Lakeland Industry & Community Association

Cold Lake Monitoring Site
Ambient Air Monitoring
Data Report
For
March 2009

Prepared By:

Maxxam Analytics

Driven by Service and Science

April 24, 2009

Lakeland Industry & Community Association
Ambient Air Monitoring

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Introduction

The following Ambient Air Monitoring report was prepared for:

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

Monitoring Location: Cold Lake
Data Period: March 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 – March 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	0.24	6	5	12	15.9	336(NNW)	1.2	12	99.7
TRS (PPB)	-	-	-	-	0.00	0	ALL	ALL	VAR	VAR	0.0	ALL	99.7
NO_2 (PPB)	212	106	0	0	5.84	40	24	5	1.3	87(E)	18.2	4	99.7
NO (PPB)	-	-	-	-	1.65	77	18	7	0.5	25(NNE)	7.9	18	99.7
NOx (PPB)	-	-	-	-	7.86	114	18	7	0.5	25(NNE)	20.6	4	99.7
O_3 (PPB)	82	-	0	-	35.38	59	27	15	11.5	228(SW)	48.0	28	99.7
THC (PPM)	-	-	-	-	1.84	3.0	10	8	1.1	264(W)	2.2	1, 26	96.0
PM 2.5 (UG/M^3)	-	30	-	0	7.15	39.6	11	7	0.8	248(WSW)	16.2	4	92.2
TEMPERATURE (DEG C)	-	-	-	-	-10.18	8.8	13	15	4.9	254(WSW)	2.8	31	99.7
RELATIVE HUMIDITY (%)	-	-	-	-	65.86	94.5	13	23	5.7	34(NE)	85.0	14	99.7
VECTOR WS (KPH)	-	-	-	-	6.39	19.3	8	9	-	314(NW)	14.4	8	99.7
VECTOR WD (DEGREES)	-	-	-	-	354(N)	-	-	-	-	-	-	-	99.7

VAR-VARIOUS

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

Passive Ambient Monitoring Network – March 2009

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION PASSIVE NETWORK			
NETWORK MAXIMUM			NETWORK AVERAGE
PARAMETER	STATION	READING (PPB)	READING (PPB)
NO_2	#28	8.2	2.1
SO_2	#27	1.3	0.8
H_2S	#3	0.19	0.15
O_3	#17 (duplicate)	50.6	38.4

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. Following the as found points, an attempt to upgrade the firmware of the SO2 analyzer was performed, but the communication program could not operate on the analyzer properly; will correct program issues and try again next month; not a critical issue. The inlet filter was changed before the monthly calibration was started. Two hours of data were invalidated for an unknown episode causing the analyzer instability on March 23rd. 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. Two hours of data were invalidated for an unknown episode causing the analyzer instability on March 23rd.

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

The pump diaphragm was replaced following the as found points on March 3rd. The analyzer was allowed time to stabilize then relit. A full calibration was performed on March 4th. The result of the calibration showed that the linearity is passable but poor. The analyzer is due for FID rebuild; will perform the rebuild once all parts are acquired. The analyzer was flamed-out on March 23rd, and it was re-lit on March 24th. A total of 24 hours of data was invalidated due to this issue. Two hours of data were invalidated for an unknown episode causing the analyzer flamed-out on March 23rd. The inlet filter was changed before the monthly calibration was started. Data was corrected using daily zero information.

General Monthly Summary - Cold Lake

AQM STATION – LICA – COLD LAKE

Nitrogen Dioxide (PPB)

- Analyzer make / model - TECO 42C

No operational issues observed during the month. The NO2 pump was replaced following the as found points on March 4th. The pump that was in use with the analyzer had failed prematurely on 2 occasions. The replacement was supplied by Maxxam. Both the expected NO2 value and the expected NOx value were changed on March 08th. The inlet filter was changed before the monthly calibration was started. The pump diaphragm in the zero span system was replaced, and a new NO2 permeation tube was installed on March 4th. Two hours of data were invalidated for an unknown episode causing the analyzer instability on March 23rd. Data was corrected using daily zero information.

Ozone (PPB)

- Analyzer make / model - TECO 49I

No operational issues observed during the month. The inlet filter was changed before the monthly calibration was started. Two hours of data were invalidated for an unknown episode causing the analyzer instability on March 23rd.

Particulate Matter 2.5 (ug/m^3)

- Analyzer make / model –TEOM1405F

No operational issues observed during this month. A removal audit on the 1405F was performed on March 26th; the unit was being shipped to distributor for a manufacturer recall repair. A replacement 1405F was installed on the same day. The replacement has been through a manufacturers recall and has had the latest version of firmware installed. A new TEOM and 47mm FDMS filters was installed, and a leak check was performed on March 26th. The analyzer was put in the Maintenance mode overnight for it stability. An installation audit was performed on March 27th. Ambient temperature and ambient pressure on the 1405F calibrations were also performed during the same day. 18 hours of data were invalidated during this maintenance. Two hours of data were invalidated for an unknown episode causing the analyzer instability on March 23rd. 40 hours of data were invalidated as it was below –3.0 ug/m^3.

General Monthly Summary - Cold Lake

AQM STATION – LICA – COLD LAKE

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. Two hours of data were invalidated for an unknown episode causing the analyzer instability on March 23rd.

Relative Humidity (PERCENT)

- System make / model - Rotronic Hygroclip-S3

No operational issues observed during the month. Two hours of data were invalidated for an unknown episode causing the analyzer instability on March 23rd.

Ambient Temperature (DEGC)

- System make / model - Rotronic Hygroclip-S3

No operational issues observed during the month. Two hours of data were invalidated for an unknown episode causing the analyzer instability on March 23rd.

Trailer Temperature (DEGC)

- System make / model - R&R 61

No operational issues observed during the month. Two hours of data were invalidated for an unknown episode causing the analyzer instability on March 23rd.

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. Two hours of data were invalidated for an unknown episode causing the analyzer instability on March 23rd.

General Monthly Summary - Cold Lake

AQM STATION – LICA – COLD LAKE

Trailer
A Model 910A canister sampler, which purchased by LICA, was dropped-off to be used for VOC sampling in near future.

Air Quality Index (AQI)
The AQI data was adjusted to reflect regular monthly and daily calibrations, maintenance, and downtime. 39 hours of fair AQI values recorded in March 2009; 35 hours of fair AQI values were due to Ozone and 2 hours were due to PM2.5. The highest hourly concentration of PM2.5 was 39.6 UG/M3 and an AQI value of 31 on March 11th, hour 7. The highest hourly concentration of Ozone was 59.0 ppb and an AQI value of 33 on March 27th, hour 15.

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*

MARCH 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	19	19	17	16	16	17	16	17	18	19	20	20	21	21	21	21	19	17	17	-	12	14	18	19	21
	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	**NA**	O3_	O3_	O3_	O3_	O3_
2	21	20	17	20	20	16	9	13	18	20	21	22	22	23	24	24	25	24	-	23	24	24	25	25	25
	O3_	O3_	O3_	O3_	O3_	O3_	PM2	PM2	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	**NA**	O3_	O3_	O3_	O3_	O3_	O3_
3	24	23	19	22	22	19	19	16	21	22	23	24	24	23	23	22	21	-	21	20	20	20	18	19	24
	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	**NA**	O3_	O3_	O3_	O3_	O3_	O3_	O3_
4	18	17	16	15	14	15	15	-	-	-	-	-	-	-	-	-	-	20	6	4	13	21	20	15	21
	O3_	O3_	PM2	O3_	O3_	O3_	O3_	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	PM2	O3_	PM2	PM2	PM2	PM2	PM2	O3_
5	15	20	20	20	-	20	20	20	20	20	-	21	-	-	-	-	20	21	21	20	20	20	18	17	21
	O3_	O3_	O3_	O3_	**NA**	O3_	O3_	O3_	O3_	O3_	**NA**	O3_	**NA**	**NA**	**NA**	**NA**	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_
6	15	12	10	11	11	11	9	7	9	14	17	18	-	-	-	21	-	21	21	20	-	19	20	20	21
	O3_	O3_	O3_	O3_	O3_	O3_	O3_	PM2	O3_	O3_	O3_	O3_	**NA**	**NA**	**NA**	O3_	**NA**	O3_	O3_	O3_	**NA**	O3_	O3_	O3_	O3_
7	20	20	20	20	20	20	20	20	20	20	20	20	20	-	20	19	19	18	18	17	17	16	17	16	20
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8	18	19	18	-	18	19	-	19	19	19	19	20	-	20	20	20	20	-	19	19	18	17	16	14	20
	O3_	O3_	O3_	**NA**	O3_	O3_	**NA**	O3_	O3_	O3_	O3_	O3_	**NA**	O3_	O3_	O3_	O3_	**NA**	O3_	O3_	O3_	O3_	O3_	O3_	O3_
9	13	12	10	9	7	5	8	7	4	4	5	-	8	8	10	10	9	11	8	7	10	5	6	5	13
	O3_	O3_	O3_	O3_	O3_	PM2	PM2	PM2	PM2	PM2	PM2	**NA**	PM2	PM2	PM2	O3_	O3_	PM2	O3_	O3_	PM2	PM2	PM2	PM2	O3_
10	6	4	9	9	4	4	6	7	8	9	-	12	13	14	15	15	15	14	13	14	13	13	11	10	15
	PM2	PM2	PM2	PM2	PM2	PM2	PM2	PM2	PM2	O3_	**NA**	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_
11	10	10	-	9	8	16	28	31	18	-	14	15	16	17	18	19	18	17	16	14	14	11	11	11	31
	O3_	O3_	**NA**	O3_	O3_	PM2	PM2	PM2	PM2	**NA**	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	PM2	PM2	O3_	O3_	O3_
12	12	11	10	14	9	10	15	15	-	19	21	21	22	23	23	24	23	22	22	22	21	20	-	-	24
	O3_	O3_	O3_	PM2	PM2	PM2	O3_	O3_	**NA**	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	**NA**	**NA**	O3_
13	18	16	18	20	19	18	16	-	17	18	19	20	20	21	-	22	-	19	-	20	20	20	18	19	22
	O3_	O3_	O3_	O3_	O3_	O3_	O3_	**NA**	O3_	O3_	O3_	O3_	O3_	O3_	**NA**	O3_	**NA**	O3_	**NA**	O3_	O3_	O3_	O3_	O3_	O3_
14	20	20	20	20	20	19	-	19	20	20	20	20	20	20	20	19	20	20	19	19	19	19	18	18	20
	O3_	O3_	O3_	O3_	O3_	O3_	**NA**	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_
15	19	19	19	19	19	-	19	19	19	19	19	19	19	19	18	18	18	17	16	17	17	17	17	17	19
	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_
16	17	17	16	16	-	16	16	15	14	14	15	16	17	17	18	18	18	17	16	16	16	16	14	11	18
	O3_	O3_	O3_	O3_	**NA**	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	PM2	O3_	O3_	O3_	O3_	O3_	O3_	O3_
17	11	8	9	-	7	6	4	9	13	15	17	18	18	19	19	19	18	17	17	16	10	7	8	7	19
	O3_	O3_	O3_	**NA**	O3_	PM2	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_
18	8	6	-	4	4	8	6	8	14	15	16	16	17	19	20	20	20	21	21	21	21	21	22	22	22
	PM2	O3_	**NA**	PM2	PM2	PM2	PM2	PM2	PM2	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_
19	22	-	22	21	20	14	10	13	18	19	19	20	21	22	23	24	24	24	11	17	22	21	20	19	24
	O3_	**NA**	O3_	O3_	O3_	O3_	PM2	PM2	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	PM2	PM2	O3_	O3_	O3_	O3_	O3_
20	-	24	23	23	23	22	20	18	22	23	23	23	24	24	23	24	23	23	23	23	23	-	23	-	24
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21	24	-	24	24	-	24	24	23	21	22	22	23	23	23	23	23	23	22	22	22	22	22	-	22	24
	O3_	**NA**	O3_	O3_	**NA**	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	**NA**	O3_	O3_
22	22	23	-	23	23	22	21	21	-	-	20	-	20	20	20	20	22	21	21	21	21	-	20	20	23
	O3_	O3_	**NA**	O3_	O3_	O3_	O3_	O3_	**NA**	**NA**	O3_	**NA**	O3_	O3_	O3_	O3_	PM2	O3_	O3_	O3_	O3_	**NA**	O3_	O3_	O3_
23	19	18	-	16	17	17	15	15	16	15	17	18	19	21	-	24	-	-	-	-	-	18	11	12	24
	O3_	O3_	**NA**	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	**NA**	O3_	**NA**	**NA**	**NA**	**NA**	**NA**	PM2	O3_	O3_	O3_
24	11	10	8	4	5	7	10	13	13	20	21	22	23	23	23	23	23	-	17	-	11	15	22	22	23
	PM2	PM2	PM2	O3_	PM2	PM2	PM2	PM2	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	**NA**	O3_	**NA**	O3_	O3_	O3_	O3_
25	21	21	17	16	15	14	18	19	21	22	22	23	24	24	-	25	24	-	-	22	17	14	11	11	25
	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	**NA**	O3_	O3_	**NA**	**NA**	O3_	O3_	O3_	O3_	O3_	O3_
26	9	8	10	12	11	9	7	10	14	23	24	-	-	-	-	-	-	-	-	-	-	-	-	-	24
	O3_	O3_	O3_	O3_	O3_	O3_	PM2	PM2	O3_	O3_	O3_	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	O3_
27	-	-	-	-	-	-	-	-	-	-	21	22	23	25	30	33	-	28	-	27	-	25	25	24	33
	NA	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	O3_	O3_	O3_	O3_	O3_	O3_	**NA**	O3_	**NA**	O3_	**NA**	O3_	O3_	O3_	O3_
28	24	25	24	23	23	21	20	22	22	23	24	26	28	29	30	-	30	-	26	26	26	25	22	17	30
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29	18	14	12	8	8	5	5	13	18	21	24	25	25	25	-	24	24	23	21	20	18	15	18	13	25
	O3_	O3_	O3_	O3_	O3_	PM2	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	**NA**	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_
30	8	7	8	8	6	6	3	11	21	23	25	27	28	-	29	29	31	30	29	28	26	25	24	24	31
	O3_	O3_	O3_	O3_	O3_	PM2	PM2	PM2	O3_	O3_	O3_	O3_	O3_	**NA**	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_
31	24	24	24	23	22	20	17	21	23	24	25	25	-	31	29	29	31	31	29	23	24	23	20	22	31
	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	**NA**	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_
PEAK	24	25	24	24	23	24	28	31	23	24	25	27	28	31	30	33	31	31	29	28	26	25	25	25	
	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)	37	5.0%	33	15	27	2	0.3%	31	7	11	0	0.0%	-	-	-	0	0.0%	-	-	-	39	5.2%
GOOD (1-25)	537	72.2%	-	-	-	68	9.1%	-	-	-	0	0.0%	-	-	-	0	0.0%	-	-	-	605	81.3%
OVERALL	574	77.2%	-	-	-	70	9.4%	-	-	-	0	0.0%	-	-	-	0	0.0%	-	-	-	644	86.6%
UNAVAILABLE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100	13.4%

Sulphur Dioxide

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

MARCH 2009

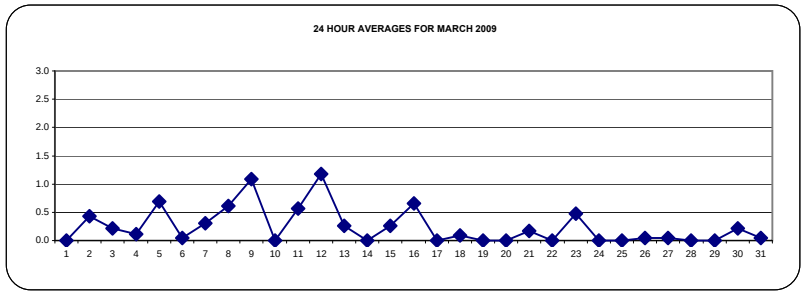
SULPHUR DIOXIDE (SO_2) hourly averages in ppb

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

STATUS FLAG CODES

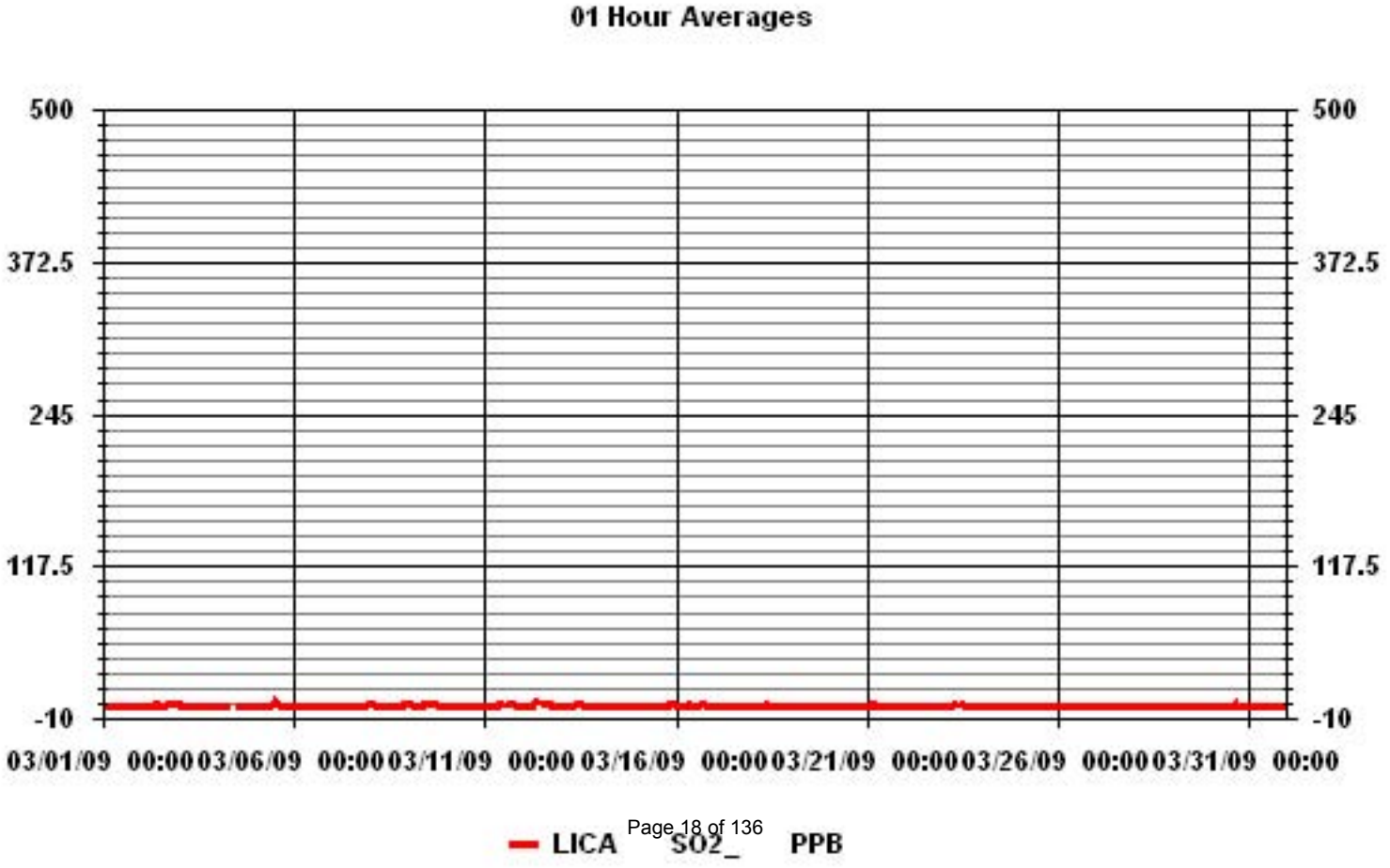
S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	- MAINTENANCE
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE



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:	109					
MAXIMUM 1-HR AVERAGE:	6	PPB	@ HOUR(S)	12	ON DAY(S)	5
MAXIMUM 24-HR AVERAGE:	1.2	PPB			ON DAY(S)	12
IZS CALIBRATION TIME:	32	HRS	OPERATIONAL TIME:		742	HRS
MONTHLY CALIBRATION TIME:	6	HRS	AMD OPERATION UPTIME:		99.7	%
STANDARD DEVIATION:	0.69		MONTHLY AVERAGE:		0.24	PPB


01 Hour Averages
500
372.5
245
117.5
-10
03/01/09 00:00
03/06/09 00:00
03/11/09 00:00
03/16/09 00:00
03/21/09 00:00
03/26/09 00:00
03/31/09 00:00
LICA SO2_ PPB

LICA
SO2_ / WDR Joint Frequency Distribution (Percent)

March 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	2.55	6.25	5.25	5.82	14.63	6.53	9.80	1.84	1.13	1.70	16.61	9.80	3.83	3.12	6.81	4.26	100.00
<	60	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
<	110	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
<	170	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
<	340	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
>=	340	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
	Totals	2.55	6.25	5.25	5.82	14.63	6.53	9.80	1.84	1.13	1.70	16.61	9.80	3.83	3.12	6.81	4.26	

Calm : .00 %

Total # Operational Hours : 704

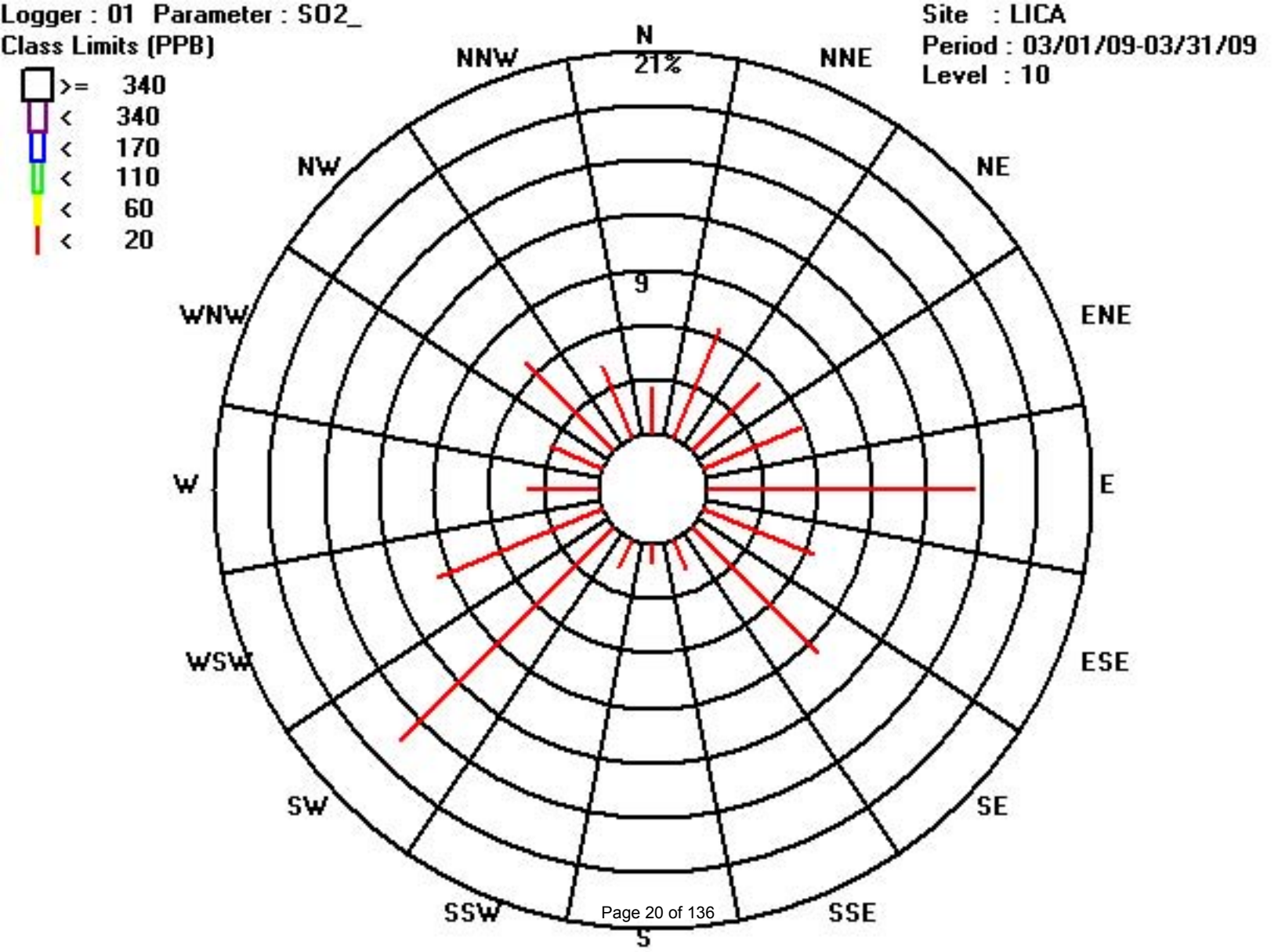
Distribution By Samples

Direction

	Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
<	20	18	44	37	41	103	46	69	13	8	12	117	69	27	22	48	30	704
<	60																	
<	110																	
<	170																	
<	340																	
>=	340																	
	Totals	18	44	37	41	103	46	69	13	8	12	117	69	27	22	48	30	

Calm : .00 %

Total # Operational Hours : 704


Logger : 01 Parameter : SO2_
Class Limits (PPB)
>= 340
< 340
< 170
< 110
< 60
< 20
Site : LICA
Period : 03/01/09-03/31/09
Level : 10
N
21%
NNE
NE
ENE
E
ESE
SE
SSE
S
SSW
SW
WSW
W
WNW
NW
NNW
9

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

MARCH 2009

SULPHUR DIOXIDE MAX instantaneous maximum in ppb

MST

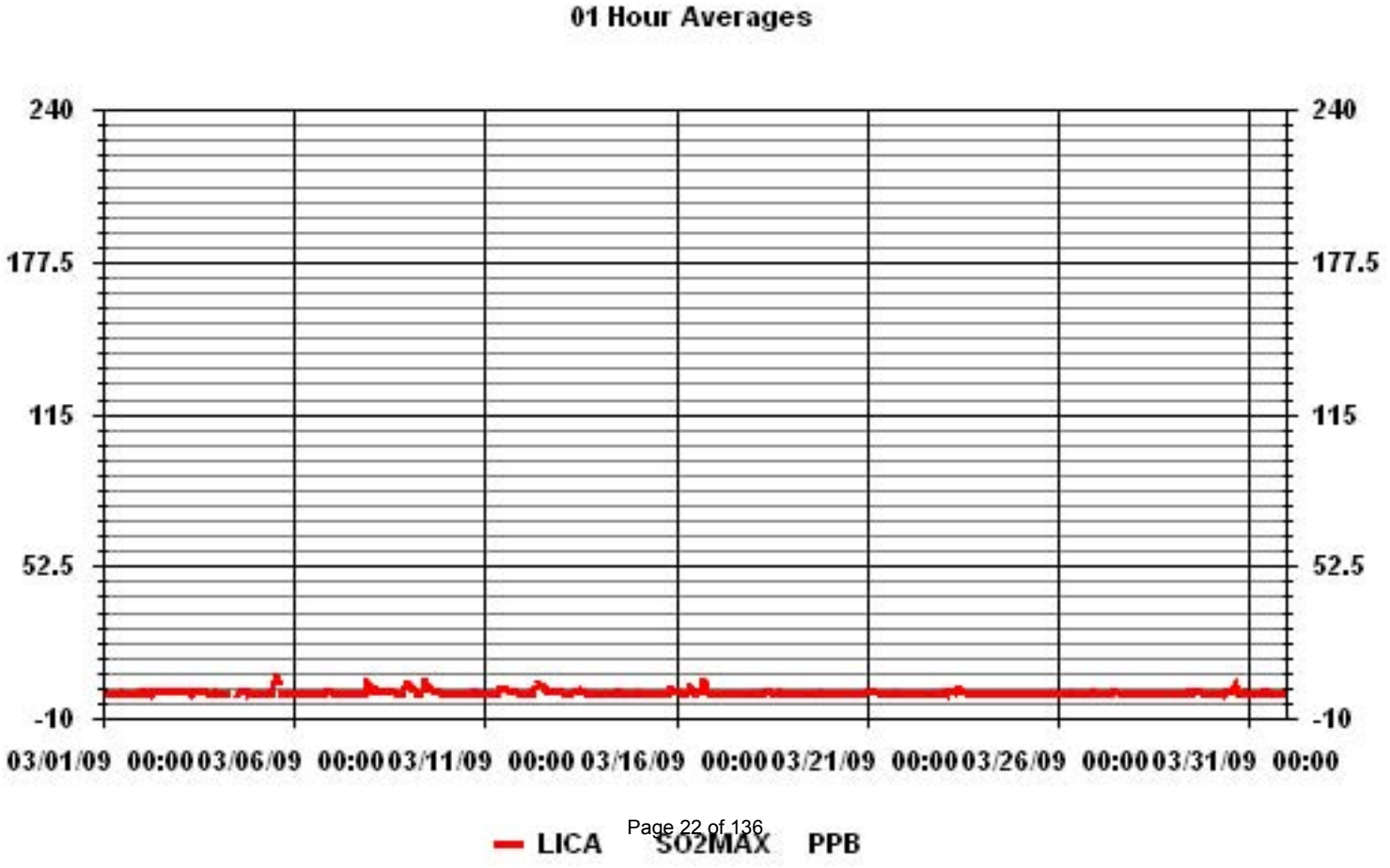
HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	**IZS**	0	0	0	0	1	0.0	24
2	1	1	0	0	1	1	0	1	1	1	1	1	1	1	1	1	1	1	**IZS**	1	1	1	1	1	1	0.9	24
3	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	**IZS**	0	0	0	0	1	1	1	0.8	24
4	1	0	0	0	0	0	0	**C**	**C**	**C**	**C**	**C**	**C**	0	1	2	**IZS**	2	0	1	0	0	0	0	2	0.4	24
5	0	0	0	0	0	0	0	0	0	0	2	5	**7**	**7**	5	**IZS**	0	0	0	0	0	0	0	0	**7**	1.1	24
6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**IZS**	0	0	0	0	0	1	1	1	1	1	0.2	24
7	1	0	0	0	0	0	0	0	0	0	0	0	0	**IZS**	0	0	0	0	0	0	0	5	5	3	5	0.6	24
8	3	1	1	2	1	1	1	1	1	1	1	1	**IZS**	1	1	1	0	0	0	0	0	3	4	4	4	1.3	24
9	4	3	2	2	0	0	0	0	1	5	5	**IZS**	4	2	2	1	1	1	1	1	0	0	0	0	5	1.5	24
10	0	0	0	0	0	0	0	0	0	0	**IZS**	0	0	0	0	0	0	1	1	1	0	0	0	0	1	0.1	24
11	0	0	0	0	0	0	0	0	0	**IZS**	2	2	2	2	2	1	1	**P**	1	1	1	0	0	0	2	0.7	23
12	0	0	0	0	0	0	2	3	**IZS**	5	4	4	3	3	2	1	1	1	1	1	1	1	1	1	5	1.5	24
13	1	1	0	0	0	0	1	**IZS**	1	1	1	2	1	1	1	0	0	0	0	0	0	0	0	0	2	0.5	24
14	0	0	0	0	0	0	**IZS**	0	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	1	0.2	24
15	1	0	0	0	0	**IZS**	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	2	2	1	2	0.4	24
16	1	1	1	0	**IZS**	0	0	1	3	3	1	0	0	1	1	1	2	5	5	1	1	0	0	0	5	1.2	24
17	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
18	0	0	**IZS**	0	0	0	0	1	1	1	1	1	0	0	0	0	0	1	1	0	0	0	0	0	1	0.3	24
19	0	**IZS**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0.0	24
20	**IZS**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**IZS**	0	0.0	24
21	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	**IZS**	0	1	0.3	24
22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**IZS**	0	0	0	0.0	24
23	1	1	0	1	1	1	1	2	1	2	2	2	1	1	0	0	**N**	**N**	0	0	**IZS**	0	0	0	2	0.8	22
24	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
25	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
26	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	**IZS**	0	0	0	1	1	1	1	0.2	24
27	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0	0	**IZS**	0	0	0	0	0	0	0	1	0.2	24
28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**IZS**	0	0	0	0	0	0	0	0	0	0.0	24
29	0	0	0	0	0	0	0	0	0	0	1	1	0	0	**IZS**	1	1	1	1	0	0	0	0	0	1	0.3	24
30	0	0	0	0	0	0	0	1	0	1	1	1	2	**IZS**	3	4	1	0	0	0	0	0	1	1	4	0.7	24
31	0	0	0	0	0	0	0	0	0	1	1	1	**IZS**	0	0	0	0	0	0	0	0	0	0	0	1	0.1	24
HOURLY MAX	4	3	2	2	1	1	2	3	3	5	5	5	7	7	5	4	2	5	5	1	2	5	5	4			
HOURLY AVG	0.5	0.3	0.2	0.2	0.2	0.2	0.2	0.4	0.3	0.8	0.9	0.9	0.9	0.8	0.7	0.5	0.3	0.5	0.4	0.3	0.2	0.5	0.6	0.5			

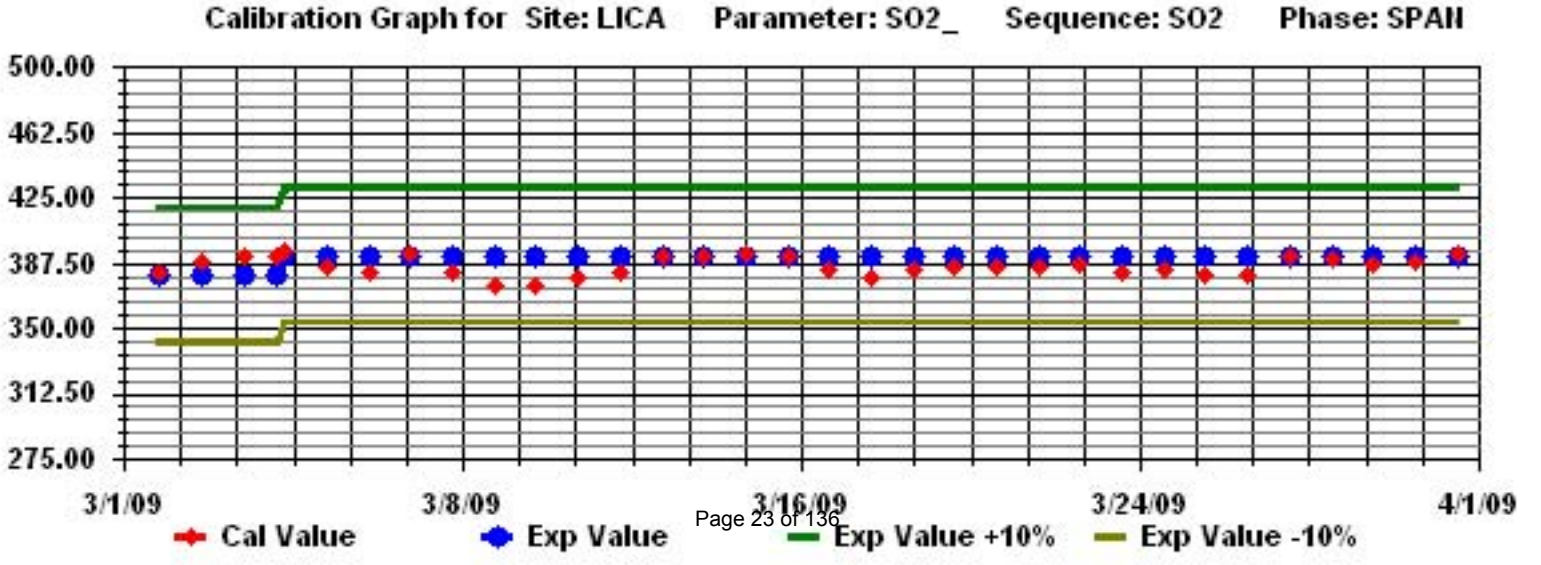
STATUS FLAG CODES

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

MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:	211					
MAXIMUM INSTANTANEOUS VALUE:	7	PPB	@ HOUR(S)	12, 13	ON DAY(S)	5
IZS CALIBRATION TIME:	32	HRS	OPERATIONAL TIME:		741	HRS
MONTHLY CALIBRATION TIME:	6	HRS				
STANDARD DEVIATION:	0.95					


01 Hour Averages
240
177.5
115
52.5
-10
03/01/09 00:00
03/06/09 00:00
03/11/09 00:00
03/16/09 00:00
03/21/09 00:00
03/26/09 00:00
03/31/09 00:00
LICA SO2MAX PPB


Calibration Graph for Site: LICA Parameter: SO2_ Sequence: SO2 Phase: SPAN
500.00
462.50
425.00
387.50
350.00
312.50
275.00
3/1/09
3/8/09
3/16/09
3/24/09
4/1/09
Cal Value
Exp Value
Exp Value +10%
Exp Value -10%

Total Reduced Sulphur

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

MARCH 2009

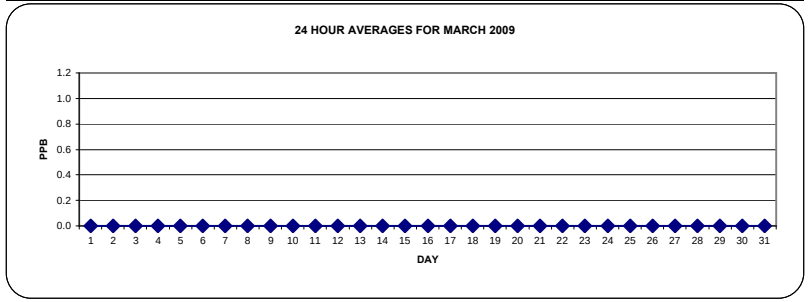
TOTAL REDUCED SULPHUR (TRS) hourly averages in ppb

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

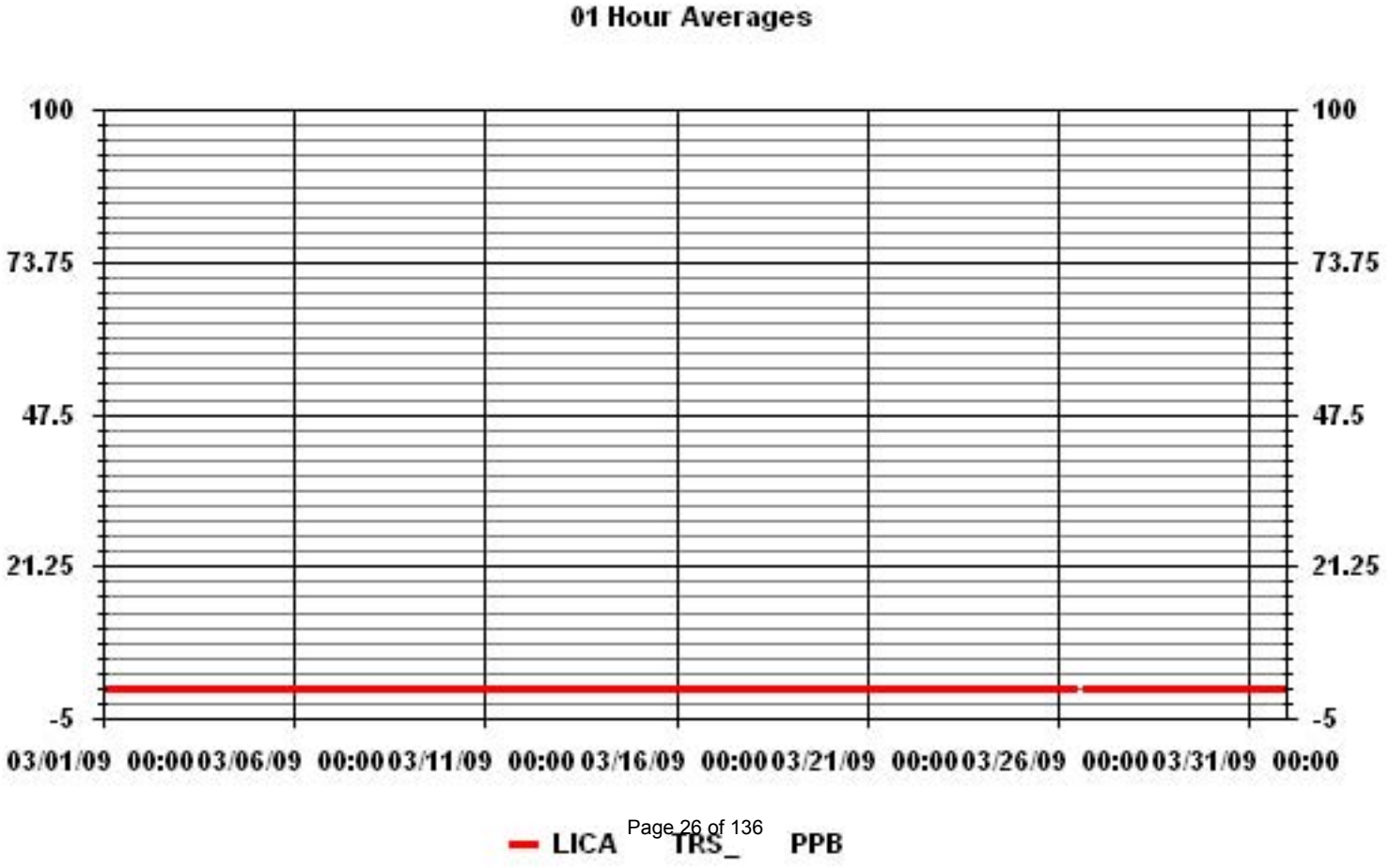


OBJECTIVE LIMIT: **ALBERTA ENVIRONMENT:** 1-HR 172 PPB | 24-HR 57 PPB

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:	32	HRS	OPERATIONAL TIME:	742	HRS
MONTHLY CALIBRATION TIME:	5	HRS	AMD OPERATION UPTIME:	99.7	%
STANDARD DEVIATION:	0.00		MONTHLY AVERAGE:	0.00	PPB


01 Hour Averages
100
73.75
47.5
21.25
-5
03/01/09 00:00
03/06/09 00:00
03/11/09 00:00
03/16/09 00:00
03/21/09 00:00
03/26/09 00:00
03/31/09 00:00
LICA TRS_ PPB

LICA
TRS_ / WD Joint Frequency Distribution (Percent)

March 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	2.55	6.24	5.24	5.81	14.60	6.52	9.78	1.98	1.13	1.70	16.87	9.50	3.82	3.12	6.80	4.25	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	2.55	6.24	5.24	5.81	14.60	6.52	9.78	1.98	1.13	1.70	16.87	9.50	3.82	3.12	6.80	4.25	

Calm : .00 %

Total # Operational Hours : 705

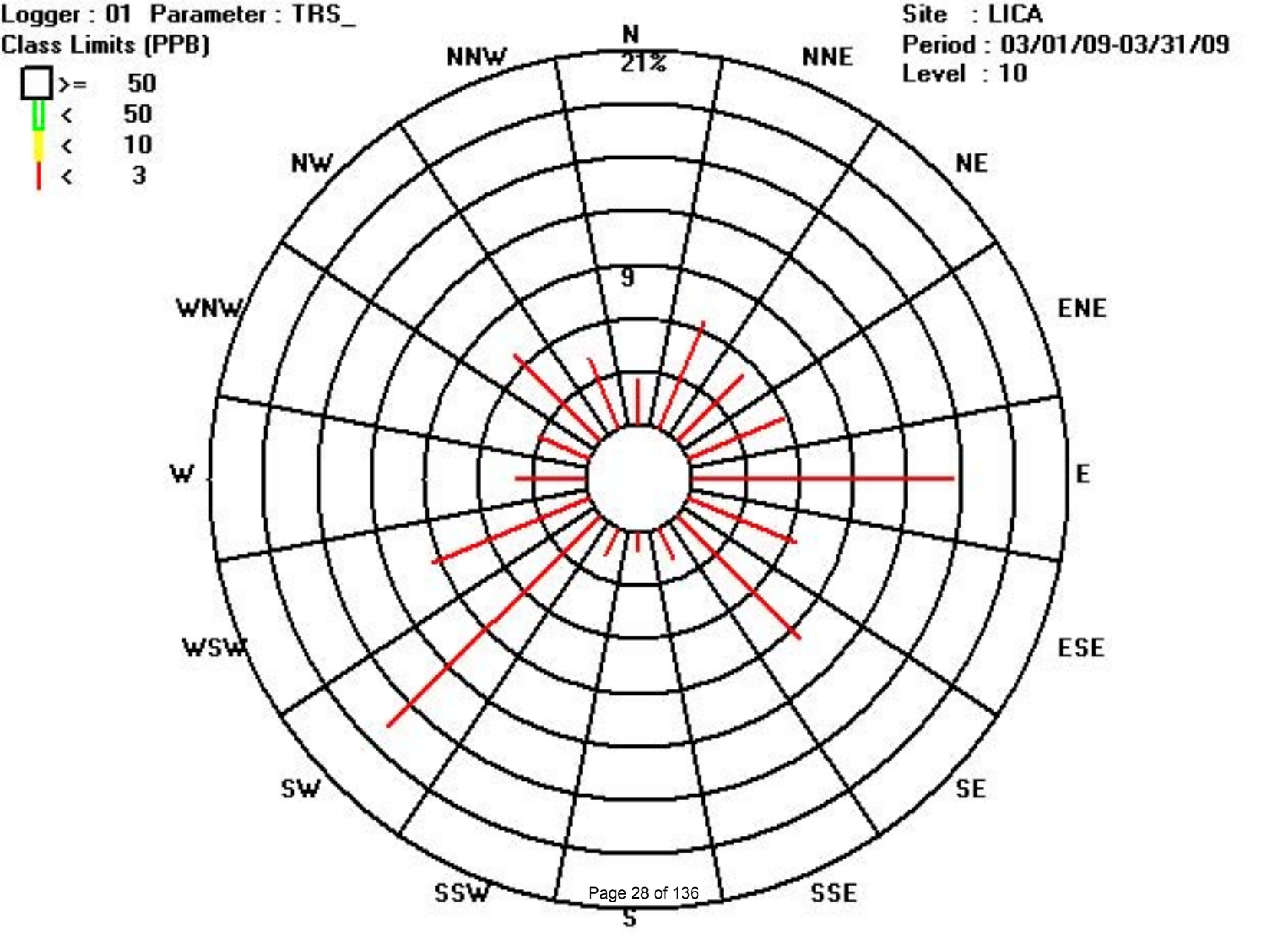
Distribution By Samples

Direction

	Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
<	3	18	44	37	41	103	46	69	14	8	12	119	67	27	22	48	30	705
<	10																	
<	50																	
>=	50																	
	Totals	18	44	37	41	103	46	69	14	8	12	119	67	27	22	48	30	

Calm : .00 %

Total # Operational Hours : 705


Logger : 01 Parameter : TRS_
Class Limits (PPB)
>= 50
< 50
< 10
< 3
Site : LICA
Period : 03/01/09-03/31/09
Level : 10
N
21%
NNE
NE
ENE
E
ESE
SE
SSE
S
SSW
SW
WSW
W
WNW
NW
NNW
9

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

MARCH 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	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0.0	24
2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0.0	24
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0.0	24
4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0.0	24
5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0.0	24
6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0.0	24
7	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0.0	24
8	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
9	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
10	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
11	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	P	0	0	0	0	0	0	0	0.0	23
12	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
13	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
14	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
15	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
16	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
17	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
18	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
19	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
20	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0.0	124
21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0.0	24
22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0.0	24
23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	N	N	0	0	IZS	0	0	0	0	0.0	22
24	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
25	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
26	0	0	0	0	0	0	0	1	0	0	C	C	C	C	C	C	0	IZS	0	0	0	0	0	0	1	0.1	24
27	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
28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0.0	24
29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0.0	24
30	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0.0	24
31	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
HOURLY MAX	0	0	0	0	0	0	0	1	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

MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS: 1

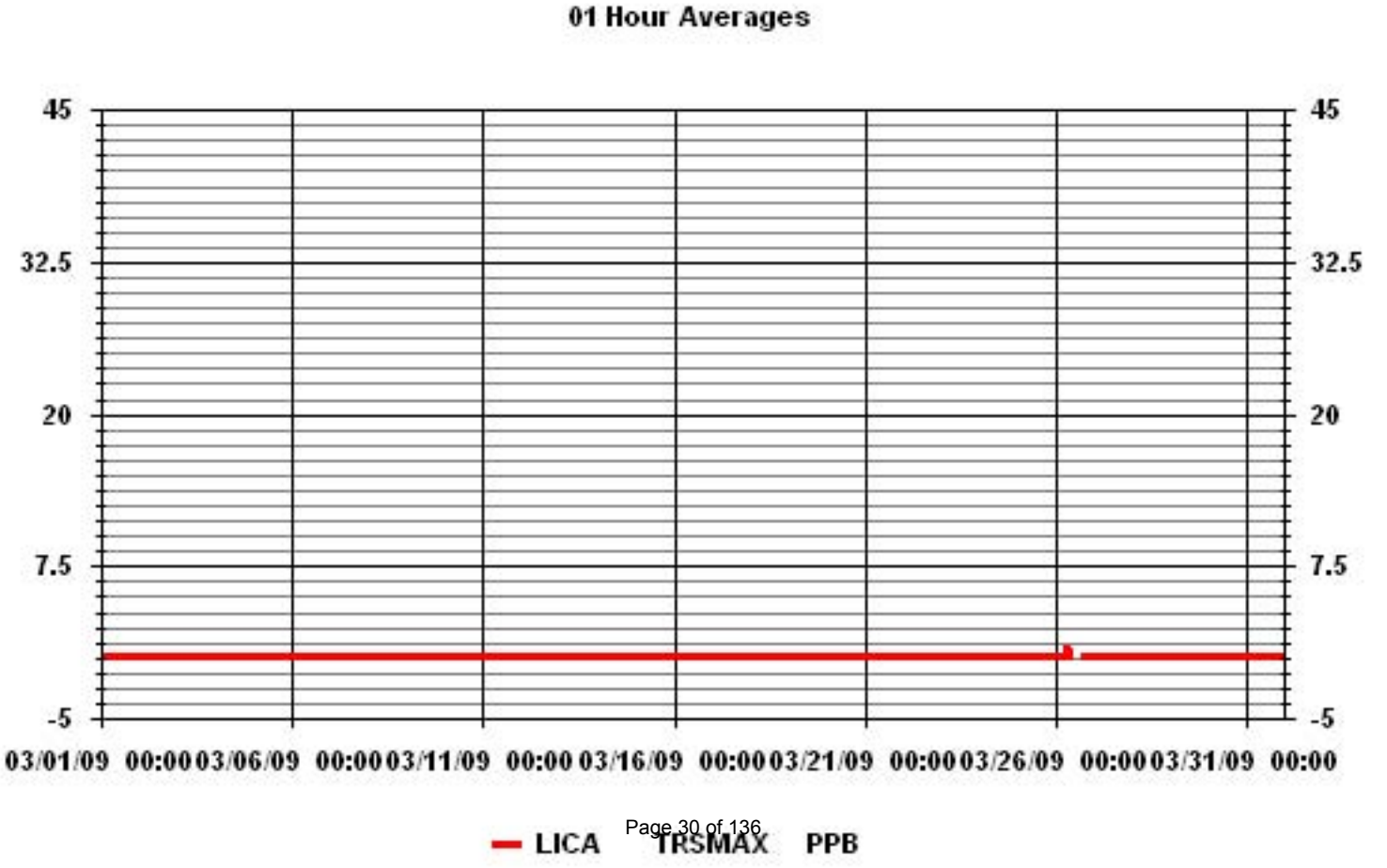
MAXIMUM INSTANTANEOUS VALUE: 1 PPB @ HOUR(S) 7 ON DAY(S) 26

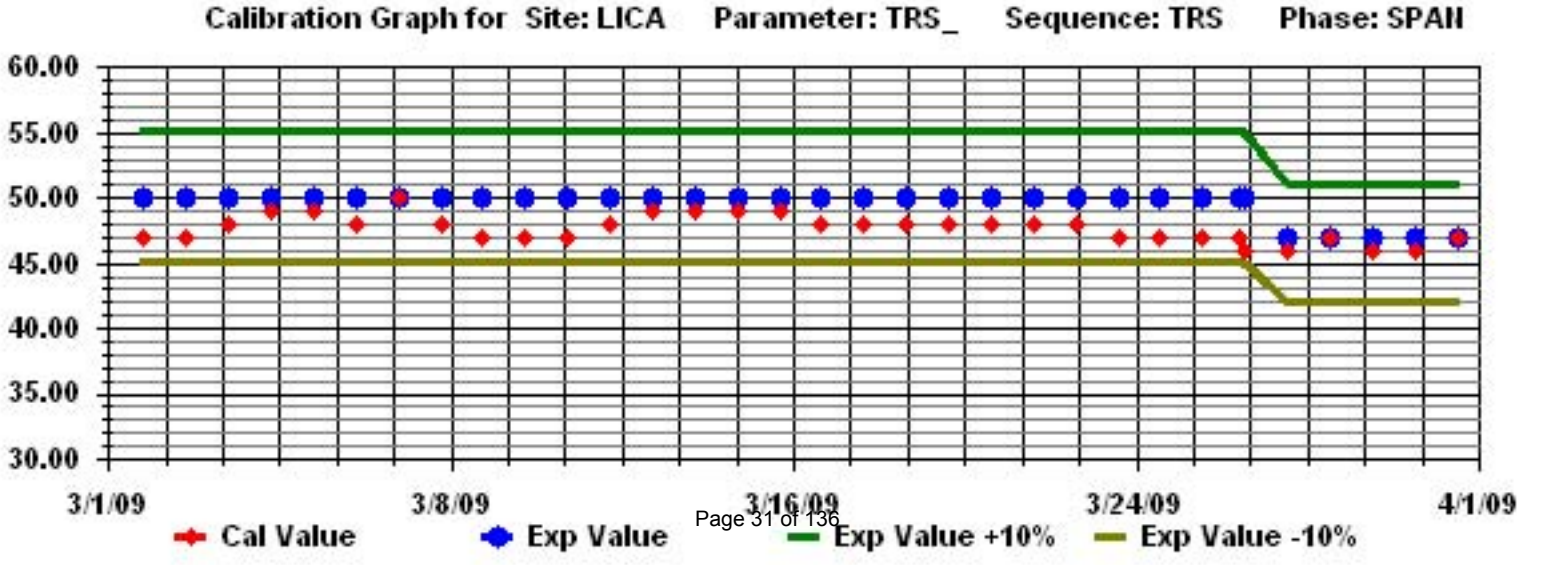
VAR - VARIOUS

IZS CALIBRATION TIME: 32 HRS OPERATIONAL TIME: 841 HRS

MONTHLY CALIBRATION TIME: 6 HRS

STANDARD DEVIATION: 0.04


01 Hour Averages
45
32.5
20
7.5
-5
03/01/09 00:00
03/06/09 00:00
03/11/09 00:00
03/16/09 00:00
03/21/09 00:00
03/26/09 00:00
03/31/09 00:00
LICA
TRSMAX
PPB


Calibration Graph for Site: LICA Parameter: TRS_ Sequence: TRS Phase: SPAN
60.00
55.00
50.00
45.00
40.00
35.00
30.00
3/1/09
3/8/09
3/16/09
3/24/09
4/1/09
Cal Value
Exp Value
Exp Value +10%
Exp Value -10%

Total Hydrocarbons

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

MARCH 2009

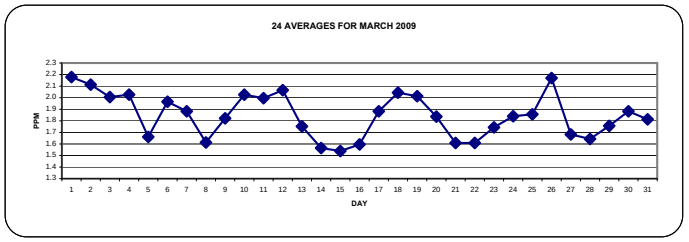
TOTAL HYDROCARBONS (THC) hourly averages in ppm

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	2.3	2.2	2.3	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.2	2.2	2.3	2.2	2.2	**IZS**	2.3	2.2	2.1	2.1	2.3	**2.2**	24
2	2.1	2.2	2.2	2.2	2.2	2.2	2.3	2.3	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2	2	**IZS**	2	2	2	2.1	2	2.3	2.1	24
3	2	2	2.1	2	2	2	2	2	2	2	2	1.9	**C**	**M**	**M**	**C**	**C**	**IZS**	2	2	2	2.1	2	2	2.1	2.0	22
4	2	1.9	1.9	2	2	2	1.9	**C**	**C**	**M**	**M**	**C**	**C**	**C**	**C**	1.8	**IZS**	1.8	2.1	2.2	2.2	2.3	2.2	2.1	2.3	2.0	22
5	1.9	1.8	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	**IZS**	1.6	1.7	1.7	1.7	1.7	1.7	1.8	1.8	1.9	1.7	24
6	1.8	1.9	1.9	1.9	1.9	1.8	1.9	2	2.2	2.7	2.3	2	1.9	1.8	**IZS**	1.8	1.9	1.8	1.8	1.8	1.9	2	2.1	2.1	2.7	2.0	24
7	2	2	1.9	2	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	**IZS**	1.8	1.9	2	2	2.1	2	1.9	1.8	1.8	1.8	2.1	1.9	24
8	1.7	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	**IZS**	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.7	1.7	1.7	1.6	24
9	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.9	1.8	1.7	1.7	**IZS**	1.8	1.8	1.8	1.9	1.9	1.9	1.9	1.9	2	2	2	2	2.0	1.8	24
10	2	2	2.1	2.1	2.1	2.2	2.3	2.6	**3**	2.9	**IZS**	2	1.9	1.8	1.7	1.7	1.7	1.7	1.8	1.8	1.8	1.8	1.8	1.8	**3.0**	2.0	24
11	1.8	1.8	1.9	2	2.1	2.2	2.2	2.2	2.3	**IZS**	2.3	2.1	2.1	2	2	1.8	1.9	1.8	1.9	1.9	1.9	1.9	1.9	1.9	2.3	2.0	24
12	2.1	2.1	2.1	2.2	2.3	2.2	2.1	2	**IZS**	2.1	2.1	2	2	2	1.9	1.9	2	2	2	2	2	2.2	2.1	2.1	2.3	2.1	24
13	2	2	2	1.9	2.1	2.3	2.4	**IZS**	1.9	1.8	1.6	1.6	1.6	1.6	1.6	1.6	1.5	1.6	1.5	1.5	1.5	1.5	1.6	1.6	2.4	1.8	24
14	1.6	1.6	1.6	1.6	1.6	1.5	**IZS**	1.5	1.5	1.5	1.6	1.6	1.5	1.6	1.6	1.5	1.5	1.6	1.5	1.6	1.6	1.6	1.6	1.6	1.6	1.6	24
15	1.6	1.6	1.6	1.6	1.6	**IZS**	1.6	1.5	1.6	1.6	1.6	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.6	1.5	24
16	1.5	1.5	1.5	1.5	**IZS**	1.6	1.5	1.7	1.7	1.6	1.6	1.6	1.6	1.7	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.7	1.7	1.6	24
17	1.9	1.9	2	**IZS**	2.1	2.1	2.2	2.5	2.3	2.1	1.8	1.8	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.8	1.7	1.8	2.5	1.9	24
18	1.8	1.8	**IZS**	2.2	2.2	2.2	2.4	2.5	2.2	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.1	2.2	2.2	2.1	2	2	1.9	1.9	2.5	2.0	24
19	1.9	**IZS**	1.9	1.9	1.9	2	2.3	2.1	2	2	2	2	2	2	2	2	2	2	2.2	2.1	2	2	2	2	2.3	2.0	24
20	**IZS**	1.8	1.8	1.9	1.8	1.8	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	**IZS**	1.9	1.8	24
21	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.7	1.7	1.6	1.6	**IZS**	1.6	1.7	1.6	24
22	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	**IZS**	1.7	1.7	1.7	1.6	24
23	1.7	1.7	1.7	1.8	1.7	1.7	1.8	1.8	1.8	1.8	1.8	1.8	1.7	1.7	1.7	1.7	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	1.8	1.7	16
24	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**M**	**M**	1.6	**IZS**	2	2	1.8	1.8	2.0	1.8	6
25	1.8	1.8	2	2	2	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	**IZS**	1.8	1.9	1.9	2	2	2.0	1.9	24
26	2	2.1	2	2	2.3	2.5	2.7	3	3	2.5	2.4	2.3	2.1	2.1	2.1	2	2	**IZS**	1.7	1.7	1.8	1.8	1.9	1.9	3.0	**2.2**	24
27	1.9	2	1.8	1.7	1.7	1.7	1.7	1.7	1.8	1.8	1.7	1.7	1.7	1.6	1.6	1.6	**IZS**	1.5	1.5	1.5	1.5	1.6	1.7	1.7	2.0	1.7	24
28	1.7	1.7	1.6	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.6	1.6	1.5	1.5	**IZS**	1.5	1.6	1.6	1.7	1.6	1.6	1.7	1.7	1.7	1.6	24
29	1.7	1.9	1.8	2	1.9	2	2	2.1	2	1.7	1.6	1.6	1.6	1.6	**IZS**	1.5	1.6	1.6	1.6	1.6	1.7	1.7	1.7	1.9	2.1	1.8	24
30	2	1.9	1.9	2	2	2.2	2.5	2.5	2.2	2	1.8	1.7	1.7	**IZS**	1.6	1.7	1.7	1.7	1.6	1.6	1.7	1.7	1.8	1.8	2.5	1.9	24
31	1.7	1.8	1.8	1.9	2	2	2	2	2	2	1.9	1.9	**IZS**	1.6	1.6	1.6	1.6	1.6	1.7	1.8	1.9	1.7	1.8	1.8	2.0	1.8	24
HOURLY MAX	2.3	2.2	2.3	2.2	2.3	2.5	2.7	3.0	3.0	2.9	2.4	2.3	2.2	2.2	2.2	2.2	2.3	2.2	2.2	2.2	2.3	2.3	2.2	2.1			
HOURLY AVG	1.8	1.8	1.8	1.9	1.9	1.9	2.0	2.0	2.0	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8			

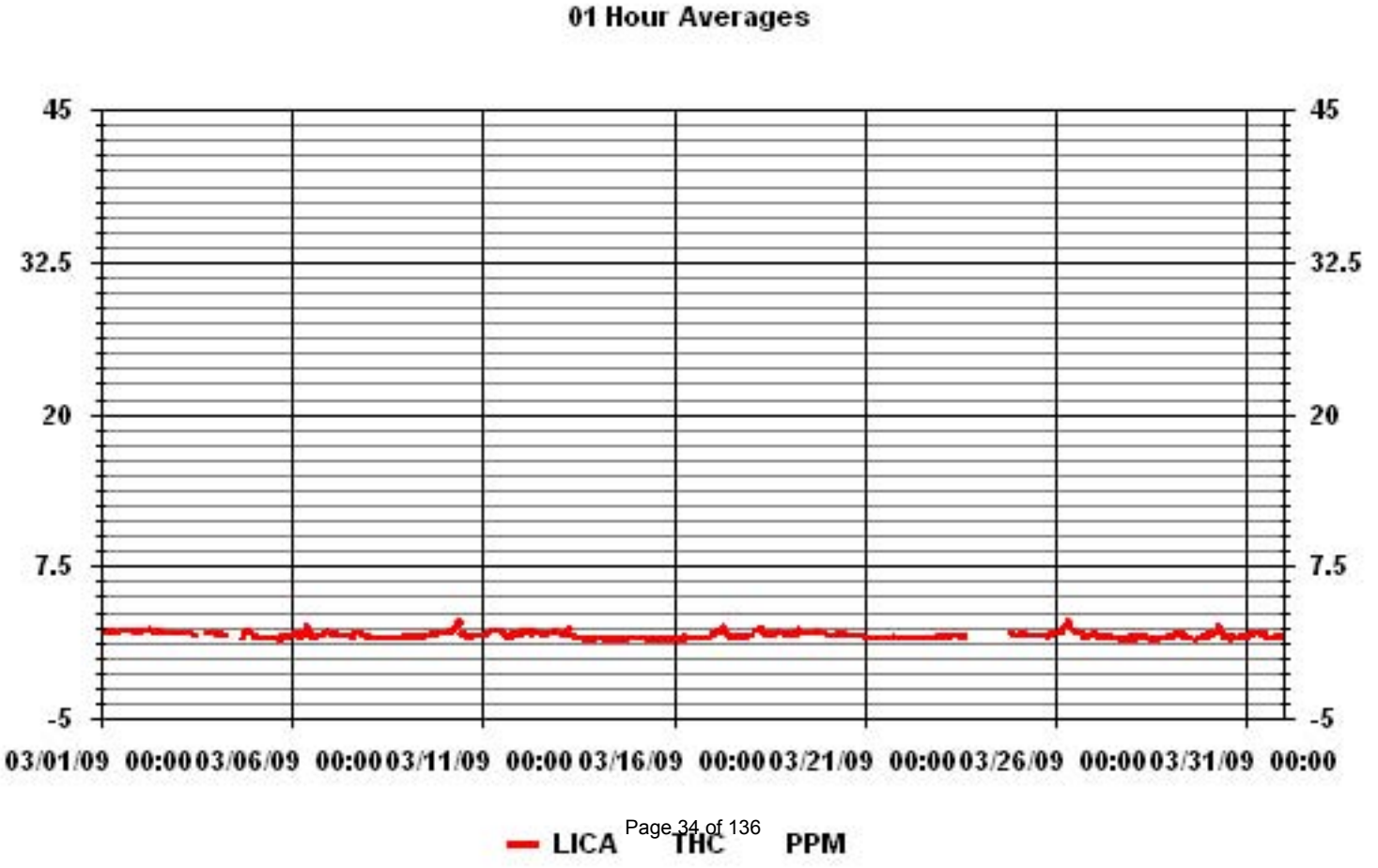
STATUS FLAG CODES

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:	674					
MAXIMUM 1-HR AVERAGE:	3.0	PPM	@ HOUR(S)	8	ON DAY(S)	10
MAXIMUM 24-HR AVERAGE:	2.2	PPM			ON DAY(S)	1, 26
IZS CALIBRATION TIME:	31	HRS	OPERATIONAL TIME:		714	HRS
MONTHLY CALIBRATION TIME:	9	HRS	AMD OPERATION UPTIME:		96.0	%
STANDARD DEVIATION:	0.25		MONTHLY AVERAGE:		1.84	PPM


01 Hour Averages
45
32.5
20
7.5
-5
03/01/09 00:00
03/06/09 00:00
03/11/09 00:00
03/16/09 00:00
03/21/09 00:00
03/26/09 00:00
03/31/09 00:00
LICA THC PPM

LICA
THC / WD Joint Frequency Distribution (Percent)

March 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	2.52	6.23	5.19	5.63	13.20	6.67	10.08	1.78	1.18	1.78	17.06	9.64	3.85	3.26	7.12	4.30	99.55
<	10.0	.00	.00	.00	.00	.14	.00	.00	.00	.00	.00	.00	.14	.14	.00	.00	.00	.44
<	50.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
>=	50.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
	Totals	2.52	6.23	5.19	5.63	13.35	6.67	10.08	1.78	1.18	1.78	17.06	9.79	4.00	3.26	7.12	4.30	

Calm : .00 %

Total # Operational Hours : 674

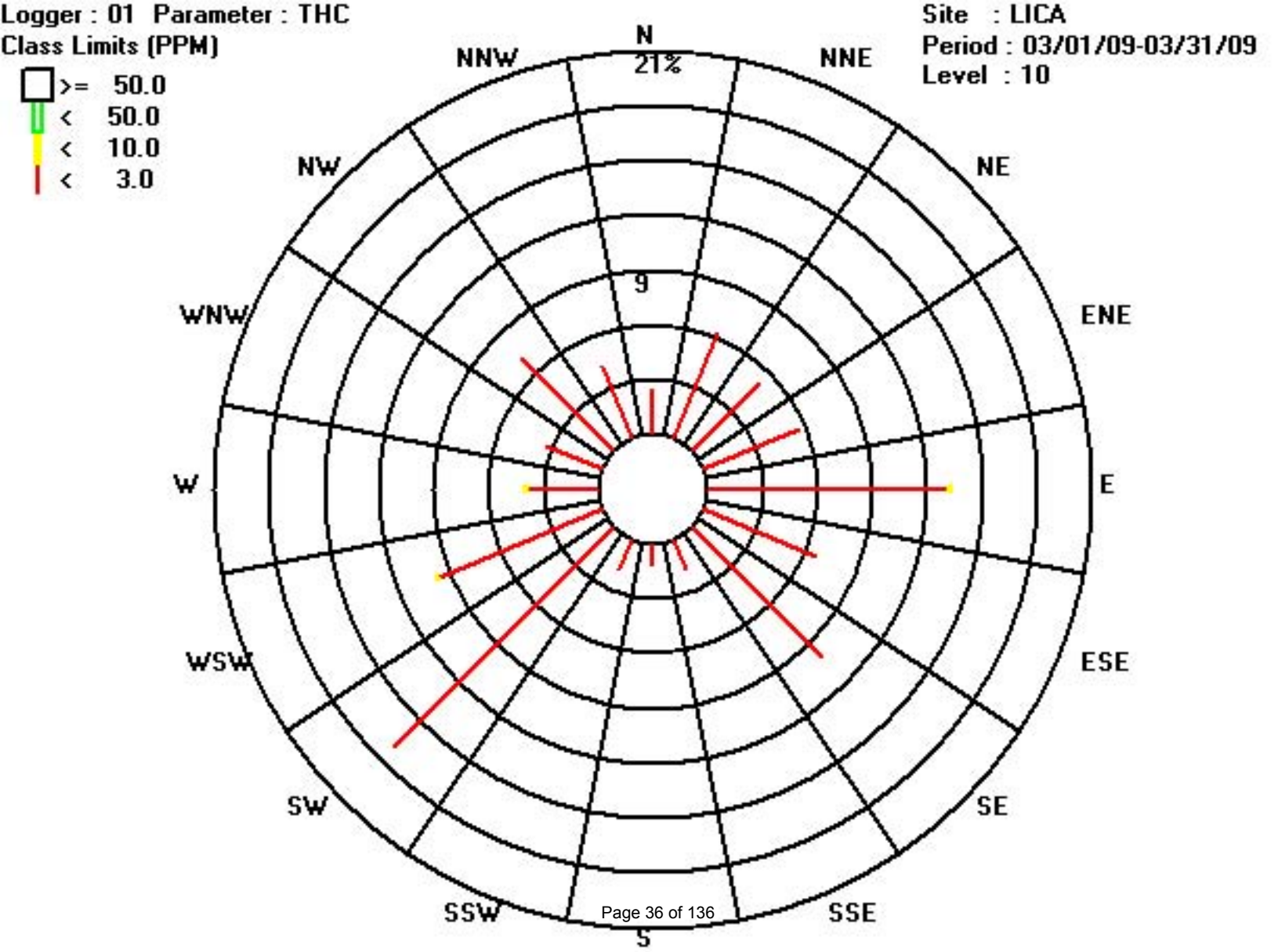
Distribution By Samples

Direction

	Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
<	3.0	17	42	35	38	89	45	68	12	8	12	115	65	26	22	48	29	671
<	10.0					1							1	1				3
<	50.0																	
>=	50.0																	
	Totals	17	42	35	38	90	45	68	12	8	12	115	66	27	22	48	29	

Calm : .00 %

Total # Operational Hours : 674


Logger : 01 Parameter : THC
Class Limits (PPM)
>= 50.0
< 50.0
< 10.0
< 3.0
Site : LICA
Period : 03/01/09-03/31/09
Level : 10
N
21%
NNE
NE
ENE
E
ESE
SE
SSE
S
SSW
SW
WSW
W
WNW
NW
NNW
9

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

MARCH 2009

TOTAL HYDROCARBONS MAX instantaneous maximum in ppm

MST

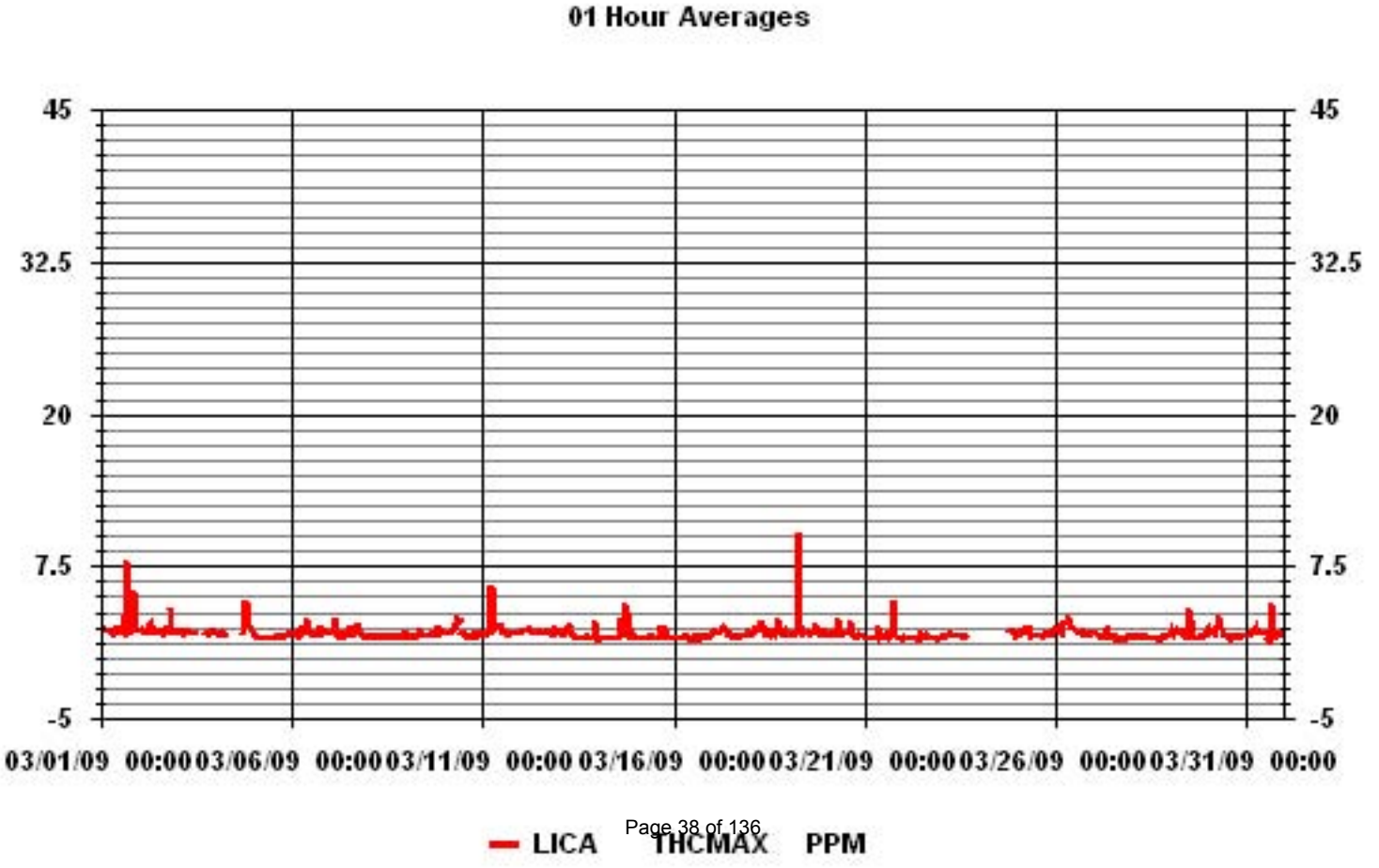
HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	2.4	2.3	2.4	2.3	2.2	2.2	2.2	2.1	2.3	2.1	2.2	2.6	2.2	2.3	2.2	3.5	7.9	2.7	2.2	**IZS**	5.2	2.4	2.3	2.2	7.9	2.7	24
2	2.2	2.3	2.4	2.3	2.2	2.3	2.6	2.8	2.2	2.1	2.1	2.2	2.2	2.2	2.2	2.1	2.4	2.4	**IZS**	3.9	2.1	2.1	2.3	2.2	3.9	2.3	24
3	2.1	2.1	2.2	2.1	2	2.1	2.1	2.1	2.1	2	2	2	**C**	**M**	**M**	**C**	**C**	**IZS**	2.1	2	2.1	2.1	2.1	2.1	2.2	2.1	22
4	2.1	2	1.9	2	2.1	2.1	2	**C**	**C**	**M**	**M**	**C**	**C**	**C**	**C**	**C**	**IZS**	2.2	3.3	4.6	2.9	2.7	2.3	2.2	4.6	2.5	22
5	2.1	1.9	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.7	1.7	**IZS**	1.7	1.7	1.7	1.8	1.8	1.8	2	1.9	2.1	1.7	24
6	1.9	2	2	1.9	2.2	1.9	2	2.4	2.6	3.1	2.5	2.2	1.9	1.9	**IZS**	1.9	1.9	1.9	2.5	2	2	2.2	2.2	2.2	3.1	2.1	24
7	2.1	2	2	3.2	2	1.9	1.9	1.8	2.2	1.8	1.8	1.9	2.4	**IZS**	1.9	2	2	2.9	2.1	2.1	2	1.8	1.9	1.8	3.2	2.1	24
8	1.8	1.7	1.8	1.8	1.8	1.7	1.7	1.7	1.7	1.7	1.7	1.7	**IZS**	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	2.2	2.2	1.7	24
9	1.8	1.8	1.7	1.7	1.7	1.7	1.9	2.1	2.1	1.8	1.8	**IZS**	1.8	1.8	1.8	1.9	1.9	1.9	1.9	1.9	2.6	2	2	2	2.6	1.9	24
10	2	2	2	2	2.1	2.2	2.4	2.7	3.2	3.1	**IZS**	2.1	2	1.9	1.8	1.7	1.9	1.8	1.9	1.9	1.8	1.9	1.9	1.9	3.2	2.1	24
11	1.9	1.9	2	2.1	2.2	5.9	2.3	2.4	2.4	**IZS**	2.7	2.2	2.3	2.1	2.1	1.9	1.9	**P**	2	2	2	2.1	2	2	5.9	2.3	23
12	2.3	2.2	2.2	2.3	2.4	2.4	2.1	2.1	**IZS**	2.1	2.2	2.2	2.1	2.1	2	2	2.1	2.1	2.1	2.1	2	2.3	2.3	2.2	2.4	2.2	24
13	2.1	2.1	2.1	2	2.2	2.4	2.6	**IZS**	2	1.9	1.7	1.6	1.6	1.7	1.6	1.6	1.6	1.7	1.7	1.6	1.6	1.6	3	2	3	1.9	24
14	1.6	1.7	1.6	1.6	1.6	1.6	**IZS**	1.6	1.6	1.6	1.6	1.6	1.6	1.6	3.3	2.1	1.9	4.4	1.6	3.6	1.6	1.6	1.9	1.6	4.4	1.9	24
15	1.6	1.6	1.6	1.6	1.6	**IZS**	1.6	1.6	1.7	1.7	1.8	1.6	1.6	1.6	1.6	1.7	2.6	1.6	2.5	1.6	1.6	1.6	1.6	1.6	2.6	1.7	24
16	1.6	1.6	1.6	1.6	**IZS**	1.6	1.6	1.8	1.7	1.7	1.7	1.6	1.7	1.7	1.7	1.7	1.6	1.7	1.7	1.7	1.7	1.7	1.7	1.8	1.8	1.7	24
17	2	2	2.2	**IZS**	2.1	2.2	2.5	2.6	2.5	2.3	2	1.9	1.8	1.7	1.7	1.8	1.7	1.7	1.8	1.8	1.8	1.9	2.1	1.9	2.6	2.0	24
18	1.9	2	**IZS**	2.3	2.3	2.3	2.8	2.9	2.7	2	1.9	1.9	2.4	2	2.2	2	2.3	3.3	2.6	2.2	2.1	2	2.2	1.9	3.3	2.3	24
19	1.9	**IZS**	1.9	1.9	2	2.1	**10.2**	2.8	2	2.1	2.1	2.1	2.2	2	2.1	2	2	2.6	2.5	2.3	2.1	2	2.1	2.1	**10.2**	2.5	24
20	**IZS**	1.9	1.9	1.9	1.9	2.3	2	3.2	1.9	1.9	1.9	2	2	2	2	3	1.9	1.8	1.9	1.8	2	1.8	1.8	**IZS**	3.2	2.0	23
21	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.7	2.6	1.8	2	1.9	1.7	1.7	2.1	1.7	1.8	2.3	4.7	1.8	1.8	1.7	**IZS**	1.6	4.7	1.9	24
22	1.7	1.7	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.7	1.6	2	1.9	1.6	1.6	1.9	1.7	1.6	1.6	1.6	1.6	**IZS**	1.6	1.7	2	1.7	24
23	1.9	1.8	1.7	1.8	1.8	1.8	2	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.7	1.8	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	2	1.8	16
24	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**M**	**M**	**M**	**IZS**	2.3	2.2	1.8	1.9	2.3	2.1	5
25	1.9	1.9	2.1	2.1	2.1	2.6	2.1	2.6	1.8	1.9	1.8	1.8	1.8	1.8	1.8	1.9	1.8	2	**IZS**	1.9	2.1	2	2.2	2.2	2.6	2.0	24
26	2.4	2.2	2.2	2.1	2.7	2.8	3	3.3	3.2	2.8	2.5	2.4	2.4	2.2	2.2	2.1	2.1	**IZS**	1.8	1.8	1.9	1.9	2	2	3.3	2.3	24
27	2	2.1	1.9	1.7	1.7	1.7	1.7	2.2	2.3	1.9	1.8	1.7	1.8	1.7	1.7	1.6	**IZS**	1.5	1.5	1.5	1.6	1.7	1.8	1.8	2.3	1.8	24
28	1.7	1.7	1.7	1.7	1.7	1.7	1.9	1.8	1.7	1.7	1.7	1.6	1.6	1.6	1.6	**IZS**	1.7	1.6	1.7	1.7	1.7	1.7	1.8	1.8	1.9	1.7	24
29	1.9	2.3	2	2.3	2.1	2.1	2.1	2.3	2.2	1.9	1.6	4.1	1.7	2.9	**IZS**	1.6	1.6	1.6	1.7	1.7	1.7	1.8	1.9	2.1	4.1	2.1	24
30	2.4	2.1	2.2	2.1	2.4	2.4	3.5	2.8	2.5	2.1	2	1.8	1.8	**IZS**	1.6	1.7	1.7	1.8	1.7	1.7	1.7	1.8	1.8	1.8	3.5	2.1	24
31	1.8	1.8	1.9	2	2.1	2.1	2.4	2	2	2	2	2	**IZS**	1.7	1.6	4.5	1.7	1.7	1.8	2	2.1	1.9	2	2.3	4.5	2.1	24
HOURLY MAX	2	2	2	3	3	6	10	3	3	3	3	4	2	3	3	5	8	4	5	5	5	3	3	2			
HOURLY AVG	2.0	1.9	1.9	2.0	2.0	2.2	2.4	2.2	2.2	2.0	1.9	2.0	1.9	1.9	1.9	2.1	2.1	2.1	2.1	2.1	2.0	1.9	2.0	2.0			

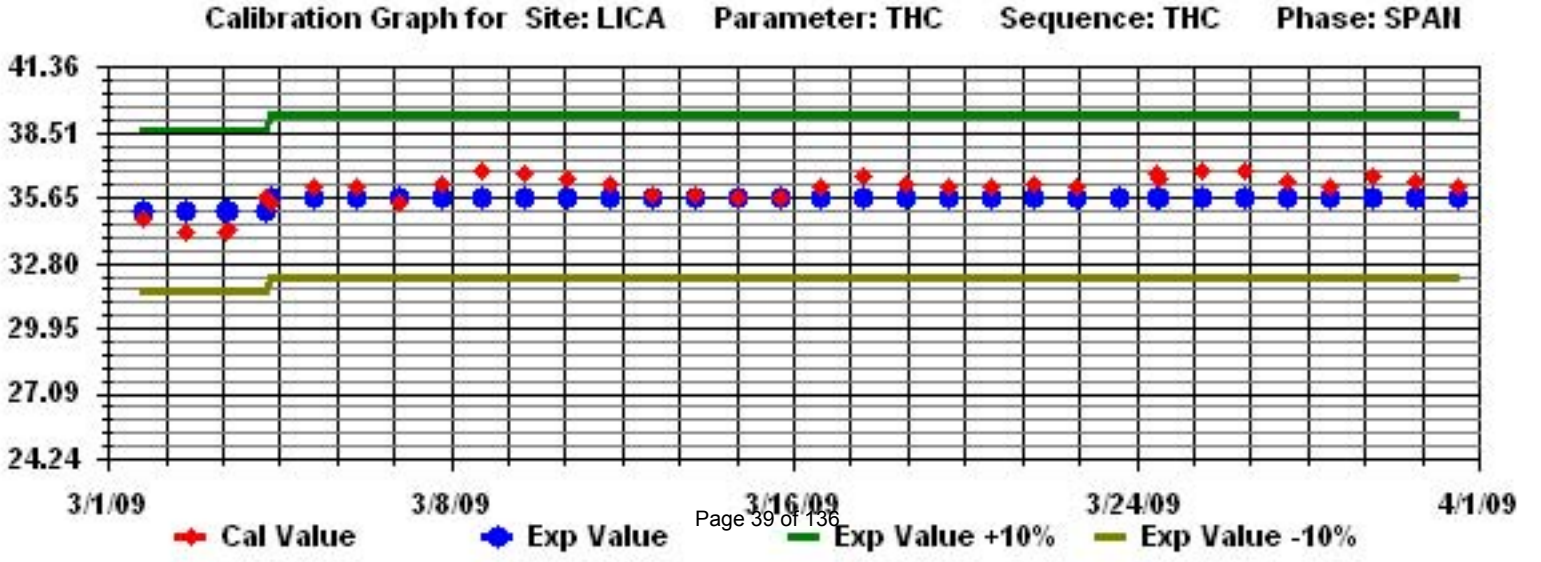
STATUS FLAG CODES

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:	671						
MAXIMUM INSTANTANEOUS VALUE:	10.2	PPM	@ HOUR(S)	6	ON DAY(S)	19	
IZS CALIBRATION TIME:	31	HRS	OPERATIONAL TIME:	711	HRS		
MONTHLY CALIBRATION TIME:	10	HRS					
STANDARD DEVIATION:	0.60						


01 Hour Averages
45
32.5
20
7.5
-5
03/01/09 00:00
03/06/09 00:00
03/11/09 00:00
03/16/09 00:00
03/21/09 00:00
03/26/09 00:00
03/31/09 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
3/1/09
3/8/09
3/16/09
3/24/09
4/1/09
Cal Value
Exp Value
Exp Value +10%
Exp Value -10%

Particulate Matter 2.5

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

MARCH 2009

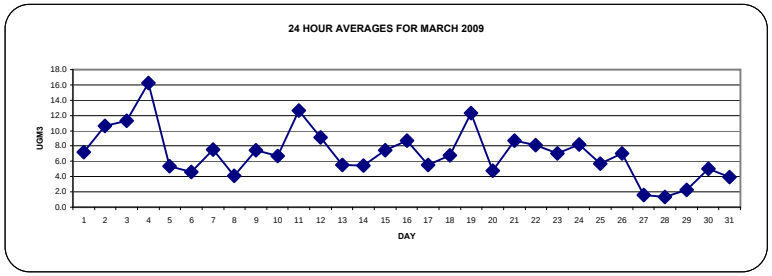
PARTICULATE MATTER 2.5 (PM2.5) hourly averages in ug/m^3

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	0	6.8	6	0.3	0	0	6.7	6	4.1	0.8	7.4	10.5	6.3	10.3	10.3	10.3	8.6	10.1	11.9	17.3	8.8	13	12	6.3	17.3	7.2	24
2	5.7	8	7.7	11.9	8.3	12.4	11.4	15.3	10.1	11.7	13	9.9	11.5	16.3	13.5	14.3	13.3	14.6	13.7	11.2	4.3	0	9.3	8.2	16.3	10.7	24
3	13.3	10.4	10	6.3	18.2	11.8	5.7	2.7	6	8.7	0.7	0.7	1.8	5.2	18.5	20.5	15.6	20.2	19	8.4	20.5	13.4	17.4	16	20.5	11.3	24
4	3.9	11.7	19.7	15.5	9.6	16.8	13.2	17.7	35.1	37.6	5.5	20.7	16	12.5	**N**	**N**	7.1	24.5	1.7	4.8	15.6	25	24.2	18	37.6	**16.2**	22
5	12.8	6.5	4.4	0	**N**	8	3.9	2.1	4.9	0	**N**	1.1	**N**	**N**	**N**	2	9	3.4	10.8	7.2	13.6	6.5	0	5	13.6	5.3	19
6	10.2	4.6	0	0.6	1	4.4	2.3	8.1	2.6	10.2	8.9	4.6	**N**	**N**	1.2	0	**N**	7.9	6.6	2.5	**N**	8.5	6.6	1.8	10.2	4.6	20
7	7.5	0	10.5	8.6	7.7	5.4	11.5	5.8	8	3.9	5.5	0	10	14.9	11.5	7.8	0.6	13.2	3	14.6	8.4	10.3	3.3	8.5	14.9	7.5	24
8	7.3	3.5	6.1	**N**	1.8	0	**N**	0	0.8	6.7	4.1	0.8	5.9	12.1	10.2	2.7	0.1	**N**	5.5	6.6	3.1	4.2	2.6	2.7	12.1	4.1	21
9	3.8	7.7	11	5.4	0.3	6.1	9.8	8.8	5	4.8	5.7	9.6	9.8	9.4	12.2	10.7	8.4	12.7	1.7	5.4	11.9	5.7	7	5.4	12.7	7.4	24
10	6.9	4.9	10.5	11.3	5.3	4.5	6.6	8.3	10	7.7	5.9	6.9	3.3	1.3	7.8	4	7.8	8.3	11.7	7.9	7.8	5.9	6.2	0	11.7	6.7	24
11	6.2	1.2	**N**	6.7	4.9	18.9	33.5	**39.6**	22	7.1	13.6	13.8	10.4	12.7	11	6.1	4.9	8	9.1	13.1	16.9	12.7	10.5	7.4	**39.6**	12.6	23
12	13.7	9.3	11.8	16.7	11.3	12.5	5.8	12.1	5.9	7.1	7.3	3.8	2.9	12.4	15.8	11.3	9	5.2	1	7.1	12.3	6.5	**N**	**N**	16.7	9.1	22
13	8.1	2.2	10.4	1.1	8.2	3.4	9.5	20.7	10.3	2.3	5.2	2.3	0.4	0	**N**	0	**N**	6.1	**N**	3.3	11.9	1.4	5.7	3	20.7	5.5	21
14	6.4	7.3	6.1	13.6	8.4	1.3	**N**	3	4.4	2.7	9.8	0.8	2	3.7	4.5	6.6	4.3	4.8	0	6.5	8.1	4.8	6.8	9.7	13.6	5.5	23
15	5.6	11.8	12.8	12.5	14.9	8.3	6.9	13.4	8	4.5	7.4	0.4	5.8	2.4	5.3	9.2	8	3.9	2.9	9.9	4.4	1.9	6.5	12.4	14.9	7.5	24
16	10.5	9.1	10.3	11.3	10.8	9.9	12.9	12.8	8	3.2	3.5	5.3	9.1	9.6	10.9	2.8	10	20.2	8.1	7.5	4.9	10.6	4.7	3.9	20.2	8.7	24
17	6.8	4.1	8.4	1.6	7.1	6.8	2.8	6.4	5.1	8.7	11	2.7	7.7	0.4	11.8	9.2	3.8	4.4	7.3	6.4	1.2	3.2	0	6	11.8	5.5	24
18	9.1	0	0.8	5.3	5.3	9	7	9.2	17	8.2	10	10.7	3.1	4.2	0.9	7.2	6.3	8.2	8.8	0	6	7.7	4.9	13	17.0	6.7	24
19	10.1	11.7	6.6	11.6	12.6	12.8	12.3	15.7	7	14.1	13.1	17.4	16.6	19.1	17	14.3	5.5	11.2	13.6	20.2	15.3	9	5	3.9	20.2	12.3	24
20	0	2.6	9.4	1	13.5	2	0	1.1	11	7.7	4.7	4.4	9.4	9.1	1.3	1.4	7.3	0	5.8	8.5	4.2	**N**	2.3	2.2	13.5	4.7	23
21	0	**N**	1.6	17.2	**N**	5.9	4.7	0	0	8.1	11.8	11.3	9.3	9.4	12.5	12.7	5.1	8.7	7.3	14.7	22.8	17.6	7.8	2.4	22.8	8.7	22
22	6.1	0.1	**N**	6.2	9.6	4.3	4.7	6.5	**N**	**N**	0	**N**	12.6	6.2	0.5	0	26.5	13.6	3.9	14.3	9.4	8.9	7.3	21	26.5	8.1	20
23	7.9	2.2	**N**	3.9	7.4	6.5	8	5.4	2.9	2.5	10	0	0	**N**	7.2	24.1	**N**	**N**	**N**	**N**	1.9	21.1	6.6	9.5	24.1	7.1	18
24	13.1	11.8	10.1	3.8	6.2	8.5	11.5	15.9	11.8	8.4	8.8	6.6	16.2	11.4	8.7	4.6	5.4	**N**	0	9.1	5.7	6.4	1.9	2.6	16.2	8.2	23
25	4	4.2	2.9	1.3	2.4	11.2	12.5	10.8	3.2	6.2	6.6	11.4	3.8	5.8	**N**	6.7	0.7	**N**	1.6	2.3	3.8	4.4	11.2	8.6	12.5	5.7	22
26	6.3	5.1	8.2	5.3	6.9	7.1	8.1	11.5	14.1	4.6	0.4	**C**	**C**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	14.1	7.1	13
27	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**C**	**C**	**C**	3.5	2.2	5.2	2.3	1.6	0	0.3	0	**N**	0.2	**N**	0	1	2.7	5.2	1.6	15
28	1.9	2.1	5.1	2.9	1.5	0	0.1	0.1	0	0	0.9	0.8	0.1	4.4	3.5	0	0	**N**	0	1.2	0	0.8	2	2.5	5.1	1.3	23
29	0.3	1.4	1.6	5.7	5.2	6.3	4.8	2.5	2.5	0	4.5	2.4	0	3.7	1.2	0	1.1	2	0.5	4	0.4	2.2	2.5	0	6.3	2.3	24
30	3.3	5	4.4	4.7	4.2	7.2	3.5	13.2	13.2	6	6.6	6.5	5.9	2.7	1	5.1	4.3	5.1	5.8	2.7	0.5	2.5	3.4	2.8	13.2	5.0	24
31	1.7	1.3	5.7	6.1	2.2	2.6	1.9	5.4	8.7	9.8	9.4	6.4	7.9	4.8	4.4	0	0	1.1	2.9	4.4	3.9	2	2.4	0	9.8	4.0	24
HOURLY MAX	14	12	20	17	18	19	34	40	35	38	14	21	17	19	19	24	27	25	19	20	23	25	24	21			
HOURLY AVG	6.4	5.4	7.5	6.8	7.0	7.1	7.9	9.3	8.3	7.0	6.8	6.0	6.9	7.6	7.9	6.7	6.4	8.7	6.1	7.6	8.1	7.5	6.2	6.4			

