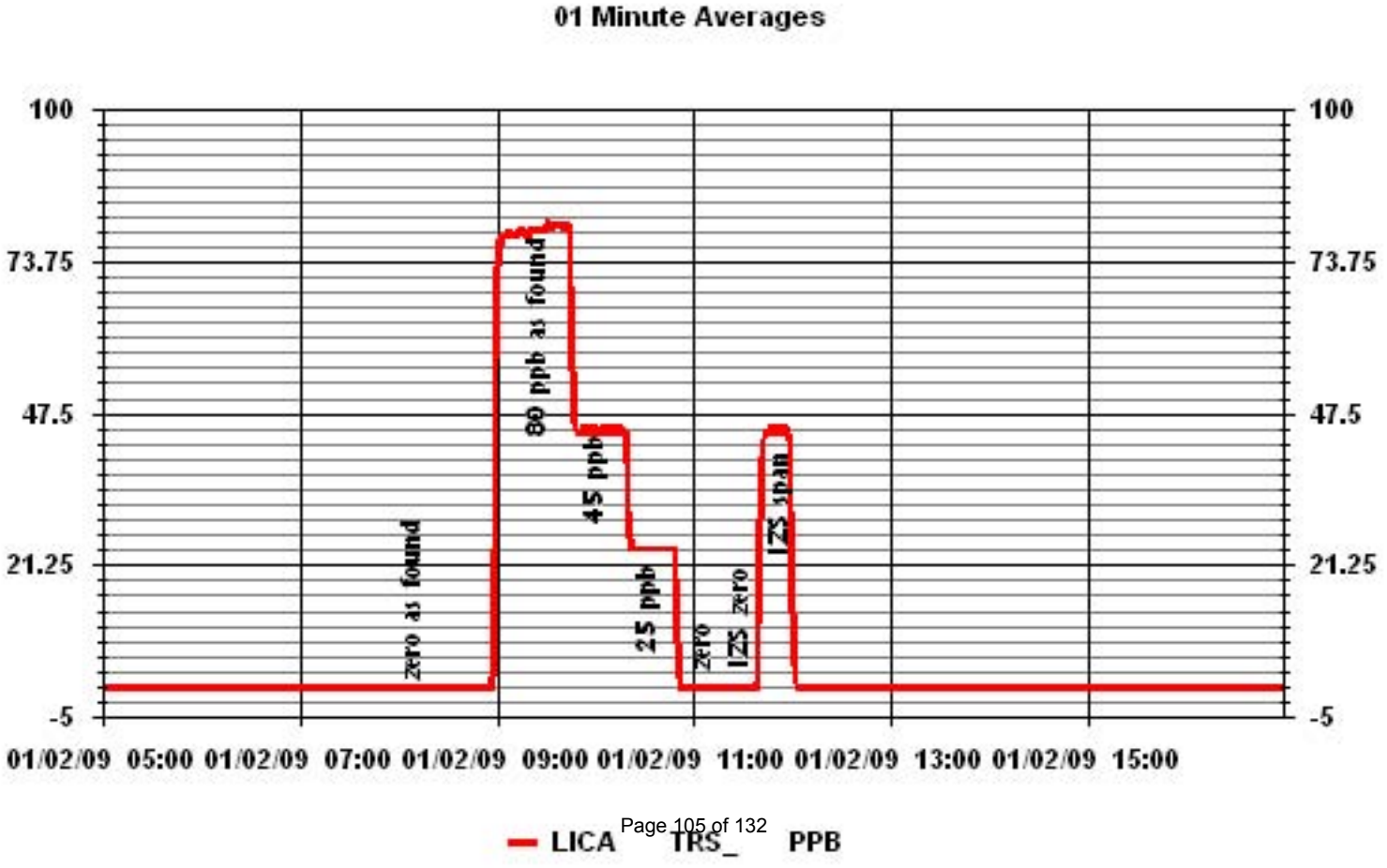
Calibration Date	January 2, 2009				
Company	Lakeland Industry & Community Association				
Plant / Location	LICA 1 - Cold Lake South				
Start Time (MST)	8:00		End Time (MST)	12:02	

Calculated Conc. ppb	Indicated Response ppb	Correction Factor
0	0	n/a
25	25	0.9926
45	45	0.9993
80	80	0.9995

Correlation Coefficient	(≥ 0.995)	0.999994
Slope	(0.85 to 1.15)	0.999875
Intercept	(± 3% F.S.)	0.068351



Notes: Pressure 668.4 inHg, Lamp intensity 90%.


01 Minute Averages
100
73.75
47.5
21.25
-5
zero as found
80 ppb as found
45 ppb
25 ppb
zero
IZS zero
IZS span
01/02/09 05:00
01/02/09 07:00
01/02/09 09:00
01/02/09 11:00
01/02/09 13:00
01/02/09 15:00
LICA TRS_ PPB

Total Hydrocarbons

THC Calibration Report

Station Information

Calibration Date:	January 2, 2009		Previous Calibration	23/01/2008	
Company:	**Lakeland Industry and Community Association**				
Plant / Location:	**LICA1/Cold Lake**				
Start Time (MST)	11:20		End Time (MST)	14:50	
Reason:	Monthly Calibration				
Barometric Pressure:	708	mmHg	Station Temperature:	24	Deg C
Calibrator:	API 700		S/N:	831	
Cal Gas Concentration:	1000	ppm	Cal Gas Expiry Date:	2/22/2011	
DAS make & Model:	ESC 8832		S/N :	263	
Output Voltage Range:	0 - 10	VDC			

Analyzer Information

Make / Model	S/N :	Method
TECO 51C-LT	51CLT-42740-8718	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	psi	8	psi
Air Pressure	17.5	psi	17.5	psi

Calibration Data

Dilution Flow	Source Gas Flow	Calculated Concentration	Indicated Concentration	Correction Factor
2001.0	0	0.0	0.1	N/A
2001.0	0.0	0.0	0.0	N/A
2001.0	80.0	38.4	38.7	0.9934
2001.0	40.0	19.6	19.7	0.9948
2001.0	20.0	9.9	9.7	1.0202
2001.0	0	0.0	0.0	N/A
			Correction Factor:	0.9934

Percent Change

Previous Calibration Correction Factor:	0.9980
Current Correction Factor Before Span Adjust:	0.9934
Percent Change:	0.5%

IZS Calibration Data

	Before Calibration	After Calibration
Auto Zero	0.1	0.0
Auto Span	31.1	31.0
Sample Lines Connected		**YES**

Cylinder Pressures			
Span	1000	psi	
Hydrogen	900	psi	
Zero Air	unlimited	psi	Maxxam-owned API 701 zero air supply with catalytic oxidizer

