Lakeland Industry & Community Association

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

Prepared By:

Maxxam Analytics Inc

Driven by Service and Science

July 25, 2008

Lakeland Industry & Community Association
Ambient Air Monitoring

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Introduction

The following Ambient Air Monitoring report was prepared for:

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

Monitoring Location: Cold Lake
Data Period: June 2008

The monthly ambient data report:

- Prepared by Lily Lin
- Reviewed by Craig Snider

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

Calibration Procedure

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

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

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

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

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

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

Continuous Ambient Monitoring – June 2008

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION COLD LAKE SITE						MAXIMUM VALUES							OPERATIONAL TIME (PERCENT)
						1-HOUR					24-HOUR		
PARAMETER	OBJECTIVES		EXCEEDENCES		MONTHLY AVERAGE	READING	DAY	HOUR	WIND SPEED (KPH)	WIND DIRECTION (DEGREES)	READING	DAY	
	1-HR	24-HR	1-HR	24-HR									
SO_2 (PPB)	172	57	0	0	0.03	7	27	11	12	308(NW)	0.7	27	99.9
TRS (PPB)	-	-	-	-	0.00	1	VAR	VAR	VAR	VAR	0.0	ALL	99.9
NO_2 (PPB)	212	106	0	0	1.94	9	4	22	0.7	49(NE)	3.4	4	99.9
NO (PPB)	-	-	-	-	0.14	5	1	6	0.2	253(WSW)	0.8	3	99.9
NOx (PPB)	-	-	-	-	2.28	11	3	8	1.6	44(NE)	3.8	4	99.9
O_3 (PPB)	82	-	0	-	29.77	62	13	15	5.2	301(WNW)	43.5	5	100.0
THC (PPM)	-	-	-	-	1.86	2.6	30	5,6	0.2,0.2	32(NNE), 214(SSW)	2.0	VAR	99.9
PM 2.5 (UG/M^3)	-	30	-	1	6.15	93	8	3	0.3	42(NE)	33.2	8	91.1
TEMPERATURE (DEG C)	-	-	-	-	15.45	29.3	30	16	-	-	22.9	30	100.0
RELATIVE HUMIDITY (%)	-	-	-	-	63.97	97.8	20	4	-	-	90.5	14	100.0
VECTOR WS (KPH)	-	-	-	-	5.23	19.5	17	19	-	353(N)	11.1	23	100.0
VECTOR WD (DEGREES)	-	-	-	-	223(SW)	-	-	-	-	-	-	-	100.0

VAR-VARIOUS

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

Passive Ambient Monitoring Network – JUNE 2008

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION PASSIVE NETWORK			
NETWORK MAXIMUM			NETWORK AVERAGE
PARAMETER	STATION	READING (PPB)	READING (PPB)
NO_2	#28	4.5	1.5
SO_2	#14	1.1	0.3
H_2S	#17	0.54	0.17
O_3	#13	37.7	30.27

Lakeland Industry & Community Association - Cold Lake

Exceedences Summary Report
JUNE 2008

SO_2 1 - Hour Exceedences
No Exceedences Recorded During the Month

SO_2 24 - Hour Exceedences
No Exceedences Recorded During the Month

NO2 1- Hour Exceedences
No Exceedences Recorded During the Month

NO2 24- Hour Exceedences
No Exceedences Recorded During the Month

O3 1- Hour Exceedences
No Exceedences Recorded During the Month

PM2.5 24- Hour Exceedences

DATE	TIME (mst)	READING (UG/M3)	WS (kph)	WD (deg)
June 5, 2008	-	33.2	6.3	135(SE)

General Monthly Summary - Cold Lake

Equipment Operation

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

AQM STATION – LICA – COLD LAKE

Sulphur Dioxide (PPB)

- Analyzer make / model - TECO 43A

No operational issues during the month. The inlet filter was changed before the monthly calibration was started. The temporary Maxxam-owned UV lamp was removed and an AENV-owned lamp was installed on June 4th, 2008. Ran the daily calibration program to verify analyzer operation to help assess analyzer stability. After that, did a 2-point calibration to adjust the zero and span values. The full calibration was performed on June 5th, 2008. Data was corrected using daily zero information.

Total Reduced Sulphur (PPB)

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

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

Total HydroCarbon (PPM)

- Analyzer make / model -TECO 51C-LT

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

General Monthly Summary - Cold Lake

AQM STATION – LICA – COLD LAKE

Nitrogen Dioxide (PPB)

- Analyzer make / model - TECO 42C

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

Ozone (PPB)

- Analyzer make / model - TECO 49I

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

Particulate Matter 2.5 (ug/m^3)

- Analyzer make / model - TEOM 1400A

The Teom audit was performed on June 5th, 2008 showing all parameters were within tolerances. On June 6th, 2008, the Teom analyzer was reading excessively negative. Thus, the technician repeated the audit, changed a leaking fitting in the bottom of the transducer housing, and installed a new filter. After the repair, all audit values were within allowable tolerance. There were 45 hours of data invalid during this period. There were high readings from mid-day of the 7th until 10:00am of the 8th due to smoke in the air which may be a result of a fire burning near by or smoke carried in from a fire to the North. Twenty hours of data were invalidated as it was below –3.0 ug/m^3.

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

- System make / model - MET ONE 50.5

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

Relative Humidity (PERCENT)

- System make / model - Rotronic Hygroclip-S3

No operational issues observed during the month.

General Monthly Summary - Cold Lake

AQM STATION – LICA – COLD LAKE

Ambient Temperature (DEGC)

- System make / model - Rotronic Hygroclip-S3

No operational issues observed during the month.

Trailer Temperature (DEGC)

- System make / model - R&R 61

No operational issues observed during the month.

Datalogger

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

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

General Monthly Summary - Cold Lake

AQM STATION – LICA – COLD LAKE

Trailer

- No operational issues during the month.

Air Quality Index (AQI)

The AQI data was adjusted to reflect regular monthly and daily calibrations, maintenance, and downtime. There were 6 hours of poor AQI values and 47 hours of fair AQI values recorded in June 2008. All the poor AQI values were due to PM2.5, which may be a result of a smoke in the air at that time period. 35hours of fair AQI values were due to Ozone and 12 hours were due to PM2.5. The highest hourly concentration of PM2.5 was 93.0 UG/M3 and an AQI value of 57 on June 8th, hour 3.The highest hourly concentration of Ozone was 62.0 ppb and an AQI value of 35 on June 13th, hour 15.

Passive Network

The results of the H2S duplicate sampling showed large variation in the concentration results. The field and laboratory data was reviewed, but failed to provide information on the reason for the discrepancies. Due to the large variations, the H2S duplicates were not utilized in the data reporting.

Continuous Monitoring

Cold Lake

Monthly Summaries, Graphs & Wind Roses

Air Quality Index

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

JUNE 2008

AIR QUALITY INDEX (AQI)

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.
DAY																									
1	7	5	4	3	3	7	10	-	18	20	20	21	22	22	23	23	-	23	23	22	17	15	17	15	23
	O3_	O3_	O3_	O3_	PM2	PM2	O3_	NA	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	NA	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_
2	15	14	15	12	8	10	14	17	20	22	22	21	23	24	20	-	17	16	14	15	9	5	7	7	24
	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	NA	O3_	O3_	O3_	O3_	O3_	PM2	PM2	PM2	O3_
3	5	6	7	7	8	10	9	10	16	20	25	28	31	31	-	34	34	34	33	26	16	22	26	22	34
	PM2	PM2	PM2	PM2	PM2	PM2	PM2	O3_	O3_	O3_	O3_	O3_	O3_	O3_	NA	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_
4	17	13	12	7	8	11	-	-	-	-	-	-	-	-	23	24	24	26	27	23	13	8	7	14	27
	O3_	O3_	O3_	O3_	PM2	PM2	NA	NA	NA	NA	NA	NA	NA	NA	O3_	O3_	O3_	O3_	O3_	O3_	O3_	PM2	PM2	O3_	O3_
5	18	17	14	15	9	14	17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	18
	O3_	O3_	O3_	O3_	O3_	O3_	O3_	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	O3_
6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0
	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	O3_
7	-	-	-	-	-	-	-	11	12	17	-	25	27	28	28	27	27	26	25	25	28	34	39	54	54
	NA	NA	NA	NA	NA	NA	NA	O3_	O3_	O3_	NA	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	PM2	PM2	PM2	PM2	PM2	O3_
8	53	54	57	57	54	50	35	37	22	-	16	18	18	20	20	21	21	19	19	18	18	19	19	17	57
	PM2	PM2	PM2	PM2	PM2	PM2	PM2	PM2	PM2	NA	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_
9	11	10	13	11	12	17	10	13	-	-	-	21	21	21	21	21	21	21	20	19	17	14	15	14	21
	O3_	PM2	PM2	PM2	PM2	PM2	PM2	O3_	NA	NA	NA	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_
10	9	8	9	10	13	14	16	-	20	24	24	25	26	27	25	25	26	25	24	23	21	18	13	9	27
	O3_	O3_	O3_	O3_	O3_	O3_	O3_	NA	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_
11	8	6	6	5	4	6	-	18	18	20	21	22	22	22	22	22	23	21	21	19	14	10	8	6	23
	O3_	O3_	O3_	O3_	PM2	PM2	NA	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_
12	5	4	2	4	5	-	9	13	15	17	19	20	21	22	22	22	22	21	20	19	28	27	27	23	28
	O3_	O3_	PM2	PM2	PM2	NA	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	PM2	PM2	PM2	PM2	O3_
13	25	23	24	23	-	25	23	23	24	20	24	29	32	34	35	28	26	23	22	22	17	14	13	12	35
	PM2	PM2	PM2	PM2	NA	PM2	PM2	PM2	PM2	O3_	O3_	PM2	O3_	O3_	O3_	PM2	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_
14	8	8	9	-	9	8	9	14	15	16	14	12	12	12	12	15	15	15	13	12	10	9	6	7	16
	O3_	O3_	O3_	NA	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_
15	6	3	-	5	4	7	7	8	11	16	19	19	18	-	18	18	18	19	19	17	14	11	8	5	19
	O3_	O3_	NA	O3_	O3_	PM2	O3_	O3_	O3_	O3_	O3_	O3_	O3_	NA	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_
16	5	-	5	3	2	7	9	8	10	12	15	16	17	18	19	21	22	21	20	22	18	13	8	4	22
	O3_	NA	O3_	O3_	O3_	PM2	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_
17	-	3	5	3	7	7	12	12	13	15	18	21	-	25	25	25	24	21	21	22	22	20	16	-	25
	NA	O3_	O3_	O3_	PM2	PM2	O3_	O3_	O3_	O3_	O3_	O3_	NA	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	NA	O3_
18	14	12	11	9	7	8	8	10	14	17	18	19	18	-	-	19	18	18	17	15	10	6	-	4	19
	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	NA	NA	O3_	O3_	O3_	O3_	O3_	O3_	O3_	NA	O3_	O3_
19	7	15	14	16	16	16	15	16	17	17	15	16	17	18	20	18	15	17	14	14	12	-	3	2	20
	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	NA	O3_	O3_	O3_
20	1	1	3	2	4	8	7	11	14	17	19	19	21	20	20	21	20	21	22	20	-	11	7	5	22
	O3_	O3_	PM2	PM2	PM2	PM2	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	NA	O3_	O3_	PM2	O3_
21	4	4	4	5	8	11	9	17	18	22	24	25	27	30	30	27	27	27	27	-	19	15	13	17	30
	O3_	PM2	PM2	PM2	PM2	PM2	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	NA	O3_	O3_	O3_	O3_	O3_
22	17	16	15	17	19	18	17	16	16	16	17	19	20	19	19	18	18	19	-	18	14	13	12	16	20
	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	NA	O3_	O3_	O3_	O3_	O3_	O3_
23	16	12	11	10	9	8	9	11	13	14	-	19	-	20	20	20	20	-	21	19	12	7	6	4	21
	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	NA	O3_	NA	O3_	O3_	O3_	O3_	NA	O3_	O3_	PM2	O3_	O3_	O3_	O3_
24	2	2	1	1	4	8	-	12	13	14	14	15	16	18	21	21	-	18	19	17	15	11	10	10	21
	O3_	PM2	O3_	PM2	PM2	PM2	NA	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	NA	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_
25	11	12	12	12	13	12	12	12	12	12	12	15	-	-	17	-	18	18	18	16	12	8	7	7	18
	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	NA	NA	O3_	NA	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_
26	6	6	6	3	5	8	9	11	12	13	16	17	18	17	-	16	15	12	11	9	-	11	10	9	18
	O3_	O3_	O3_	O3_	PM2	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	NA	O3_	O3_	O3_	O3_	O3_	NA	O3_	O3_	O3_	O3_
27	9	7	7	6	5	6	7	9	10	13	14	16	16	-	15	15	15	15	15	16	13	9	6	6	16
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28	4	2	2	1	6	13	8	11	15	21	22	21	-	21	21	22	23	23	21	20	18	18	19	20	23
	O3_	O3_	O3_	PM2	PM2	PM2	O3_	O3_	O3_	O3_	O3_	O3_	NA	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_
29	20	19	18	17	16	15	17	19	20	21	22	-	25	26	31	33	33	30	-	18	16	8	4	3	33
	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	NA	O3_	O3_	O3_	O3_	O3_	O3_	NA	O3_	PM2	PM2	O3_	O3_	O3_
30	2	4	3	7	8	15	7	12	-	-	-	24	22	19	18	-	19	20	19	18	17	14	-	13	24
	PM2	PM2	PM2	PM2	PM2	PM2	PM2	O3_	NA	NA	NA	O3_	O3_	O3_	O3_	NA	O3_	O3_	O3_	O3_	O3_	O3_	NA	O3_	O3_
PEAK	53	54	57	57	54	50	35	37	24	24	25	29	32	34	35	34	34	34	33	26	28	34	39	54	
	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%	62	15	13	6	0.8%	-	-	-	0	0.0%	-	-	-	0	0.0%	-	-	-	6	0.8%
FAIR (26-50)	35	4.9%	-	-	-	12	1.7%	-	-	-	0	0.0%	-	-	-	0	0.0%	-	-	-	47	6.5%
GOOD (1-25)	496	68.9%	-	-	-	69	9.6%	6	7	10	0	0.0%	-	-	-	0	0.0%	-	-	-	565	78.5%
OVERALL	531	73.8%	-	-	-	87	12.1%	-	-	-	0	0.0%	-	-	-	0	0.0%	-	-	-	618	85.8%
UNAVAILABLE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	75	10.4%

Sulphur Dioxide

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

JUNE 2008

SULPHUR DIOXIDE (SO_2) hourly averages in ppb

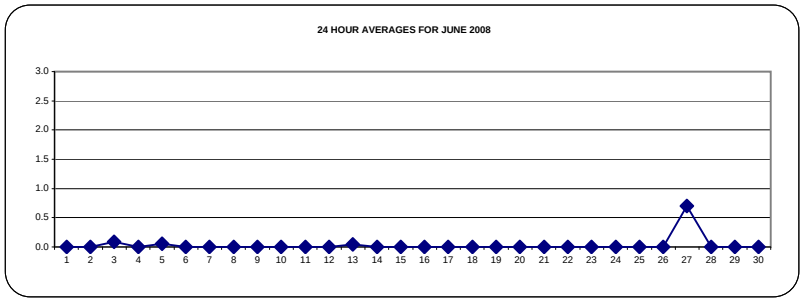
MST

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

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

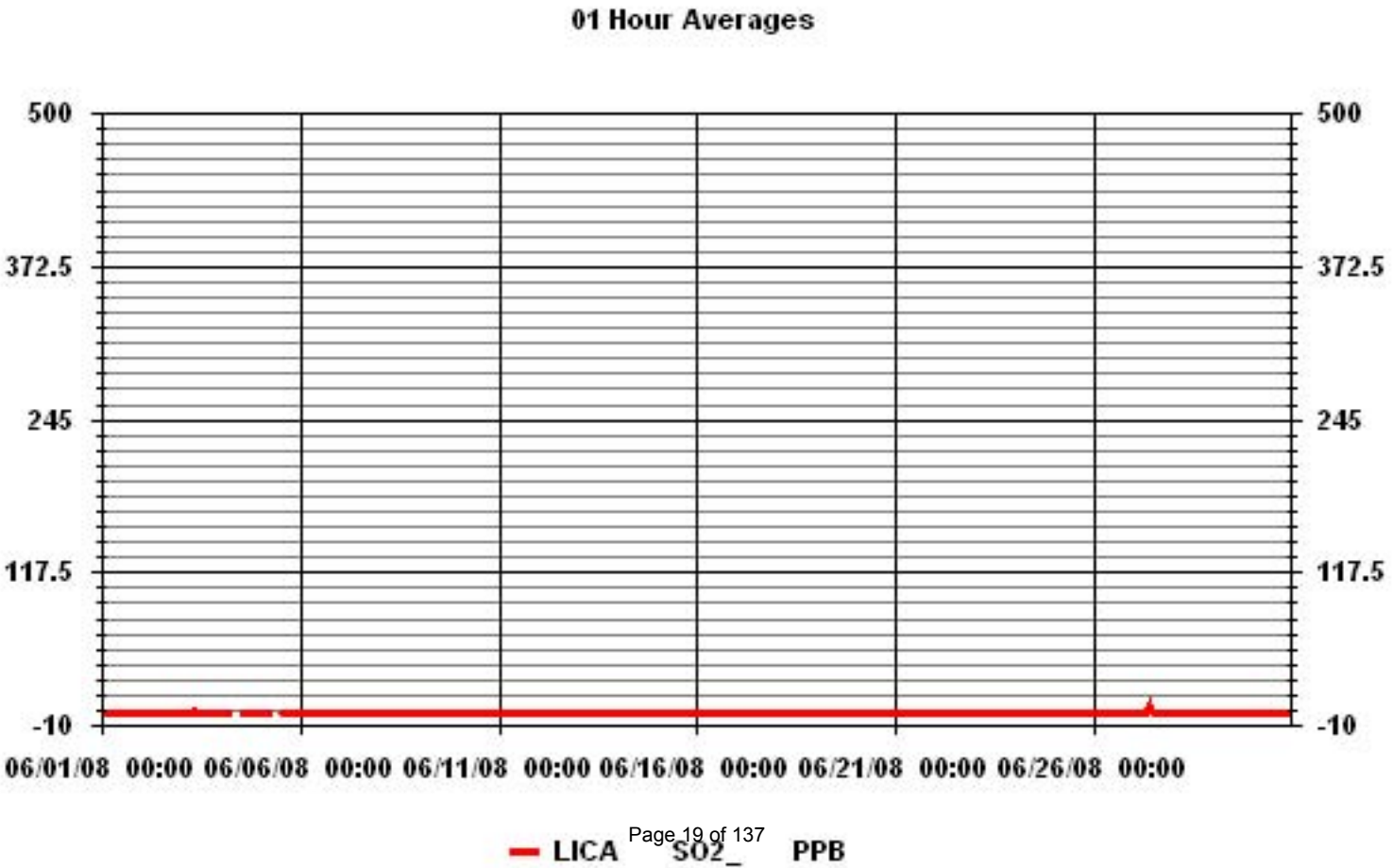
OBJECTIVE LIMIT: **ALBERTA ENVIRONMENT:** 1-HR 172 PPB | 24-HR 57 PPB



MONTHLY SUMMARY

NUMBER OF 1-HR EXCEEDENCES:	0					
NUMBER OF 24-HR EXCEEDENCES:	0					
NUMBER OF NON-ZERO READINGS:	8					
MAXIMUM 1-HR AVERAGE:	7	PPB	@ HOUR(S)	11	ON DAY(S)	27
MAXIMUM 24-HR AVERAGE:	0.7	PPB			ON DAY(S)	27

IZS CALIBRATION TIME:	30	HRS	OPERATIONAL TIME:	719	HRS
MONTHLY CALIBRATION TIME:	11	HRS	AMD OPERATION UPTIME:	99.9	%
STANDARD DEVIATION:	0.35		MONTHLY AVERAGE:	0.03	PPB


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

LICA
SO2_ / WDR Joint Frequency Distribution (Percent)

June 2008

Distribution By % Of Samples

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

Wind Parameter : WDR
Instrument Height : 10 Meters

Direction

	Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
<	20	3.24	3.39	5.01	2.80	5.75	11.06	9.58	3.68	3.98	4.27	10.47	14.30	11.35	7.66	1.91	1.47	100.00
<	60	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
<	110	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
<	170	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
<	340	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
>=	340	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
	Totals	3.24	3.39	5.01	2.80	5.75	11.06	9.58	3.68	3.98	4.27	10.47	14.30	11.35	7.66	1.91	1.47	

Calm : .00 %

Total # Operational Hours : 678

Distribution By Samples

Direction

	Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
<	20	22	23	34	19	39	75	65	25	27	29	71	97	77	52	13	10	678
<	60																	
<	110																	
<	170																	
<	340																	
>=	340																	
	Totals	22	23	34	19	39	75	65	25	27	29	71	97	77	52	13	10	

Calm : .00 %

Total # Operational Hours : 678

Logger : 01 Parameter : SO2_

Class Limits (PPB)

>= 340

< 340

< 170

< 110

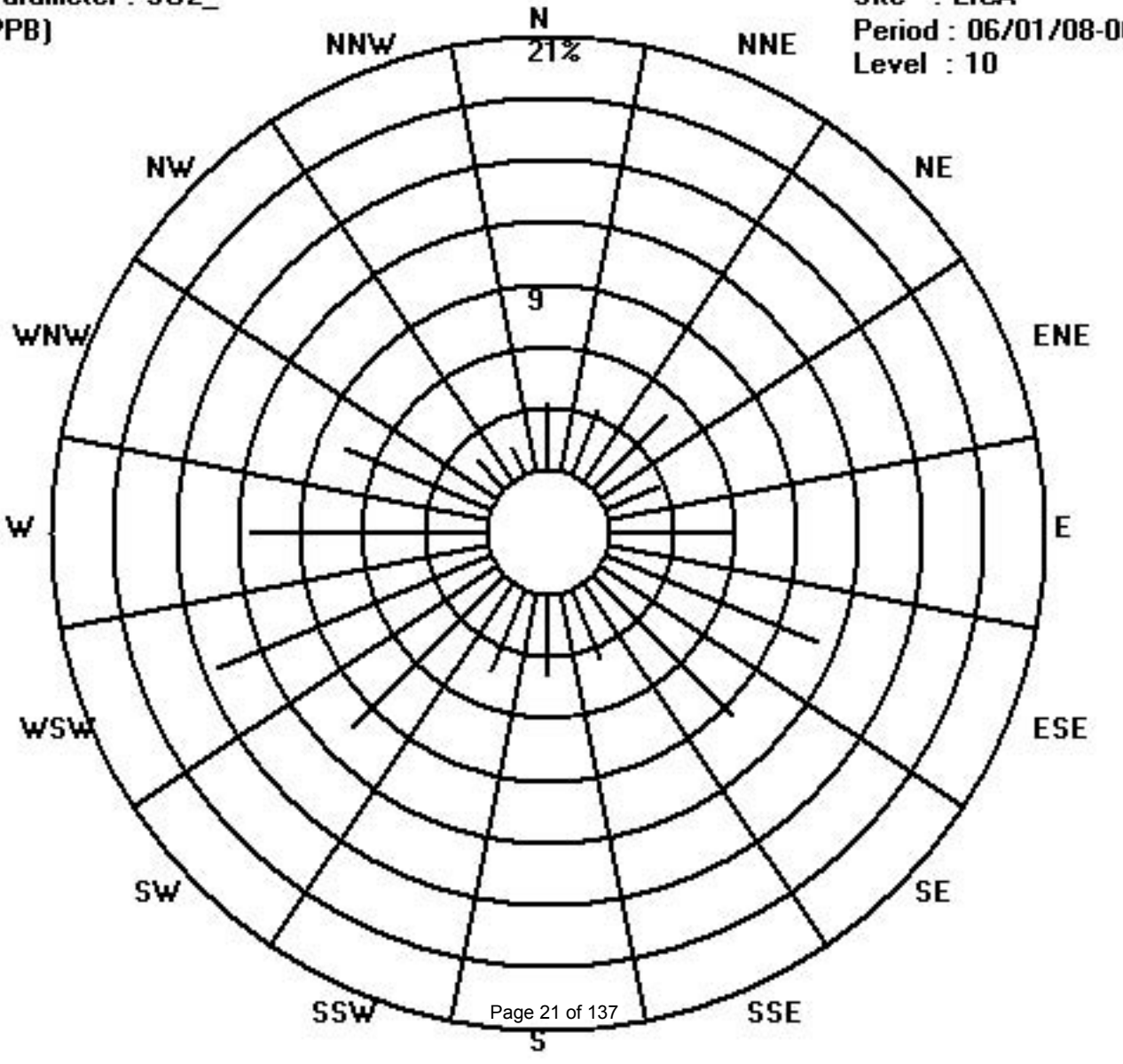
< 60

< 20

Site : LICA

Period : 06/01/08-06/30/08

Level : 10



LAKELAND INDUSTRY & COMMUNITY ASSOCIATION -*COLD LAKE*

JUNE 2008

SULPHUR DIOXIDE MAX instantaneous maximum in ppb

MST

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

STATUS FLAG CODES

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

MONTHLY SUMMARY

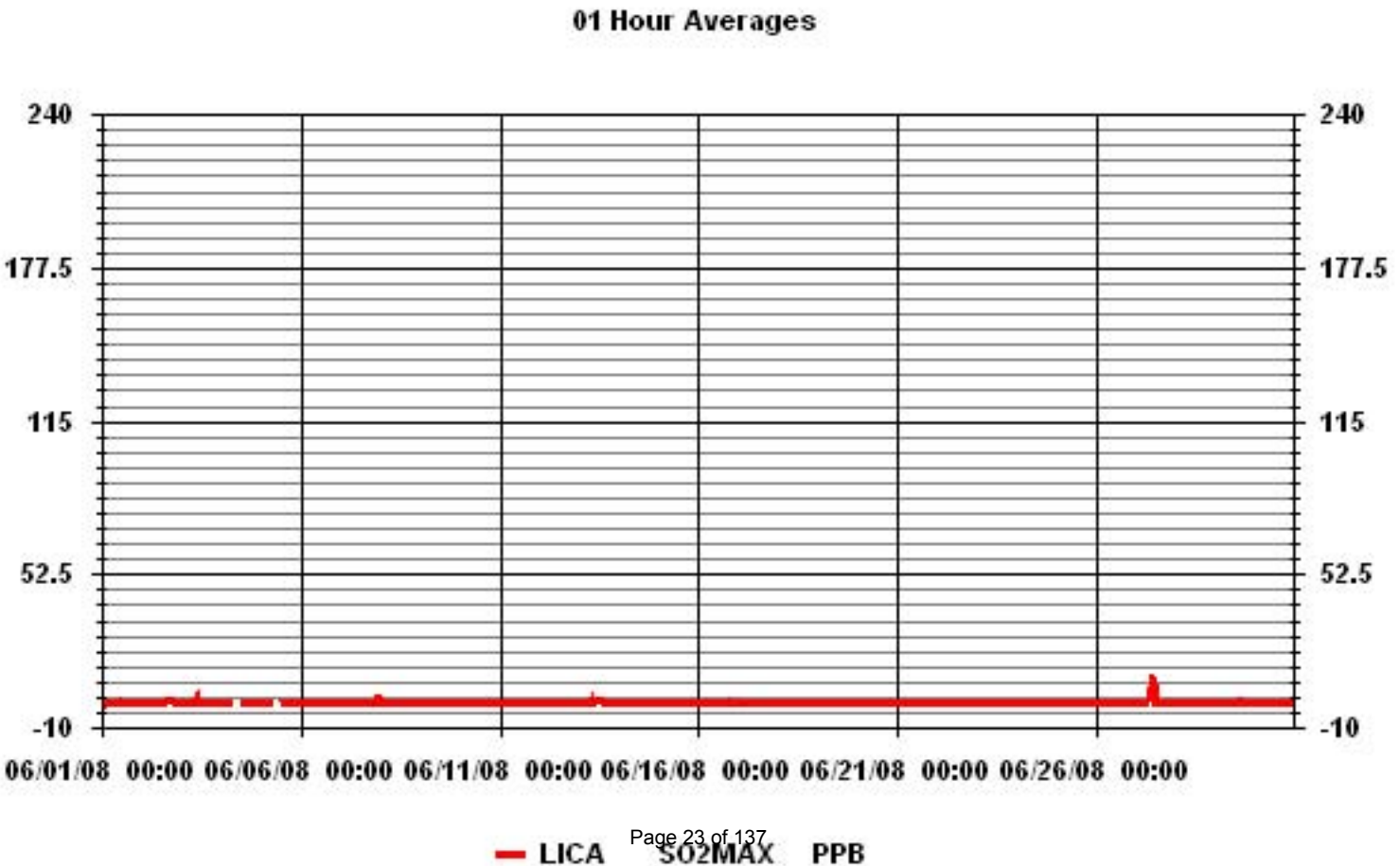
NUMBER OF NON-ZERO READINGS: 27

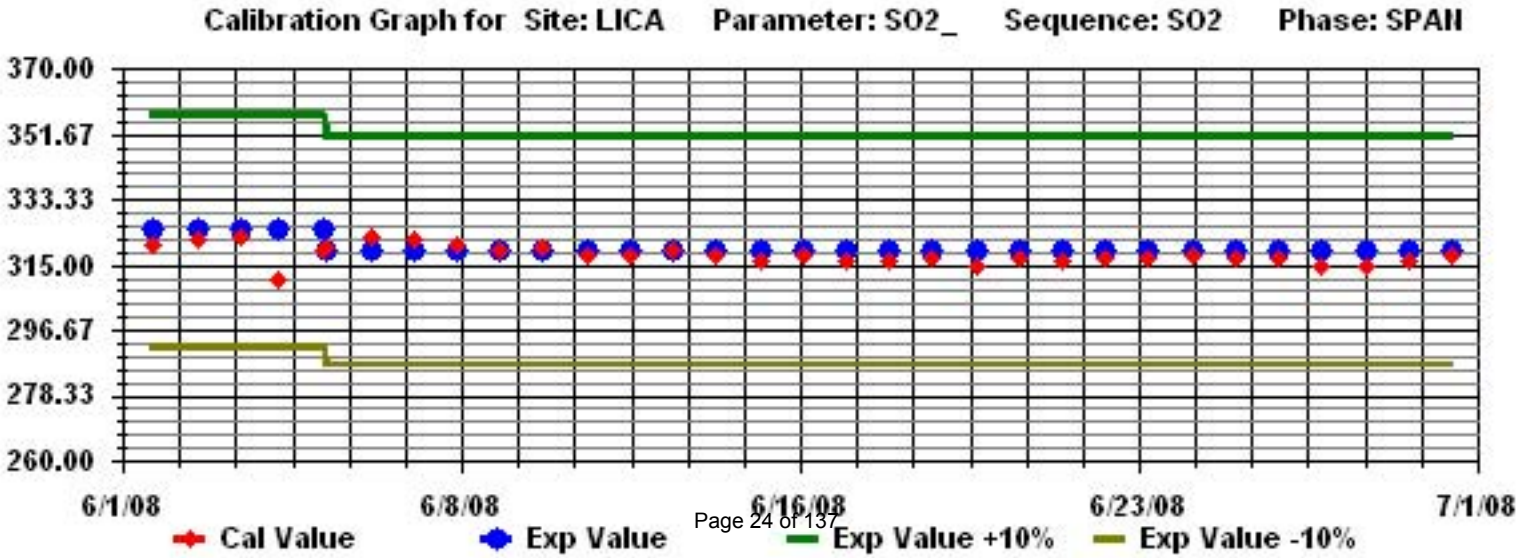
MAXIMUM INSTANTANEOUS VALUE: 11 PPB @ HOUR(S) 11 ON DAY(S) 27

IZS CALIBRATION TIME: 30 HRS OPERATIONAL TIME: 719 HRS

MONTHLY CALIBRATION TIME: 11 HRS

STANDARD DEVIATION: 0.65


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


Calibration Graph for Site: LICA Parameter: SO2_ Sequence: SO2 Phase: SPAN
370.00
351.67
333.33
315.00
296.67
278.33
260.00
6/1/08
6/8/08
6/16/08
6/23/08
7/1/08
Cal Value
Exp Value
Exp Value +10%
Exp Value -10%

Total Reduced Sulphur

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

JUNE 2008

TOTAL REDUCED SULPHUR (TRS) hourly averages in ppb

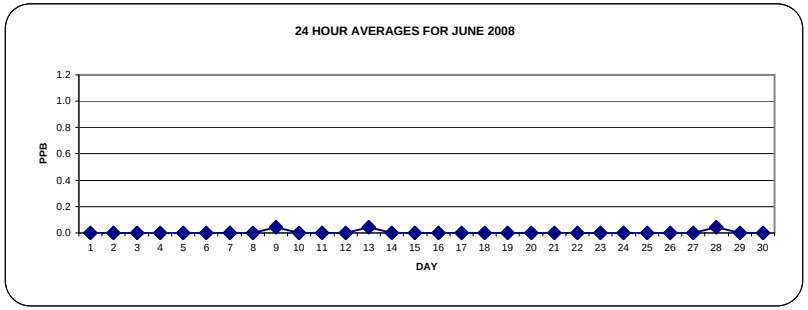
MST

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

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

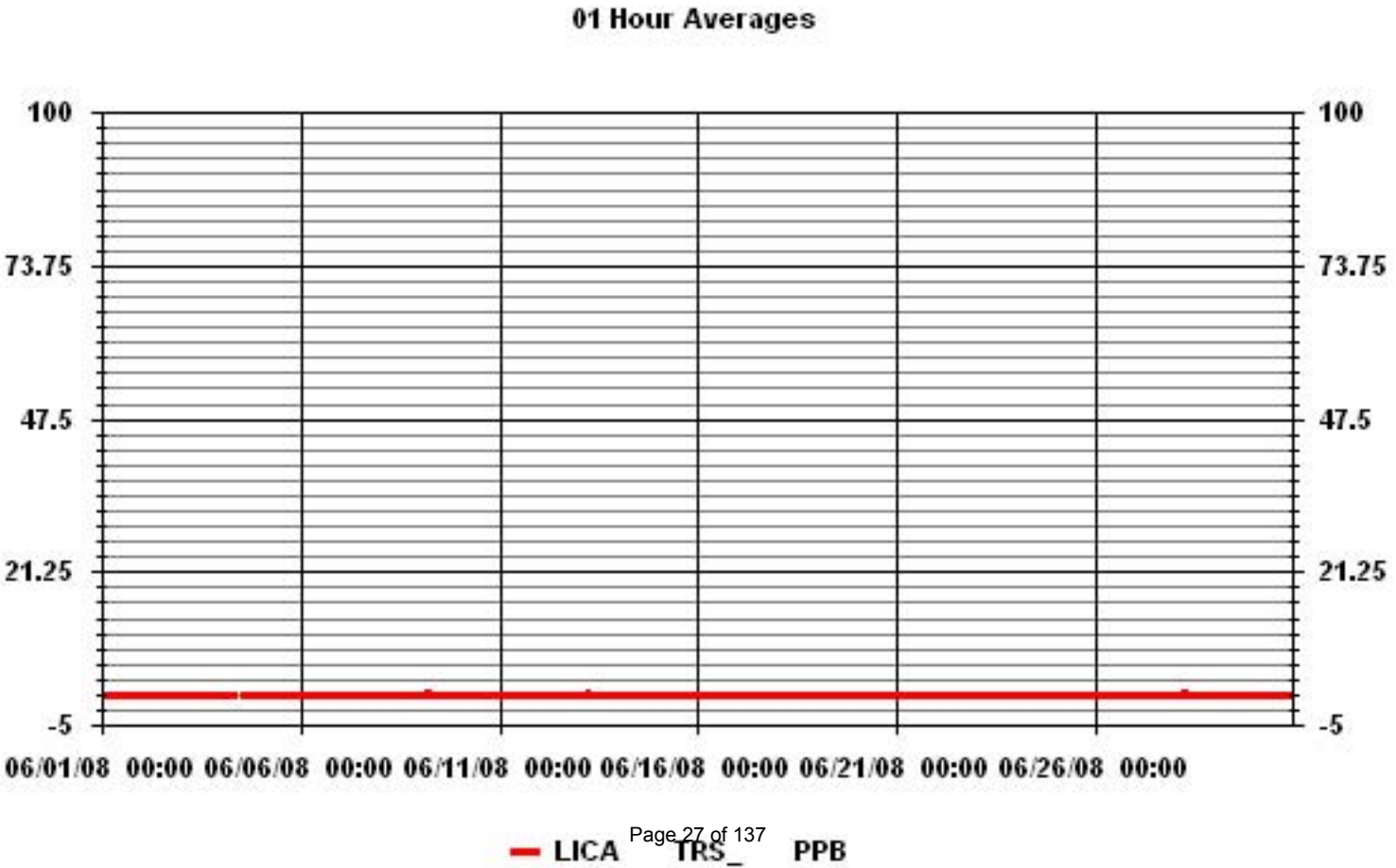
OBJECTIVE LIMIT: **ALBERTA ENVIRONMENT:** 1-HR 172 PPB | 24-HR 57 PPB



MONTHLY SUMMARY

NUMBER OF 1-HR EXCEEDENCES:	0					
NUMBER OF 24-HR EXCEEDENCES:	0					
NUMBER OF NON-ZERO READINGS:	3					
MAXIMUM 1-HR AVERAGE:	1	PPB	@ HOUR(S)	VAR	ON DAY(S)	VAR
MAXIMUM 24-HR AVERAGE:	0.0	PPB			ON DAY(S)	ALL
				VAR-VARIOUS		

IZS CALIBRATION TIME:	31	HRS	OPERATIONAL TIME:	719	HRS
MONTHLY CALIBRATION TIME:	3	HRS	AMD OPERATION UPTIME	99.9	%
STANDARD DEVIATION	0.07		MONTHLY AVERAGE	0.00	PPB


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

LICA
TRS_ / WD Joint Frequency Distribution (Percent)

June 2008

Distribution By % Of Samples

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

Wind Parameter : WD
Instrument Height : 10 Meters

Direction

	Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
<	3	3.35	3.64	4.96	2.77	5.69	10.94	9.92	3.64	3.94	4.23	10.36	14.16	11.24	7.59	1.89	1.60	100.00
<	10	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
<	50	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
>=	50	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
	Totals	3.35	3.64	4.96	2.77	5.69	10.94	9.92	3.64	3.94	4.23	10.36	14.16	11.24	7.59	1.89	1.60	

Calm : .00 %

Total # Operational Hours : 685

Distribution By Samples

Direction

	Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
<	3	23	25	34	19	39	75	68	25	27	29	71	97	77	52	13	11	685
<	10																	
<	50																	
>=	50																	
	Totals	23	25	34	19	39	75	68	25	27	29	71	97	77	52	13	11	

Calm : .00 %

Total # Operational Hours : 685

Logger : 01 Parameter : TRS_

Class Limits (PPB)