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

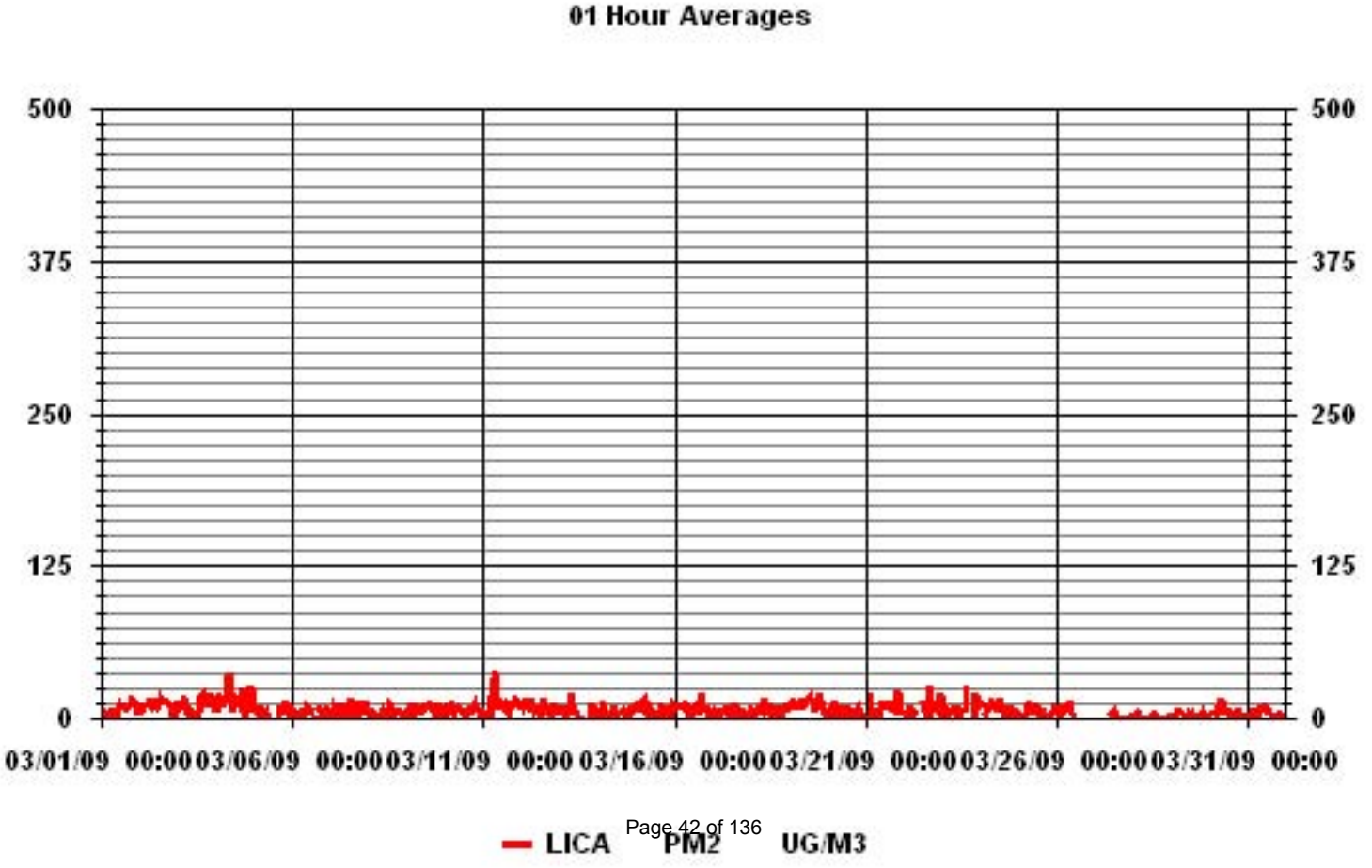


OBJECTIVE LIMIT: **ALBERTA ENVIRONMENT:** 1-HR - PPB 24-HR 30 PPB

MONTHLY SUMMARY

NUMBER OF 1-HR EXCEEDENCES:	-					
NUMBER OF 24-HR EXCEEDENCES:	0	PROPOSED CANADA WIDE GUIDELINE				
NUMBER OF NON-ZERO READINGS:	633					
MAXIMUM 1-HR AVERAGE:	39.6	UG/M^3	@ HOUR(S)	7	ON DAY(S)	11
MAXIMUM 24-HR AVERAGE:	16.2	UG/M^3			ON DAY(S)	4

IZS CALIBRATION TIME:	0	HRS	OPERATIONAL TIME:	686	HRS
MONTHLY CALIBRATION TIME:	5	HRS	AMD OPERATION UPTIME:	92.2	%
STANDARD DEVIATION:	5.56		MONTHLY AVERAGE:	7.15	UG/M^3


01 Hour Averages
500
375
250
125
0
03/01/09 00:00
03/06/09 00:00
03/11/09 00:00
03/16/09 00:00
03/21/09 00:00
03/26/09 00:00
03/31/09 00:00
LICA PM2 UG/M3

LICA
PM2 / WD Joint Frequency Distribution (Percent)

March 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	2.34	6.31	5.28	6.02	15.41	6.60	8.81	1.76	.73	1.76	16.74	9.83	3.96	3.23	6.60	3.96	99.41
<	60.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.29	.14	.14	.00	.00	.00	.58
<	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	2.34	6.31	5.28	6.02	15.41	6.60	8.81	1.76	.73	1.76	17.03	9.98	4.11	3.23	6.60	3.96	

Calm : .00 %

Total # Operational Hours : 681

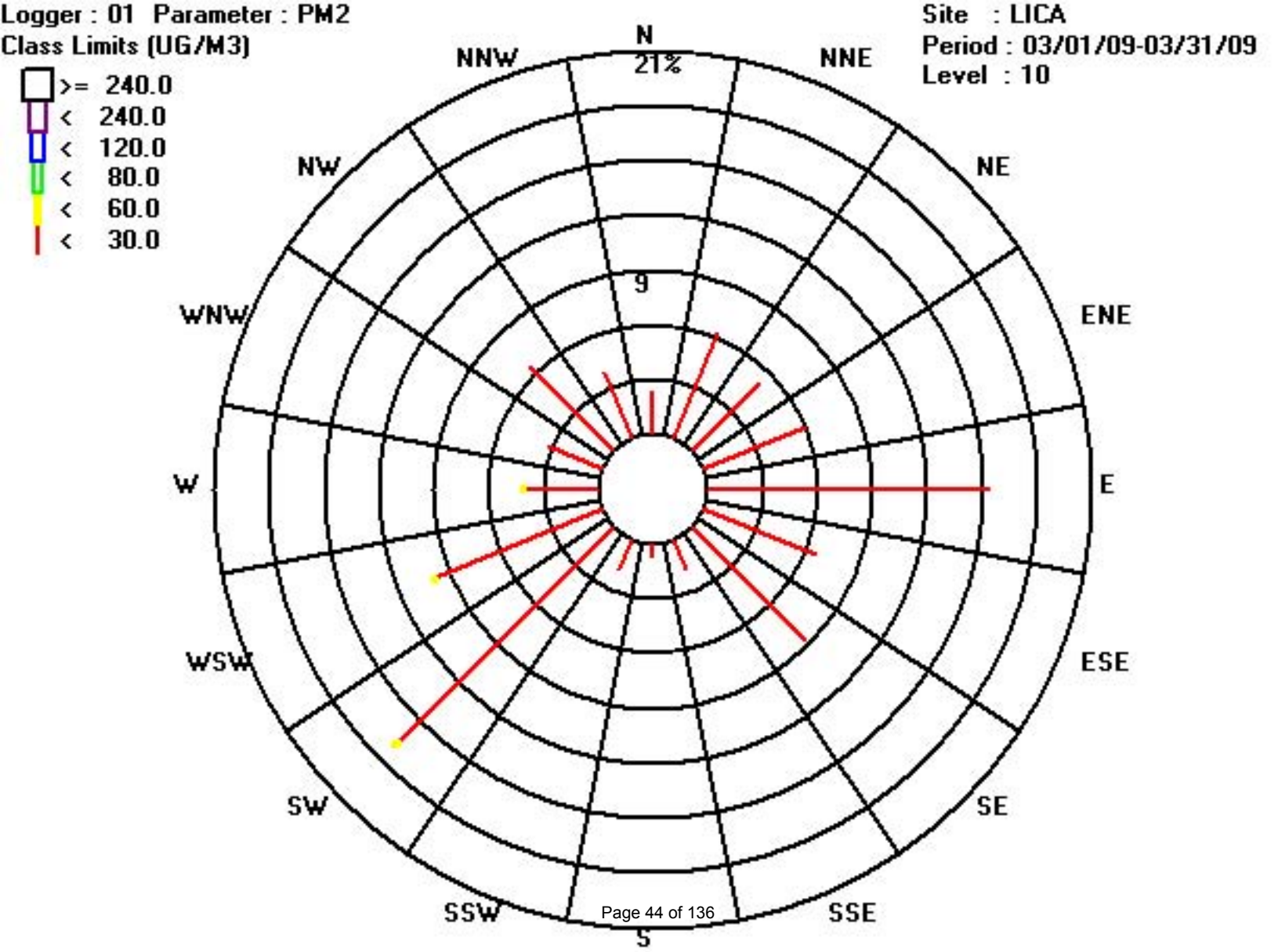
Distribution By Samples

Direction

	Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
<	30.0	16	43	36	41	105	45	60	12	5	12	114	67	27	22	45	27	677
<	60.0											2	1	1				4
<	80.0																	
<	120.0																	
<	240.0																	
>=	240.0																	
	Totals	16	43	36	41	105	45	60	12	5	12	116	68	28	22	45	27	

Calm : .00 %

Total # Operational Hours : 681


Logger : 01 Parameter : PM2
Class Limits (UG/M3)
>= 240.0
< 240.0
< 120.0
< 80.0
< 60.0
< 30.0
Site : LICA
Period : 03/01/09-03/31/09
Level : 10
N
21%
NNE
NE
ENE
E
ESE
SE
SSE
S
SSW
SW
WSW
W
WNW
NW
NNW
9

Nitrogen Dioxide

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

MARCH 2009

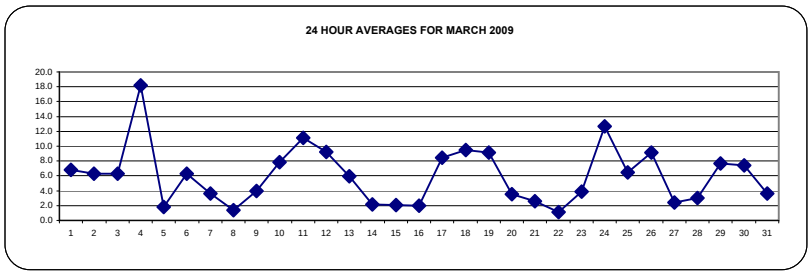
NITROGEN DIOXIDE hourly averages in ppb

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	8	9	8	7	10	6	4	2	2	4	3	3	4	3	8	11	11	**IZS**	20	16	8	5	20	6.8	24
2	2	5	7	5	4	12	29	22	8	5	3	3	3	3	3	4	4	6	**IZS**	5	4	3	2	2	29	6.3	24
3	4	5	11	5	6	11	10	14	6	5	3	4	3	5	5	6	8	**IZS**	7	7	5	5	5	5	14	6.3	24
4	5	5	7	6	7	7	10	**C**	**C**	**C**	**C**	**C**	**C**	**C**	**C**	**C**	**C**	9	30	37	38	37	31	26	38	**18.2**	24
5	12	3	1	1	0	1	0	0	1	1	1	1	2	2	1	**IZS**	1	1	1	1	1	1	3	5	12	1.8	24
6	7	11	11	8	7	7	11	20	17	10	4	3	1	1	**IZS**	1	2	2	2	3	4	5	4	3	20	6.3	24
7	3	3	3	3	4	3	3	2	3	1	2	3	2	**IZS**	3	4	4	5	6	7	6	5	4	5	7	3.7	24
8	3	2	3	2	2	2	2	1	1	1	1	1	**IZS**	1	0	0	0	0	1	1	1	1	2	4	4	1.4	24
9	2	2	1	1	1	1	8	5	1	0	1	**IZS**	1	1	1	1	2	3	6	7	13	11	10	12	13	4.0	24
10	12	11	10	9	10	14	18	16	17	6	**IZS**	3	3	2	1	1	1	3	6	5	7	7	10	8	18	7.8	24
11	6	6	6	6	9	19	26	21	15	**IZS**	6	6	6	6	6	5	7	9	12	14	18	23	13	11	26	11.1	24
12	12	11	12	11	13	15	13	14	**IZS**	11	9	8	7	6	5	5	6	8	7	7	8	8	7	9	15	9.2	24
13	9	13	6	4	5	6	8	**IZS**	7	6	6	5	5	5	6	5	5	8	5	3	5	5	6	4	13	6.0	24
14	2	2	2	2	2	1	**IZS**	2	2	2	2	2	2	2	2	3	2	3	3	2	2	2	3	2	3	2.1	24
15	2	1	2	2	2	**IZS**	2	3	2	2	1	1	1	2	2	2	2	3	8	3	1	1	1	1	8	2.0	24
16	1	0	0	0	**IZS**	1	1	2	4	3	2	1	1	1	1	2	2	2	3	2	3	2	4	7	7	2.0	24
17	7	12	10	**IZS**	10	18	20	13	8	7	3	1	3	1	2	2	4	3	2	6	16	19	14	14	20	8.5	24
18	13	14	**IZS**	20	23	25	30	36	28	3	2	4	2	1	1	1	2	2	2	2	2	2	2	2	36	9.5	24
19	1	**IZS**	2	2	3	14	29	23	7	6	6	5	6	6	3	4	3	5	32	21	7	6	9	10	32	9.1	24
20	**IZS**	2	4	4	4	5	10	13	4	4	2	2	2	2	2	2	3	3	3	3	3	2	1	1	**IZS**	3.5	24
21	1	1	1	1	2	1	1	4	6	4	4	3	2	2	2	3	3	3	3	4	4	2	**IZS**	2	6	2.6	24
22	2	2	2	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	**IZS**	0	0	2	1.1	24
23	1	2	1	4	2	2	4	4	2	5	4	2	2	1	1	1	**N**	**N**	2	1	**IZS**	16	14	11	16	3.9	22
24	19	12	19	18	24	**40**	38	33	20	3	1	1	1	1	1	1	2	4	14	**IZS**	21	12	3	3	**40**	12.7	24
25	2	4	10	11	18	21	8	8	2	1	2	1	0	0	0	1	1	3	**IZS**	4	10	13	16	13	21	6.5	24
26	15	15	11	8	15	17	25	38	23	5	4	4	4	3	3	3	2	**IZS**	2	3	3	3	2	2	38	9.1	24
27	2	2	2	2	2	2	2	2	5	2	2	3	3	3	2	2	**IZS**	1	1	2	2	4	3	5	5	2.4	24
28	4	3	3	4	4	5	5	4	3	2	2	1	1	1	1	**IZS**	1	1	1	1	3	4	5	10	10	3.0	24
29	8	10	10	18	15	33	19	11	6	3	1	1	1	1	**IZS**	1	1	2	5	4	7	6	5	9	33	7.7	24
30	13	13	10	9	23	22	22	24	4	3	2	2	2	**IZS**	1	2	2	2	2	2	3	3	3	2	24	7.4	24
31	2	2	2	3	4	5	10	5	3	3	3	3	**IZS**	1	1	1	1	1	3	9	6	5	7	4	10	3.7	24
HOURLY MAX	19	15	19	20	24	40	38	38	28	11	9	8	7	6	6	6	8	11	32	37	38	37	31	26			
HOURLY AVG	5.8	5.9	5.9	6.0	7.7	10.6	12.5	12.0	7.2	3.7	2.8	2.7	2.5	2.3	2.2	2.4	2.9	3.7	6.2	5.8	7.4	7.6	6.6	6.5			

STATUS FLAG CODES

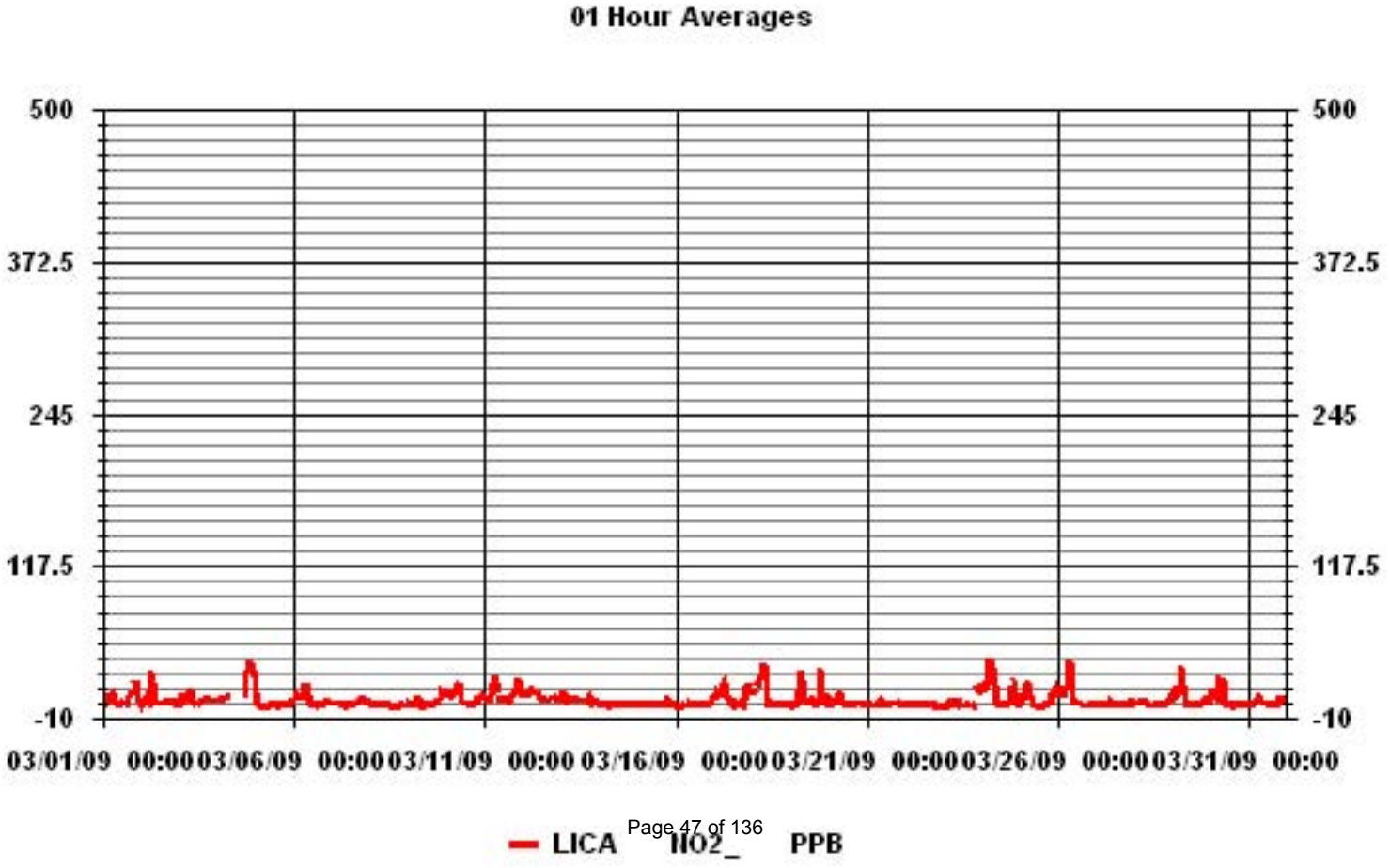
S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	- MISSING DATA
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE



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:	684					
MAXIMUM 1-HR AVERAGE:	40	PPB	@ HOUR(S)	5	ON DAY(S)	24
MAXIMUM 24-HR AVERAGE:	18.2	PPB			ON DAY(S)	4
IZS CALIBRATION TIME:	31	HRS	OPERATIONAL TIME:		742	HRS
MONTHLY CALIBRATION TIME:	10	HRS	AMD OPERATION UPTIME:		99.7	%
STANDARD DEVIATION:	6.68		MONTHLY AVERAGE:		5.84	PPB


01 Hour Averages
500
372.5
245
117.5
-10
03/01/09 00:00
03/06/09 00:00
03/11/09 00:00
03/16/09 00:00
03/21/09 00:00
03/26/09 00:00
03/31/09 00:00
LICA NO2_ PPB

LICA
NO2_ / WD Joint Frequency Distribution (Percent)

March 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	2.56	6.27	5.27	5.84	14.69	6.56	9.55	1.71	1.14	1.71	16.69	9.84	3.85	3.13	6.84	4.27	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	2.56	6.27	5.27	5.84	14.69	6.56	9.55	1.71	1.14	1.71	16.69	9.84	3.85	3.13	6.84	4.27	

Calm : .00 %

Total # Operational Hours : 701

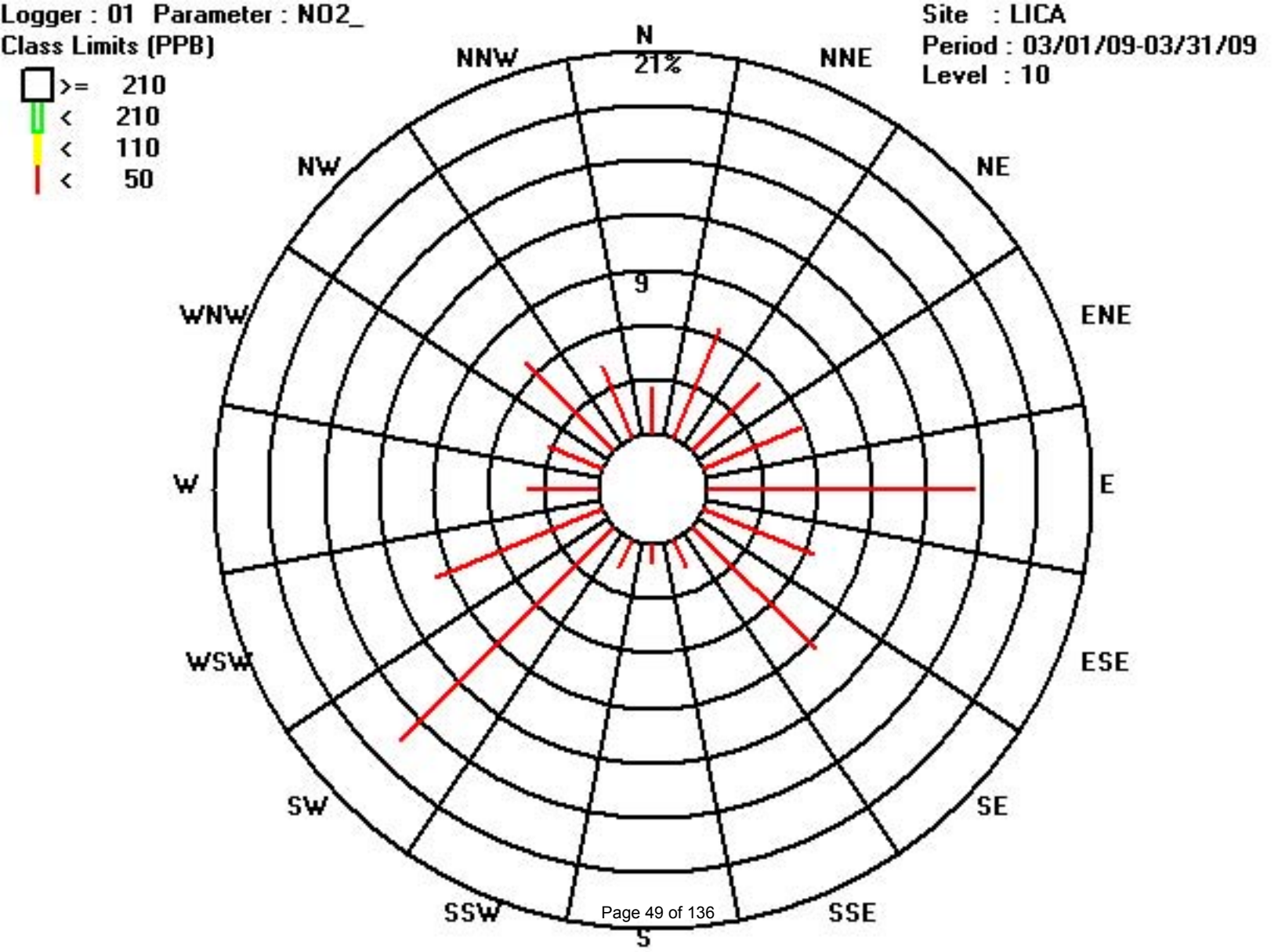
Distribution By Samples

Direction

	Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
<	50	18	44	37	41	103	46	67	12	8	12	117	69	27	22	48	30	701
<	110																	
<	210																	
>=	210																	
	Totals	18	44	37	41	103	46	67	12	8	12	117	69	27	22	48	30	

Calm : .00 %

Total # Operational Hours : 701


Logger : 01 Parameter : NO2_
Class Limits (PPB)
>= 210
< 210
< 110
< 50
Site : LICA
Period : 03/01/09-03/31/09
Level : 10
N
21%
NNE
NE
ENE
E
ESE
SE
SSE
S
SSW
SW
WSW
W
WNW
NW
NNW
9

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

MARCH 2009

NITROGEN DIOXIDE MAX instantaneous maximum in ppb

MST

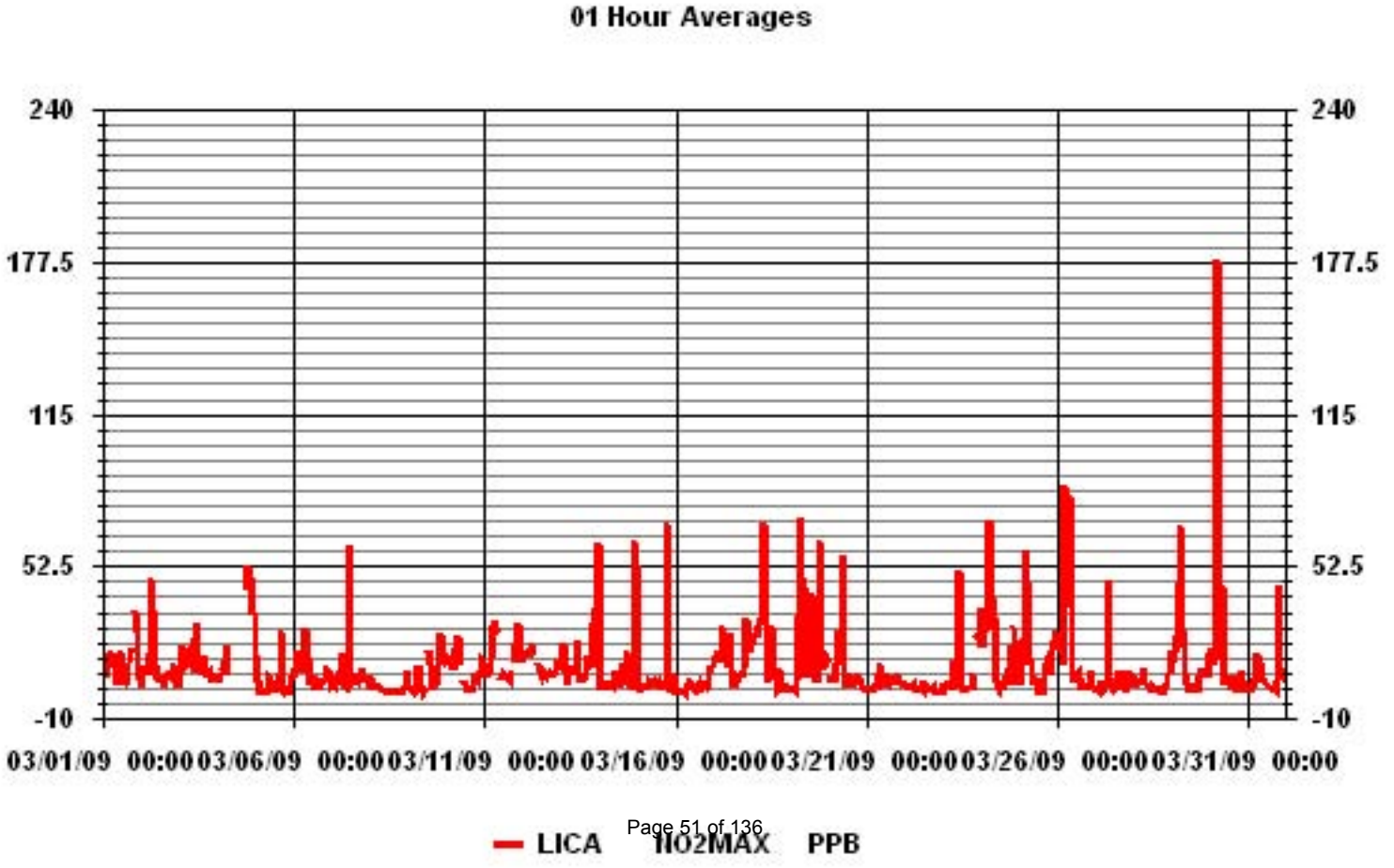
HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	9	7	15	17	12	18	14	15	13	5	4	18	10	6	5	6	13	18	18	**IZS**	33	26	11	7	33	13.0	24
2	3	8	11	9	8	17	48	35	14	12	7	6	6	4	4	6	8	9	**IZS**	7	13	6	4	4	48	10.8	24
3	7	9	20	10	11	17	14	20	11	23	9	29	9	11	9	9	15	**IZS**	8	9	6	6	6	6	29	11.9	24
4	8	5	8	11	10	8	19	**C**	**C**	**C**	**C**	**C**	**C**	**C**	**C**	**C**	**C**	**M**	44	53	46	49	34	33	53	25.2	23
5	17	6	1	1	1	1	1	1	7	6	2	2	3	3	7	**IZS**	25	2	1	2	1	1	6	7	25	4.5	24
6	10	14	18	11	12	9	19	27	21	16	5	5	2	6	**IZS**	3	3	5	5	6	11	7	10	4	27	10.0	24
7	5	5	4	7	6	5	17	4	4	3	5	61	4	**IZS**	5	6	8	6	7	10	6	6	5	6	61	8.5	24
8	6	3	3	3	3	3	2	2	2	1	1	1	**IZS**	1	1	1	1	1	1	1	1	2	3	9	9	2.3	24
9	3	3	2	1	2	2	12	10	4	1	2	**IZS**	17	13	12	2	3	4	9	16	25	14	13	14	25	8.0	24
10	15	14	13	11	11	18	19	24	20	13	**IZS**	5	4	2	2	2	2	7	7	6	8	8	14	13	24	10.3	24
11	8	8	9	8	15	28	30	27	26	**IZS**	7	9	8	7	7	6	9	**P**	14	21	28	29	22	13	30	15.4	23
12	16	16	16	16	19	21	17	17	**IZS**	12	10	10	7	8	7	8	8	9	8	8	9	12	11	11	21	12.0	24
13	13	21	10	4	6	12	10	**IZS**	9	8	22	6	6	6	7	7	10	16	11	15	29	35	11	62	62	14.6	24
14	3	3	3	3	3	5	**IZS**	5	4	9	3	10	3	5	5	13	5	18	7	4	3	3	63	54	63	10.2	24
15	4	2	2	3	3	**IZS**	3	5	4	5	3	5	4	5	3	3	4	4	70	18	2	2	2	9	70	7.2	24
16	1	1	1	1	**IZS**	2	1	4	5	5	3	2	3	2	3	5	4	3	4	3	4	10	10	11	11	3.8	24
17	13	15	17	**IZS**	14	28	24	17	11	19	25	3	10	3	5	6	8	9	7	11	31	25	18	19	31	14.7	24
18	20	24	**IZS**	25	28	31	40	70	57	5	16	20	28	9	7	2	3	11	4	3	2	2	3	3	70	18.0	24
19	2	**IZS**	3	2	6	32	72	40	48	44	8	8	16	42	22	11	5	18	63	45	10	11	15	14	72	23.3	24
20	**IZS**	6	6	6	5	13	26	21	12	57	3	4	6	8	6	3	5	5	8	6	6	3	2	**IZS**	57	9.9	24
21	2	2	2	2	3	3	3	8	13	8	8	5	3	6	5	7	4	6	6	8	6	5	**IZS**	4	13	5.2	24
22	4	3	3	3	3	4	2	2	2	2	3	2	5	2	3	3	2	2	3	1	1	**IZS**	1	1	5	2.5	24
23	3	3	3	5	3	3	14	5	3	27	51	5	2	2	2	3	3	148	7	3	**IZS**	24	25	19	148	15.8	24
24	35	19	26	27	38	71	44	40	32	6	3	2	5	2	5	7	4	11	19	**IZS**	27	23	4	6	71	19.8	24
25	4	8	15	23	59	47	12	15	5	5	7	5	1	1	1	6	12	15	**IZS**	9	18	22	26	24	59	14.8	24
26	21	23	18	12	86	40	36	82	50	6	6	8	9	5	6	5	3	**IZS**	3	3	4	10	3	2	86	19.2	24
27	2	3	2	5	2	3	4	4	47	4	3	6	4	5	10	3	**IZS**	8	2	2	3	9	4	6	47	6.1	24
28	6	3	5	5	5	8	10	5	4	3	4	3	2	2	2	**IZS**	3	1	1	3	4	8	9	18	18	5.0	24
29	13	18	17	24	46	69	27	20	9	5	2	2	2	4	**IZS**	2	2	7	10	8	10	8	7	16	69	14.3	24
30	17	19	12	14	**178**	67	27	45	15	4	7	5	3	**IZS**	7	4	2	2	2	9	4	3	5	3	**178**	19.7	24
31	2	2	3	6	17	14	17	14	5	6	5	4	**IZS**	3	2	2	3	2	6	45	8	6	10	6	45	8.2	24
HOURLY MAX	35	24	26	27	178	71	72	82	57	57	51	61	28	42	22	13	25	148	70	53	46	49	63	62			
HOURLY AVG	9.1	9.1	8.9	9.2	20.5	20.0	19.5	20.1	15.8	11.0	8.1	8.7	6.5	6.2	5.7	5.0	6.1	12.9	12.2	11.6	12.0	12.5	11.9	13.5			

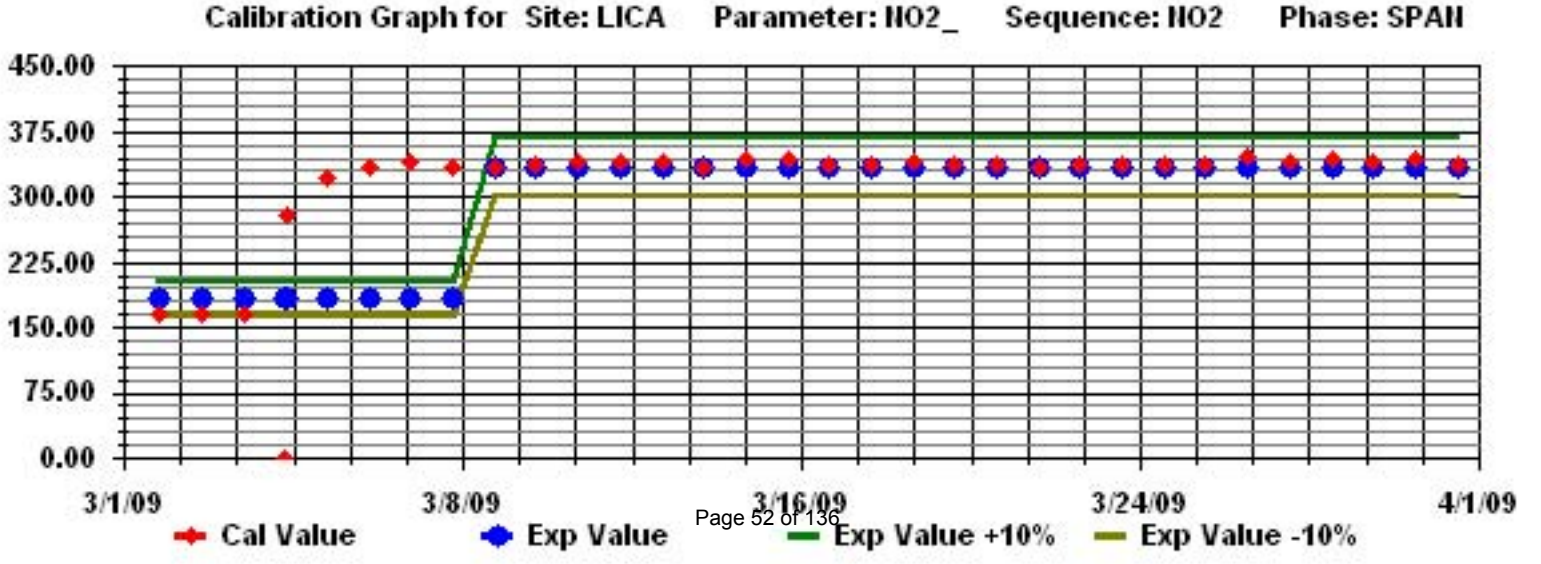
STATUS FLAG CODES

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:	701					
MAXIMUM INSTANTANEOUS VALUE:	178	PPB	@ HOUR(S)	4	ON DAY(S)	30
IZS CALIBRATION TIME:	31	HRS	OPERATIONAL TIME:		742	HRS
MONTHLY CALIBRATION TIME:	10	HRS				
STANDARD DEVIATION	15.22					


01 Hour Averages
240
177.5
115
52.5
-10
03/01/09 00:00
03/06/09 00:00
03/11/09 00:00
03/16/09 00:00
03/21/09 00:00
03/26/09 00:00
03/31/09 00:00
LICA
NO2MAX
PPB


Calibration Graph for Site: LICA Parameter: NO2_ Sequence: NO2 Phase: SPAN
450.00
375.00
300.00
225.00
150.00
75.00
0.00
3/1/09
3/8/09
3/16/09
3/24/09
4/1/09
Cal Value
Exp Value
Exp Value +10%
Exp Value -10%

Nitric Oxide

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

MARCH 2009

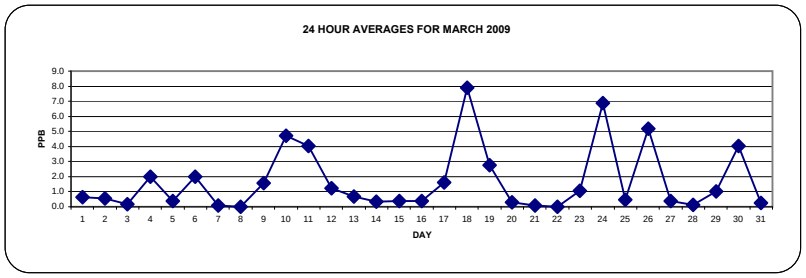
NITRIC OXIDE hourly averages in ppb

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	0	0	0	1	0	0	0	1	1	1	1	2	1	2	1	1	1	1	0	**IZS**	1	0	0	0	2	0.7	24
2	0	0	0	0	0	0	2	3	2	2	1	1	1	0	0	1	0	0	**IZS**	0	0	0	0	0	3	0.6	24
3	0	0	0	0	0	0	0	0	1	2	0	1	0	0	0	0	0	**IZS**	0	0	0	0	0	0	2	0.2	24
4	0	0	0	0	0	0	0	**C**	**C**	**C**	**C**	**C**	**C**	**C**	**C**	**C**	**C**	0	4	7	10	6	1	0	10	2.0	24
5	0	0	0	0	0	0	0	0	0	1	0	0	1	1	1	**IZS**	5	0	0	0	0	0	0	0	5	0.4	24
6	0	0	0	0	0	0	0	10	18	11	4	3	0	0	**IZS**	0	0	0	0	0	0	0	0	0	18	2.0	24
7	0	0	0	0	0	0	0	0	0	0	0	1	1	**IZS**	0	0	0	0	0	0	0	0	0	0	1	0.1	24
8	0	0	0	0	0	0	0	0	0	0	0	0	**IZS**	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
9	0	0	0	0	0	0	8	4	1	1	4	**IZS**	6	2	2	1	1	1	0	0	4	0	0	1	8	1.6	24
10	0	0	0	0	0	1	7	29	48	12	**IZS**	5	4	2	0	0	0	0	0	0	0	0	0	0	48	4.7	24
11	0	0	0	0	0	3	5	24	25	**IZS**	7	7	7	6	4	2	2	1	0	0	0	0	0	0	25	4.0	24
12	0	0	0	0	0	0	0	2	**IZS**	5	5	5	4	3	2	1	1	0	0	0	0	0	0	0	5	1.2	24
13	0	0	0	0	0	0	0	**IZS**	1	1	3	1	2	2	2	1	0	0	0	1	1	1	0	0	3	0.7	24
14	0	0	0	0	0	1	**IZS**	0	0	0	0	1	0	0	0	3	1	0	0	0	0	0	1	1	3	0.3	24
15	0	0	0	0	0	**IZS**	0	0	0	0	0	0	0	0	0	0	0	0	9	0	0	0	0	0	9	0.4	24
16	0	0	0	0	**IZS**	0	0	0	2	2	2	0	0	1	1	1	0	0	0	0	0	0	0	0	2	0.4	24
17	0	0	0	**IZS**	0	1	3	6	5	7	3	1	4	1	1	1	2	0	0	0	2	0	0	0	7	1.6	24
18	0	0	**IZS**	1	2	7	30	**77**	54	2	2	5	2	0	0	0	0	0	0	0	0	0	0	0	**77**	**7.9**	24
19	0	**IZS**	0	0	0	1	10	13	5	5	5	3	4	2	2	1	0	0	9	3	0	0	0	0	13	2.7	24
20	**IZS**	0	0	0	0	0	0	3	1	1	0	0	0	1	1	0	0	0	0	0	0	0	0	**IZS**	3	0.3	24
21	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**IZS**	0	1	0.1	24
22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**IZS**	0	0	0	0.0	24
23	0	0	0	0	0	0	0	1	1	11	5	2	1	1	0	0	**N**	**N**	0	0	**IZS**	0	0	0	11	1.0	22
24	0	0	0	1	2	23	59	47	21	1	1	0	0	0	1	0	0	0	1	**IZS**	1	0	0	0	59	6.9	24
25	0	0	0	0	2	2	1	2	1	1	1	0	0	0	0	0	1	0	**IZS**	0	0	0	0	0	2	0.5	24
26	0	0	0	0	2	0	9	68	28	2	2	3	2	1	1	1	0	**IZS**	0	0	0	0	0	0	68	5.2	24
27	0	0	0	0	0	0	0	0	4	1	1	1	1	1	0	0	**IZS**	0	0	0	0	0	0	0	4	0.4	24
28	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	**IZS**	0	0	0	0	0	0	0	0	1	0.1	24
29	0	0	0	0	0	8	5	5	3	1	0	0	0	1	**IZS**	0	0	0	0	0	0	0	0	0	8	1.0	24
30	0	0	0	0	13	5	21	49	2	1	1	1	0	**IZS**	0	0	0	0	0	0	0	0	0	0	49	4.0	24
31	0	0	0	0	0	0	1	1	1	1	1	1	**IZS**	0	0	0	0	0	0	0	0	0	0	0	1	0.3	24
HOURLY MAX	0	0	0	1	13	23	59	77	54	12	7	7	7	6	4	3	5	1	9	7	10	6	1	1			
HOURLY AVG	0.0	0.0	0.0	0.1	0.7	1.7	5.4	11.9	7.8	2.5	1.7	1.5	1.5	1.0	0.7	0.5	0.5	0.1	0.8	0.4	0.6	0.2	0.1	0.1			

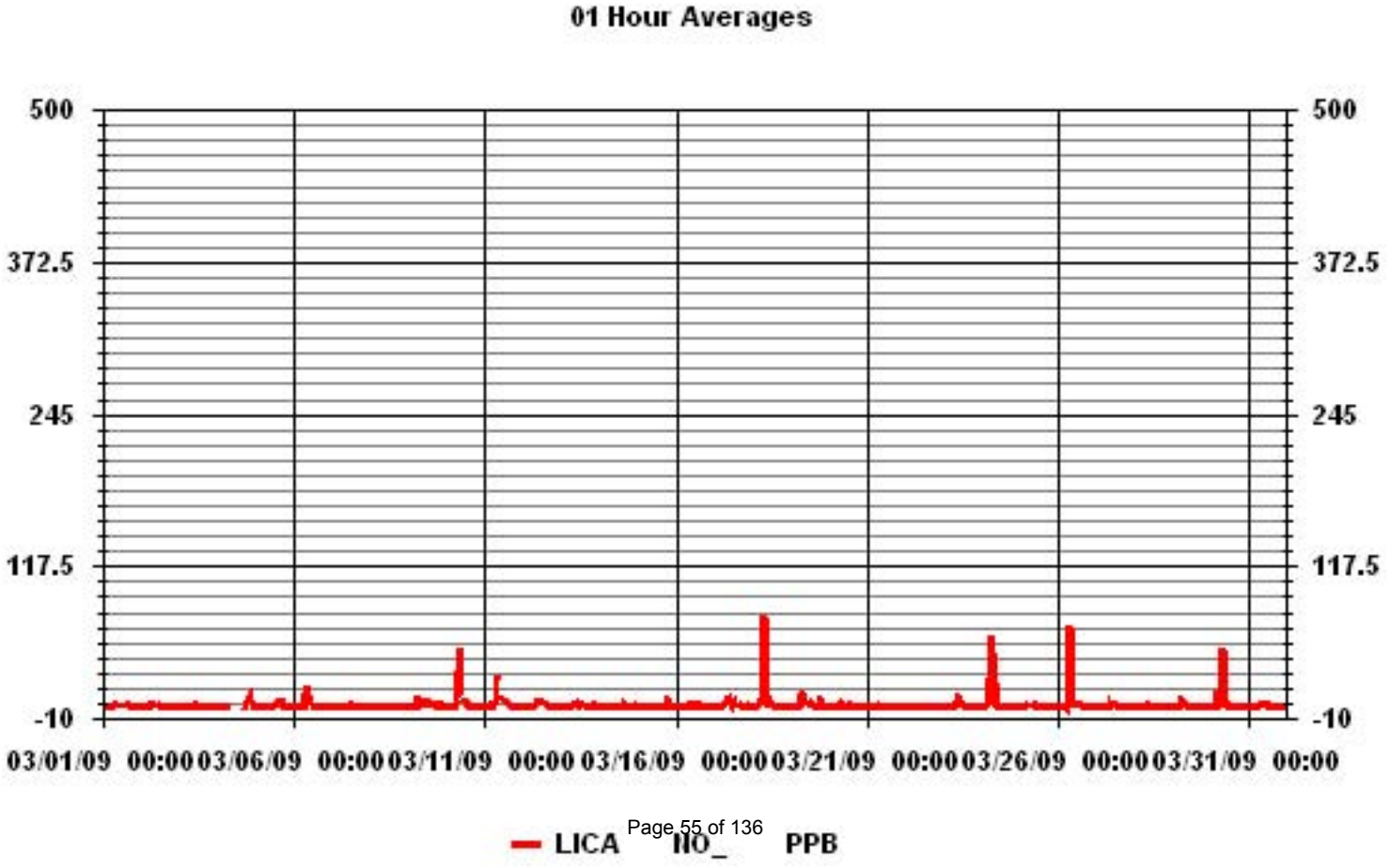
STATUS FLAG CODES

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



MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:		216					
MAXIMUM 1-HR AVERAGE:		77	PPB	@ HOUR(S)	7	ON DAY(S)	18
MAXIMUM 24-HR AVERAGE:		7.9	PPB			ON DAY(S)	18
IZS CALIBRATION TIME:	31	HRS		OPERATIONAL TIME:		742	HRS
MONTHLY CALIBRATION TIME:	10	HRS		AMD OPERATION UPTIME:		99.7	%
STANDARD DEVIATION:	6.56			MONTHLY AVERAGE:		1.65	PPB


01 Hour Averages
500
372.5
245
117.5
-10
03/01/09 00:00
03/06/09 00:00
03/11/09 00:00
03/16/09 00:00
03/21/09 00:00
03/26/09 00:00
03/31/09 00:00
LICA NO_ PPB

LICA
NO_ / WD Joint Frequency Distribution (Percent)

March 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	2.56	6.13	5.27	5.70	14.40	6.56	9.55	1.71	1.14	1.71	16.69	9.84	3.85	3.13	6.84	4.27	99.42
<	110	.00	.14	.00	.14	.28	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.57
<	210	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
>=	210	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
	Totals	2.56	6.27	5.27	5.84	14.69	6.56	9.55	1.71	1.14	1.71	16.69	9.84	3.85	3.13	6.84	4.27	

Calm : .00 %

Total # Operational Hours : 701

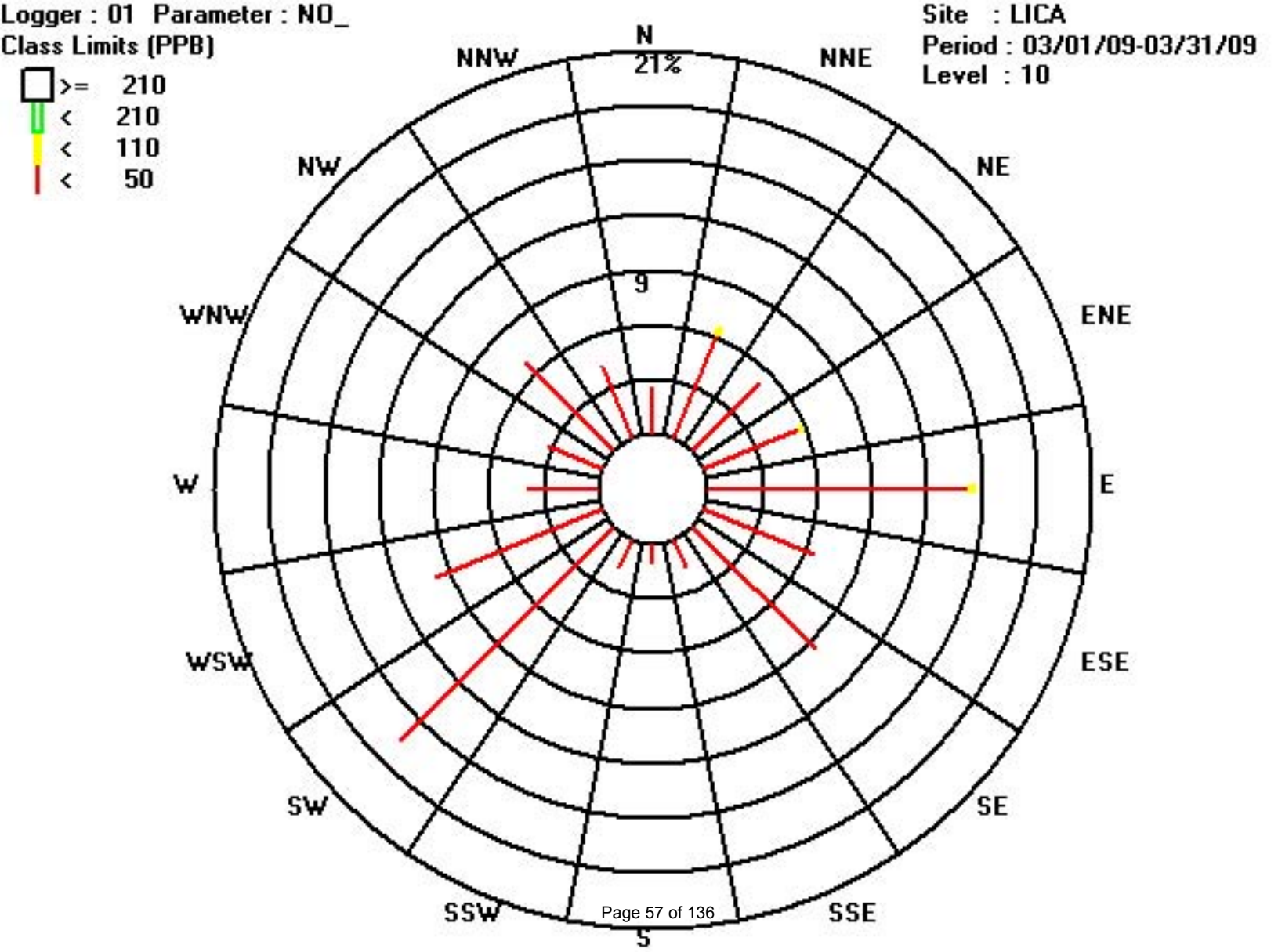
Distribution By Samples

Direction

	Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
<	50	18	43	37	40	101	46	67	12	8	12	117	69	27	22	48	30	697
<	110		1		1	2												4
<	210																	
>=	210																	
	Totals	18	44	37	41	103	46	67	12	8	12	117	69	27	22	48	30	