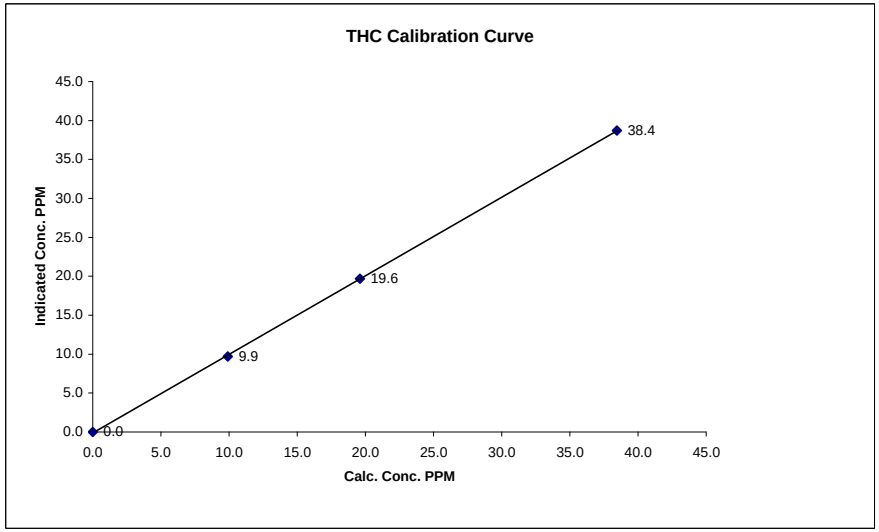
Calibration Performed by: Shea Beaton

THC Calibration Curve

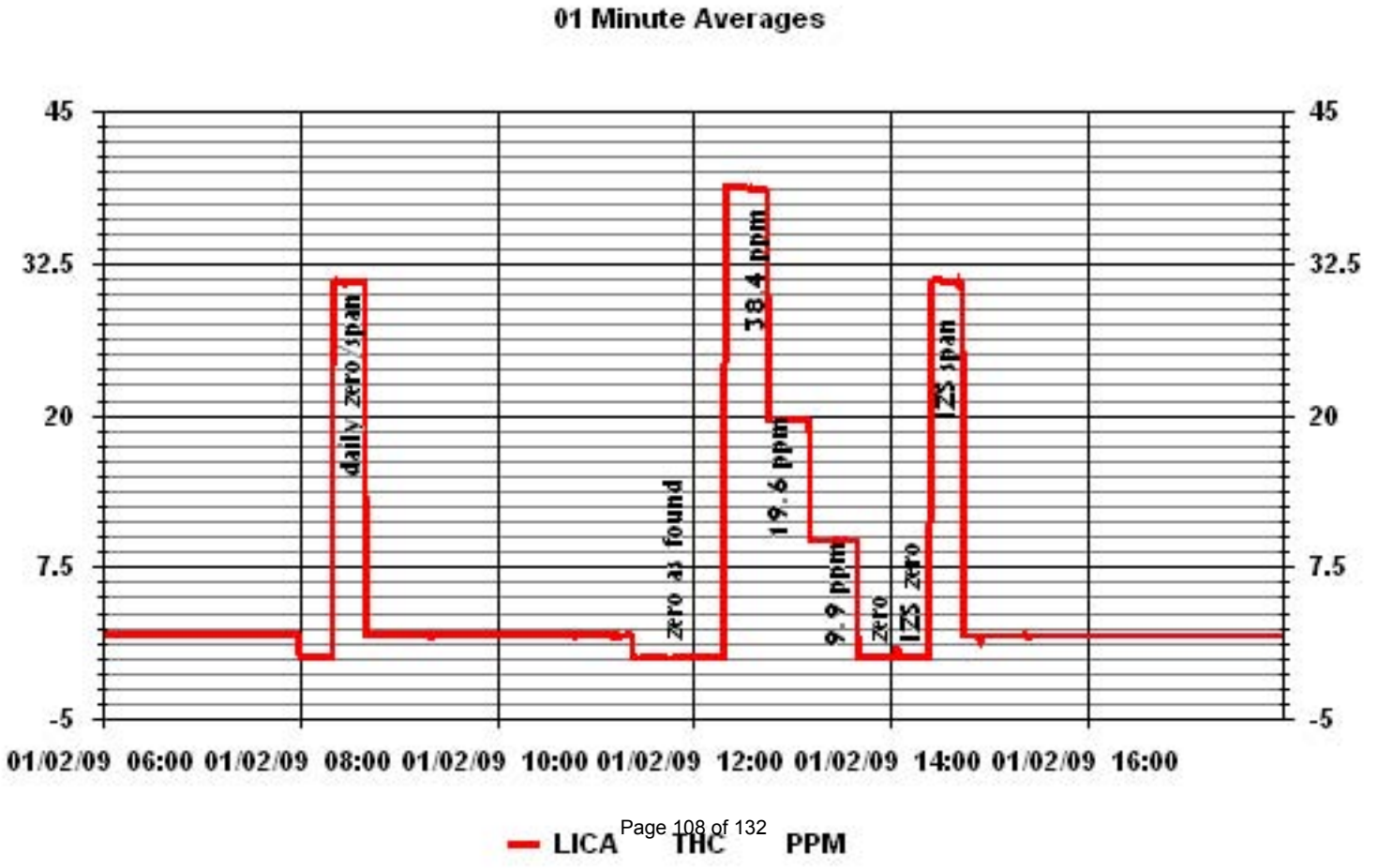
Calibration Date	January 2, 2009				
Company	**Lakeland Industry and Community Association**				
Plant / Location	**LICA1/Cold Lake**				
Start Time (MST)	11:20	End Time	(MST)	14:50	

Calculated Conc. ppm	Indicated Response ppm	Correction Factor
0.0	0.0	
9.9	9.7	1.0202
19.6	19.7	0.9948
38.4	38.7	0.9934

Correlation Coefficient	(≥ 0.995)	0.999946
Slope	(0.85 to 1.15)	1.008895
Intercept	(± 3% F.S.)	-0.110423



Notes:


01 Minute Averages
45
32.5
20
7.5
-5
daily zero/span
zero as found
38.4 ppm
19.6 ppm
9.9 ppm
zero
125 zero
125 span
01/02/09 06:00
01/02/09 08:00
01/02/09 10:00
01/02/09 12:00
01/02/09 14:00
01/02/09 16:00
LICA THC PPM

Particulate Matter 2.5

TEOM® Audit

Station		Audit Transfer Standard	
Date:	January 12, 2009	Make/Model:	Bios DC2
Station Name:	LICA 1	Serial Number:	1193
Location:	Cold Lake South	Cell s/n:	2272
Operator:	LICA	Thermometer s/n:	2178

Sampler		Set-up and current Sampler readings	
Make/Model	R+P Series 1400a Teom	F-Main Set Pt (l/min)	3.00
Unit #	AMU 1494	F-Aux Set Pt (l/min)	13.67
Control unit s/n	140AB229030002	Filter Load (%)	30%
Transducer s/n	140AB229030002	K_o Factor	13319
Parameter	PM 2.5	Temp (^oC)	-21.2
		Press (ATM)	0.954

Conversion from mmHg or "Hg to ATM (Atmospheres)

ATM = (mmHg) X (1.316 X 10 -3) or ATM = ("Hg) X (3.34207 X 10 -2)

Note: Tolerances are noted as BOLD in Brackets

Audit

Zero flow

	Pump Off		Pump On (Time to reach set points)	
F-Main (l/min)	0.08		**(45-60 Sec)**	37
F-Aux (l/min)	0.10		**(45-60 Sec)**	46

Temperature/Pressure

Measured Temp **(± 1 ^oC)**	-20.6	**Δ ^oC**	-0.6
Measured Press **(± 1.5% ATM)**	0.953	**Δ % ATM**	0.1%

Flow Audit

			Δ % from Set-pt	
Indicated Main/Aux Flow (l/min)	2.99	/ 13.63	**(± 2%)**	-0.3% / -0.3%
Total Flow = Main + Aux (l/min)	16.62		**(± 2%)**	-0.3%
Measured Total Flow (l/min)	18.34		**(± 1.0 l/min. (5.65%))**	1.72
Measured Main Flow (l/min)	3.32		**(± 0.2 l/min. (6.25%))**	0.33

Leak Check

		Actual leakage = Pump On - Pump Off
Main **(< 0.15 l/min)**	0.01	0.10-0.09 = 0.01
Aux **(< 0.15 l/min)**	0.01	0.11-0.10 = 0.01

K_o Factor

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

Start Time: 11:30 **Finish Time:**

Sample Inlet Cleaned: NO **Sample Inlet Connected:** YES

Comments: - Removal Audit. Flows both outside tolerance.

Auditor/s: Shea Beaton

TEOM® 1405F Audit

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

Sampler		Set-up and current Sampler readings	
Make/Model	Thermo Scientific Series 1405F	F-Main Set Pt (l/min)	3.00
Unit #	AMU 1776	F-Aux Set Pt (l/min)	13.67
Unit s/n	1405A01570804	Filter Load (%)	29%
Firmware Ver.	1.18	K_o Factor	13716.0
Parameter	PM 2.5 (with FDMS)	Temp (^oC)	-19.5
		Press (ATM)	0.95

Conversion from mmHg or "Hg to ATM (Atmospheres)

ATM = (mmHg) X (1.316 X 10 -3) or ATM = ("Hg) X (3.34207 X 10 -2)

Note: Tolerances are noted as BOLD in Brackets

Audit

Status

Noise **<0.10*u* g**	0.056 - 0.081	Warnings	None
Pump Vacuum	0.38 atm		

Temperature/Pressure

Measured Temp **(± 2 ^oC)**	-19.2	**Δ ^oC**	-0.3
Measured Press **(± 0.01atm)**	0.945	**ΔATM**	0.0

Flow Audit

Indicated Main Flow (l/min)	3.00	Main Flow Drift **(±10.0%)**	0.00%
Measured Main Flow (l/min)	2.99	Flow Adjusted to Measured?	no
Indicated Bypass Flow (l/min)	13.67	Bypass Flow Drift **(±10.0%)**	1.53%
Measured Bypass Flow (l/min)	13.88	Flow Adjusted to Measured?	no

Leak Check

Main **(< 0.15 l/min)**	0.00
Aux **(< 0.15 l/min)**	0.00

Instrument Setup

Flow Control = Active

Report Conditions = Standard (25.0 C and 1atm)

K_o Factor

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

Start Time: 14:00 **Finish Time:** 16:10

Sample Inlet Cleaned: YES **New Filters Installed:** YES

New Filter Loading %: 29%

Comments: - Installation audit. Flows, Temp, Pressure were all calibrated. Leak check was performed during initial stabilization time. Teom will need some time to stabilize

Auditor/s: Shea Beaton

TEOM® 1405F Audit

Station		Audit Transfer Standard	
Date:	January 16, 2009	Make/Model:	Bios DC2
Station Name:	LICA 1	Serial Number:	1193
Location:	Cold Lake South	Cell s/n:	2272
Operator:	LICA	Thermometer s/n:	2178