>= 50

< 50

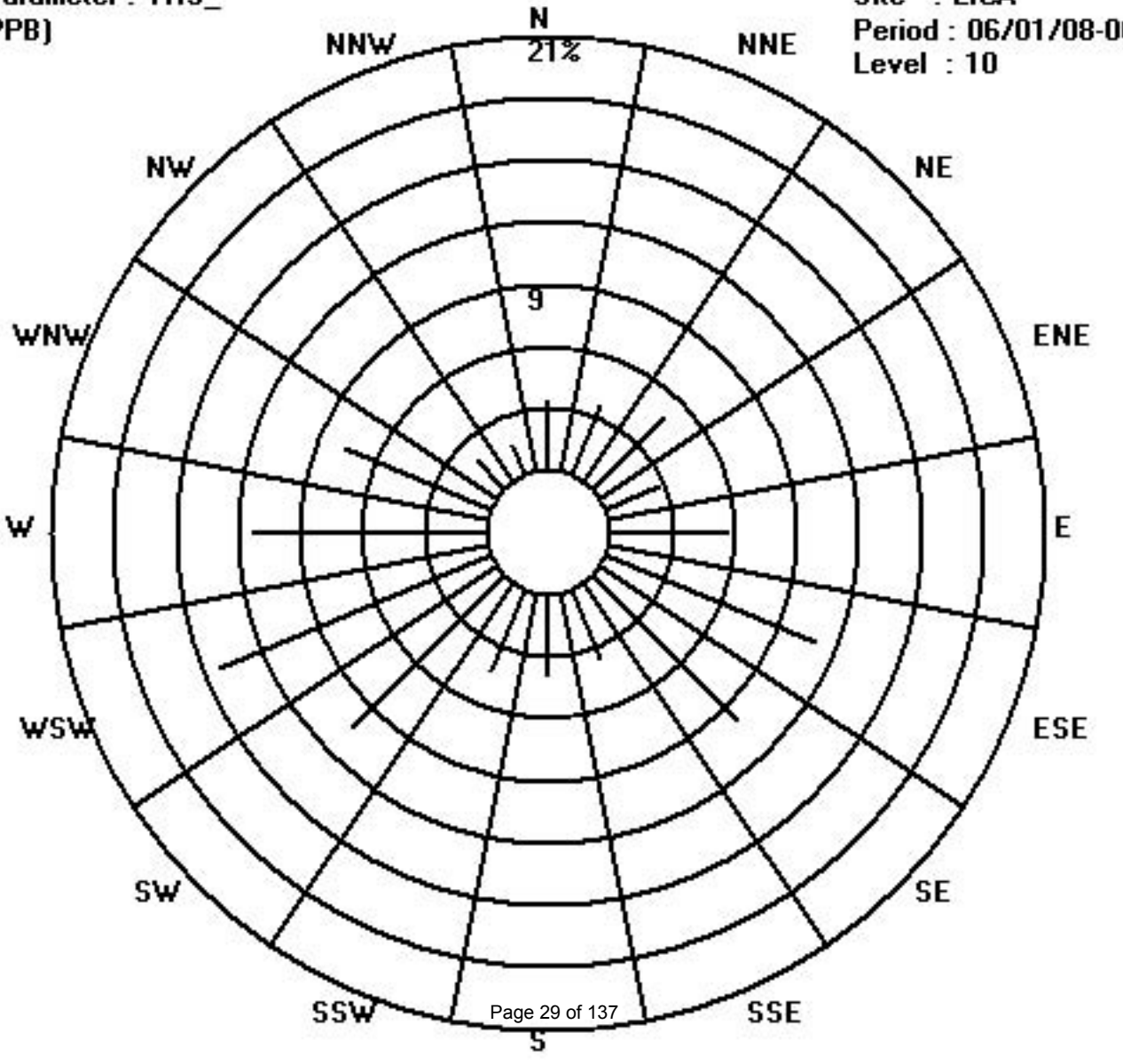
< 10

< 3

Site : LICA

Period : 06/01/08-06/30/08

Level : 10



LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

JUNE 2008

TOTAL REDUCED SULPHUR MAX instantaneous maximum in ppb

MST

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

STATUS FLAG CODES

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

MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS: 145

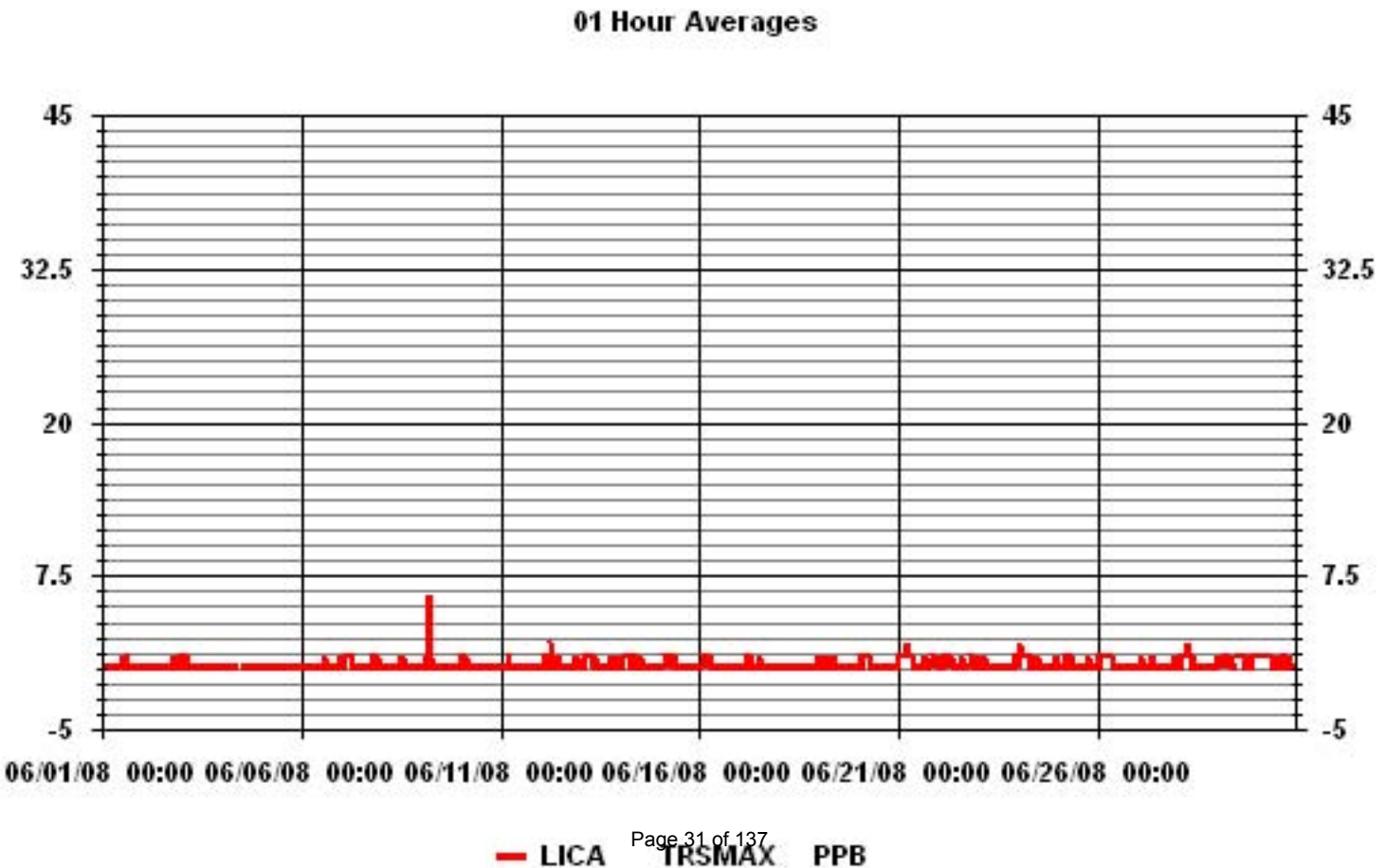
MAXIMUM INSTANTANEOUS VALUE: 6 PPB @ HOUR(S) 6 ON DAY(S) 9

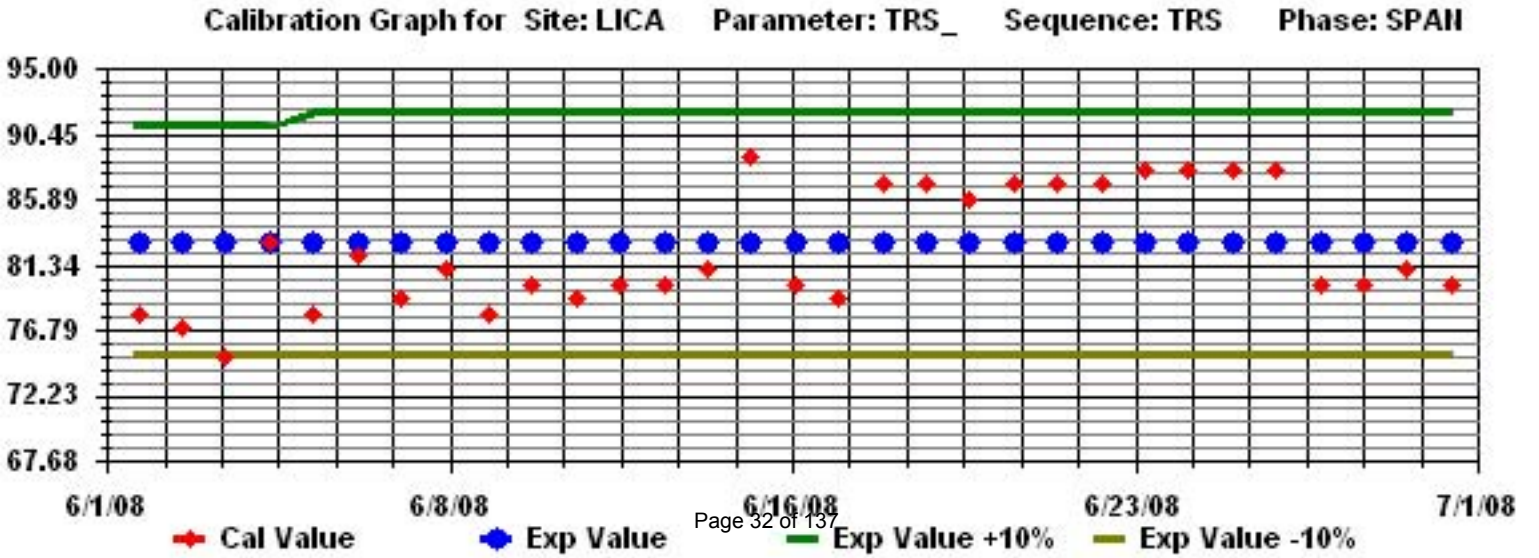
VAR - VARIOUS

IZS CALIBRATION TIME: 31 HRS OPERATIONAL TIME: 719 HRS

MONTHLY CALIBRATION TIME: 3 HRS

STANDARD DEVIATION: 0.48


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


Calibration Graph for Site: LICA Parameter: TRS_ Sequence: TRS Phase: SPAN
95.00
90.45
85.89
81.34
76.79
72.23
67.68
6/1/08
6/8/08
6/16/08
6/23/08
7/1/08
Cal Value
Exp Value
Exp Value +10%
Exp Value -10%

Total Hydrocarbons

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

JUNE 2008

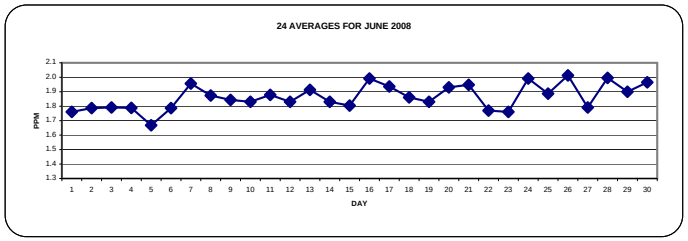
TOTAL HYDROCARBONS (THC) hourly averages in ppm

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	1.7	1.8	1.8	1.9	1.9	1.9	1.9	1.8	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	**IZS**	1.7	1.7	1.7	1.7	1.8	1.8	1.8	1.9	1.8	24
2	1.8	1.8	1.8	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.7	1.7	1.7	1.7	1.6	**IZS**	1.7	1.7	1.7	1.7	1.8	1.8	1.9	1.9	1.9	1.8	24
3	1.9	2	2.1	2.1	2.2	2.3	2.2	2	1.7	1.7	1.6	1.6	1.6	1.6	**IZS**	1.6	1.6	1.6	1.6	1.7	1.7	1.6	1.6	1.6	2.3	1.8	24
4	1.6	1.7	1.8	1.9	1.9	1.9	**C**	**C**	**C**	**C**	**C**	**C**	1.7	**IZS**	1.7	1.7	1.7	1.7	1.8	1.7	1.8	1.9	2	1.9	2.0	1.8	24
5	1.5	1.5	1.5	1.5	1.6	1.5	1.6	1.6	1.6	1.9	**M**	1.7	**IZS**	1.7	1.7	1.7	1.7	1.7	1.7	1.8	1.8	1.8	1.8	1.8	1.9	1.7	23
6	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.7	1.7	**IZS**	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.8	1.9	1.9	1.9	2.1	2.1	1.8	24
7	2	2	2.1	2	2.2	2.2	2.3	2	2	2	**IZS**	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	2.1	2	1.9	2.3	2.0	24
8	1.9	1.9	1.9	2	2	2	1.9	1.9	1.9	**IZS**	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.9	1.9	2.0	1.9	24
9	1.9	1.9	2	2.1	2.2	2.2	2.1	2	**IZS**	1.8	1.8	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.8	1.8	1.8	2.2	1.8	24
10	1.9	1.9	1.9	1.8	1.8	1.7	1.7	**IZS**	1.8	1.8	1.8	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.9	2	2.0	1.8	24
11	2	2.1	2.1	2.1	2.1	2.1	**IZS**	1.7	1.7	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	2	2.1	1.9	24
12	2	2	2.1	2.2	2.4	**IZS**	2	1.8	1.8	1.7	1.8	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.8	1.8	2.4	1.8	24
13	1.9	1.9	2	2	**IZS**	2.3	2.2	2.1	2.1	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.9	1.9	2.3	1.9	24
14	1.9	1.9	1.9	**IZS**	1.8	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.8	1.8	1.9	1.9	1.8	24
15	1.9	1.9	**IZS**	1.6	2	2	1.9	1.9	1.9	1.8	1.8	1.8	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.8	1.9	2	2.0	1.8	24
16	2.1	**IZS**	2.4	2.4	2.4	2.5	2.3	2	2	2	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.9	2.5	2.0	24
17	**IZS**	2.1	2.1	2.2	2.2	2.1	2.1	2.1	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	**IZS**	2.2	1.9	24
18	1.8	1.9	1.9	1.9	2	1.9	2.1	2.1	2	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	2	**IZS**	1.6	2.1	1.9	24
19	2.1	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	**IZS**	1.8	1.9	2.1	1.8	24
20	1.9	2.2	2.2	2.3	2.4	2.5	2.2	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.7	1.8	1.7	1.7	1.7	1.7	**IZS**	1.9	1.9	1.9	2.5	1.9	24
21	2	2	2.1	2.2	2.2	2.3	2.2	2	2	2	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	**IZS**	1.8	1.9	1.9	1.9	2.3	1.9	24
22	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.7	1.7	1.7	1.7	1.7	1.7	1.7	**IZS**	1.7	1.7	1.7	1.8	1.7	1.9	1.8	24
23	1.6	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.8	1.7	1.7	1.7	1.7	1.7	1.7	1.7	**IZS**	1.8	1.8	1.8	2	2.1	2.1	2.1	1.8	24
24	2.2	2.3	2.4	2.3	2.4	2.3	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	**IZS**	1.8	1.8	1.8	1.9	2	2.2	2.3	2.4	2.0	24
25	2.1	1.9	2	1.9	1.9	1.9	1.8	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	**IZS**	1.8	1.8	1.8	1.8	1.8	2	2.1	2.2	2.2	1.9	24
26	2.3	2.4	2.5	2.5	2.3	2.4	2.2	2.1	2	1.9	1.9	1.9	1.9	1.8	**IZS**	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	2.5	2.0	24
27	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	**IZS**	1.7	1.7	1.7	1.7	1.7	1.7	1.8	1.8	1.9	2.1	2.1	1.8	24
28	2.2	2.3	2.4	2.5	2.4	2.5	2.3	2.3	2.1	1.8	1.8	1.8	**IZS**	1.8	1.7	1.8	1.7	1.7	1.7	1.8	1.8	1.8	1.8	1.9	2.5	2.0	24
29	2	2.1	2.1	2.1	2.1	2	1.9	1.8	1.9	1.9	1.9	**IZS**	1.9	1.8	1.7	1.7	1.7	1.7	1.7	1.7	1.8	1.9	2.2	2.1	2.2	1.9	24
30	2.2	2.3	2.4	2.5	**2.6**	**2.6**	2.3	2.1	2	1.8	**IZS**	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.8	1.8	1.8	**2.6**	2.0	24
HOURLY MAX	2.3	2.4	2.5	2.5	2.6	2.6	2.3	2.3	2.1	2.0	2.0	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	2.1	2.2	2.3			
HOURLY AVG	1.9	2.0	2.0	2.0	2.1	2.1	2.0	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.7	1.8	1.7	1.7	1.8	1.8	1.8	1.9	1.9	1.9			

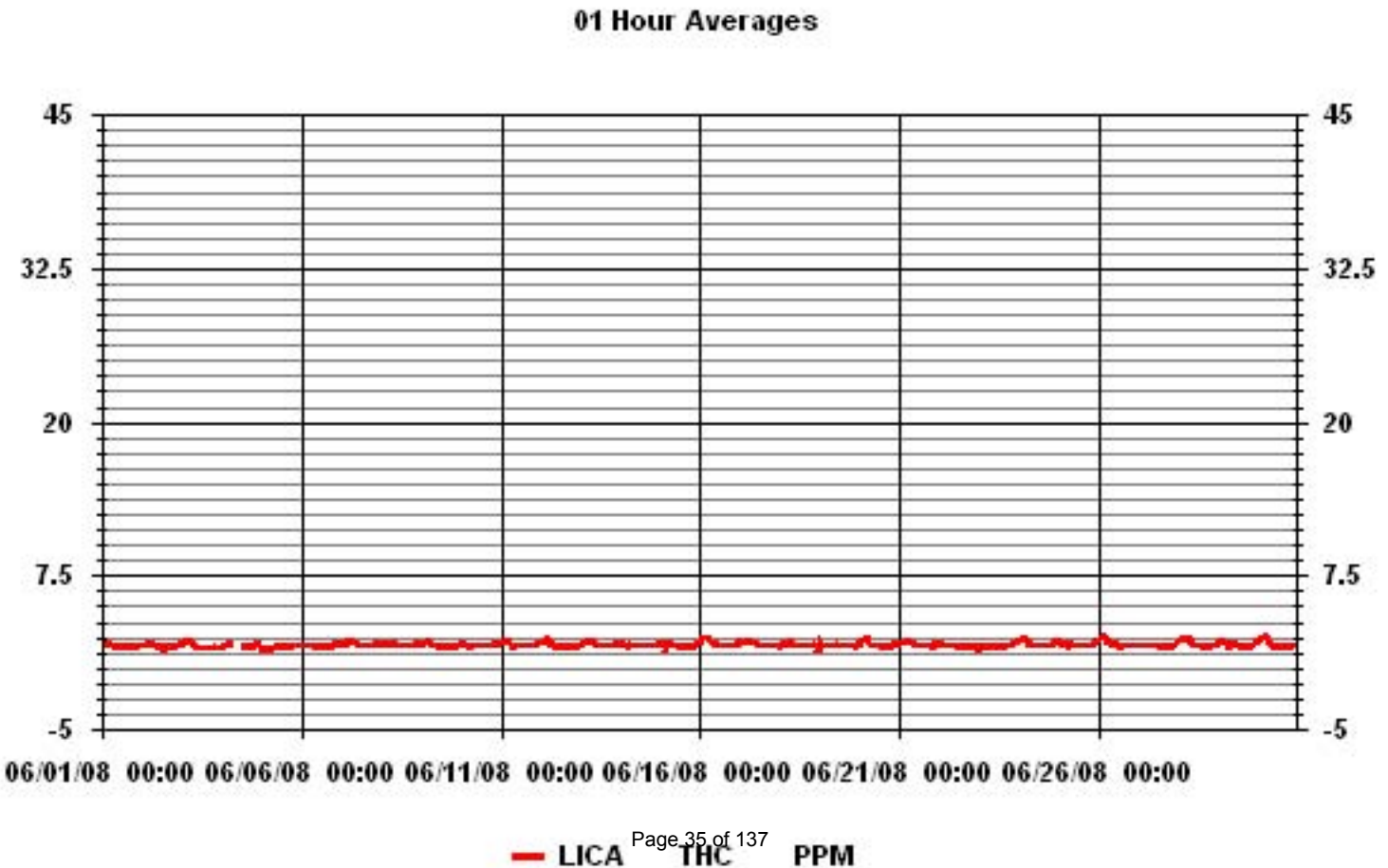
STATUS FLAG CODES

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



MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:	682						
MAXIMUM 1-HR AVERAGE:	2.6	PPM	@ HOUR(S)	5,6	ON DAY(S)	30	
MAXIMUM 24-HR AVERAGE:	2.0	PPM			ON DAY(S)	VAR	
IZS CALIBRATION TIME:	31	HRS	OPERATIONAL TIME:	719	HRS		
MONTHLY CALIBRATION TIME:	6	HRS	AMD OPERATION UPTIME:	99.9	%		
STANDARD DEVIATION:	0.18		MONTHLY AVERAGE:	1.86	PPM		


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

LICA
THC / WD Joint Frequency Distribution (Percent)

June 2008

Distribution By % Of Samples

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

Wind Parameter : WD
Instrument Height : 10 Meters

Direction

	Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
<	3.0	3.22	3.51	4.98	2.78	5.71	10.99	9.97	3.66	3.95	4.25	10.41	14.22	11.29	7.62	1.90	1.46	100.00
<	10.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
<	50.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
>=	50.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
	Totals	3.22	3.51	4.98	2.78	5.71	10.99	9.97	3.66	3.95	4.25	10.41	14.22	11.29	7.62	1.90	1.46	

Calm : .00 %

Total # Operational Hours : 682

Distribution By Samples

Direction

	Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
<	3.0	22	24	34	19	39	75	68	25	27	29	71	97	77	52	13	10	682
<	10.0																	
<	50.0																	
>=	50.0																	
	Totals	22	24	34	19	39	75	68	25	27	29	71	97	77	52	13	10	

Calm : .00 %

Total # Operational Hours : 682

Logger : 01 Parameter : THC

Class Limits (PPM)

>= 50.0

< 50.0

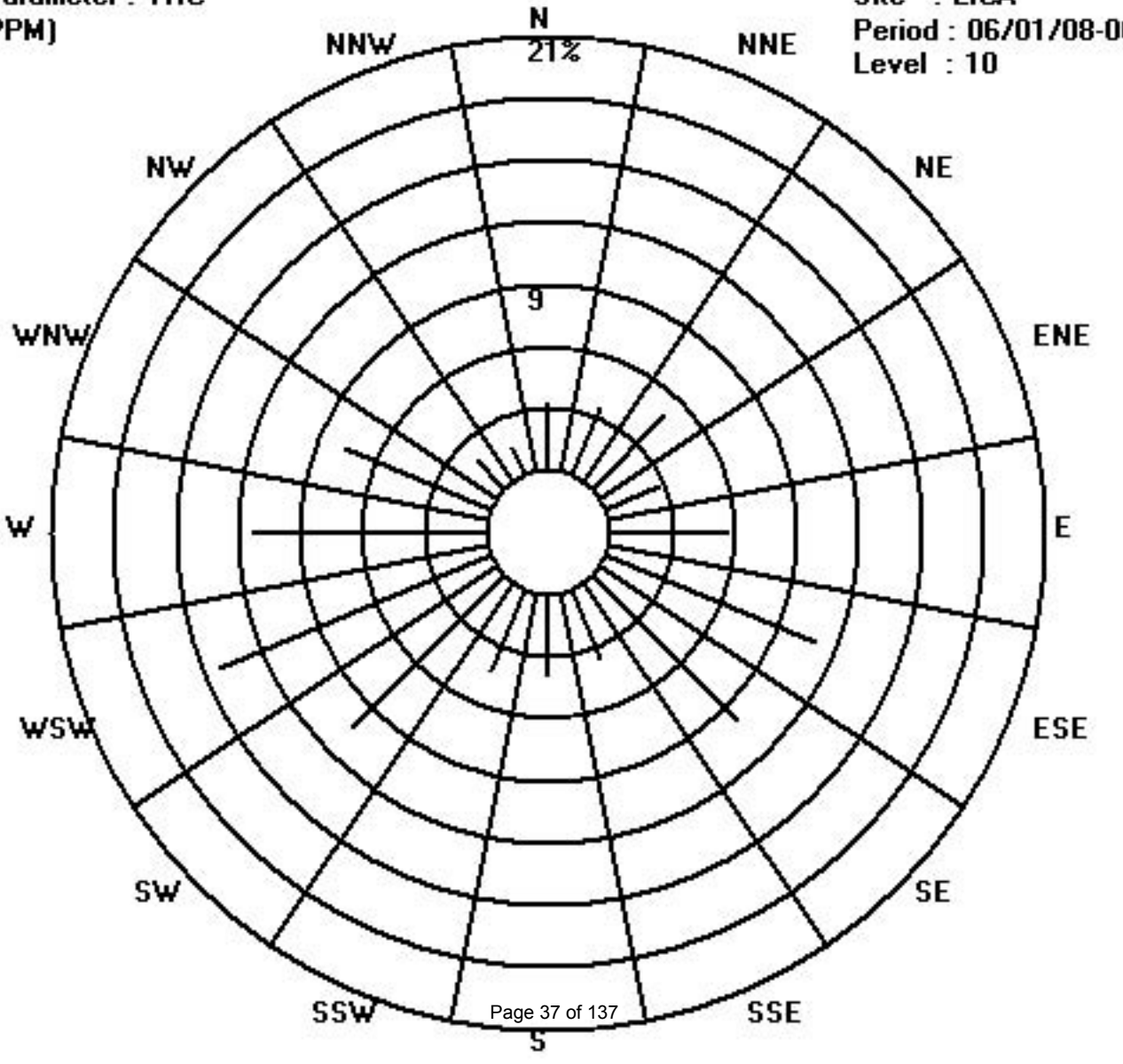
< 10.0

< 3.0

Site : LICA

Period : 06/01/08-06/30/08

Level : 10



LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

JUNE 2008

TOTAL HYDROCARBONS MAX instantaneous maximum in ppm

MST

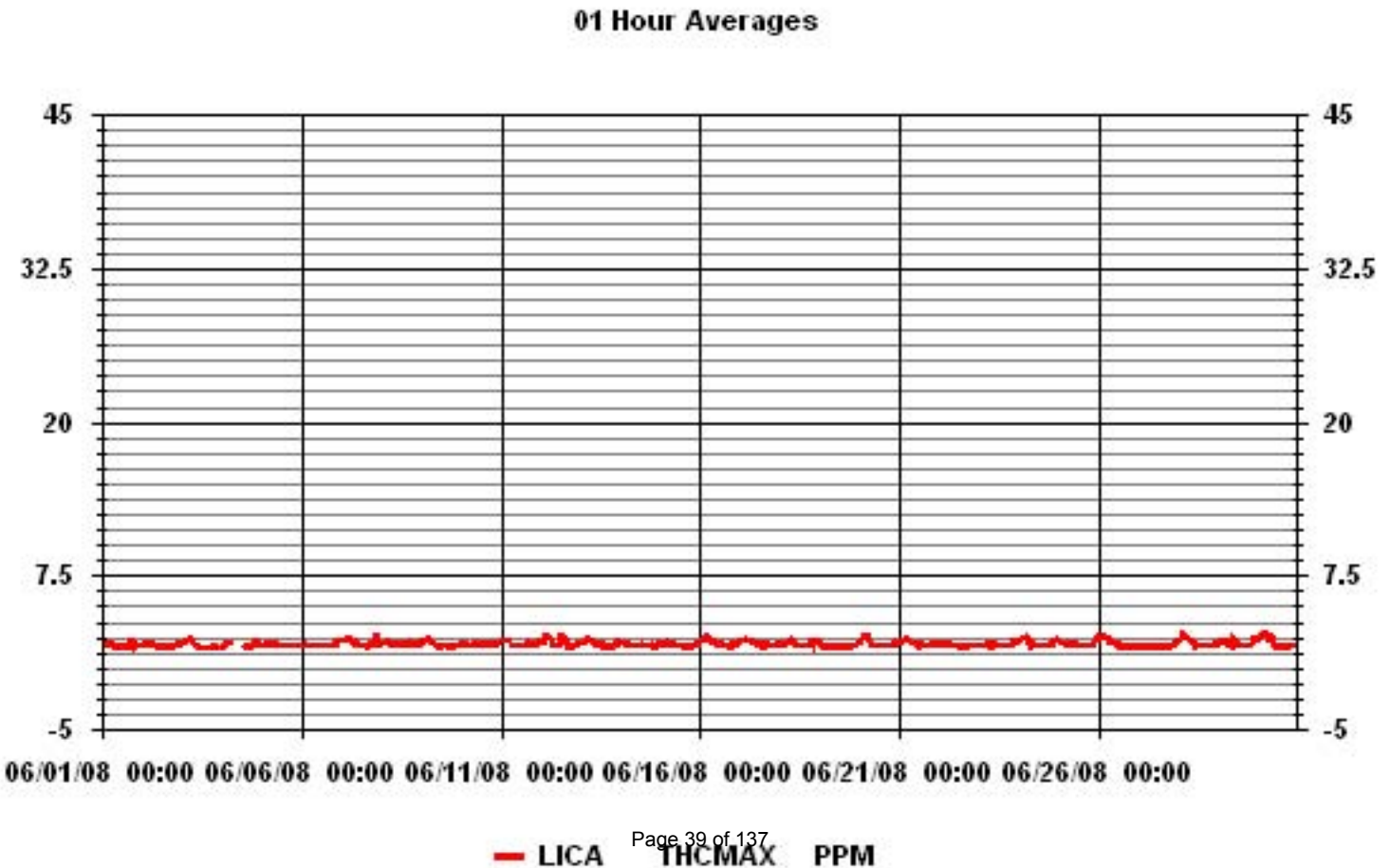
HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00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

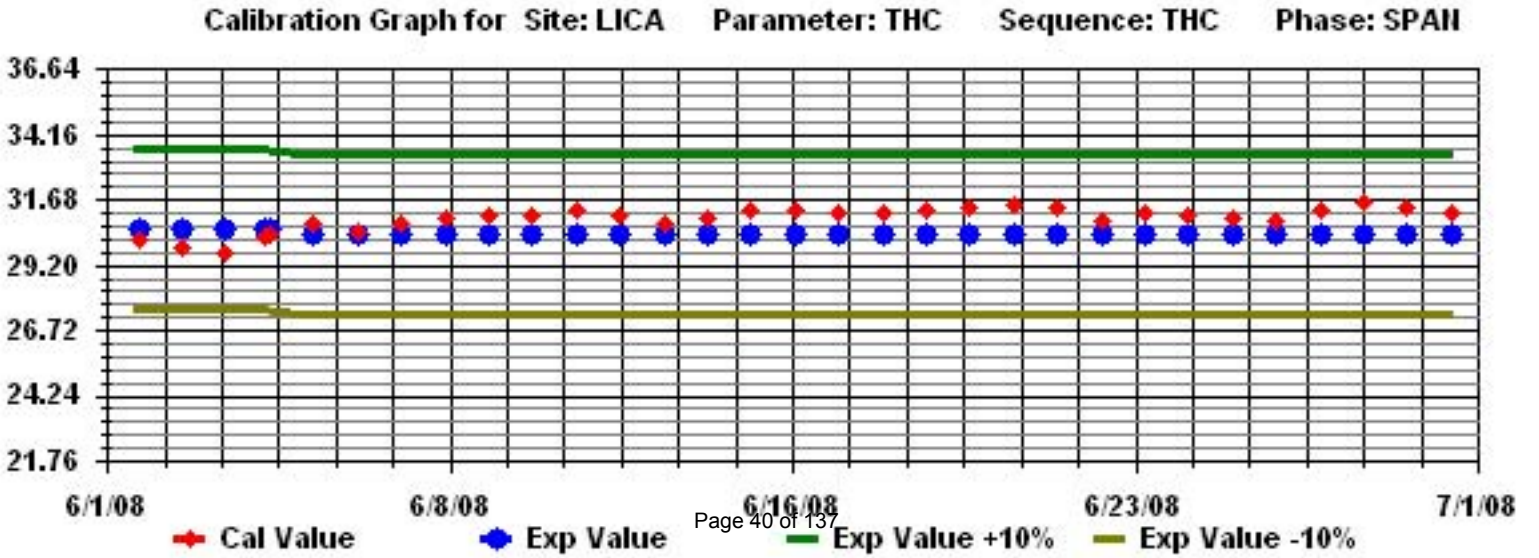
STATUS FLAG CODES

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

MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:	682					
MAXIMUM INSTANTANEOUS VALUE:	2.9	PPM	@ HOUR(S)	22	ON DAY(S)	7
IZS CALIBRATION TIME:	31	HRS	OPERATIONAL TIME:	711	HRS	
MONTHLY CALIBRATION TIME:	6	HRS				
STANDARD DEVIATION:	0.24					


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


Calibration Graph for Site: LICA Parameter: THC Sequence: THC Phase: SPAN
36.64
34.16
31.68
29.20
26.72
24.24
21.76
6/1/08
6/8/08
6/16/08
6/23/08
7/1/08
Cal Value
Exp Value
Exp Value +10%
Exp Value -10%

Particulate Matter 2.5

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

JUNE 2008

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

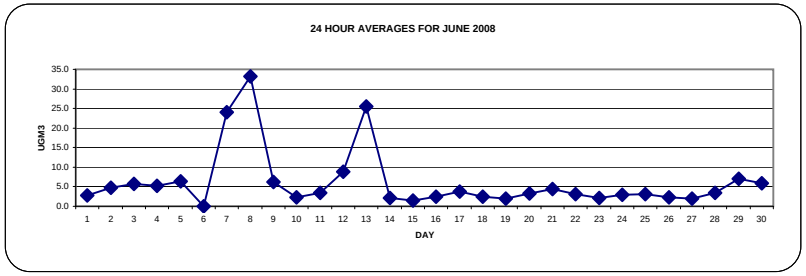
MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	3.9	3	1.7	1.6	4.1	8.2	1.9	**N**	1.4	0.4	0	0.8	1.2	2.4	1.4	0.8	3.5	3	4.1	2.5	6.5	4.8	2.9	3.2	8.2	2.8	23
2	3.3	3.2	4.4	4	4.8	4	3.8	4.6	1.1	2.4	3.6	4.5	1.9	4	7.7	3.8	4.7	3.6	7.1	5.2	7	6.5	8.1	8.8	8.8	4.7	24
3	5.7	6.7	7.9	8.7	10.1	12.4	11.4	10.3	5.8	5.5	0.2	0.4	2.4	1.9	1.5	1.2	3.2	4.4	5.7	8	9.6	7.3	2.8	4.1	12.4	5.7	24
4	4.8	5.8	7	6.3	10	12.9	7.1	4.4	5.7	2.3	3.2	2.4	1.6	1	3.3	2.4	2.4	1.7	2.6	6.1	7.2	9.6	8.6	5.6	12.9	5.2	24
5	5.3	5.7	5.3	5	6.5	7.1	9.9	**C**	**C**	**C**	**D**	**D**	**D**	**D**	**D**	**D**	**D**	**D**	**D**	**D**	**D**	**D**	**D**	**D**	9.9	6.4	10
6	**D**	**D**	**D**	**D**	**D**	**D**	**D**	**M**	**M**	**M**	**M**	**M**	**M**	**M**	**M**	**M**	**M**	**M**	**M**	**M**	**M**	**M**	**M**	**M**	0.0	0.0	0
7	**M**	**M**	**M**	**M**	**M**	**M**	**M**	1.5	5.5	1.6	6.5	4.6	21.4	30.5	25.5	12.1	9.6	15.8	21	30	34.9	47.4	56.6	85.3	85.3	24.1	17
8	85	85.6	**93**	91.5	86.5	79.2	49.5	52.5	26.6	13.3	7.9	0	2.7	0	8.3	8.3	16	1.9	14.3	19.2	20.4	14	11.7	9.6	**93.0**	33.2	24
9	10.4	12	16.1	12.6	14.6	20.8	12.4	2.4	4.3	**N**	**N**	0	0	0	1.9	3.4	2	7.1	3.8	2.3	2.5	3.3	4	1.6	20.8	6.3	22
10	0	0	2	0.9	1.6	0	0	0	6	0	0	0.1	0.4	1.7	2.6	3.3	0	3	2.4	5.9	2.9	7.2	9.3	5.1	9.3	2.3	24
11	3.4	3.5	3.8	4.2	4.4	6.8	0	3.4	4.1	3	0.1	0	2.5	1.4	1.6	1.4	0.9	4.1	2.5	4.2	5.6	7.5	7.6	4.7	7.6	3.4	24
12	2.7	3.4	2.9	4.8	6.2	6.6	8.8	6	0.6	0	0	0	0.1	0.1	3.5	2.5	4	9.7	10.6	14	34.9	31.3	31.9	27.7	34.9	8.8	24
13	29.7	27.1	28.7	27.4	27.4	29.7	28.1	27.8	28.6	21.7	26.6	37.3	35.6	41.2	39.4	34.1	28.1	17.3	16.4	12	18.9	12	9.1	6.7	41.2	25.5	24
14	8.3	6.9	3.2	0.1	2.4	1.7	0	0	0	0.2	3.2	3	0.8	1.8	4.2	0.9	0	2.1	5	2.8	0.5	0	1.3	0.8	8.3	2.1	24
15	0	0	1.1	4.5	0	7.8	1.9	1.4	0.2	0	1.6	4	2.2	**N**	0	0	0	0.2	0	1.5	4.8	2.6	0.4	1.4	7.8	1.5	23
16	3.8	2.7	3.3	2.2	1.6	8.8	4.3	1.2	0	3.2	0	0	0	0.2	1.1	0	0.1	5.1	2.7	1.5	6.1	6.1	3.7	0	8.8	2.4	24
17	2.1	2.3	3.2	1.2	7.9	8.5	4.6	5.9	5.2	5.7	0.9	0	**N**	2.8	0	1.7	4.2	18.5	0	1.8	2.1	0	3.3	2.9	18.5	3.7	23
18	1.6	2.4	2.3	2.2	6.3	5.8	4.6	1.8	1.7	0	0	2.4	2.2	0	0.9	1.6	0	0	2.2	5.3	7	5.4	2.2	2.2	7.0	2.5	24
19	3	1.2	3.8	2.5	2.4	0.9	0.9	2.6	2.4	1.5	2.6	0	0	**N**	**N**	7.6	3.3	0	5.8	0.5	0	0	**N**	0	7.6	2.0	21
20	0	0.4	3.1	1.9	5.2	9.2	4.3	0	0	2.6	0	0	0	0.9	1.9	0	6.1	4.9	2.9	1.7	10.9	9.9	5	6.4	10.9	3.2	24
21	3.8	4.5	5.1	5.8	10.1	13.6	2.7	0.7	6.9	4.9	1.3	0	0	5.6	1.5	1.4	1.6	3	4.6	8.6	6.2	5.1	5.7	2.2	13.6	4.4	24
22	3	3.9	3.4	0.4	0.4	5.9	6	5.7	7	8.8	1.2	2.1	5.4	0.4	4.5	7.1	3.1	0	2.7	1.1	0.6	0.8	3	0	8.8	3.2	24
23	2.1	4.3	2.8	2.6	1.8	2.9	0	0	0	0	**N**	0	**N**	0	3.1	0.1	0	0.9	0	4.5	13.8	6.7	1.4	0.5	13.8	2.2	22
24	0	2.3	0.5	1.5	4.9	10.1	**N**	2.2	1.1	4.9	0.8	0	0.6	2.1	4	5.9	1.7	2.2	2.7	3.3	4.8	5	2.2	3.3	10.1	2.9	23
25	0.3	2.8	4	4.9	3.2	6.4	0	7.7	5.1	2.6	3.7	0	**N**	**N**	0.8	**N**	0.8	0	0	4.3	8.5	3.7	5.1	0	8.5	3.0	21
26	0	3	0.5	0	6.3	2.7	0.4	2.8	2.1	0.6	0	1.1	0	5.8	0	6.2	10.4	3.3	3.7	2.8	**N**	0	0.1	0.2	10.4	2.3	23
27	0	0.1	0.3	1.5	1.5	1	1.8	3.3	0.6	8.3	2.3	2.1	0	1.4	0.4	0.3	0	1.2	3	1.8	7.9	4.4	3.6	0.7	8.3	2.0	24
28	0.5	1.2	0	1.7	7.1	16	0	6.1	5.5	0.2	0	2.2	1	1	3.6	3.9	4.4	7.9	7.3	1.8	7.1	1.1	0	1.1	16.0	3.4	24
29	2.5	2.9	3.8	2.1	1.6	1.6	2.1	2.5	3.4	7.5	8.6	7.7	8.2	14.1	10.9	13.7	13.8	9.1	**N**	8.4	19.6	10.1	4.3	3.5	19.6	7.0	23
30	2.1	4.7	4.1	8.4	9.4	18.5	8	12.7	**N**	**N**	0.8	11.4	5.1	1.9	2.3	**N**	3.1	0.4	3.6	6.8	2.4	8.1	**N**	2.9	18.5	5.8	21
HOURLY MAX	85	86	93	92	87	79	50	53	29	22	27	37	36	41	39	34	28	19	21	30	35	47	57	85			
HOURLY AVG	6.7	7.2	7.8	7.5	8.9	11.0	6.5	6.3	4.8	3.9	2.9	3.1	3.8	4.9	5.0	4.8	4.5	4.7	5.1	6.0	9.4	7.9	7.5	6.8			