Calm : .00 %

Total # Operational Hours : 701


Logger : 01 Parameter : NO_
Class Limits (PPB)
>= 210
< 210
< 110
< 50
Site : LICA
Period : 03/01/09-03/31/09
Level : 10
N
21%
NNE
NE
ENE
E
ESE
SE
SSE
S
SSW
SW
WSW
W
WNW
NW
NNW
9

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

MARCH 2009

NITRIC OXIDE MAX instantaneous maximum in ppb

MST

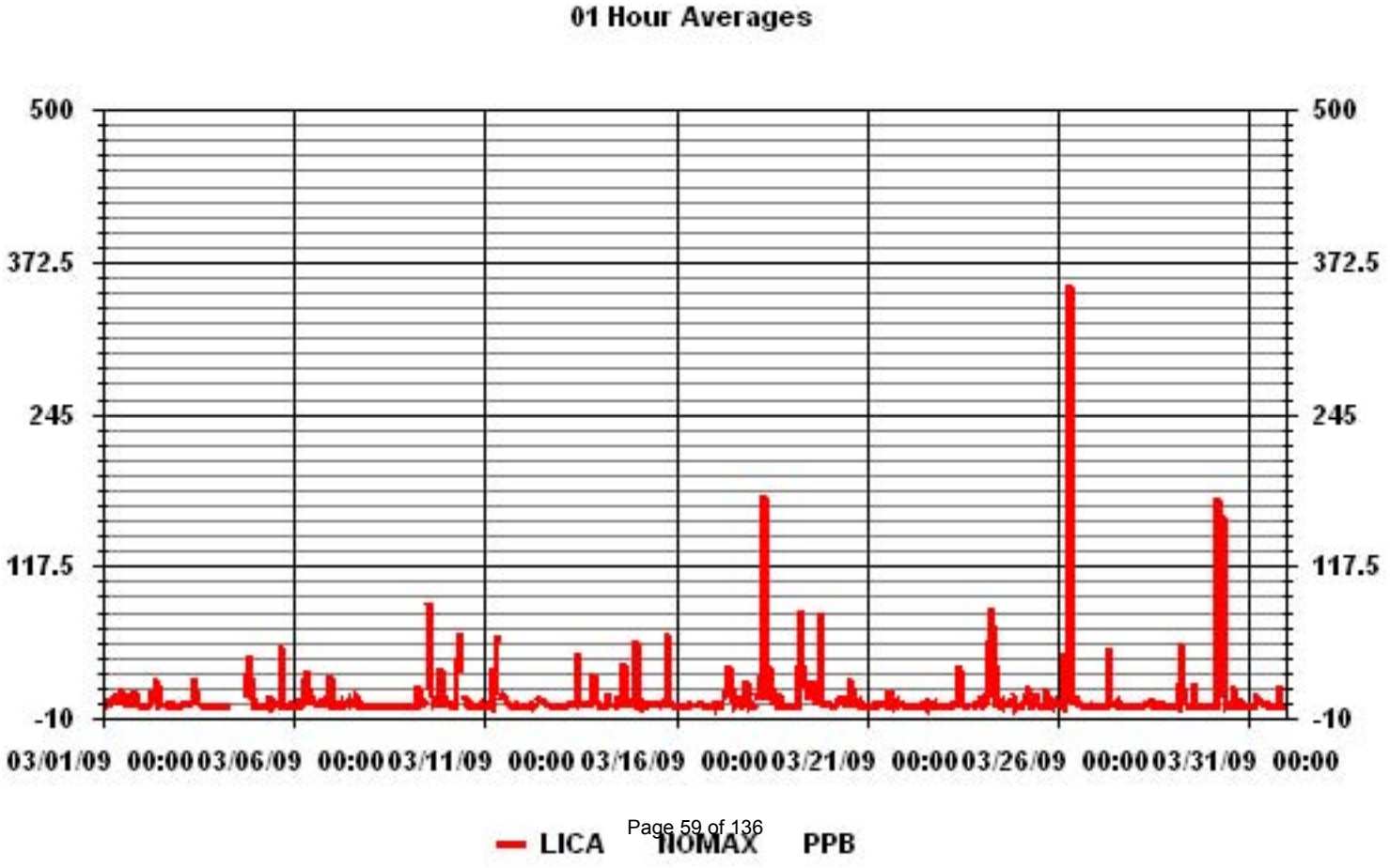
HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	0	1	3	4	2	3	3	8	3	10	2	14	5	4	2	2	2	11	5	**IZS**	11	2	2	0	14	4.3	24
2	0	1	0	0	0	2	12	13	4	24	19	2	3	1	1	2	1	3	**IZS**	1	3	3	0	1	24	4.2	24
3	0	1	1	1	1	1	1	2	3	23	2	12	4	2	1	0	1	**IZS**	0	0	0	0	0	0	23	2.4	24
4	0	0	0	0	0	0	0	**C**	**C**	**C**	**C**	**C**	**C**	**C**	**C**	**C**	**M**	10	28	43	26	8	1	43	8.9	23	
5	0	0	0	0	0	0	0	0	6	6	0	1	1	1	4	**IZS**	49	0	0	0	0	0	1	1	49	3.0	24
6	0	1	0	0	6	1	2	23	29	17	5	6	1	4	**IZS**	1	1	7	1	5	3	0	18	25	29	6.8	24
7	0	0	1	1	0	0	4	1	1	1	5	2	4	**IZS**	1	8	6	0	0	0	0	0	0	0	8	1.5	24
8	0	0	0	0	0	0	0	0	0	0	0	0	**IZS**	0	0	0	0	0	0	0	0	0	0	1	1	0.0	24
9	0	0	0	0	0	0	18	9	5	3	5	**IZS**	85	16	10	2	3	5	0	7	31	1	1	8	85	9.1	24
10	2	1	1	0	0	4	32	41	62	30	**IZS**	7	7	2	1	0	2	1	0	0	0	0	3	0	62	8.5	24
11	0	0	1	1	0	31	10	60	57	**IZS**	8	10	8	7	5	3	2	**P**	0	2	1	1	0	0	60	9.4	23
12	0	0	1	0	1	2	0	2	**IZS**	7	6	6	4	4	4	2	2	1	0	0	0	0	1	0	7	1.9	24
13	0	0	0	0	1	3	3	**IZS**	2	2	45	1	2	2	3	2	1	2	0	28	21	26	6	3	45	6.7	24
14	0	0	0	0	1	8	**IZS**	1	1	2	1	9	2	2	2	37	13	8	1	1	4	0	51	56	56	8.7	24
15	1	0	7	0	1	**IZS**	1	2	3	2	1	2	2	3	1	3	1	1	62	6	1	1	1	0	62	4.4	24
16	0	0	0	0	**IZS**	0	0	0	2	2	2	1	2	1	2	3	2	0	0	0	0	0	0	1	3	0.8	24
17	5	1	4	**IZS**	1	5	11	11	7	34	28	2	15	2	4	4	4	8	1	2	21	6	0	1	34	7.7	24
18	1	0	**IZS**	9	6	25	57	176	146	4	22	35	18	2	9	1	2	10	2	0	0	0	1	0	176	22.9	24
19	0	**IZS**	0	0	0	35	80	36	32	24	17	5	12	8	21	11	1	14	71	78	2	2	1	1	80	19.6	24
20	**IZS**	1	1	0	1	6	2	8	3	9	1	1	2	24	17	2	1	1	2	4	0	0	0	**IZS**	24	3.9	24
21	0	0	0	0	1	1	0	3	3	3	2	2	0	1	14	4	0	2	4	0	1	1	**IZS**	1	14	1.9	24
22	0	0	0	0	0	0	0	0	0	0	2	1	2	0	6	3	0	0	3	0	0	**IZS**	0	0	6	0.7	24
23	0	0	0	0	0	0	5	1	1	35	32	3	1	1	0	1	245	178	2	0	**IZS**	2	2	3	245	22.3	24
24	8	2	3	11	7	56	83	69	37	3	4	1	2	0	4	2	2	2	6	**IZS**	8	0	2	1	83	13.6	24
25	0	0	3	3	10	18	4	6	2	3	10	4	0	1	0	2	16	4	**IZS**	0	4	1	4	1	18	4.2	24
26	1	1	1	0	44	3	21	**353**	85	3	3	9	6	2	2	1	0	**IZS**	0	0	0	2	0	0	**353**	23.3	24
27	0	0	0	1	0	0	0	1	49	1	1	3	2	1	4	1	**IZS**	2	0	0	0	0	0	0	49	2.9	24
28	0	0	0	0	0	0	1	1	1	1	5	5	0	0	0	**IZS**	4	0	0	0	0	0	0	1	5	0.8	24
29	0	0	1	0	20	54	7	14	4	2	1	0	2	18	**IZS**	0	0	0	0	0	0	0	0	0	54	5.3	24
30	0	0	0	0	174	51	39	161	9	1	3	3	1	**IZS**	14	1	1	0	0	6	0	0	0	0	174	20.2	24
31	0	0	0	0	11	2	6	5	2	2	1	2	**IZS**	0	0	0	0	0	0	17	0	0	0	0	17	2.1	24
HOURLY MAX	8	2	7	11	174	56	83	353	146	35	45	35	85	24	21	37	245	178	71	78	43	26	51	56			
HOURLY AVG	0.6	0.3	0.9	1.0	9.6	10.4	13.4	34.7	19.3	8.8	8.0	5.1	6.9	3.9	4.7	3.5	12.5	9.6	5.9	6.4	5.1	2.5	3.4	3.5			

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:	447					
MAXIMUM INSTANTANEOUS VALUE:	353	PPB	@ HOUR(S)	7	ON DAY(S)	26
IZS CALIBRATION TIME:	31	HRS	OPERATIONAL TIME:		742	HRS
MONTHLY CALIBRATION TIME:	10	HRS				
STANDARD DEVIATION	24.27					


01 Hour Averages
500
372.5
245
117.5
-10
03/01/09 00:00
03/06/09 00:00
03/11/09 00:00
03/16/09 00:00
03/21/09 00:00
03/26/09 00:00
03/31/09 00:00
LICA
NOMAX
PPB

Oxides of Nitrogen

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

MARCH 2009

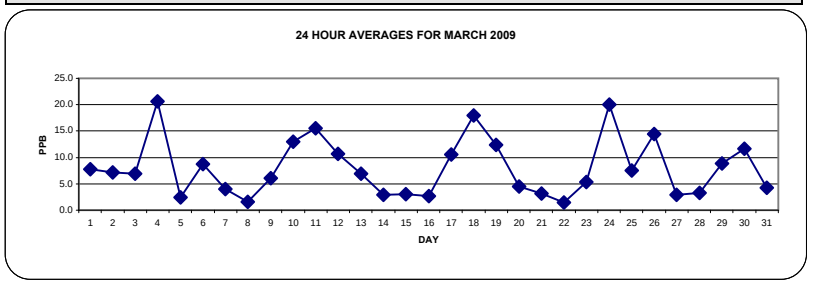
OXIDES OF NITROGEN hourly averages in ppb

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	2	3	9	10	9	8	10	7	6	3	3	6	4	6	6	4	10	12	11	**IZS**	21	17	8	5	21	7.8	24
2	2	5	7	5	5	12	31	26	10	7	5	4	4	4	4	5	5	6	**IZS**	6	5	3	2	2	31	7.2	24
3	4	5	12	6	7	11	11	15	7	8	3	5	4	6	6	6	8	**IZS**	7	7	5	5	5	5	15	6.9	24
4	5	5	7	6	7	7	10	**C**	**C**	**C**	**C**	**C**	**C**	**C**	**C**	**C**	**C**	10	35	45	49	44	32	27	49	**20.6**	24
5	12	3	1	1	1	1	0	0	1	3	2	2	4	3	2	**IZS**	7	1	1	1	1	1	4	5	12	2.5	24
6	7	11	12	8	8	7	11	30	35	22	9	7	2	2	**IZS**	2	2	3	2	4	4	5	4	4	35	8.7	24
7	3	3	3	3	4	3	3	2	3	2	3	4	3	**IZS**	4	4	5	6	6	7	6	5	4	5	7	4.0	24
8	3	2	3	3	2	2	2	2	2	1	1	1	**IZS**	1	1	1	1	0	0	1	1	1	2	4	4	1.6	24
9	3	2	1	1	1	1	17	9	3	2	6	**IZS**	8	3	3	3	4	4	6	8	17	12	11	14	17	6.0	24
10	13	12	10	9	10	16	25	46	66	19	**IZS**	8	7	4	2	2	2	4	7	5	7	7	10	8	66	13.0	24
11	6	6	6	6	9	23	31	45	40	**IZS**	13	14	14	12	11	8	9	11	12	15	18	24	13	11	45	15.5	24
12	12	11	12	11	13	15	13	16	**IZS**	16	15	13	11	10	8	6	8	9	8	7	8	8	7	9	16	10.7	24
13	9	13	6	3	5	6	8	**IZS**	8	7	9	7	7	7	8	7	5	9	5	4	7	7	7	5	13	6.9	24
14	2	2	2	2	2	2	**IZS**	3	3	3	3	4	3	3	2	6	3	4	3	3	2	3	4	4	6	3.0	24
15	2	2	2	2	2	**IZS**	3	4	3	3	2	2	2	3	3	3	3	3	17	4	1	1	1	1	17	3.0	24
16	1	1	0	1	**IZS**	1	0	3	6	6	4	2	2	2	2	3	2	3	3	2	3	3	4	7	7	2.7	24
17	8	12	11	**IZS**	11	19	23	20	13	14	7	3	7	2	3	3	6	4	3	7	18	20	14	15	23	10.6	24
18	14	14	**IZS**	21	25	32	60	**114**	83	6	5	10	4	2	2	2	3	3	3	2	2	2	2	2	**114**	18.0	24
19	1	**IZS**	2	2	3	16	40	37	12	11	11	9	10	8	6	6	4	6	42	24	8	7	9	10	42	12.3	24
20	**IZS**	3	4	4	4	6	11	16	5	5	3	3	3	4	4	3	3	4	3	4	3	2	1	**IZS**	16	4.5	24
21	1	1	1	1	2	2	2	5	8	5	5	3	3	2	3	4	3	3	4	5	4	3	**IZS**	3	8	3.2	24
22	2	2	2	2	2	2	1	2	2	2	2	1	2	1	1	2	1	1	1	1	1	**IZS**	0	0	2	1.4	24
23	1	2	1	4	2	2	5	5	4	16	10	4	3	3	2	2	**N**	**N**	3	1	**IZS**	17	14	11	17	5.3	22
24	20	12	20	20	27	63	97	80	41	5	2	1	2	2	2	2	3	5	15	**IZS**	23	12	3	3	97	20.0	24
25	2	4	11	12	20	23	10	11	4	3	4	2	0	0	0	1	2	4	**IZS**	4	11	13	17	14	23	7.5	24
26	15	15	11	8	17	17	34	106	52	7	7	7	7	5	4	4	2	**IZS**	2	3	3	3	2	2	106	14.5	24
27	2	2	2	2	2	2	2	3	9	3	3	5	4	4	3	2	**IZS**	1	1	2	2	4	3	5	9	3.0	24
28	4	3	3	4	4	5	5	5	5	4	3	2	1	1	1	**IZS**	1	1	1	1	2	4	5	10	10	3.3	24
29	8	10	10	18	16	41	24	17	10	4	1	1	2	2	**IZS**	1	1	3	5	4	7	6	5	9	41	8.9	24
30	13	13	10	9	36	27	43	73	6	4	4	3	3	**IZS**	2	3	2	2	2	2	3	3	3	2	73	11.7	24
31	2	2	2	3	5	6	11	7	4	5	5	4	**IZS**	2	1	1	2	1	3	10	6	5	7	4	11	4.3	24
HOURLY MAX	20	15	20	21	36	63	97	114	83	22	15	14	14	12	11	8	10	12	42	45	49	44	32	27			
HOURLY AVG	6.0	6.0	6.1	6.2	8.7	12.6	18.1	24.4	15.6	6.8	5.2	4.7	4.5	3.7	3.4	3.4	3.8	4.4	7.3	6.5	8.3	8.2	6.8	6.9			

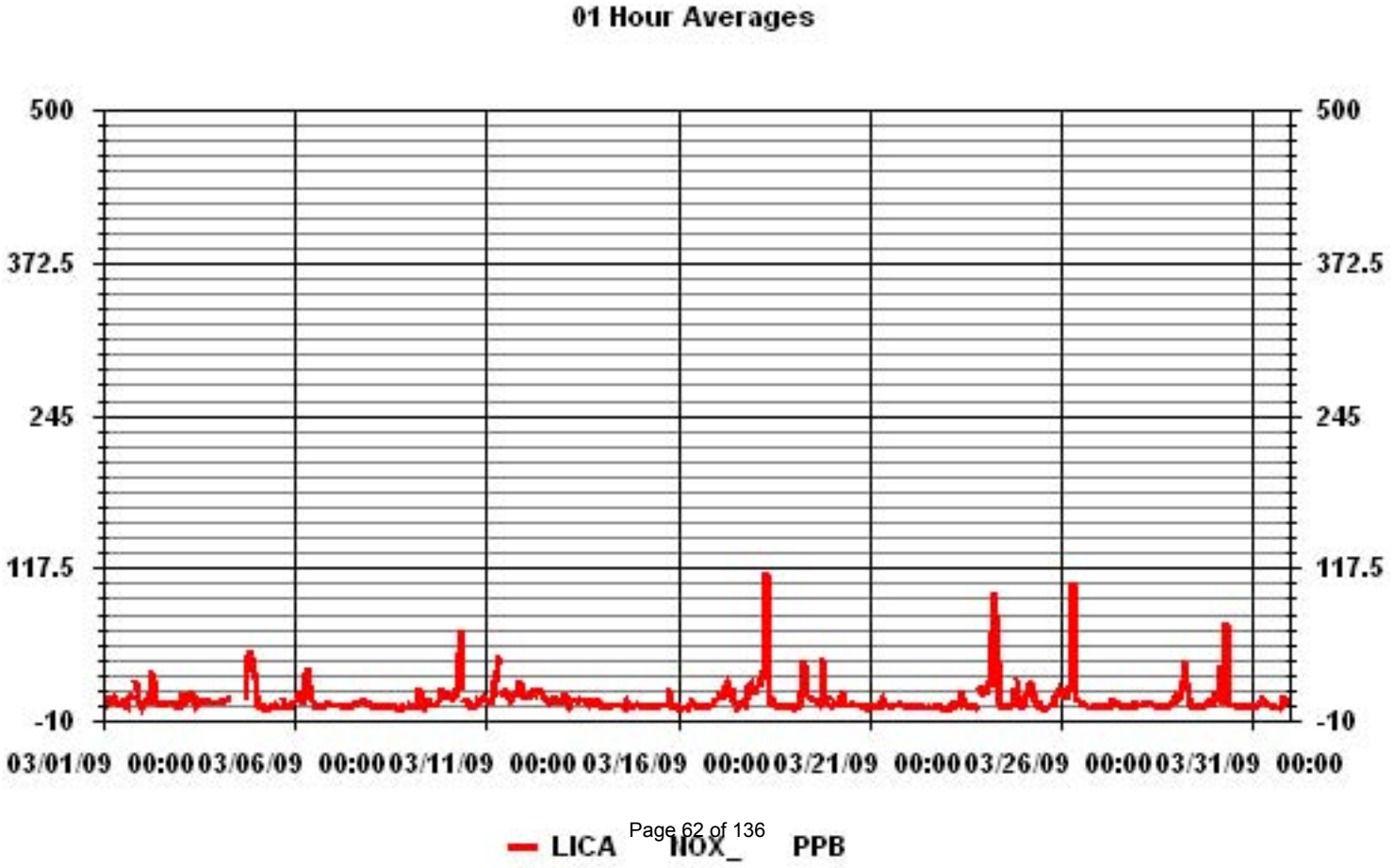
STATUS FLAG CODES

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



MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:	690					
MAXIMUM 1-HR AVERAGE:	114	PPB	@ HOUR(S)	7	ON DAY(S)	18
MAXIMUM 24-HR AVERAGE:	20.6	PPB			ON DAY(S)	4
IZS CALIBRATION TIME:	31	HRS	OPERATIONAL TIME:		742	HRS
MONTHLY CALIBRATION TIME:	10	HRS	AMD OPERATION UPTIME:		99.7	%
STANDARD DEVIATION:	11.70		MONTHLY AVERAGE:		7.86	PPB


01 Hour Averages
500
372.5
245
117.5
-10
03/01/09 00:00
03/06/09 00:00
03/11/09 00:00
03/16/09 00:00
03/21/09 00:00
03/26/09 00:00
03/31/09 00:00
LICA NOX_ PPB

LICA
NOX_ / WD Joint Frequency Distribution (Percent)

March 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	2.56	5.99	5.27	5.70	14.12	6.56	9.41	1.71	1.14	1.71	16.69	9.70	3.70	3.13	6.84	4.27	98.57
<	110	.00	.14	.00	.14	.57	.00	.14	.00	.00	.00	.00	.14	.14	.00	.00	.00	1.28
<	210	.00	.14	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.14
>=	210	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
	Totals	2.56	6.27	5.27	5.84	14.69	6.56	9.55	1.71	1.14	1.71	16.69	9.84	3.85	3.13	6.84	4.27	

Calm : .00 %

Total # Operational Hours : 701

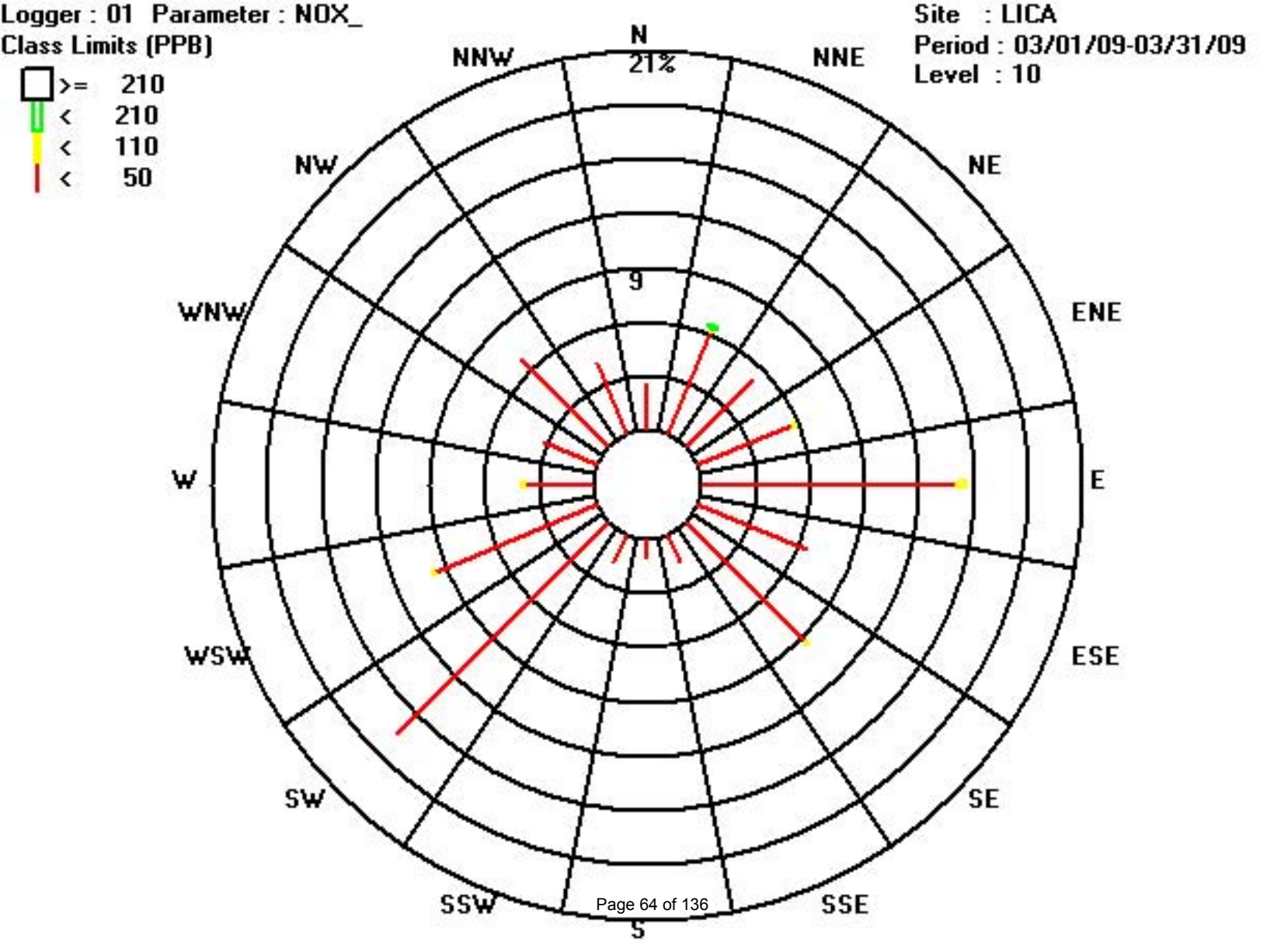
Distribution By Samples

Direction

	Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
<	50	18	42	37	40	99	46	66	12	8	12	117	68	26	22	48	30	691
<	110		1		1	4		1					1	1				9
<	210		1															1
>=	210																	
	Totals	18	44	37	41	103	46	67	12	8	12	117	69	27	22	48	30	

Calm : .00 %

Total # Operational Hours : 701


Logger : 01 Parameter : NOX_
Class Limits (PPB)
>= 210
< 210
< 110
< 50
Site : LICA
Period : 03/01/09-03/31/09
Level : 10
N
21%
NNE
NE
ENE
E
ESE
SE
SSE
S
SSW
SW
WSW
W
WNW
NW
NNW
9

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

MARCH 2009

OXIDES OF NITROGEN MAX instantaneous maximum in ppb

MST

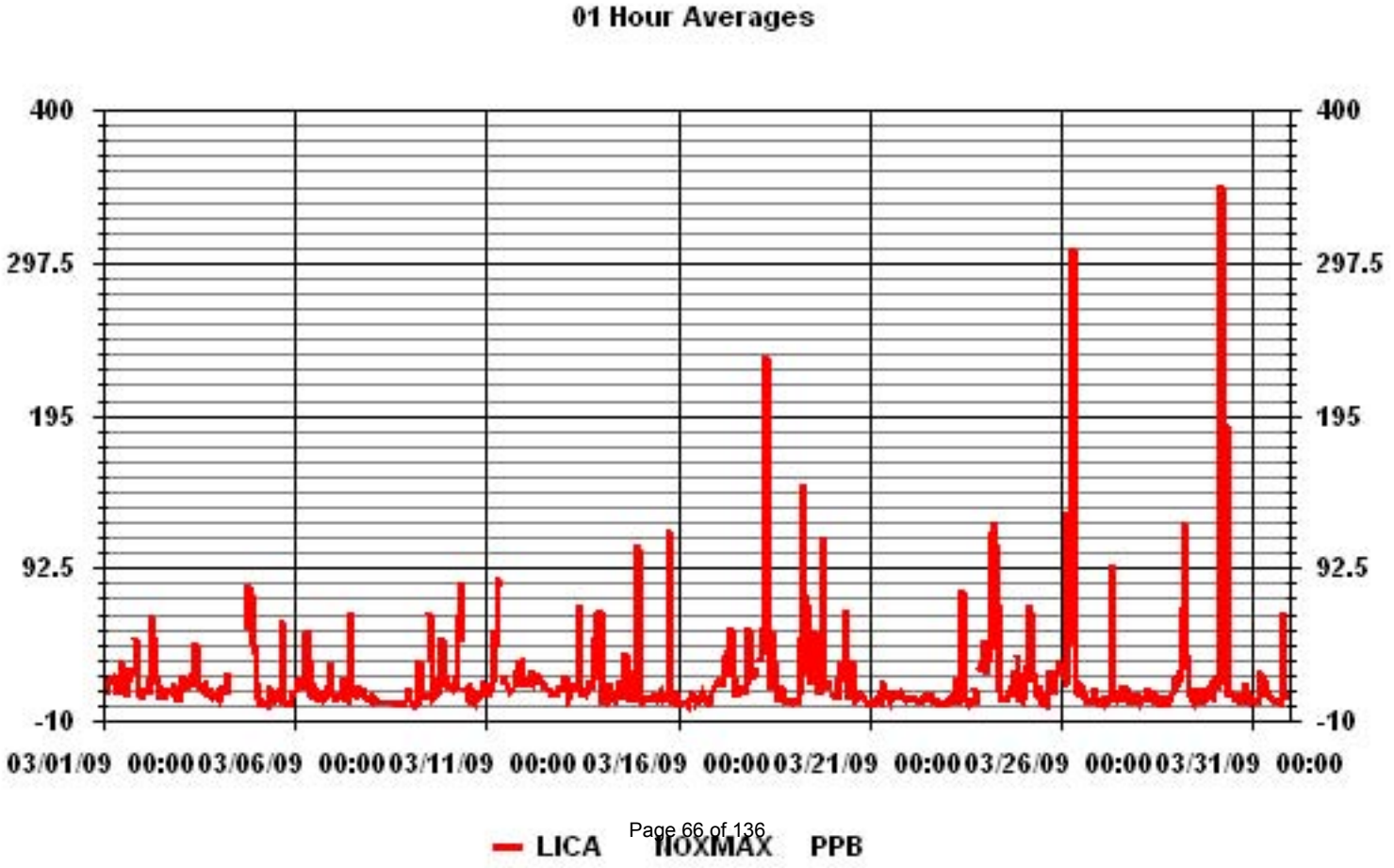
HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	9	9	18	20	14	21	16	19	17	10	7	30	14	11	8	8	16	26	23	**IZS**	44	27	12	7	44	16.8	24
2	4	8	12	9	9	19	61	48	19	21	15	8	9	6	6	8	10	11	**IZS**	8	15	9	4	4	61	14.0	24
3	7	10	21	12	12	18	15	22	13	42	12	40	13	13	11	10	16	**IZS**	8	9	6	7	6	6	42	14.3	24
4	9	6	9	11	10	8	20	**C**	**C**	**C**	**C**	**C**	**C**	**C**	**C**	**C**	**C**	**M**	53	81	76	75	42	35	81	33.5	23
5	17	6	2	1	1	2	2	1	13	11	3	3	4	4	10	**IZS**	55	3	2	2	1	1	8	8	55	7.0	24
6	10	14	19	11	19	10	21	49	51	33	11	12	4	10	**IZS**	5	5	9	6	8	14	8	28	9	51	15.9	24
7	6	6	5	7	6	6	18	5	5	4	7	63	8	**IZS**	6	11	14	8	7	11	6	6	5	6	63	9.8	24
8	6	3	4	3	3	3	2	2	3	2	2	2	**IZS**	2	2	2	1	1	1	1	1	3	4	11	11	2.8	24
9	4	3	2	1	3	3	30	19	9	4	7	**IZS**	61	30	21	5	6	8	10	20	45	15	14	20	61	14.8	24
10	16	14	14	11	12	21	51	61	83	44	**IZS**	12	13	5	3	3	2	9	8	6	8	8	17	14	83	18.9	24
11	8	8	11	9	16	50	40	86	83	**IZS**	16	20	17	14	13	10	11	**P**	14	23	29	30	22	13	86	24.7	23
12	17	16	17	16	21	21	17	19	**IZS**	20	17	16	13	13	12	11	9	10	9	8	9	12	13	12	21	14.3	24
13	13	21	10	5	7	16	12	**IZS**	11	11	67	8	8	8	11	9	11	16	11	43	43	62	18	65	67	21.1	24
14	3	3	4	3	5	13	**IZS**	6	5	10	5	17	5	8	7	36	12	25	9	5	4	4	109	106	109	17.6	24
15	5	3	5	4	4	**IZS**	5	7	6	7	5	7	7	9	5	6	6	5	118	24	3	3	3	10	118	11.2	24
16	2	1	1	2	**IZS**	3	1	4	8	8	6	3	5	4	5	9	7	4	4	3	5	10	12	13	13	5.2	24
17	15	15	18	**IZS**	15	32	34	29	19	53	32	5	19	5	10	11	12	13	8	14	52	27	18	21	53	20.7	24
18	21	24	**IZS**	32	34	52	93	235	195	10	36	50	31	12	10	3	6	14	5	3	3	3	4	3	235	38.2	24
19	2	**IZS**	3	3	7	46	149	76	70	69	22	14	24	50	32	19	7	29	114	108	12	12	15	15	149	39.0	24
20	**IZS**	7	7	6	6	18	28	27	16	65	4	6	8	31	9	5	6	6	10	7	7	4	2	**IZS**	65	13.0	24
21	2	3	3	2	5	4	3	10	16	11	10	7	4	7	6	9	5	8	7	9	7	6	**IZS**	4	16	6.4	24
22	5	4	4	4	4	4	4	3	3	4	4	4	8	2	6	7	3	3	4	2	1	**IZS**	1	1	8	3.7	24
23	3	3	3	5	3	3	19	6	5	59	78	8	4	4	2	4	**N**	**N**	10	3	**IZS**	26	28	22	78	14.2	22
24	44	20	29	38	46	116	124	110	69	10	7	3	7	2	7	10	6	14	22	**IZS**	32	23	6	7	124	32.7	24
25	5	9	18	27	68	64	15	22	8	7	14	7	2	2	1	9	24	20	**IZS**	9	22	23	31	26	68	18.8	24
26	23	24	19	13	130	41	53	308	136	10	9	15	14	8	8	6	3	**IZS**	3	4	5	12	3	2	308	36.9	24
27	3	3	2	7	2	3	5	5	95	6	5	9	6	7	14	5	**IZS**	11	2	2	3	9	5	6	95	9.3	24
28	6	3	5	5	5	8	12	7	5	4	10	8	3	2	3	**IZS**	6	1	1	3	4	8	9	19	19	6.0	24
29	13	18	18	24	66	124	32	34	14	7	4	2	4	10	**IZS**	3	3	7	11	8	11	8	7	16	124	19.3	24
30	18	19	12	14	**349**	118	66	189	24	6	10	8	4	**IZS**	8	6	3	2	2	15	4	3	6	3	**349**	38.7	24
31	3	3	3	6	23	16	22	19	7	9	7	6	**IZS**	4	3	3	4	3	6	62	8	7	10	6	62	10.4	24
HOURLY MAX	44	24	29	38	349	124	149	308	195	69	78	63	61	50	32	36	55	29	118	108	76	75	109	106			
HOURLY AVG	10.0	9.5	9.9	10.4	30.2	28.8	32.3	49.2	34.8	19.2	14.9	13.6	11.4	10.1	8.5	8.3	9.6	10.2	16.8	17.3	16.0	15.0	15.4	16.3			

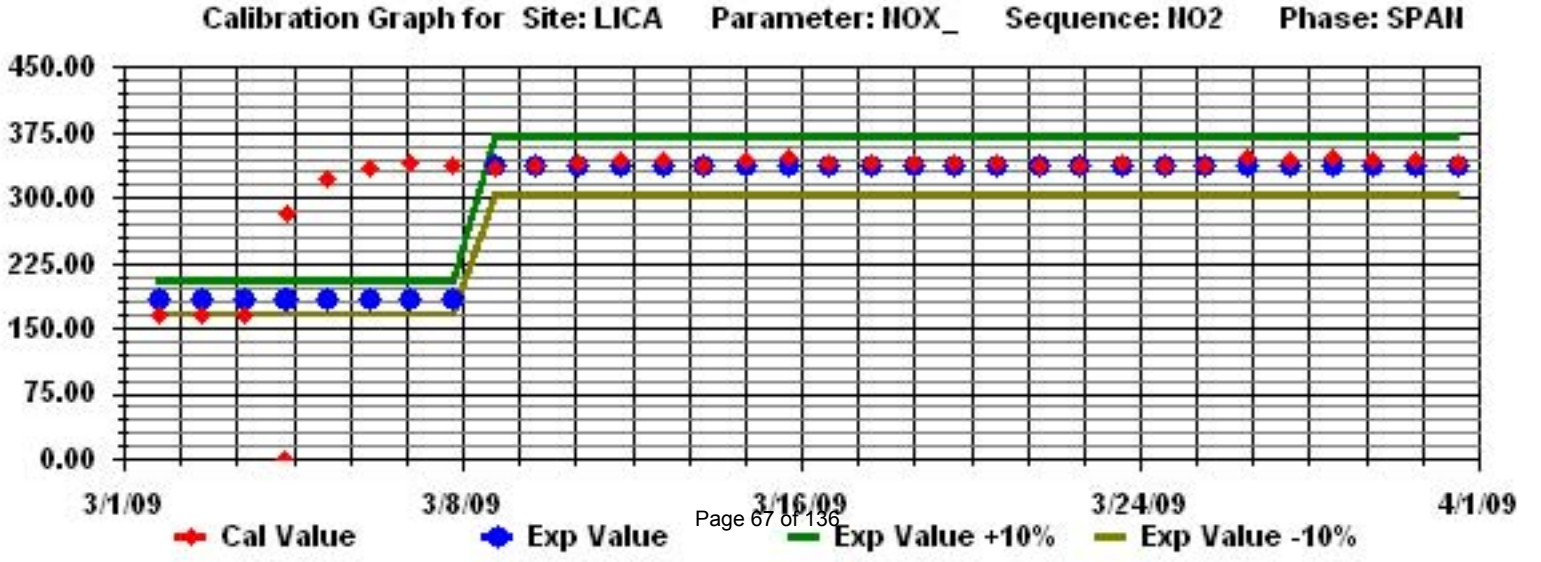
STATUS FLAG CODES

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

MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:	699					
MAXIMUM INSTANTANEOUS VALUE:	349	PPB	@ HOUR(S)	4	ON DAY(S)	30
IZS CALIBRATION TIME:	31	HRS	OPERATIONAL TIME:		740	HRS
MONTHLY CALIBRATION TIME:	10	HRS				
STANDARD DEVIATION	29.72					


01 Hour Averages
400
297.5
195
92.5
-10
03/01/09 00:00
03/06/09 00:00
03/11/09 00:00
03/16/09 00:00
03/21/09 00:00
03/26/09 00:00
03/31/09 00:00
LICA
NOXMAX
PPB


Calibration Graph for Site: LICA Parameter: NOX_ Sequence: NO2 Phase: SPAN
450.00
375.00
300.00
225.00
150.00
75.00
0.00
3/1/09
3/8/09
3/16/09
3/24/09
4/1/09
Cal Value
Exp Value
Exp Value +10%
Exp Value -10%

Ozone

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

MARCH 2009

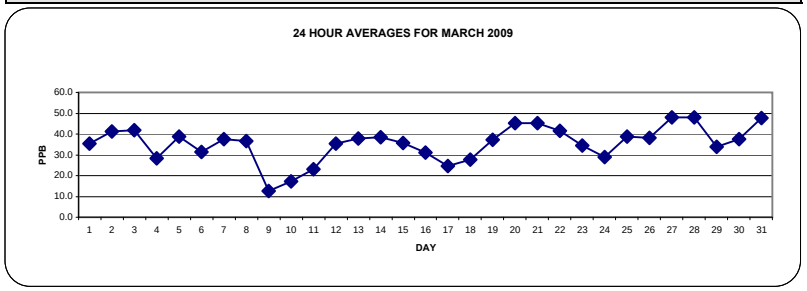
OZONE (O_3) hourly averages in ppb

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	37	37	33	32	32	34	31	33	35	38	39	40	41	41	41	42	38	34	33	**IZS**	24	27	36	38	42	35.5	24
2	42	39	34	39	39	32	17	23	36	40	42	44	44	46	47	48	49	47	**IZS**	46	47	48	50	49	50	41.2	24
3	48	45	37	44	43	38	37	32	42	44	46	47	47	45	45	44	42	**IZS**	41	40	40	39	36	37	48	41.7	24
4	35	34	30	30	28	30	29	30	29	32	36	39	42	44	45	46	**IZS**	37	12	7	5	7	9	15	46	28.3	24
5	29	40	39	40	39	39	39	39	39	39	40	41	39	39	41	**IZS**	39	41	41	40	40	40	36	34	41	38.8	24
6	29	23	20	21	21	21	17	10	17	28	34	36	40	41	**IZS**	42	42	41	41	40	39	38	39	39	42	31.3	24
7	39	40	40	39	39	39	39	39	39	40	40	39	39	**IZS**	39	38	38	36	35	33	34	32	34	32	40	37.5	24
8	35	38	36	36	36	37	37	37	37	38	38	39	**IZS**	39	39	40	40	39	38	37	35	34	31	28	40	36.7	24
9	26	23	19	17	13	10	3	6	7	7	9	**IZS**	13	14	18	19	18	18	15	13	6	7	7	4	26	12.7	24
10	4	5	5	6	5	2	0	4	8	18	**IZS**	24	25	28	30	30	30	28	26	27	26	26	21	20	30	17.3	24
11	20	19	18	18	15	9	3	8	15	**IZS**	28	29	31	33	35	38	36	34	31	28	23	15	21	22	38	23.0	24
12	23	22	20	19	16	16	29	30	**IZS**	38	41	42	44	45	46	47	45	43	43	43	41	40	41	37	47	35.3	24
13	36	31	36	39	38	36	31	**IZS**	33	36	38	39	40	41	41	43	43	38	40	40	39	39	36	37	43	37.8	24
14	39	39	40	40	39	38	**IZS**	38	39	39	39	39	39	39	39	38	39	39	38	37	37	37	36	36	40	38.4	24
15	37	37	37	37	37	**IZS**	37	37	38	38	38	38	37	37	36	35	35	33	31	33	34	33	33	33	38	35.7	24
16	33	33	32	32	**IZS**	31	31	29	27	28	30	32	33	34	35	35	36	33	32	31	31	31	27	22	36	31.2	24
17	22	16	17	**IZS**	13	8	7	18	26	29	34	35	35	37	38	38	36	34	34	31	19	13	16	13	38	24.7	24
18	14	12	**IZS**	5	3	2	2	6	16	30	32	32	34	37	39	40	40	41	41	41	42	43	43	44	44	27.8	24
19	44	**IZS**	43	42	40	28	12	16	35	37	37	40	42	44	46	47	48	47	21	27	44	42	39	37	48	37.3	24
20	**IZS**	48	46	45	45	44	39	36	44	45	46	46	47	47	46	47	46	46	46	45	46	46	46	**IZS**	48	45.1	24
21	47	47	47	47	47	47	47	45	42	43	43	45	46	46	45	45	45	44	44	43	44	44	**IZS**	44	47	45.1	24
22	44	46	46	45	45	44	41	41	41	41	40	40	40	40	40	40	41	41	41	41	41	**IZS**	40	39	46	41.7	24
23	38	35	37	32	33	33	30	29	31	30	33	36	38	42	45	47	**N**	**N**	43	43	**IZS**	23	21	23	47	34.4	22
24	16	17	9	8	7	2	3	10	26	40	42	44	45	45	46	46	46	44	34	**IZS**	21	30	44	43	46	29.0	24
25	42	41	33	32	29	27	36	37	42	43	44	46	48	48	49	50	48	46	**IZS**	44	34	28	21	21	50	38.7	24
26	17	16	20	23	21	17	9	9	27	45	48	48	50	50	53	56	56	**IZS**	56	53	52	52	50	49	56	38.1	24
27	47	44	45	44	43	41	40	**C**	**C**	**C**	42	44	46	50	56	**59**	**IZS**	54	54	52	51	49	49	48	**59**	47.9	24
28	48	49	48	46	45	41	40	43	44	46	48	51	54	55	56	**IZS**	56	54	51	51	51	49	44	34	56	**48.0**	24
29	35	27	23	15	15	5	10	25	35	42	48	50	50	49	**IZS**	47	47	45	41	40	35	30	36	25	50	33.7	24
30	16	13	15	15	12	5	4	11	41	46	50	52	53	**IZS**	55	55	57	56	55	53	51	49	48	48	57	37.4	24
31	48	47	47	45	43	40	34	42	45	47	49	50	**IZS**	57	55	55	57	57	55	45	48	45	39	44	57	47.6	24
HOURLY MAX	48	49	48	47	47	47	47	45	45	47	50	52	54	57	56	59	57	57	56	53	52	52	50	49			
HOURLY AVG	33.0	32.1	31.7	31.1	29.4	26.5	24.5	26.3	32.3	36.8	39.1	40.9	40.8	41.8	43.0	43.3	42.6	41.1	38.4	38.1	36.0	34.5	34.3	33.2			

STATUS FLAG CODES

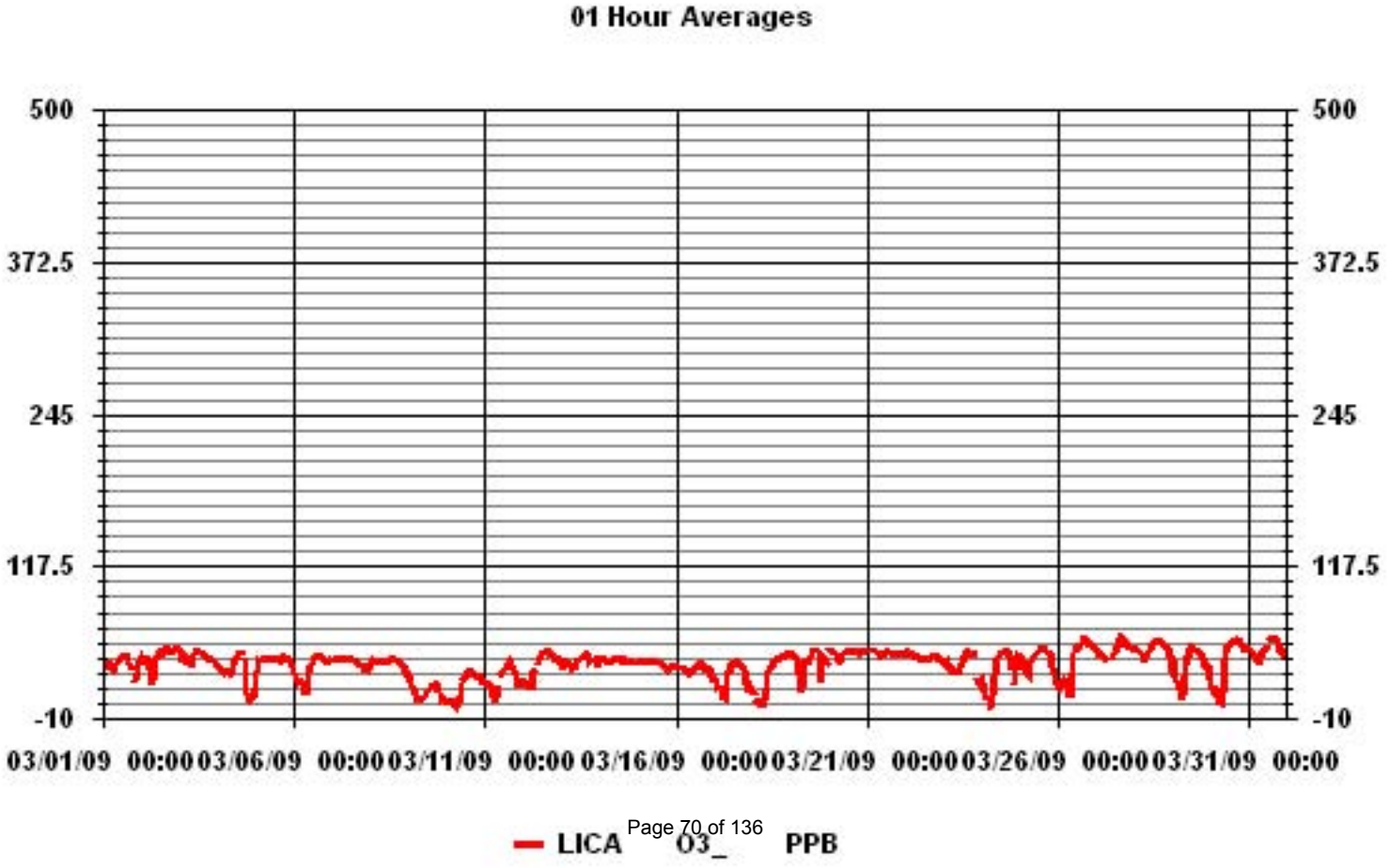
S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	- MISSING DATA
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE



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

MONTHLY SUMMARY

NUMBER OF 1-HR EXCEEDENCES:	0					
NUMBER OF NON-ZERO READINGS:	706					
MAXIMUM 1-HR AVERAGE:	59	PPB	@ HOUR(S)	15	ON DAY(S)	27
MAXIMUM 24-HR AVERAGE:	48.0	PPB			ON DAY(S)	28
					VAR-VARIOUS	
IZS CALIBRATION TIME:	32	HRS	OPERATIONAL TIME:		742	HRS
MONTHLY CALIBRATION TIME:	3	HRS	AMD OPERATION UPTIME		99.7	%
STANDARD DEVIATION	12.28		MONTHLY AVERAGE		35.38	PPB


01 Hour Averages
500
372.5
245
117.5
-10
03/01/09 00:00
03/06/09 00:00
03/11/09 00:00
03/16/09 00:00
03/21/09 00:00
03/26/09 00:00
03/31/09 00:00
LICA O3_ PPB

LICA
O3_ / WD Joint Frequency Distribution (Percent)

March 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	2.54	6.08	5.23	5.79	14.56	6.36	8.76	1.69	.70	.70	14.28	9.33	3.25	3.11	6.64	4.24	93.35
<	110	.00	.14	.00	.00	.00	.14	.84	.28	.42	.84	2.54	.56	.70	.00	.14	.00	6.64
<	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	2.54	6.22	5.23	5.79	14.56	6.50	9.61	1.98	1.13	1.55	16.83	9.90	3.96	3.11	6.78	4.24	

Calm : .00 %

Total # Operational Hours : 707

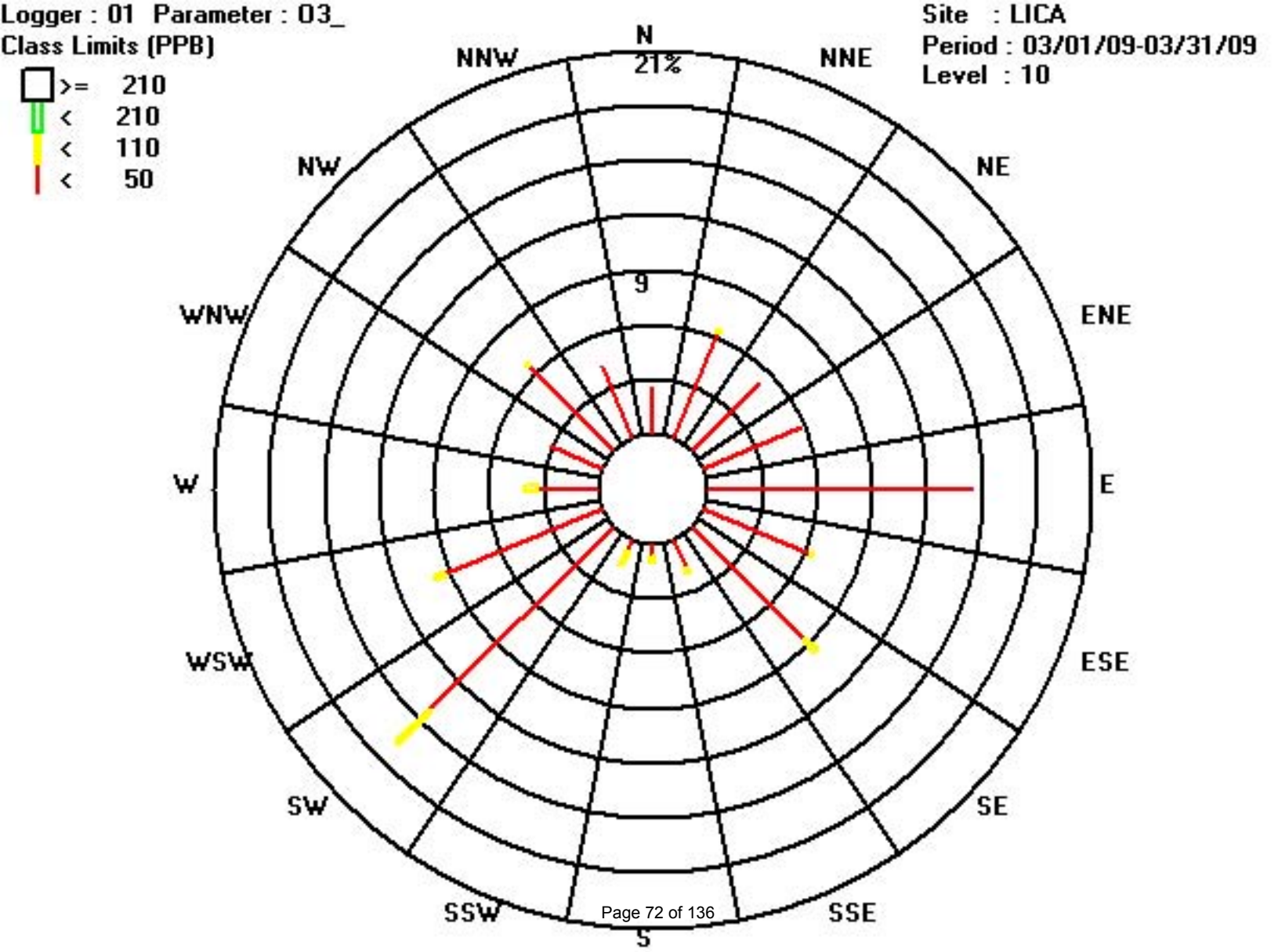
Distribution By Samples

Direction

	Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
<	50	18	43	37	41	103	45	62	12	5	5	101	66	23	22	47	30	660
<	110		1				1	6	2	3	6	18	4	5		1		47
<	210																	
>=	210																	
	Totals	18	44	37	41	103	46	68	14	8	11	119	70	28	22	48	30	

Calm : .00 %

Total # Operational Hours : 707


Logger : 01 Parameter : 03_
Class Limits (PPB)
>= 210
< 210
< 110
< 50
Site : LICA
Period : 03/01/09-03/31/09
Level : 10
N
21%
NNE
NE
ENE
E
ESE
SE
SSE
S
SSW
SW
WSW
W
WNW
NW
NNW
9

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

MARCH 2009

OZONE MAX instantaneous maximum in ppb

MST

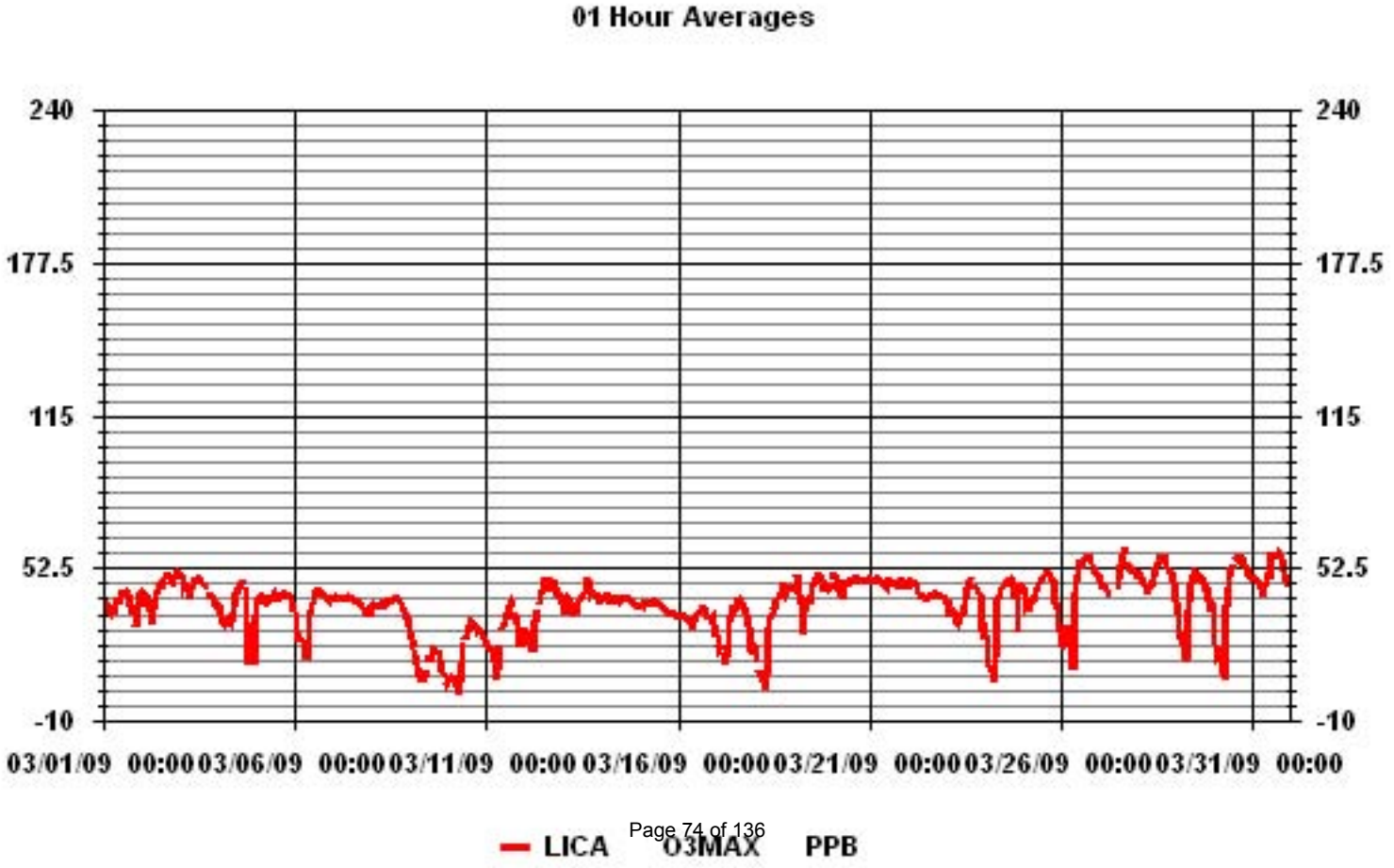
HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	38	38	36	35	34	36	34	37	39	39	39	42	42	42	42	43	42	38	35	**IZS**	30	37	38	42	43	38.2	24
2	43	42	37	41	40	36	29	36	38	42	43	45	45	47	48	49	49	49	**IZS**	47	48	49	51	50	51	43.7	24
3	49	49	44	45	45	41	41	44	45	47	47	48	48	48	47	46	45	**IZS**	41	41	41	40	38	37	49	44.2	24
4	37	35	33	31	30	31	32	32	31	34	37	42	44	45	46	47	**IZS**	43	31	14	14	14	14	33	47	32.6	24
5	40	41	40	41	40	39	40	39	40	40	41	42	40	40	42	**IZS**	41	42	42	41	41	41	39	36	42	40.3	24
6	35	27	24	23	23	23	21	15	23	34	35	38	42	42	**IZS**	43	43	42	42	41	40	39	40	40	43	33.7	24
7	40	41	40	40	40	40	40	40	40	41	40	40	40	**IZS**	39	39	38	38	37	35	35	33	35	33	41	38.4	24
8	37	38	37	37	37	38	37	37	38	38	39	39	**IZS**	39	40	40	40	40	39	37	36	35	33	29	40	37.4	24
9	27	24	20	18	14	12	9	7	7	8	10	**IZS**	15	15	20	20	19	19	18	16	11	10	9	5	27	14.5	24
10	6	7	8	7	7	5	1	6	14	21	**IZS**	25	27	29	31	31	30	29	27	28	27	27	26	24	31	19.3	24
11	21	21	20	20	19	15	7	11	20	**IZS**	29	30	33	33	37	39	38	**P**	33	30	27	20	26	25	39	25.2	23
12	28	25	22	22	19	19	31	34	**IZS**	39	42	43	47	47	47	47	47	44	44	45	42	41	41	39	47	37.2	24
13	38	34	38	40	39	37	34	**IZS**	35	38	39	40	41	42	43	47	47	42	43	42	41	41	41	38	47	40.0	24
14	40	40	41	41	41	39	**IZS**	39	40	40	40	39	40	40	40	40	40	40	39	39	38	37	37	37	41	39.4	24
15	37	38	37	38	38	**IZS**	38	38	39	39	39	38	38	37	37	36	36	35	34	34	34	34	34	33	39	36.6	24
16	33	33	33	33	**IZS**	32	32	31	29	29	31	33	34	35	36	36	36	35	33	33	32	33	30	25	36	32.5	24
17	25	20	21	**IZS**	17	13	16	21	30	33	36	36	37	39	39	40	39	37	35	34	29	18	22	17	40	28.4	24
18	22	15	**IZS**	10	7	7	3	9	28	32	33	34	36	39	40	41	41	45	45	42	43	44	44	44	45	30.6	24
19	44	**IZS**	49	43	42	39	25	35	39	40	38	41	45	46	48	49	49	49	46	43	47	45	44	45	49	43.1	24
20	**IZS**	49	49	46	47	46	42	40	46	46	46	47	47	47	47	48	48	47	47	47	47	47	47	**IZS**	49	46.5	24
21	48	48	47	47	48	48	48	47	46	46	45	47	47	47	46	46	46	45	45	46	49	45	**IZS**	45	49	46.6	24
22	45	47	47	46	46	46	43	41	41	41	40	40	40	41	41	41	41	42	42	41	41	**IZS**	41	40	47	42.3	24
23	39	36	37	34	34	34	31	30	32	33	34	37	40	44	47	48	48	**M**	45	44	**IZS**	41	27	28	48	37.4	23
24	24	24	13	11	11	8	6	16	40	41	44	45	46	46	47	47	48	47	41	**IZS**	28	44	45	45	48	33.3	24
25	43	43	37	38	35	38	39	41	43	44	46	47	48	49	50	50	50	48	**IZS**	47	39	36	27	29	50	42.0	24
26	21	20	27	26	29	23	14	11	42	47	50	55	55	52	56	57	57	**IZS**	57	55	53	52	51	50	57	41.7	24
27	48	45	45	45	44	42	**C**	**C**	**C**	**C**	**C**	45	48	54	58	**60**	**IZS**	54	54	53	52	51	51	49	**60**	49.9	24
28	49	50	49	47	46	43	43	44	45	47	49	53	55	57	57	**IZS**	57	55	53	52	52	51	48	40	57	49.7	24
29	39	34	27	24	22	16	15	35	39	46	49	51	51	50	**IZS**	48	48	47	44	44	40	34	39	36	51	38.2	24
30	22	17	18	20	15	10	7	37	44	49	52	53	53	**IZS**	57	56	57	57	55	54	53	50	49	48	57	40.6	24
31	48	48	47	47	45	45	41	45	46	49	49	58	**IZS**	58	57	57	59	58	57	52	50	48	45	48	59	50.3	24
HOURLY MAX	49	50	49	47	48	48	48	47	46	49	52	58	55	58	58	60	59	58	57	55	53	52	51	50			
HOURLY AVG	35.5	34.3	34.1	33.2	31.8	30.0	27.6	31.0	35.8	38.7	40.1	42.4	42.2	43.1	44.3	44.5	44.1	43.2	41.5	40.6	38.7	37.9	37.1	36.3			

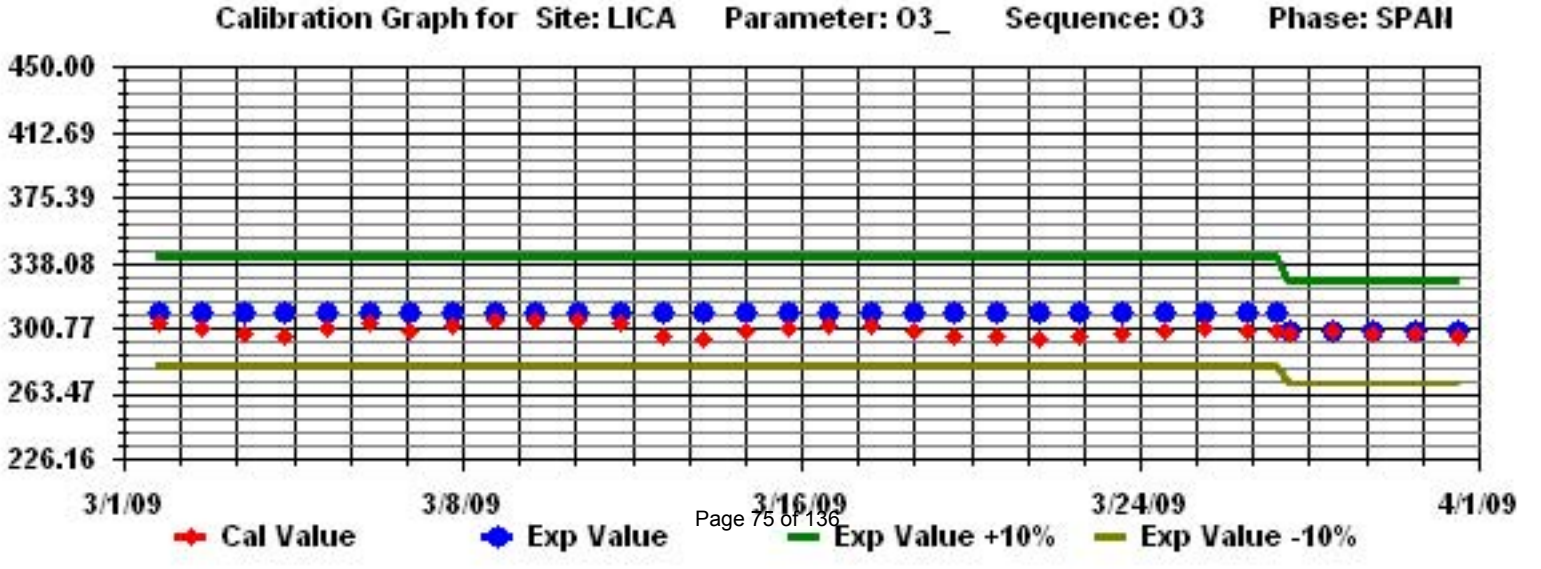
STATUS FLAG CODES

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

MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:	705					
MAXIMUM INSTANTANEOUS VALUE:	60	PPB	@ HOUR(S)	15	ON DAY(S)	27
IZS CALIBRATION TIME:	32	HRS	OPERATIONAL TIME:		742	HRS
MONTHLY CALIBRATION TIME:	5	HRS				
STANDARD DEVIATION	11.35					


01 Hour Averages
240
177.5
115
52.5
-10
03/01/09 00:00
03/06/09 00:00
03/11/09 00:00
03/16/09 00:00
03/21/09 00:00
03/26/09 00:00
03/31/09 00:00
LICA O3MAX PPB


Calibration Graph for Site: LICA Parameter: O3_ Sequence: O3 Phase: SPAN
450.00
412.69
375.39
338.08
300.77
263.47
226.16
3/1/09
3/8/09
3/16/09
3/24/09
4/1/09
Cal Value
Exp Value
Exp Value +10%
Exp Value -10%

Ambient Temperature

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

MARCH 2009

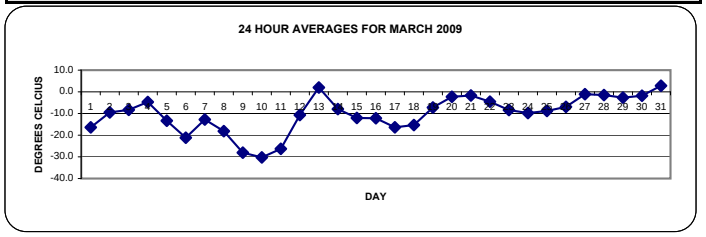
AMBIENT TEMPERATURE hourly averages (Degrees C)

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	-21.2	-20.5	-20.7	-21.3	-21.6	-22.2	-22.5	-23.1	-21.1	-19.5	-17.3	-15.6	-13.9	-12.2	-11.7	-11	-10.6	-12.2	-13.8	-13.1	-12.7	-11.6	-12	-12.2	-10.6	-16.4	24
2	-12.6	-14	-15.9	-15.5	-15.9	-16.1	-16.8	-16.2	-13.9	-12.2	-10.5	-8.5	-7.3	-6.1	-4.4	-3.8	-3.9	-4.2	-4.2	-4.1	-4.2	-4.9	-6	-7.2	-3.8	-9.5	24
3	-7.8	-8.6	-10.3	-10.7	-11.2	-11.8	-11.4	-11.4	-10.7	-9.9	-9	-9	-8.1	-7.6	-7.3	-7.3	-7.3	-7.3	-7.4	-6.6	-5.7	-4.7	-4.3	-4	-4.0	-8.3	24
4	-3.8	-4.1	-5.2	-6.1	-8.1	-9.4	-10.1	-10.7	-9.8	-7.9	-5.3	-3.2	-2	-1.5	0.6	1.4	1.4	0.2	-1.9	-3.8	-5.3	-6.3	-6.3	-5.5	1.4	-4.7	24
5	-4.8	-4.5	-6	-7.3	-10	-11.3	-12.7	-13.8	-15	-15.1	-15.1	-15.8	-15.7	-14.4	-13.4	-13.8	-14	-14.3	-14.8	-15.4	-16.2	-17.1	-18.9	-20.6	-4.5	-13.3	24
6	-23.6	-26.2	-27.9	-29.9	-31.1	-32.3	-33.3	-33.1	-27.9	-24.2	-20.6	-16.9	-15.1	-13.2	-12.6	-12.3	-12.5	-13.8	-15.3	-16.4	-17.2	-18	-17.6	-17.2	-12.3	-21.2	24
7	-16.8	-16.6	-15.9	-15.4	-15.6	-16.2	-16.2	-16.1	-15.5	-14.1	-13.4	-12.4	-10.8	-10.8	-10.6	-10.9	-10.6	-10.2	-9.9	-9.7	-9.3	-8.7	-10.3	-11.1	-8.7	-12.8	24
8	-12.3	-13.1	-14.3	-14.5	-15.3	-16.1	-16.9	-17.4	-17.9	-18.2	-18	-18	-18	-18.6	-18.5	-17.9	-17.9	-18.6	-19.5	-20.6	-21.7	-23.1	-24.1	-25.1	-12.3	-18.2	24
9	-26	-27.1	-28.2	-29.2	-29.8	-30.5	-32.3	-31.9	-30.3	-29.2	-28	-26.4	-25	-24.6	-24	-23.5	-23.7	-24.5	-25.7	-27.1	-28.9	-30.7	-32.5	-34.3	-23.5	-28.1	24
10	-35.6	-37.1	-38.1	-39.1	-39.9	**-40**	**-40**	**-40**	-36.9	-32	-27.5	-24.7	-23.2	-21.7	-21.1	-20.9	-21.3	-22.2	-23.9	-25.2	-26.2	-27.3	-29.8	-32.5	-20.9	-30.3	24
11	-34.3	-35.7	-36.7	-37.6	-38.3	-39.1	-39.7	-38.7	-33.5	-27.5	-24.6	-22.2	-20.6	-17.9	-15.4	-13.6	-13.5	-14.4	-15.9	-18.2	-21.1	-22.7	-24.2	-25.4	-13.5	-26.3	24
12	-24.8	-22.5	-21.1	-21.9	-23.5	-24.6	-18	-15.7	-12.9	-10.6	-8.5	-6.9	-5.5	-4	-2.5	-1.4	-1.4	-2.1	-3.1	-4	-5.5	-6.1	-5.4	-4.7	-1.4	-10.7	24
13	-4.5	-4.7	-4.1	-2.9	-2.6	-2.5	-2.5	-1.4	0.4	3.2	4.4	5	5.8	6.6	7.5	**8.8**	8.2	6.9	5.8	4.3	2.8	2.2	1.2	-0.2	**8.8**	2.0	24
14	-2.3	-2.8	-3.8	-4.2	-5.4	-7.1	-8.4	-8.5	-8.7	-9.2	-9.5	-9	-8.6	-7.5	-8.3	-8.7	-8.3	-8.8	-9.3	-9.8	-10.1	-10.6	-10.9	-11.2	-2.3	-8.0	24
15	-11.7	-11.8	-11.8	-12	-12.3	-12.5	-12.7	-12.7	-12.5	-12.2	-11.5	-11.5	-11.2	-11	-10.9	-10.8	-10.9	-11.2	-11.3	-11.6	-13.1	-13.6	-14.1	-14.4	-10.8	-12.1	24
16	-14.7	-15.1	-15.4	-15.6	-15.5	-15.4	-15.2	-14.7	-14.1	-13.3	-11.7	-10.3	-9.2	-8.7	-7.7	-7.2	-6.9	-7.5	-8.5	-10	-11.6	-12.6	-14.6	-16.8	-6.9	-12.2	24
17	-18.3	-20	-21.3	-22.8	-24.1	-24	-23.9	-20.5	-16.8	-15	-12.9	-11.9	-10.9	-9.8	-9.7	-9.1	-9.2	-9.6	-11.3	-13.4	-16	-18.7	-21.2	-22.8	-9.1	-16.4	24
18	-24.1	-25.3	-26.1	-26.8	-27.7	-28.1	-27.1	-24.3	-19.6	-15.8	-13.1	-10.8	-8.8	-6.9	-5.8	-5	-5.3	-6.2	-7.4	-9.1	-10.6	-11.3	-11.4	-11.6	-5.0	-15.3	24
19	-11.9	-12.2	-12.5	-12.9	-13.4	-14.9	-16.4	-15.2	-12.7	-10	-7.7	-5.4	-4.4	-2.4	-0.1	2	2.2	1.6	-0.5	-3.4	-5.2	-5	-5.7	-7.2	2.2	-7.2	24
20	-5.2	-4.4	-4.9	-5.3	-5.9	-6.6	-6.6	-6.5	-3.6	-2.1	-1.1	-0.7	-0.1	0.3	0.7	1.2	1	0.6	0.3	-0.2	-0.9	-1.4	-1.8	-1.6	1.2	-2.3	24
21	-1.7	-2.3	-2.7	-2.5	-2.4	-2.4	-2.6	-2.5	-2.1	-1.7	-1.6	-1.2	-1.1	-1	-0.6	-0.6	-0.6	-0.9	-1.3	-1.5	-1.6	-1.7	-2	-2.2	-0.6	-1.7	24
22	-2.4	-2.4	-2.1	-2.2	-2.3	-2.1	-2.9	-3.4	-4.2	-5	-5.9	-6.2	-6.1	-6.1	-5.7	-5.6	-5.1	-4.7	-4.6	-4.7	-5.3	-5.9	-6.6	-7.4	-2.1	-4.5	24
23	-8.4	-9.5	-10.5	-11.6	-12.5	-12.9	-13.3	-12.6	-11.4	-10.1	-8.8	-7.2	-5.2	-3.1	-1.8	-1.2	**N**	**N**	-3.2	-4.1	-5.5	-8.7	-10.8	-12.3	-1.2	-8.4	22
24	-13.6	-15.7	-16.9	-18.1	-18.8	-19.2	-18.6	-15.3	-11.1	-9.6	-7.8	-5.9	-4.7	-3.3	-2.4	-1.9	-1.9	-2.4	-4	-6.9	-9.9	-10.2	-7.6	-9.1	-1.9	-9.8	24
25	-11.5	-11.8	-15.5	-16.6	-17.4	-17.7	-17.3	-15.1	-13.2	-10.4	-7.3	-4.7	-3.1	-1.3	-0.4	0	-0.3	-1.7	-3	-4.5	-6.5	-9	-10.7	-12.6	0.0	-8.8	24
26	-13.9	-15.1	-16.3	-17.2	-17.9	-18.5	-18.3	-14.4	-9.3	-6.1	-2.5	-0.4	0.7	2.6	2.1	2.3	1.3	0	-1.9	-3.3	-4.1	-5.2	-5.5	-5.7	2.6	-6.9	24
27	-6.1	-6.6	-5.8	-5.1	-4.1	-4.2	-4.5	-4.4	-3.6	-2.9	-0.9	0	0.5	1.8	3.5	4.7	5.4	4.5	3.3	1.7	0.5	0.2	-1.7	-2.7	5.4	-1.1	24
28	-3.5	-3.8	-4	-4.9	-6.3	-8.8	-8	-5.2	-3.1	-0.9	1	2	2.7	3.3	3.7	3.8	3.4	3	1.5	-0.1	-1.1	-1.9	-3.5	-5.3	3.8	-1.5	24
29	-7.1	-8.2	-9.3	-10	-11	-11.3	-10.7	-7	-1.7	0	2.7	4.6	4.3	4	2.9	1.4	2.4	3.5	1.9	-0.7	-2.2	-3.6	-3.8	-5.6	4.6	-2.7	24
30	-7.1	-8.6	-9.8	-10.6	-11.5	-12.2	-11.4	-6.7	-3.2	0	2.8	4.1	4.7	4.6	5.1	4.6	4.2	3.5	3.3	2	0.5	-0.2	-0.6	-0.6	5.1	-1.8	24
31	-0.4	-0.7	-1.1	-1.2	-1.9	-2.5	-3.1	-1.1	0.5	2.4	3.4	5	6.7	7.8	8.2	8.7	8.4	8.3	6.2	4.2	3.5	2.7	1.3	2	8.7	**2.8**	24
HOURLY MAX	-0.4	-0.7	-1.1	-1.2	-1.9	-2.1	-2.5	-1.1	0.5	3.2	4.4	5.0	6.7	7.8	8.2	8.8	8.4	8.3	6.2	4.3	3.5	2.7	1.3	2.0			
HOURLY AVG	-12.6	-13.3	-14.0	-14.5	-15.3	-15.9	-15.9	-14.8	-12.8	-10.9	-9.2	-7.9	-6.9	-5.9	-5.2	-4.8	-4.9	-5.5	-6.4	-7.6	-8.7	-9.5	-10.4	-11.2			

STATUS FLAG CODES

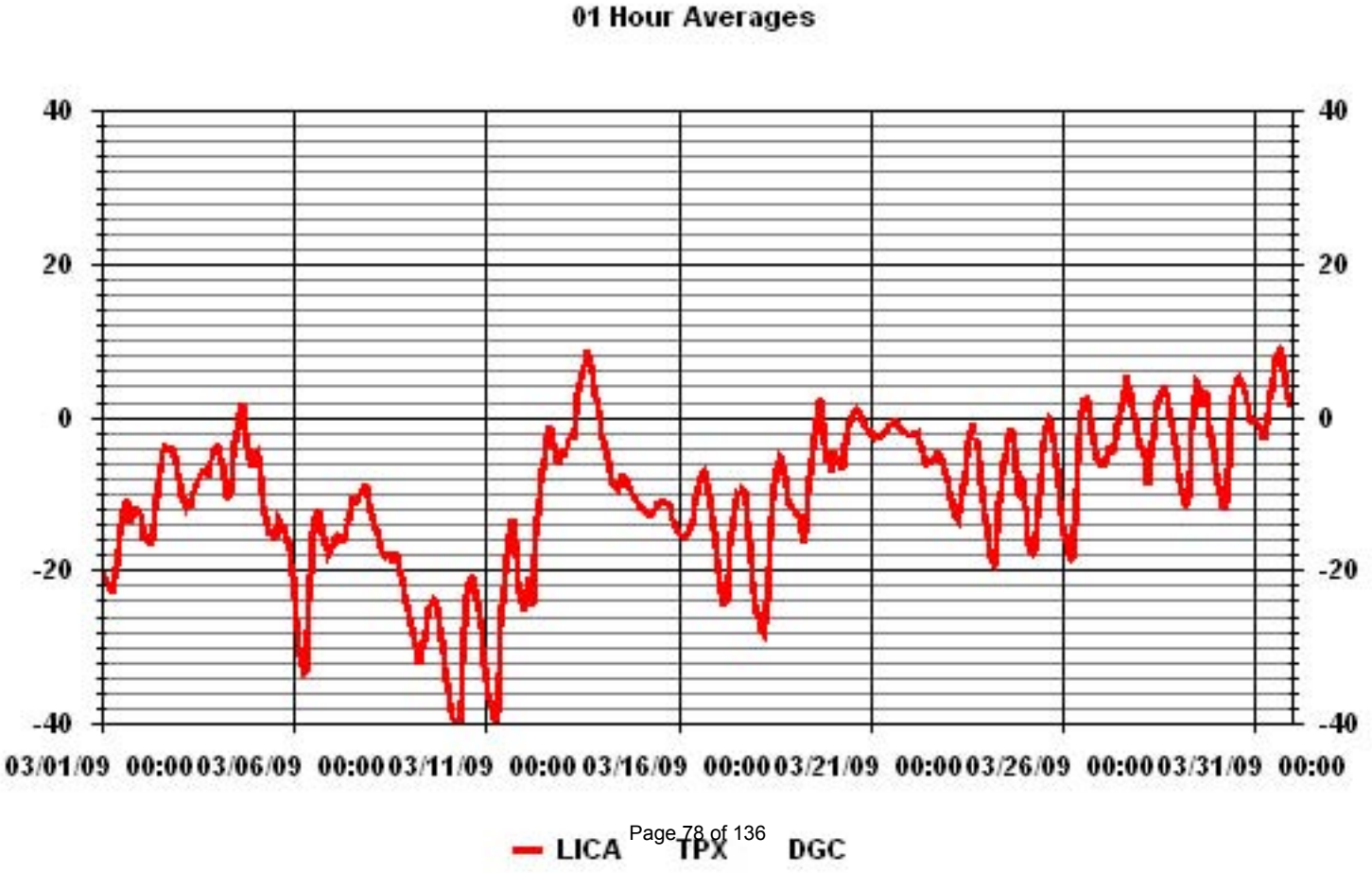
S	- OUT OF SERVICE	OD	- OUTSIDE DECTECTION LIMITS
N	- INVALID DATA	M	- MISSING DATA
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE



MONTHLY SUMMARY

MINIMUM 1-HR AVERAGE:	-40	^{O}C	@ HOUR(S)	VAR	ON DAY(S)	10	
MAXIMUM 1-HR AVERAGE:	8.8	^{O}C	@ HOUR(S)	15	ON DAY(S)	13	
MAXIMUM 24-HR AVERAGE:	2.8	^{O}C			ON DAY(S)	31	
					VAR-VARIOUS		
CALIBRATION TIME:	0	HRS	OPERATIONAL TIME:			742	HRS
			AMD OPERATION UPTIME:			99.7	%
STANDARD DEVIATION:	9.69		MONTHLY AVERAGE:			-10.18	^{O}C

*** Outside detection limits of sensor.**


01 Hour Averages
40
20
0
-20
-40
03/01/09 00:00
03/06/09 00:00
03/11/09 00:00
03/16/09 00:00
03/21/09 00:00
03/26/09 00:00
03/31/09 00:00
LICA
TPX
DGC

Relative Humidity

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

MARCH 2009

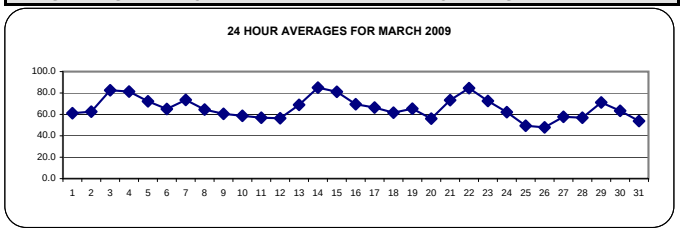
RELATIVE HUMIDITY hourly averages (%)

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	69.8	70.5	71.9	73.7	74.3	75.2	76.1	75.9	69.4	64.1	57.8	53.1	49.0	45.4	44.9	43.4	44.7	51.5	55.7	56.3	61.4	59.4	60.9	62.5	76.1	61.1	24
2	63.7	68.2	73.5	72.0	73.4	74.9	78.0	76.4	67.5	63.9	60.0	55.6	52.8	50.9	48.4	47.9	51.1	54.6	55.3	56.4	58.2	61.3	67.0	70.7	78.0	62.6	24
3	73.1	74.8	77.3	76.4	78.5	81.0	80.4	79.6	80.2	77.8	75.5	76.9	76.4	79.6	78.1	81.4	88.1	89.2	90.4	91.6	93.3	93.8	93.8	93.7	93.8	82.5	24
4	92.8	91.1	90.6	90.4	90.0	89.3	88.3	87.6	86.4	82.9	77.6	71.6	65.6	62.9	60.7	60.3	64.5	75.8	86.1	86.7	88.9	88.3	87.7	86.7	92.8	81.4	24
5	87.6	90.9	85.5	79.7	76.6	78.1	78.3	74.5	74.5	71.3	70.0	72.2	72.0	67.3	62.9	63.2	62.3	63.9	66.2	66.2	63.4	63.4	69.6	73.9	90.9	72.2	24
6	75.3	76.6	74.5	72.3	72.1	70.7	70.0	69.8	68.1	72.8	68.5	59.3	56.0	51.8	51.5	50.7	50.6	54.6	59.2	63.4	66.2	68.7	69.1	70.2	76.6	65.1	24
7	70.9	71.4	71.3	70.5	69.8	70.7	70.2	69.7	67.5	62.8	63.1	61.4	63.4	76.0	78.0	81.6	82.7	84.6	85.5	86.2	86.3	75.8	72.5	73.3	86.3	73.6	24
8	71.3	67.7	72.8	76.9	72.2	69.5	69.9	68.7	68.8	62.0	61.8	59.3	57.9	58.1	60.4	62.7	57.2	57.2	56.7	56.3	59.5	66.1	66.9	68.4	76.9	64.5	24
9	68.6	69.5	68.5	68.9	67.0	67.8	69.7	68.1	62.4	57.6	55.1	52.0	47.7	47.7	45.5	45.3	47.9	50.5	56.6	61.3	66.2	69.1	70.1	69.8	70.1	60.5	24
10	68.4	67.5	66.1	65.3	64.7	64.0	63.6	63.4	62.8	62.8	54.9	50.4	48.9	47.3	45.8	44.6	46.2	49.3	55.1	58.0	60.0	62.6	67.2	69.8	69.8	58.7	24
11	68.7	68.1	67.1	66.1	65.7	65.5	64.9	64.4	63.4	57.7	52.0	46.4	44.7	40.3	37.6	35.7	38.5	43.9	49.4	54.6	62.8	66.9	69.6	71.6	71.6	56.9	24
12	72.0	70.0	69.1	71.6	74.5	74.4	60.8	55.1	48.1	43.9	40.3	39.4	41.0	42.4	41.9	41.6	44.6	50.1	55.7	58.6	62.7	65.0	63.8	67.6	74.5	56.4	24
13	84.3	90.8	92.8	93.3	83.5	82.0	81.2	74.9	69.8	61.9	56.0	54.3	51.3	49.5	47.7	43.3	44.5	49.7	52.8	62.2	70.1	77.0	86.9	**94.5**	**94.5**	68.9	24
14	93.3	89.3	85.5	85.6	85.3	83.5	82.4	83.5	84.9	83.3	82.1	81.0	82.3	83.3	86.8	87.5	85.7	83.3	81.8	84.0	86.5	87.0	86.8	85.8	93.3	**85.0**	24
15	87.1	87.8	87.8	87.5	86.8	85.6	84.9	82.4	80.0	77.1	75.2	75.8	75.5	75.2	76.0	77.0	78.0	79.0	80.1	81.8	82.2	81.5	81.3	81.4	87.8	81.1	24
16	81.7	81.2	80.7	80.0	79.0	78.4	77.6	76.9	74.2	69.4	62.3	58.3	55.3	54.6	53.0	52.4	52.1	59.4	63.1	69.3	73.1	74.6	79.9	81.3	81.7	69.5	24
17	79.8	77.6	77.6	76.5	74.7	75.3	76.1	76.4	72.5	68.0	60.7	57.9	54.9	50.4	51.1	47.5	47.7	49.1	53.8	63.3	70.9	76.9	77.9	77.3	79.8	66.4	24
18	76.4	75.6	75.1	74.6	72.2	73.0	73.7	71.4	72.4	64.5	57.0	50.4	46.4	42.9	42.8	43.2	44.4	48.8	52.8	56.3	61.8	65.9	68.2	68.8	76.4	61.6	24
19	70.7	74.5	78.5	81.1	83.2	85.1	84.9	80.1	78.3	71.0	64.3	58.0	58.1	51.7	44.3	39.1	39.9	42.4	53.9	60.8	64.3	65.6	69.0	69.2	85.1	65.3	24
20	56.5	59.9	64.8	68.2	70.8	73.8	75.1	73.5	61.3	56.6	53.7	52.6	51.0	50.2	48.1	46.2	46.4	45.5	45.7	45.7	44.7	47.6	52.6	55.2	75.1	56.1	24
21	54.5	57.3	61.4	64.3	67.4	70.2	72.0	73.9	75.3	77.7	76.6	75.7	75.5	77.8	77.2	76.5	77.1	78.0	80.5	79.7	77.7	75.9	77.6	79.4	80.5	73.3	24
22	81.7	84.8	83.6	82.6	84.3	81.4	76.1	76.0	83.1	88.9	90.5	89.2	87.9	89.3	87.7	89.2	87.1	85.5	84.7	85.3	85.8	82.9	80.7	80.9	90.5	84.6	24
23	80.4	78.3	75.7	77.6	77.7	77.5	76.8	72.4	68.1	66.3	64.2	63.0	62.1	61.3	60.0	58.5	**N**	**N**	66.1	70.9	76.9	85.9	88.2	88.6	88.6	72.6	22
24	86.7	83.8	82.0	81.8	80.6	80.3	79.7	77.5	74.8	69.3	60.4	55.1	51.4	47.8	43.8	40.4	38.5	36.5	42.2	56.0	64.3	61.2	46.3	49.9	86.7	62.1	24
25	58.4	56.9	68.9	72.4	73.0	72.2	67.9	62.2	58.0	53.7	50.0	39.0	32.1	29.9	26.9	23.3	23.5	28.2	28.4	32.5	44.2	54.4	62.9	67.2	73.0	49.4	24
26	70.9	73.6	71.2	71.8	73.3	72.5	72.5	63.4	46.3	40.8	32.5	26.4	24.3	21.9	24.8	28.0	26.9	27.3	31.7	38.7	43.9	50.6	55.9	60.6	73.6	47.9	24
27	64.3	68.3	64.5	62.8	59.8	61.5	64.1	64.6	61.6	61.6	56.3	59.5	67.3	66.1	58.7	53.0	36.3	38.1	44.7	50.7	54.7	52.8	57.8	57.1	68.3	57.8	24
28	59.6	62.1	62.7	63.9	67.1	74.7	71.1	62.7	55.8	50.1	45.8	45.3	44.4	44.1	43.5	42.8	44.2	46.0	50.2	56.6	61.0	63.3	71.4	77.3	77.3	56.9	24
29	80.8	83.9	84.7	86.2	86.9	85.7	82.3	71.1	55.5	55.3	49.9	40.2	46.6	52.9	59.8	74.2	66.2	58.6	66.6	77.1	82.4	86.4	85.3	89.2	89.2	71.2	24
30	90.3	89.7	88.8	87.2	85.9	85.6	83.6	75.9	69.3	51.3	39.6	35.9	36.5	36.5	35.5	40.3	46.5	52.1	54.4	59.5	64.4	67.8	71.4	72.2	90.3	63.3	24
31	70.9	71.3	72.0	72.2	74.5	75.5	76.6	64.7	56.8	50.6	46.0	41.6	35.6	31.1	29.1	28.6	30.8	33.1	39.9	47.8	53.7	58.6	66.4	64.3	76.6	53.8	24
HOURLY MAX	93.3	91.1	92.8	93.3	90.0	89.3	88.3	87.6	86.4	88.9	90.5	89.2	87.9	89.3	87.7	89.2	88.1	89.2	90.4	91.6	93.3	93.8	93.8	94.5			
HOURLY AVG	74.5	75.3	75.7	75.9	75.6	76.0	75.1	72.2	68.3	64.4	60.0	56.7	55.3	54.4	53.3	53.2	53.1	55.5	59.5	63.7	67.5	69.6	71.8	73.5			

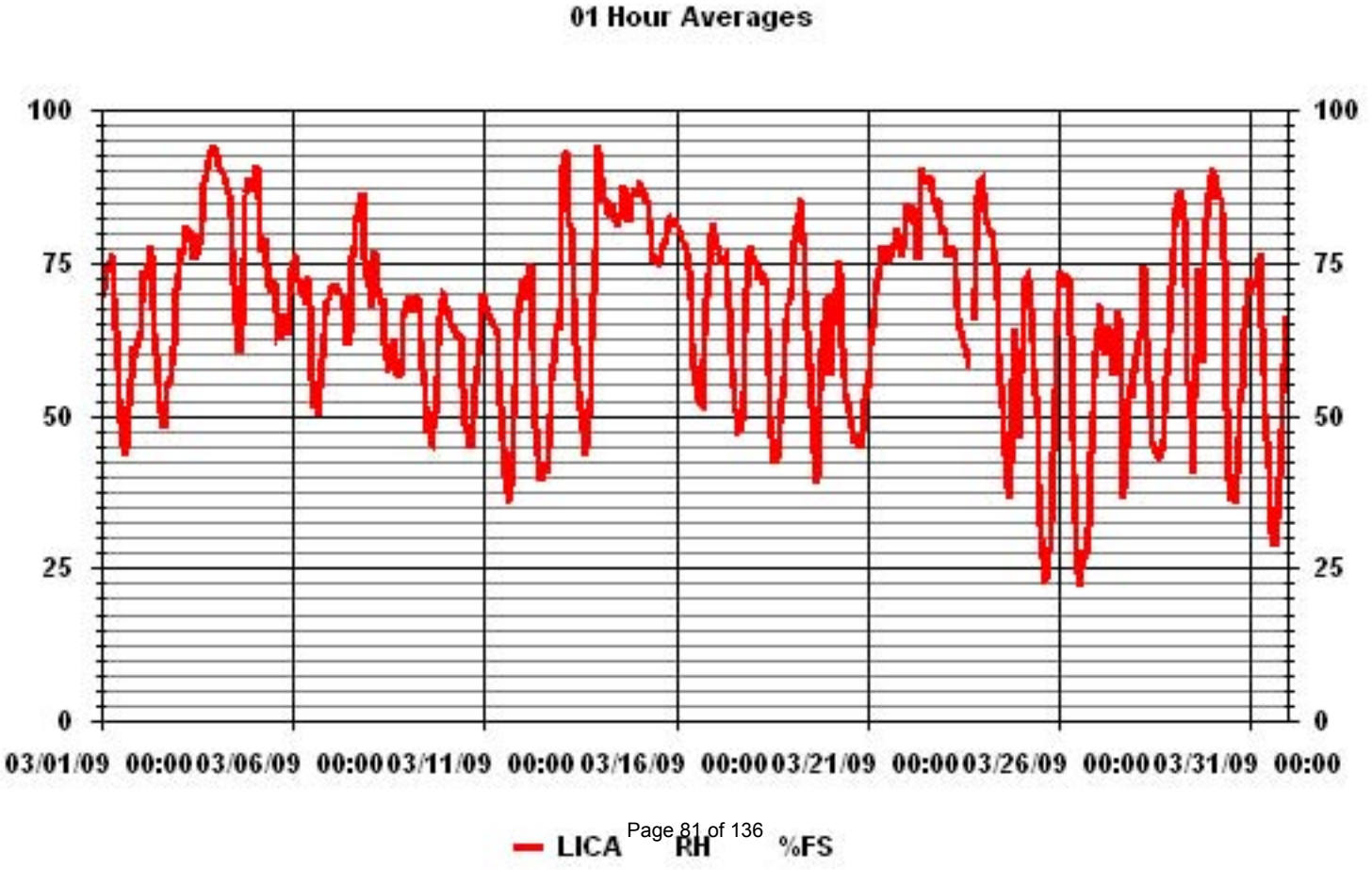
STATUS FLAG CODES

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



MONTHLY SUMMARY

MAXIMUM 1-HR AVERAGE:		94.5	%	@ HOUR(S)	23	ON DAY(S)	13
MAXIMUM 24-HR AVERAGE:		85.0	%			ON DAY(S)	14
CALIBRATION TIME:	0	HRS		OPERATIONAL TIME:		742	HRS
				AMD OPERATION UPTIME:		99.7	%
STANDARD DEVIATION:	15.24			MONTHLY AVERAGE:		65.86	%