Sampler		Set-up and current Sampler readings	
Make/Model	Thermo Scientific Series 1405F	F-Main Set Pt (l/min)	3.00
Unit #	AMU 1776	F-Aux Set Pt (l/min)	13.67
Unit s/n	1405A01570804	Filter Load (%)	28%
Firmware Ver.	1.18	K_o Factor	13716.0
Parameter	PM 2.5 (with FDMS)	Temp (^oC)	2.7
		Press (ATM)	0.94

Conversion from mmHg or "Hg to ATM (Atmospheres)

ATM = (mmHg) X (1.316 X 10 -3) or ATM = ("Hg) X (3.34207 X 10 -2)

Note: Tolerances are noted as BOLD in Brackets

Audit

Status

Noise **<0.10*u* g**	0.071	Warnings	None
Pump Vacuum	0.30 atm		

Temperature/Pressure

Measured Temp **(± 2 ^oC)**	2.9	**Δ ^oC**	-0.2
Measured Press **(± 0.01atm)**	0.940	**ΔATM**	0.0

Flow Audit

Indicated Main Flow (l/min)	3.00	Main Flow Drift **(±10.0%)**	6.00%
Measured Main Flow (l/min)	2.82	Flow Adjusted to Measured?	Yes
Indicated Bypass Flow (l/min)	13.67	Bypass Flow Drift **(±10.0%)**	8.34%
Measured Bypass Flow (l/min)	12.53	Flow Adjusted to Measured?	Yes

Leak Check

Main **(< 0.15 l/min)**	NA
Aux **(< 0.15 l/min)**	NA

Instrument Setup

Flow Control = Active

Report Conditions = Standard (25.0 C and 1atm)

K_o Factor

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

Start Time: 14:30 **Finish Time:** 14:55

Sample Inlet Cleaned: NO **New Filters Installed:** NO

New Filter Loading %: NA

Comments: - Finished audit check at 14:55, instrument was left in maintenance mode untill it reached the fully operational stage. Temp and pressure were very close but flows were both a little low.

Auditor/s: Shea Beaton

Nitrogen Dioxide

NOx - NO- NO_2 Calibration Report

Station Information

Calibration Date	January 2, 2009		Previous Calibration	December 1, 2008	
Company	**Lakeland Ind & Comm. Assoc.**		Plant/Location	**LICA 1 - Cold Lake South**	
Start Time (MST)	8:00		End Time (MST)	14:55	
Reason:	Post-Repair Calibration				
Barometric Pressure	708 mmHg		Station Temperature	25.0	Deg C
Cal Gas Concentration	NOx 52.0 ppm	NO 51.5 ppm	Cal Gas Expiry date	03/12/2010	
DAS Output Voltage	0 - 1 Volts		Chart Rec. Output	0 - 1	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	764	ccm	318	Deg C	763	ccm	318	Deg C
Ozone Flow / Vacuum	OK	ccm	165.1	mmHg	OK	ccm	164.4	mmHg
HVPS	-821	Volts			-821	Volts		
Rx/ Temp / PMT Temp	49.8	Deg C	-2.4	Deg C	49.9	Deg C	-2.5	Deg C
Box Temp / IZS Temp	29.5	Deg C	OK	Deg C	29.1	Deg C	OK	Deg C
Offset	3.3	NOx	3.1	NO	3.2	NOx	3.1	NO
Slope	1.009	NOx	0.831	NO	1.008	NOx	0.811	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
4994.3	0.0	N/A	0	0	0	0	0	N/A	N/A
4961.9	38.8	N/A	403	400	413	410	4	0.9769	0.9746
4961.9	38.8	N/A	403	400	402	400	3	1.0036	0.9990
4975.4	24.3	N/A	253	250	252	250	2	1.0029	1.0012
4985.2	14.6	N/A	152	150	152	151	1	0.9990	0.9959
5002.3	0.0	N/A	0	0	0	0	0	N/A	N/A
								Converter Efficiency	
4961.9	38.8	N/A	403	400	401	399	2	N/A	
4961.9	38.8	300	403	400	399	130	269	99%	
4961.9	38.8	200	403	400	399	207	192	99%	
4961.9	38.8	100	403	400	400	302	98	99%	
4961.9	38.8	N/A	403	400	400	398	3	N/A	
4999.7	0	N/A	0	0	1	0	0	N/A	N/A

Linearity OK?	**Yes**	No	Sum of Least Squares	1.0030	0.9993
Flows Checked on-site?	**Yes**	No	New Correction Factor	1.0036	0.9990
			Average Converter Efficiency	99%	

	Before Calibration				After Calibration			
Auto Zero	0.5	NOx	0.4	NO2	0.5	NOx	0.6	NO2
Auto Span	211.3	NOx	210.6	NO2	202.7	NOx	201.9	NO2
Sample Lines Connected					YES			
Percent Change from Previous Calibration					*NOx*	-0.2%	*NO*	0.1%

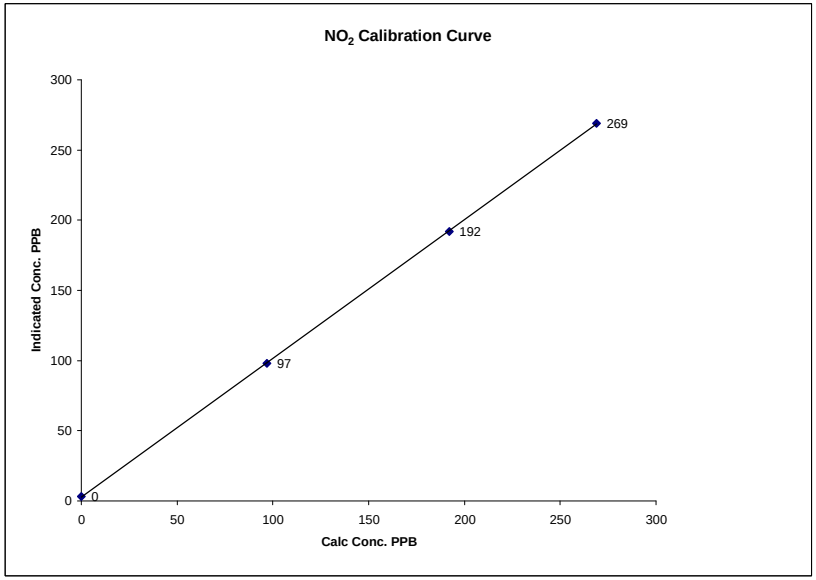
Calibration Performed by: Shea Beaton

NO_2 Calibration Curve

Calibration Date	January 2, 2009		
Company	**Lakeland Ind & Comm. Assoc.**		
Plant / Location	**LICA 1 - Cold Lake South**		
Start Time (MST)	8:00	End Time (MST)	14:55

Calculated Conc. ppb	Indicated Response ppb	Correction Factor
0	3	N/A
97	98	0.9898
192	192	1.0000
269	269	1.0000

Correlation Coefficient	(≥ 0.995)	0.999980
Slope	(0.85 to 1.15)	0.988699
Intercept	(± 3% F.S.)	2.57648



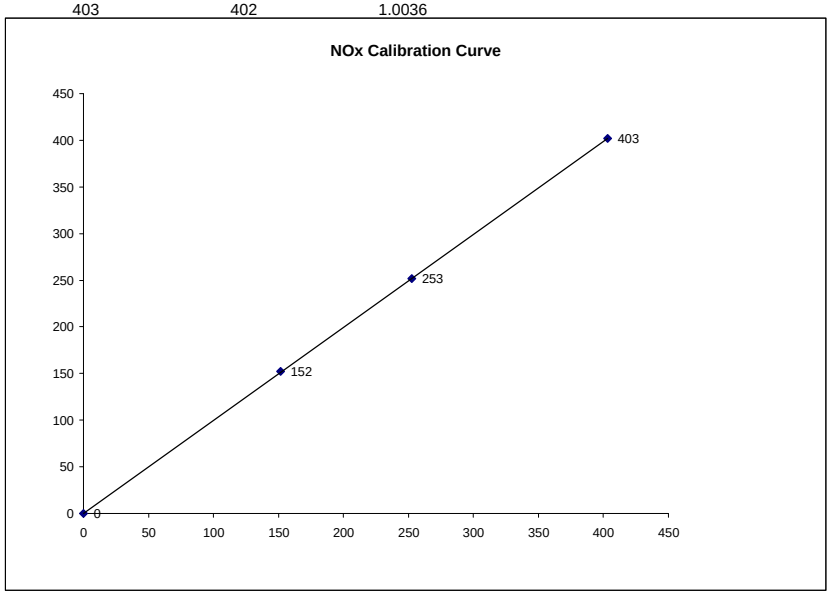
Notes:

NOx Calibration Curve

Calibration Date	January 2, 2009				
Company	**Lakeland Ind & Comm. Assoc.**				
Plant / Location	**LICA 1 - Cold Lake South**				
Start Time (MST)	8:00	End Time (MST)	14:55		

Calculated Conc. ppb	Indicated Response ppb	Correction Factor
0	0	N/A
152	152	0.9990
253	252	1.0029
403	402	1.0036

Correlation Coefficient	(≥ 0.995)	0.999996
Slope	(0.85 to 1.15)	0.996070
Intercept	(± 3% F.S.)	0.28265

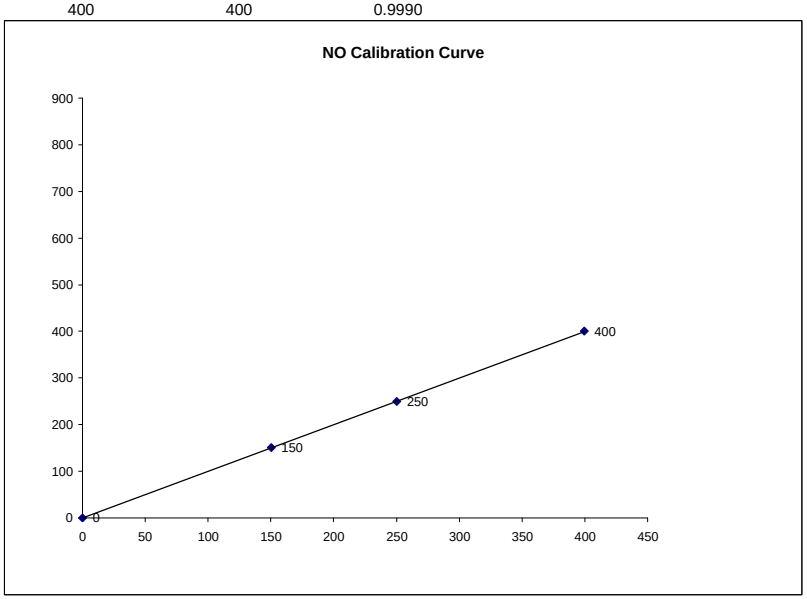


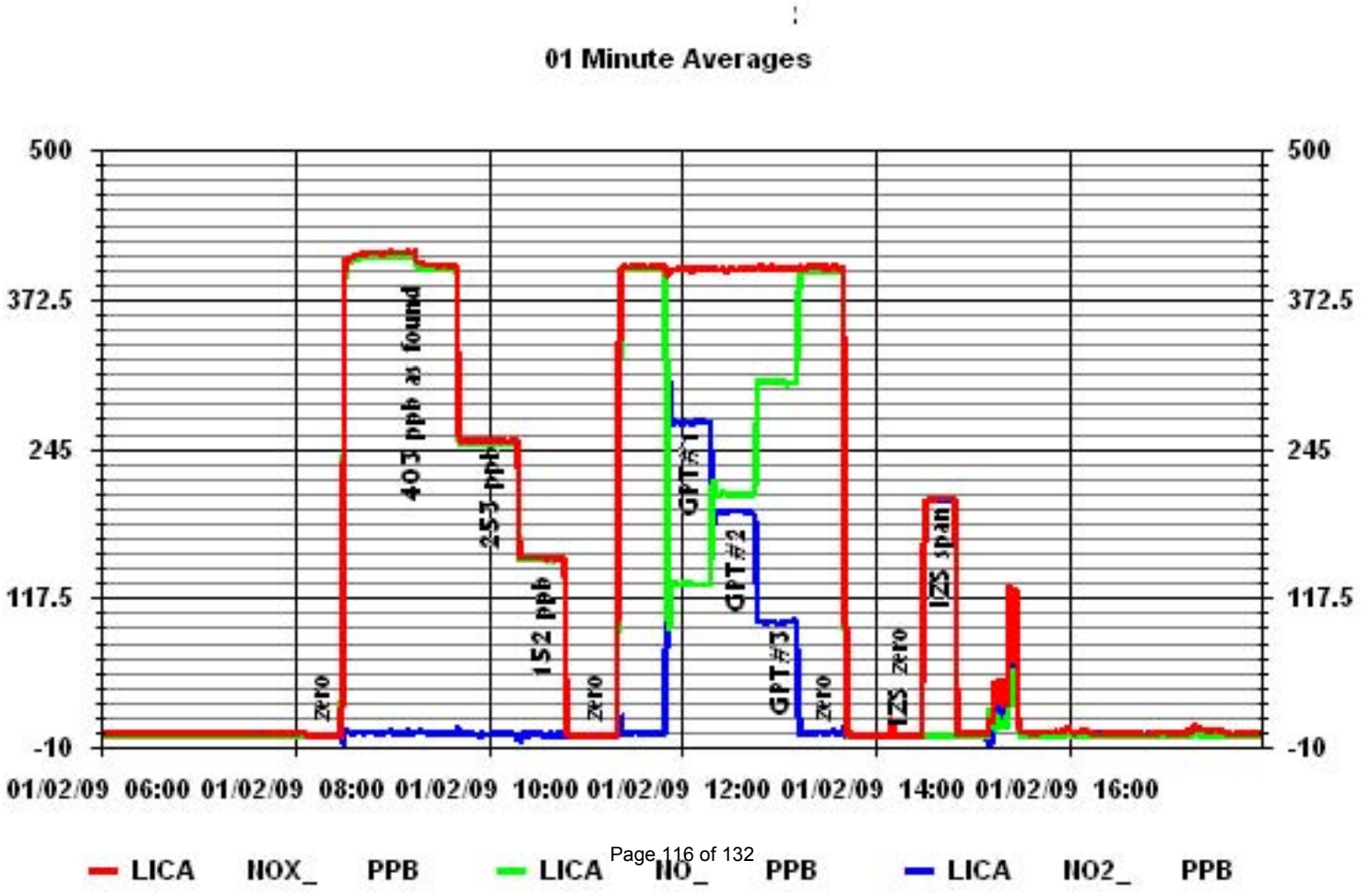
NO Calibration Curve

Calibration Date	January 2, 2009				
Company	**Lakeland Ind & Comm. Assoc.**				
Plant / Location	**LICA 1 - Cold Lake South**				
Start Time (MST)	8:00	End Time (MST)	14:55		

Calculated Conc. ppb	Indicated Response ppb	Correction Factor
0	0	N/A
150	151	0.9959
250	250	1.0012
400	400	0.9990

Correlation Coefficient	(≥ 0.995)	0.999994
Slope	(0.85 to 1.15)	0.999644
Intercept	(± 3% F.S.)	-1.5139




01 Minute Averages
500
372.5
245
117.5
-10
zero
403 ppb as found
253 ppb
152 ppb
zero
GPT#1
GPT#2
GPT#3
zero
IZS zero
IZS span
01/02/09 06:00
01/02/09 08:00
01/02/09 10:00
01/02/09 12:00
01/02/09 14:00
01/02/09 16:00
LICA NOX_ PPB
LICA NO_ PPB
LICA NO2_ PPB

Ozone

O_3 Calibration Report

Station Information

Calibration Date	January 13, 2009	Previous Calibration	December 18, 2008
Company	**Lakeland Industry & Community Association**		
Plant / Location	**LICA 1 - Cold Lake South**		
Start Time (MST)	13:05	End Time (MST)	16:55
Reason:		Monthly Calibration	
Barometric Pressure	714 mm Hg	Station Temperature	23 Deg C
DAS Output Voltage	0 - 10 Volts		

Equipment Information

Analyzer Make / Model:	TEI 49i	S/N :	700419951	Method:	Fluorescent
Calibrator Make / Model:	Environics 2000	S/N :	1991	Method:	GPT
DAS Make / Model:	ESC 8832	S/N :	263		

Analyzer Settings

	Before Calibration		After Calibration	
Concentration Range	0 - 500 ppb			
Bench Temp/ Pressure	29.4	Deg C	29.8	Deg C
O_3 Set Level	29%		29%	
Bench Lamp/O3 Lamp				
Sample Flow A/B	0.743 LPM	0.756 LPM	0.745 LPM	0.758 LPM
Offset / Slope	0.7	1.041	0.7	0.993

Calibration Data

Dilution Flow Rate	Ozone Set Point	Calculated Concentration	Indicated Conc. (DAS)	Correction Factor
5024	0	0	0	N/A
5024	400	385	403	0.9553
5024	400	385	397	0.9698
5027	200	193	194	0.9948
5027	100	93	95	0.9789
5027	0	0	0	N/A
			Sum of Least Squares	N/A
			New Correction Factor	0.9698

	Before Calibration	After Calibration
Auto Zero	-0.1	0.2
Auto Span	296.7	283.4
Sample Lines Connected		YES
Percent Change from Previous Calibration		2.9%