STATUS FLAG CODES

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

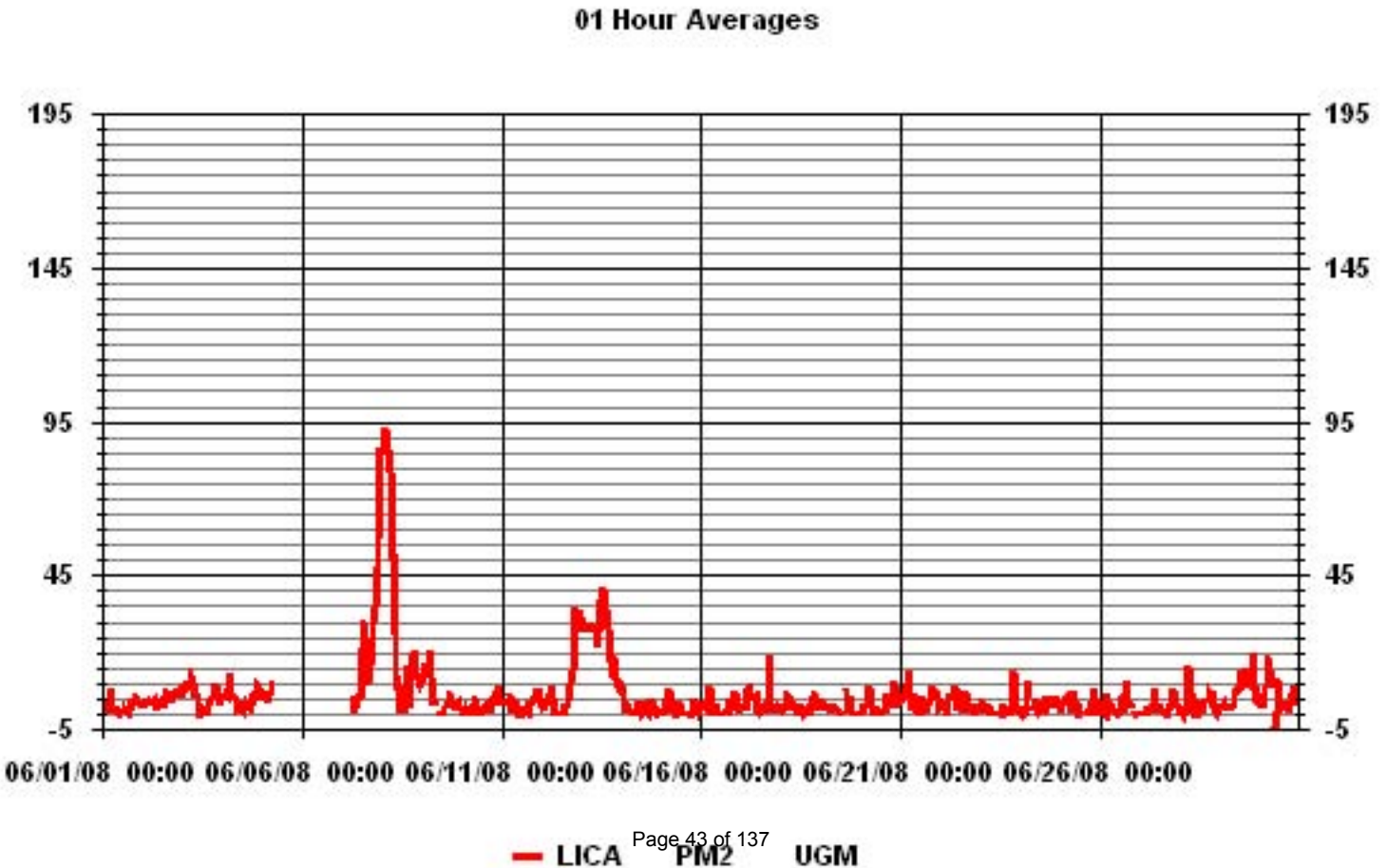
OBJECTIVE LIMIT: **ALBERTA ENVIRONMENT:** 1-HR - PPB 24-HR 30 PPB



MONTHLY SUMMARY

NUMBER OF 1-HR EXCEEDENCES:	-					
NUMBER OF 24-HR EXCEEDENCES:	1	PROPOSED CANADA WIDE GUIDELINE				
NUMBER OF NON-ZERO READINGS:	560					
MAXIMUM 1-HR AVERAGE:	93.0	UG/M^3	@ HOUR(S)	3	ON DAY(S)	8
MAXIMUM 24-HR AVERAGE:	33.2	UG/M^3			ON DAY(S)	8

IZS CALIBRATION TIME:	0	HRS	OPERATIONAL TIME:	656	HRS
MONTHLY CALIBRATION TIME:	3	HRS	AMD OPERATION UPTIME:	91.1	%
STANDARD DEVIATION:	11.24		MONTHLY AVERAGE:	6.15	UG/M^3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195
145
95
45
-5
06/01/08 00:00
06/06/08 00:00
06/11/08 00:00
06/16/08 00:00
06/21/08 00:00
06/26/08 00:00
LICA PM2 UGM

LICA
PM2 / WD Joint Frequency Distribution (Percent)

June 2008

Distribution By % Of Samples

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

Wind Parameter : WD
Instrument Height : 10 Meters

Direction

	Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
<	30.0	3.21	4.13	4.90	2.60	4.74	9.03	9.49	3.52	3.98	4.28	11.02	14.08	11.17	7.50	1.53	1.37	96.63
<	60.0	.15	.15	.15	.30	.15	.15	.00	.00	.00	.00	.15	.15	.00	.15	.30	.45	2.29
<	80.0	.00	.00	.15	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.15
<	120.0	.30	.15	.15	.15	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.15	.91
<	240.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
>=	240.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
	Totals	3.67	4.44	5.35	3.06	4.90	9.18	9.49	3.52	3.98	4.28	11.17	14.24	11.17	7.65	1.83	1.99	

Calm : .00 %

Total # Operational Hours : 653

Distribution By Samples

Direction

	Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
<	30.0	21	27	32	17	31	59	62	23	26	28	72	92	73	49	10	9	631
<	60.0	1	1	1	2	1	1					1	1		1	2	3	15
<	80.0			1														1
<	120.0	2	1	1	1												1	6
<	240.0																	
>=	240.0																	
	Totals	24	29	35	20	32	60	62	23	26	28	73	93	73	50	12	13	

Calm : .00 %

Total # Operational Hours : 653

Logger : 01 Parameter : PM2

Class Limits (UG/M3)

>= 240.0

< 240.0

< 120.0

< 80.0

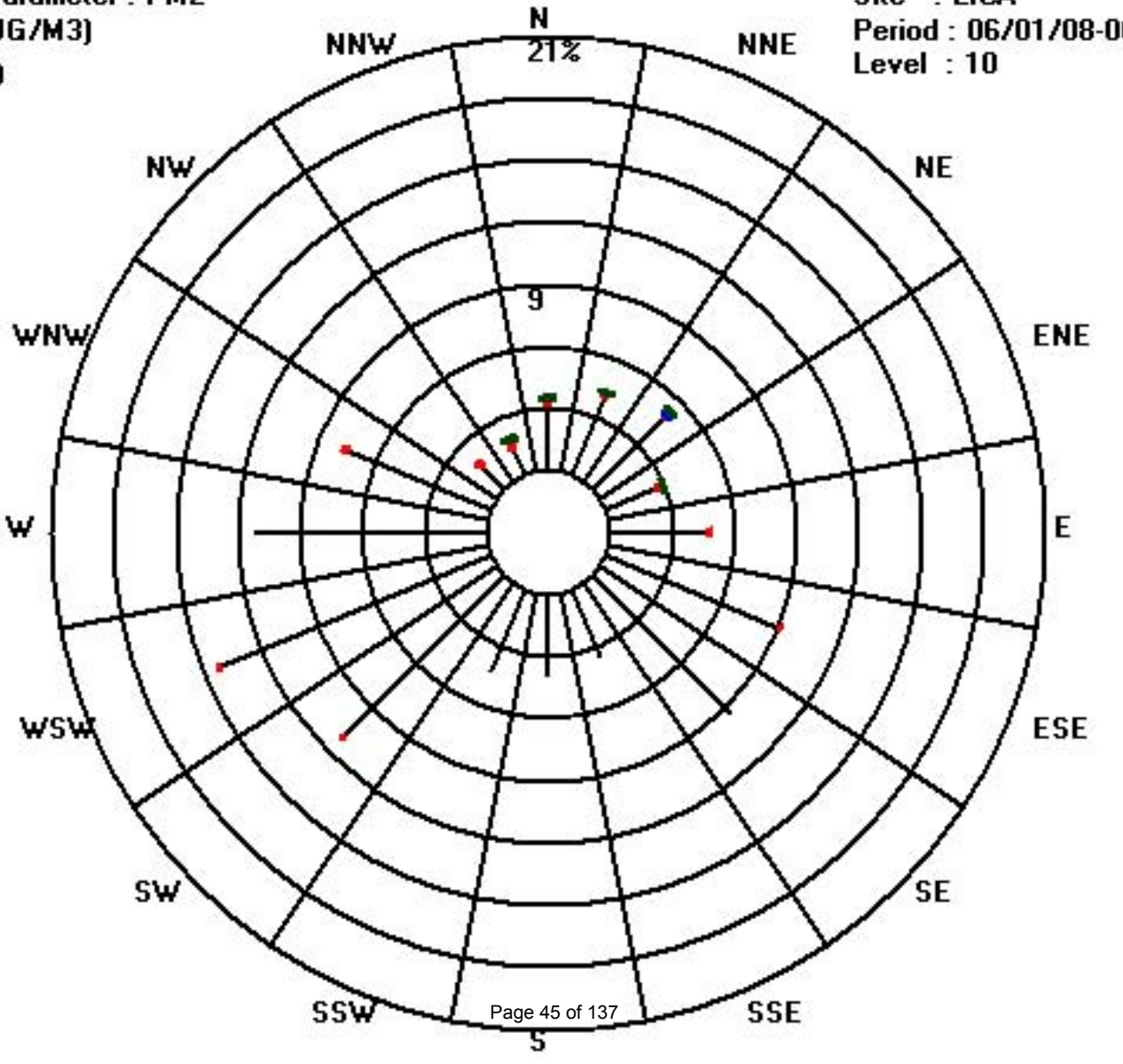
< 60.0

< 30.0

Site : LICA

Period : 06/01/08-06/30/08

Level : 10



LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

JUNE 2008

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

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	8.1	6.2	5.3	5	10.1	14	8	0.9	4.3	4	3.4	3.7	7.2	5.8	5.7	2.8	5.9	6.5	7.5	6	9.4	9.4	5.4	6.8	14	6.3	24
2	5.8	5	6.1	5.9	8.5	7.1	7.2	9.2	5.6	5.4	6.9	7.6	5.5	6.6	13.2	7.2	11.5	9.8	11.9	9.9	10.4	10.3	11	11.1	13.2	8.3	24
3	8.5	9.5	10.8	11.7	14	16.6	16.2	12.7	9.7	9.3	4.3	3.8	5.7	5.3	5.4	5.1	7.7	7.8	9.7	12.5	14.2	12.1	5	7.5	16.6	9.4	24
4	8.6	7.6	12.1	9.6	17	17.7	11.8	8.3	8.8	6.6	9.1	5	5.1	7.4	6.7	5.8	4.4	3.9	5	14.7	10	13.7	12.5	9.8	17.7	9.2	24
5	8.2	8.6	8.8	6.6	9.6	10.9	11.7	**C**	**C**	**C**	**D**	**D**	**D**	**D**	**D**	**D**	**D**	**D**	**D**	**D**	**D**	**D**	**D**	**D**	11.7	9.2	10
6	**D**	**D**	**D**	**D**	**D**	**D**	**D**	**M**	**M**	**M**	**M**	**M**	**M**	**M**	**M**	**M**	**M**	**M**	**M**	**M**	**M**	**M**	**M**	**M**	0	0.0	0
7	**M**	**M**	**M**	**M**	**M**	**M**	**M**	**M**	13	11.9	19.7	24	35.9	37.5	38.1	24.1	18.1	27	30.7	39	49.6	56.3	82.2	93.1	93.1	37.5	16
8	**101.6**	95.1	98.6	96.7	93.3	88.7	60.3	60.7	43.7	22	16.1	11.3	22.4	14.7	18.7	27.1	29.4	19.1	29.8	30.8	35.8	20.3	19.1	15.5	**101.6**	44.6	24
9	16.1	21.6	21.8	20.4	21.1	30.2	22.6	11.4	10.2	9.2	3.5	8.9	6.9	11.9	9.2	12.3	9	14.5	11.4	8	8.7	6.1	9.6	7.3	30.2	13.0	24
10	7.6	5.1	9.2	4.6	8.3	5.5	5.3	3.6	16.4	8.3	11.2	6.1	5.4	10.9	9.3	11.5	5.4	8.3	9.9	14.3	9.4	15	13	13.1	16.4	9.0	24
11	9.5	10.3	7.8	8.4	10.4	14.7	13.6	19.9	12.8	12.6	10.8	5.8	9.5	8.8	10.5	10	7.7	14.7	9	9.5	13.7	20	12.7	11.2	20	11.4	24
12	7.8	7.5	8.7	8.3	10	10.9	19	14.2	4.5	9.6	11.1	6.5	5.5	6	9.8	8.9	11.2	16	17.1	25.4	41.9	35.8	39.8	35.4	41.9	15.5	24
13	35.7	31.2	36.8	33.5	33.8	36.6	32.1	37.5	39.7	27.6	38.1	48.7	45.8	52.7	49.2	44.7	38.2	24.9	24.1	18.8	32.5	18.8	14.3	12.2	52.7	33.6	24
14	13.3	10.4	10.8	5.6	6.5	6.2	4.9	3.4	3.7	4.5	11.4	9.4	6	7.3	9.3	6.9	6.5	5.6	12.6	8.3	5.1	3.8	7.2	6	13.3	7.3	24
15	4.8	1.7	9.5	13.7	3.6	14.5	11.1	13.7	12.7	9.1	10.5	10.6	12.8	4.3	12.1	11.5	10.3	8	4.8	7	11.4	6.5	3.8	7.6	14.5	9.0	24
16	9	10.4	10	6.6	4.2	16.4	9.5	7.5	9.8	18.7	6.6	11.9	8.6	8.3	12	6.9	12.6	14.4	14.2	9.5	17.5	13.6	10.6	4.4	18.7	10.6	24
17	7.8	5.5	8.7	5.1	17.6	18.1	13.8	16.3	15.4	17.1	14.7	23.8	15.5	13.8	6.5	8.9	9.6	37	5.7	7.7	7.2	4.3	18.2	15.5	37	13.1	24
18	7.2	7.8	7.5	7.6	12.4	11.3	11.6	8.3	5.9	10.1	10	10.4	9.4	17.2	14.5	14.4	11.9	9.5	13	14.3	13.7	10.5	6.9	6.5	17.2	10.5	24
19	12.4	6.6	7.6	8.1	7.2	7.2	6.6	7.2	8.5	7	8.7	6.9	9.2	8	4.4	25.8	11.8	11.6	19.4	11.3	7.7	3.9	3.1	3.8	25.8	8.9	24
20	2.3	5	6.6	5.9	13.6	16	12.1	11.1	13.3	13.7	11	15.5	14.8	9.9	15.9	13.2	17.2	18.6	10.5	17.2	26.2	18.6	12	10.5	26.2	12.9	24
21	11.9	8.9	10.5	10.5	21.5	24.9	21.3	12.1	15.1	13.3	10.9	14.3	15.5	20.3	16.3	14.1	17	12.6	17.6	15.2	13.1	13.7	14.5	7.1	24.9	14.7	24
22	6.9	8.8	8.3	5.3	7.8	12.9	11.4	13.7	13.2	14.4	16.2	10.2	17.2	14.8	14.4	19.2	17.6	7.6	19	9.5	5.4	4.8	8.6	12.3	19.2	11.6	24
23	8.9	8.8	7	6.9	5.7	8.7	4.3	9.9	9	8	6.2	8.8	6.1	6.5	11.6	7.6	8.2	10	10.3	13.1	26.7	19.9	6.5	4.4	26.7	9.3	24
24	5.6	10.1	7.1	3.7	10.2	19.4	14.5	11.1	11	15.5	12.2	21.7	20.4	15.1	15.5	14	16	10.5	10.1	10	13.6	12	7	7.7	21.7	12.3	24
25	3.8	7.7	7	8.7	6.7	9.9	12.8	14.2	12.5	12.3	13.4	8.7	1.7	3.5	11.9	8.7	10	12.9	7.6	12.4	15.3	9.9	10.3	5.4	15.3	9.5	24
26	5.4	10.1	5.5	6.1	12.7	14.9	7.1	11.2	14.5	9.2	10.7	14	15.4	25.9	22.7	18	27.7	12.2	13.1	6.6	3.2	3.5	5.1	5.7	27.7	11.7	24
27	2.8	5.3	5	6.1	6.8	6.5	6.6	9.3	11	22.1	16.9	11.1	14.3	13.2	19.1	15.4	13.3	12.2	10.5	10.1	19.4	12.6	9.3	6	22.1	11.0	24
28	4.9	6.5	4.3	7.2	21.9	26.4	6.7	17.3	16.7	17.7	6.1	16.5	11.6	12.4	29.3	19.5	17	25.8	19.3	9.5	11.9	5.6	5.2	6.2	29.3	13.6	24
29	7.1	6.5	7.6	5.7	5.3	13.9	12.6	12.5	15.3	15.9	23.3	20.1	23.3	28.1	28.4	32.2	25.8	22.5	8.2	25.8	34.3	18	13.2	11.1	34.3	17.4	24
HOURLY MAX	102	95	99	97	93	89	60	61	44	28	38	49	46	53	49	45	38	37	31	39	50	56	82	93			
HOURLY AVG	12.3	12.1	12.9	12.0	14.8	17.8	13.9	13.7	13.2	12.4	12.0	12.8	13.2	13.9	15.5	14.7	14.1	14.2	13.4	13.9	17.3	14.0	13.6	12.7			

STATUS FLAG CODES

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

MONTHLY SUMMARY

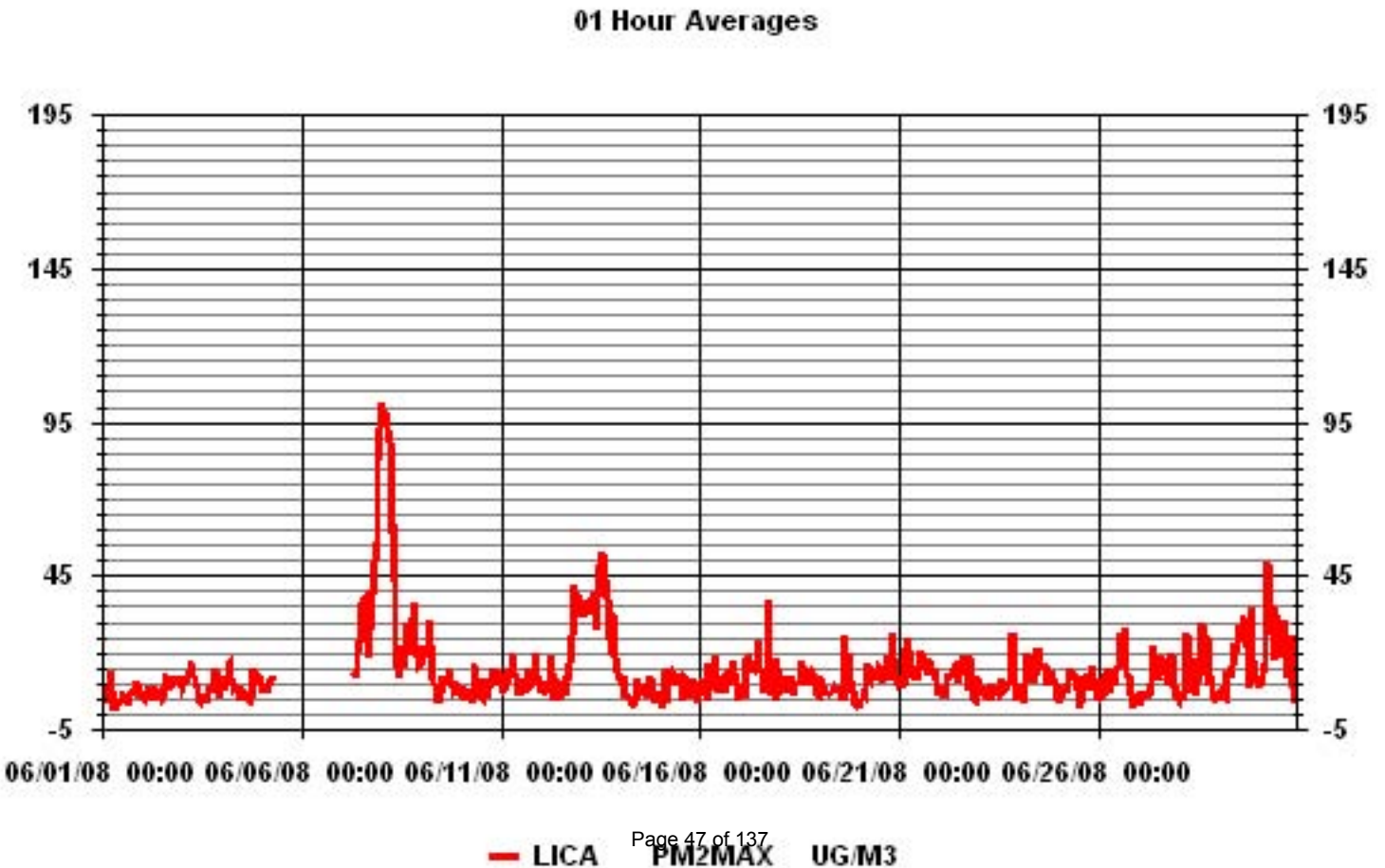
NUMBER OF NON-ZERO READINGS: 647

MAXIMUM INSTANTANEOUS VALUE: 101.6 UG/M^3 @ HOUR(S) 1 ON DAY(S) 8

IZS CALIBRATION TIME: 0 HRS OPERATIONAL TIME: 650 HRS

MONTHLY CALIBRATION TIME: 3 HRS

STANDARD DEVIATION: 12.49


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

Nitrogen Dioxide

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

JUNE 2008

NITROGEN DIOXIDE hourly averages in ppb

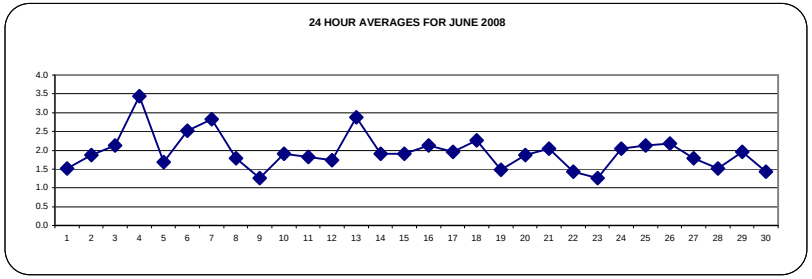
MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	3	2	1	2	2	5	4	3	1	0	0	0	0	1	1	0	**IZS**	1	1	1	3	2	1	1	5	1.5	24
2	1	1	1	2	2	2	2	2	1	1	1	1	1	1	3	**IZS**	2	1	2	3	3	4	3	3	4	1.9	24
3	3	2	2	1	1	2	3	6	5	4	2	1	1	1	**IZS**	1	1	1	1	1	5	3	1	1	6	2.1	24
4	2	2	6	6	4	4	**C**	**C**	**C**	**C**	**C**	**C**	**C**	**IZS**	0	0	1	1	1	3	7	9	6	3	**9**	**3.4**	24
5	1	1	2	2	2	4	2	2	2	1	**M**	1	**IZS**	1	1	2	2	1	1	1	2	3	1	2	4	1.7	23
6	2	1	2	2	2	3	3	2	1	2	1	**IZS**	1	1	1	1	2	2	2	4	6	7	6	4	7	2.5	24
7	6	6	4	3	2	2	3	3	5	3	**IZS**	1	1	1	1	0	0	1	2	4	4	6	4	3	6	2.8	24
8	3	2	4	3	3	4	2	1	1	**IZS**	1	1	1	0	1	1	2	1	1	1	2	2	2	2	4	1.8	24
9	2	2	2	1	2	5	2	1	**IZS**	1	1	0	0	0	0	0	0	1	0	1	2	3	2	1	5	1.3	24
10	2	3	3	3	4	3	2	**IZS**	1	1	1	1	1	1	2	2	1	0	1	1	2	3	3	3	4	1.9	24
11	3	2	2	2	3	4	**IZS**	3	2	1	1	0	0	0	1	1	1	1	0	1	3	4	4	3	4	1.8	24
12	3	3	3	3	3	**IZS**	4	3	2	2	1	0	0	0	0	0	1	1	1	2	1	2	3	2	4	1.7	24
13	3	3	4	3	**IZS**	3	5	4	5	4	3	2	2	2	2	1	2	1	2	1	4	3	5	2	5	2.9	24
14	2	4	3	**IZS**	2	3	4	1	1	1	1	2	2	2	2	1	1	1	1	2	2	1	2	3	4	1.9	24
15	2	4	**IZS**	3	4	4	3	3	2	1	1	1	0	1	1	0	1	1	1	1	2	2	3	3	4	1.9	24
16	3	**IZS**	3	3	3	3	3	3	2	1	1	1	0	0	1	1	1	1	2	2	4	5	3	3	5	2.1	24
17	**IZS**	2	2	1	2	5	4	3	3	2	2	1	1	1	1	2	3	2	1	1	1	1	2	**IZS**	5	2.0	24
18	3	4	5	5	7	4	3	3	2	1	1	1	1	1	1	1	0	0	0	1	2	3	**IZS**	3	7	2.3	24
19	3	2	2	1	1	1	3	3	2	2	2	1	0	0	0	1	1	2	1	1	1	**IZS**	2	2	3	1.5	24
20	2	1	2	3	3	3	5	2	2	1	1	1	1	0	0	1	1	1	1	1	**IZS**	3	4	4	5	1.9	24
21	3	4	3	2	2	2	2	1	1	2	1	1	1	1	1	1	1	1	1	**IZS**	4	4	5	3	5	2.0	24
22	2	2	3	2	2	2	2	2	2	1	1	1	1	1	1	1	2	1	**IZS**	1	1	1	1	0	3	1.4	24
23	0	2	1	1	2	2	1	1	1	2	1	0	0	0	0	0	0	**IZS**	0	1	6	3	3	2	6	1.3	24
24	2	4	4	3	2	3	5	2	2	2	1	0	0	1	1	1	**IZS**	1	1	1	1	3	3	4	5	2.0	24
25	4	4	4	4	3	3	3	2	2	2	2	1	1	0	1	**IZS**	0	0	0	1	2	4	3	3	4	2.1	24
26	2	3	4	3	3	3	3	3	3	3	1	1	1	1	**IZS**	2	1	2	2	3	2	1	1	2	4	2.2	24
27	1	1	1	3	5	4	3	3	2	1	1	1	1	**IZS**	0	0	0	0	0	1	4	2	4	3	5	1.8	24
28	3	3	2	2	1	3	3	2	2	1	1	1	**IZS**	1	0	0	1	1	1	1	2	1	1	2	3	1.5	24
29	2	2	2	2	2	2	1	1	1	1	1	**IZS**	1	2	2	2	2	2	1	2	3	4	4	3	4	2.0	24
30	3	2	**2**	2	2	2	5	5	2	1	**IZS**	1	1	1	1	0	0	0	0	1	0	2	0	0	5	1.4	24
HOURLY MAX	6	6	6	6	7	5	5	6	5	4	3	2	2	2	3	2	3	2	2	4	7	9	6	4			
HOURLY AVG	2.4	2.6	2.7	2.5	2.6	3.1	3.0	2.5	2.1	1.6	1.2	0.9	0.7	0.8	0.9	0.8	1.1	1.0	1.0	1.6	2.8	3.1	2.8	2.4			

STATUS FLAG CODES

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

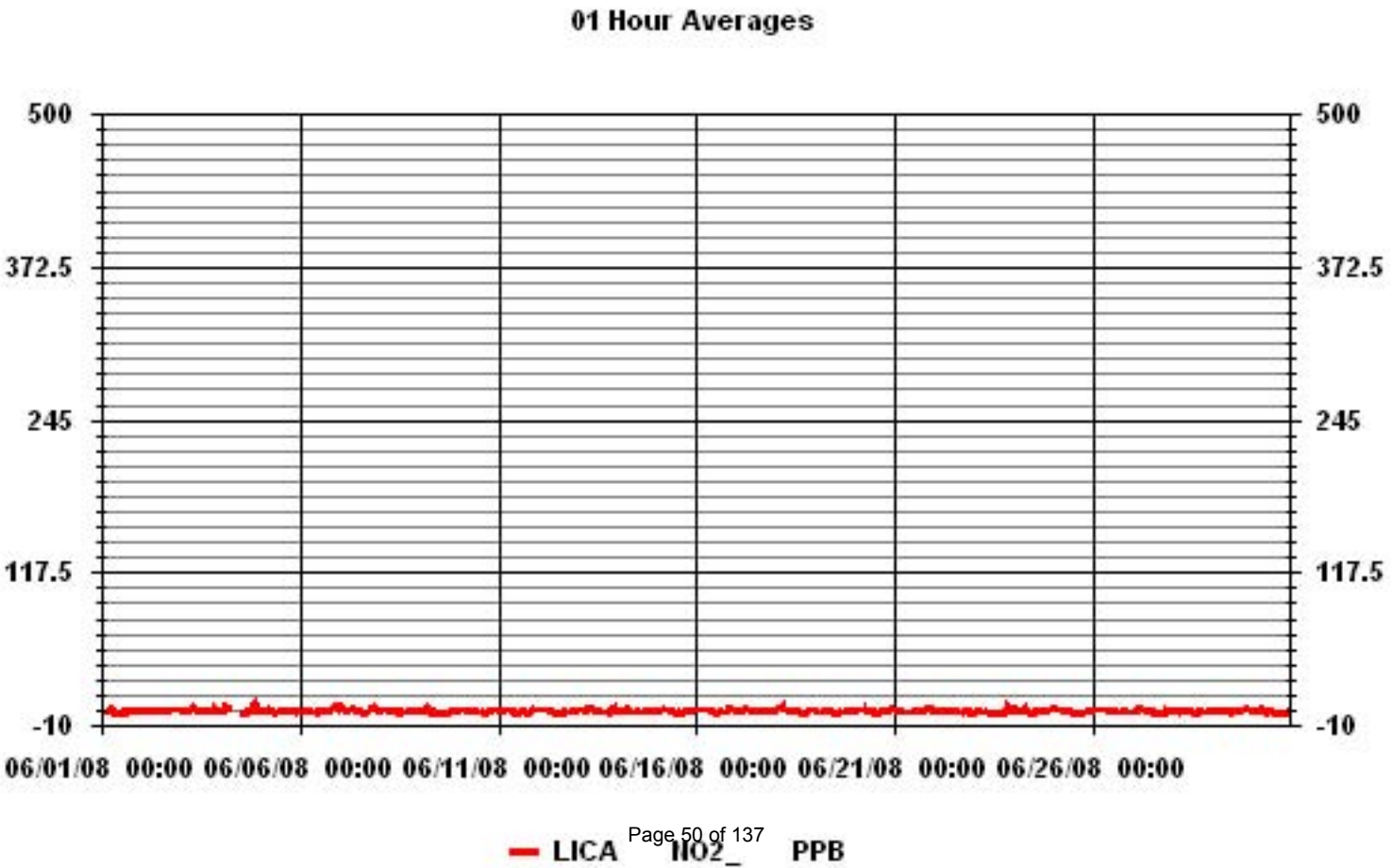
OBJECTIVE LIMIT: **ALBERTA ENVIRONMENT:** 1-HR 212 PPB | 24-HR 106 PPB



MONTHLY SUMMARY

NUMBER OF 1-HR EXCEEDENCES:	0					
NUMBER OF 24-HR EXCEEDENCES:	0					
NUMBER OF NON-ZERO READINGS:	613					
MAXIMUM 1-HR AVERAGE:	9	PPB	@ HOUR(S)	22	ON DAY(S)	4
MAXIMUM 24-HR AVERAGE:	3.4	PPB			ON DAY(S)	4

IZS CALIBRATION TIME:	31	HRS	OPERATIONAL TIME:	719	HRS
MONTHLY CALIBRATION TIME:	7	HRS	AMD OPERATION UPTIME	99.9	%
STANDARD DEVIATION	1.37		MONTHLY AVERAGE	1.94	PPB


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

LICA
NO2_ / WD Joint Frequency Distribution (Percent)

June 2008

Distribution By % Of Samples

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

Wind Parameter : WD
Instrument Height : 10 Meters

Direction

	Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
<	50	3.23	3.37	4.99	2.79	5.72	11.01	9.98	3.67	3.96	4.25	10.42	14.24	11.30	7.63	1.90	1.46	100.00
<	110	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
<	210	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
>=	210	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
	Totals	3.23	3.37	4.99	2.79	5.72	11.01	9.98	3.67	3.96	4.25	10.42	14.24	11.30	7.63	1.90	1.46	

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
<	50	22	23	34	19	39	75	68	25	27	29	71	97	77	52	13	10	681
<	110																	
<	210																	
>=	210																	
	Totals	22	23	34	19	39	75	68	25	27	29	71	97	77	52	13	10	

Calm : .00 %

Total # Operational Hours : 681

Logger : 01 Parameter : NO2_

Class Limits (PPB)

>= 210

< 210

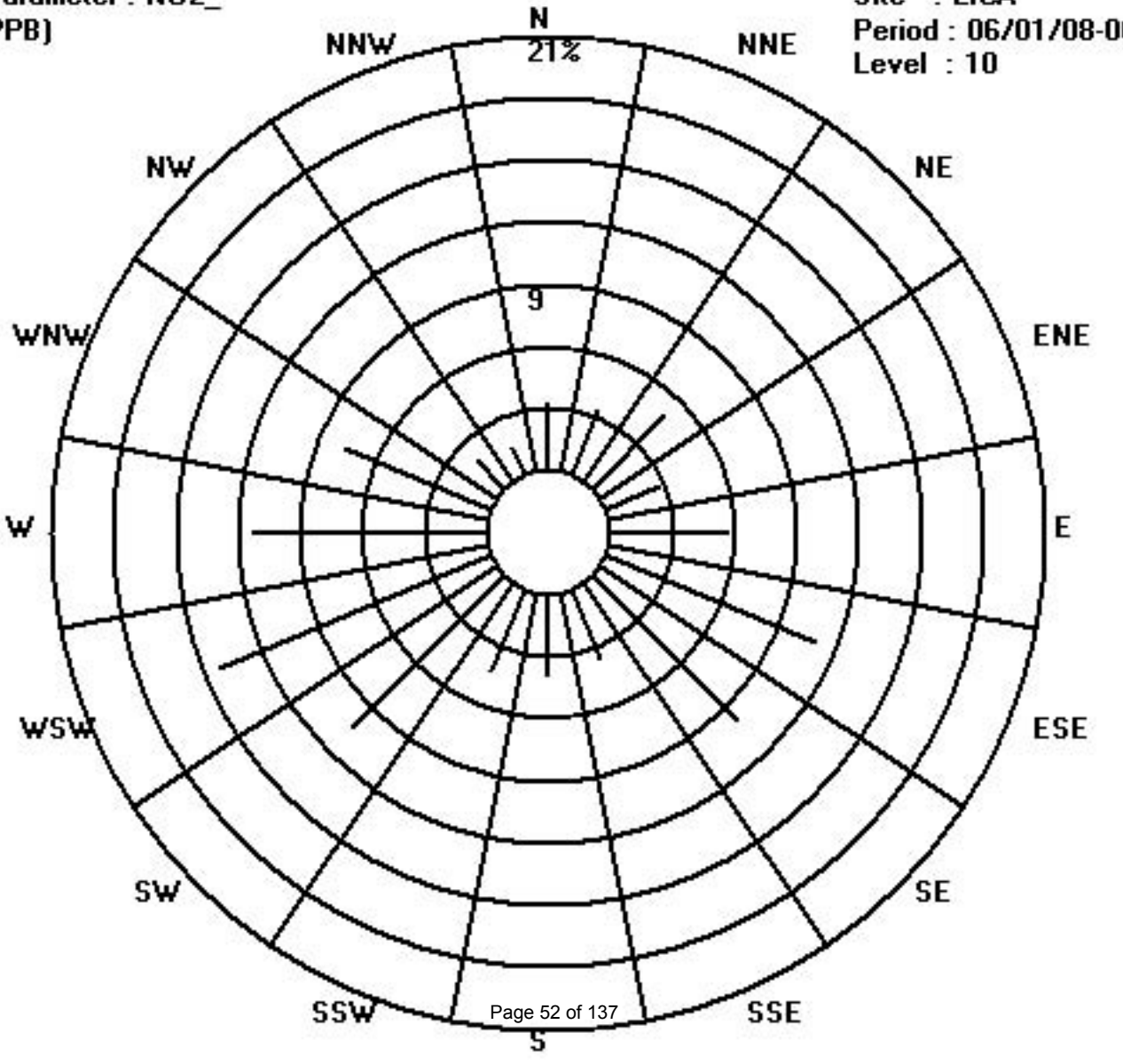
< 110

< 50

Site : LICA

Period : 06/01/08-06/30/08

Level : 10



LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

JUNE 2008

NITROGEN DIOXIDE MAX instantaneous maximum in ppb

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	5	4	2	2	7	7	6	6	2	1	1	1	1	2	3	1	**IZS**	2	6	2	7	15	2	3	15	3.8	24
2	2	1	4	7	4	3	3	3	2	2	2	4	2	2	6	**IZS**	5	2	4	3	6	6	3	5	7	3.5	24
3	5	4	3	2	2	3	6	11	7	7	29	3	3	8	**IZS**	1	1	1	1	3	11	11	1	2	29	5.4	24
4	3	5	11	9	6	7	**C**	**C**	**C**	**C**	**C**	**C**	**C**	**IZS**	2	1	2	9	2	9	11	13	9	4	13	6.4	24
5	2	2	5	5	5	13	4	4	19	3	**M**	2	**IZS**	18	3	6	6	7	1	3	4	3	3	3	19	5.5	23
6	3	2	3	3	3	12	22	9	7	31	3	**IZS**	3	5	2	2	8	3	3	8	12	10	9	7	31	7.4	24
7	8	8	5	5	4	3	4	4	7	4	**IZS**	2	1	1	4	1	1	2	4	6	8	12	6	7	12	4.7	24
8	6	5	8	4	6	7	3	2	2	**IZS**	3	1	1	1	2	2	7	2	2	5	3	10	3	3	10	3.8	24
9	4	4	3	3	4	10	3	3	**IZS**	3	1	1	3	4	3	1	1	3	1	2	5	5	7	6	10	3.5	24
10	3	3	4	5	5	6	4	**IZS**	3	4	2	2	8	7	5	8	4	1	3	2	7	5	6	5	8	4.4	24
11	7	4	4	3	4	15	**IZS**	7	4	5	13	3	5	2	2	3	3	10	1	4	10	9	7	8	15	5.8	22
12	6	5	6	4	4	**IZS**	5	9	4	4	3	1	1	0	4	5	4	3	2	4	2	3	7	5	9	4.0	24
13	7	6	6	8	**IZS**	6	8	9	7	6	4	4	3	4	3	2	5	3	3	3	6	6	9	3	9	5.3	24
14	3	8	5	**IZS**	3	4	5	5	1	1	2	2	2	3	3	1	1	1	2	2	4	2	3	5	8	3.0	24
15	4	5	**IZS**	4	5	7	4	4	2	2	1	1	1	1	1	1	1	1	1	2	4	4	4	4	7	2.8	24
16	4	**IZS**	6	3	4	4	3	4	4	2	1	1	1	1	1	1	1	2	3	3	**38**	15	5	5	**38**	4.9	24
17	**IZS**	3	4	2	3	11	9	7	5	4	4	2	11	2	12	7	8	6	1	1	2	2	3	**IZS**	12	5.0	24
18	5	5	6	6	9	6	4	4	4	2	1	1	3	2	2	1	1	1	1	5	5	7	**IZS**	4	9	3.7	24
19	3	3	3	2	2	4	5	7	3	3	3	2	1	1	1	4	3	7	3	2	2	**IZS**	6	4	7	3.2	24
20	2	2	4	4	6	5	6	3	3	3	1	1	6	1	2	1	1	2	2	2	**IZS**	8	8	6	8	3.4	24
21	5	5	4	3	3	5	5	2	2	5	3	3	1	1	1	2	2	4	3	**IZS**	6	8	8	5	8	3.7	24
22	4	4	6	3	5	2	4	3	5	2	2	3	3	3	4	2	5	2	**IZS**	2	2	1	3	2	6	3.1	24
23	1	2	2	2	3	3	2	2	4	6	2	2	2	1	1	1	1	**IZS**	1	1	24	6	4	5	24	3.4	24
24	3	6	5	3	3	9	9	3	5	17	8	1	1	7	2	3	**IZS**	5	1	3	2	13	5	5	17	5.2	24
25	6	6	5	4	4	4	3	3	4	3	4	3	1	3	2	**IZS**	1	1	1	4	4	7	5	5	7	3.6	24
26	3	4	4	4	4	5	4	4	6	5	2	1	2	4	**IZS**	3	3	3	4	5	4	3	2	2	6	3.5	24
27	2	2	2	5	5	5	4	8	3	2	2	2	1	**IZS**	1	3	1	0	1	3	6	4	5	5	8	3.1	24
28	5	4	3	3	2	4	4	3	6	2	1	2	**IZS**	1	1	1	1	1	2	7	2	2	2	4	7	2.7	24
29	2	5	3	2	2	2	2	1	1	1	8	**IZS**	2	2	2	3	2	2	2	5	6	6	6	5	8	3.1	24
30	4	4	3	4	5	5	6	6	5	2	**IZS**	3	3	2	1	1	1	1	1	2	1	8	1	3	8	3.1	24
HOURLY MAX	8	8	11	9	9	15	22	11	19	31	29	4	11	18	12	8	8	10	6	9	38	15	9	8			
HOURLY AVG	4.0	4.2	4.4	3.9	4.2	6.1	5.3	4.9	4.5	4.7	4.1	2.0	2.7	3.2	2.7	2.4	2.9	3.0	2.1	3.6	7.0	7.0	4.9	4.5			