01 Hour Averages
100
75
50
25
0
03/01/09 00:00
03/06/09 00:00
03/11/09 00:00
03/16/09 00:00
03/21/09 00:00
03/26/09 00:00
03/31/09 00:00
LICA RH %FS

Vector Wind Speed

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

MARCH 2009

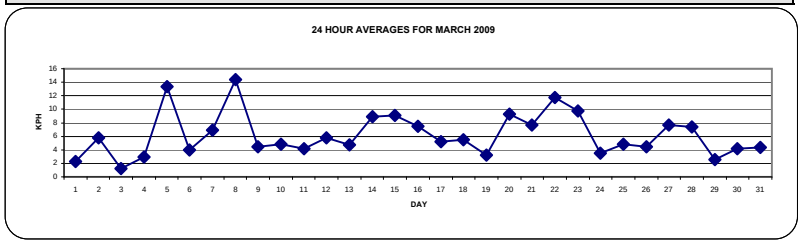
VECTOR WIND SPEED (WS) hourly averages (km/hr)

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	5.5	3.3	4.1	3.4	4	3.3	2.2	3.8	5.2	3.5	3.2	2.7	2.2	3.3	3	3	3	1.5	1.1	3.5	1.5	3	3.4	5.6	2.3	24
2	5.4	1.4	1.4	2.7	3.5	3.5	2.8	3.3	6.2	6.6	7.1	6.6	6.6	8.7	8.8	8.7	10.5	11	8.9	8.3	5.8	6.2	6.7	6.4	11	5.8	24
3	4.5	2.7	2.9	6	3.7	3.2	3.1	0.5	4.4	4.8	4.1	6.3	0.8	5	5.9	4.3	4.4	3	4.6	7.1	10.9	8.9	10.1	8.1	10.9	1.2	24
4	8.7	7.7	6.8	5.6	6.1	7.1	7.5	7.2	6.7	5.2	4.4	4	2.2	5.4	5.8	5.3	3.6	1.1	0.6	1.6	0.7	0.9	1	1.4	8.7	2.9	24
5	1.8	11	18	16.5	18.9	16.2	16.2	15.9	17.6	16.4	18.8	19.1	15.9	13.3	13.6	15	12.3	11	11	12.5	11.6	9.1	4.9	4.8	19.1	13.4	24
6	3.5	1	0.7	0.3	0.1	0.2	0.7	0.3	0.7	3.8	4.3	6.1	8.1	7.2	8.3	6.6	4.1	5	2.5	5.5	5.9	6.8	7.2	6.6	8.3	4.0	24
7	6.2	5.7	7	6.6	5.3	7.4	8.6	7.6	6.8	8.4	7.3	5.8	2.6	5.6	6.9	6.5	6.3	4.4	2.2	3.9	7.9	15.7	11	11.1	15.7	7.0	24
8	14.6	15.3	9.6	10.7	15.1	15.4	15.8	16.9	16.7	**19.3**	16.3	17.6	18	17.6	17.1	14.6	16.5	17.1	16.3	13.3	11	8.5	7.7	4.9	**19.3**	**14.4**	24
9	6.3	5.2	6.7	5.3	5.2	5.1	2.4	4.1	5.9	4.1	7.9	1.6	3.3	8.3	9.4	7.8	5.9	5.4	2.3	3.2	0.2	0.4	0.5	0.3	9.4	4.5	24
10	0.4	0.3	1	7.9	0.4	0.4	0.2	1	1.1	5.4	5.4	6	7.9	10.1	11.3	11.2	10.5	8.9	6.5	6	5.9	5.5	1.3	0.9	11.3	4.8	24
11	0.4	0.2	0.3	0.2	0.1	1.3	0.8	0.8	2	6	8.4	7	9.9	10	8.5	8.9	10.3	8.3	7.2	4.2	2.1	1.6	0.1	0.8	10.3	4.1	24
12	3.5	0.5	0.1	0.3	0.2	3.1	6.7	6.9	6.9	7	7.5	7.9	9.2	9.9	9.1	8.7	8.8	9.5	6.8	6.7	5.2	4.4	4.3	4.8	9.9	5.8	24
13	0.6	1.7	2.6	2.8	2.3	1.8	1.9	2.6	2.5	5	10.7	11.1	10.8	10.6	6.8	4.9	4.5	2.8	3.2	6.4	5.1	4.6	2.9	5.7	11.1	4.7	24
14	7.8	8.7	8.6	8.2	9.3	10.5	11.1	7.2	9.8	11	11.3	10.1	10.2	8.3	8	9.9	7.1	8.5	8.9	8	8.1	8.3	7.3	7.6	11.3	8.9	24
15	8.7	9	7.6	9.5	9.8	8.6	9.3	8.2	10.9	12	9.6	12.9	10.9	9	9.2	8.4	7.2	8	6.6	7.5	9.2	9.2	8.5	9.1	12.9	9.1	24
16	8.7	10.1	9	7.7	6.8	5.1	5.4	5.6	7.6	7.8	7.8	7.2	8.9	9.8	10.9	10.3	9.7	7.9	9.7	9.8	5.4	3	2.1	3.1	10.9	7.5	24
17	4	3.4	3.7	1.6	3.3	3.3	2.7	4.4	3.6	5.6	5.6	8.6	10	11	11.7	10.5	11.9	8.8	5.3	3.5	1	0.5	0.5	0.6	11.9	5.2	24
18	0.4	0.2	0.7	0.4	0.7	0.1	0.3	0.5	2.5	4.4	4.8	4.6	5.5	5.6	7.8	9.8	11.8	10.6	10	11.3	10.7	10.1	10.1	9.7	11.8	5.5	24
19	9.5	5.9	5.9	5.4	3.3	0.6	0.9	1.2	3	3	3.1	2.6	4.2	3.6	3.4	1.7	2.9	3.6	1.6	3.3	2.9	1.2	1.3	2.7	9.5	3.2	24
20	5.6	2.7	3.3	2.7	5.1	4.1	2.8	3.2	9	9.8	11	12.4	10.6	12.2	12.2	13.7	13.8	12.5	11.8	13.1	12.8	13	12.8	11.8	13.8	9.3	24
21	12.6	12.7	11.2	11.1	10.8	10	9.7	7.9	5.3	5.9	4.7	4.5	5.5	6.2	4.8	6.2	6.6	5.9	4.9	6	6	8.7	8.8	8.1	12.7	7.7	24
22	9.1	10.8	11.4	11.6	10.4	12.4	11.6	13.6	13.6	13.4	13.5	13.8	10.3	12.2	11.9	10	10.7	10.9	10.6	9.2	11.9	12	14.6	13	14.6	11.8	24
23	12.6	15.2	11.4	12.3	12.2	11.1	8.7	9.8	10.6	13.1	13.6	14.1	12.7	13.4	15.5	11.5	**N**	**N**	4.3	5	3.3	1.2	1.9	1.7	15.5	9.8	22
24	0.3	0.3	0.6	0.6	1.1	1.3	1	0.2	2.4	5.9	6.6	7.6	6.6	7.2	6.4	6.1	5.6	3.9	3.5	0.8	1.3	4.3	7.8	3.5	7.8	3.5	24
25	0.9	2.4	2.1	2.3	2.1	2.8	3	4.9	5.7	7.5	8.9	10.3	10.4	9.2	9.8	12.2	8.7	5.5	3.3	1.5	0.1	0.8	0.3	0.6	12.2	4.8	24
26	0.4	0.5	0.3	0.4	0.9	0.5	0.2	1	3.1	5.5	2.1	6.1	6.7	3.5	9	6.9	8	6	3.6	5.8	10	9.6	8.5	7.8	10.0	4.4	24
27	6.6	7.9	8.7	4.4	3.5	4.4	3.7	4.9	5	9.3	7.8	7.8	10.1	10.2	10.7	11.5	14.5	12.3	11.3	5.6	5.8	7	5.7	6.1	14.5	7.7	24
28	6.4	7.5	6.9	5.5	3.9	3.3	5.1	7	7.4	7.9	8.9	10.1	12.2	12.2	12.3	12.3	11.2	9.3	8.1	6.4	7.1	4.1	0.5	0.6	12.3	7.3	24
29	2.9	0.3	0.4	0.2	0.1	0.4	0.2	1.2	1.1	3.1	2.8	1.6	2.8	2.9	12.5	12.7	2.8	2.1	1	1.9	2.6	2.3	3.5	0.5	12.7	2.6	24
30	0.8	0.5	0.8	0.2	0.3	0.1	1.1	1.1	4.2	4	5.4	6.6	8.3	10	9.2	9.1	9.2	6.8	4.7	3	3.1	2.6	3.3	4.7	10.0	4.1	24
31	6.1	3.6	3.1	1.6	2.8	2.5	1.2	3.5	3.6	3.9	6.8	6.5	5.6	6.4	6.4	7.1	6.6	5.2	4	3	4.8	2.9	2.7	4.9	7.1	4.4	24
HOURLY MAX	14.6	15.3	18.0	16.5	18.9	16.2	16.2	16.9	17.6	19.3	18.8	19.1	18.0	17.6	17.1	15.0	16.5	17.1	16.3	13.3	12.8	15.7	14.6	13.0			
HOURLY AVG	5.3	5.2	5.0	5.0	4.9	4.8	4.8	5.0	6.1	7.4	7.7	8.1	8.0	8.6	9.2	8.9	8.3	7.3	6.0	6.0	5.9	5.6	5.2	5.0			

STATUS FLAG CODES

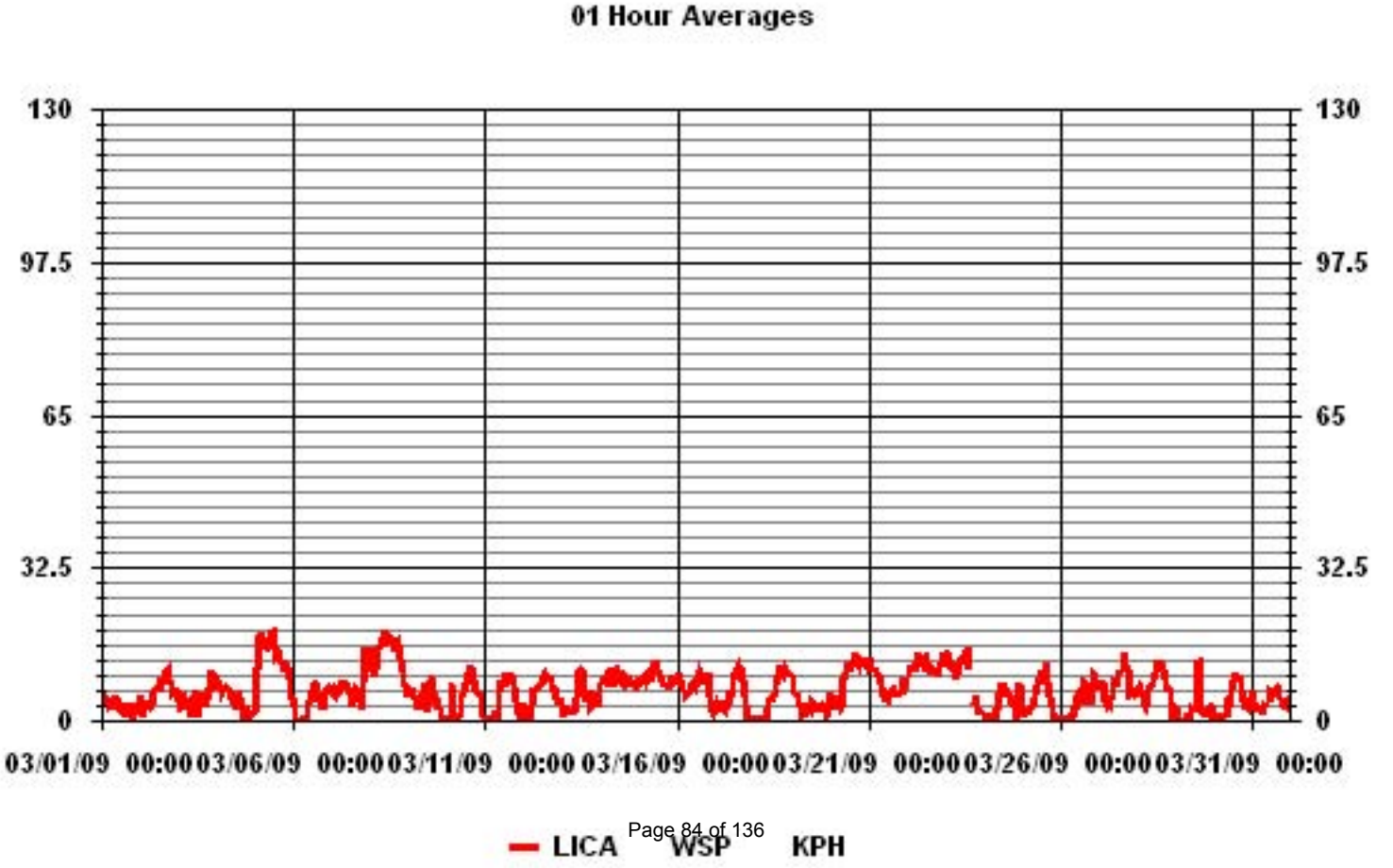
S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	- MISSING DATA
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE



LAST CALIBRATION: November 5, 2008

MONTHLY SUMMARY

MAXIMUM 1-HR AVERAGE:	19.3	KPH	@ HOUR(S)	9	ON DAY(S)	8	
MAXIMUM 24-HR AVERAGE:	14.4	KPH			ON DAY(S)	8	
CALMS (≤ 1 KPH)	4.44	%	OPERATIONAL TIME:		742	HRS	
MONTHLY CALIBRATION TIME:	0	HRS	AMD OPERATION UPTIME		99.7	%	
STANDARD DEVIATION:	4.25		MONTHLY AVERAGE:		6.39	KPH	


01 Hour Averages
130
97.5
65
32.5
0
03/01/09 00:00
03/06/09 00:00
03/11/09 00:00
03/16/09 00:00
03/21/09 00:00
03/26/09 00:00
03/31/09 00:00
LICA WSP KPH

LICA
WSP / WD Joint Frequency Distribution (Percent)

March 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	.53	2.96	2.96	3.50	4.44	4.58	5.39	1.61	.94	.67	4.98	5.79	2.69	1.61	1.48	1.21	45.41
<	12.0	1.34	2.02	1.88	2.02	7.68	1.61	3.63	.13	.13	1.07	9.83	3.63	1.07	.80	1.88	.80	39.62
<	20.0	.53	.67	.53	.00	1.88	.00	.00	.00	.00	.00	.53	.00	.26	.40	3.36	2.29	10.51
<	29.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
<	39.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
>=	39.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
	Totals	2.42	5.66	5.39	5.52	14.01	6.19	9.02	1.75	1.07	1.75	15.36	9.43	4.04	2.83	6.73	4.31	

Calm : 4.44 %

Total # Operational Hours : 742

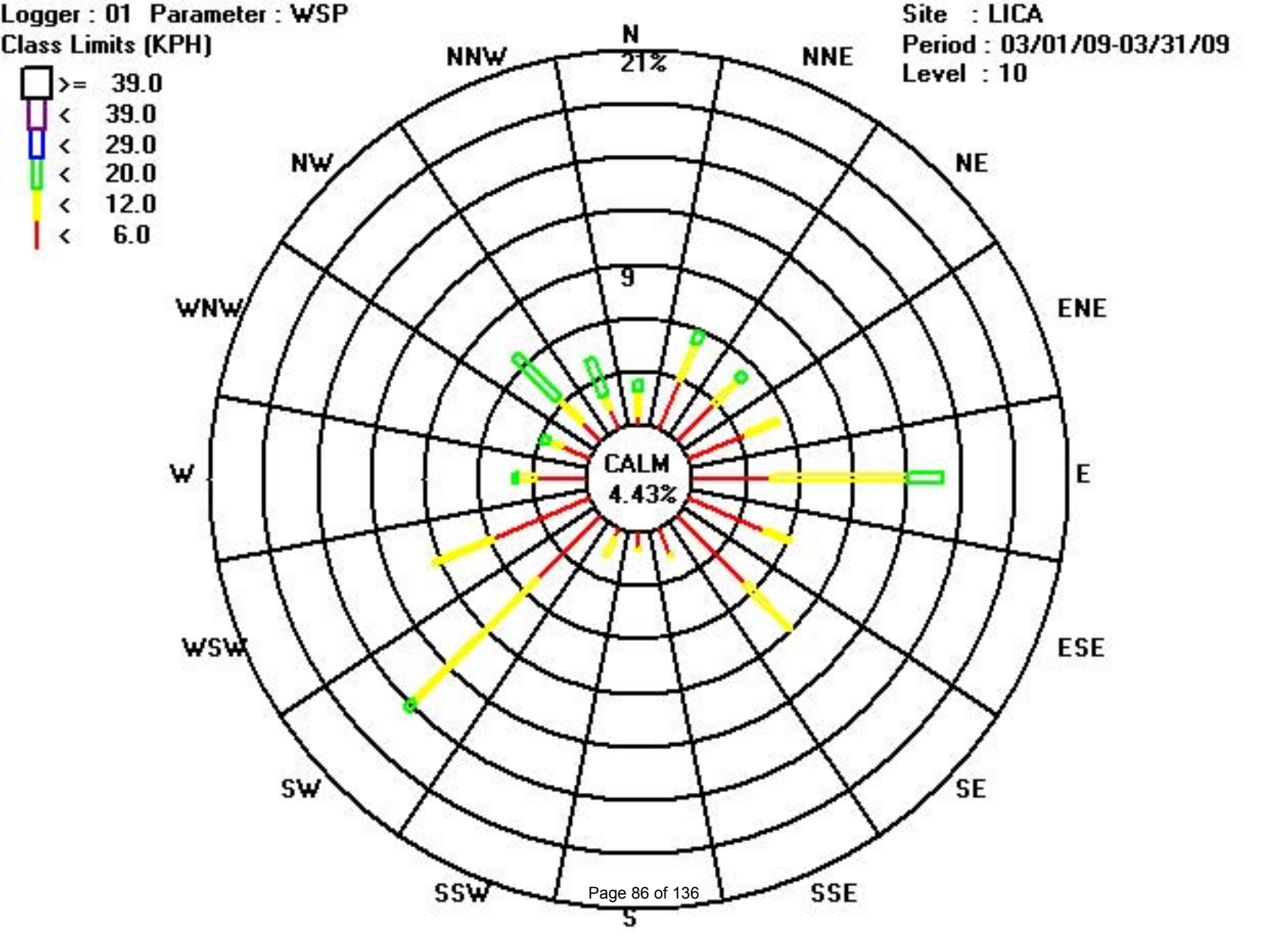
Distribution By Samples

Direction

	Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
<	6.0	4	22	22	26	33	34	40	12	7	5	37	43	20	12	11	9	337
<	12.0	10	15	14	15	57	12	27	1	1	8	73	27	8	6	14	6	294
<	20.0	4	5	4		14						4		2	3	25	17	78
<	29.0																	
<	39.0																	
>=	39.0																	
	Totals	18	42	40	41	104	46	67	13	8	13	114	70	30	21	50	32	

Calm : 4.44 %

Total # Operational Hours : 742


Logger : 01 Parameter : WSP
Class Limits (KPH)
>= 39.0
< 39.0
< 29.0
< 20.0
< 12.0
< 6.0
Site : LICA
Period : 03/01/09-03/31/09
Level : 10
N
21%
NNE
NE
ENE
E
ESE
SE
SSE
S
SSW
SW
WSW
W
WNW
NW
NNW
9
CALM
4.43%

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

MARCH 2009

VECTOR WIND SPEED MAX instantaneous maximum in km/hr

MST

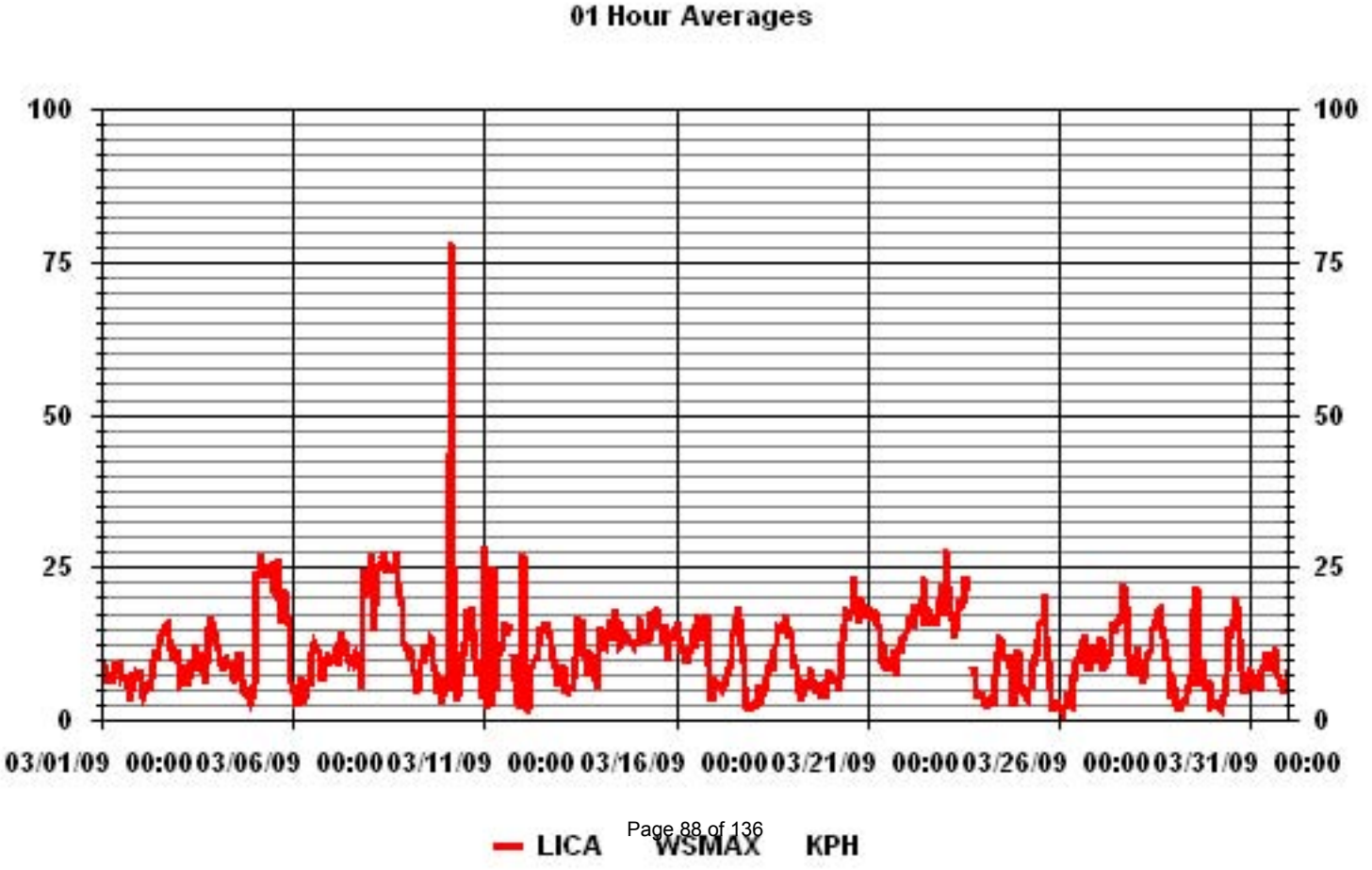
HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.
DAY																									
1	9	9.4	5.7	8.3	6.3	7	6.8	5.8	7.9	9.4	8.7	9	6.8	7.2	7	7.1	5.5	5.3	3	4.5	7.7	6.4	7.9	7.6	9.4
2	8.1	4.2	3.5	4.1	6	5.9	4.5	6.7	9.9	11.4	11.3	9.4	13.8	12.6	14.6	13.7	15.4	15.7	12.3	12.5	9.7	11.2	11.9	10.5	15.7
3	10.8	5.9	6.2	9.1	7.2	6.9	5.5	6.7	9.4	9.7	9.4	12.3	9.9	8	10.9	7.8	8.5	5.9	9.1	15.1	17	16.3	15.8	14.8	17
4	12.8	11.5	8.6	10.1	7.9	10	10.2	9.7	9	8.7	6.7	6.2	9.3	8.4	11.2	10.5	6.8	4.7	4.1	5.5	3.7	2.8	3.3	5.6	12.8
5	6	24.2	23.6	24.2	27.3	25.6	23.3	24	25.3	24.4	24.7	26.1	21.2	20.7	19.5	26.4	19.9	15.9	17.3	21.4	17.3	15.5	6.4	6.1	27.3
6	4.5	3.4	3.9	2.2	4.5	6.8	2.4	4.4	3.3	6.3	6.2	11.2	12.4	13.1	12.6	11.1	11.1	8.5	6.4	8.7	9.4	10.1	11.1	9.5	13.1
7	9.7	10.5	10.1	11.9	8.6	12.6	14.6	11.3	11.6	13	10.8	9.3	9.7	10.2	10.7	9.5	10	9.1	5	7.6	20	24.5	23	20.2	24.5
8	21.9	27.3	14.4	18.5	20.4	24.9	24.9	25.7	26.5	27.4	24.3	25	25.6	25.4	24.8	24.9	26.3	27.6	22.7	20.3	19	12.8	12.6	11.5	27.6
9	9.9	11.8	10	8.3	8.1	7	4.4	7.5	10	9.2	12.5	10.6	12.1	12.2	13.7	13.4	9.2	8.2	4.8	4.5	3.1	3.1	3.9	6.8	13.7
10	6	4.5	43.6	**78.3**	8.4	25.2	2.8	11.3	3.6	8.4	8.2	10.4	12.8	18	17.4	16.8	18.7	15	10.4	7.8	7.9	7.6	5.3	3.6	**78.3**
11	28.3	1.9	3.7	9	2.2	25	7.3	13.3	4.5	10.3	12	11.1	13.8	16	13.8	15.1	15.2	**P**	10.4	6.8	4.2	3.2	1.8	2.8	28.3
12	27.2	2.9	2	1.8	2.6	8.7	8.8	9.7	10.4	10.3	12.1	15.2	14.4	14.6	15.8	15.9	13.2	14.2	12.2	10	8.9	6.3	5.8	8.3	27.2
13	5.4	8.9	4.6	5	4.7	5.5	4.5	5.8	6.8	10.4	16.8	15	15.2	16.5	10.4	10.4	8.5	7.2	11	10.9	9.2	6.7	5.1	9.5	16.8
14	11.3	15.3	12.6	12.2	14	14.7	16.3	13	15.2	16.8	17.9	14.3	16.6	12.2	12.5	14.9	12.6	14.2	13.5	13.1	12.5	12.1	12.9	13.1	17.9
15	12	17	12.6	14.1	14.4	14.2	13.2	12.8	17.9	16.9	15.2	17.9	18.4	14.9	15.5	13.9	12.3	15.7	9.7	12.7	14	14	13.1	14.4	18.4
16	14.1	16.2	13.8	11.7	11.8	9.1	9.8	9.3	11.3	11.3	14.7	11.4	15.7	17.4	14.6	14.5	13.8	12.8	14.8	17.3	9	4.9	2.9	4.8	17.4
17	7.1	5.5	6	5.8	5.3	6.1	5.7	6.7	7.2	8.4	9.7	14.5	14	16.9	16.5	18.5	16.9	12.6	9.4	5.8	2.2	2	2.1	2	18.5
18	2.5	1.7	3.4	2.2	5.6	2.5	3.8	4.6	6.8	7.1	9.1	9.6	9.2	11.3	12.2	15.3	15.1	15.4	14.1	16.1	17.2	16.2	15.7	13.2	17.2
19	14.6	11.1	9	9	7.4	4.7	3.2	3.7	6.6	5.2	5.9	5.3	8.8	7	5.9	4.2	5.7	6.3	3.4	5.6	5.9	5.1	3.3	6.2	14.6
20	8.3	7	6.7	5.9	7	6.4	4.8	6.5	12.9	15.7	18.3	17.4	16.4	17.9	17.4	23.5	18.2	18	15.8	20.1	17.6	19.2	18.5	17.2	23.5
21	17.2	18.5	16	17.5	16.1	18.1	15.7	15.2	9.2	12.7	8.9	7.8	8.9	9.8	7.8	10.3	10.8	11.6	7.2	11.8	10.8	13.6	12.8	13.8	18.5
22	14.3	16.6	16.7	16.7	14.9	19	17	18.1	18.6	18.8	19.9	23.4	15.4	17.5	18.3	17.5	15.4	16.3	16.4	15.4	19.7	18.7	22.1	19.2	23.4
23	16.8	28	22.3	20.6	18.2	16.5	13.1	14.5	15.8	19.4	19.3	18.7	19.1	23.5	23	21.6	18.5	12.7	8.4	7.5	5.1	3.6	4.3	4.4	28
24	4	2.7	2.6	1.9	3.5	4.1	3.1	2.3	7.2	11.1	14	13.4	10.8	10.4	10.4	9.9	10.1	8.6	5.4	2.2	3.8	10.5	11.7	6.5	14
25	4.3	5.8	4.4	3.8	3.5	5.2	5.4	9	9.1	10.6	13	15.5	15.8	16.5	15.6	20.5	13.9	9.9	5.3	3.2	1.4	3.4	2.9	3.1	20.5
26	2.6	1.5	1.1	2.2	2.6	4.4	2.3	2.2	7.2	9.5	6.1	9.6	9.6	11.3	13.1	12.6	14.1	10.7	8	9.3	12.5	11.8	10.6	9.9	14.1
27	9.1	12	13.4	7.8	11.2	8.2	9.2	10.5	11.6	14	16.1	13.9	16.4	15.6	17.3	18.8	22.3	21.9	19.1	10.9	7.6	10.2	7.8	7.7	22.3
28	10.5	11.7	10.1	7.6	5.9	6.7	7.8	10	10.8	11.6	14.9	15.1	16.4	17.3	18	18.2	15.5	13.9	13.4	9.6	10.4	8.1	3.2	6.9	18.2
29	5.6	2.9	3	1.6	2.1	3.4	2.6	3.5	4.3	5.7	7.2	5.4	18.2	12.2	21.9	18.9	8.3	5.5	9.7	5.2	5.2	4.9	6.4	2.4	21.9
30	2.6	1.7	3.2	2.4	2	1.6	2.5	3.9	6.8	8	15.2	13.4	15.2	16.6	20.1	18.7	15.1	13.6	8.2	6.5	4.2	5	7.2	8	20.1
31	8	6.4	6.7	5.6	5.5	7.4	4.8	8.2	9	8.8	11	9.4	9	10.9	10.3	11.7	11	7.6	7	5.4	6.3	4.4	6.7	8	11.7
PEAK	28.3	28.0	43.6	78.3	27.3	25.6	24.9	25.7	26.5	27.4	24.7	26.1	25.6	25.4	24.8	26.4	26.3	27.6	22.7	21.4	20.0	24.5	23.0	20.2	

STATUS FLAG CODES

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

MONTHLY SUMMARY

MAXIMUM INSTANTANEOUS READING	78.3	KPH	@ HOUR(S)	3
			ON DAY(S)	10


01 Hour Averages
100
75
50
25
0
03/01/09 00:00
03/06/09 00:00
03/11/09 00:00
03/16/09 00:00
03/21/09 00:00
03/26/09 00:00
03/31/09 00:00
LICA WSMAX KPH

Vector Wind Direction

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

MARCH 2009

VECTOR WIND DIRECTION (WD) hourly averages in degrees

MST

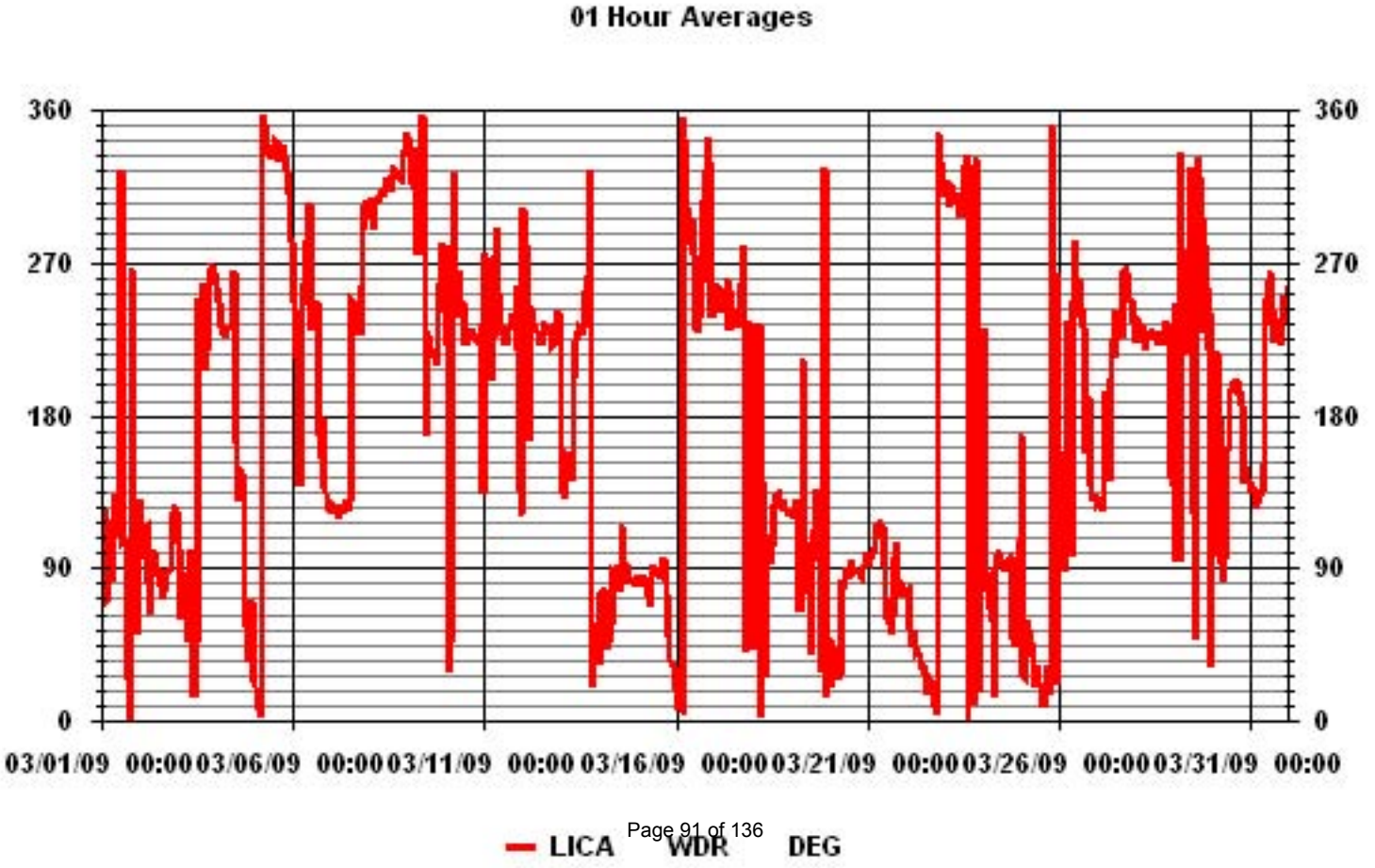
HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	24-HOUR	24-HOUR AVG	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	AVG.	QUANDRANT	RDGS.
DAY																											
1	124	124	85	72	73	98	82	118	133	125	109	281	324	106	107	106	61	26	0	267	66	63	51	114	92	E	24
2	130	103	95	114	115	81	62	91	91	100	92	85	90	80	72	76	81	87	88	91	104	123	127	124	93	E	24
3	116	103	59	87	81	70	46	82	101	77	15	17	46	249	228	244	258	206	218	254	266	270	257	266	255	WSW	24
4	251	252	247	233	229	226	229	231	232	233	238	265	165	129	149	138	131	146	72	57	35	58	71	24	220	SW	24
5	21	10	11	12	2	358	353	339	334	340	332	332	336	342	341	329	333	337	339	333	325	312	285	283	341	NNW	24
6	248	243	214	219	138	228	245	258	283	289	305	256	230	236	245	245	169	154	180	138	135	127	128	128	199	SSW	24
7	123	123	127	125	119	123	125	125	123	130	127	124	129	248	247	235	240	229	229	257	290	304	307	295	180	S	24
8	305	309	290	306	306	308	308	312	309	314	320	313	313	313	322	327	325	322	321	320	325	336	333	347	315	NW	24
9	345	333	318	314	338	332	274	294	322	358	298	168	230	228	220	218	217	218	210	240	258	282	258	243	276	W	24
10	280	223	28	46	265	323	237	264	264	245	245	223	223	225	229	229	225	228	226	224	225	225	234	133	228	SW	24
11	276	235	273	235	200	225	275	248	290	253	230	229	230	222	226	230	233	240	235	240	257	220	136	121	233	SW	24
12	303	259	282	237	164	245	234	234	230	230	226	222	228	235	233	228	230	228	221	222	232	232	241	238	231	SW	24
13	161	135	131	147	143	145	159	141	202	224	230	233	232	228	231	254	258	262	325	19	44	50	58	34	223	SW	24
14	34	75	77	79	48	42	46	56	89	88	89	92	86	76	116	80	89	93	84	83	80	83	83	79	76	ENE	24
15	84	84	81	86	81	80	74	67	84	86	92	88	87	86	83	88	97	84	75	51	36	35	33	32	75	ENE	24
16	20	6	9	8	356	344	309	303	297	281	296	276	232	229	238	242	258	307	314	324	344	331	237	242	301	WNW	24
17	252	258	252	256	240	250	251	253	261	230	253	241	241	243	231	241	247	258	280	49	41	73	236	65	247	WSW	24
18	42	123	79	77	234	2	142	25	93	110	101	92	102	128	133	134	129	128	127	130	125	122	122	122	122	ESE	24
19	125	119	122	130	124	64	107	214	110	95	105	76	38	93	112	119	137	134	85	28	33	326	13	27	102	E	24
20	49	20	36	43	31	24	31	27	83	78	90	84	89	89	94	90	88	89	88	85	84	89	92	99	81	E	24
21	94	93	95	98	102	107	115	116	109	115	92	74	61	57	63	50	61	97	105	84	73	82	79	78	89	E	24
22	76	77	55	47	43	54	40	41	40	36	30	33	29	16	18	25	19	16	9	4	347	338	330	319	24	NNE	24
23	309	317	319	303	316	313	305	309	311	304	297	300	304	327	333	1	**N**	**N**	11	327	332	54	16	110	320	NW	22
24	81	232	76	88	66	87	60	13	91	98	101	96	93	89	91	89	95	96	83	49	43	95	95	107	92	E	24
25	169	27	26	37	59	55	46	45	25	19	33	23	21	11	8	16	30	32	15	351	26	218	21	264	23	NNE	24
26	98	130	158	87	100	236	127	96	247	237	283	253	261	242	245	233	157	179	191	139	132	131	131	133	183	S	24
27	127	128	131	123	181	194	163	141	202	225	213	241	225	226	228	228	265	266	264	261	249	248	236	223	222	SW	24
28	238	233	226	225	234	220	220	229	225	229	231	225	227	221	225	229	227	224	222	235	231	222	144	139	226	SW	24
29	246	94	102	94	335	220	216	277	272	277	326	121	304	48	305	332	322	228	297	282	257	218	241	31	300	WNW	24
30	96	114	118	218	180	93	82	95	128	160	162	196	198	197	196	201	197	195	187	170	140	149	143	136	178	S	24
31	136	138	136	126	128	132	133	136	152	249	233	260	265	243	223	228	234	236	235	221	239	250	235	254	217	SW	24
HOURLY AVG	345	333	319	314	356	358	353	339	334	358	332	332	336	342	341	332	333	337	339	351	347	338	333	347			

STATUS FLAG CODES

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

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

MONTHLY CALIBRATION TIME:	0	HRS	OPERATIONAL TIME:	742	HRS
STANDARD DEVIATION	97.08		AMD OPERATION UPTIME	99.7	%
			MONTHLY AVERAGE	354	DEG


01 Hour Averages
360
270
180
90
0
03/01/09 00:00
03/06/09 00:00
03/11/09 00:00
03/16/09 00:00
03/21/09 00:00
03/26/09 00:00
03/31/09 00:00
LICA WDR DEG

Standard Deviation Wind Direction

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

MARCH 2009

STANDARD DEVIATION WIND DIRECTION (STDWDIR) hourly averages in degrees

MST

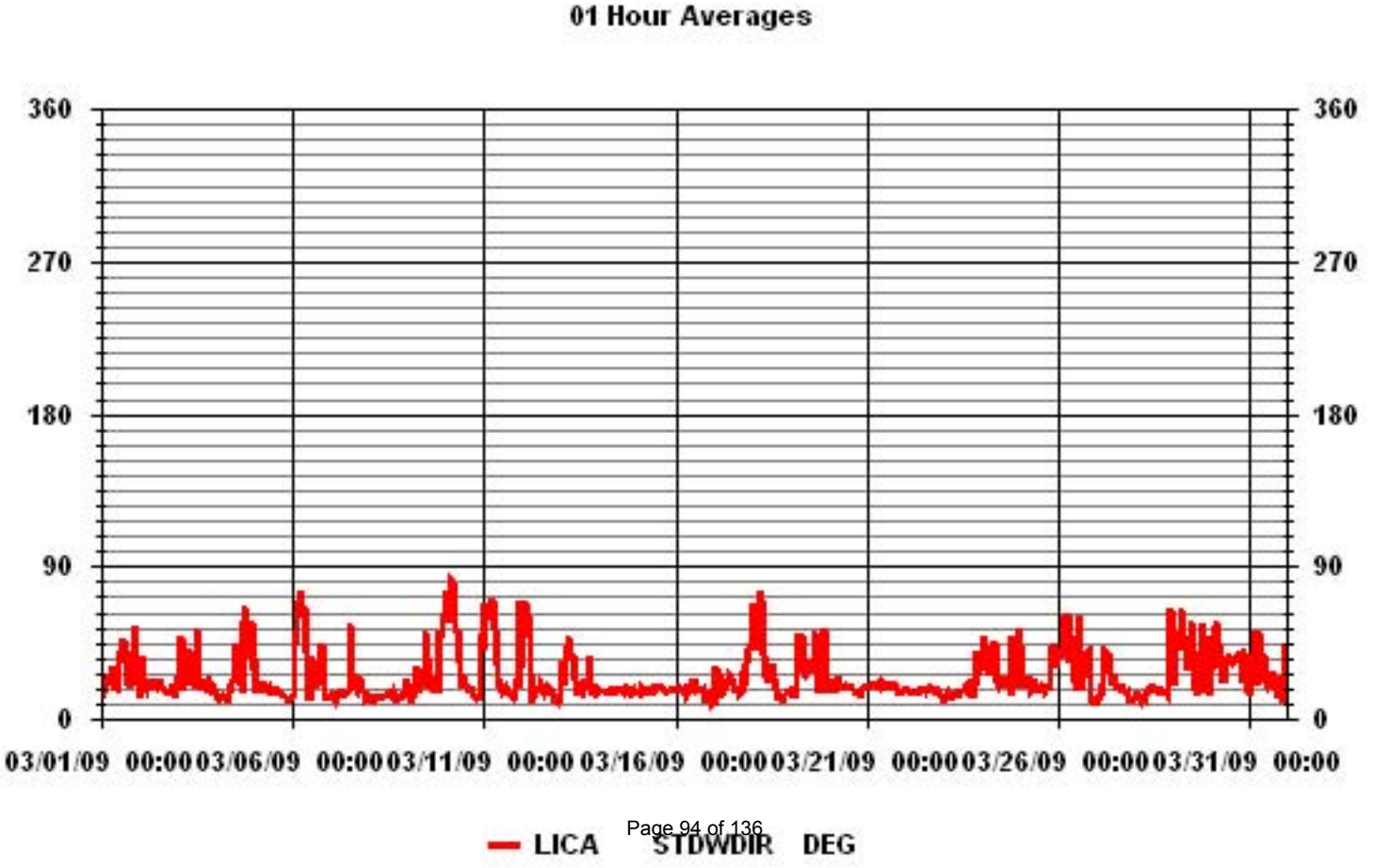
HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00
DAY																								
1	14	15	26	21	24	24	24	31	18	18	32	41	39	48	32	46	21	19	33	39	19	55	20	25
2	13	28	37	20	19	23	16	24	19	21	20	22	23	18	18	18	17	15	15	16	21	15	13	17
3	25	41	49	17	27	24	20	42	23	22	29	28	54	22	17	20	21	22	22	17	15	22	15	17
4	14	13	12	14	13	13	13	12	15	21	23	25	45	21	30	21	16	58	66	40	36	45	58	29
5	37	17	17	18	17	17	22	17	16	18	16	16	16	19	18	17	15	15	15	14	12	11	12	13
6	15	52	44	63	70	76	60	66	40	19	10	37	21	27	18	26	34	32	45	21	14	13	14	13
7	15	15	12	15	17	16	15	14	18	15	16	18	57	28	17	18	17	19	25	19	16	13	14	14
8	12	12	13	11	12	13	13	13	13	14	15	14	16	15	14	17	16	12	12	12	13	14	14	24
9	17	16	10	12	21	16	31	17	18	29	22	52	37	20	18	20	22	16	18	18	53	47	61	61
10	59	75	57	82	81	58	53	52	34	21	22	27	21	21	18	18	18	16	14	12	13	11	50	41
11	69	64	68	66	57	71	54	53	32	20	18	20	18	17	19	17	16	14	12	14	23	22	69	30
12	49	52	69	53	61	28	10	12	16	16	17	21	19	16	18	20	18	17	17	16	12	11	10	14
13	33	35	19	40	39	49	39	35	39	24	16	17	17	16	18	24	16	22	37	22	16	16	18	16
14	18	17	16	17	17	16	15	17	18	18	17	19	15	18	18	16	18	19	17	17	16	18	16	16
15	16	16	19	16	17	18	17	17	17	16	19	17	19	19	20	19	19	17	16	16	17	17	18	18
16	19	16	21	18	18	19	13	14	16	17	22	22	18	19	17	17	17	18	12	12	15	16	9	10
17	8	31	20	28	15	15	21	17	23	19	26	24	21	18	18	19	14	15	28	19	32	41	43	44
18	41	68	47	43	42	76	71	39	26	26	24	23	24	32	25	18	14	12	12	11	14	16	16	16
19	15	18	15	14	39	50	48	50	29	26	28	35	33	28	30	52	29	17	17	17	21	54	35	17
20	17	23	22	22	16	19	25	21	16	19	21	19	19	19	19	19	16	17	17	15	15	18	19	20
21	20	19	20	20	21	21	20	21	22	20	21	19	20	17	22	17	19	21	20	16	17	16	17	17
22	17	17	16	15	16	16	16	16	16	17	18	18	18	16	18	19	19	18	16	16	18	18	15	12
23	11	14	16	13	12	12	15	14	16	15	15	16	17	19	17	20	19	20	22	13	19	40	25	29
24	37	49	37	43	39	26	41	37	45	22	**20**	21	22	21	26	22	21	20	13	49	36	25	18	53
25	42	41	25	18	24	18	25	17	19	20	18	19	18	20	19	17	18	19	19	36	42	44	31	35
26	38	42	37	61	36	60	60	36	35	21	48	20	21	61	17	27	**N**	**N**	40	25	11	10	10	12
27	13	12	14	21	43	33	33	40	29	20	26	25	19	18	17	18	21	17	16	17	13	12	9	12
28	15	14	14	13	11	14	12	14	17	19	20	19	17	17	17	16	18	18	17	16	14	19	65	38
29	20	51	46	40	52	65	40	43	43	28	49	57	52	42	19	14	32	36	56	43	18	17	14	48
30	30	31	55	58	30	45	21	27	21	36	31	38	34	33	34	37	36	36	39	40	21	36	36	17
31	14	22	31	52	20	44	52	27	37	39	23	20	22	24	28	24	19	15	14	25	10	14	45	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: November 5, 2008

CALIBRATION TIME: 0 HRS OPERATIONAL TIME: 742 HRS


01 Hour Averages
360
270
180
90
0
03/01/09 00:00
03/06/09 00:00
03/11/09 00:00
03/16/09 00:00
03/21/09 00:00
03/26/09 00:00
03/31/09 00:00
LICA STDWDIR DEG