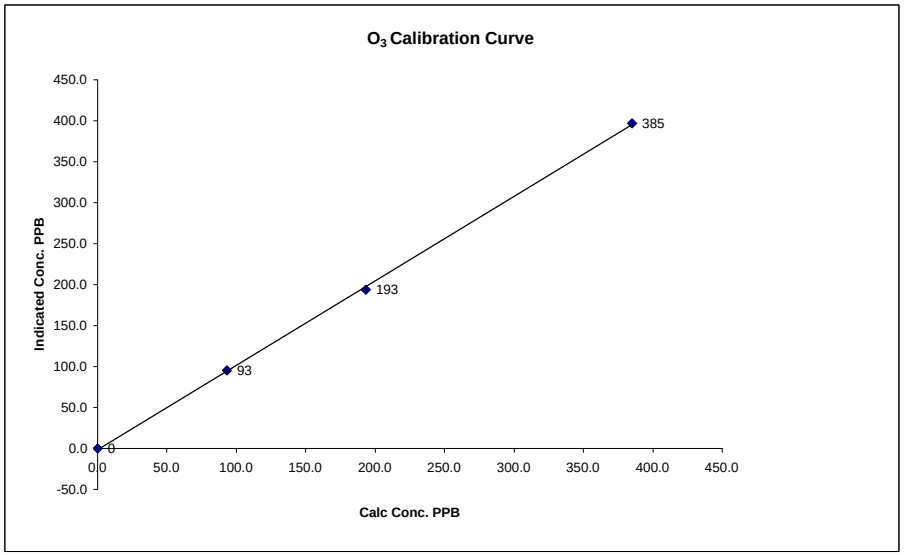
Calibration Performed by: Shea Beaton

O_3 Calibration Curve

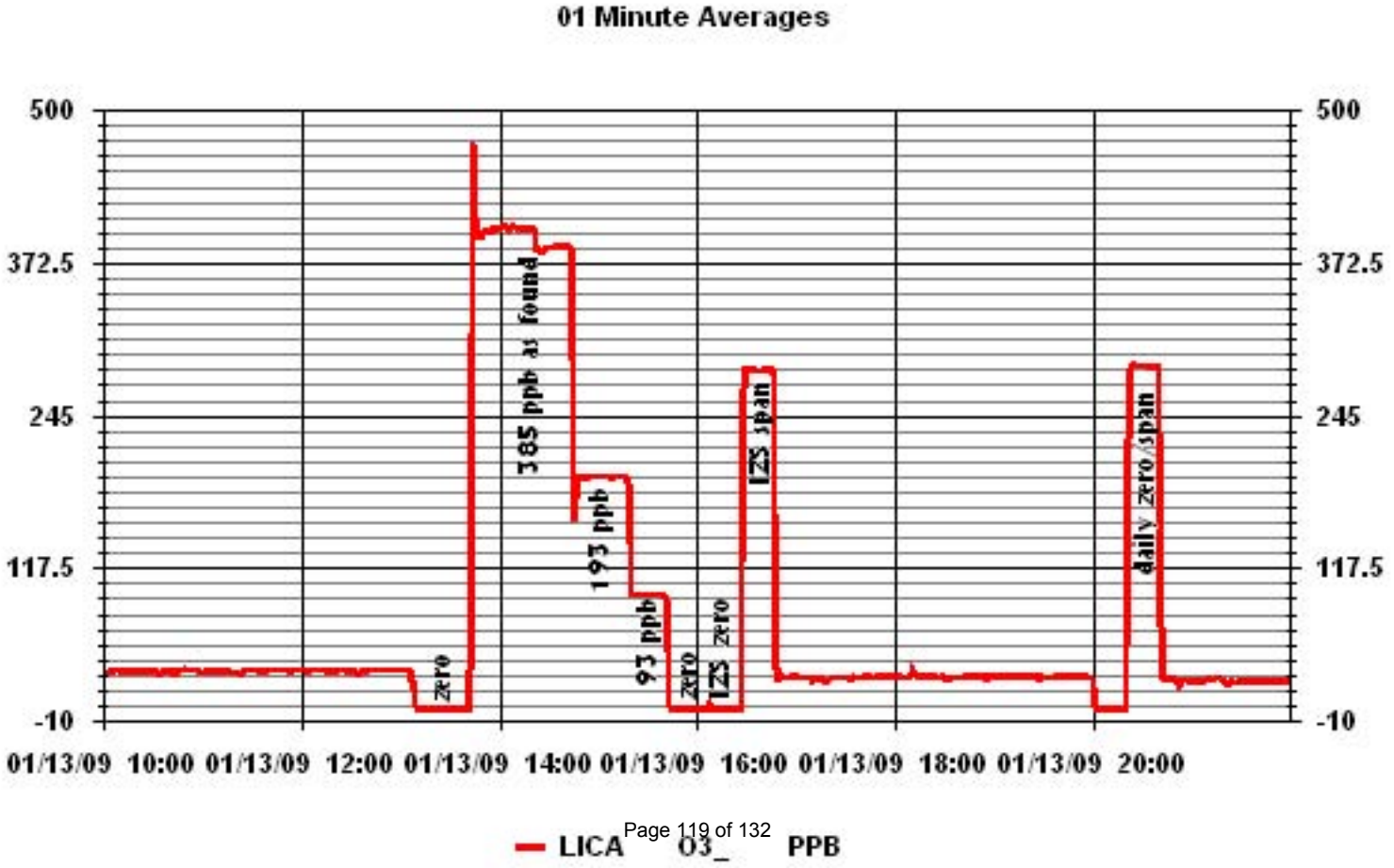
Calibration Date	January 13, 2009		
Company	**Lakeland Industry & Community Association**		
Plant / Location	**LICA 1 - Cold Lake South**		
Start Time (MST)	13:05	End Time (MST)	16:55

Calculated Conc. ppb	Indicated Response ppb	Correction Factor
0	0	n/a
93	95	0.9789
193	194	0.9948
385	397	0.9698

Correlation Coefficient	(≥ 0.995)	0.999802
Slope	(0.85 to 1.15)	1.030440
Intercept	(± 3% F.S.)	-1.356269



Notes: pressure =710.4 mmHg , Bench Lamp = 53.6, O3 Lamp = 67.6


01 Minute Averages
500
372.5
245
117.5
-10
zero
385 ppb as found
193 ppb
93 ppb
zero
LZS zero
LZS span
daily zero/span
01/13/09 10:00
01/13/09 12:00
01/13/09 14:00
01/13/09 16:00
01/13/09 18:00
01/13/09 20:00
LICA O3_ PPB