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

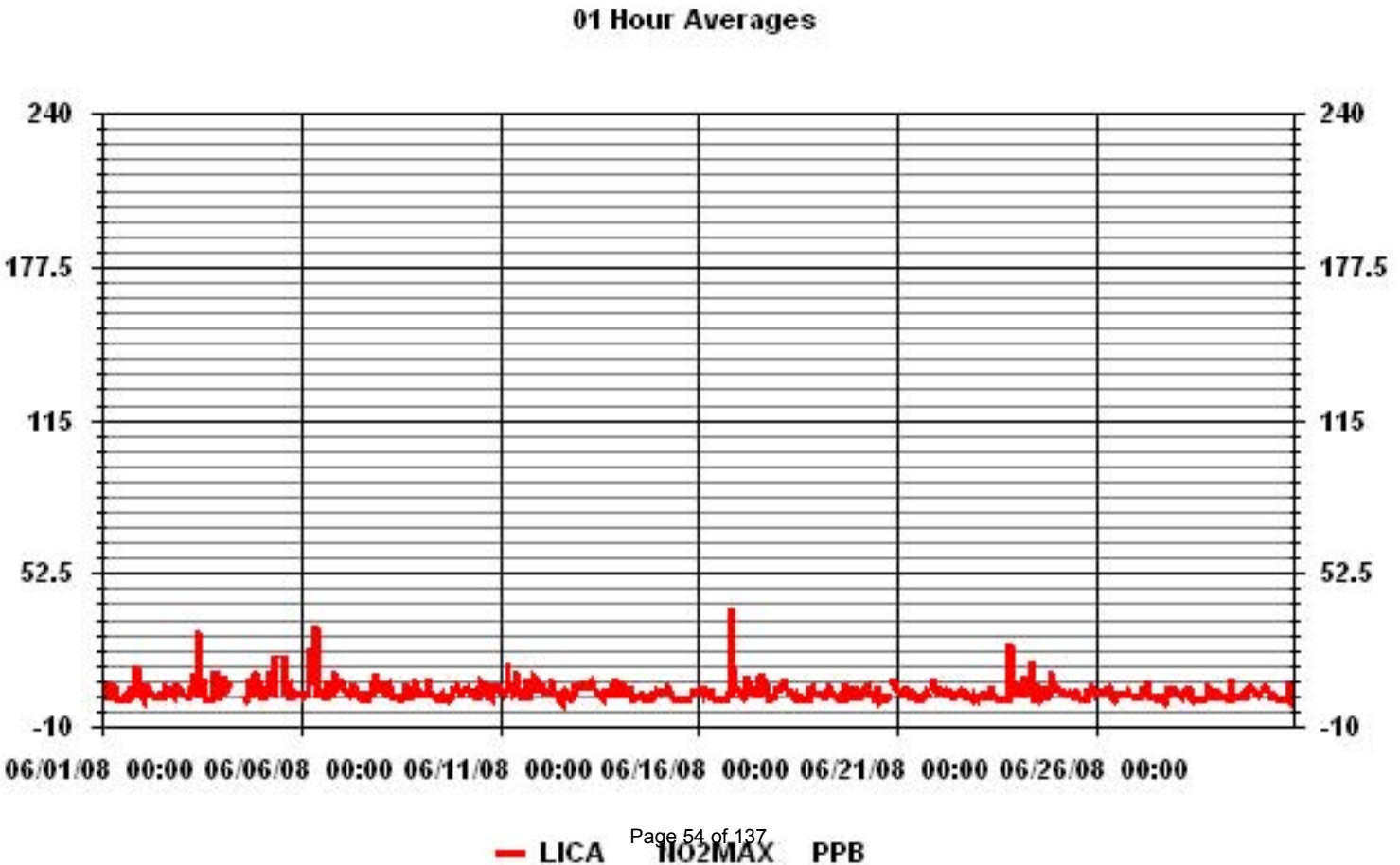
NUMBER OF NON-ZERO READINGS: 679

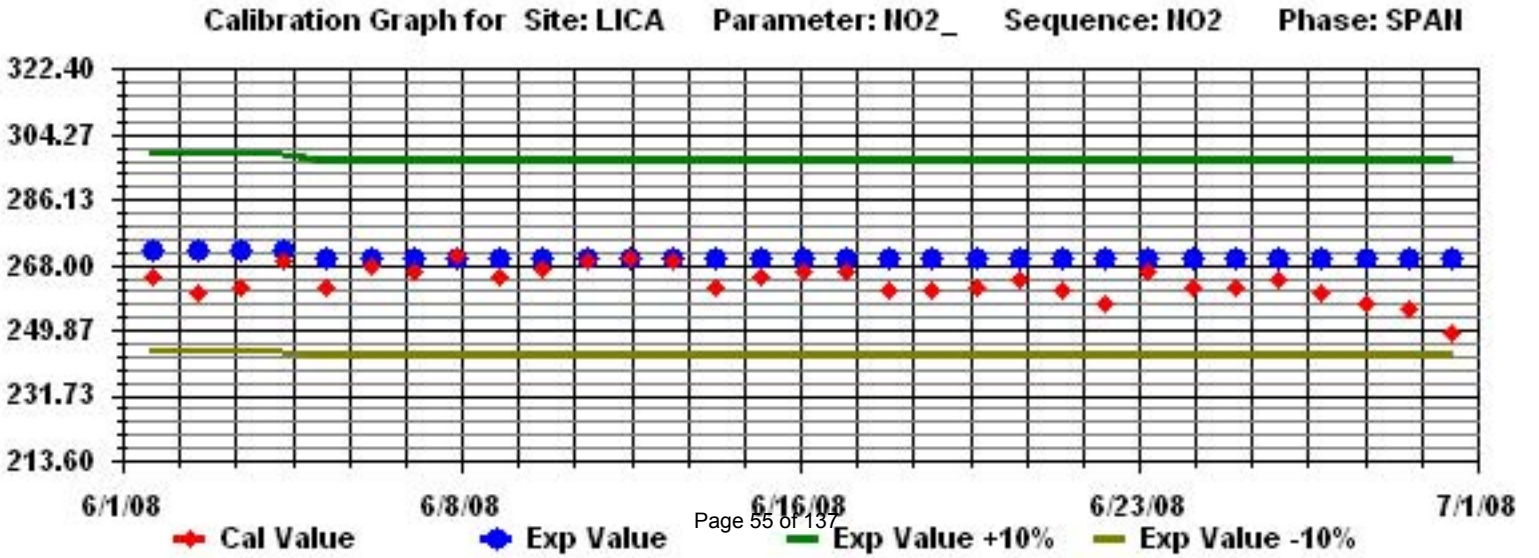
MAXIMUM INSTANTANEOUS VALUE: 38 PPB @ HOUR(S) 21 ON DAY(S) 16

IZS CALIBRATION TIME: 31 HRS OPERATIONAL TIME: 717 HRS

MONTHLY CALIBRATION TIME: 7 HRS

STANDARD DEVIATION: 3.46


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


Calibration Graph for Site: LICA Parameter: NO2_ Sequence: NO2 Phase: SPAN
322.40
304.27
286.13
268.00
249.87
231.73
213.60
6/1/08
6/8/08
6/16/08
6/23/08
7/1/08
Cal Value
Exp Value
Exp Value +10%
Exp Value -10%

Nitric Oxide

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

JUNE 2008

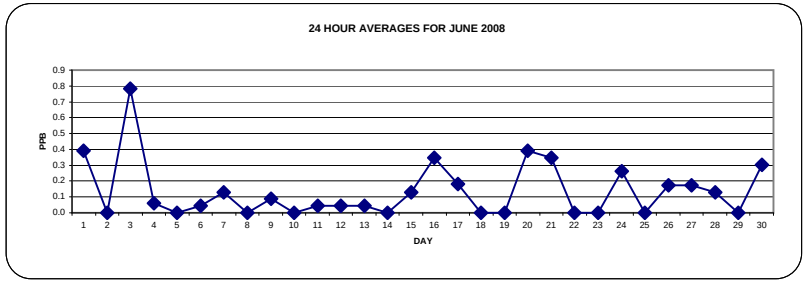
NITRIC OXIDE hourly averages in ppb

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	0	0	0	0	1	**5**	1	1	0	0	0	0	0	0	0	0	**IZS**	0	0	0	0	1	0	0	**5**	0.4	24
2	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
3	0	1	1	1	2	4	2	4	2	1	0	0	0	0	**IZS**	0	0	0	0	0	0	0	0	0	4	**0.8**	24
4	0	0	0	0	0	1	**C**	**C**	**C**	**C**	**C**	**C**	**C**	**IZS**	0	0	0	0	0	0	0	0	0	0	1	0.1	24
5	0	0	0	0	0	0	0	0	0	0	**M**	0	**IZS**	0	0	0	0	0	0	0	0	0	0	0	0	0.0	23
6	0	0	0	0	0	0	0	0	1	0	0	**IZS**	0	0	0	0	0	0	0	0	0	0	0	0	1	0.0	24
7	0	0	0	0	0	1	1	0	1	0	**IZS**	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.1	24
8	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
9	0	0	0	0	0	1	0	1	**IZS**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.1	24
10	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
11	0	0	0	0	0	1	**IZS**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.0	24
12	0	0	0	0	0	**IZS**	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.0	24
13	0	0	0	0	**IZS**	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.0	24
14	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
15	0	0	**IZS**	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.1	24
16	0	**IZS**	0	0	1	1	1	2	1	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	0.3	24
17	**IZS**	0	0	0	0	2	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**IZS**	2	0.2	24
18	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
19	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
20	0	0	0	0	3	2	3	1	0	0	0	0	0	0	0	0	0	0	0	0	**IZS**	0	0	0	3	0.4	24
21	0	0	0	1	1	4	2	0	0	0	0	0	0	0	0	0	0	0	0	**IZS**	0	0	0	0	4	0.3	24
22	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
23	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
24	0	0	0	0	1	3	2	0	0	0	0	0	0	0	0	0	**IZS**	0	0	0	0	0	0	0	3	0.3	24
25	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
26	0	0	0	0	0	0	1	1	1	1	0	0	0	0	**IZS**	0	0	0	0	0	0	0	0	0	1	0.2	24
27	0	0	0	0	0	0	1	2	1	0	0	0	0	**IZS**	0	0	0	0	0	0	0	0	0	0	2	0.2	24
28	0	0	0	0	0	2	1	0	0	0	0	0	**IZS**	0	0	0	0	0	0	0	0	0	0	0	2	0.1	24
29	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
30	0	0	0	1	2	2	1	1	0	0	**IZS**	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0.3	24
HOURLY MAX	0	1	1	1	3	5	3	4	2	1	0	0	0	0	0	0	0	0	0	0	2	1	0	0			
HOURLY AVG	0.0	0.0	0.0	0.1	0.4	1.0	0.6	0.5	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0			

STATUS FLAG CODES

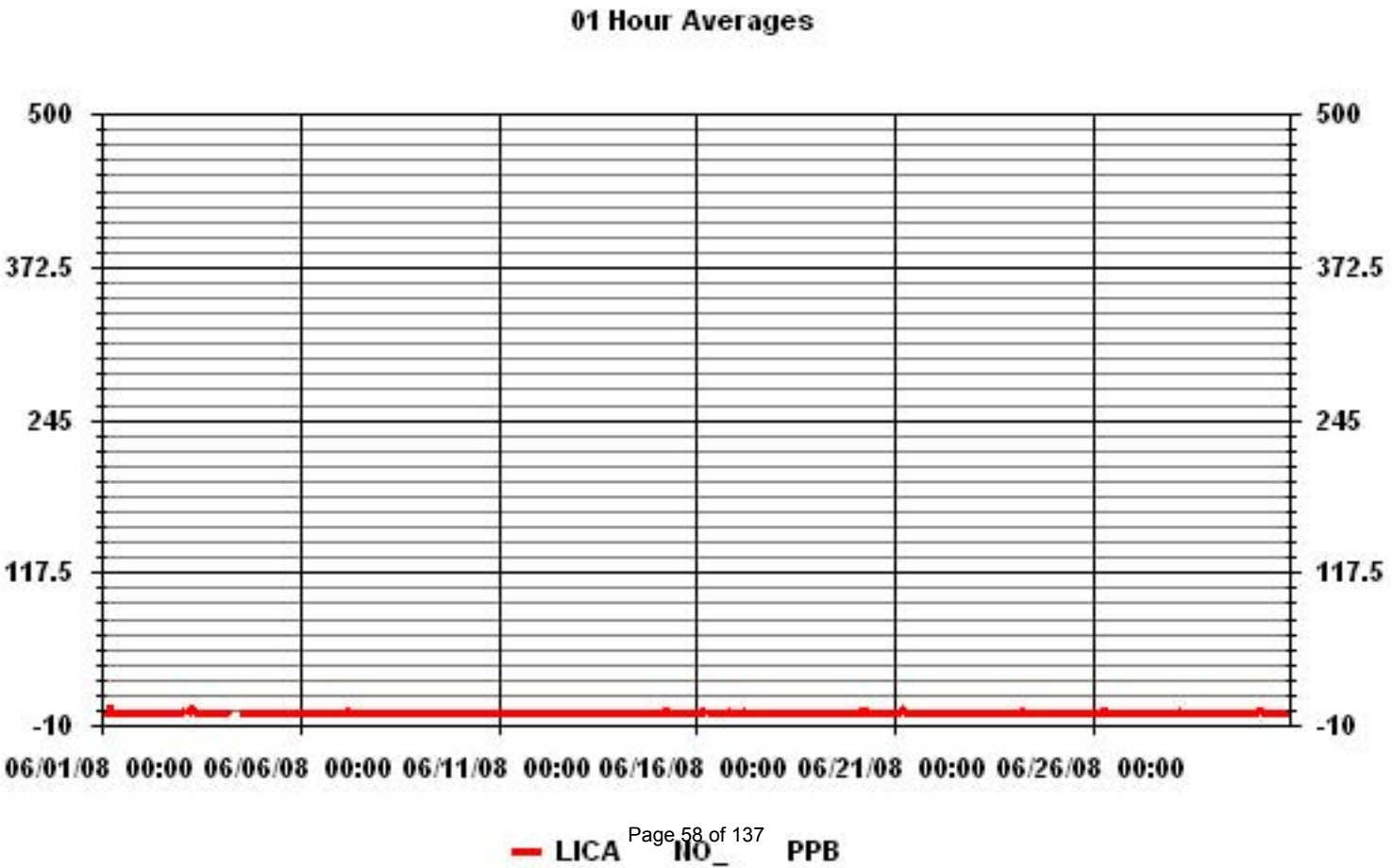
S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	- MISSING DATA
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE



MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:	61					
MAXIMUM 1-HR AVERAGE:	5	PPB	@ HOUR(S)	6	ON DAY(S)	1
MAXIMUM 24-HR AVERAGE:	0.8	PPB			ON DAY(S)	3

IZS CALIBRATION TIME:	31	HRS	OPERATIONAL TIME:	719	HRS
MONTHLY CALIBRATION TIME:	7	HRS	AMD OPERATION UPTIME	99.9	%
STANDARD DEVIATION	0.51		MONTHLY AVERAGE	0.14	PPB


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

LICA
NO_ / WD Joint Frequency Distribution (Percent)

June 2008

Distribution By % Of Samples

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

Wind Parameter : WD
Instrument Height : 10 Meters

Direction

	Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
<	50	3.23	3.37	4.99	2.79	5.72	11.01	9.98	3.67	3.96	4.25	10.42	14.24	11.30	7.63	1.90	1.46	100.00
<	110	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
<	210	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
>=	210	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
	Totals	3.23	3.37	4.99	2.79	5.72	11.01	9.98	3.67	3.96	4.25	10.42	14.24	11.30	7.63	1.90	1.46	

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
<	50	22	23	34	19	39	75	68	25	27	29	71	97	77	52	13	10	681
<	110																	
<	210																	
>=	210																	
	Totals	22	23	34	19	39	75	68	25	27	29	71	97	77	52	13	10	

Calm : .00 %

Total # Operational Hours : 681

Logger : 01 Parameter : NO_

Class Limits (PPB)

>= 210

< 210

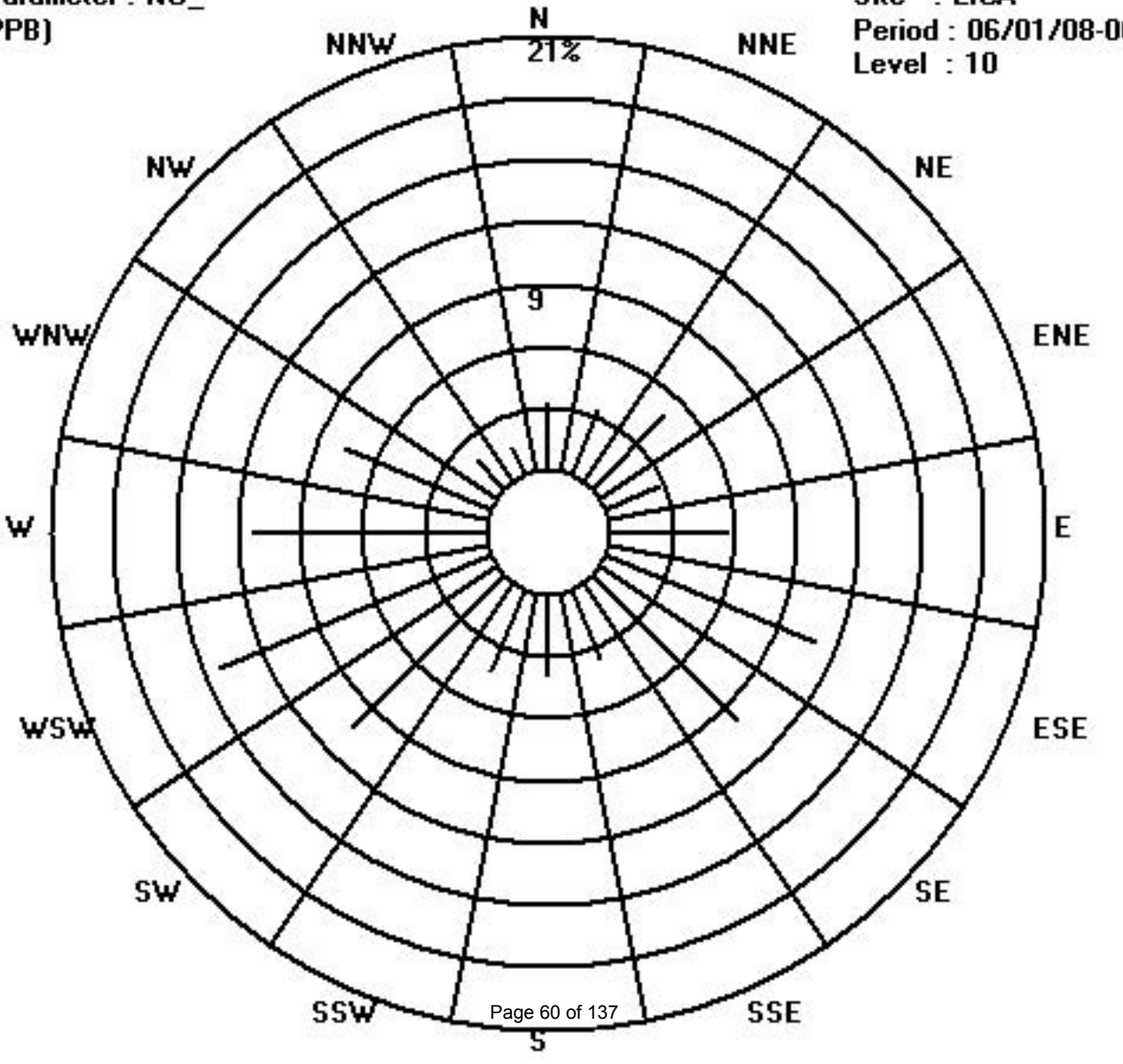
< 110

< 50

Site : LICA

Period : 06/01/08-06/30/08

Level : 10



LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

JUNE 2008

OXIDES OF NITROGEN MAX instantaneous maximum in ppb

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	6	5	3	3	26	27	11	9	3	1	2	2	1	2	4	1	**IZS**	2	8	2	8	29	3	3	29	7.0	24
2	2	1	4	7	6	4	4	5	2	4	3	4	2	3	8	**IZS**	7	2	4	3	7	6	4	5	8	4.2	24
3	9	6	7	5	10	9	11	20	11	10	31	4	4	11	**IZS**	5	1	2	1	3	11	12	1	2	31	8.1	24
4	3	5	11	10	7	10	**C**	**C**	**C**	**C**	**C**	**C**	**C**	**IZS**	3	1	3	11	3	10	11	17	9	5	17	7.4	24
5	2	2	6	7	6	15	6	8	22	4	**M**	2	**IZS**	21	3	7	7	16	1	3	5	4	3	3	22	7.0	23
6	3	3	3	3	4	14	25	18	14	57	7	**IZS**	3	9	2	4	14	3	3	8	13	11	10	9	57	10.4	24
7	11	11	7	8	5	5	6	4	9	6	**IZS**	3	2	1	5	2	1	2	5	6	10	13	7	7	13	5.9	24
8	6	5	8	4	6	8	4	3	3	**IZS**	4	2	2	2	2	3	9	4	2	5	3	13	3	3	13	4.5	24
9	4	5	5	6	6	15	5	8	**IZS**	4	1	1	3	5	7	2	2	6	2	2	6	5	12	8	15	5.2	24
10	3	3	4	7	6	7	4	**IZS**	4	8	5	2	11	9	9	12	6	2	4	3	10	5	6	5	12	5.9	24
11	9	5	5	4	5	30	**IZS**	11	5	7	15	3	6	5	3	5	4	24	1	5	10	9	8	9	30	8.2	24
12	8	9	9	5	6	**IZS**	6	14	6	7	5	2	1	1	6	6	6	3	3	4	2	3	7	6	14	5.4	24
13	8	6	6	8	**IZS**	7	9	12	9	8	5	7	3	6	3	2	5	4	4	3	6	6	10	3	12	6.1	24
14	4	8	5	**IZS**	3	4	5	5	1	1	2	3	2	3	3	2	1	1	2	2	4	2	3	5	8	3.1	24
15	4	7	**IZS**	4	5	11	5	5	3	2	1	1	1	1	1	1	1	2	1	2	5	4	4	5	11	3.3	24
16	4	**IZS**	7	4	7	5	5	8	8	4	2	1	1	1	1	1	2	2	4	4	**83**	18	5	7	**83**	8.0	24
17	**IZS**	4	6	4	5	17	14	10	7	6	6	3	15	3	13	8	9	7	1	1	3	2	3	**IZS**	17	6.7	24
18	5	5	6	6	10	7	5	5	6	2	2	2	4	2	2	2	1	1	1	6	5	7	**IZS**	5	10	4.2	24
19	4	3	3	2	2	4	6	10	3	3	4	2	1	1	1	6	4	12	3	3	2	**IZS**	7	5	12	4.0	24
20	4	3	4	6	10	8	11	5	4	4	2	1	9	1	3	2	1	2	2	2	**IZS**	8	8	6	11	4.6	24
21	5	5	5	5	5	15	14	3	2	6	4	5	1	1	2	2	3	6	3	**IZS**	6	9	8	5	15	5.2	24
22	4	4	6	3	7	3	5	5	6	2	3	3	3	6	7	2	6	3	**IZS**	2	2	1	4	2	7	3.9	24
23	1	2	2	2	3	3	3	3	6	10	2	3	2	1	2	1	1	**IZS**	1	1	35	6	5	6	35	4.4	24
24	3	6	6	7	6	17	17	5	9	26	12	1	1	10	2	3	**IZS**	7	2	4	2	27	6	6	27	8.0	24
25	6	6	5	5	4	4	4	4	5	4	5	5	2	3	2	**IZS**	1	1	1	7	4	7	6	6	7	4.2	24
26	4	5	5	6	5	6	6	6	8	8	3	2	3	5	**IZS**	3	4	4	5	6	4	3	2	3	8	4.6	24
27	3	2	2	5	5	5	6	16	6	4	2	2	1	**IZS**	1	5	2	1	1	3	6	4	6	6	16	4.1	24
28	6	5	3	4	3	8	5	3	10	2	2	2	**IZS**	1	2	1	2	1	2	12	2	4	4	5	12	3.9	24
29	2	6	3	2	2	2	2	1	2	2	10	**IZS**	2	3	3	3	2	2	3	5	6	7	8	7	10	3.7	24
30	6	6	4	10	12	9	9	8	6	3	**IZS**	3	4	2	2	1	1	1	1	2	1	9	1	3	12	4.5	24
HOURLY MAX	11	11	11	10	26	30	25	20	22	57	31	7	15	21	13	12	14	24	8	12	83	29	12	9			
HOURLY AVG	4.8	4.9	5.2	5.2	6.4	9.6	7.6	7.6	6.4	7.3	5.4	2.6	3.3	4.3	3.6	3.3	3.8	4.6	2.6	4.1	9.4	8.7	5.6	5.2			

STATUS FLAG CODES

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

MONTHLY SUMMARY

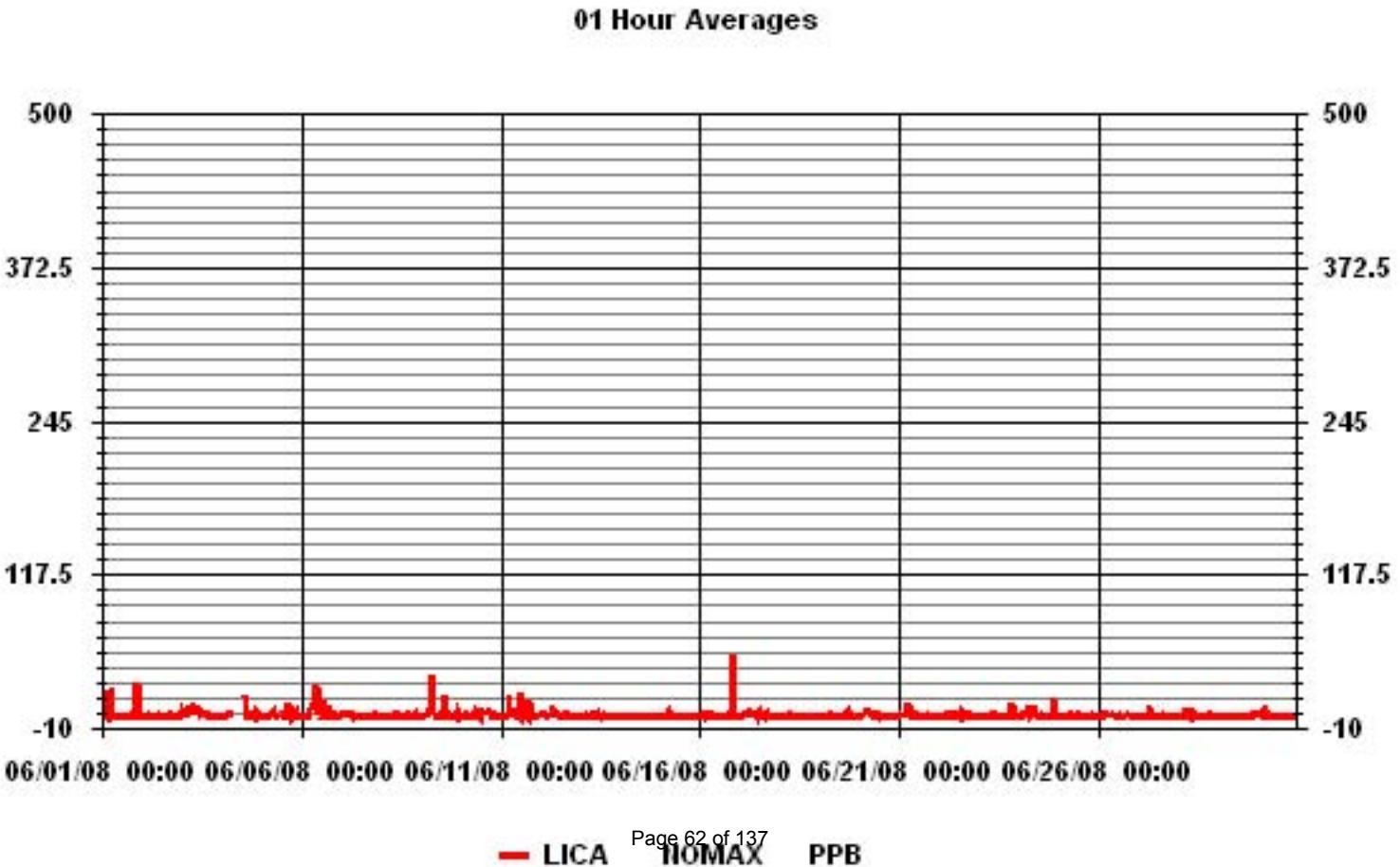
NUMBER OF NON-ZERO READINGS: 681

MAXIMUM INSTANTANEOUS VALUE: 83 PPB @ HOUR(S) 21 ON DAY(S) 16

IZS CALIBRATION TIME: 31 HRS OPERATIONAL TIME: 719 HRS

MONTHLY CALIBRATION TIME: 7 HRS

STANDARD DEVIATION: 5.69


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

Oxides of Nitrogen

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

JUNE 2008

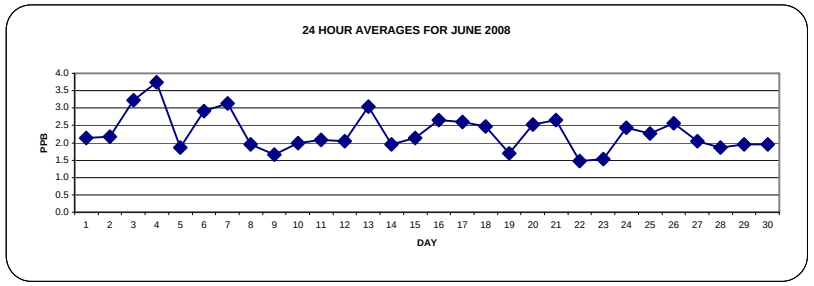
OXIDES OF NITROGEN hourly averages in ppb

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	3	2	2	2	3	10	6	5	1	0	0	0	1	1	1	0	**IZS**	1	1	1	3	4	1	1	10	2.1	24
2	1	1	1	2	2	2	3	2	2	1	1	2	1	1	3	**IZS**	3	2	2	3	4	4	3	4	4	2.2	24
3	4	4	3	3	3	6	6	**11**	7	6	3	1	1	1	**IZS**	1	1	1	1	1	5	3	1	1	**11**	3.2	24
4	2	2	6	7	5	6	**C**	**C**	**C**	**C**	**C**	**C**	**C**	**IZS**	1	0	1	1	1	3	7	9	6	3	9	**3.8**	24
5	1	1	2	2	2	4	3	3	3	1	**M**	1	**IZS**	2	1	2	2	1	1	1	2	3	1	2	4	1.9	23
6	2	1	2	2	2	4	4	3	2	3	2	**IZS**	1	2	1	2	2	2	2	4	6	7	6	5	7	2.9	24
7	7	6	5	3	3	3	4	3	6	4	**IZS**	1	1	1	1	0	0	1	2	4	4	6	4	3	7	3.1	24
8	3	2	4	3	3	5	2	2	1	**IZS**	1	1	1	1	1	1	3	1	1	1	2	2	2	2	5	2.0	24
9	2	2	2	2	3	7	3	3	**IZS**	1	1	0	0	0	1	1	0	1	0	1	2	3	2	1	7	1.7	24
10	2	3	3	3	4	3	2	**IZS**	2	1	1	1	1	1	2	3	1	0	1	1	2	3	3	3	4	2.0	24
11	3	2	2	2	3	5	**IZS**	3	3	1	1	1	1	1	1	1	1	1	0	1	3	4	4	4	5	2.1	24
12	3	3	4	3	4	**IZS**	5	4	3	3	1	0	0	0	0	1	1	1	1	2	1	1	3	3	5	2.0	24
13	3	3	4	3	**IZS**	4	5	5	6	5	3	2	2	2	2	1	2	1	2	1	4	3	5	2	6	3.0	24
14	3	4	3	**IZS**	2	3	4	1	1	1	1	2	2	2	2	1	1	1	1	2	2	1	2	3	4	2.0	24
15	3	4	**IZS**	3	4	5	4	4	2	1	1	1	1	1	1	0	1	1	1	1	2	2	3	3	5	2.1	24
16	3	**IZS**	3	3	4	5	4	5	3	2	1	1	1	1	1	1	1	1	2	2	6	5	3	3	6	2.7	24
17	**IZS**	3	2	1	3	8	5	4	5	3	3	2	2	1	2	3	3	1	1	1	1	1	2	**IZS**	8	2.6	24
18	3	4	5	5	8	5	4	4	3	1	1	1	1	1	1	1	0	0	0	1	2	3	**IZS**	3	8	2.5	24
19	3	2	2	1	1	1	3	4	2	2	2	1	1	0	0	1	1	3	2	1	1	**IZS**	2	3	4	1.7	24
20	2	2	3	4	6	6	8	3	2	2	1	1	1	0	1	1	1	1	1	1	**IZS**	3	4	4	8	2.5	24
21	4	4	4	3	4	7	4	2	1	2	2	1	1	1	1	1	1	1	1	**IZS**	4	4	5	3	7	2.7	24
22	2	2	3	2	2	2	3	2	2	1	1	1	1	1	1	1	2	1	**IZS**	1	1	1	1	0	3	1.5	24
23	0	2	1	1	2	2	2	2	2	2	1	1	0	0	0	0	0	**IZS**	0	1	7	3	3	3	7	1.5	24
24	2	4	4	3	3	6	7	3	3	3	1	0	0	1	1	1	**IZS**	1	1	1	1	3	3	4	7	2.4	24
25	4	4	4	4	3	3	3	3	3	2	2	1	1	0	1	**IZS**	1	0	0	1	2	4	3	3	4	2.3	24
26	3	3	4	3	4	4	4	4	5	4	1	1	1	1	**IZS**	2	2	2	2	3	2	1	1	2	5	2.6	24
27	1	1	1	3	5	4	5	5	3	1	1	1	1	**IZS**	0	0	0	0	0	1	4	2	4	4	5	2.0	24
28	4	3	2	3	2	6	4	3	2	2	1	1	**IZS**	1	0	0	1	1	1	1	2	1	1	1	6	1.9	24
29	2	2	2	2	2	2	1	1	1	1	1	**IZS**	1	2	2	2	2	2	1	2	3	4	4	3	4	2.0	24
30	3	3	3	3	4	4	7	7	2	1	**IZS**	1	1	1	1	1	0	0	0	1	0	2	0	0	7	2.0	24
HOURLY MAX	7	6	6	7	8	10	8	11	7	6	3	2	2	2	3	3	3	3	2	4	7	9	6	5			
HOURLY AVG	2.7	2.7	3.0	2.8	3.3	4.6	4.1	3.6	2.8	2.0	1.3	1.0	1.0	1.0	1.1	1.0	1.2	1.0	1.0	1.6	2.9	3.2	2.8	2.6			

STATUS FLAG CODES

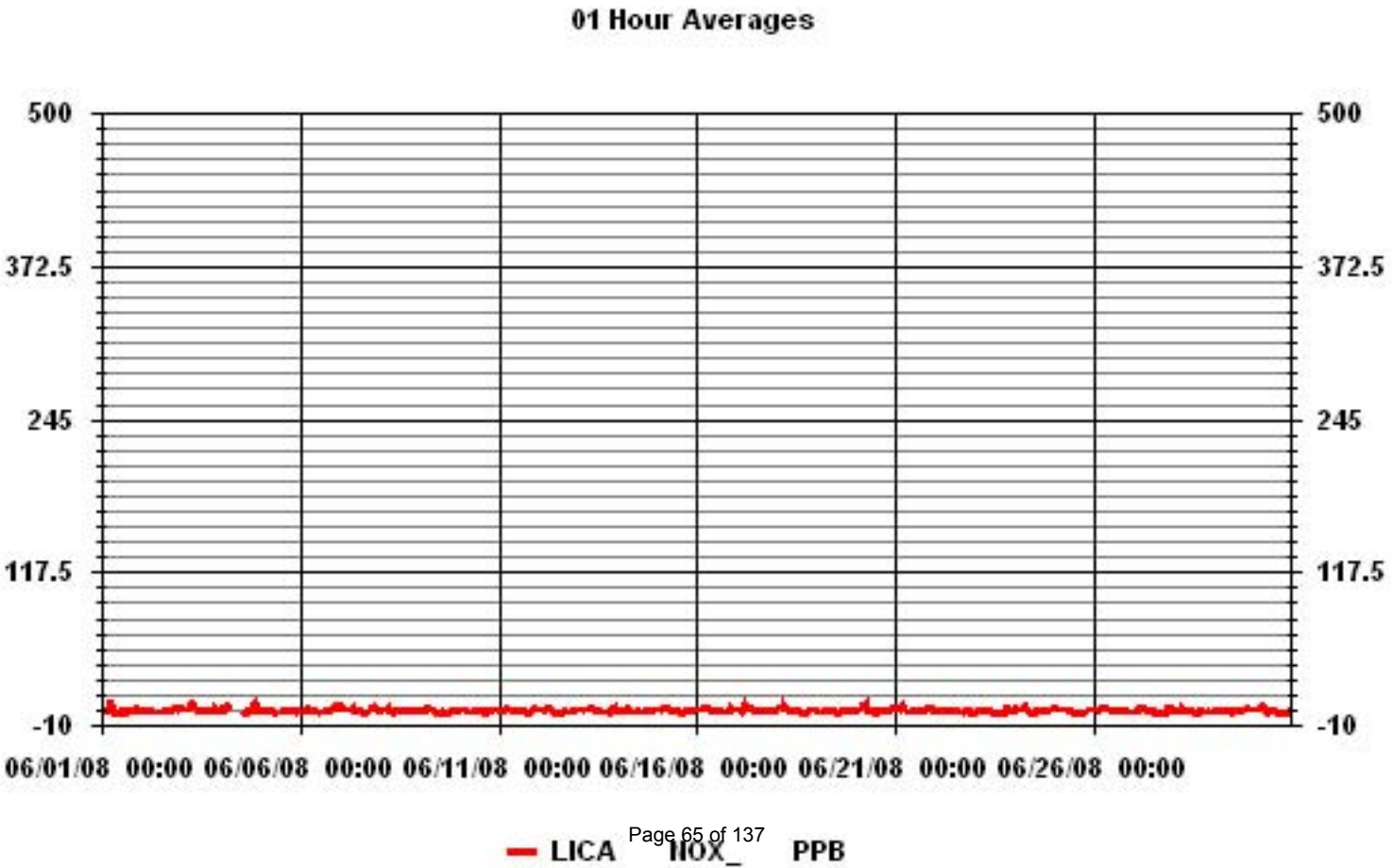
S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	- MISSING DATA
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE



MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:	630					
MAXIMUM 1-HR AVERAGE:	11	PPB	@ HOUR(S)	8	ON DAY(S)	3
MAXIMUM 24-HR AVERAGE:	3.8	PPB			ON DAY(S)	4

IZS CALIBRATION TIME:	31	HRS	OPERATIONAL TIME:	719	HRS
MONTHLY CALIBRATION TIME:	7	HRS	AMD OPERATION UPTIME	99.9	%
STANDARD DEVIATION	1.67		MONTHLY AVERAGE	2.28	PPB


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

LICA
NOX_ / WD Joint Frequency Distribution (Percent)

June 2008

Distribution By % Of Samples

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

Wind Parameter : WD
Instrument Height : 10 Meters

Direction

	Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
<	50	3.23	3.37	4.99	2.79	5.72	11.01	9.98	3.67	3.96	4.25	10.42	14.24	11.30	7.63	1.90	1.46	100.00
<	110	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
<	210	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
>=	210	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
	Totals	3.23	3.37	4.99	2.79	5.72	11.01	9.98	3.67	3.96	4.25	10.42	14.24	11.30	7.63	1.90	1.46	

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
<	50	22	23	34	19	39	75	68	25	27	29	71	97	77	52	13	10	681
<	110																	
<	210																	
>=	210																	
	Totals	22	23	34	19	39	75	68	25	27	29	71	97	77	52	13	10	

Calm : .00 %

Total # Operational Hours : 681

Logger : 01 Parameter : NOX_

Class Limits (PPB)