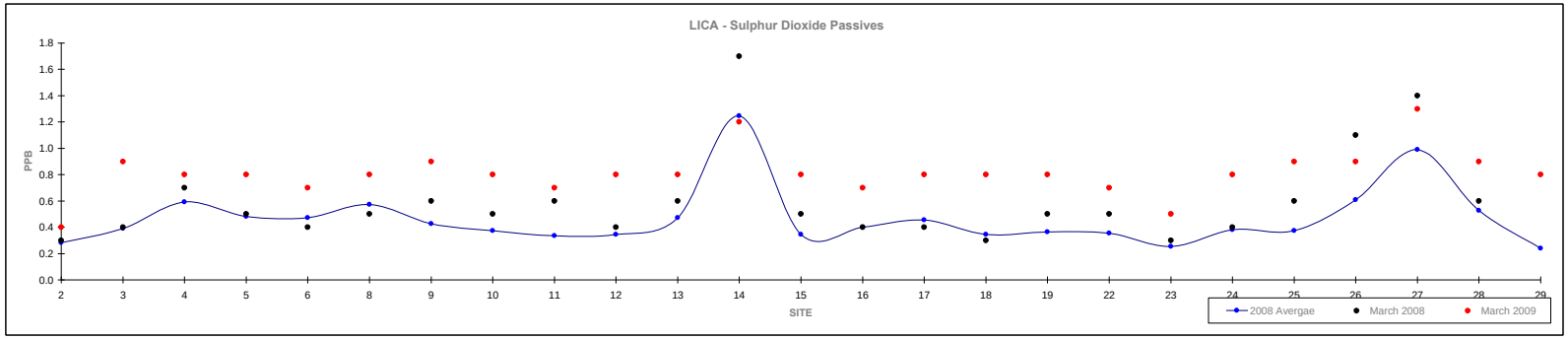
Non-Continuous Monitoring

Passive Summary Results for March 2009

Lakeland Industry & Community Association

Sulphur Dioxide
ppb

	2008																								March 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	0.8	-
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	1.3	#27

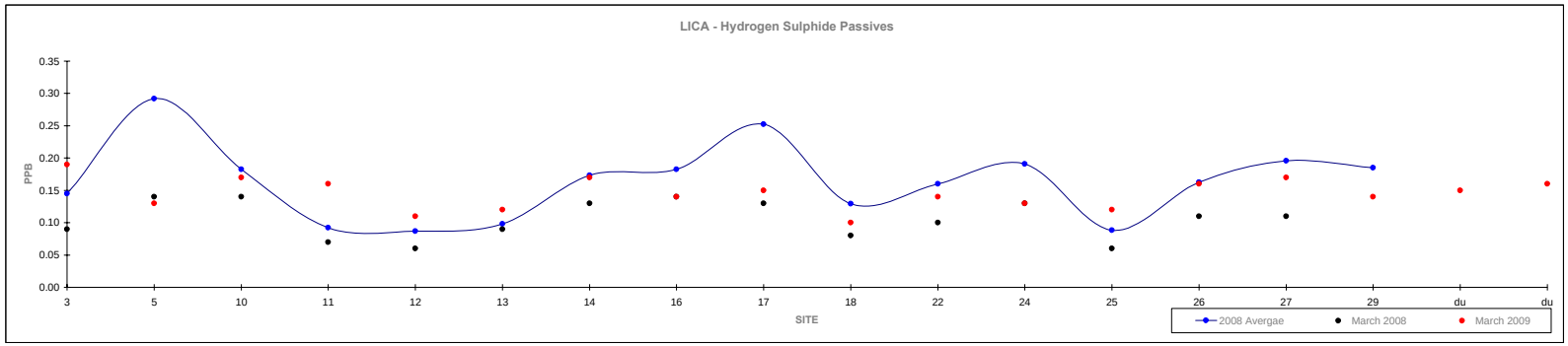


Passive Summary Results for March 2009

Lakeland Industry & Community Association

Hydrogen Sulphide
ppb

	2008																March 2009	
	3	**5**	**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	0.15	-
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	0.10	#18
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	0.19	#3

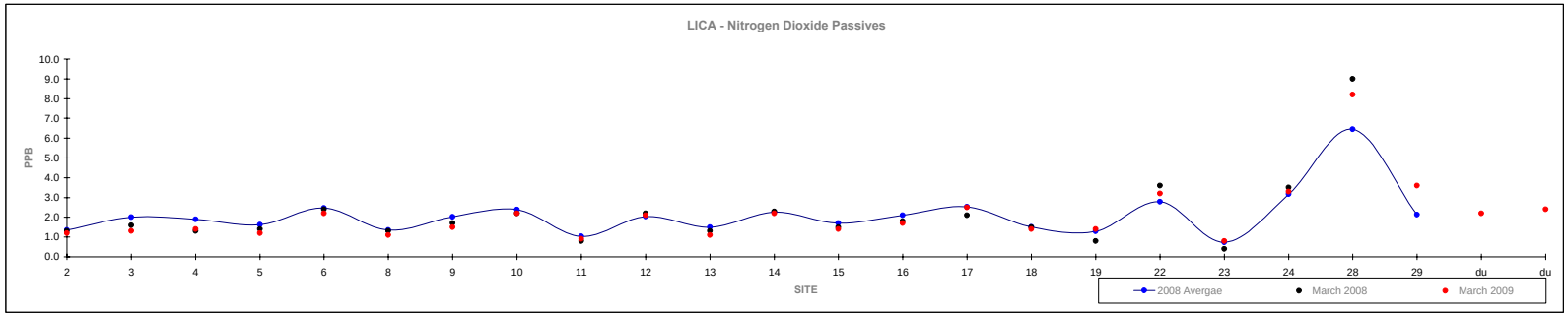


Passive Summary Results for March 2009

Lakeland Industry & Community Association

Nitrogen Dioxide
ppb

	2008																					March 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	2.1	-
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	0.8	#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	8.2	#28



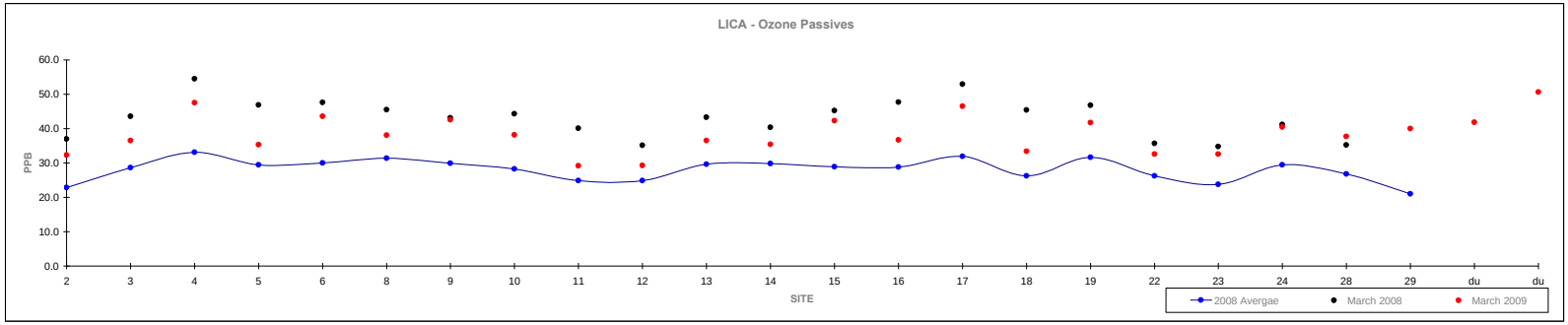
Passive Summary Results for March 2009

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
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
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
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

March 2009	
Reading	**Site**
38.4	-
29.2	#11
50.6	#17 duplicate



Calibration Reports

Cold Lake

Sulphur Dioxide

SO_2 Calibration Report

Station Information

Calibration Date	March 4, 2009		Previous Calibration	February 2, 2009	
Company	Lakeland Community and Industry Association				
Plant / Location	LICA 1 - Cold Lake South				
Start Time (MST)	7:30		End Time (MST)	12:40	
Reason:	Monthly Calibration				
Barometric Pressure	703	mmHg	Station Temperature	25	Deg C
Cal Gas	52.2	ppm	Cal Gas Expiry date	12/19/2010	
DAS Output Voltage	0 - 10	Volts			

Equipment Information

Analyzer Make / Model:	Thermon 43i	S/N :	806528242	Method:	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	442	ccm	30.3	Deg C	442	ccm	29.9	Deg C
HVPS / Lamp Setting	-630.9		767		-630.9		769	
PMT / RxCell Temp	OK	Deg C	45.2	Deg C	OK	Deg C	45.2	Deg C
Converter / IZS Temp	NA	Deg C	45.0	Deg C	NA	Deg C	45.0	Deg C
Offset / Slope	5.2		1.074		5.2		1.074	

Calibration Data

Dilution Flow Rate	Source Gas Flow Rate	Calculated Concentration	Indicated Conc. (DAS)	Correction Factor
5005.8	0	0	0	N/A
4973.4	38.8	404	403	1.0027
5013.9	0	0	1	N/A
4961.9	38.8	405	408	0.9927
4975.4	24.2	253	255	0.9909
4986.2	14.6	152	153	0.9961
4999.6	0	0	1	N/A
			Sum of Least Squares	0.3441
			New Correction Factor	0.9927

	Before Calibration	After Calibration
Auto Zero	-0.1	-0.2
Auto Span	392.5	392.5
Sample Lines Connected		**YES**
Percent Change from Previous Calibration		1.0%

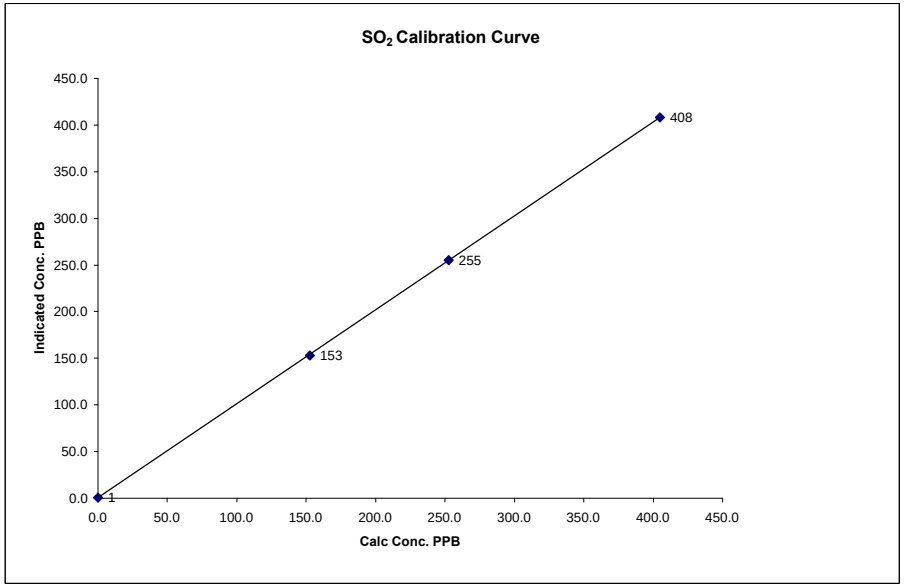
Calibration Performed by: Shea Beaton

SO_2 Calibration Curve

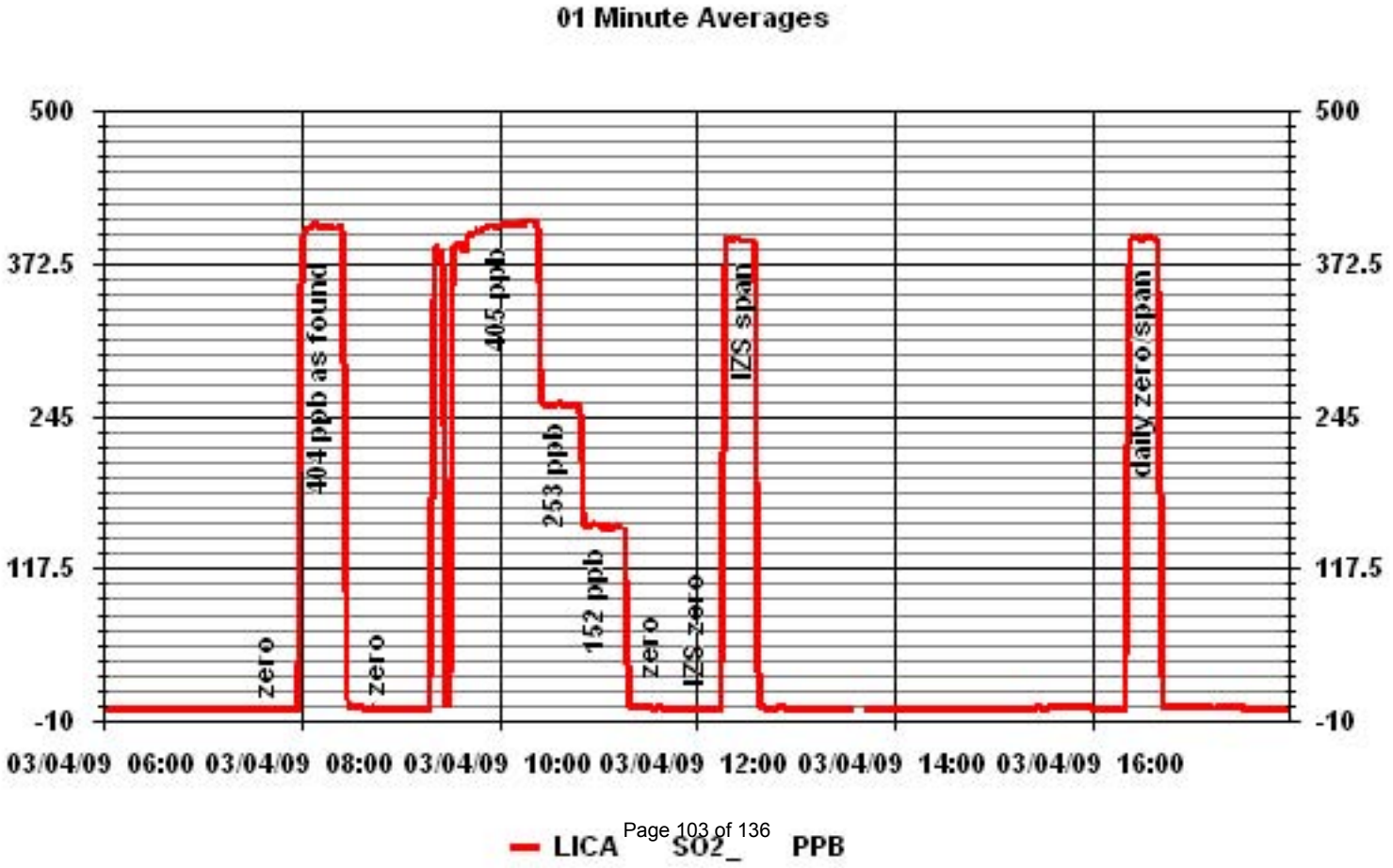
Calibration Date	March 4, 2009			
Company	Lakeland Community and Industry Association			
Plant / Location	LICA 1 - Cold Lake South			
Start Time (MST)	7:30	End Time (MST)	12:40	

Calculated Conc. ppb	Indicated Response ppb	Correction Factor
0	1	n/a
152	153	0.9961
253	255	0.9909
405	408	0.9927

Correlation Coefficient	(≥ 0.995)	0.999989
Slope	(0.85 to 1.15)	1.005614
Intercept	(± 3% F.S.)	0.592191



Notes: Pressure=666.8, Lamp intensity=75%


01 Minute Averages
500
372.5
245
117.5
-10
zero
404 ppb as found
zero
405 ppb
253 ppb
152 ppb
zero
IZS zero
IZS span
daily zero/span
03/04/09 06:00
03/04/09 08:00
03/04/09 10:00
03/04/09 12:00
03/04/09 14:00
03/04/09 16:00
LICA SO2_ PPB

Total Reduced Sulphur

TRS Calibration Report

Station Information

Calibration Date	March 26, 2009		Previous Calibration	February 2, 2009	
Company	Lakeland Industry & Community Association				
Plant / Location	LICA 1 - Cold Lake South				
Start Time (MST)	10:55		End Time (MST)	15:20	
Reason:	Monthly Calibration				
Barometric Pressure	720	mm Hg	Station Temperature	23	Deg C
Cal Gas	10.6	ppm	Cal Gas Expiry date	April 3, 2009	
DAS Output Voltage	0 - 10	Volts			

Equipment Information

Analyzer Make / Model:	TEI 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	364	ccm	30.5	Deg C	364	ccm	31.6	Deg C
HVPS / Lamp Setting	-622		774		-622		775	
PMT / RxCell Temp	OK	Deg C	45.0	Deg C	OK	Deg C	44.9	Deg C
Converter / IZS Temp	850	Deg C	45.0	Deg C	850	Deg C	45.0	Deg C
Offset / Slope	11.8		1.239		11.4		1.201	

Calibration Data

Dilution Flow Rate	Source Gas Flow Rate	Calculated Concentration	Indicated Conc. (DAS)	Correction Factor
5042	0	0	0	N/A
5001	37.7	79	81	0.9791
5001	37.7	79	80	0.9914
5029	20.9	44	44	0.9970
5037	11.4	24	24	0.9973
5056	0	0	0	N/A
			Sum of Least Squares	0.9930
			New Correction Factor	0.9914

	Before Calibration	After Calibration
Auto Zero	-0.4	-0.3
Auto Span	48.0	47.0
Sample Lines Connected		YES
Percent Change from Previous Calibration		-0.4%

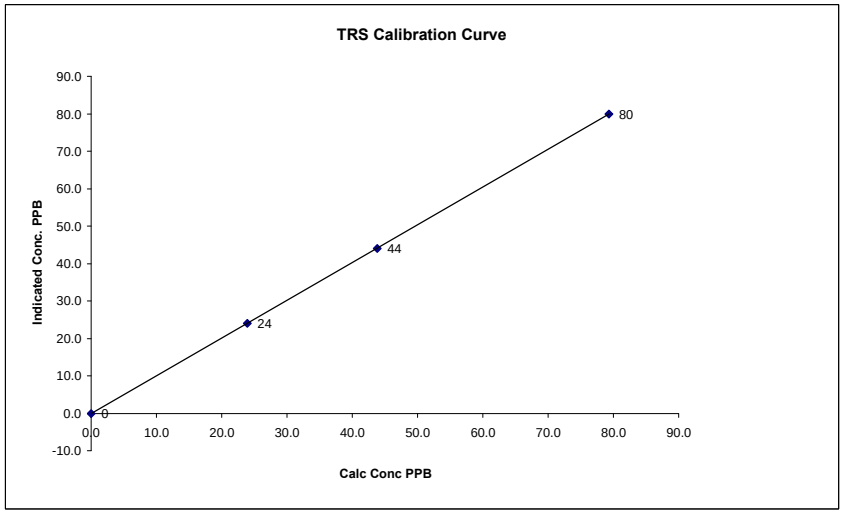
Calibration Performed by: Shea Beaton

TRS Calibration Curve

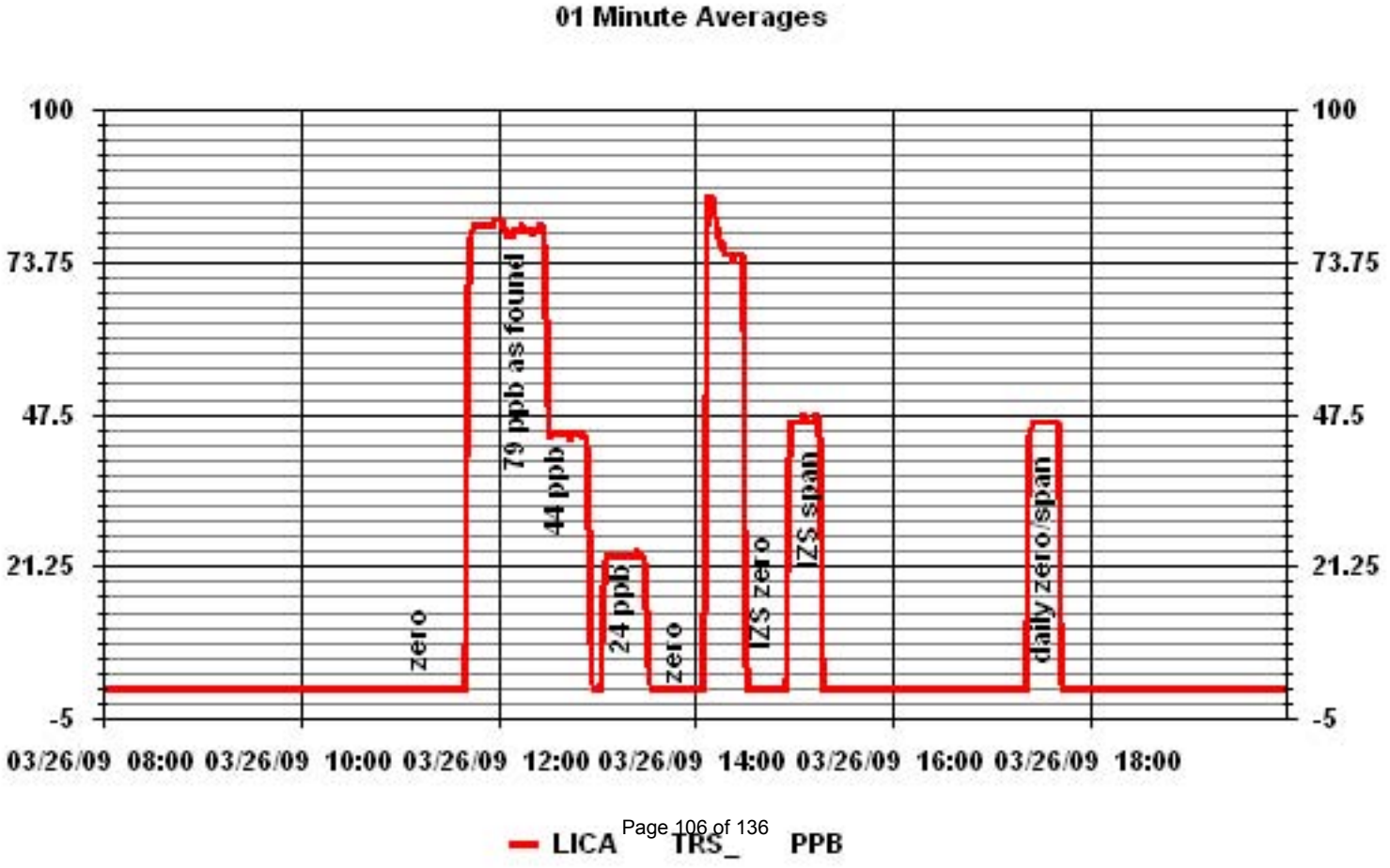
Calibration Date	March 26, 2009				
Company	Lakeland Industry & Community Association				
Plant / Location	LICA 1 - Cold Lake South				
Start Time (MST)	10:55		End Time (MST)	15:20	

Calculated Conc. ppb	Indicated Response ppb	Correction Factor
0	0	n/a
24	24	0.9973
44	44	0.9970
79	80	0.9914

Correlation Coefficient	(≥ 0.995)	0.999987
Slope	(0.85 to 1.15)	1.008719
Intercept	(± 3% F.S.)	-0.099836



Notes: Pressure681.5inHg, Lamp intensity 91%.


01 Minute Averages
100
73.75
47.5
21.25
-5
zero
79 ppb as found
44 ppb
24 ppb
zero
IZS zero
IZS span
daily zero/span
03/26/09 08:00
03/26/09 10:00
03/26/09 12:00
03/26/09 14:00
03/26/09 16:00
03/26/09 18:00
LICA TRS_ PPB

Total Hydrocarbons

THC Calibration Report

Station Information

Calibration Date:	March 3, 2009	Previous Calibration	February 27, 2008		
Company:	**Lakeland Industry and Community Association**				
Plant / Location:	**LICA1/Cold Lake**				
Start Time (MST)	12:30	End Time (MST)	16:45		
Reason:	As Found Calibration				
Barometric Pressure:	703 mmHg	Station Temperature:	25	Deg C	
Calibrator:	API 700	S/N:	831		
Cal Gas Concentration:	299Prop/1019Meth	ppm	Cal Gas Expiry Date:	8/11/2011	
DAS make & Model:	ESC 8832	S/N :	263		
Output Voltage Range:	0 - 10 VDC				

Analyzer Information

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

Analyzer Settings

	Before Calibration		After Calibration	
Concentration Range	0 - 50	ppm	0 - 50	ppm
Sample Pressure	6.9	psi	6.9	psi
Hydrogen Pressure	8	psi	8	psi
Air Pressure	19.5	psi	19.5	psi

Calibration Data

Dilution Flow	Source Gas Flow	Calculated Concentration	Indicated Concentration	Correction Factor
3060.0	0.0	0.0	0.0	N/A
3048.0	70.1	41.5	40.0	1.0364
3063.0	0.0	0.0	0.1	N/A
3051.0	70	41.3	41.3	1.0000
			Correction Factor:	-

Percent Change

Previous Calibration Correction Factor:	0.9982
Current Correction Factor Before Span Adjust:	-
Percent Change:	#VALUE!

IZS Calibration Data

	Before Calibration	After Calibration
Auto Zero	0.0	0.0
Auto Span	34.2	34.2
Sample Lines Connected		**YES**

Cylinder Pressures			
Span	250	psi	
Hydrogen	1950	psi	
Zero Air	unlimited	psi	Maxxam-owned API 701 zero air supply with catalytic oxidizer

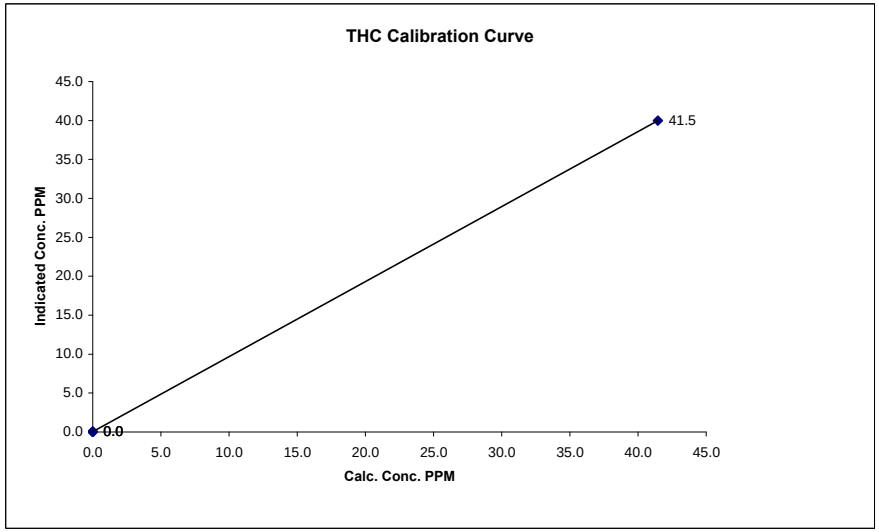
Calibration Performed by: Shea Beaton

THC Calibration Curve

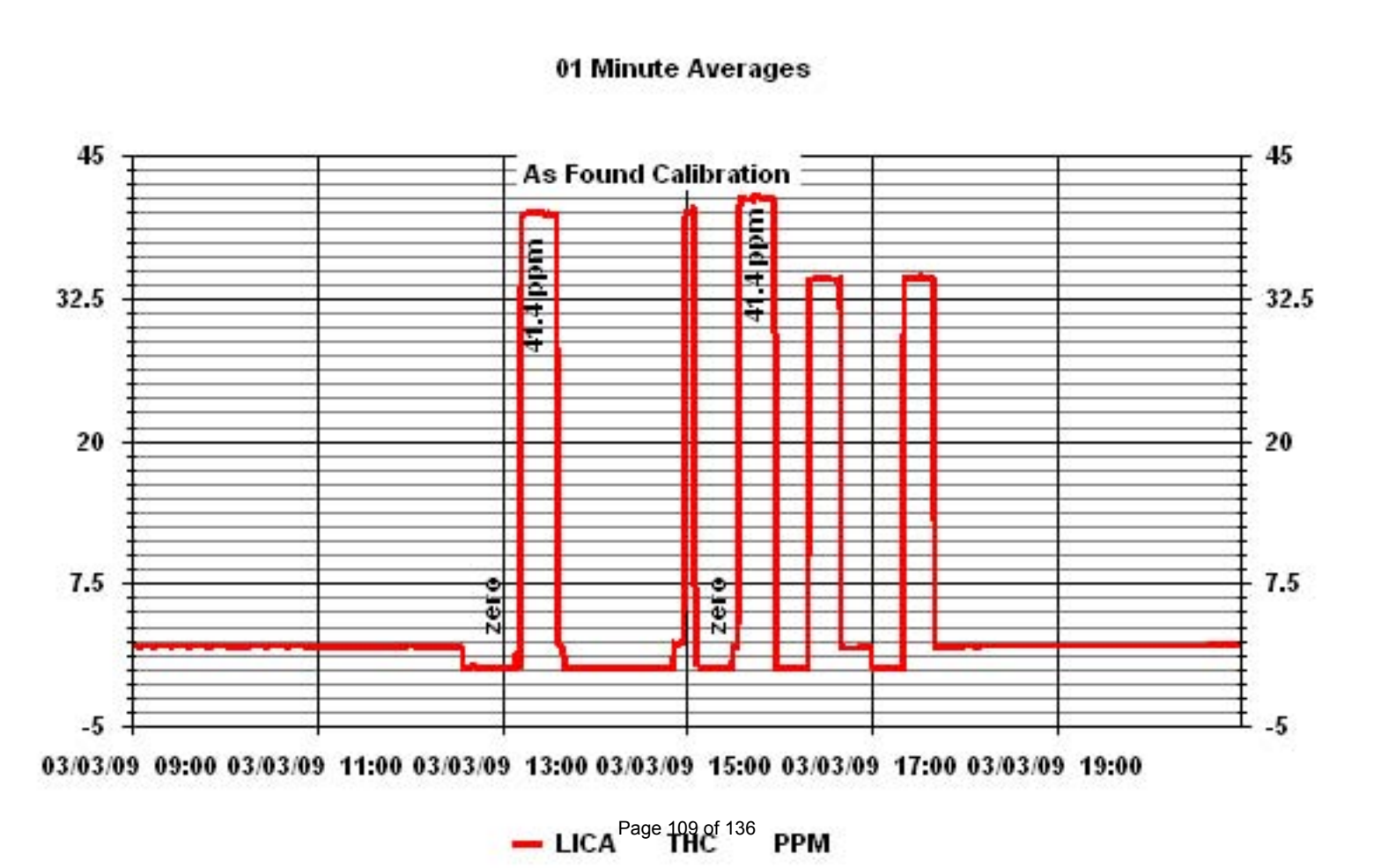
Calibration Date	March 3, 2009		
Company	**Lakeland Industry and Community Association**		
Plant / Location	**LICA1/Cold Lake**		
Start Time (MST)	12:30	End Time (MST)	16:45

Calculated Conc. ppm	Indicated Response ppm	Correction Factor
0.0	0.0	
0.0	0.1	0.0000
0.0	0.0	#DIV/0!
41.5	40.0	1.0364

Correlation Coefficient	(≥ 0.995)	0.999994
Slope	(0.85 to 1.15)	0.964071
Intercept	(± 3% F.S.)	0.033333



Notes: Pump Diaphragm was replaced following the as found points.


01 Minute Averages
As Found Calibration
45
32.5
20
7.5
-5
zero
41.4ppm
zero
41.4ppm
03/03/09 09:00
03/03/09 11:00
03/03/09 13:00
03/03/09 15:00
03/03/09 17:00
03/03/09 19:00
LICA THC PPM

THC Calibration Report

Station Information

Calibration Date:	March 4, 2009	Previous Calibration	February 27, 2008		
Company:	**Lakeland Industry and Community Association**				
Plant / Location:	**LICA1/Cold Lake**				
Start Time (MST)	7:30	End Time (MST)	8:42		
Reason:	Post Repair Calibration				
Barometric Pressure:	703 mmHg	Station Temperature:	25	Deg C	
Calibrator:	API 700	S/N:	831		
Cal Gas Concentration:	299Prop/1019Meth ppm	Cal Gas Expiry Date:	8/11/2011		
DAS make & Model:	ESC 8832	S/N :	263		
Output Voltage Range:	0 - 10 VDC				

Analyzer Information

Make / Model	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	6.9	psi	6.9	psi
Hydrogen Pressure	8.5	psi	8.5	psi
Air Pressure	19.5	psi	19.5	psi

Calibration Data

Dilution Flow	Source Gas Flow	Calculated Concentration	Indicated Concentration	Correction Factor
2977.0	0.0	0.0	0.1	N/A
2972.0	0.0	0.0	0.0	N/A
3047.0	70.0	41.4	41.0	1.0100
			Correction Factor:	N/A

Percent Change

Previous Calibration Correction Factor:	1.1236
Current Correction Factor Before Span Adjust:	N/A
Percent Change:	#VALUE!

IZS Calibration Data

	Before Calibration	After Calibration
Auto Zero	0.0	-
Auto Span	34.3	-
Sample Lines Connected		**YES**

Cylinder Pressures			
Span	250	psi	
Hydrogen	1950	psi	
Zero Air	unlimited	psi	Maxxam-owned API 701 zero air supply with catalytic oxidizer

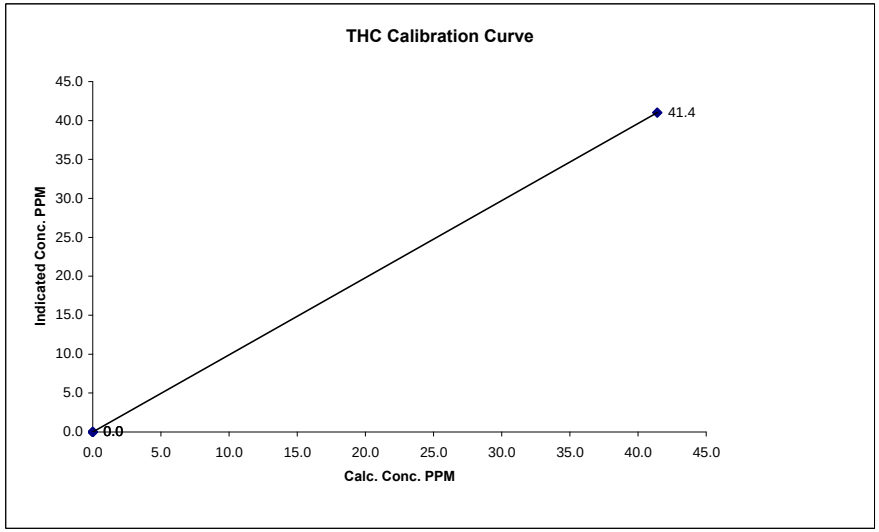
Calibration Performed by: Shea Beaton

THC Calibration Curve

Calibration Date	March 4, 2009		
Company	**Lakeland Industry and Community Association**		
Plant / Location	**LICA1/Cold Lake**		
Start Time (MST)	7:30	End Time (MST)	8:42

Calculated Conc. ppm	Indicated Response ppm	Correction Factor
0.0	0.0	
0.0	0.0	#DIV/0!
41.4	41.0	1.0100
0.0	0.0	#DIV/0!

Correlation Coefficient	(≥ 0.995)	1.000000
Slope	(0.85 to 1.15)	0.990060
Intercept	(± 3% F.S.)	0.000000



Notes: -PumpDiaphragm replaced yesterday.
- This calibration was halted. The middle and low span points were had poor linearity. The flow through the detector were changed in an attempt to correct the poor linearity.

THC Calibration Report

Station Information

Calibration Date:	March 4, 2009	Previous Calibration	February 27, 2008		
Company:	**Lakeland Industry and Community Association**				
Plant / Location:	**LICA1/Cold Lake**				
Start Time (MST)	11:15	End Time (MST)	14:20		
Reason:		Post Repair Calibration			
Barometric Pressure:	703 mmHg	Station Temperature:	25	Deg C	
Calibrator:	API 700	S/N:	831		
Cal Gas Concentration:	299Prop/1019Meth	ppm	Cal Gas Expiry Date:	8/11/2011	
DAS make & Model:	ESC 8832	S/N :	263		
Output Voltage Range:	0 - 10 VDC				

Analyzer Information

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

Analyzer Settings

	Before Calibration		After Calibration	
Concentration Range	0 - 50	ppm	0 - 50	ppm
Sample Pressure	6.9	psi	6.9	psi
Hydrogen Pressure	8.5	psi	8	psi
Air Pressure	19.5	psi	19.5	psi

Calibration Data

Dilution Flow	Source Gas Flow	Calculated Concentration	Indicated Concentration	Correction Factor
3051.0	0.0	0.0	0.0	N/A
3051.0	70.5	41.6	41.9	0.9940
3059.0	34.8	20.7	20.5	1.0118
3060.0	14.4	8.6	8.3	1.0406
3060.0	0	0.0	0.0	N/A
			Correction Factor:	0.9940

Percent Change

Previous Calibration Correction Factor:	1.1236
Current Correction Factor Before Span Adjust:	0.9940
Percent Change:	13.0%

IZS Calibration Data

	Before Calibration	After Calibration
Auto Zero	0.0	0.0
Auto Span	34.3	35.7
Sample Lines Connected		**YES**

Cylinder Pressures			
Span	2000	psi	
Hydrogen	1950	psi	
Zero Air	unlimited	psi	Maxxam-owned API 701 zero air supply with catalytic oxidizer

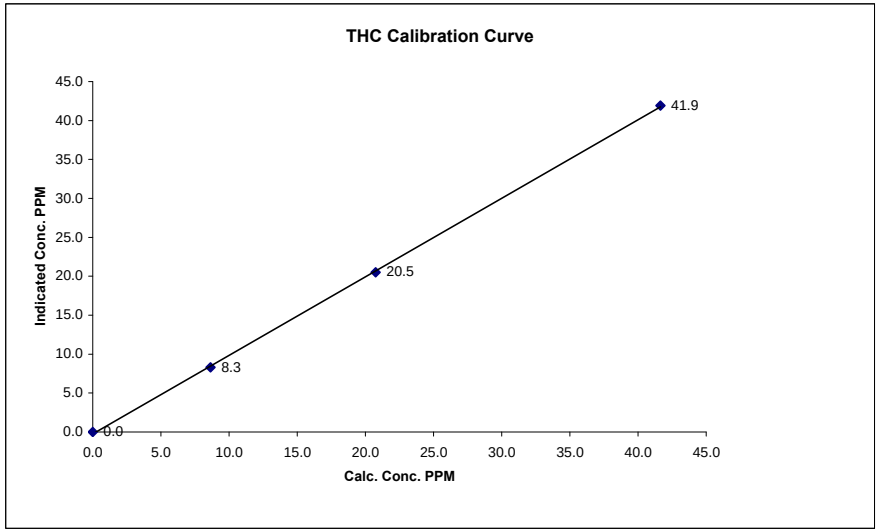
Calibration Performed by: Shea Beaton

THC Calibration Curve

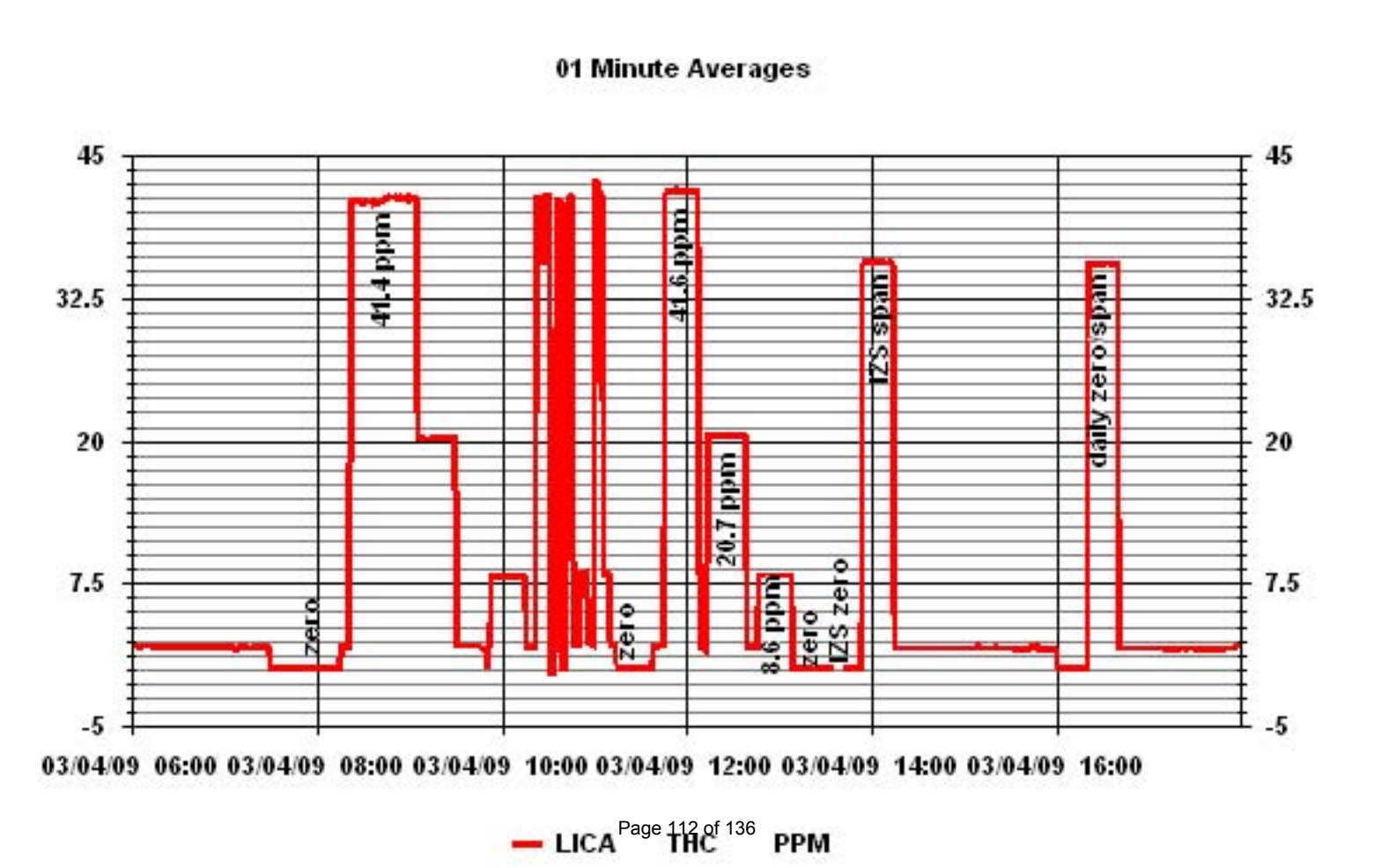
Calibration Date	March 4, 2009				
Company	**Lakeland Industry and Community Association**				
Plant / Location	**LICA1/Cold Lake**				
Start Time (MST)	11:15	End Time	(MST)	14:20	

Calculated Conc. ppm	Indicated Response ppm	Correction Factor
0.0	0.0	
8.6	8.3	1.0406
20.7	20.5	1.0118
41.6	41.9	0.9940

Correlation Coefficient	(≥ 0.995)	0.999862
Slope	(0.85 to 1.15)	1.008576
Intercept	(± 3% F.S.)	-0.233824



Notes: Pump Diaphragm was replaced yesterday. -
Adjusted flows prior this calibration.
- Flows measured manually. -
Analyzer exhibiting poor linearity, FID rebuild will be performed as soon as parts are available.


01 Minute Averages
45
32.5
20
7.5
-5
zero
41.4 ppm
zero
41.6 ppm
20.7 ppm
8.6 ppm
zero
IZS zero
IZS span
daily zero/span
03/04/09 06:00
03/04/09 08:00
03/04/09 10:00
03/04/09 12:00
03/04/09 14:00
03/04/09 16:00
LICA THC PPM

Particulate Matter 2.5

TEOM® 1405F Audit

Station		Audit Transfer Standard	
Date:	March 26, 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 (%)	39%
Firmware Ver.	1.18	K_o Factor	13716.0
Parameter	PM 2.5 (with FDMS)	Temp (^oC)	0.5
		Press (ATM)	0.950

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**	0.079	Warnings	None
Pump Vacuum	0.35 ATM		

Temperature/Pressure

Measured Temp **(± 2 °C)**	-0.1	**Δ °C**	0.6
Measured Press **(± 0.01atm)**	0.948	**ΔATM**	0.0

Flow Audit

Indicated Main Flow (l/min)	3.00	Main Flow Drift **(±10.0%)**	1.67%
Measured Main Flow (l/min)	3.05	Flow Adjusted to Measured?	No
Indicated Bypass Flow (l/min)	13.67	Bypass Flow Drift **(±10.0%)**	1.02%
Measured Bypass Flow (l/min)	13.81	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: 11:43 **Finish Time:** 12:10

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

New Filter Loading %: NA

Comments: Removal audit, unit being shipped to distributor for a manufacturer recall repair.

Auditor/s: Shea Beaton

TEOM® 1405F Audit

Station		Audit Transfer Standard	
Date:	March 27, 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 1775	F-Aux Set Pt (l/min)	13.67
Unit s/n	1405A201620804	Filter Load (%)	32%
Firmware Ver.	1.22	K_o Factor	14578.0
Parameter	PM 2.5 (with FDMS)	Temp (^oC)	-4.6
		Press (ATM)	0.929

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**	0.007	Warnings	None
Pump Vacuum	0.35ATM		

Temperature/Pressure

Measured Temp **(± 2 °C)**	-4.4	**Δ °C**	-0.2
Measured Press **(± 0.01atm)**	0.929	**ΔATM**	0.0

Flow Audit

Indicated Main Flow (l/min)	3.00	Main Flow Drift **(±10.0%)**	1.67%
Measured Main Flow (l/min)	2.98	Flow Adjusted to Measured?	YES
Indicated Bypass Flow (l/min)	13.67	Bypass Flow Drift **(±10.0%)**	1.17%
Measured Bypass Flow (l/min)	13.51	Flow Adjusted to Measured?	YES

Leak Check

Main **(< 0.15 l/min)**	0.01
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: 7:50 **Finish Time:** 8:30

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

New Filter Loading %: 31.5%

Comments: Teom installed yesterday. New filters installed and leak checked yesterday. Prior to this audit, the Flow Ambient temp, and ambient pressure were all calibrated.