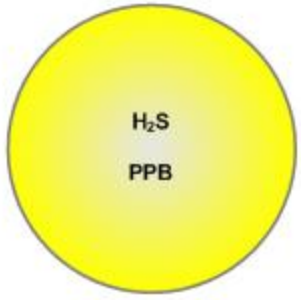
Passive Bubble Maps

Lakeland Industry & Community Association
H_2S Passive Bubble Map

JANUARY 2009

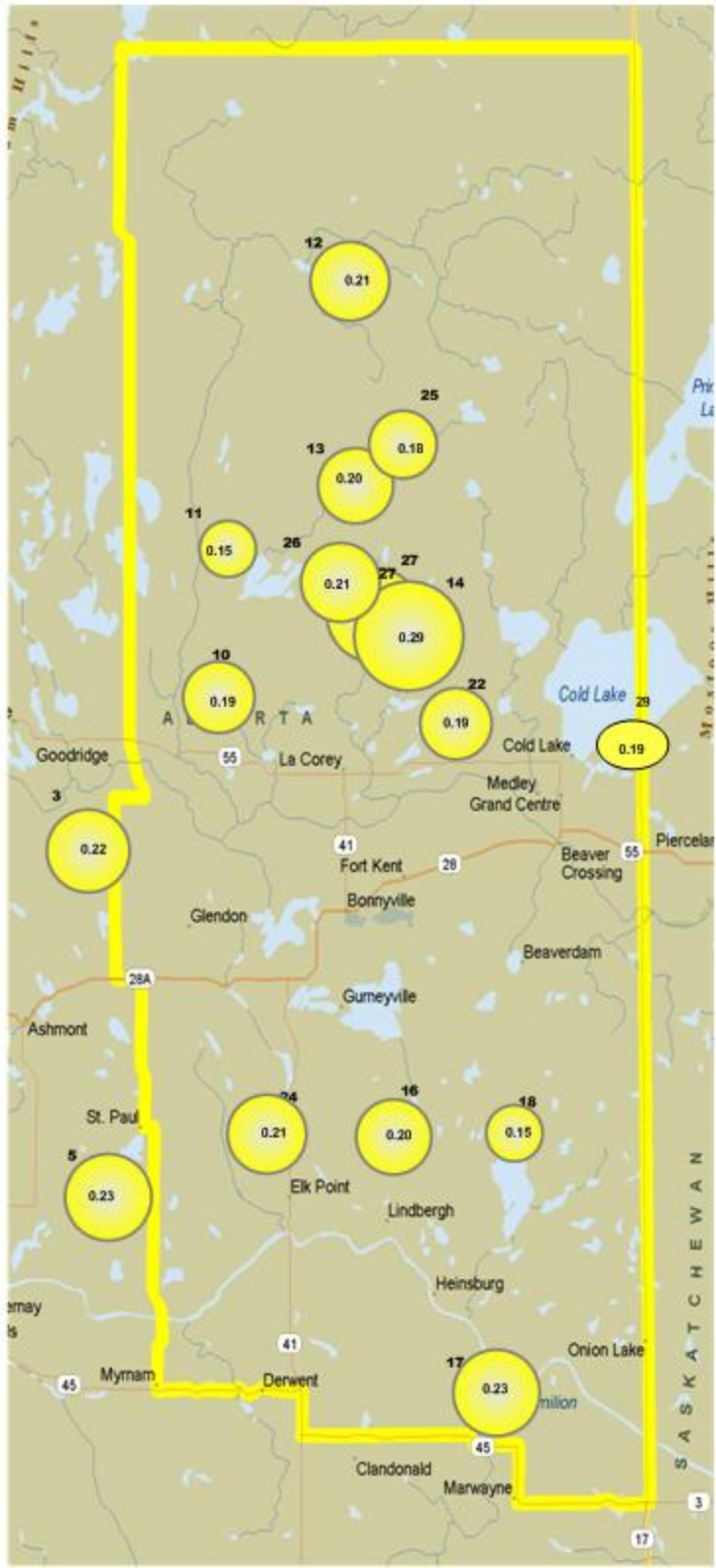
PASSIVE STATIONS

3 – Therien	0.22 PPB
5 – Lake Eliza	0.23 PPB
10 – La Corey	0.19 PPB
11 – Wolf Lake	0.15 PPB
12 – Foster Creek	0.21 PPB
13 – Primrose	0.20 PPB
14 – Maskwa	0.29 PPB
14A – Maskwa	0.32 PPB
16 – Frog Lake	0.20 PPB
17 – Clear Range	0.23 PPB
18 – Fishing Lake	0.15 PPB
22 – Cold Lake South	0.19 PPB
22A – Cold Lake South	0.23 PPB
24 – Fort George	0.21 PPB
25 – Burnt Lake	0.18 PPB
26 – Mahihkan	0.21 PPB
27 – Hilda Lake	0.25 PPB
29 – Cold Lake South 2	0.19 PPB



Summary

Minimum : 0.15PPB –Wolf Lake
Maximum: 0.29 PPB –Maskwa
Average: 0.20 PPB *Includes Duplicates

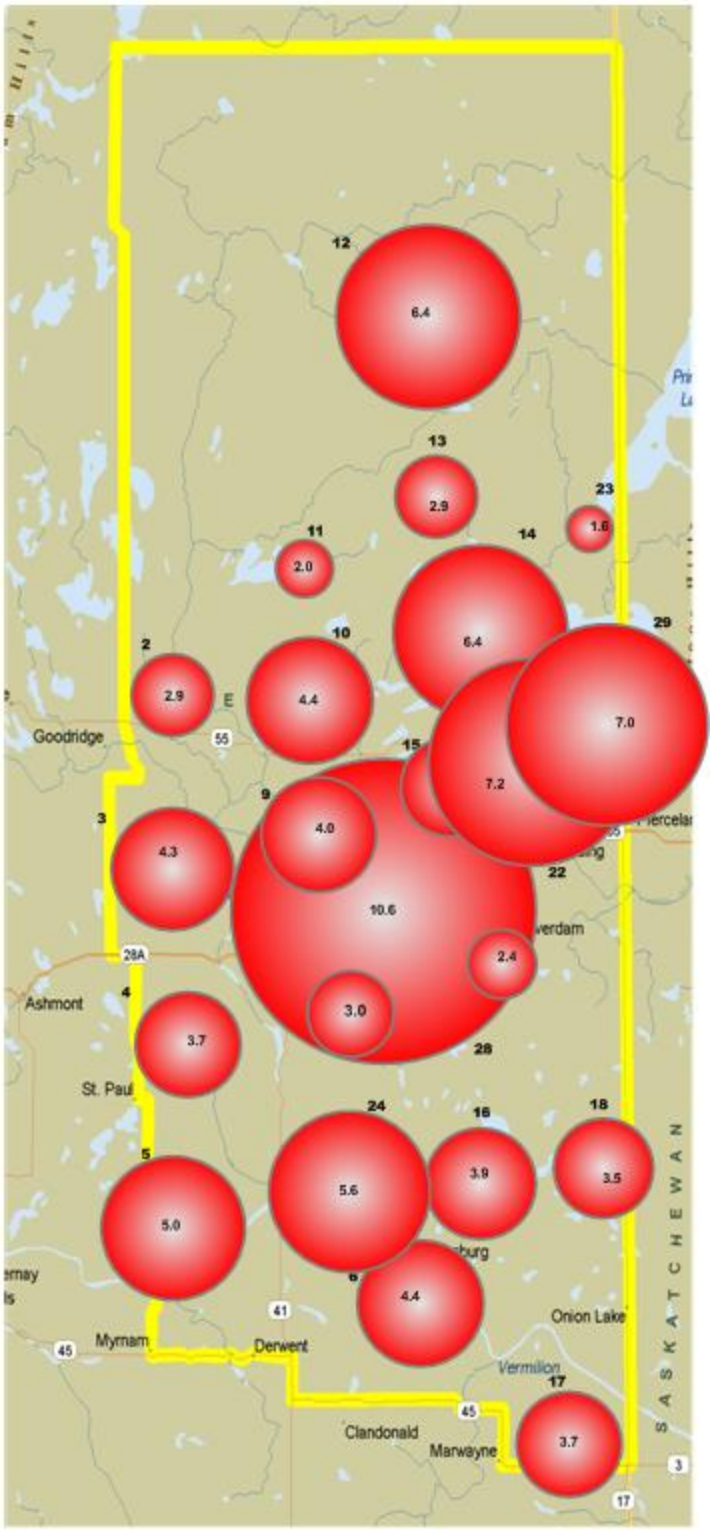


Lakeland Industry & Community Association
NO_2 Passive Bubble Map

JANUARY 2009

PASSIVE STATIONS

2 – Sand River	2.9 PPB
3 – Therien	4.3 PPB
4 – Flat Lake	3.7 PPB
5 – Lake Eliza	5.0 PPB
6 – Telegraph Creek	4.4 PPB
8 – Muriel-Kehewin	3.0 PPB
9 – Dupre	4.0 PPB
10 – La Corey	4.4 PPB
11 – Wolf Lake	2.0 PPB
12 – Foster Creek	6.4 PPB
13 – Primrose	2.9 PPB
14 – Maskwa	6.1 PPB
15 – Ardmore	3.5 PPB
16 – Frog Lake	3.9 PPB
17 – Clear Range	3.7 PPB
18 – Fishing Lake	3.5 PPB
19 – Beaverdam	2.4 PPB
22 – Cold Lake South	7.2 PPB
23 – Medley-Martineau	1.6 PPB
24 – Fort George	5.6 PPB
28 – Town of Bonnyville	10.6 PPB
29 – Cold Lake South 2	7.0 PPB



Summary

Minimum : 1.6 PPB – Medley-Martineau
Maximum: 10.6 PPB – Town of Bonnyville
Average: 4.5 PPB *Includes Duplicates