>= 210

< 210

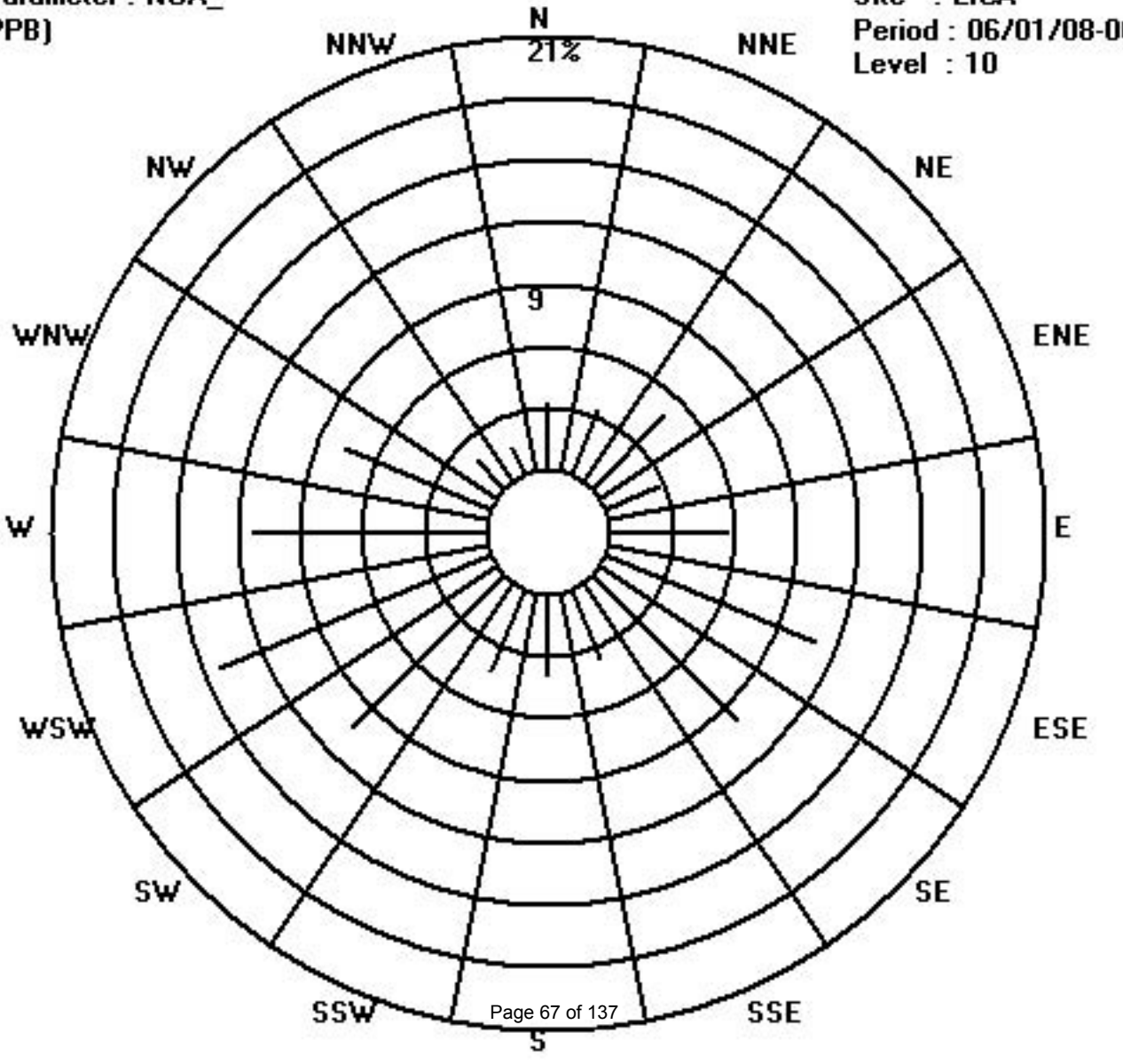
< 110

< 50

Site : LICA

Period : 06/01/08-06/30/08

Level : 10



LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

JUNE 2008

OXIDES OF NITROGEN MAX instantaneous maximum in ppb

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	6	5	3	3	26	27	11	9	3	1	2	2	1	2	4	1	**IZS**	2	8	2	8	29	3	3	29	7.0	24
2	2	1	4	7	6	4	4	5	2	4	3	4	2	3	8	**IZS**	7	2	4	3	7	6	4	5	8	4.2	24
3	9	6	7	5	10	9	11	20	11	10	31	4	4	11	**IZS**	5	1	2	1	3	11	12	1	2	31	8.1	24
4	3	5	11	10	7	10	**C**	**C**	**C**	**C**	**C**	**C**	**C**	**IZS**	3	1	3	11	3	10	11	17	9	5	17	7.4	24
5	2	2	6	7	6	15	6	8	22	4	**M**	2	**IZS**	21	3	7	7	16	1	3	5	4	3	3	22	7.0	23
6	3	3	3	3	4	14	25	18	14	57	7	**IZS**	3	9	2	4	14	3	3	8	13	11	10	9	57	10.4	24
7	11	11	7	8	5	5	6	4	9	6	**IZS**	3	2	1	5	2	1	2	5	6	10	13	7	7	13	5.9	24
8	6	5	8	4	6	8	4	3	3	**IZS**	4	2	2	2	2	3	9	4	2	5	3	13	3	3	13	4.5	24
9	4	5	5	6	6	15	5	8	**IZS**	4	1	1	3	5	7	2	2	6	2	2	6	5	12	8	15	5.2	24
10	3	3	4	7	6	7	4	**IZS**	4	8	5	2	11	9	9	12	6	2	4	3	10	5	6	5	12	5.9	24
11	9	5	5	4	5	30	**IZS**	11	5	7	15	3	6	5	3	5	4	24	1	5	10	9	8	9	30	8.2	24
12	8	9	9	5	6	**IZS**	6	14	6	7	5	2	1	1	6	6	6	3	3	4	2	3	7	6	14	5.4	24
13	8	6	6	8	**IZS**	7	9	12	9	8	5	7	3	6	3	2	5	4	4	3	6	6	10	3	12	6.1	24
14	4	8	5	**IZS**	3	4	5	5	1	1	2	3	2	3	3	2	1	1	2	2	4	2	3	5	8	3.1	24
15	4	7	**IZS**	4	5	11	5	5	3	2	1	1	1	1	1	1	1	2	1	2	5	4	4	5	11	3.3	24
16	4	**IZS**	7	4	7	5	5	8	8	4	2	1	1	1	1	1	2	2	4	4	**83**	18	5	7	**83**	8.0	24
17	**IZS**	4	6	4	5	17	14	10	7	6	6	3	15	3	13	8	9	7	1	1	3	2	3	**IZS**	17	6.7	24
18	5	5	6	6	10	7	5	5	6	2	2	2	4	2	2	2	1	1	1	6	5	7	**IZS**	5	10	4.2	24
19	4	3	3	2	2	4	6	10	3	3	4	2	1	1	1	6	4	12	3	3	2	**IZS**	7	5	12	4.0	24
20	4	3	4	6	10	8	11	5	4	4	2	1	9	1	3	2	1	2	2	2	**IZS**	8	8	6	11	4.6	24
21	5	5	5	5	5	15	14	3	2	6	4	5	1	1	2	2	3	6	3	**IZS**	6	9	8	5	15	5.2	24
22	4	4	6	3	7	3	5	5	6	2	3	3	3	6	7	2	6	3	**IZS**	2	2	1	4	2	7	3.9	24
23	1	2	2	2	3	3	3	3	6	10	2	3	2	1	2	1	1	**IZS**	1	1	35	6	5	6	35	4.4	24
24	3	6	6	7	6	17	17	5	9	26	12	1	1	10	2	3	**IZS**	7	2	4	2	27	6	6	27	8.0	24
25	6	6	5	5	4	4	4	4	5	4	5	5	2	3	2	**IZS**	1	1	1	7	4	7	6	6	7	4.2	24
26	4	5	5	6	5	6	6	6	8	8	3	2	3	5	**IZS**	3	4	4	5	6	4	3	2	3	8	4.6	24
27	3	2	2	5	5	5	6	16	6	4	2	2	1	**IZS**	1	5	2	1	1	3	6	4	6	6	16	4.1	24
28	6	5	3	4	3	8	5	3	10	2	2	2	**IZS**	1	2	1	2	1	2	12	2	4	4	5	12	3.9	24
29	2	6	3	2	2	2	2	1	2	2	10	**IZS**	2	3	3	3	2	2	3	5	6	7	8	7	10	3.7	24
30	6	6	4	10	12	9	9	8	6	3	**IZS**	3	4	2	2	1	1	1	1	2	1	9	1	3	12	4.5	24
HOURLY MAX	11	11	11	10	26	30	25	20	22	57	31	7	15	21	13	12	14	24	8	12	83	29	12	9			
HOURLY AVG	4.8	4.9	5.2	5.2	6.4	9.6	7.6	7.6	6.4	7.3	5.4	2.6	3.3	4.3	3.6	3.3	3.8	4.6	2.6	4.1	9.4	8.7	5.6	5.2			

STATUS FLAG CODES

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

MONTHLY SUMMARY

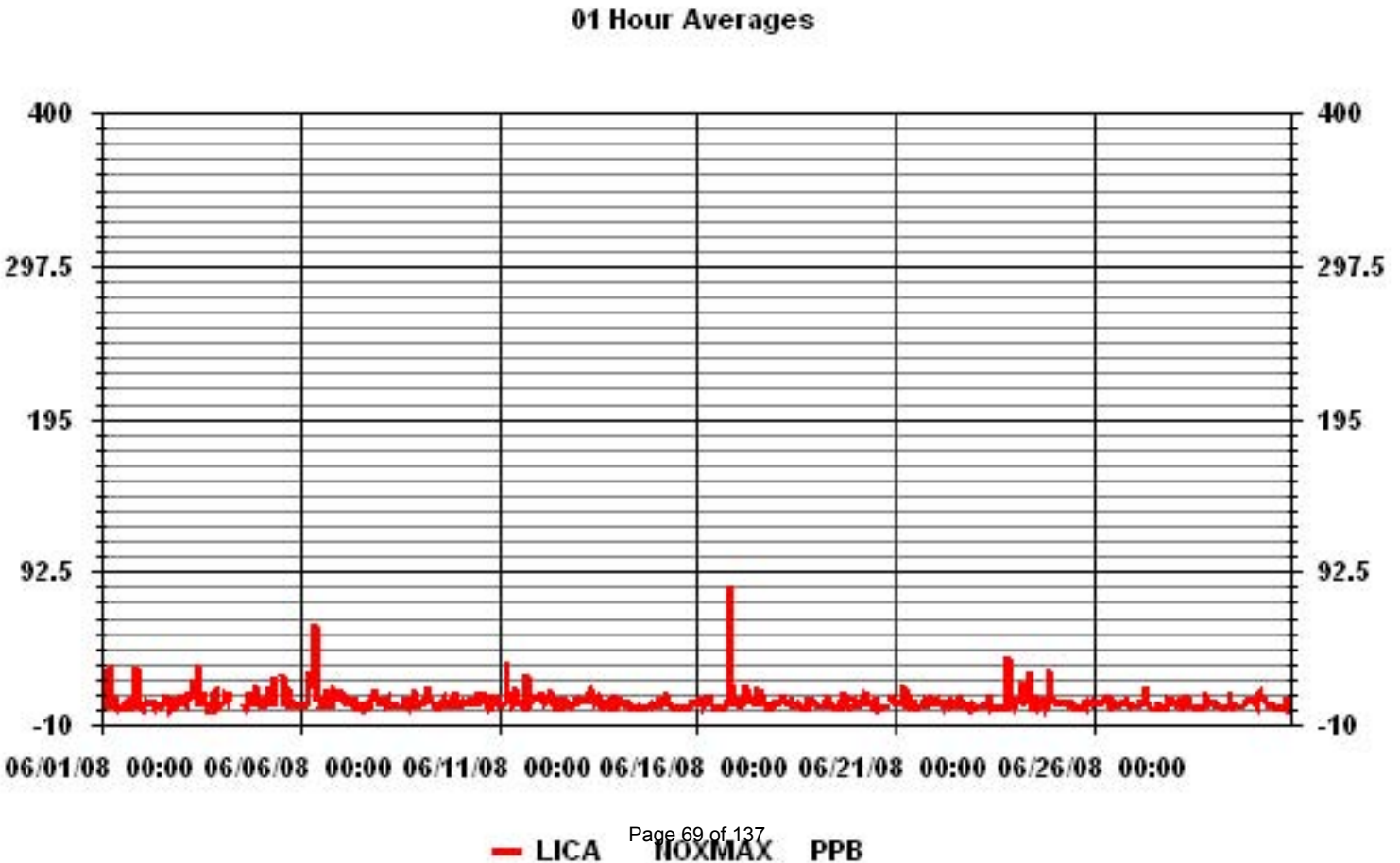
NUMBER OF NON-ZERO READINGS: 681

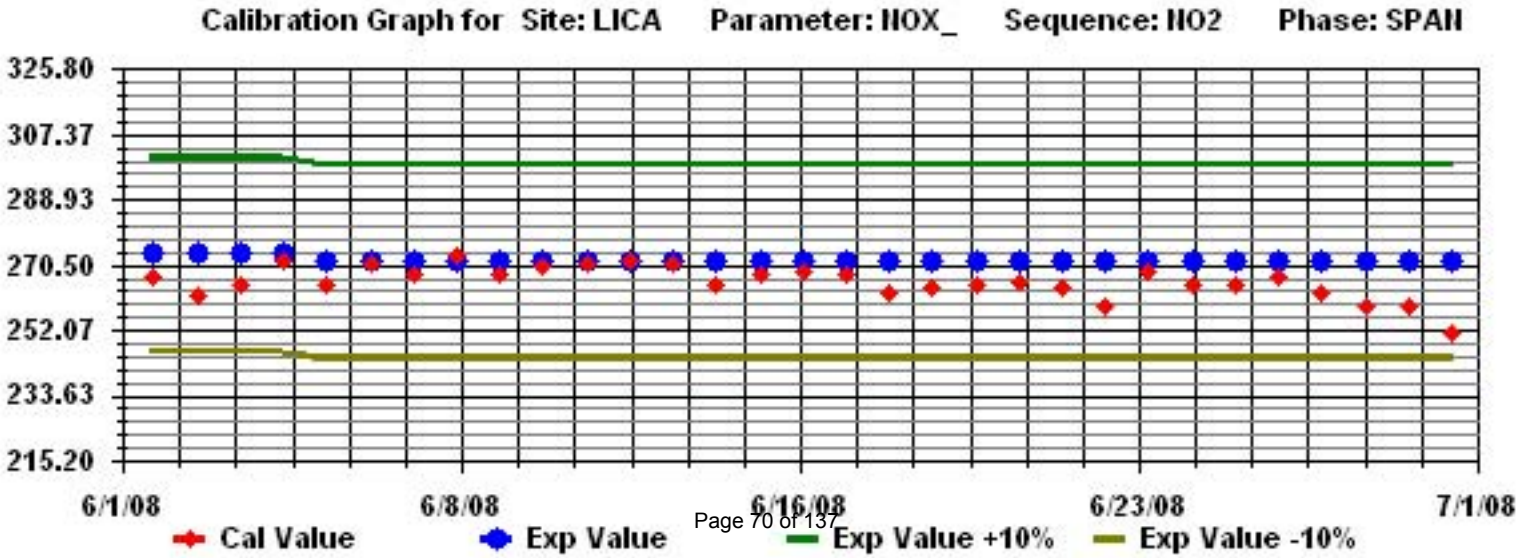
MAXIMUM INSTANTANEOUS VALUE: 83 PPB @ HOUR(S) 21 ON DAY(S) 16

IZS CALIBRATION TIME: 31 HRS OPERATIONAL TIME: 719 HRS

MONTHLY CALIBRATION TIME: 7 HRS

STANDARD DEVIATION: 5.69


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


Calibration Graph for Site: LICA Parameter: NOX_ Sequence: NO2 Phase: SPAN
325.80
307.37
288.93
270.50
252.07
233.63
215.20
6/1/08
6/8/08
6/16/08
6/23/08
7/1/08
Cal Value
Exp Value
Exp Value +10%
Exp Value -10%

Ozone

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

JUNE 2008

OZONE (O_3) hourly averages in ppb

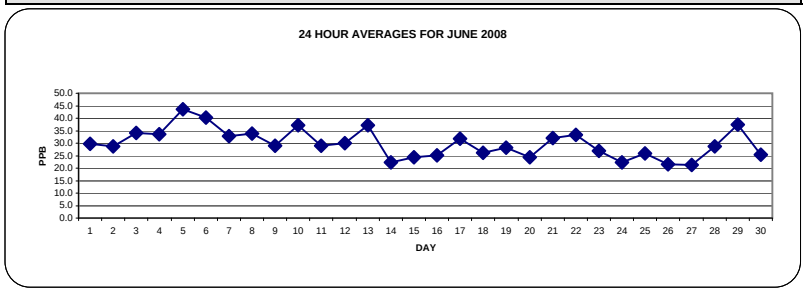
MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	14	10	7	5	3	4	19	28	35	39	39	42	44	44	45	46	**IZS**	46	46	43	33	29	33	30	46	29.7	24
2	29	28	29	23	16	20	28	34	40	43	44	42	45	47	39	**IZS**	33	32	28	29	17	7	6	4	47	28.8	24
3	1	0	0	0	0	2	10	19	32	40	49	54	57	57	**IZS**	61	61	61	59	51	32	44	51	44	61	34.1	24
4	34	26	23	13	7	13	32	39	39	42	43	44	46	**IZS**	46	47	48	51	52	45	26	15	13	28	52	33.6	24
5	36	34	27	29	18	28	33	**C**	**C**	**C**	**C**	57	**IZS**	59	59	54	50	53	53	50	48	45	47	46	59	**43.5**	24
6	44	42	36	35	35	35	36	38	42	48	51	**IZS**	56	56	55	51	52	53	50	44	26	18	13	10	56	40.3	24
7	7	7	5	6	4	4	12	22	24	34	**IZS**	49	52	53	54	52	52	51	50	46	47	41	41	44	54	32.9	24
8	41	40	32	24	22	22	22	25	29	**IZS**	31	35	35	39	39	41	42	38	38	36	36	38	37	34	42	33.7	24
9	22	12	10	6	3	7	19	25	**IZS**	38	40	41	41	42	41	42	42	41	40	38	33	28	29	27	42	29.0	24
10	18	15	17	20	25	28	31	**IZS**	40	47	48	49	51	52	50	50	51	49	48	45	41	35	26	18	52	37.1	24
11	15	12	11	9	6	8	**IZS**	35	35	39	41	43	43	44	44	44	45	41	41	37	27	20	16	12	45	29.0	24
12	9	8	4	3	3	**IZS**	17	26	29	34	38	40	41	43	43	43	43	42	40	37	44	41	32	29	44	30.0	24
13	23	23	21	16	**IZS**	19	23	28	32	40	48	53	58	61	**62**	51	51	46	44	43	34	27	26	24	**62**	37.1	24
14	16	16	17	**IZS**	18	16	18	27	30	31	28	24	24	23	24	29	30	29	26	24	20	17	11	13	31	22.2	24
15	12	5	**IZS**	10	7	9	14	15	21	31	38	38	35	35	35	36	36	37	37	34	27	22	16	9	38	24.3	24
16	10	**IZS**	9	6	3	11	17	16	20	24	30	32	34	35	37	41	43	41	40	43	36	25	15	8	43	25.0	24
17	**IZS**	6	10	6	4	10	23	23	26	29	35	42	47	50	49	50	47	42	41	44	43	40	32	**IZS**	50	31.8	24
18	28	24	21	17	13	15	15	20	27	33	35	37	35	35	37	37	35	35	34	29	19	11	**IZS**	7	37	26.0	24
19	13	30	27	32	32	32	29	31	34	33	30	32	33	36	39	35	29	33	28	28	23	**IZS**	6	3	39	28.2	24
20	1	1	2	2	1	8	14	22	28	34	37	38	41	40	39	41	40	42	44	40	**IZS**	21	13	10	44	24.3	24
21	7	2	1	0	1	2	17	34	36	43	48	50	52	56	56	52	52	52	52	**IZS**	37	30	25	34	56	32.1	24
22	34	32	30	33	38	35	33	32	32	31	34	38	39	38	37	36	35	37	**IZS**	35	28	26	23	31	39	33.3	24
23	32	23	22	20	18	16	17	21	25	27	34	37	39	40	40	40	40	**IZS**	41	38	19	13	11	8	41	27.0	24
24	4	3	2	2	1	4	18	23	25	27	27	29	32	36	41	42	**IZS**	36	37	34	30	22	19	19	42	22.3	24
25	22	23	23	24	25	24	24	24	24	24	24	29	33	34	34	**IZS**	36	36	36	32	24	15	14	14	36	26.0	24
26	12	11	12	6	9	15	18	21	24	26	31	34	36	33	**IZS**	32	29	24	22	18	23	22	20	17	36	21.5	24
27	17	14	14	11	9	12	14	17	20	25	28	32	32	**IZS**	29	29	29	29	30	32	25	17	12	11	32	21.2	24
28	7	3	3	2	2	5	15	22	29	41	43	42	**IZS**	41	42	44	46	46	41	39	35	35	38	39	46	28.7	24
29	40	38	35	33	31	30	33	38	40	41	43	**IZS**	49	51	57	59	59	56	42	36	25	12	8	6	59	37.5	24
30	3	2	1	0	0	2	13	23	34	41	**IZS**	47	44	37	35	36	37	39	38	36	34	27	27	25	47	25.3	24
HOURLY MAX	44	42	36	35	38	35	36	39	42	48	51	57	58	61	62	61	61	61	59	51	48	45	51	46			
HOURLY AVG	19.0	16.9	15.6	13.6	12.2	15.0	21.2	26.0	30.4	35.2	37.7	40.4	41.9	43.5	43.1	43.6	42.6	42.0	40.6	37.4	30.8	25.6	22.8	20.8			

STATUS FLAG CODES

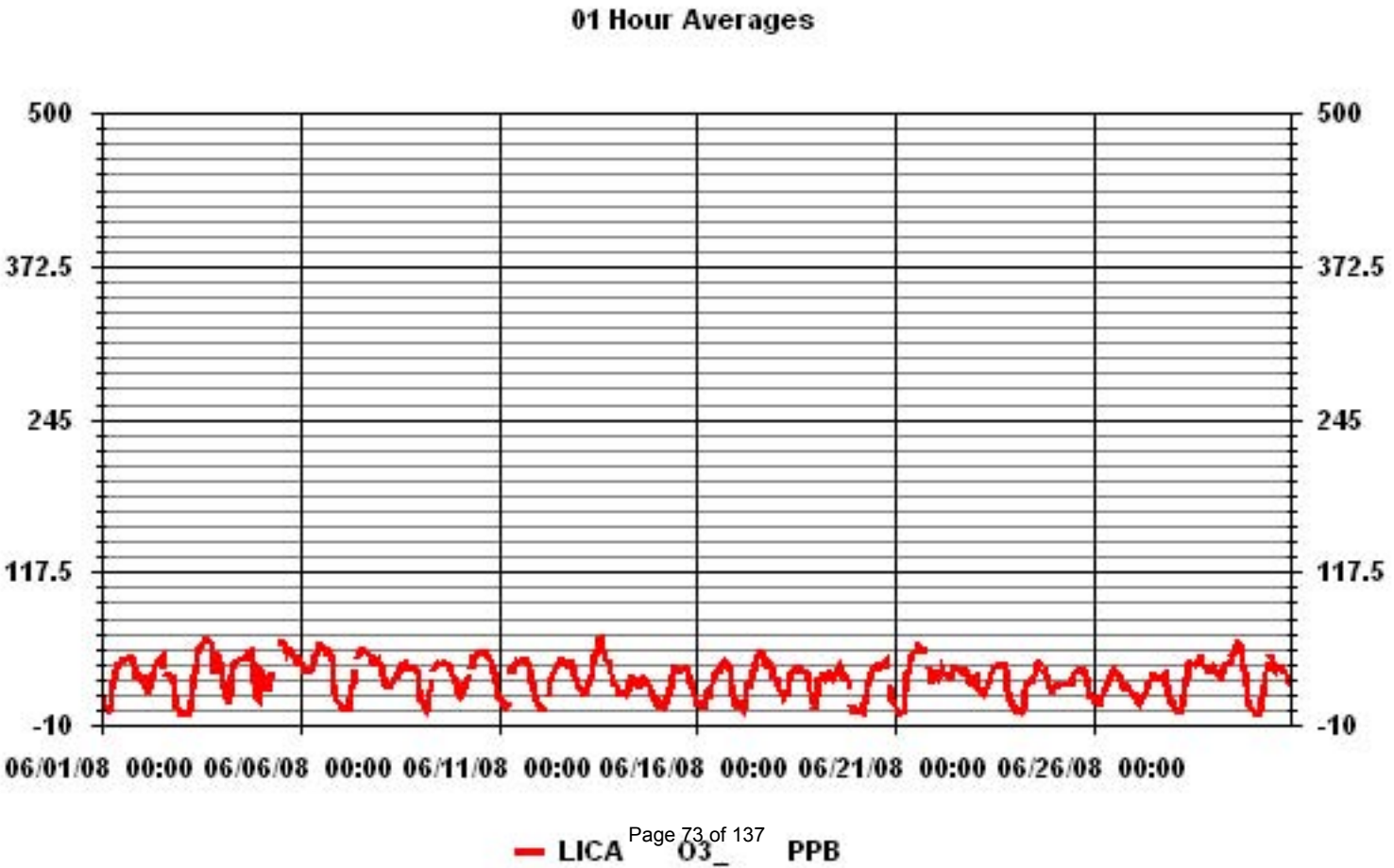
S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	- MISSING DATA
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE

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



MONTHLY SUMMARY

NUMBER OF 1-HR EXCEEDENCES:	0					
NUMBER OF NON-ZERO READINGS:	678					
MAXIMUM 1-HR AVERAGE:	62	PPB	@ HOUR(S)	15	ON DAY(S)	13
MAXIMUM 24-HR AVERAGE:	43.5	PPB			ON DAY(S)	5
					VAR-VARIOUS	
IZS CALIBRATION TIME:	31	HRS	OPERATIONAL TIME:		720	HRS
MONTHLY CALIBRATION TIME:	4	HRS	AMD OPERATION UPTIME		100.0	%
STANDARD DEVIATION	14.60		MONTHLY AVERAGE		29.77	PPB


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

LICA
O3_ / WD Joint Frequency Distribution (Percent)

June 2008

Distribution By % Of Samples

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

Wind Parameter : WD
Instrument Height : 10 Meters

Direction

	Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
<	50	2.77	3.35	4.81	2.33	4.37	10.21	8.61	2.91	3.64	3.94	9.48	13.72	10.80	7.44	1.60	1.16	91.24
<	110	.72	.58	.14	.43	1.31	.72	.87	.72	.29	.29	.87	.43	.43	.14	.29	.43	8.75
<	210	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
>=	210	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
	Totals	3.50	3.94	4.96	2.77	5.69	10.94	9.48	3.64	3.94	4.23	10.36	14.16	11.24	7.59	1.89	1.60	

Calm : .00 %

Total # Operational Hours : 685

Distribution By Samples

Direction

	Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
<	50	19	23	33	16	30	70	59	20	25	27	65	94	74	51	11	8	625
<	110	5	4	1	3	9	5	6	5	2	2	6	3	3	1	2	3	60
<	210																	
>=	210																	
	Totals	24	27	34	19	39	75	65	25	27	29	71	97	77	52	13	11	

Calm : .00 %

Total # Operational Hours : 685

Logger : 01 Parameter : 03_

Class Limits (PPB)

>= 210

< 210

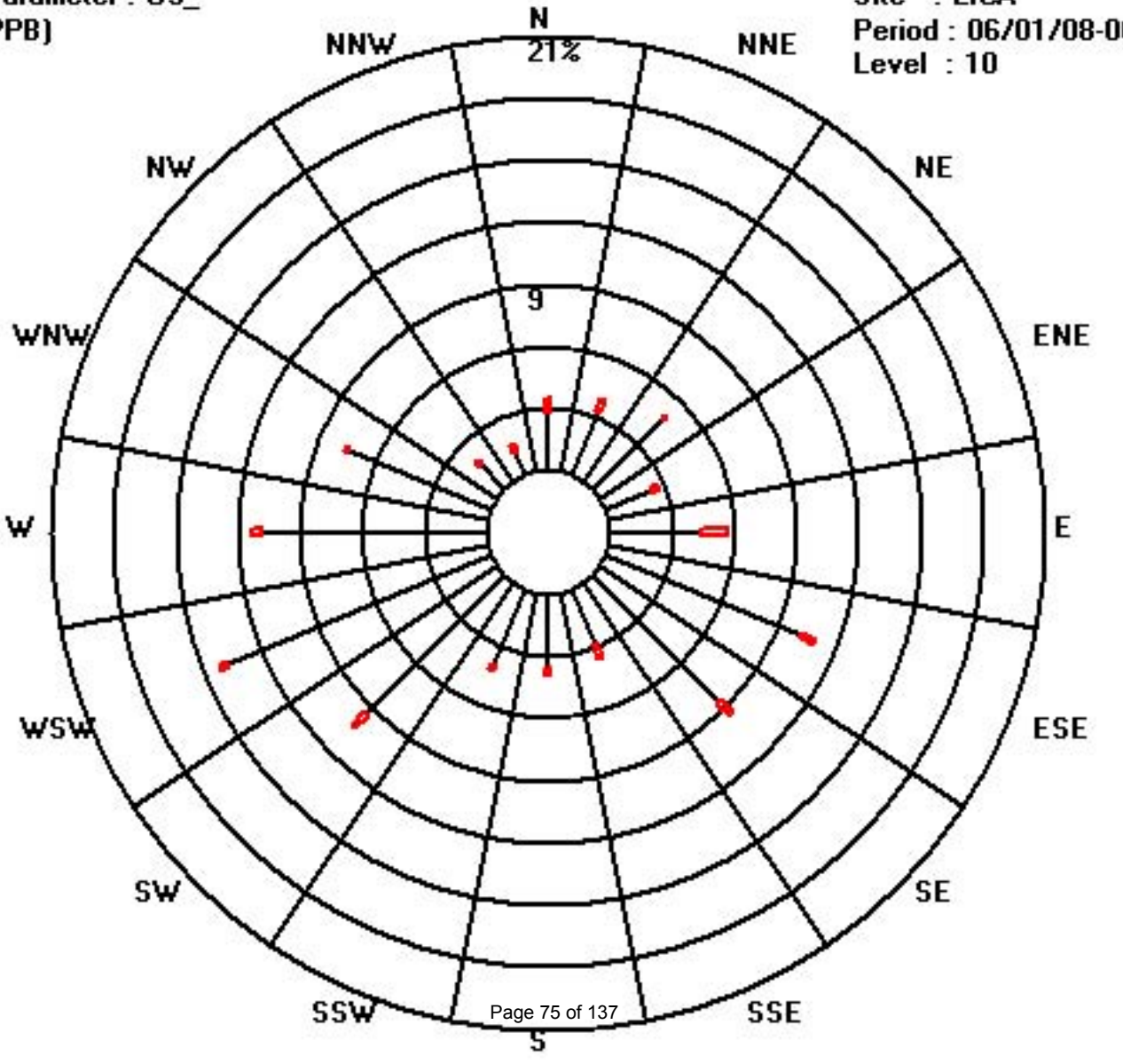
< 110

< 50

Site : LICA

Period : 06/01/08-06/30/08

Level : 10



LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

JUNE 2008

OZONE MAX instantaneous maximum in ppb

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	18	13	11	9	4	7	26	33	39	41	42	45	45	45	47	47	**IZS**	48	49	46	42	35	38	34	49	33.2	24
2	33	31	33	29	28	27	31	41	42	46	47	43	47	49	44	**IZS**	37	36	32	35	31	12	11	6	49	33.5	24
3	5	1	1	1	1	7	14	31	36	50	53	56	58	59	**IZS**	62	63	63	62	57	41	53	53	50	63	38.1	24
4	43	36	30	20	10	21	39	40	40	43	44	45	47	**IZS**	47	48	50	52	53	53	40	20	19	39	53	38.2	24
5	39	36	34	34	24	32	34	**C**	**C**	**C**	**C**	59	**IZS**	62	62	60	59	56	55	52	52	47	49	47	62	47.0	24
6	46	45	38	38	38	36	37	41	43	51	54	**IZS**	58	60	58	54	53	54	54	49	39	23	17	16	60	43.6	24
7	11	9	7	8	7	8	21	25	28	40	**IZS**	51	54	55	58	54	54	54	52	49	52	51	50	49	58	36.8	24
8	46	44	41	31	28	27	27	28	31	**IZS**	32	40	37	42	43	48	48	40	41	42	39	39	40	35	48	37.8	24
9	32	19	13	10	6	14	23	28	**IZS**	40	41	42	43	44	42	43	44	42	42	40	37	30	31	31	44	32.0	24
10	23	17	21	24	28	30	34	**IZS**	44	49	50	50	52	53	52	52	52	52	49	48	43	38	35	22	53	39.9	24
11	18	17	16	12	8	14	**IZS**	39	37	41	42	44	44	44	45	46	46	43	42	40	35	24	22	17	46	32.0	24
12	12	13	8	5	5	**IZS**	23	28	31	38	41	41	44	44	45	45	45	44	41	42	47	44	38	36	47	33.0	24
13	29	31	30	21	**IZS**	22	28	30	36	45	51	56	61	63	65	55	55	49	46	47	42	32	28	26	65	41.2	24
14	21	19	19	**IZS**	21	17	22	29	32	33	30	25	27	24	27	31	31	30	29	26	23	20	15	16	33	24.7	24
15	14	10	**IZS**	12	9	13	15	17	25	37	42	41	38	38	37	38	38	39	39	36	34	29	24	14	42	27.8	24
16	16	**IZS**	14	13	5	17	19	18	23	28	33	33	35	36	40	43	44	45	45	45	42	33	19	11	45	28.6	24
17	**IZS**	15	16	14	6	14	26	26	31	32	39	50	51	51	52	52	51	49	46	46	45	43	37	**IZS**	52	36.0	23
18	30	26	23	21	15	18	18	25	33	36	40	38	40	38	39	39	38	37	38	34	27	19	**IZS**	12	40	29.7	24
19	26	33	31	34	33	35	31	34	36	35	32	34	36	38	41	41	36	36	35	33	27	**IZS**	15	5	41	32.0	24
20	2	3	6	6	2	11	19	26	33	36	38	41	43	41	41	42	42	46	47	44	**IZS**	34	20	18	47	27.9	24
21	14	4	3	1	1	3	28	37	41	46	51	53	56	59	60	54	53	54	54	**IZS**	43	35	32	38	60	35.7	24
22	36	36	33	38	40	36	35	34	33	32	40	40	41	41	39	38	38	39	**IZS**	42	32	28	25	35	42	36.1	24
23	35	27	23	21	20	17	18	24	28	29	37	38	40	41	41	41	42	**IZS**	42	41	36	18	17	12	42	29.9	24
24	8	5	4	4	3	10	26	26	29	28	29	31	34	40	43	44	**IZS**	38	38	37	33	28	23	23	44	25.4	24
25	23	25	24	25	26	26	26	26	27	26	26	32	34	35	35	**IZS**	38	37	37	36	30	20	20	20	38	28.4	24
26	18	16	15	13	15	18	19	25	27	28	33	37	38	35	**IZS**	37	34	28	25	21	24	23	22	20	38	24.8	24
27	18	15	15	13	10	13	16	19	23	27	31	34	34	**IZS**	32	31	30	30	32	34	32	22	17	16	34	23.7	24
28	11	6	5	4	3	14	21	25	36	45	46	45	**IZS**	42	43	46	50	50	45	41	39	37	39	42	50	32.0	24
29	41	40	38	34	34	32	37	40	41	44	45	**IZS**	52	54	61	62	**83**	59	51	38	33	18	13	13	**83**	41.9	24
30	7	7	2	1	1	6	20	30	37	45	**IZS**	49	50	43	37	38	40	40	40	38	35	33	29	27	50	28.5	24
HOURLY MAX	46	45	41	38	40	36	39	41	44	51	54	59	61	63	65	62	83	63	62	57	52	53	53	50			
HOURLY AVG	23.3	20.7	19.1	17.1	14.9	18.8	25.3	29.5	33.6	38.3	40.3	42.6	44.3	45.6	45.6	46.1	46.2	44.5	43.5	41.1	37.1	30.6	27.5	25.2			

STATUS FLAG CODES

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

MONTHLY SUMMARY

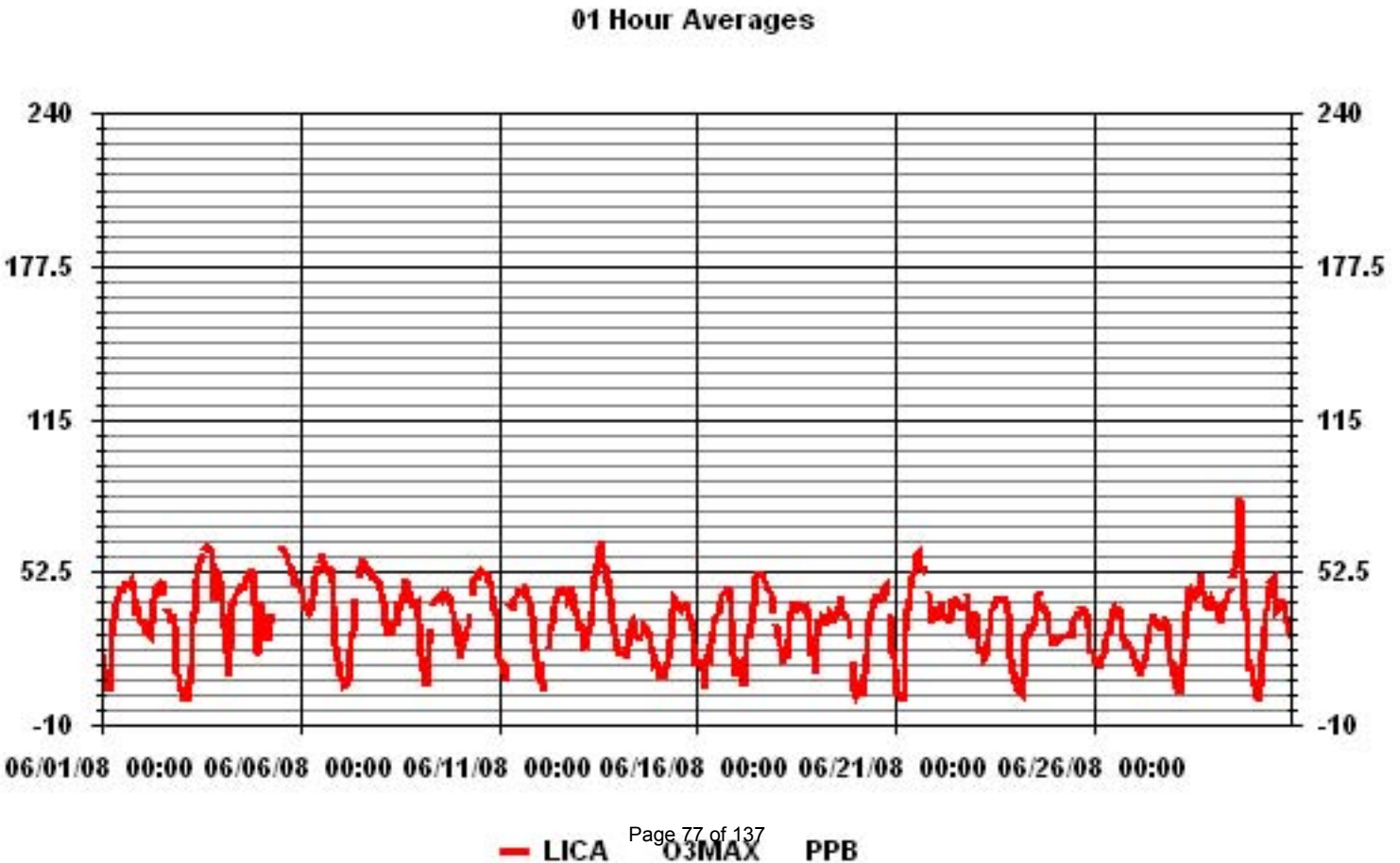
NUMBER OF NON-ZERO READINGS: 685

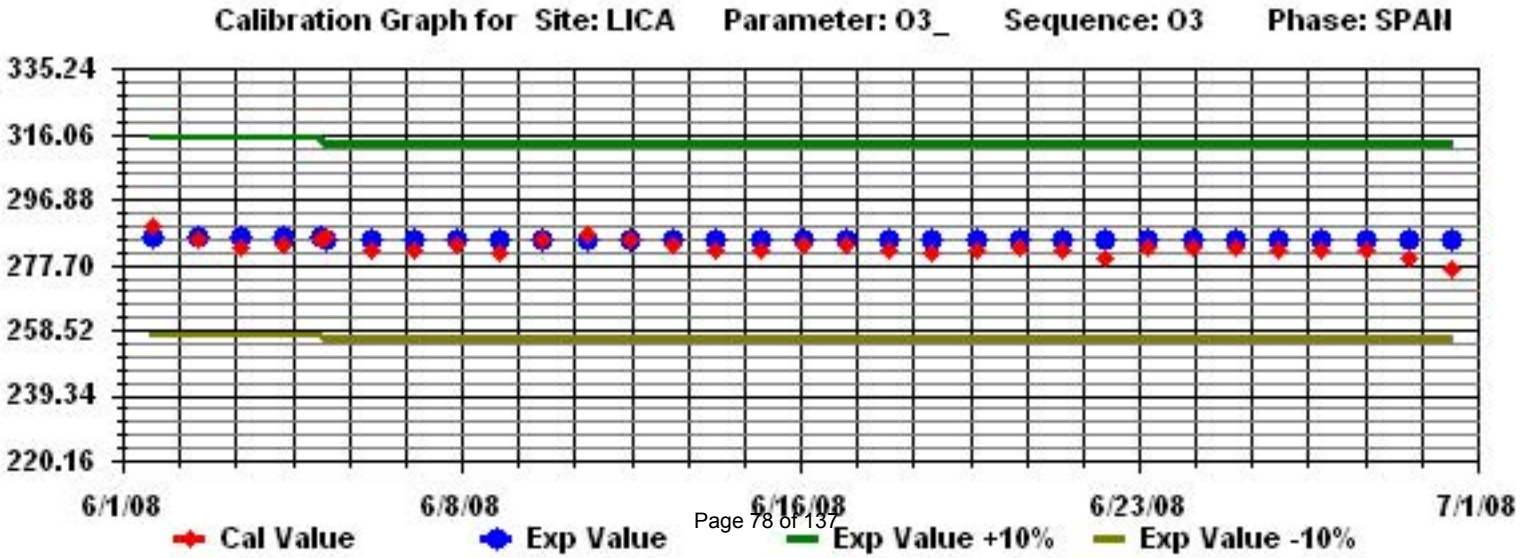
MAXIMUM INSTANTANEOUS VALUE: 83 PPB @ HOUR(S) 17 ON DAY(S) 29