Auditor/s: Shea Beaton

Nitrogen Dioxide

NOx - NO- NO_2 Calibration Report

Station Information

Calibration Date	March 4, 2009	Previous Calibration	February 2, 2009
Company	**Lakeland Ind & Comm. Assoc.**	Plant/Location	**LICA 1 - Cold Lake South**
Start Time (MST)	7:30	End Time (MST)	17:15
Reason:	Monthly Calibrtion		
Barometric Pressure	703 mmHg	Station Temperature	25.0 Deg C
Cal Gas Concentration	NOx 51.8 ppm NO 51.6 ppm	Cal Gas Expiry date	12/19/2010
DAS Output Voltage	0 - 5 Volts	Chart Rec. Output	NA Volts

Equipment Information

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

Analyzer Settings

	Before Calibration				After Calibration			
Concentration Range				0 - 500 ppb				
Sample Flow/Conv. Temp	758	ccm	317	Deg C	722	ccm	318	Deg C
Ozone Flow / Vacuum	OK	ccm	163.6	mmHg	OK	ccm	174.2	mmHg
HVPS	-821	Volts			-821	Volts		
Rx/ Temp / PMT Temp	49.7	Deg C	-2.5	Deg C	49.4	Deg C	-2.4	Deg C
Box Temp / IZS Temp	29.8	Deg C	OK	Deg C	28.3	Deg C	OK	Deg C
Offset	3.2	NOx	3.1	NO	3.6	NOx	3.4	NO
Slope	1.008	NOx	0.811	NO	1.007	NOx	0.903	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	NO_2	NOx	NO
5005.8	0	N/A	0	0	0	0	0	N/A	N/A
4973.4	38.8	N/A	401	399	397	395	2	1.0100	1.0112
4999.6	0.0	N/A	0	0	1	0	1	N/A	N/A
4961.9	38.8	N/A	402	400	403	401	3	0.9973	0.9984
4975.4	24.3	N/A	252	251	252	250	2	0.9991	1.0032
4986.2	14.6	N/A	151	151	152	151	1	0.9949	0.9977
4999.6	0.0	N/A	0	0	1	0	0	N/A	N/A
								Converter Efficiency	
4961.9	38.8	N/A	402	400	401	399	2	N/A	
4961.9	38.8	300	402	400	400	134	266	100%	
4961.9	38.8	200	402	400	399	209	191	99%	
4964.6	38.8	100	402	400	400	305	96	100%	
4961.9	38.8	N/A	402	400	401	399	2	N/A	
5002.3	0	N/A	0	0	1	0	0	N/A	N/A
Linearity OK?			**Yes**	No	Sum of Least Squares			0.9975	0.9995
Flows Checked on-site?			**Yes**	No	New Correction Factor			0.9973	0.9984
					Average Converter Efficiency			100%	

	Before Calibration				After Calibration			
Auto Zero	0.1	NOx	0.2	NO2	0.3	NOx	0.3	NO2
Auto Span	166.1	NOx	165.4	NO2	283.0	NOx	281.0	NO2
Sample Lines Connected					YES			
Percent Change from Previous Calibration					*NOx* 0.4%		*NO* 0.3%	

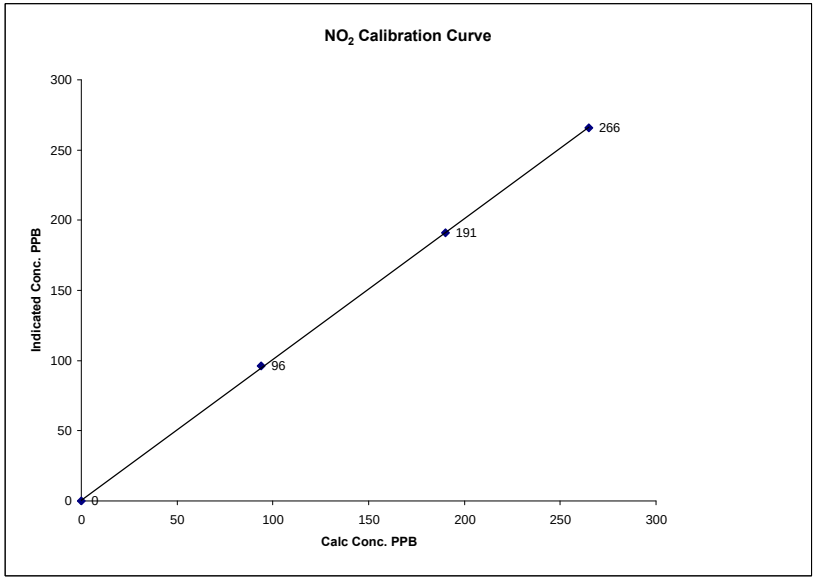
Calibration Performed by: Shea Beaton

NO_2 Calibration Curve

Calibration Date	March 4, 2009		
Company	**Lakeland Ind & Comm. Assoc.**		
Plant / Location	**LICA 1 - Cold Lake South**		
Start Time (MST)	7:30	End Time (MST)	17:15

Calculated Conc. ppb	Indicated Response ppb	Correction Factor
0	0	N/A
94	96	0.9792
190	191	0.9948
265	266	0.9962

Correlation Coefficient	(≥ 0.995)	0.999956
Slope	(0.85 to 1.15)	1.002361
Intercept	(± 3% F.S.)	0.67593

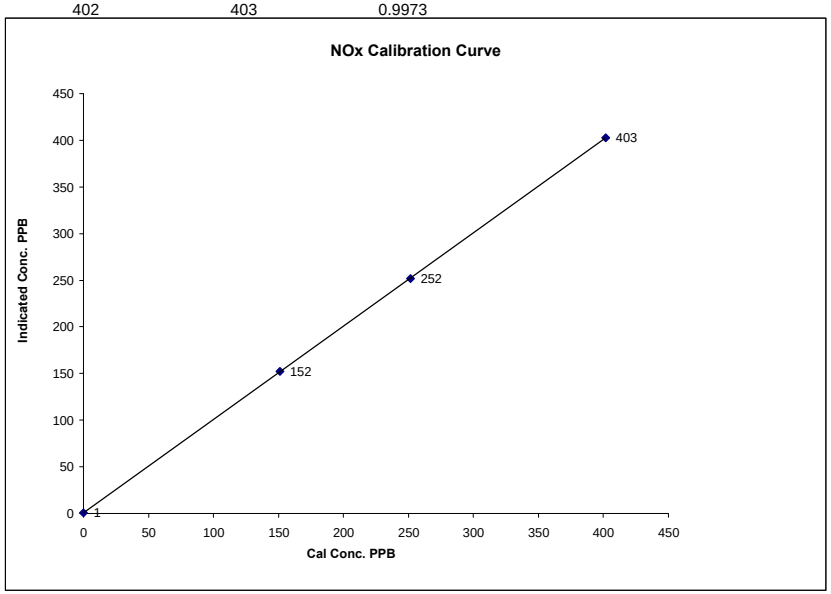


Notes:

NOx Calibration Curve

Calibration Date	March 4, 2009				
Company	**Lakeland Ind & Comm. Assoc.**				
Plant / Location	**LICA 1 - Cold Lake South**				
Start Time (MST)	7:30	End Time	(MST)	17:15	

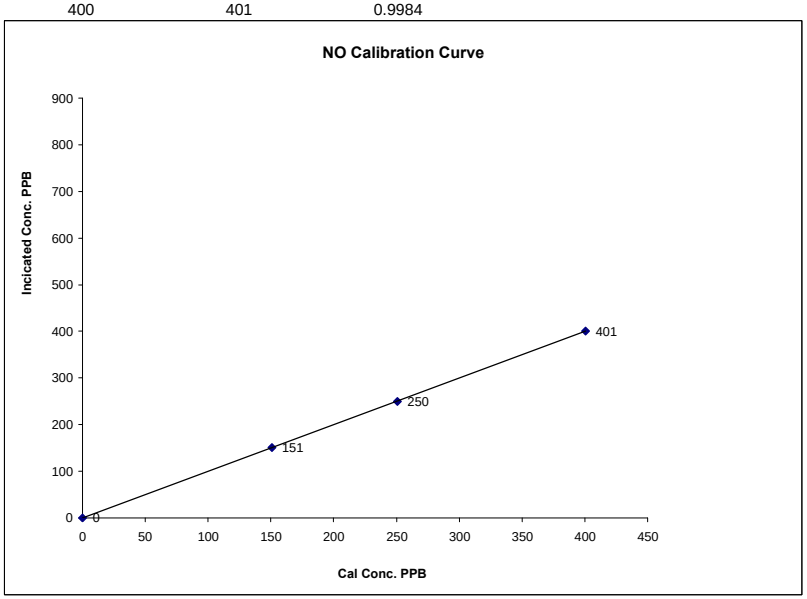
Calculated Conc. ppb	Indicated Response ppb	Correction Factor	Correlation Coefficient	(≥ 0.995)	0.999995
			Slope	(0.85 to 1.15)	0.999892
0	1	N/A	Intercept	(± 3% F.S.)	0.79506
151	152	0.9949			
252	252	0.9991			
402	403	0.9973			

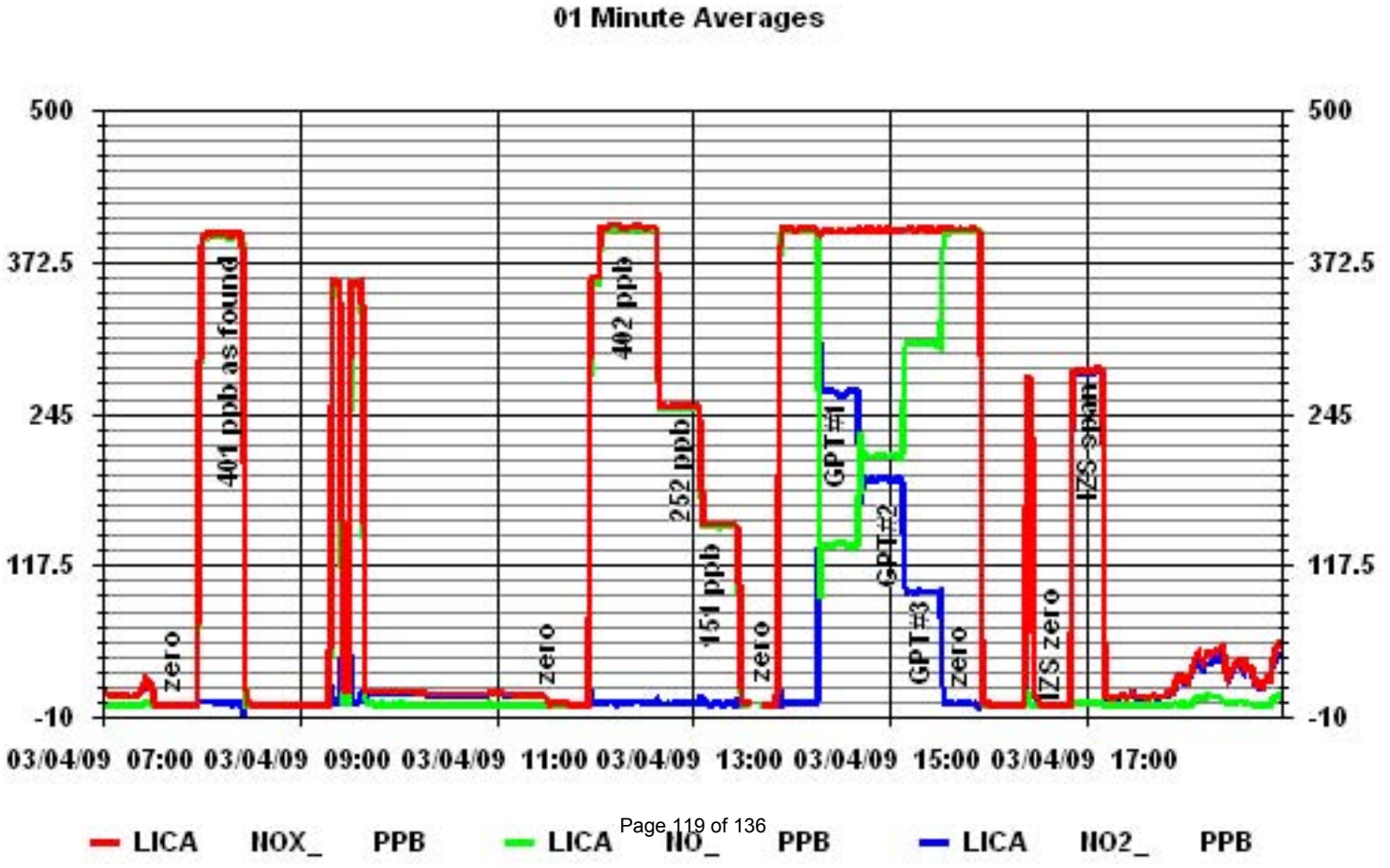


NO Calibration Curve

Calibration Date	March 4, 2009				
Company	**Lakeland Ind & Comm. Assoc.**				
Plant / Location	**LICA 1 - Cold Lake South**				
Start Time (MST)	7:30	End Time	(MST)	17:15	

Calculated Conc. ppb	Indicated Response ppb	Correction Factor	Correlation Coefficient	(≥ 0.995)	0.999987
			Slope	(0.85 to 1.15)	1.001810
0	0	N/A	Intercept	(± 3% F.S.)	-3.1907
151	151	0.9977			
251	250	1.0032			
400	401	0.9984			




01 Minute Averages
500
372.5
245
117.5
-10
zero
401 ppb as found
zero
402 ppb
252 ppb
151 ppb
zero
GPT#1
GPT#2
GPT#3
zero
IZS zero
IZS span
03/04/09 07:00
03/04/09 09:00
03/04/09 11:00
03/04/09 13:00
03/04/09 15:00
03/04/09 17:00
LICA NOX_ PPB
LICA NO_ PPB
LICA NO2_ PPB

Ozone

O_3 Calibration Report

Station Information

Calibration Date	March 27, 2009	Previous Calibration	February 5, 2009
Company	**Lakeland Industry & Community Association**		
Plant / Location	**LICA 1 - Cold Lake South**		
Start Time (MST)	7:50	End Time (MST)	10:10
Reason:		Monthly Calibration	
Barometric Pressure	706 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	28.4	Deg C	28.3	Deg C
O_3 Set Level	29%		29%	
Bench Lamp/O3 Lamp				
Sample Flow A/B	0.736 LPM	0.749 LPM	0.738 LPM	0.75 LPM
Offset / Slope	0.7	1.048	0.7	1.049

Calibration Data

Dilution Flow Rate	Ozone Set Point	Calculated Concentration	Indicated Conc. (DAS)	Correction Factor
5000	0	0	0	N/A
5000	400	388	387	1.0026
5000	200	197	194	1.0155
5000	100	97	94	1.0319
5000	0	0	0	N/A
			Sum of Least Squares	N/A
			New Correction Factor	1.0026

	Before Calibration	After Calibration
Auto Zero	0.0	-0.1
Auto Span	300.0	299.0
Sample Lines Connected		YES
Percent Change from Previous Calibration		-0.3%

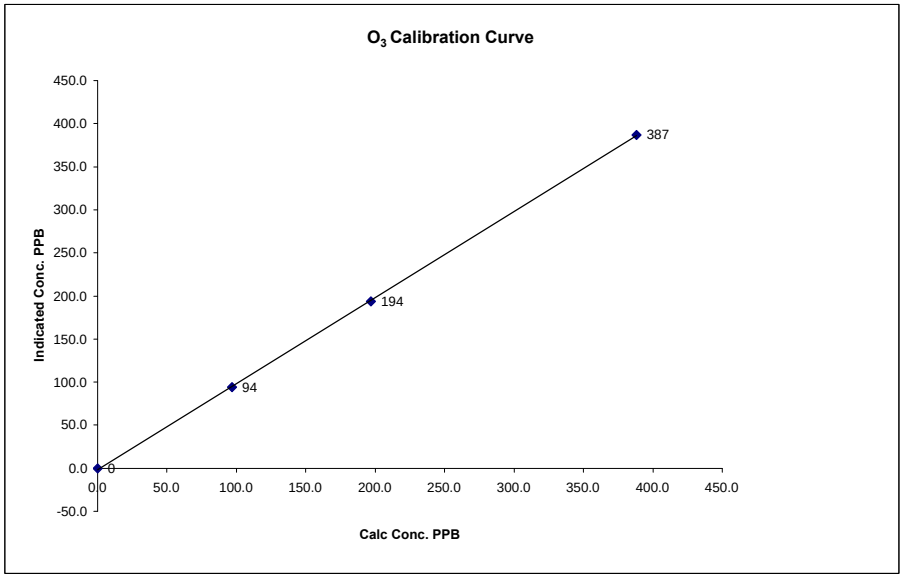
Calibration Performed by: Shea Beaton

O_3 Calibration Curve

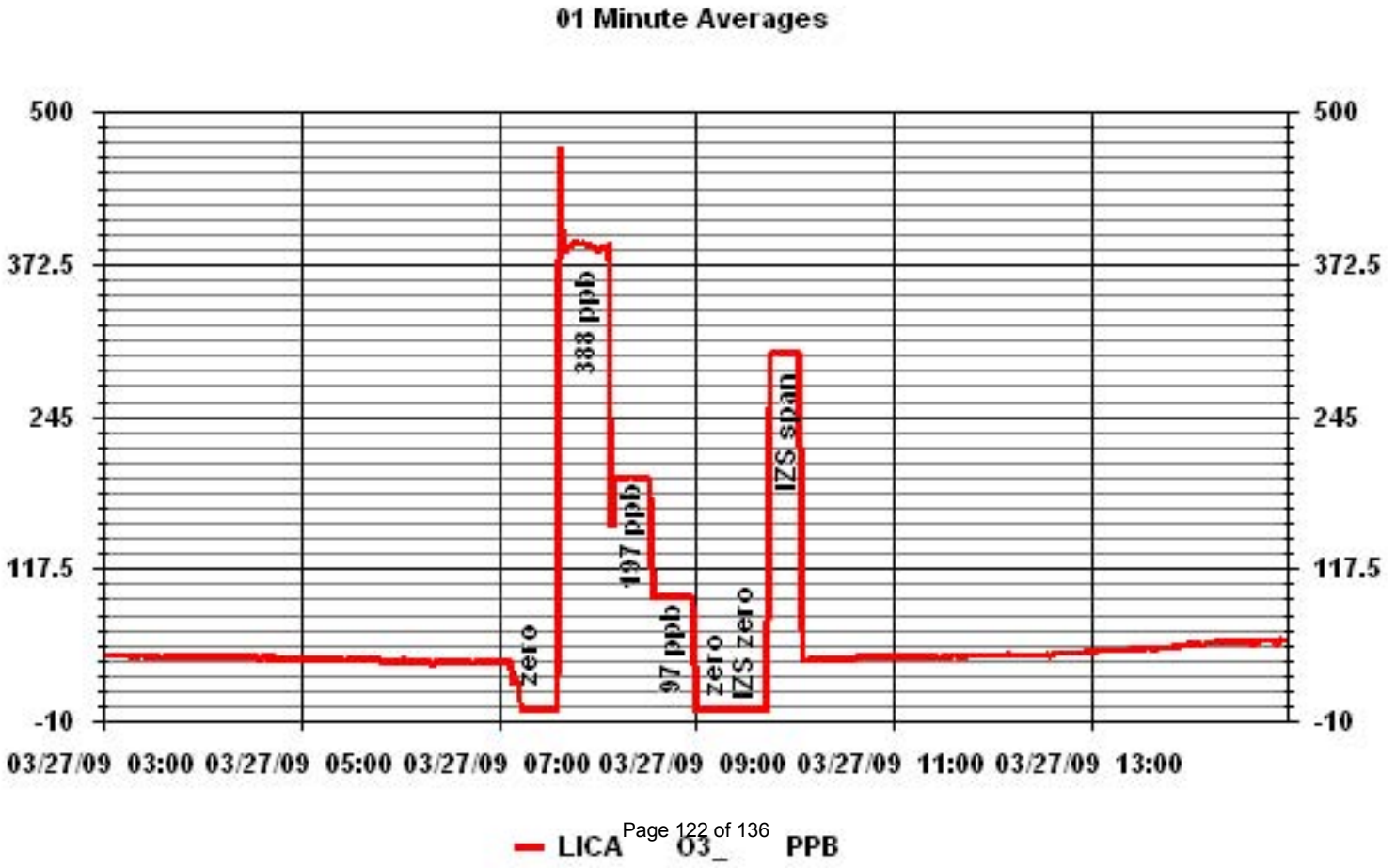
Calibration Date	March 27, 2009		
Company	**Lakeland Industry & Community Association**		
Plant / Location	**LICA 1 - Cold Lake South**		
Start Time (MST)	7:50	End Time (MST)	10:10

Calculated Conc. ppb	Indicated Response ppb	Correction Factor
0	0	n/a
97	94	1.0319
197	194	1.0155
388	387	1.0026

Correlation Coefficient	(≥ 0.995)	0.999919
Slope	(0.85 to 1.15)	0.999073
Intercept	(± 3% F.S.)	-1.591864



Notes: pressure =700.5 mmHg , Bench Lamp = 53.5, O3 Lamp = 67.6
Intensity; Cell A=90193, Cell B=76849


01 Minute Averages
500
372.5
245
117.5
-10
zero
388 ppb
197 ppb
97 ppb
zero
IZS zero
IZS span
03/27/09 03:00 03/27/09 05:00 03/27/09 07:00 03/27/09 09:00 03/27/09 11:00 03/27/09 13:00
LICA O3_ PPB

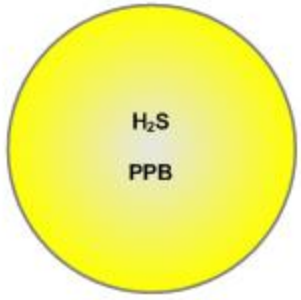
Passive Bubble Maps

Lakeland Industry & Community Association
H_2S Passive Bubble Map

MARCH 2009

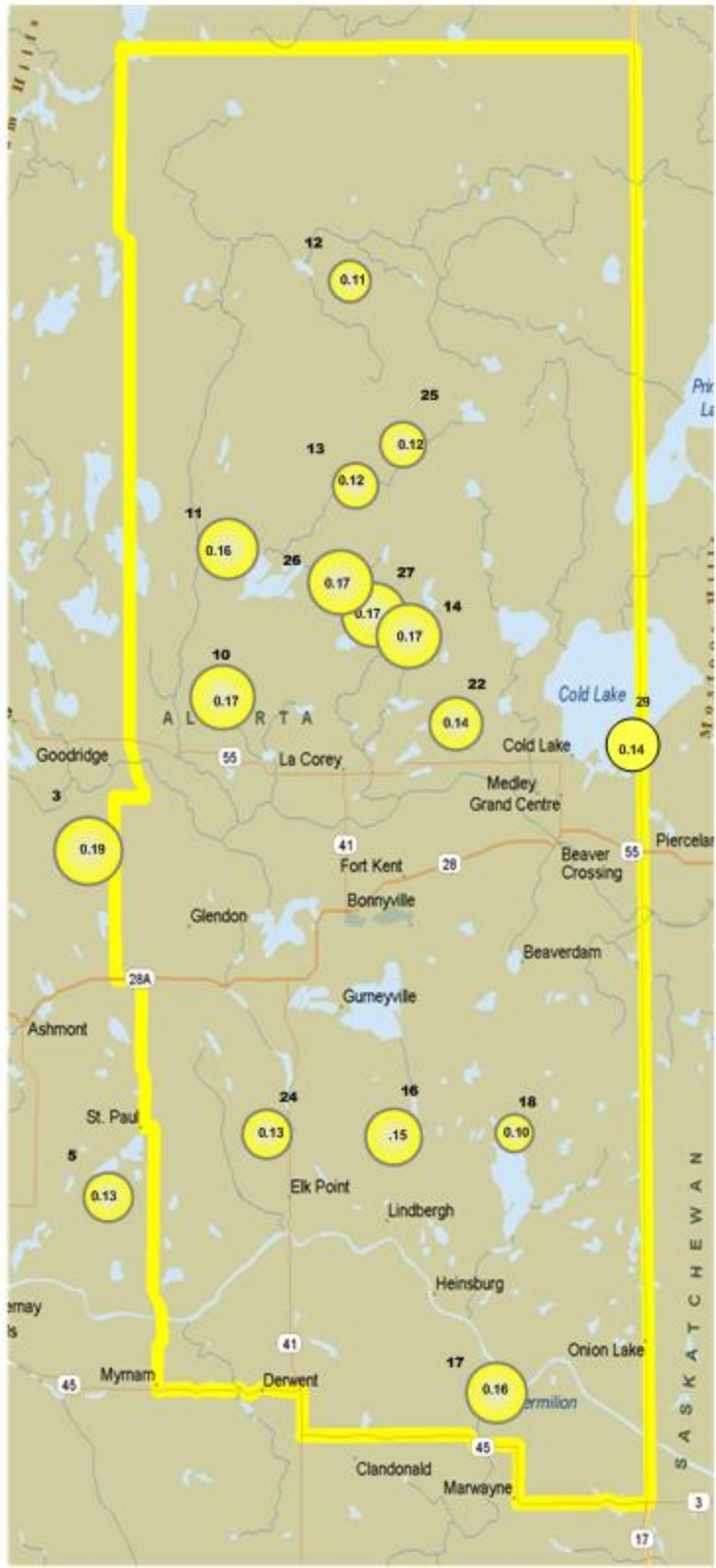
PASSIVE STATIONS

3 – Therien	0.19 PPB
5 – Lake Eliza	0.13 PPB
10 – La Corey	0.17 PPB
11 – Wolf Lake	0.16 PPB
12 – Foster Creek	0.11 PPB
13 – Primrose	0.12 PPB
14 – Maskwa	0.17 PPB
16 – Frog Lake	0.14 PPB
16A – Frog Lake	0.15 PPB
17 – Clear Range	0.15 PPB
17A – Clear Range	0.16 PPB
18 – Fishing Lake	0.10 PPB
22 – Cold Lake South	0.14 PPB
24 – Fort George	0.13 PPB
25 – Burnt Lake	0.12 PPB
26 – Mahihkan	0.16 PPB
27 – Hilda Lake	0.17 PPB
29 – Cold Lake South 2	0.14 PPB



Summary

Minimum : 0.10PPB –Fishing Lake
Maximum: 0.19 PPB –Therien
Average: 0.15 PPB *Includes Duplicates

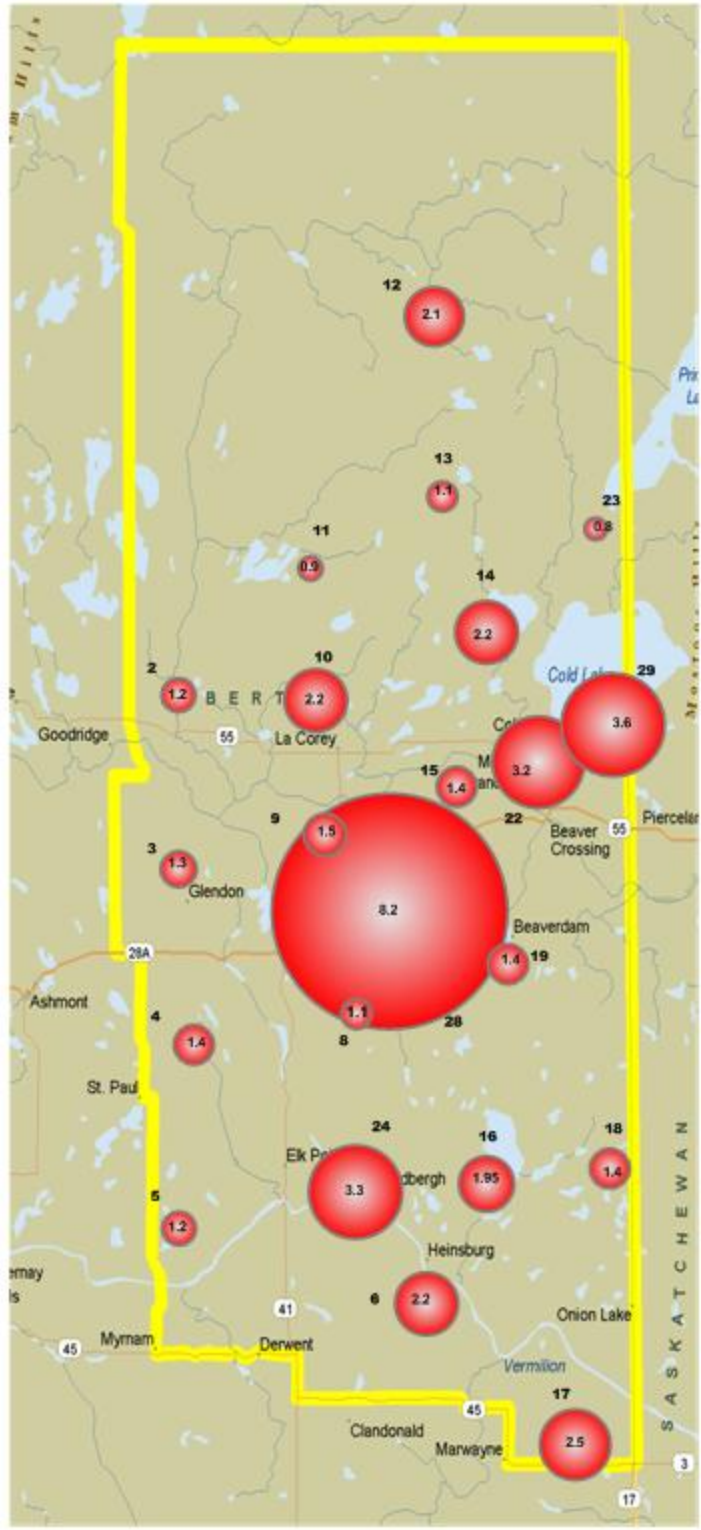


Lakeland Industry & Community Association
NO_2 Passive Bubble Map

MARCH 2009

PASSIVE STATIONS

2 – Sand River	1.2 PPB
3 – Therien	1.3 PPB
4 – Flat Lake	1.4 PPB
5 – Lake Eliza	1.2 PPB
6 – Telegraph Creek	2.2 PPB
8 – Muriel-Kehewin	1.1 PPB
9 – Dupre	1.5 PPB
10 – La Corey	2.2 PPB
11 – Wolf Lake	0.9 PPB
12 – Foster Creek	2.1 PPB
13 – Primrose	1.1 PPB
14 – Maskwa	2.2 PPB
15 – Ardmore	1.4 PPB
16 – Frog Lake	1.7 PPB
16A – Frog Lake	2.2 PPB
17 – Clear Range	2.5 PPB
17A – Clear Range	2.4 PPB
18 – Fishing Lake	1.4 PPB
19 – Beaverdam	1.4 PPB
22 – Cold Lake South	3.2 PPB
23 – Medley-Martineau	0.8 PPB
24 – Fort George	3.3 PPB
28 – Town of Bonnyville	8.2 PPB
29 – Cold Lake South 2	3.6 PPB



Summary

Minimum : 0.8 PPB – Medley-Martineau
Maximum: 8.2 PPB – Town of Bonnyville
Average: 2.1 PPB *Includes Duplicates

Lakeland Industry & Community Association
O_3 Passive Bubble Map

MARCH 2009

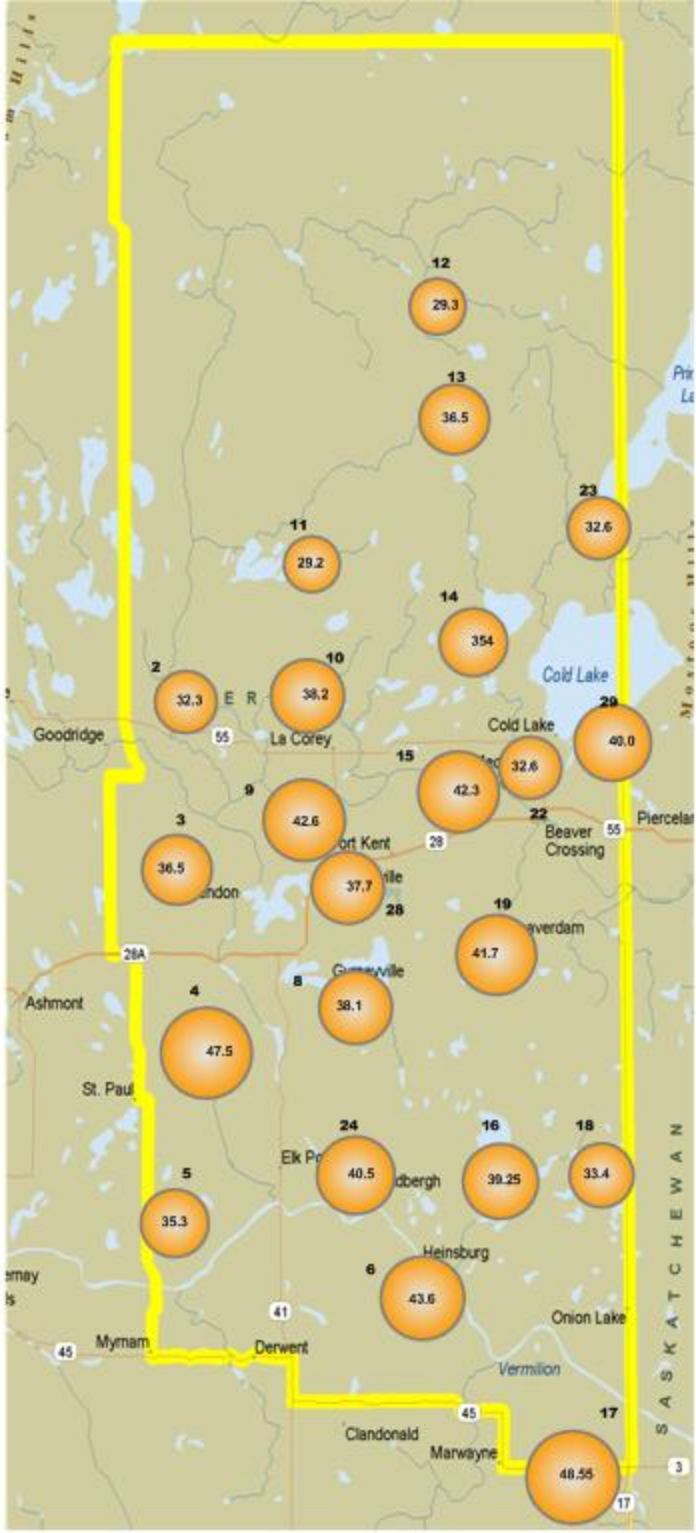
PASSIVE STATIONS

2 – Sand River	32.3 PPB
3 – Therien	36.5 PPB
4 – Flat Lake	47.5 PPB
5 – Lake Eliza	35.3 PPB
6 – Telegraph Creek	43.6 PPB
8 – Muriel-Kehewin	38.1 PPB
9 – Dupre	42.6 PPB
10 – La Corey	38.2 PPB
11 – Wolf Lake	29.2 PPB
12 – Foster Creek	29.3 PPB
13 – Primrose	36.5 PPB
14 – Maskwa	35.4 PPB
15 – Ardmore	42.3 PPB
16 – Frog Lake	36.7 PPB
16A – Frog Lake	41.8 PPB
17 – Clear Range	46.5 PPB
17A – Clear Range	50.6 PPB
18 – Fishing Lake	33.4 PPB
19 – Beaverdam	41.7 PPB
22 – Cold Lake South	32.6 PPB
23 – Medley-Martineau	32.6 PPB
24 – Fort George	40.5 PPB
28 – Town of Bonnyville	37.7 PPB
29 – Cold Lake South 2	40.0 PPB

O_3 PPB

Summary

Minimum : 29.2 PPB –Wolf Lake
Maximum: 50.6 PPB –Clear Range
Average: 38.4 PPB *Includes Duplicates

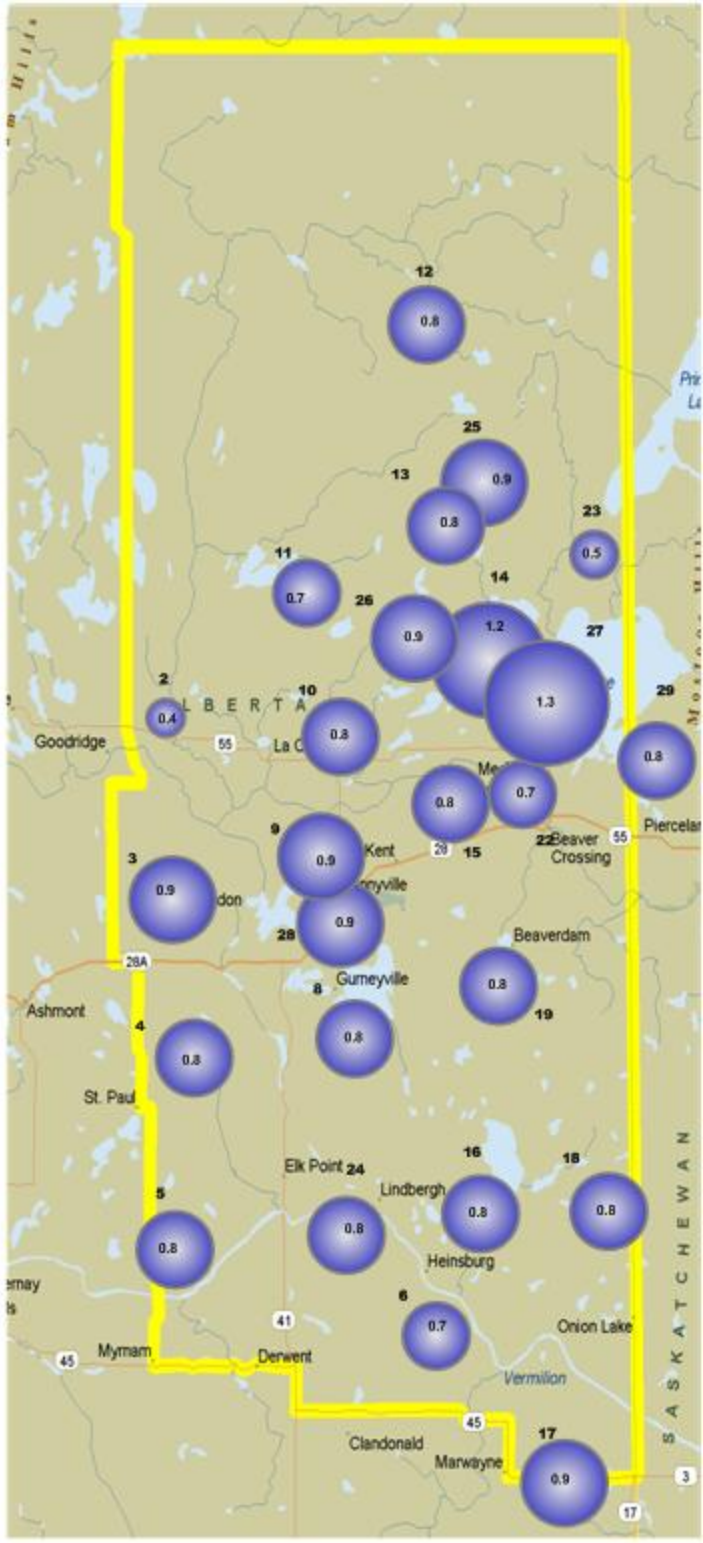


Lakeland Industry & Community Association
SO_2 Passive Bubble Map

MARCH 2008

PASSIVE STATIONS

2 – Sand River	0.4 PPB
3 – Therien	0.9 PPB
4 – Flat Lake	0.8 PPB
5 – Lake Eliza	0.8 PPB
6 – Telegraph Creek	0.7 PPB
8 – Muriel-Kehewin	0.8 PPB
9 – Dupre	0.9 PPB
10 – La Corey	0.8 PPB
11 – Wolf Lake	0.7 PPB
12 – Foster Creek	0.8 PPB
13 – Primrose	0.8 PPB
14 – Maskwa	1.2 PPB
15 – Ardmore	0.8 PPB
16 – Frog Lake	0.7 PPB
16A – Frog Lake	0.8 PPB
17 – Clear Range	0.8 PPB
17A – Clear Range	0.9 PPB
18 – Fishing Lake	0.8 PPB
19 – Beaverdam	0.8 PPB
22 – Cold Lake South	0.7 PPB
23 – Medley-Martineau	0.5 PPB
24 – Fort George	0.8 PPB
25 – Burnt Lake	0.9 PPB
26 – Mahihkan	0.9 PPB
27 – Hilda Lake	1.3 PPB
28 – Town of Bonnyville	0.9 PPB
29 – Cold Lake South 2	0.8 PPB



Summary

Minimum : 0.4 PPB – Sand River
Maximum: 1.3 PPB –Hilda Lake
Average: 0.8 PPB *Includes Duplicates

Passive Network Laboratory Analysis

Your Project #: 2009/02/28 - 2009/03/31
Site:LICA

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

Report Date: 2009/04/22

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: A912957
Received: 2009/03/23, 13:17

Sample Matrix: Air
Samples Received: 27

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
H2S Passive Analysis (1)	1	2009/04/16	2009/04/22		EDM SOP-0320
H2S Passive Analysis (1)	17	2009/04/22	2009/04/22		EDM SOP-0320
NO2 Passive Analysis (1)	24	2009/04/15	2009/04/22		EDM SOP-0318
O3 Passive Analysis (1)	24	2009/04/22	2009/04/22		EDM SOP-0317
SO2 Passive Analysis (1)	27	2009/04/13	2009/04/22		EDM SOP-0319

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

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

Encryption Key

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

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

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

Total cover pages: 1

RESULTS OF CHEMICAL ANALYSES OF AIR

Maxxam ID		O17405	O17406	O17407	O17408		
Sampling Date		2009/02/28 07:05	2009/02/28 06:25	2009/03/01 12:40	2009/03/01 12:00		
	Units	**2**	**3**	**4**	**5**	**RDL**	**QC Batch**
Passive Monitoring							
Calculated H2S	ppb		0.19		0.13	0.02	3072432
Calculated NO2	ppb	1.2	1.3	1.4	1.2	0.1	3059009
Calculated O3	ppb	32.3	36.5	47.5	35.3	0.1	3073560
Calculated SO2	ppb	0.4	0.9	0.8	0.8	0.1	3051254

RDL = Reportable Detection Limit

Maxxam ID		O17409	O17410	O17411	O17412		
Sampling Date		2009/03/01 10:45	2009/03/01 13:30	2009/02/28 15:35	2009/02/28 07:55		
	Units	**6**	**8**	**9**	**10**	**RDL**	**QC Batch**
Passive Monitoring							
Calculated H2S	ppb				0.17	0.02	3072432
Calculated NO2	ppb	2.2	1.1	1.5	2.2	0.1	3059009
Calculated O3	ppb	43.6	38.1	42.6	38.2	0.1	3073560
Calculated SO2	ppb	0.7	0.8	0.9	0.8	0.1	3051254

RDL = Reportable Detection Limit

Maxxam ID		O17413	O17414	O17415	O17416		
Sampling Date		2009/02/28 08:30	2009/02/28 09:45	2009/02/28 11:10	2009/02/28 12:00		
	Units	**11**	**12**	**13**	**14**	**RDL**	**QC Batch**
Passive Monitoring							
Calculated H2S	ppb	0.16	0.11	0.12	0.17	0.02	3072432
Calculated NO2	ppb	0.9	2.1	1.1	2.2	0.1	3059009
Calculated O3	ppb	29.2	29.3	36.5	35.4	0.1	3073560
Calculated SO2	ppb	0.7	0.8	0.8	1.2	0.1	3051254

RDL = Reportable Detection Limit

RESULTS OF CHEMICAL ANALYSES OF AIR

Maxxam ID		O17417	O17418	O17419	O17420		
Sampling Date		2009/02/28 15:05	2009/03/01 08:45	2009/03/01 09:35	2009/03/01 08:00		
	Units	**15**	**16**	**17**	**18**	**RDL**	**QC Batch**
Passive Monitoring							
Calculated H2S	ppb		0.14	0.15	0.10	0.02	3072432
Calculated NO2	ppb	1.4	1.7	2.5	1.4	0.1	3059009
Calculated O3	ppb	42.3	36.7	46.5	33.4	0.1	3073560
Calculated SO2	ppb	0.8	0.7	0.8	0.8	0.1	3051254

RDL = Reportable Detection Limit

Maxxam ID		O17421	O17422	O17423	O17424		
Sampling Date		2009/03/01 06:55	2009/02/28 14:05	2009/02/28 13:15	2009/03/01 11:20		
	Units	**19**	**22**	**23**	**24**	**RDL**	**QC Batch**
Passive Monitoring							
Calculated H2S	ppb		0.14		0.13	0.02	3072432
Calculated NO2	ppb	1.4	3.2	0.8	3.3	0.1	3059013
Calculated O3	ppb	41.7	32.6	32.6	40.5	0.1	3073560
Calculated SO2	ppb	0.8	0.7	0.5	0.8	0.1	3051260

RDL = Reportable Detection Limit

Maxxam ID		O17427	O17428	O17429	O17430		
Sampling Date		2009/02/28 10:50	2009/02/28 11:45	2009/02/28 12:20	2009/03/01 14:15		
	Units	**25**	**26**	**27**	**28**	**RDL**	**QC Batch**
Passive Monitoring							
Calculated H2S	ppb	0.12	0.16	0.17		0.02	3072432
Calculated NO2	ppb				8.2	0.1	3059013
Calculated O3	ppb				37.7	0.1	3073560
Calculated SO2	ppb	0.9	0.9	1.3	0.9	0.1	3051260

RDL = Reportable Detection Limit

Maxxam Job #: A912957
Report Date: 2009/04/22

LAKELAND INDUSTRY AND COMMUNITY ASSOCIATION
Client Project #: 2009/02/28 - 2009/03/31
Site Reference: LICA
Sampler Initials: SB

RESULTS OF CHEMICAL ANALYSES OF AIR

Maxxam ID		O17431	O17432	O17433		
Sampling Date		2009/03/01 14:15	2009/03/01 08:45	2009/03/01 09:35		
	Units	**29**	**16A**	**17A**	**RDL**	**QC Batch**
Passive Monitoring						
Calculated H2S	ppb	0.14	0.15	0.16	0.02	3072432
Calculated NO2	ppb	3.6	2.2	2.4	0.1	3059013
Calculated O3	ppb	40.0	41.8	50.6	0.1	3073560
Calculated SO2	ppb	0.8	0.8	0.9	0.1	3051260

RDL = Reportable Detection Limit

General Comments

Results relate only to the items tested.

LAKELAND INDUSTRY AND COMMUNITY ASSOCIATION
Attention: MICHAEL BISAGA
Client Project #: 2009/02/28 - 2009/03/31
P.O. #:
Site Reference: LICA

Quality Assurance Report

Maxxam Job Number: PA912957

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
3051254	DF4	Calibration Check	Calculated SO2	2009/04/13		99	%	95 - 105
		SPIKE	Calculated SO2	2009/04/13		100	%	N/A
		BLANK	Calculated SO2	2009/04/13	<0.1		ppb	
3051260	DF4	Calibration Check	Calculated SO2	2009/04/13		101	%	95 - 105
		SPIKE	Calculated SO2	2009/04/13		103	%	N/A
		BLANK	Calculated SO2	2009/04/13	<0.1		ppb	
3059009	DF4	Calibration Check	Calculated NO2	2009/04/16		100	%	76 - 118
		SPIKE	Calculated NO2	2009/04/16		98	%	N/A
		BLANK	Calculated NO2	2009/04/16	<0.1		ppb	
3059013	DF4	Calibration Check	Calculated NO2	2009/04/16		99	%	76 - 118
		SPIKE	Calculated NO2	2009/04/16		101	%	N/A
		BLANK	Calculated NO2	2009/04/16	<0.1		ppb	
3072432	TM5	Calibration Check	Calculated H2S	2009/04/22		100	%	80 - 120
		SPIKE	Calculated H2S	2009/04/22		100	%	N/A
3073560	OZ	Calibration Check	Calculated O3	2009/04/22		95	%	91 - 107
		SPIKE	Calculated O3	2009/04/22		101	%	N/A
		BLANK	Calculated O3	2009/04/22	<0.1		ppb	

N/A = Not Applicable

Passive Field Data

Field Notes

ID	SAMPLER	START		END		NOTES
		DATE	TIME	DATE	TIME	
2	$SO_2/NO_2/O_3$	02/28/2009	07:05	03/31/09	09:50	
3	$H_2S/SO_2/NO_2/O_3$	02/28/2009	06:25	03/31/09	09:15	
4	$SO_2/NO_2/O_3$	03/01/2009	12:40	04/01/09	13:30	
5	$H_2S/SO_2/NO_2/O_3$	03/01/2009	12:00	04/01/09	12:50	
6	$SO_2/NO_2/O_3$	03/01/2009	10:45	04/01/09	11:15	
8	$SO_2/NO_2/O_3$	03/01/2009	13:30	04/01/09	19:15	
9	$SO_2/NO_2/O_3$	02/28/2009	15:35	03/31/09	08:40	
10	$H_2S/SO_2/NO_2/O_3$	02/28/2009	07:55	03/31/09	10:35	
11	$H_2S/SO_2/NO_2/O_3$	02/28/2009	07:30	03/31/09	11:10	
12	$H_2S/SO_2/NO_2/O_3$	02/28/2009	09:45	03/31/09	12:35	
13	$H_2S/SO_2/NO_2/O_3$	02/28/2009	11:10	03/31/09	14:00	
14	$H_2S/SO_2/NO_2/O_3$	02/28/2009	12:00	03/31/09	15:00	
15	$SO_2/NO_2/O_3$	02/28/2009	15:05	03/31/09	07:35	
16	$H_2S/SO_2/NO_2/O_3$	03/01/2009	08:45	04/01/09	09:35	
17	$H_2S/SO_2/NO_2/O_3$	03/01/2009	09:35	04/01/09	10:30	
18	$H_2S/SO_2/NO_2/O_3$	03/01/2009	08:00	04/01/09	08:55	
19	$SO_2/NO_2/O_3$	03/01/2009	06:55	04/01/09	08:00	
22	$H_2S/SO_2/NO_2/O_3$	02/28/2009	14:05	04/01/09	15:20	
23	$SO_2/NO_2/O_3$	02/28/2009	13:15	03/31/09	16:25	
24	$H_2S/SO_2/NO_2/O_3$	03/01/2009	11:20	04/01/09	12:00	
25	H_2S/SO_2	02/28/2009	10:50	03/31/09	13:40	
26	H_2S/SO_2	02/28/2009	11:45	03/31/09	14:35	
27	H_2S/SO_2	02/28/2009	12:20	03/31/09	15:20	
28	$SO_2/NO_2/O_3$	03/01/2009	14:15	03/31/09	08:10	
29	$H_2S/SO_2/NO_2/O_3$	02/28/2009	14:15	04/01/09	15:25	
16A	$H_2S/SO_2/NO_2/O_3$	03/01/2009	08:00	04/01/09	09:35	
17A	$H_2S/SO_2/NO_2/O_3$	02/28/2009	14:15	04/01/09	10:30	