Lakeland Industry & Community Association
O_3 Passive Bubble Map

JANUARY 2009

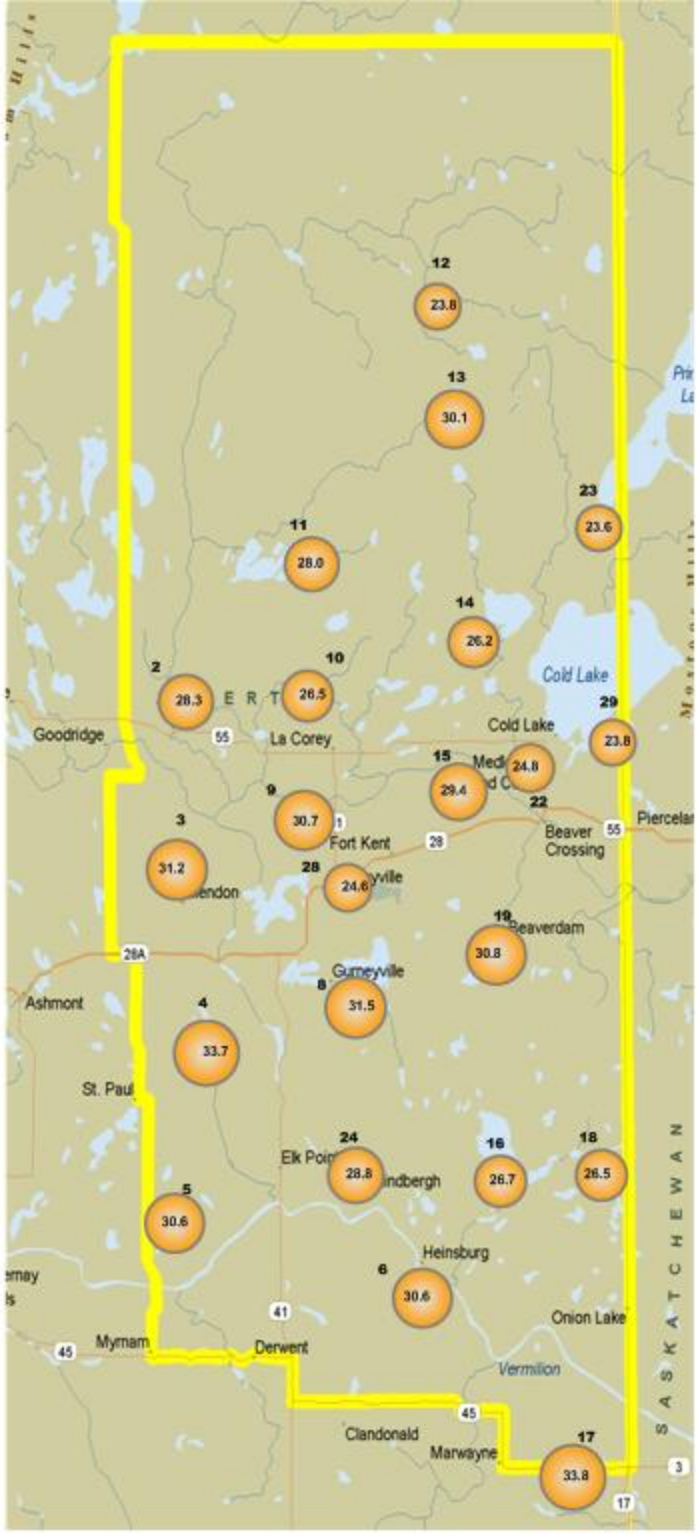
PASSIVE STATIONS

2 – Sand River	28.3 PPB
3 – Therien	31.2 PPB
4 – Flat Lake	33.7 PPB
5 – Lake Eliza	29.8 PPB
6 – Telegraph Creek	30.6 PPB
8 – Muriel-Kehewin	31.5 PPB
9 – Dupre	30.7 PPB
10 – La Corey	26.5 PPB
11 – Wolf Lake	28.0 PPB
12 – Foster Creek	23.8 PPB
13 – Primrose	30.1 PPB
14 – Maskwa	26.2 PPB
15 – Ardmore	29.4 PPB
16 – Frog Lake	26.7 PPB
17 – Clear Range	33.8 PPB
18 – Fishing Lake	26.5 PPB
19 – Beaverdam	30.8 PPB
22 – Cold Lake South	24.8 PPB
23 – Medley-Martineau	23.6 PPB
24 – Fort George	28.8 PPB
28 – Town of Bonnyville	24.6 PPB
29 – Cold Lake South 2	23.8 PPB

O_3 PPB

Summary

Minimum : 23.6 PPB –Medley-Martineau
Maximum: 33.8 PPB –Clear Range
Average: 28.3 PPB *Includes Duplicates



Lakeland Industry & Community Association
SO_2 Passive Bubble Map

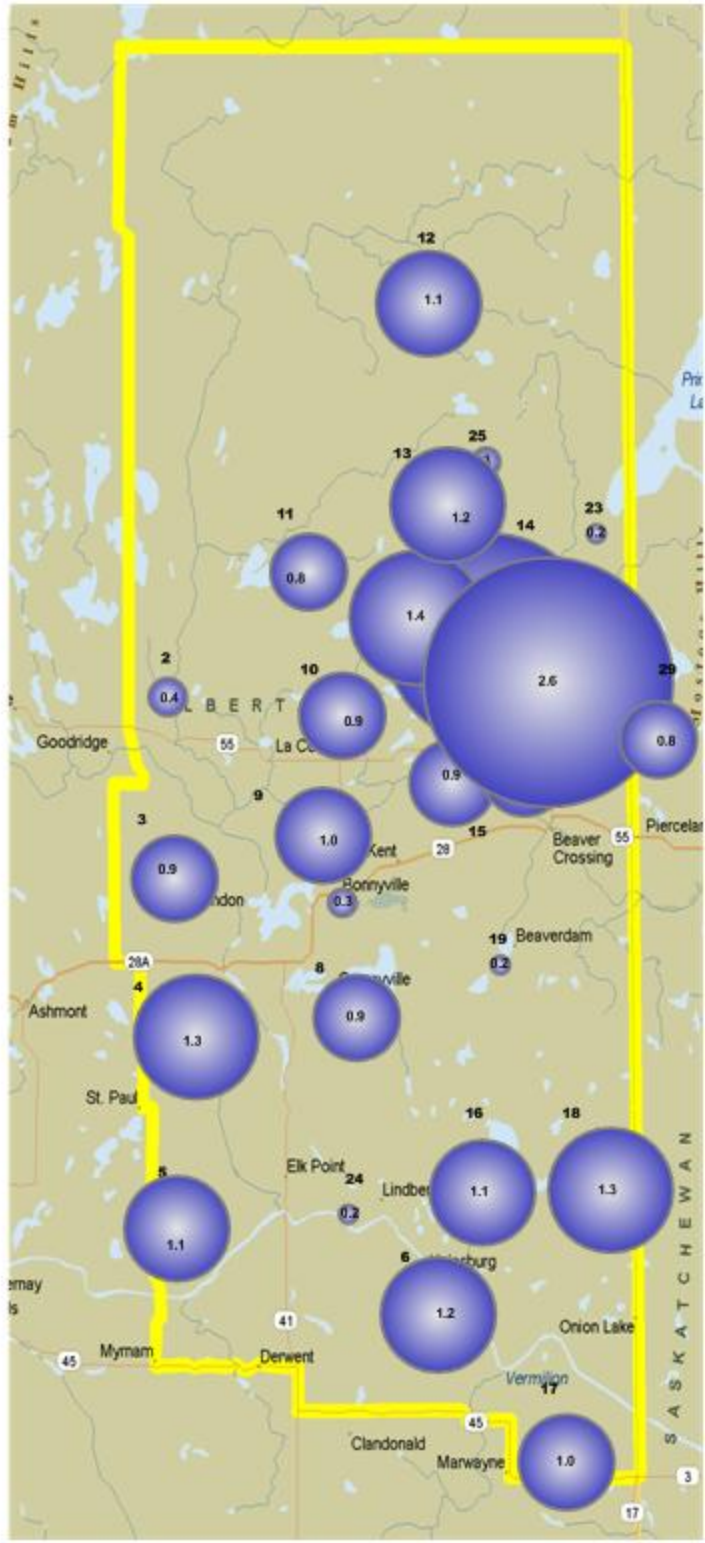
JANUARY 2008

PASSIVE STATIONS

2 – Sand River	0.4 PPB
3 – Therien	0.9 PPB
4 – Flat Lake	1.3 PPB
5 – Lake Eliza	1.1 PPB
6 – Telegraph Creek	1.2 PPB
8 – Muriel-Kehewin	0.9 PPB
9 – Dupre	1.0 PPB
10 – La Corey	0.9 PPB
11 – Wolf Lake	0.8 PPB
12 – Foster Creek	1.1 PPB
13 – Primrose	1.2 PPB
14 – Maskwa	2.2 PPB
15 – Ardmore	0.9 PPB
16 – Frog Lake	1.1 PPB
17 – Clear Range	1.0 PPB
18 – Fishing Lake	1.3 PPB
19 – Beaverdam	0.8 PPB
22 – Cold Lake South	0.9 PPB
23 – Medley-Martineau	1.7 PPB
24 – Fort George	1.1 PPB
25 – Burnt Lake	1.0 PPB
26 – Mahihkan	1.4 PPB
27 – Hilda Lake	2.6 PPB
28 – Town of Bonnyville	0.9 PPB
29 – Cold Lake South 2	0.8 PPB

Summary

Minimum : 0.4 PPB – Sand River
Maximum: 2.6 PPB – Hilda Lake
Average: 1.1 PPB *Includes Duplicates



Passive Network Laboratory Analysis

Your Project #: 2008/12/29 - 2009/01/29
Site:LICA

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

Report Date: 2009/02/20

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: A904659
Received: 2009/02/03, 15:14

Sample Matrix: Air
Samples Received: 27

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
H2S Passive Analysis (1)	18	2009/02/20	2009/02/20		EDM SOP-0320
NO2 Passive Analysis (1)	23	2009/02/09	2009/02/20		EDM SOP-0318
NO2 Passive Analysis (1)	1	2009/02/10	2009/02/20		EDM SOP-0318
O3 Passive Analysis (1)	24	2009/02/11	2009/02/20		EDM SOP-0317
SO2 Passive Analysis (1)	27	2009/02/09	2009/02/20		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.