IZS CALIBRATION TIME: 31 HRS OPERATIONAL TIME: 719 HRS

MONTHLY CALIBRATION TIME: 4 HRS

STANDARD DEVIATION: 14.36


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


Calibration Graph for Site: LICA Parameter: O3_ Sequence: O3 Phase: SPAN
335.24
316.06
296.88
277.70
258.52
239.34
220.16
6/1/08
6/8/08
6/16/08
6/23/08
7/1/08
Cal Value
Exp Value
Exp Value +10%
Exp Value -10%

Ambient Temperature

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

JUNE 2008

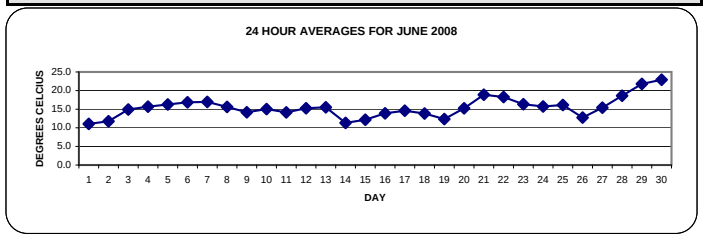
AMBIENT TEMPERATURE hourly averages (Degrees C)

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	3.5	2.3	1.2	**0.5**	0.8	4.5	7.7	10.3	12.6	13.8	14.4	15.4	16.1	16.4	17.5	17.1	17.5	17.2	17.7	16.2	13.3	10.7	10.1	8.5	17.7	11.1	24
2	7.6	6.9	7.2	5.5	5	7.7	11.1	14.3	14.8	15	14.8	14.3	15.4	15.5	12	11.9	14	14.7	14.9	14.9	13.1	11.3	10.3	9.9	15.5	11.8	24
3	8.6	6.8	5.4	4.4	3.8	6.4	10.7	14.2	15.7	17	18.5	19.6	20.1	21	21.8	22.3	22.4	22.2	21.7	20.2	16.5	14.7	12.7	11.2	22.4	14.9	24
4	11.2	10.3	9.2	7.9	6.9	9.2	12.5	13.8	14.7	16.8	18.6	19.6	20.6	21.7	22.1	22.4	22.4	22.4	22.3	21.4	16.5	12.4	10.2	11.3	22.4	15.7	24
5	12.7	11.4	9.7	9.4	7.4	10.6	12.8	15.1	17.9	20.7	21.8	22.1	21.6	22.4	21.4	15.8	19.3	21	18.6	17.1	16.5	15.6	15	14.5	22.4	16.3	24
6	14.2	13.3	11.3	11	11.3	12.5	13.6	15.3	17.3	18.7	19.7	20.5	21.3	21.8	22.1	22.1	22	21.5	20.6	19.6	16.4	13.8	12.9	11.7	22.1	16.9	24
7	10.2	9.4	8.8	8.1	8.3	9.4	11.8	13.9	15.5	18.4	20.7	21.7	22.3	23.1	23.8	24	23.8	23.1	21.8	20.6	19.1	17.1	16.1	15.8	24.0	17.0	24
8	14.5	13.3	11.6	10.1	10.5	11.2	11.8	13.5	14.6	15.5	17.7	19.3	20.1	20.8	20.7	20.9	18.9	19.4	18.5	17.3	15.2	13.8	13.2	12.4	20.9	15.6	24
9	11.2	9.6	9.3	8.8	8.5	10.1	11	12.8	13.8	15.6	16.9	17.3	18.2	18.9	19.3	18.9	19	18.1	17	16.6	15.1	12.8	11.4	10	19.3	14.2	24
10	8.2	7.1	7.1	7.7	9.4	11	13	14.8	16.2	17.3	18.2	18.8	19.4	20	20.3	20.3	20.8	20.6	20.1	18.8	16.9	14.3	11.5	9.1	20.8	15.0	24
11	7.6	6.1	5.2	5.1	6.5	9.1	13.3	14.8	15.6	17.8	18.8	19.2	19.5	19.8	19.9	19.7	19.6	18.5	18.1	16.9	15.1	12.6	11	9.7	19.9	14.1	24
12	8.6	7.4	6.7	6.1	6.7	8.2	11.2	13.3	14.5	16.6	19.1	20.3	20.4	21.7	22.2	21.9	22.1	21.3	20.5	19.8	17.1	15	13	12.4	22.2	15.3	24
13	11.7	11.3	10.5	9.1	8.7	10.6	12.9	15.6	16.5	18.5	20.4	21.8	22.5	22.3	22.3	19.6	18.2	16.6	16.3	15.7	14.4	12.6	12.2	11.9	22.5	15.5	24
14	11.6	11.3	11.1	10.9	10.8	10.6	10.2	9.8	10.1	10.8	11.5	11.7	11.8	11.7	12	13.3	13.6	13.4	12.7	11.7	11.3	10.6	9.6	9.5	13.6	11.3	24
15	9.3	8.2	7.4	9	8.5	9.5	11	11.9	12.7	13.5	14.6	15	15.5	15	15.6	15.6	15.5	15.5	14.8	13.9	12	10.4	9.3	8.3	15.6	12.2	24
16	8.3	8.6	8.6	8.1	6.8	8.2	10.7	12.4	13.5	15.3	16.3	17.3	18.3	18.8	20	20.6	21.3	19.6	17.2	16.2	14.7	12.9	10.5	9	21.3	13.9	24
17	8.1	7.6	7.6	6.7	6.9	10.8	13.9	14.1	16	15.9	18.8	21.4	23.2	24.2	24.7	24.2	22.9	16.1	12.2	11.4	11	10.9	10.8	11	24.7	14.6	24
18	11	11	10.9	10.6	10.4	10.9	11.2	11.7	12.5	13.3	13.7	15.2	15.1	15.6	18	18.6	18	18	18.2	17	14.6	12.5	12	12	18.6	13.8	24
19	12	12.4	12.1	11.4	10.9	10.8	10.9	11.4	11.7	11.8	12.2	12.6	14	15.9	16.6	15.4	14.8	15.4	12.4	12.5	12.1	10.4	9	7.7	16.6	12.4	24
20	6.7	5.8	5.5	5.5	5.5	8.4	11.2	14.2	16.7	18	19.4	20.3	21.2	21.6	22.3	22.6	22	21.5	19.6	20.9	17	14.4	13.6	12	22.6	15.2	24
21	10.2	9	8.1	7.4	7.4	11.3	15.5	17.7	19.4	21.4	22.5	23.9	24.8	25.4	25.8	26	26.1	25.7	25.3	24.1	22	19	17.5	17.7	26.1	18.9	24
22	16.8	16	15	15.1	16.3	16.8	17.8	18.2	19.3	20.3	22.1	22.7	22.9	22.7	21.9	21.2	20.1	21.1	18.6	16.7	15.3	14.5	14.3	12.9	22.9	18.3	24
23	12.4	12.6	12.8	12.8	12.5	12.7	13.4	14.7	16.5	16.9	17.9	19	19.9	20.6	21.2	21.4	21.7	21.8	21.5	21	17.6	12.3	10.1	8.7	21.8	16.3	24
24	7.6	7.2	6.7	5.7	5.7	9.1	13.8	14.5	15.6	17.6	19	19.8	20.5	21.2	21.6	22.1	22.3	22.8	22.1	21.2	18.9	15.7	13.9	13	22.8	15.7	24
25	13.8	13.5	12.3	11.9	12.8	13.1	14.5	15	15.5	15.3	15.3	17.4	19.4	20.4	21	21.1	21.2	21.1	20.8	20.2	17.2	13.1	11.3	9.9	21.2	16.1	24
26	9.1	8.1	7.9	6.7	7	9.3	12.1	14.4	15.9	16.9	18.4	19.4	19.1	18.1	18.3	17.3	15.9	11.8	10.8	10.9	10.1	9.6	9.4	9.5	19.4	12.8	24
27	9.2	9.2	9.3	9.2	9.2	9.4	10.4	12.2	14.6	16.1	17.3	18.5	19.4	20.3	21	21.3	22	22.1	21.4	20.9	18.4	14.5	12.4	11.4	22.1	15.4	24
28	10	9.1	8.2	7.3	7.3	11.7	14.1	16.4	19.5	21.9	23	24	24.6	25.1	25.4	25.4	25.6	25.1	24.5	22.9	21	19.2	18.2	17.2	25.6	18.6	24
29	16.8	16	14.9	14.2	14.2	15.6	18.5	20.8	21.9	22.6	23.9	25.3	26.2	27	27.4	27.7	28	28.3	28.3	27.4	24	19.7	17.7	16.6	28.3	21.8	24
30	15.6	14.8	14.1	14	14.4	16.3	20.5	22.6	24.7	26.2	27.1	28.2	28.4	28.6	29.1	**29.3**	29	29	28.4	27	24.3	20.8	19.4	18.1	**29.3**	**22.9**	24
HOURLY MAX	16.8	16.0	15.0	15.1	16.3	16.8	20.5	22.6	24.7	26.2	27.1	28.2	28.4	28.6	29.1	29.3	29.0	29.0	28.4	27.4	24.3	20.8	19.4	18.1			
HOURLY AVG	10.6	9.9	9.2	8.7	8.7	10.5	12.8	14.5	15.9	17.2	18.4	19.4	20.1	20.6	20.9	20.7	20.7	20.2	19.2	18.4	16.2	13.9	12.6	11.8			

STATUS FLAG CODES

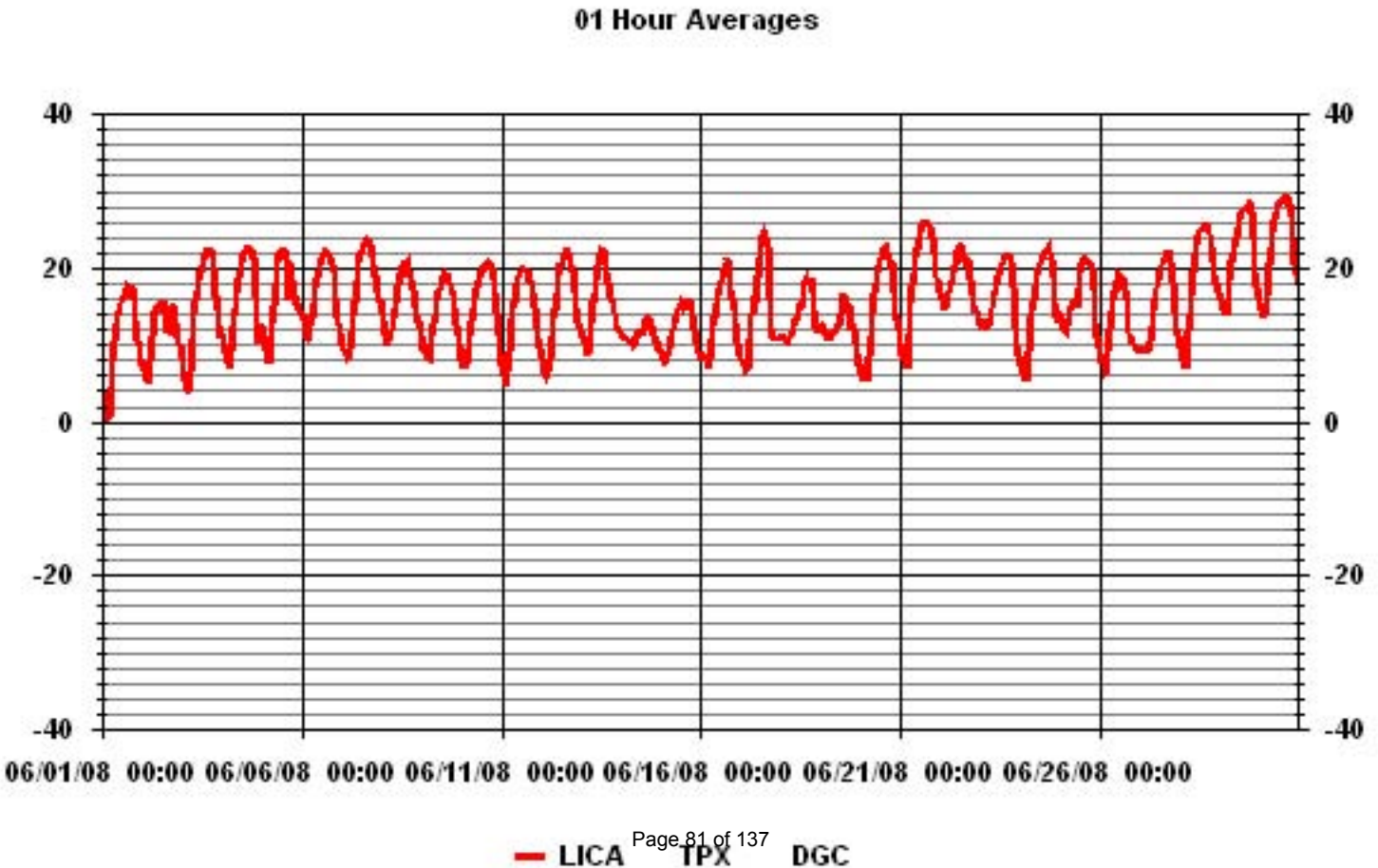
S	- OUT OF SERVICE	OD	- OUTSIDE DECTECTION LIMITS
N	- INVALID DATA	M	- MISSING DATA
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE



MONTHLY SUMMARY

MINIMUM 1-HR AVERAGE:	0.5	^{o}C	@ HOUR(S)	4	ON DAY(S)	1
MAXIMUM 1-HR AVERAGE:	29.3	^{o}C	@ HOUR(S)	16	ON DAY(S)	30
MAXIMUM 24-HR AVERAGE:	22.9	^{o}C			ON DAY(S)	30
					VAR-VARIOUS	

CALIBRATION TIME:	0	HRS	OPERATIONAL TIME:	720	HRS
			AMD OPERATION UPTIME:	100.0	%
STANDARD DEVIATION:	5.47		MONTHLY AVERAGE:	15.45	^{o}C


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

Relative Humidity

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

JUNE 2008

RELATIVE HUMIDITY hourly averages (%)

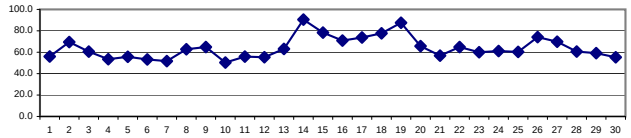
MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	87.2	89.2	92.2	92.3	91.6	80.6	73.7	60.6	50.5	45.1	40.9	36.2	34.3	34.5	31.4	31.3	31.1	32.7	32.0	37.9	51.6	59.9	60.3	67.3	92.3	56.0	24
2	70.6	72.8	70.4	78.9	80.8	70.2	58.8	51.5	44.0	43.1	45.3	56.6	51.2	49.1	79.0	84.0	75.5	71.4	74.4	72.6	84.6	92.9	95.1	95.1	95.1	69.5	24
3	95.4	95.8	96.2	96.8	97.3	94.8	81.9	71.8	63.0	52.8	39.7	32.2	34.1	33.8	30.8	27.9	28.5	30.2	33.2	41.1	59.9	64.7	73.2	79.1	97.3	60.6	24
4	80.5	86.4	90.7	92.4	93.3	87.9	76.2	70.2	64.4	50.2	38.7	33.3	29.0	26.1	26.0	23.9	21.3	19.0	17.9	23.0	45.8	60.8	68.9	58.3	93.3	53.5	24
5	51.1	56.0	64.0	64.5	77.1	65.2	65.0	61.6	56.3	44.6	38.9	38.8	43.9	39.7	40.1	68.4	57.5	45.8	51.5	58.3	59.1	62.9	63.1	64.4	77.1	55.7	24
6	64.2	66.3	74.2	72.3	69.7	66.0	64.6	60.9	55.8	48.3	43.5	38.4	33.7	32.2	31.1	31.7	31.2	30.9	34.2	39.3	59.8	72.8	76.6	80.9	80.9	53.3	24
7	85.8	86.9	90.0	91.1	91.6	90.2	82.0	73.0	65.1	50.4	38.7	28.9	25.7	25.9	23.3	22.4	21.2	24.0	29.0	31.0	33.9	40.2	44.2	46.4	91.6	51.7	24
8	52.3	58.8	67.6	74.6	76.1	77.2	81.9	74.5	65.1	60.3	56.1	48.3	46.7	41.1	42.2	40.8	54.2	49.9	53.3	60.7	73.3	79.7	83.6	88.9	88.9	62.8	24
9	92.1	94.1	95.3	95.9	96.2	95.9	95.7	83.7	75.5	60.2	51.2	46.1	40.8	36.1	34.6	33.4	32.9	39.5	45.0	47.8	54.6	64.1	69.4	75.7	96.2	64.8	24
10	82.3	85.0	85.2	85.4	79.0	72.6	65.5	57.0	51.6	43.8	34.2	30.6	27.8	28.3	27.9	27.0	23.2	23.7	25.4	31.0	38.6	48.7	62.2	72.1	85.4	50.3	24
11	78.4	83.1	86.8	87.7	84.7	83.5	65.9	55.4	55.0	45.3	36.6	30.1	30.4	30.8	30.4	30.4	30.3	36.3	37.5	43.8	56.1	66.9	75.5	81.5	87.7	55.9	24
12	84.5	87.5	88.6	90.6	91.9	90.2	76.8	71.7	64.0	52.3	38.6	30.4	28.0	23.8	23.5	24.0	24.0	27.9	33.2	37.8	47.2	56.3	66.7	68.4	91.9	55.3	24
13	74.4	74.1	78.0	85.2	86.1	80.7	70.5	61.5	56.9	49.1	40.2	34.2	30.6	33.5	34.2	42.3	48.4	57.3	60.6	63.5	76.5	91.3	92.5	93.0	93.0	63.1	24
14	95.2	95.5	93.5	92.6	93.4	94.8	94.8	93.1	90.2	87.4	88.5	90.0	89.4	89.6	88.1	81.5	77.8	78.2	83.6	91.5	93.8	95.2	96.9	96.8	96.9	**90.5**	24
15	96.9	97.2	97.7	97.6	96.5	95.4	90.4	88.0	84.1	75.3	67.9	67.1	64.0	62.5	59.2	57.3	59.1	58.8	57.5	65.0	76.2	83.9	89.6	92.8	97.7	78.3	24
16	92.8	91.8	94.3	96.1	96.7	94.3	87.4	81.7	72.6	66.2	59.7	53.7	50.4	48.6	46.2	42.8	40.4	46.7	54.9	58.0	67.8	77.5	88.9	91.5	96.7	70.9	24
17	93.4	92.5	93.8	95.2	94.3	82.3	75.0	77.2	72.3	74.3	61.7	51.2	38.8	34.5	33.7	33.5	38.0	71.6	89.1	89.1	91.1	94.4	96.4	97.3	97.3	73.8	24
18	96.0	95.2	95.5	96.4	97.1	95.5	94.2	91.1	86.6	79.2	75.7	69.5	67.9	67.6	55.8	51.7	52.3	48.6	49.3	58.3	74.2	89.0	88.5	89.3	97.1	77.7	24
19	88.8	83.5	86.8	90.8	95.9	95.5	95.9	93.6	92.9	92.3	93.0	90.1	82.6	69.6	62.0	71.8	80.5	73.3	90.7	89.6	92.1	95.9	96.8	97.3	97.3	87.6	24
20	97.4	97.4	97.6	**97.8**	97.7	94.8	88.7	75.8	64.1	57.6	49.2	44.9	37.7	38.5	35.5	33.9	37.1	39.3	43.8	40.9	62.2	76.4	81.6	87.2	**97.8**	65.7	24
21	91.0	94.2	94.7	95.1	94.8	81.9	71.8	59.9	57.4	51.5	45.7	39.3	32.5	32.8	30.9	28.9	29.8	30.8	32.8	39.3	47.9	58.0	63.6	59.4	95.1	56.8	24
22	62.4	64.9	68.7	66.0	57.7	58.1	56.9	58.2	58.4	59.9	55.0	50.6	51.0	51.8	54.0	59.5	65.7	59.2	71.1	79.2	81.8	85.3	87.6	93.3	93.3	64.8	24
23	90.5	93.2	92.1	90.9	90.9	89.3	83.6	73.4	62.1	57.9	44.1	35.6	31.5	27.3	29.7	29.1	28.3	27.5	26.2	30.5	55.1	78.8	84.4	88.5	93.2	60.0	24
24	91.6	91.6	92.9	93.9	94.1	85.9	66.5	64.2	59.3	53.7	49.2	42.6	38.6	37.9	38.1	39.3	39.8	37.6	39.6	42.9	52.4	66.5	73.1	75.5	94.1	61.1	24
25	68.9	70.0	75.9	77.8	74.7	79.2	73.1	71.4	70.6	71.4	73.2	62.4	48.4	40.1	37.7	34.2	32.4	32.1	31.7	35.4	51.8	71.9	80.3	83.3	83.3	60.3	24
26	84.4	87.0	88.5	90.3	91.4	83.8	74.1	65.6	58.8	52.1	45.1	42.7	40.7	45.2	45.4	53.3	67.4	91.1	94.5	96.1	94.0	95.3	95.8	96.4	96.4	74.1	24
27	97.4	97.7	96.4	96.3	96.4	95.9	92.6	86.2	75.5	69.0	61.1	53.1	49.4	45.5	43.8	42.6	42.2	40.9	42.9	44.5	56.7	76.5	85.1	87.9	97.7	69.8	24
28	92.8	92.8	93.9	95.0	94.9	83.1	77.3	68.0	60.2	49.9	41.9	38.1	36.2	35.0	34.4	36.4	37.5	41.2	46.2	51.6	59.0	63.9	62.8	62.9	95.0	60.6	24
29	62.8	66.6	70.7	72.4	71.5	66.4	57.8	49.9	47.3	48.7	49.0	48.6	47.5	48.9	50.0	49.3	51.1	50.3	42.8	43.4	61.4	81.3	90.0	91.9	91.9	59.2	24
30	92.9	95.0	94.4	95.3	94.2	88.0	72.9	66.2	47.3	38.4	33.6	35.7	37.6	36.9	37.3	33.5	33.1	32.1	32.2	36.6	42.3	52.5	48.2	50.3	95.3	55.3	24
HOURLY MAX	97.4	97.7	97.7	97.8	97.7	95.9	95.9	93.6	92.9	92.3	93.0	90.1	89.4	89.6	88.1	84.0	80.5	91.1	94.5	96.1	94.0	95.9	96.9	97.3			
HOURLY AVG	83.1	84.7	86.9	88.2	88.3	84.0	77.1	70.6	64.2	57.7	51.2	46.6	43.3	41.6	41.2	42.2	43.1	44.9	48.5	52.7	63.4	73.5	78.0	80.4			

STATUS FLAG CODES

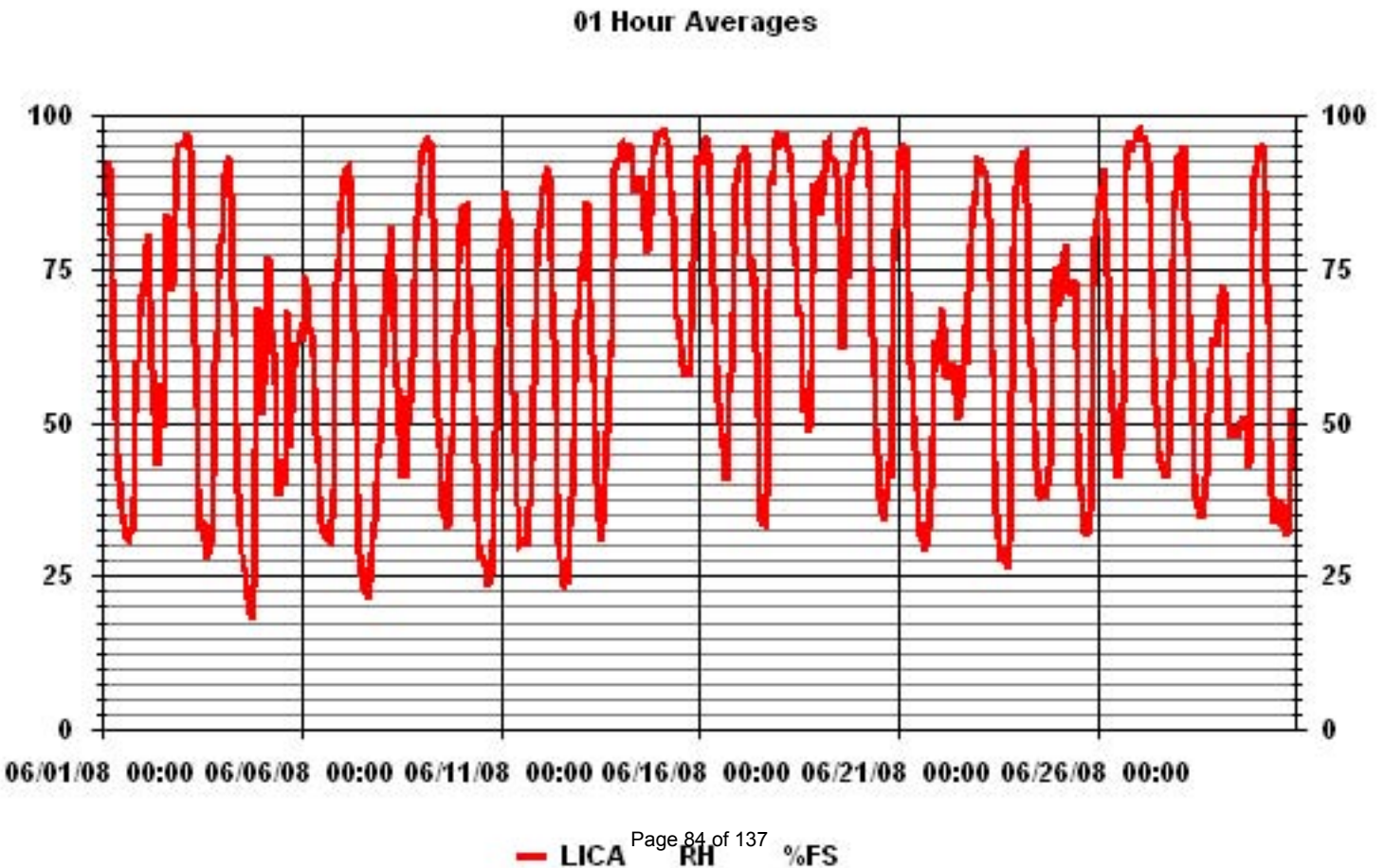
S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	- MISSING DATA
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE

24 HOUR AVERAGES FOR JUNE 2008



MONTHLY SUMMARY

MAXIMUM 1-HR AVERAGE:	97.8	%	@ HOUR(S)	4	ON DAY(S)	20	
MAXIMUM 24-HR AVERAGE:	90.5	%			ON DAY(S)	14	
CALIBRATION TIME:	0	HRS	OPERATIONAL TIME:		720	HRS	
			AMD OPERATION UPTIME:		100.0	%	
STANDARD DEVIATION:	22.72		MONTHLY AVERAGE:		63.97	%	


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

Vector Wind Speed

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

JUNE 2008

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

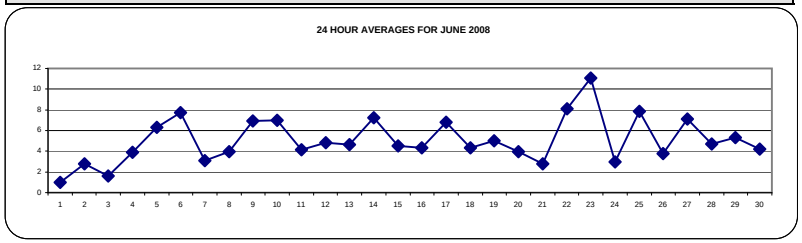
MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	0.5	0.2	0.7	0.2	0.4	0.2	2.1	4.6	3.3	2.6	3.3	1.7	1.6	6.6	1.5	2.9	2.9	3.4	4.5	5.5	2.8	5.5	4.7	3.9	6.6	1	24
2	4.1	3.8	3.5	3	0.4	0.4	3.1	4.1	7.5	6.6	7.2	7.8	7.2	6.9	6.7	5.2	3	2.2	1.8	1.6	0.5	0.5	0.8	0.4	7.8	2.8	24
3	0.4	0.1	0.2	0.3	0.3	0.9	0.2	1.6	4.1	4.4	2.8	4.1	4.1	3.2	0.9	2.8	2.9	1.4	2.9	3	0.8	12	5.6	1.5	12	1.6	24
4	1.2	1.1	2.8	0	1.1	3	5.2	7.2	6.9	9.1	9.8	10.2	9.3	9.4	8.6	9	10.6	8.9	5.3	1.6	0.2	0.7	0.5	3.8	10.6	3.9	24
5	4.9	5.4	2.7	2.9	1.5	5.9	8.9	5.4	6.1	9.6	9.1	9.7	6.6	7.4	7.2	6.3	4.3	8.3	6.2	7.5	7.6	4.7	6.5	7	9.7	6.3	24
6	7.6	8.8	4.3	4.2	4.6	7	8.4	8.9	11.3	14.1	12.2	12.4	13	12.9	10.9	10.6	10.3	11.1	8.4	3.3	0.6	0.4	0.1	0.1	14.1	7.7	24
7	0.5	0.2	1	0.9	0.2	1.8	1.3	1.3	2.2	0.6	1.3	3.8	3.9	7	8.1	8.6	7.2	5.5	4.4	3.4	4.4	1.9	1.9	2.8	8.6	3.1	24
8	1.8	1.5	0.3	0.5	0.7	2.2	0.8	3.3	4.8	5.1	4	4.5	5.8	8.4	7.5	6.5	3.8	6	4.7	0.3	6.9	6.4	5.8	3.7	8.4	4.0	24
9	0.6	1.3	1.3	0.8	0.6	2.2	4.1	8.7	8.9	12.4	11.4	11.2	9.5	10.6	10.5	11.3	11.7	12.9	11.3	8.8	4.1	3.5	5.1	2.8	12.9	6.9	24
10	1.3	1.6	2.1	2.4	3.7	4.8	5.3	7	8.6	10.2	13.9	12.9	10.8	11	11.2	11.6	11.2	11.4	10.5	6.4	4.7	3.2	1.2	0.6	13.9	7.0	24
11	0.5	0.4	0.2	0.1	0.4	0.4	4	3.9	4.7	3.7	6.2	8.8	8.5	9.1	8	7.8	8	8.4	8.4	5.2	1.1	0.7	0.6	0.3	9.1	4.1	24
12	0.5	0.4	0.1	0.6	1.2	1.2	1.9	4	5.1	7.6	9.3	9.8	10.4	11.2	9.6	9.1	8.3	5.1	3.9	3.5	6.5	2.2	1.9	1.7	11.2	4.8	24
13	0.5	1.5	0.1	0.9	1.9	2.9	3.9	2.4	6.1	7.1	5	4.4	2.1	2.9	5.2	14.3	11	15.1	5.9	3.1	1.2	2.9	7.1	3.8	15.1	4.6	24
14	1.5	4.1	4.5	5	2.4	2.7	6.1	10.7	9.6	8.6	9	7.4	7.2	8.1	8.8	13.7	13.9	9.4	10.1	16.2	3.6	3.7	3.5	4.1	16.2	7.2	24
15	3.4	3.2	3.3	3.1	2.6	0.9	3.4	4	5.3	5.7	3.4	4.9	7	9.3	7.8	8	6.8	6.4	5.8	8	1.8	2.2	0.9	0.8	9.3	4.5	24
16	1.1	1.6	1.7	1.1	1.2	3.7	5.4	6.2	7	5.7	7.7	9.1	7.3	7.6	7	7.5	6.1	4.2	6.9	4.5	0.3	0.9	0.1	0.4	9.1	4.3	24
17	0.4	1.2	0.5	0.4	0.5	2.1	1.5	2.6	3.7	4.2	7.2	9.7	11.4	11.8	14.9	14	6.7	18.3	**19.5**	16.3	8.1	2.7	1.8	4.4	**19.5**	6.8	24
18	5.8	4.8	4.5	2.9	3	3	5.8	7.4	7.2	7.5	8.3	6.2	4.7	2.2	3.9	5.7	6.9	4.7	2.5	1.9	1.3	1.6	1.1	0.5	8.3	4.3	24
19	3.9	6.4	7.7	6.5	6.1	3.9	5	6.2	7	6.6	5.8	6.3	7.7	8	6.8	5.9	2.8	4.4	4.1	2.8	2.7	2.1	0.9	1	8.0	5.0	24
20	0.8	1.8	1.6	0.7	0	2.6	4.8	3.2	3.3	5	4.8	6.6	7.1	6.7	8.9	8.5	7.3	8.9	6.5	3.1	1.9	0.7	0.5	0.2	8.9	4.0	24
21	0.4	0.1	0.3	0.2	0.1	0.2	1.1	3.4	2.4	1.9	5.4	2	4.2	3.6	4.7	4.1	3.8	5.4	6.4	5.1	3.3	2.6	2.4	3.2	6.4	2.8	24
22	3.8	2.8	2.9	3.8	6	6.2	6.5	9.6	13	12.7	12	12.2	10.3	5.8	7.2	5.2	6.2	14.3	13.1	10.4	10.1	6.4	1.3	13.3	14.3	8.1	24
23	15.4	13.7	13.5	11.9	12	11.1	13.4	13.8	12.8	12.3	15.5	16.5	15.2	17.3	13.9	15	14.1	11.3	9.6	5.2	0.7	0.9	0.6	0.4	17.3	**11.1**	24
24	0.4	0.5	0.1	0.5	0.5	0.4	2.7	2.3	2.9	3.3	1	2.2	1.7	4.1	3.4	3.1	5.1	6.6	8	5.4	4.3	3.2	4.3	4.7	8.0	2.9	24
25	7.7	6	5.6	5.6	5.8	5.8	8.7	7	8.7	8.9	6.6	8.4	12.1	12.7	12.8	15	12.5	11.5	10	6.3	2.9	1.8	2	3.5	15.0	7.8	24
26	2.1	2.9	3.8	0.2	2.8	3.8	3.8	2.4	3.5	5.3	3.7	1.5	3.2	3.1	1.9	4.8	2.6	7.1	3	4.7	9.4	6.6	5	2.9	9.4	3.8	24
27	5.3	5.7	6.8	6.5	5.7	7.9	7.2	7.3	9	9.1	12	11.3	9.7	8.6	9.2	8.4	7	5.8	7.3	7.8	4	2.9	3.1	2.8	12.0	7.1	24
28	1.6	1.1	0.7	0.5	0.3	0.3	2.4	4.6	4.1	4.9	7.7	7.9	8.3	9.4	7.8	7.9	6.6	4.8	3.5	5.8	5.7	6.9	6	4.1	9.4	4.7	24
29	4.5	3.2	2.2	1.2	3.5	2.5	3.4	5.1	6	7.1	5.4	6.4	10.1	9.6	10.4	9.5	9.2	9.3	8.9	5.5	2.5	1.1	0.3	0.3	10.4	5.3	24
30	0.4	0.3	0.3	0.2	0.2	0.2	0.3	1.1	3.6	2.1	2.8	1.5	6.3	6.5	7.2	12.6	11.3	10	8.9	7.2	6.4	2.8	5.2	3.7	12.6	4.2	24
HOURLY MAX	15.4	13.7	13.5	11.9	12.0	11.1	13.4	13.8	13.0	14.1	15.5	16.5	15.2	17.3	14.9	15.0	14.1	18.3	19.5	16.3	10.1	12.0	7.1	13.3			
HOURLY AVG	2.8	2.9	2.6	2.2	2.3	3.0	4.4	5.3	6.3	6.8	7.1	7.4	7.5	8.0	7.8	8.5	7.5	8.1	7.1	5.6	3.7	3.1	2.7	2.8			

STATUS FLAG CODES

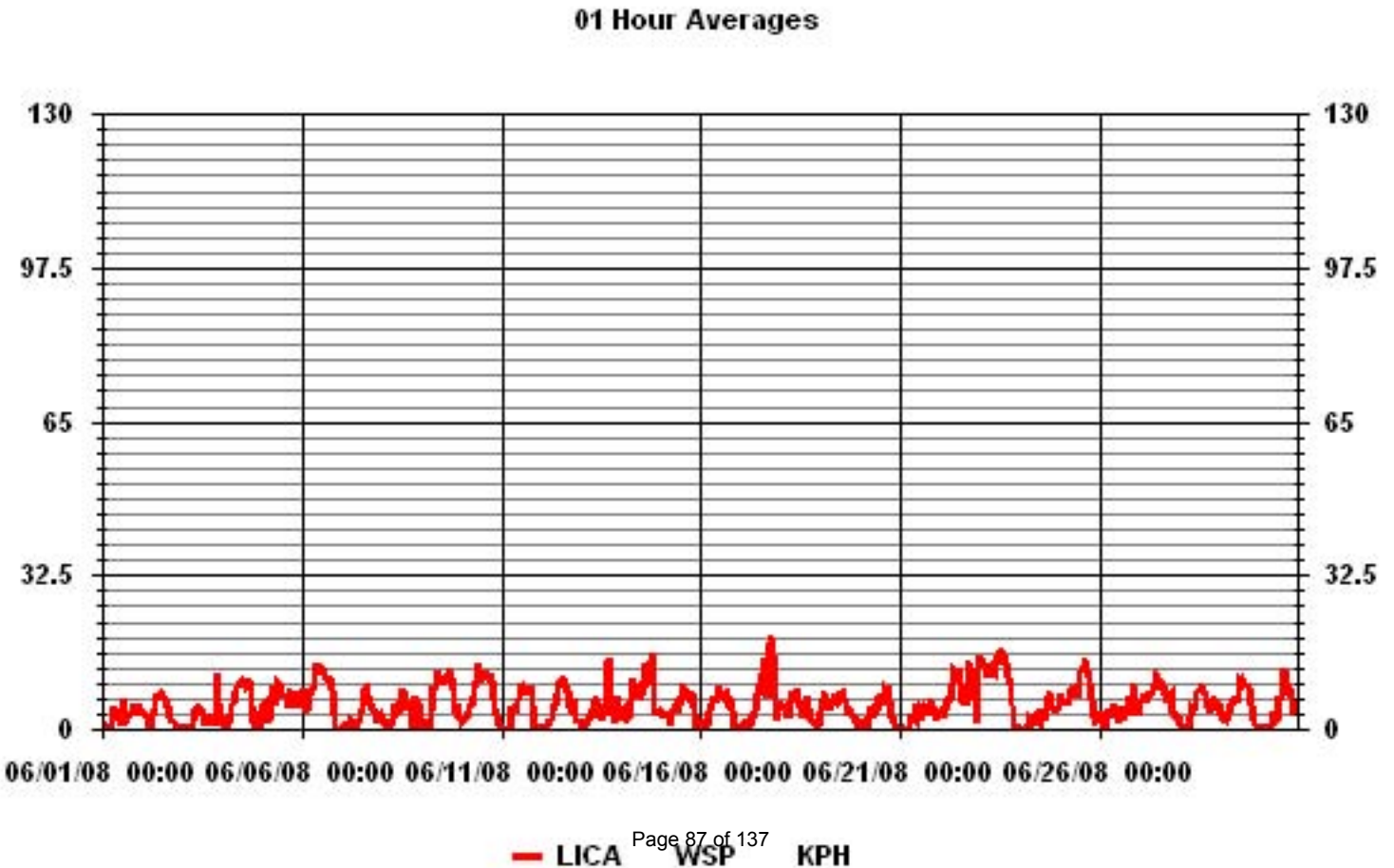
S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	- MISSING DATA
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE

LAST CALIBRATION: December-2006



MONTHLY SUMMARY

MAXIMUM 1-HR AVERAGE:	19.5	KPH	@ HOUR(S)	19	ON DAY(S)	17	
MAXIMUM 24-HR AVERAGE:	11.1	KPH			ON DAY(S)	23	
CALMS (≤ 0 KPH)	5.65	%	OPERATIONAL TIME:	720	HRS		
MONTHLY CALIBRATION TIME:	0	HRS	AMD OPERATION UPTIME	100.0	%		
STANDARD DEVIATION:	3.87		MONTHLY AVERAGE:	5.23	KPH		


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

LICA
WSP / WD Joint Frequency Distribution (Percent)

June 2008

Distribution By % Of Samples

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

Wind Parameter : WD
Instrument Height : 10 Meters

Direction

	Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
<	6.0	2.08	1.94	3.88	2.08	2.77	4.02	5.55	2.36	2.77	2.50	7.77	6.94	5.00	3.47	.55	1.52	55.27
<	12.0	.97	1.52	.83	.41	2.50	4.86	3.05	.83	.55	.69	2.22	5.13	4.16	3.47	.55	.27	32.08
<	20.0	.27	.13	.00	.00	.00	1.38	.97	.00	.00	.00	.00	1.25	1.80	.41	.55	.00	6.80
<	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	3.33	3.61	4.72	2.50	5.27	10.27	9.58	3.19	3.33	3.19	10.00	13.33	10.97	7.36	1.66	1.80	

Calm : 5.83 %

Total # Operational Hours : 720

Distribution By Samples

Direction

	Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
<	6.0	15	14	28	15	20	29	40	17	20	18	56	50	36	25	4	11	398
<	12.0	7	11	6	3	18	35	22	6	4	5	16	37	30	25	4	2	231
<	20.0	2	1				10	7					9	13	3	4		49
<	29.0																	
<	39.0																	
>=	39.0																	
	Totals	24	26	34	18	38	74	69	23	24	23	72	96	79	53	12	13	