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

==========

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

Total cover pages: 1

RESULTS OF CHEMICAL ANALYSES OF AIR

Maxxam ID		N55414	N55415	N55416	N55417	N55418		
Sampling Date		2008/12/29	2008/12/29	2008/12/30	2008/12/30	2008/12/30		
	Units	**1**	**2**	**3**	**4**	**5**	**RDL**	**QC Batch**
Passive Monitoring								
Calculated H2S	ppb		0.22		0.23		0.02	2935353
Calculated NO2	ppb	2.9	4.3	3.7	5.0	4.4	0.1	2909604
Calculated O3	ppb	28.3	31.2	33.7	29.8	30.6	0.1	2914644
Calculated SO2	ppb	0.4	0.9	1.3	1.1	1.2	0.1	2910081

RDL = Reportable Detection Limit

Maxxam ID		N55419	N55420	N55421	N55422	N55423		
Sampling Date		2008/12/30	2008/12/29	2008/12/29	2008/12/29	2008/12/29		
	Units	**7**	**8**	**9**	**10**	**11**	**RDL**	**QC Batch**
Passive Monitoring								
Calculated H2S	ppb			0.19	0.15	0.21	0.02	2935353
Calculated NO2	ppb	3.0	4.0	4.4	2.0	6.4	0.1	2909604
Calculated O3	ppb	31.5	30.7	26.5	28.0	23.8	0.1	2914644
Calculated SO2	ppb	0.9	1.0	0.9	0.8	1.1	0.1	2910081

RDL = Reportable Detection Limit

Maxxam ID		N55424	N55425	N55426	N55427	N55428		
Sampling Date		2008/12/29	2008/12/29	2008/12/29	2008/12/30	2008/12/30		
	Units	**12**	**13**	**14**	**15**	**16**	**RDL**	**QC Batch**
Passive Monitoring								
Calculated H2S	ppb	0.20	0.29		0.20	0.23	0.02	2935353
Calculated NO2	ppb	2.9	6.1	3.5	3.9	3.7	0.1	2909604
Calculated O3	ppb	30.1	26.2	29.4	26.7	33.8	0.1	2914644
Calculated SO2	ppb	1.2	2.2	0.9	1.1	1.0	0.1	2910081

RDL = Reportable Detection Limit

Maxxam Job #: A904659
Report Date: 2009/02/20

LAKELAND INDUSTRY AND COMMUNITY ASSOCIATION
Client Project #: 2008/12/29 - 2009/01/29
Site Reference: LICA
Sampler Initials: SB

RESULTS OF CHEMICAL ANALYSES OF AIR

Maxxam ID		N55429	N55430	N55431	N55432	N55433		
Sampling Date		2008/12/30	2008/12/30	2008/12/29	2008/12/29	2008/12/30		
	Units	**17**	**18**	**19**	**20**	**21**	**RDL**	**QC Batch**
Passive Monitoring								
Calculated H2S	ppb	0.15		0.19		0.21	0.02	2935353
Calculated NO2	ppb	3.5	2.4	7.2	1.6	5.6	0.1	2909604
Calculated O3	ppb	26.5	30.8	24.8	23.6	28.8	0.1	2914644
Calculated SO2	ppb	1.3	0.8	0.9	0.7	1.1	0.1	2910081

RDL = Reportable Detection Limit

Maxxam ID		N55437	N55438	N55439	N55440	N55441		
Sampling Date		2008/12/29	2008/12/29	2008/12/29	2008/12/30	2008/12/29		
	Units	**22**	**23**	**24**	**25**	**26**	**RDL**	**QC Batch**
Passive Monitoring								
Calculated H2S	ppb	0.18	0.21	0.25		0.19	0.02	2935353
Calculated NO2	ppb				10.6	7.0	0.1	2909604
Calculated O3	ppb				24.6	23.8	0.1	2914644
Calculated SO2	ppb	1.0	1.4	2.6	0.9	0.8	0.1	2910081

RDL = Reportable Detection Limit

Maxxam ID		N55443	N55444		
Sampling Date		2008/12/29	2008/12/29		
	Units	**13A**	**19A**	**RDL**	**QC Batch**
Passive Monitoring					
Calculated H2S	ppb	0.32	0.23	0.02	2935353
Calculated NO2	ppb	5.6	5.9	0.1	2909604
Calculated O3	ppb	26.1	25.3	0.1	2914644
Calculated SO2	ppb	2.1	1.0	0.1	2910081

RDL = Reportable Detection Limit

General Comments

Results relate only to the items tested.

LAKELAND INDUSTRY AND COMMUNITY ASSOCIATION
Attention: MICHAEL BISAGA
Client Project #: 2008/12/29 - 2009/01/29
P.O. #:
Site Reference: LICA

Quality Assurance Report

Maxxam Job Number: PA904659

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
2909604	DF4	Calibration Check	Calculated NO2	2009/02/09		96	%	76 - 118
		SPIKE	Calculated NO2	2009/02/09		96	%	N/A
		BLANK	Calculated NO2	2009/02/09	<0.1		ppb	
2910081	DF4	Calibration Check	Calculated SO2	2009/02/09		100	%	95 - 105
		SPIKE	Calculated SO2	2009/02/09		103	%	N/A
		BLANK	Calculated SO2	2009/02/09	<0.1		ppb	
2914644	OZ	Calibration Check	Calculated O3	2009/02/11		101	%	91 - 107
		SPIKE	Calculated O3	2009/02/11		101	%	N/A
		BLANK	Calculated O3	2009/02/11	<0.1		ppb	
2935353	TM5	Calibration Check	Calculated H2S	2009/02/20		102	%	80 - 120
		SPIKE	Calculated H2S	2009/02/20		98	%	N/A

N/A = Not Applicable

Passive Field Data

Field Notes

SAMPLER	SITE	ID	START		END		NOTES
			DATE	TIME	DATE	TIME	
$SO_2/NO_2/O_3$		2	12/29/08	07:10	01/29/2009	07:15	
$H_2S/SO_2/NO_2/O_3$		3	12/29/08	06:25	01/29/2009	06:30	
$SO_2/NO_2/O_3$		4	12/30/08	12:15	01/30/2009	12:05	
$H_2S/SO_2/NO_2/O_3$		5	12/30/08	11:40	01/30/2009	11:25	
$SO_2/NO_2/O_3$		6	12/30/08	10:15	01/30/2009	10:10	
$SO_2/NO_2/O_3$		8	12/30/08	13:10	01/30/2009	12:55	
$SO_2/NO_2/O_3$		9	12/29/08	16:45	01/29/2008	16:50	
$H_2S/SO_2/NO_2/O_3$		10	12/29/08	08:10	01/30/2009	08:00	
$H_2S/SO_2/NO_2/O_3$		11	12/29/08	08:50	01/29/2009	08:40	
$H_2S/SO_2/NO_2/O_3$		12	12/29/08	10:10	01/29/2009	09:55	
$H_2S/SO_2/NO_2/O_3$		13	12/29/08	11:50	01/29/2009	11:30	
$H_2S/SO_2/NO_2/O_3$		14	12/29/08	12:50	01/29/2009	12:20	
$SO_2/NO_2/O_3$		15	12/29/08	16:15	01/29/2009	16:15	
$H_2S/SO_2/NO_2/O_3$		16	12/30/08	08:45	01/30/2009	08:30	
$H_2S/SO_2/NO_2/O_3$		17	12/30/08	09:30	01/30/2009	09:15	
$H_2S/SO_2/NO_2/O_3$		18	12/30/08	07:55	01/30/2009	07:45	
$SO_2/NO_2/O_3$		19	12/30/08	06:55	01/30/2009	06:35	
$H_2S/SO_2/NO_2/O_3$		22	12/29/08	15:10	01/29/2009	15:05	
$SO_2/NO_2/O_3$		23	12/29/08	14:20	01/29/2009	14:10	
$H_2S/SO_2/NO_2/O_3$		24	12/30/08	10:55	01/30/2009	10:45	
H_2S/SO_2		25	12/29/08	11:25	01/29/2009	11:10	
H_2S/SO_2		26	12/29/08	12:30	01/29/2009	12:05	
H_2S/SO_2		27	12/29/08	13:20	01/29/2009	12:45	
$SO_2/NO_2/O_3$		28	12/30/08	13:50	01/30/2009	13:30	
$H_2S/SO_2/NO_2/O_3$		29	12/29/08	15:30	01/29/2009	15:25	
$H_2S/SO_2/NO_2/O_3$		14A	12/29/08	10:10	01/29/2009	12:20	
$H_2S/SO_2/NO_2/O_3$		22A	12/29/08	11:50	01/29/2009	15:05	