Calm : 5.83 %

Total # Operational Hours : 720

Logger : 01 Parameter : WSP

Class Limits (KPH)

>= 39.0

< 39.0

< 29.0

< 20.0

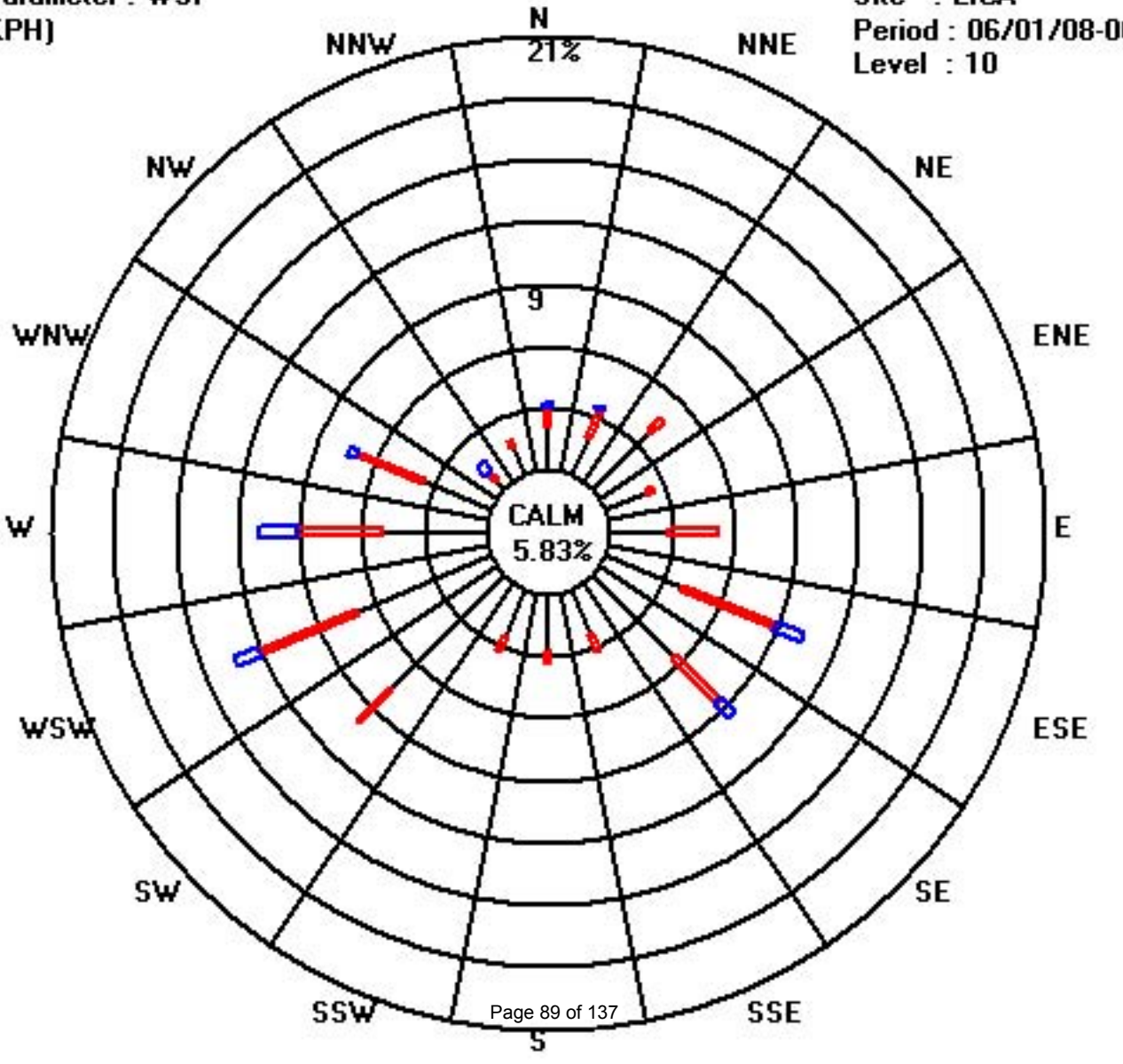
< 12.0

< 6.0

Site : LICA

Period : 06/01/08-06/30/08

Level : 10



LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

JUNE 2008

VECTOR WIND SPEED MAX instantaneous maximum in km/hr

MST

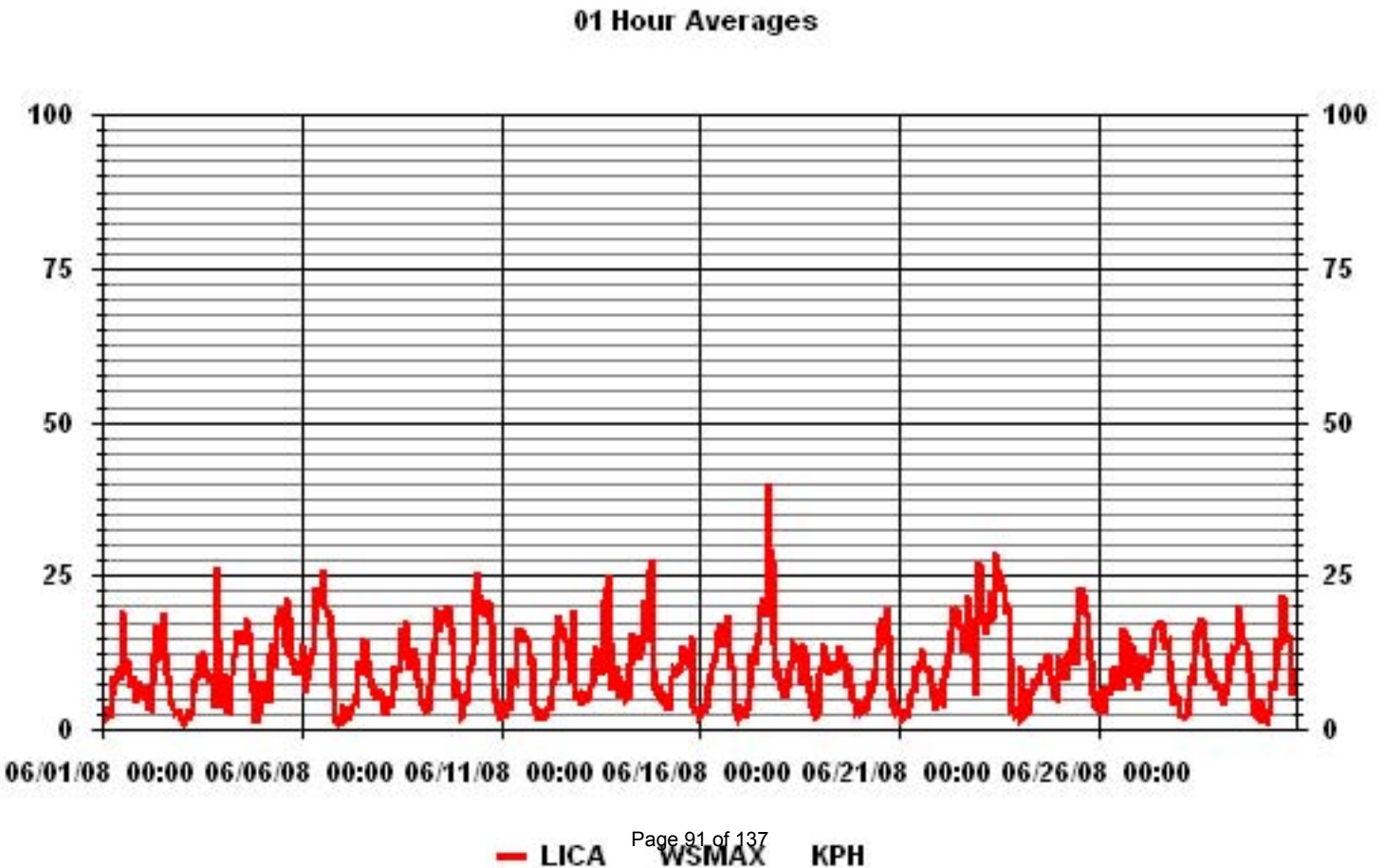
HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.
DAY																									
1	2	1.2	3.1	2.5	3.6	1.9	5.6	8	8	9.8	8.1	10.5	19.4	14.4	8.7	11.3	10.2	6.7	8.8	8	4.1	7.4	7.5	6.2	19.4
2	6	5.3	7	4.9	3.8	3.6	7.6	12.3	16.7	12.9	12	12.4	16.7	18.9	12.7	9.2	7.3	4.9	4.2	3.6	2.6	2.8	3	2.4	18.9
3	1.8	1	1.5	2	2	3.4	2.4	5.8	8	9	10.5	11.8	12.2	12.6	8.5	9.2	8.6	7.6	9	5.8	3.2	26.4	14.8	5	26.4
4	3.2	6	9	3.4	3.2	7.1	8.8	11.9	12.4	13.6	16.1	15.3	16.1	14.8	13.9	18.3	15	15.7	9.8	6.1	1.7	1.6	2.6	7.5	18.3
5	7.5	7.6	5.8	5.4	4.2	12.4	13.9	10.9	10.8	18.6	17.8	19.6	16.4	18	13.4	21.5	11.8	18.4	11.9	11.1	11	8.7	10.8	11	21.5
6	13.4	13.2	6	8.2	9.1	10.4	12	13.1	17.2	23.2	21.8	20.7	20.4	26	20.2	19	19.2	18.8	15.3	7.2	1.7	1.4	1	1.6	26
7	1.6	4.2	2.1	2.5	1.4	3.5	2.5	4	5	4.7	9.2	11.1	8.7	14.7	12.9	14.4	11.6	8.6	7	5.6	6.8	4.6	5.2	6.3	14.7
8	5.1	4.2	3.1	2.1	4.1	5.1	3.4	6.4	10.3	9.7	10.1	10	13.5	16.4	13.3	17.7	11.7	9.4	12.5	10.2	13.3	12	8.5	7.2	17.7
9	4.4	4.4	3.1	3.4	2.8	7	7.5	12.2	14.3	19.6	17.9	15.7	17.2	19.5	18.7	17.8	20	19.9	16.8	14	8.6	5.1	7.6	6.3	20
10	2.3	2.6	4	4.4	6.2	9.1	10.4	11.9	13.5	22.7	25.5	22.1	18.6	20.8	18.4	19	18.6	21	17.2	9.3	7.1	4.8	3.1	1.8	25.5
11	1.9	2.6	4.6	1.8	3.9	3.1	9.7	8.5	8.1	7.8	15.2	16.4	14	16.4	15.5	14	15	11.7	12	11.8	4.1	2.8	3.3	3	16.4
12	2	1.8	2	3.2	3.5	3	5.4	7.1	8.1	15.4	14.7	18.4	17.7	16.4	16.1	14.5	14.4	11.5	7.3	12.7	19.2	5.3	5.2	6.1	19.2
13	3.6	5.9	5.6	4.7	4.8	6	6.6	7.6	11.7	13.4	11.1	11.5	10.4	8.9	20.1	19.8	23	25.1	14.6	6.5	7.3	7.8	10.1	9	25.1
14	4.9	8	7.1	8	4.9	5.1	10.5	15.6	13.7	13.1	15.3	11.1	12.8	13.1	15.6	21.2	20.5	14	25.8	27.6	10	6.9	5.9	6.3	27.6
15	5	4.6	6	5.2	3.8	3.7	5.9	8.5	9.5	8.9	9	9.3	10.7	13.6	13	12.5	13	10.8	10.2	15.1	3.9	3.2	3.2	2.1	15.1
16	2.4	3.5	3.7	2.7	3.5	6.9	9.1	10	10.8	12.4	15.4	15.1	17.1	13.8	13.3	15.9	15.7	18.5	12.7	9.5	10.3	2.6	3.1	1.8	18.5
17	2.2	3.1	2.6	1.9	3.1	4.8	6.5	11.8	11.9	10.5	13.6	15.8	18.9	20	21.5	19.7	18.3	**39.9**	29.8	27.6	14.1	11.6	9.1	9.3	**39.9**
18	8.5	6.9	6.9	5.7	5	6.8	9.9	11.2	14.1	13.9	12.8	11.5	11.1	7	14	11.9	12.4	9	6.4	3.9	2.9	3.4	2.4	2.7	14.1
19	9.2	10.3	13.8	12.1	10.6	8.9	9.4	9.7	11.1	10.3	9.9	10.2	13.4	12.3	12	12.5	6.6	10.5	8	7.5	5.2	4.5	3.2	3.7	13.8
20	2.9	3.2	4.4	3.5	2.8	5.2	7.6	6.1	7.2	9.5	13.1	12.7	17	16	17.9	14.6	13.7	19.6	15.7	6.8	3.8	3.2	3.8	3	19.6
21	2.5	1.7	2.2	2.2	3.3	1.8	3.4	5.8	6.9	6.7	10.2	9.1	11.2	12.7	12.5	10.3	10	9.7	9.7	7.9	5.4	3.8	3.7	4.8	12.7
22	6.6	4.7	4.5	8.4	10.2	9.5	12.3	16.1	19.2	19.1	19.7	19.4	17	16.6	14.5	12.3	13.6	21.9	18.7	14.8	17.8	12.1	5.3	21.6	21.9
23	27.2	19.3	18.3	17.5	15.2	17.2	18.8	22.4	18.2	18.4	28.9	22.5	25.8	25.2	23.4	23	21	18.7	19.8	11.9	2.8	3.5	2.4	2.6	28.9
24	2.8	10.3	1.7	1.9	2.3	2.7	6.6	5.6	6.4	8.3	7.1	8.5	8.2	10.7	10.1	10.6	10.9	11.8	12.4	9.1	7.7	5.6	5.3	7.4	12.4
25	12.1	9.1	8.9	8.6	8.6	11.9	12.8	11.5	14.8	14.4	10.5	17.1	18.8	23.2	21.7	21.7	19.3	18.8	15	11.6	5.9	3.8	3.5	5.9	23.2
26	5.6	6.1	5.3	2.4	4.7	7	6.3	5.4	7.1	9.6	10.4	6.3	9.1	6.9	6.8	16.5	8.5	15.6	8.3	11.9	13.9	12.6	8	6.5	16.5
27	7.8	10.3	11.7	10.4	9.1	10.9	10.5	11.5	14.2	14	16.3	16.7	17.1	17.5	17.3	14.5	13.1	14.5	14.7	11.6	8	4.3	4.4	5.5	17.5
28	4.7	2.5	2.3	1.9	2	2.4	5	8.7	7.2	10.5	12.3	16	16.7	17.1	18.1	15.5	14.2	11.9	8.5	9.1	7.7	9.3	8.1	6.9	18.1
29	6.9	5.8	5.2	3.8	7.5	5.3	7.3	12.3	10.3	13.3	13	13.3	20.2	14.5	17.3	14.1	14.1	14	13	9.4	5.5	3.1	2.7	2.3	20.2
30	3.4	4.9	2.2	1.6	1.8	1.5	2.8	2.7	7.9	6.3	7.4	9.4	15	12.7	16.2	22	17	14.9	15.2	14.8	10.4	5.4	7.5	7.9	22
PEAK	27.2	19.3	18.3	17.5	15.2	17.2	18.8	22.4	19.2	23.2	28.9	22.5	25.8	26.0	23.4	23.0	23.0	39.9	29.8	27.6	19.2	26.4	14.8	21.6	

STATUS FLAG CODES

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

MONTHLY SUMMARY

MAXIMUM INSTANTANEOUS READING	39.9	KPH	@ HOUR(S)	18
			ON DAY(S)	17


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

Vector Wind Direction

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

JUNE 2008

VECTOR WIND DIRECTION (WD) hourly averages in degrees

MST

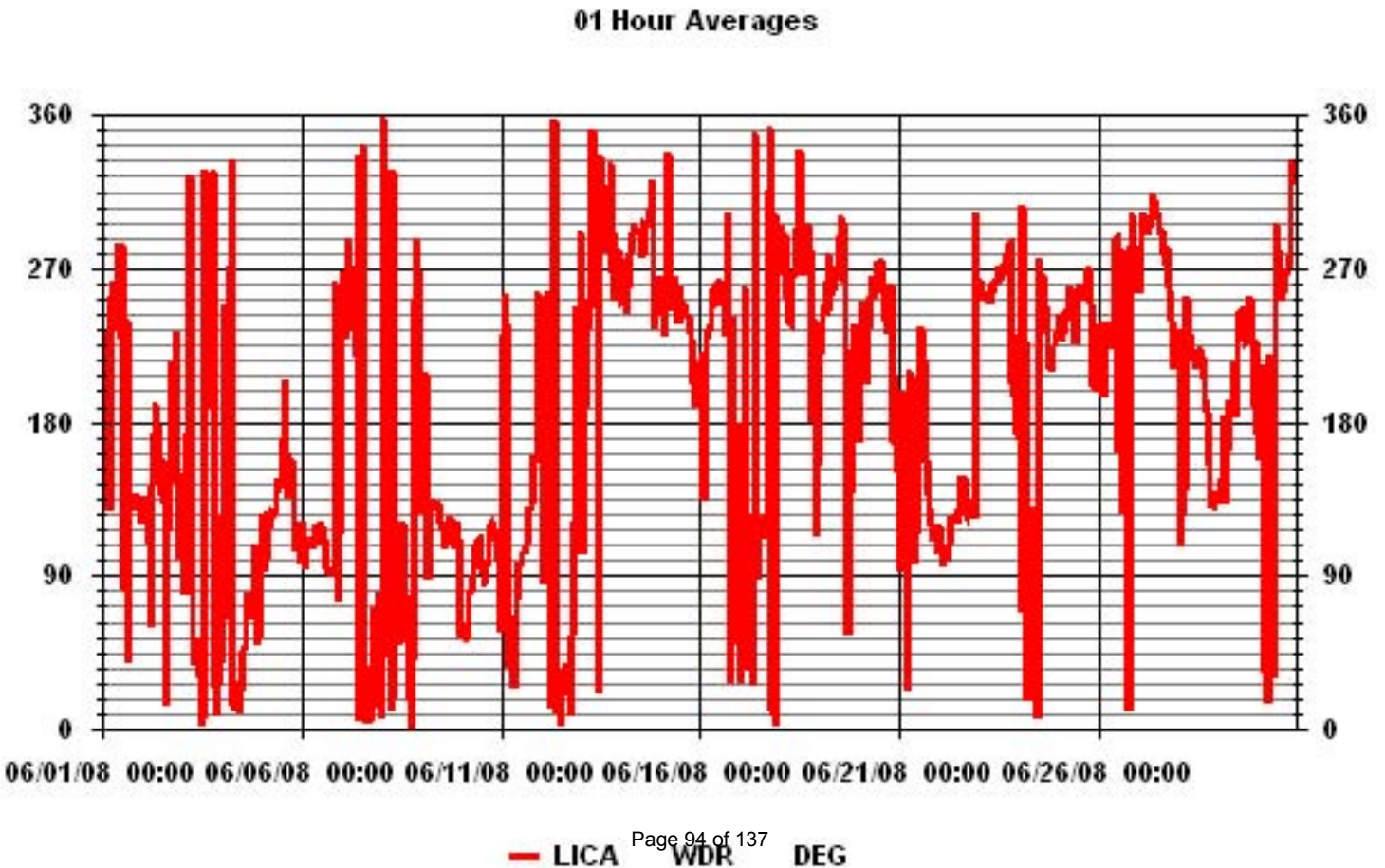
HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	24-HOUR	24-HOUR AVG	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	AVG.	QUANDRANT	RDGS.
DAY																											
1	229	212	233	227	127	253	233	262	257	284	273	229	284	84	81	240	38	133	129	129	130	138	133	121	152	SSE	24
2	126	131	127	136	110	60	142	173	191	179	158	136	159	133	14	116	147	215	169	150	145	233	109	100	147	SE	24
3	131	150	78	173	171	324	109	44	37	53	34	32	2	6	328	275	251	187	260	327	25	7	26	38	7	N	24
4	124	230	249	64	239	272	334	15	11	26	28	9	22	46	49	74	80	74	64	66	108	49	53	83	39	NE	24
5	121	126	93	99	127	118	127	126	127	138	146	141	154	170	204	163	135	149	158	136	123	104	117	97	135	SE	24
6	114	121	93	113	110	109	113	105	117	120	108	122	120	114	112	95	93	89	94	91	262	250	74	114	109	ESE	24
7	249	268	229	233	287	236	271	268	235	218	336	4	63	342	14	3	8	4	37	58	71	50	80	14	11	NNE	24
8	7	359	42	69	328	53	11	327	18	63	54	49	76	122	82	51	79	18	0	40	252	287	267	269	32	NNE	24
9	179	126	205	209	87	116	130	134	131	132	132	121	123	118	105	113	112	111	124	118	109	106	122	113	120	ESE	24
10	56	56	54	52	62	82	80	91	108	103	110	111	96	92	84	99	96	115	119	121	118	111	99	71	99	E	24
11	56	231	164	255	238	36	67	40	24	50	76	98	95	103	105	105	109	131	128	132	160	157	256	225	98	E	24
12	230	130	84	253	234	257	12	24	358	9	19	35	1	20	29	36	36	28	7	55	122	225	247	239	23	NNE	24
13	292	103	174	189	235	252	246	352	277	258	275	21	336	318	301	319	279	303	332	267	292	252	254	282	290	WNW	24
14	251	252	275	264	244	258	279	291	297	289	293	292	291	276	278	296	295	295	305	321	235	242	244	251	286	WNW	24
15	265	244	230	256	254	338	298	245	261	262	254	237	259	250	249	247	241	243	233	230	203	189	199	189	246	WSW	24
16	215	221	134	176	229	234	237	246	257	260	261	249	251	262	254	248	230	302	27	49	241	52	101	180	254	WSW	24
17	27	88	178	259	34	42	116	126	25	350	88	109	117	116	124	126	112	316	353	12	8	302	2	265	60	ENE	24
18	295	293	287	290	254	239	238	255	264	268	291	291	340	266	281	266	290	296	282	180	184	240	113	155	275	W	24
19	220	228	249	242	263	279	245	254	259	257	268	267	289	301	298	262	156	55	138	139	222	237	177	233	256	WSW	24
20	168	224	250	245	202	235	253	266	253	261	261	274	264	275	257	256	241	231	251	261	168	209	168	151	251	WSW	24
21	92	198	125	112	107	23	210	134	206	96	114	159	200	236	223	218	158	138	131	121	111	113	113	102	151	SSE	24
22	120	110	95	99	108	98	108	122	122	124	124	120	129	148	136	148	126	124	128	133	134	123	302	265	126	SE	24
23	263	255	254	253	254	252	250	260	261	256	261	262	271	265	269	267	269	278	284	285	203	196	172	231	262	W	24
24	170	68	307	175	228	17	94	92	63	131	69	6	276	265	265	238	231	247	224	212	209	224	231	231	225	SW	24
25	243	240	227	232	244	246	252	259	240	235	226	237	253	261	252	252	261	269	271	251	203	202	237	220	248	WSW	24
26	223	225	238	195	236	229	239	228	223	239	287	288	161	202	282	126	272	277	11	283	302	283	283	277	259	WSW	24
27	255	276	290	302	295	294	293	298	314	307	308	304	300	291	291	279	272	283	260	258	240	211	218	233	286	WNW	24
28	235	107	144	125	140	253	223	232	218	219	212	214	219	223	219	206	194	187	156	134	132	131	133	138	191	S	24
29	139	141	147	184	133	139	163	192	193	215	190	182	227	244	245	233	226	227	251	253	230	188	229	172	214	SSW	24
30	193	157	205	213	32	214	15	220	50	119	30	297	281	267	251	256	265	266	269	277	334	321	321	331	280	W	24
HOURLY AVG	295	359	307	302	328	338	334	352	358	350	336	304	340	342	328	319	295	316	353	327	334	321	321	331			

STATUS FLAG CODES

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

LAST CALIBRATION:	December-2006
DECLINATION :	19 DEGREES FROM MAGNETIC NORTH

MONTHLY CALIBRATION TIME:	0	HRS	OPERATIONAL TIME:	720	HRS
STANDARD DEVIATION	89.11		AMD OPERATION UPTIME	100.0	%
			MONTHLY AVERAGE	223	DEG


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

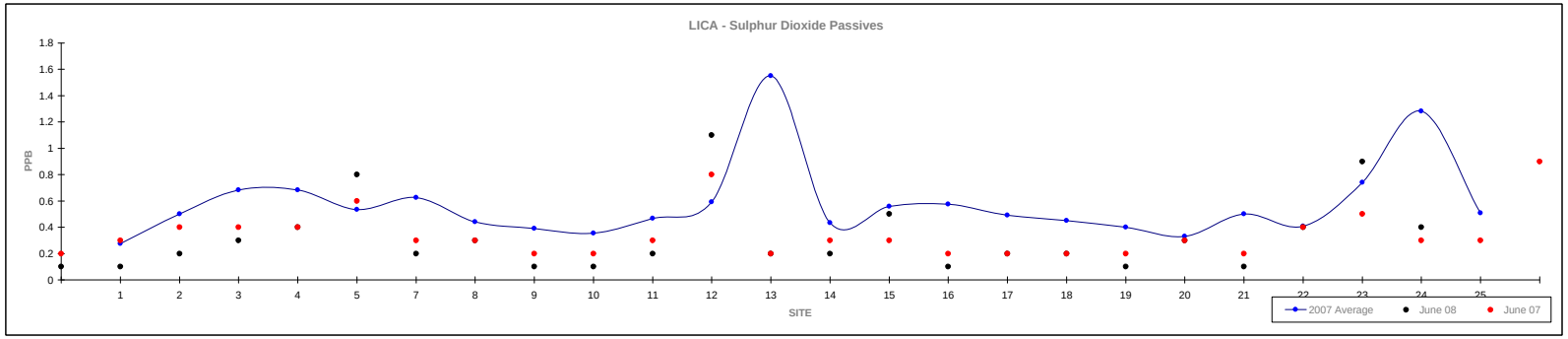
Non-Continuous Monitoring

Passive Summary Results for June 2008

Lakeland Industry & Community Association

Sulphur Dioxide
ppb

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

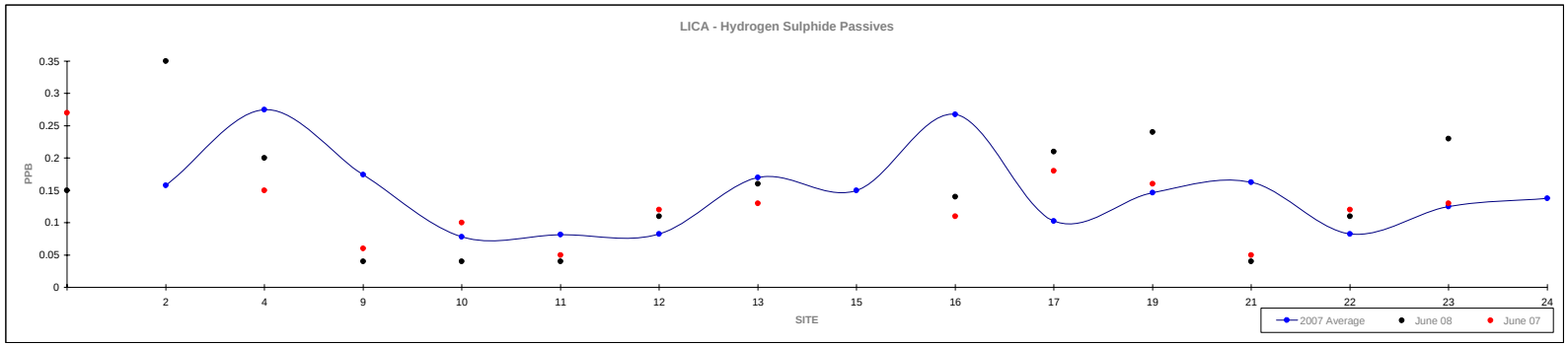


Passive Summary Results for June 2008

Lakeland Industry & Community Association

Hydrogen Sulphide
ppb

	2007															2008	
	3	**5**	**10**	**11**	**12**	**13**	**14**	**16**	**17**	**18**	**22**	**24**	**25**	**26**	**27**	**Reading**	**Site**
Mean	0.2	0.3	0.2	0.1	0.1	0.1	0.2	0.2	0.3	0.1	0.1	0.2	0.1	0.1	0.1	0.17	-
Minimum	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.1	0.1	0.0	0.1	0.1	0.04	VAR
Maximum	0.5	0.7	0.5	0.1	0.1	0.2	0.4	0.4	0.9	0.2	0.4	0.4	0.2	0.2	0.4	0.54	#17

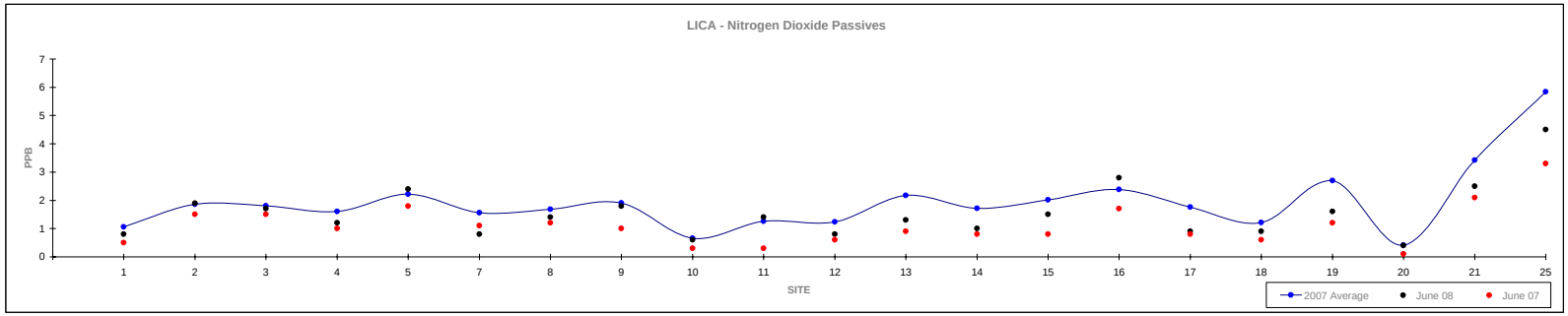


Passive Summary Results for June 2008

Lakeland Industry & Community Association

Nitrogen Dioxide
ppb

	2007																					2008	
	2	**3**	**4**	**5**	**6**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**22**	**23**	**24**	**28**	**Reading**	**Site**
Mean	1.1	1.9	1.8	1.6	2.2	1.6	1.7	1.9	0.7	1.3	1.2	2.2	1.7	2.0	2.4	1.8	1.2	2.7	0.4	3.4	5.8	1.5	-
Minimum	0.2	0.8	0.2	0.3	1.2	0.5	0.6	0.4	0.3	0.3	0.6	0.8	0.8	0.7	0.8	0.6	0.2	1.2	0.1	2.1	3.3	0.4	#23
Maximum	4.1	3.5	4.0	3.8	5.3	3.6	3.8	3.9	1.4	3.2	2.5	5.3	3.4	4.5	4.8	3.9	3.0	5.8	1.2	6.4	10.7	4.5	#28

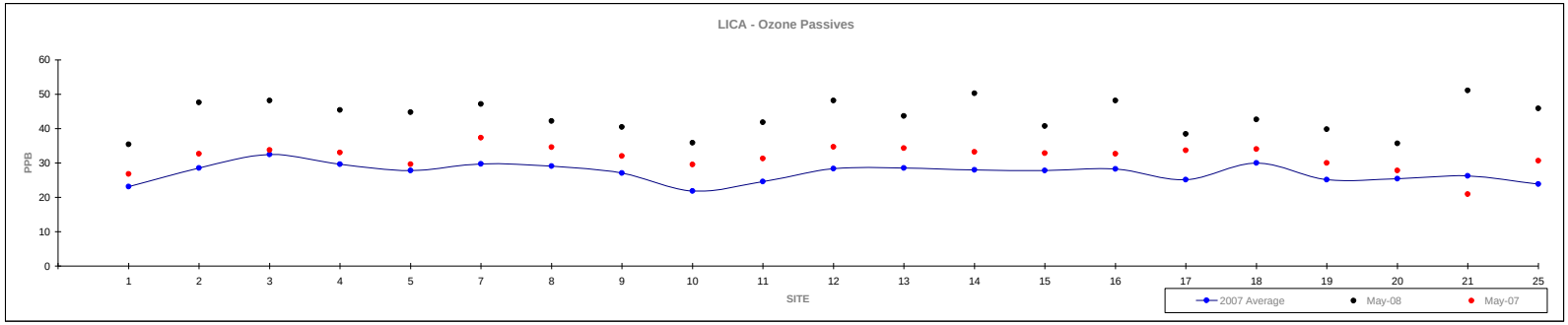


Passive Summary Results for June 2008

Lakeland Industry & Community Association

Ozone ppb

	2007																					2008	
	2	3	4	5	6	8	9	10	11	12	13	14	15	16	17	18	19	22	23	24	28	Reading	Site
Mean	23.1	28.5	32.5	29.6	27.8	29.7	29.0	27.0	21.9	24.6	28.3	28.5	28.0	27.8	28.3	25.2	30.0	25.2	25.5	26.2	23.8	30.3	-
Minimum	12.9	18.6	20.6	19.3	17.6	19.5	18.7	16.2	12.2	15.3	16.8	19.9	19.0	18.9	17.4	14.7	19.4	15.8	10.9	17.7	16.9	21.0	#2
Maximum	37.3	41.1	51.4	48.0	46.3	42.3	44.1	44.6	29.5	33.6	41.2	38.6	39.9	41.6	44.7	38.6	46.5	39.2	39.0	41.6	33.2	37.7	#13



Calibration Reports

Cold Lake

Sulphur Dioxide

SO_2 Calibration Report

Station Information

Calibration Date	June 4, 2008	Previous Calibration	05/021/2008
Company	**Lakeland Industry & Community Association**		
Plant / Location	**LICA 1 - Cold Lake South**		
Start Time (MST)	6:40	End Time (MST)	13:55
Reason:	Monthly Calibration		
Barometric Pressure	706 mmHg	Station Temperature	24 Deg C
Cal Gas	52.2 ppm	Cal Gas Expiry date	March 12, 2010
DAS Output Voltage	0 - 10 Volts		

Equipment Information

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

Analyzer Settings

	Before Calibration				After Calibration			
Concentration Range	0 - 500 ppb							
Sample Flow / Box Temp	700	ccm	OK	Deg C	700	ccm	OK	Deg C
HVPS / Lamp Setting	OK		845		OK		830	
PMT / RxCell Temp	OK	Deg C	OK	Deg C	OK	Deg C	OK	Deg C
Converter / IZS Temp	NA	Deg C	OK	Deg C	NA	Deg C	OK	Deg C
Offset / Slope	106		844		106		972	

Calibration Data

Dilution Flow Rate	Source Gas Flow Rate	Calculated Concentration	Indicated Conc. (DAS)	Correction Factor
5000	0	0	0	N/A
4961.1	38.9	406	397	1.0230
5000	0	0	0	N/A
4961.7	38.3	400	402	0.9947
			Sum of Least Squares	
			New Correction Factor	

	Before Calibration	After Calibration
Auto Zero	0	N/A
Auto Span	324	N/A
Sample Lines Connected		**YES**
Percent Change from Previous Calibration		

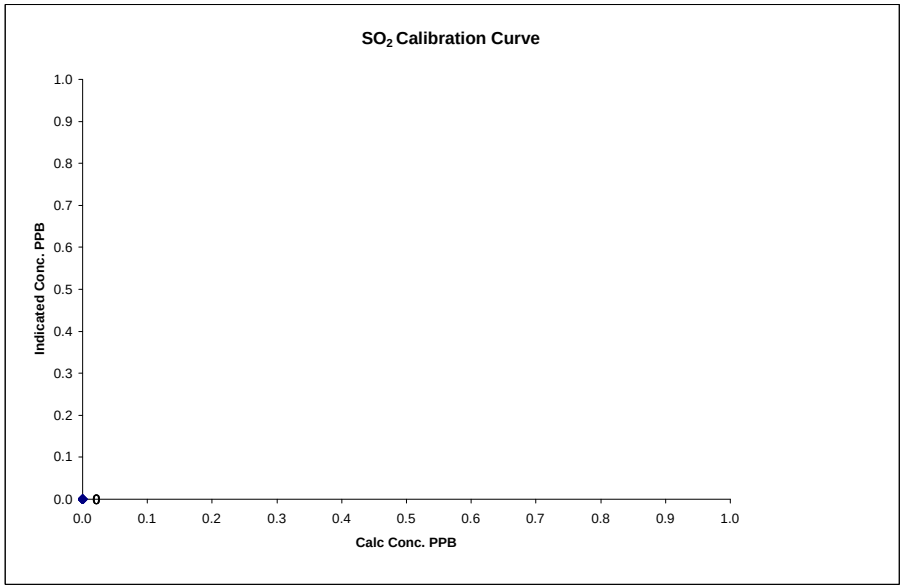
Calibration Performed by: Shea Beaton

SO_2 Calibration Curve

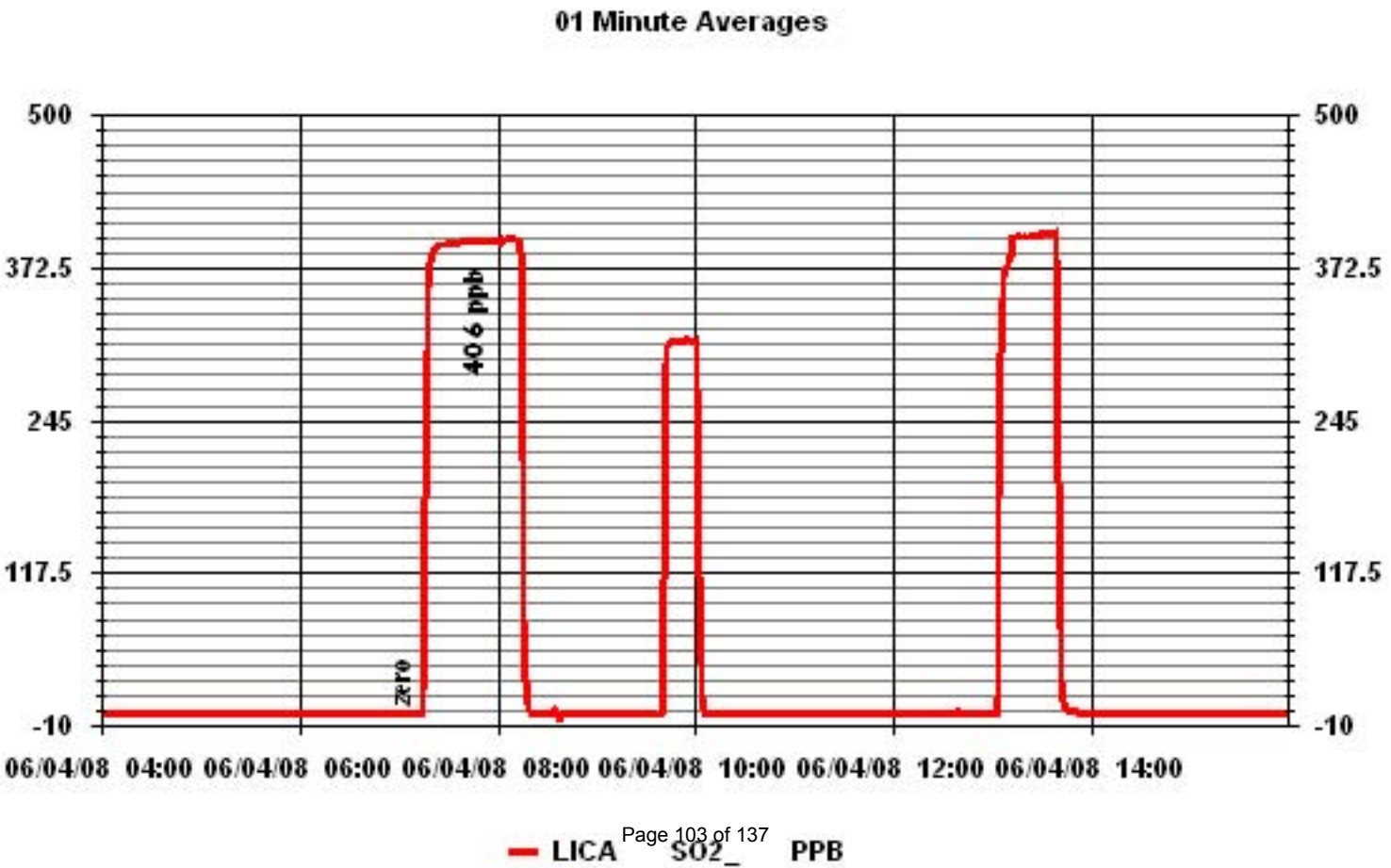
Calibration Date	June 4, 2008		
Company	**Lakeland Industry & Community Association**		
Plant / Location	**LICA 1 - Cold Lake South**		
Start Time (MST)	6:40	End Time (MST)	13:55

Calculated Conc. ppb	Indicated Response ppb	Correction Factor
0	0	n/a
0	0	#DIV/0!
0	0	#DIV/0!
0	0	#DIV/0!

Correlation Coefficient	(≥ 0.995)	#DIV/0!
Slope	(0.85 to 1.15)	#DIV/0!
Intercept	(± 3% F.S.)	#DIV/0!



Notes: *Performed as found points, replaced the lamp. Ran the daily cal program to verify operation then at 12:38 began a two point cal to adjust the zero and span values. Will allow analyzer to stablize overnight then perform a 3-point cal tomorrow.


01 Minute Averages
500
372.5
245
117.5
-10
zero
406 ppb
06/04/08 04:00
06/04/08 06:00
06/04/08 08:00
06/04/08 10:00
06/04/08 12:00
06/04/08 14:00
LICA SO2_ PPB

SO_2 Calibration Report

Station Information

Calibration Date	June 5, 2008	Previous Calibration	May 21, 2008
Company	**Lakeland Industry & Community Association**		
Plant / Location	**LICA 1 - Cold Lake South**		
Start Time (MST)	7:00	End Time (MST)	10:55
Reason:	Monthly Calibration		
Barometric Pressure	708 mmHg	Station Temperature	25 Deg C
Cal Gas	52.2 ppm	Cal Gas Expiry date	March 12, 2010
DAS Output Voltage	0 - 10 Volts		

Equipment Information

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

Analyzer Settings

	Before Calibration				After Calibration			
Concentration Range	0 - 500 ppb							
Sample Flow / Box Temp	700	ccm	OK	Deg C	700	ccm	OK	Deg C
HVPS / Lamp Setting	OK		828		OK		830	
PMT / RxCell Temp	OK	Deg C	OK	Deg C	OK	Deg C	OK	Deg C
Converter / IZS Temp	NA	Deg C	OK	Deg C	NA	Deg C	OK	Deg C
Offset / Slope	106		972		106		972	

Calibration Data

Dilution Flow Rate	Source Gas Flow Rate	Calculated Concentration	Indicated Conc. (DAS)	Correction Factor
5000	0	0	0	N/A
4961.7	38.3	400	407	0.9824
4961.7	38.3	400	400	0.9996
4976	24	251	250	1.0022
4985.6	14.4	150	153	0.9826
5000	0	0	0	N/A
			Sum of Least Squares	0.9987
			New Correction Factor	0.9996

	Before Calibration	After Calibration
Auto Zero	-1	-1
Auto Span	312	320
Sample Lines Connected		**YES**
Percent Change from Previous Calibration		-0.1%

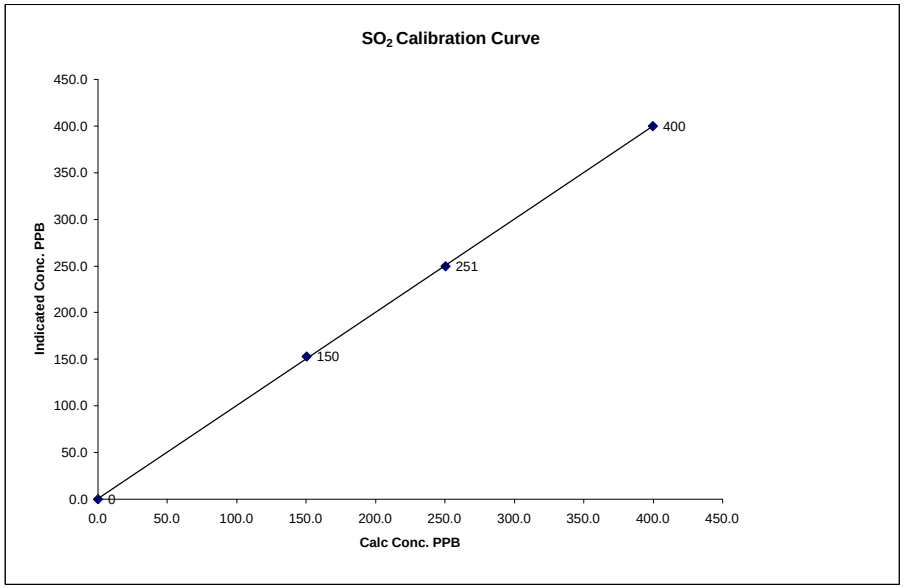
Calibration Performed by: Shea Beaton

SO_2 Calibration Curve

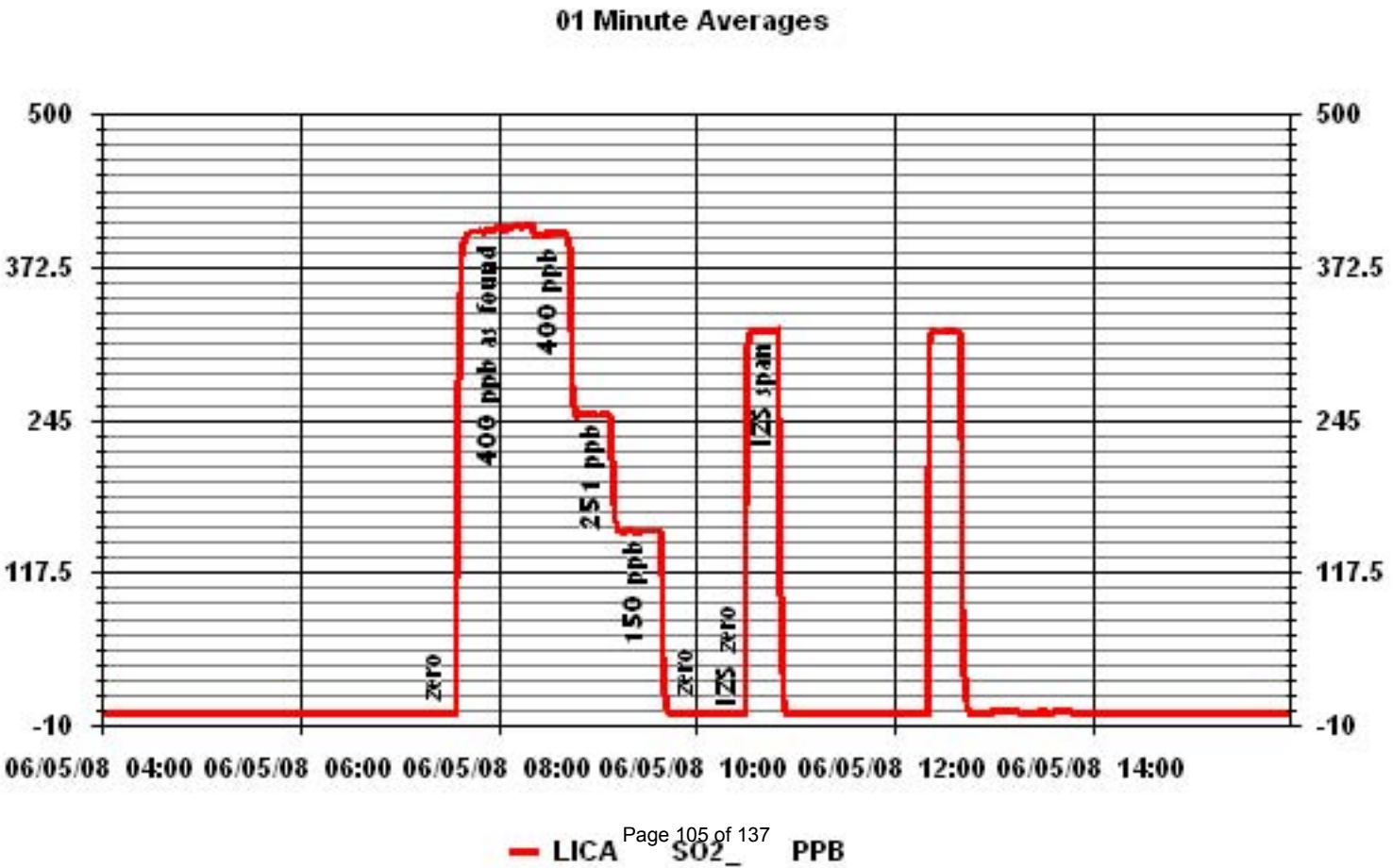
Calibration Date	June 5, 2008		
Company	**Lakeland Industry & Community Association**		
Plant / Location	**LICA 1 - Cold Lake South**		
Start Time (MST)	7:00	End Time (MST)	10:55

Calculated Conc. ppb	Indicated Response ppb	Correction Factor
0	0	n/a
150	153	0.9826
251	250	1.0022
400	400	0.9996

Correlation Coefficient	(≥ 0.995)	0.999930
Slope	(0.85 to 1.15)	0.998453
Intercept	(± 3% F.S.)	0.872743



Notes:


01 Minute Averages
500
372.5
245
117.5
-10
zero
400 ppb as found
400 ppb
251 ppb
150 ppb
zero
IZS zero
IZS span
06/05/08 04:00
06/05/08 06:00
06/05/08 08:00
06/05/08 10:00
06/05/08 12:00
06/05/08 14:00
LICA SO2_ PPB

Total Reduced Sulphur

TRS Calibration Report

Station Information

Calibration Date	June 4, 2008	Previous Calibration	May 1, 2008
Company	**Lakeland Industry & Community Association**		
Plant / Location	**LICA 1 - Cold Lake South**		
Start Time (MST)	9:50	End Time (MST)	13:50
Reason:	Monthly Calibration		
Barometric Pressure	706 mm Hg	Station Temperature	24 Deg C
Cal Gas	10.2 ppm	Cal Gas Expiry date	April 3, 2009
DAS Output Voltage	0 - 10 Volts		

Equipment Information

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

Analyzer Settings

	Before Calibration				After Calibration			
Concentration Range	0 -100 ppb							
Sample Flow / Box Temp	425	ccm	OK	Deg C	425	ccm	OK	Deg C
HVPS / Lamp Setting	OK		885		OK		888	
PMT / RxCell Temp	OK	Deg C	OK	Deg C	OK	Deg C	OK	Deg C
Converter / IZS Temp	850	Deg C	OK	Deg C	850	Deg C	OK	Deg C
Offset / Slope	918		701		918		859	

Calibration Data

Dilution Flow Rate	Source Gas Flow Rate	Calculated Concentration	Indicated Conc. (DAS)	Correction Factor
5000	0	0	0	N/A
4962.2	37.8	77	74	1.0421
4962.2	37.8	77	80	0.9639
4978.8	21.2	43	45	0.9611
4988.2	11.8	24	26	0.9258
5000	0	0	0	N/A
			Sum of Least Squares	0.9605
			New Correction Factor	0.9639

	Before Calibration	After Calibration
Auto Zero	-1	0
Auto Span	76	84
Sample Lines Connected		YES
Percent Change from Previous Calibration		3.7%

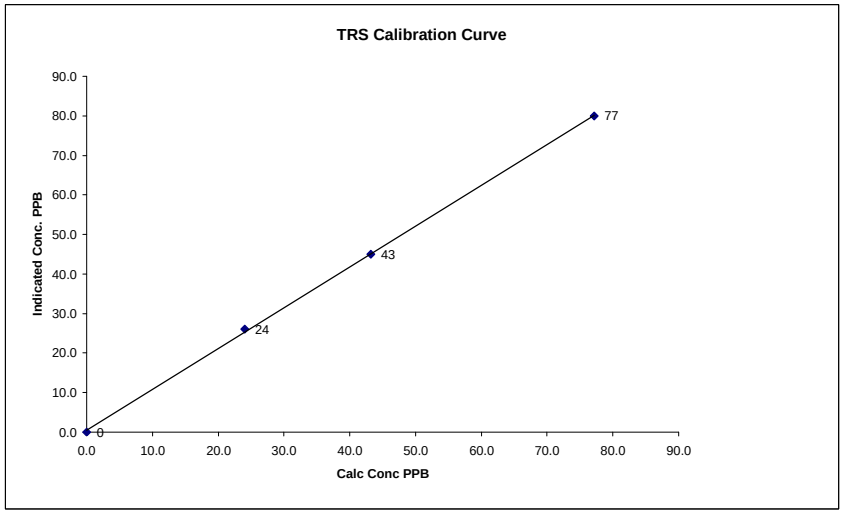
Calibration Performed by: Shea Beaton

TRS Calibration Curve

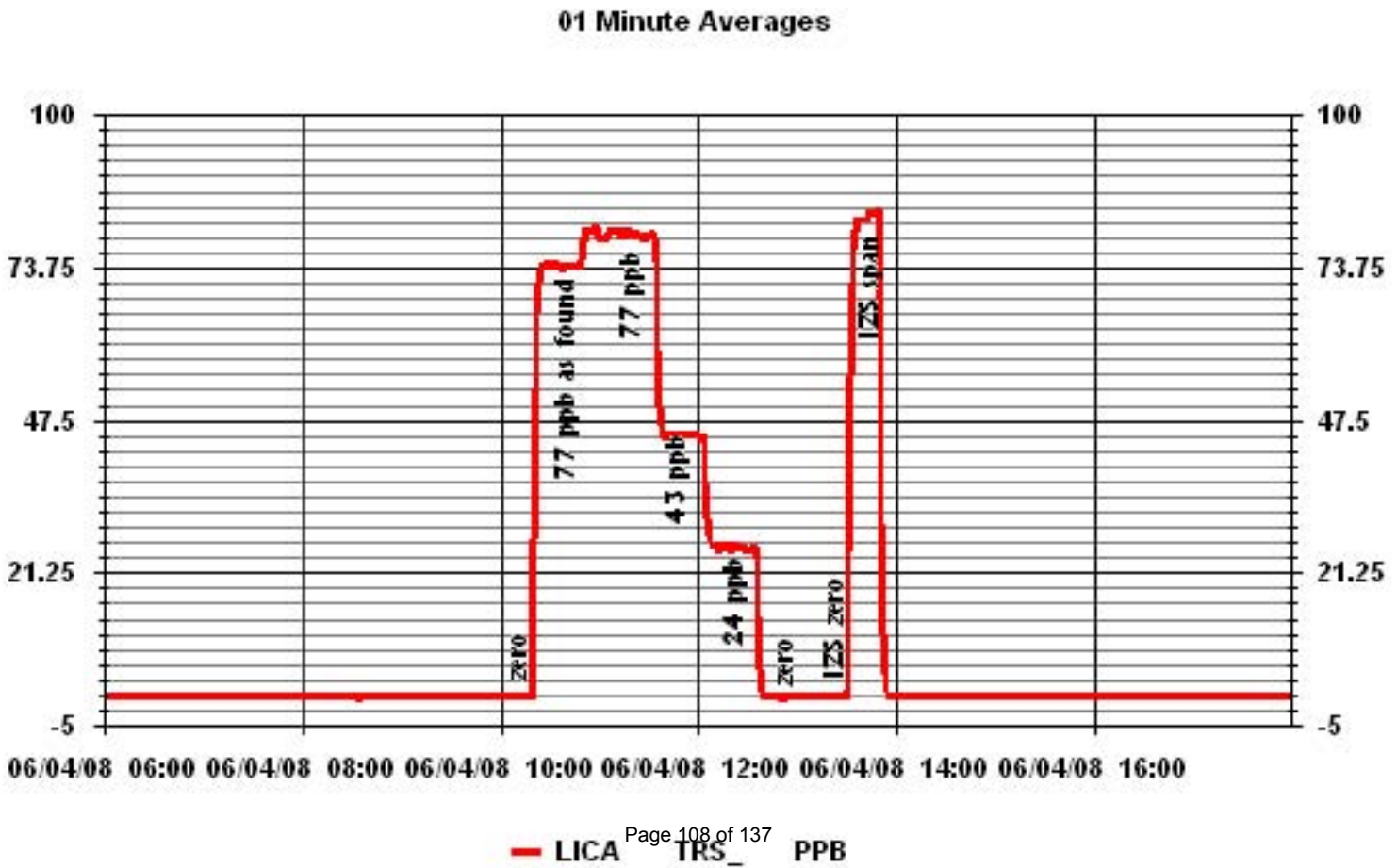
Calibration Date	June 4, 2008		
Company	**Lakeland Industry & Community Association**		
Plant / Location	**LICA 1 - Cold Lake South**		
Start Time (MST)	9:50	End Time (MST)	13:50

Calculated Conc. ppb	Indicated Response ppb	Correction Factor
0	0	n/a
24	26	0.9258
43	45	0.9611
77	80	0.9639

Correlation Coefficient	(≥ 0.995)	0.999796
Slope	(0.85 to 1.15)	1.033865
Intercept	(± 3% F.S.)	0.419200



Notes:


01 Minute Averages
100
73.75
47.5
21.25
-5
zero
77 ppb as found
77 ppb
43 ppb
24 ppb
zero
IZS zero
IZS span
06/04/08 06:00
06/04/08 08:00
06/04/08 10:00
06/04/08 12:00
06/04/08 14:00
06/04/08 16:00
LICA TRS_ PPB

Total Hydrocarbons

THC Calibration Report

Station Information

Calibration Date:	June 4, 2008	Previous Calibration	May 1, 2008
Company:	**Lakeland Industry and Community Association**		
Plant / Location:	**LICA1/Cold Lake**		
Start Time (MST)	6:40	End Time (MST)	10:40
Reason:		Monthly Calibration	
Barometric Pressure:	706 mmHg	Station Temperature:	24 Deg C
Calibrator:	API 700	S/N:	690
Cal Gas Concentration:	1010 ppm	Cal Gas Expiry Date:	February 22, 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	6.5	psi	6.5	psi
Hydrogen Pressure	8.5	psi	8	psi
Air Pressure	18	psi	18	psi

Calibration Data

Dilution Flow	Source Gas Flow	Calculated Concentration	Indicated Concentration	Correction Factor
2000	0	0.0	-0.1	N/A
2000	0	0.0	0.0	N/A
2000	80.0	38.8	37.7	1.0304
2000	80.0	38.8	38.5	1.0090
2000	40.0	19.8	19.7	1.0053
2000	20.0	10.0	9.8	1.0204
2000	0	0.0	0.0	N/A
			Correction Factor:	1.0090

Percent Change

Previous Calibration Correction Factor:	0.9986
Current Correction Factor Before Span Adjust:	1.0304
Percent Change:	-3.1%

IZS Calibration Data

	Before Calibration	After Calibration
Auto Zero	-0.1	0.0
Auto Span	29.7	30.4
Sample Lines Connected		**YES**

Cylinder Pressures			
Span	1500	psi	
Hydrogen	200	psi	
Zero Air	unlimited	psi	Maxxam-owned API 701 zero air supply with catalytic oxidizer

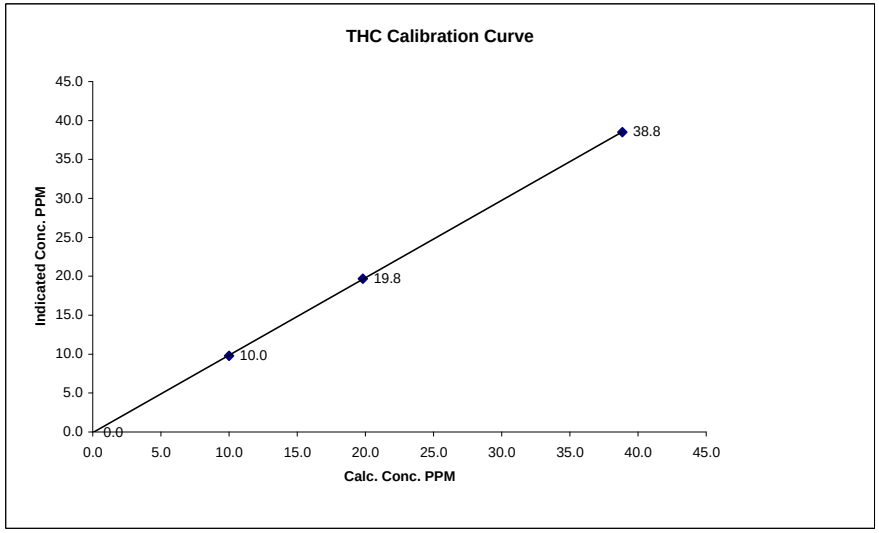
Calibration Performed by: Shea Beaton

THC Calibration Curve

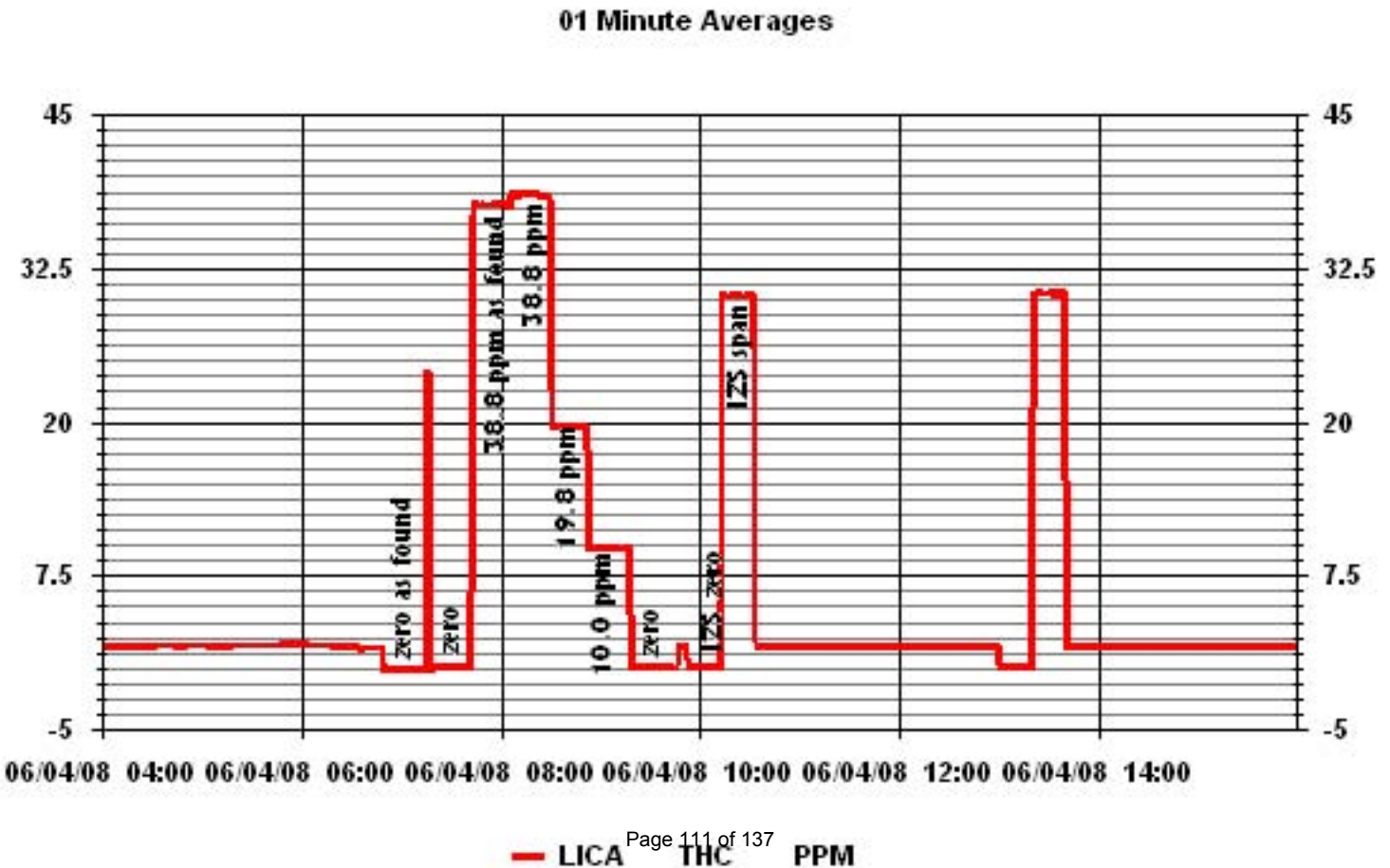
Calibration Date	June 4, 2008		
Company	**Lakeland Industry and Community Association**		
Plant / Location	**LICA1/Cold Lake**		
Start Time (MST)	6:40	End Time (MST)	10:40

Calculated Conc. ppm	Indicated Response ppm	Correction Factor
0.0	-0.1	
10.0	9.8	1.0204
19.8	19.7	1.0053
38.8	38.5	1.0090

Correlation Coefficient	(≥ 0.995)	0.999983
Slope	(0.85 to 1.15)	0.994372
Intercept	(± 3% F.S.)	-0.090934



Notes: Finished cal at 10:40, but analyzer not taken out of maintenance mode until 12:05


01 Minute Averages
45
32.5
20
7.5
-5
zero as found
zero
38.8 ppm as found
38.8 ppm
19.8 ppm
10.0 ppm
zero
IZS zero
IZS span
06/04/08 04:00
06/04/08 06:00
06/04/08 08:00
06/04/08 10:00
06/04/08 12:00
06/04/08 14:00
LICA THC PPM

Particulate Matter 2.5

TEOM® Calibration

Station		Transfer Standard	
Date:	June 5, 2008	Make/Model:	Bios DC-2
Station Name:	LICA 1	Serial Number:	1193
Location:	Cold Lake - South	Cell s/n:	2272
Operator:	LICA	Thermometer s/n:	2178

Sampler		Set-up and current Sampler readings	
Make/Model	R & P Series 1400 a TEOM	F-Main Set Pt (l/min)	3.00
Unit #	AMU 1494	F-Aux Set Pt (l/min)	13.67
Control unit s/n	140AB213859701	Filter Load (%)	17
Transducer s/n	140AB213859701	K_o Factor	11095
Parameter	PM 2.5	Temp (^oC)	15.4
		Press (ATM)	0.931

Note: Tolerances are noted as BOLD in Brackets

Calibration

Zero flow

	Pump Off		Pump On (Time to reach set points)	
F-Main (l/min)	0.06		**(45-60 Sec)**	38
F-Aux (l/min)	0.17		**(45-60 Sec)**	59

Temperature/Pressure

Measured Temp **(± 1 ^oC)**	14.6	**Δ ^oC**	-0.8
Measured Press **(± 1.5% ATM)**	0.932	**Δ % ATM**	0.1%

Flow Audit

			Δ % from Set-pt
Indicated Main/Aux Flow (l/min)	3.00 / 13.65	**(± 2%)**	0.0% / 0.1%
Total Flow = Main + Aux (l/min)	16.65	**(± 2%)**	0.1%
Measured Total Flow (l/min)	16.58	**(± 1.0 l/min. (5.65%))**	0.4%
Measured Main Flow (l/min)	3.06	**(± 0.2 l/min. (6.25%))**	-2.0%

Leak Check

		Actual leakage = Pump On - Pump Off
Main **(< 0.15 l/min)**	0.01	0.07
Aux **(< 0.15 l/min)**	0.00	0.17

K_o Factor

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

Start Time: 7:00 **Finish Time:** 9:45

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

Comments:

Calibrator/s: Shea Beaton

TEOM® Calibration

Station		Transfer Standard	
Date:	June 6, 2008	Make/Model:	Bios DC-2
Station Name:	LICA 1	Serial Number:	1193
Location:	Cold Lake - South	Cell s/n:	2272
Operator:	LICA	Thermometer s/n:	2178

Sampler		Set-up and current Sampler readings	
Make/Model	R & P Series 1400 a TEOM	F-Main Set Pt (l/min)	3.00
Unit #	AMU 1494	F-Aux Set Pt (l/min)	13.67
Control unit s/n	140AB213859701	Filter Load (%)	11
Transducer s/n	140AB213859701	K_o Factor	11095
Parameter	PM 2.5	Temp (^oC)	20.1
		Press (ATM)	0.921

Note: Tolerances are noted as BOLD in Brackets

Calibration

Zero flow

	Pump Off		Pump On (Time to reach set points)	
F-Main (l/min)	0.07		**(45-60 Sec)**	39
F-Aux (l/min)	0.17		**(45-60 Sec)**	54

Temperature/Pressure

Measured Temp **(± 1 ^oC)**	19.4	**Δ ^oC**	-0.7
Measured Press **(± 1.5% ATM)**	0.922	**Δ % ATM**	0.1%

Flow Audit

			Δ % from Set-pt
Indicated Main/Aux Flow (l/min)	3.00 / 13.64	**(± 2%)**	0.0% / 0.2%
Total Flow = Main + Aux (l/min)	16.64	**(± 2%)**	0.2%
Measured Total Flow (l/min)	16.42	**(± 1.0 l/min. (5.65%))**	1.3%
Measured Main Flow (l/min)	3.02	**(± 0.2 l/min. (6.25%))**	-0.7%

Leak Check

		Actual leakage = Pump On - Pump Off
Main **(< 0.15 l/min)**	0.00	0.07
Aux **(< 0.15 l/min)**	0.00	0.17

K_o Factor

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

Start Time: 7:00 **Finish Time:** 9:45

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

Comments:

Calibrator/s: Shea Beaton

Nitrogen Dioxide

NOx - NO- NO_2 Calibration Report

Station Information

Calibration Date	June 4, 2008	Previous Calibration	May 1, 2008
Company	**Lakeland Ind & Comm. Assoc.**	Plant/Location	**LICA 1 - Cold Lake South**
Start Time (MST)	6:40	End Time (MST)	13:25
Reason:	Monthly Calibration		
Barometric Pressure	706 mmHg	Station Temperature	24.0 Deg C
Cal Gas Concentration	NOx 52 ppm NO 51.5 ppm	Cal Gas Expiry date	March 12, 2010
DAS Output Voltage	0 - 5 Volts		

Equipment Information

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

Analyzer Settings

	Before Calibration				After Calibration			
Concentration Range			0 - 500	ppb				
Sample Flow/Conv. Temp	691	ccm	317	Deg C	691	ccm	317	Deg C
Ozone Flow / Vacuum	OK	ccm	189.7	"Hg-A	OK	ccm	189.7	"Hg-A
HVPS	-821		Volts		-821		Volts	
Rx/ Temp / PMT Temp	49.8	Deg C	-2.5	Deg C	49.6	Deg C	-2.4	Deg C
Box Temp / IZS Temp	28.7	Deg C	OK	Deg C	28.5	Deg C	OK	Deg C
Offset	3.8	NOx	3.6	NO	3.9	NOx	3.7	NO
Slope	1.001	NOx	0.956	NO	1.006	NOx	0.978	NO

Gas Phase Titration Calibration Data

Dilution Air Flow Rate	Source Flow Rate	O3 Set Point	Calculated Concentration		Indicated Concentration			Correction Factor	
			NOx	NO	NOx	NO	NO2	NOx	NO
5000	0	N/A	0	0	0	0	0	N/A	N/A
4961	38.9	N/A	405	401	393	393	1	1.0294	1.0195
4961	38.9	N/A	405	401	403	401	2	1.0039	0.9992
4976	24.3	N/A	253	250	253	251	2	0.9989	0.9972
4985	14.6	N/A	152	150	152	151	1	0.9989	0.9959
5000	0	N/A	0	0	0	0	0	N/A	N/A
								Converter Efficiency	
4961	38.9	N/A	405	401	405	403	2	N/A	
4961	38.9	300	405	N/A	402	130	273	99%	
4961	38.9	200	405	N/A	404	209	194	99%	
4961	38.9	100	405	N/A	404	306	98	99%	
4961	38.9	N/A	405	401	405	403	2	N/A	
			1					Correction Factor	
5000	N/A	N/A	0	0	1	0	0	N/A	N/A

Linearity OK?	**Yes**	No	Sum of Least Squares	1.0021	0.9984
Flows Checked on-site?	Yes	**No**	New Correction Factor	1.0039	0.9992
			Average Converter Efficiency	99%	

	Before Calibration				After Calibration			
Auto Zero	0	NOx	0	NO2	0	NOx	0	NO2
Auto Span	265	NOx	263	NO2	272	NOx	270	NO2
Sample Lines Connected							**YES**	
Percent Change from Previous Calibration					*NOx*	-0.3%	*NO*	0.0%

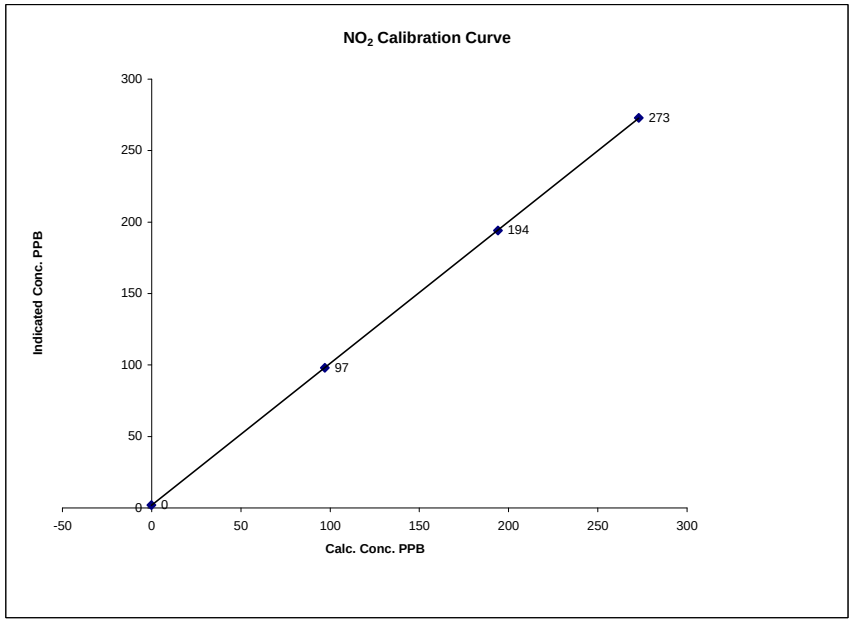
Calibration Performed by: Shea Beaton

NO_2 Calibration Curve

Calibration Date	June 4, 2008		
Company	**Lakeland Ind & Comm. Assoc.**		
Plant / Location	**LICA 1 - Cold Lake South**		
Start Time (MST)	6:40	End Time (MST)	13:25

Calculated Conc. ppb	Indicated Response ppb	Correction Factor
0	2	N/A
97	98	0.9898
194	194	1.0000
273	273	1.0000

Correlation Coefficient	(≥ 0.995)	0.999994
Slope	(0.85 to 1.15)	0.991914
Intercept	(± 3% F.S.)	1.914884



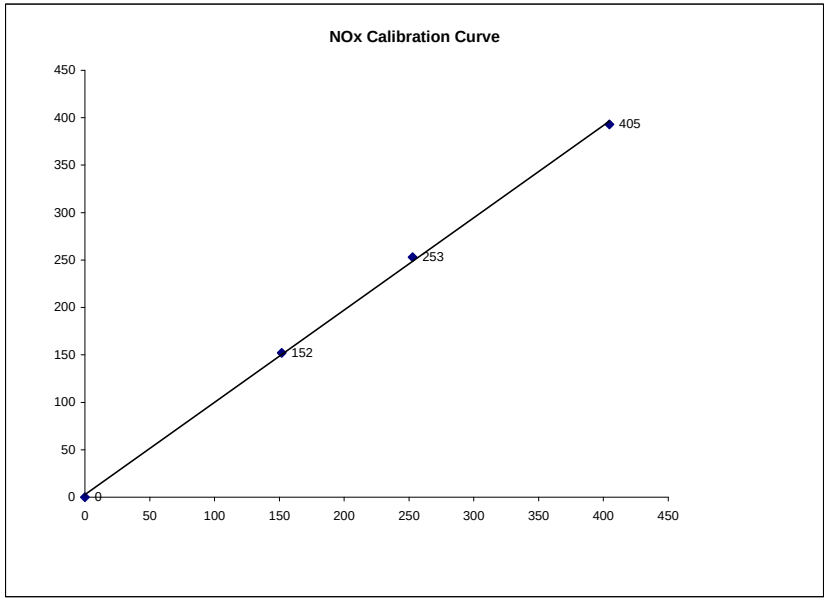
Notes:

NOx Calibration Curve

Calibration Date	June 4, 2008		
Company	**Lakeland Ind & Comm. Assoc.**		
Plant / Location	**LICA 1 - Cold Lake South**		
Start Time (MST)	6:40	End Time (MST)	13:25

Calculated Conc. ppb	Indicated Response ppb	Correction Factor
0	0	N/A
152	152	0.9989
253	253	0.9989
405	393	1.0294

Correlation Coefficient	(≥ 0.995)	0.999511
Slope	(0.85 to 1.15)	0.973168
Intercept	(± 3% F.S.)	2.647558

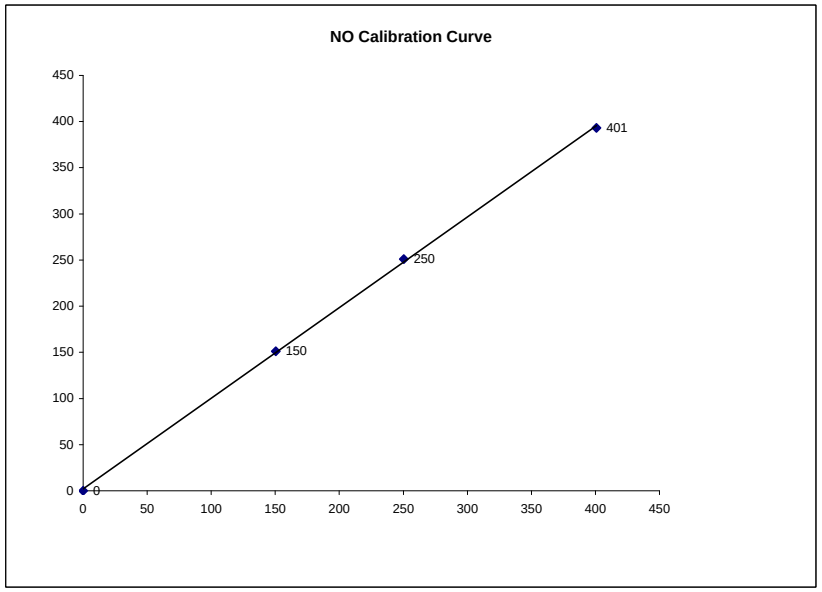


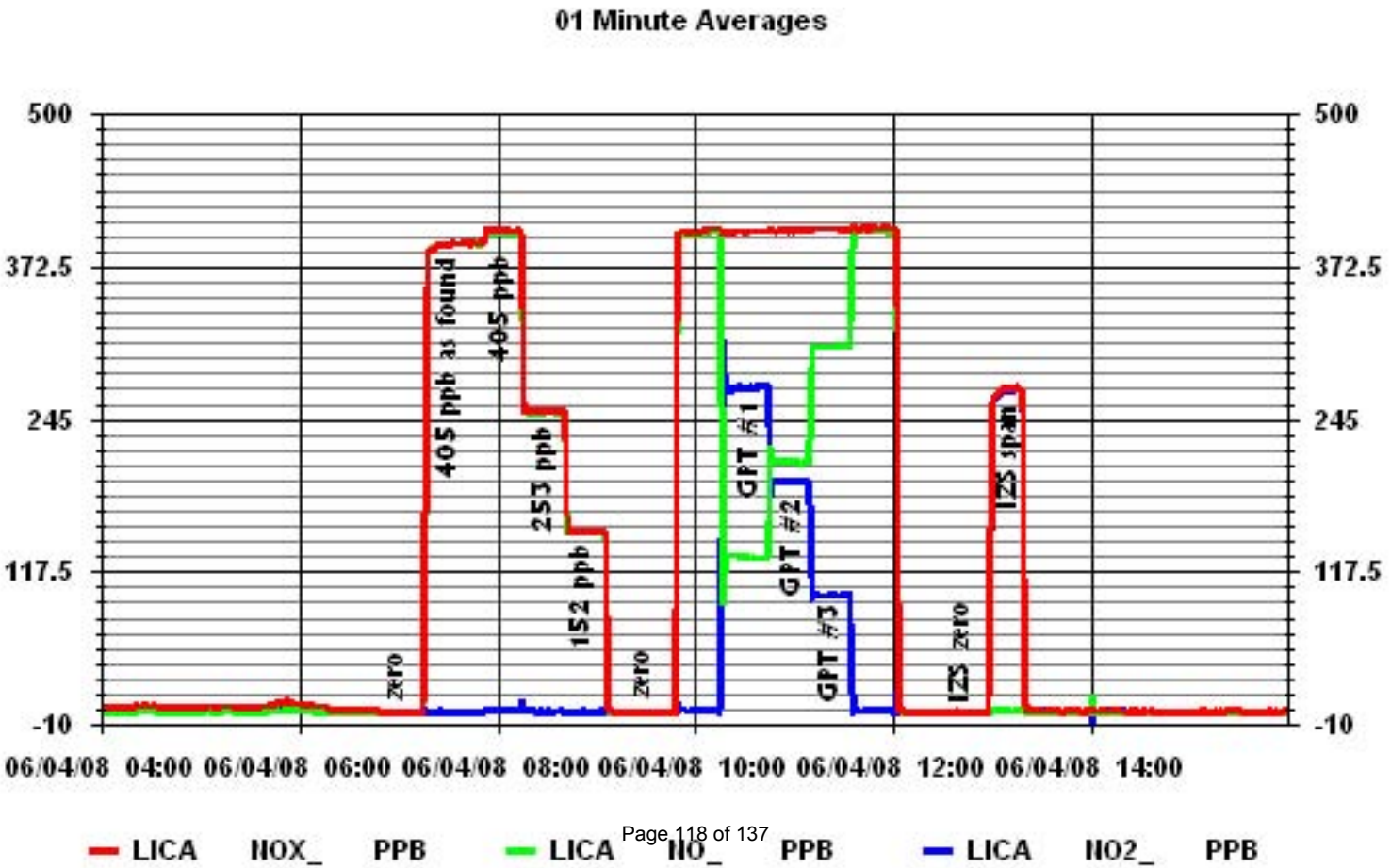
NO Calibration Curve

Calibration Date	June 4, 2008		
Company	**Lakeland Ind & Comm. Assoc.**		
Plant / Location	**LICA 1 - Cold Lake South**		
Start Time (MST)	6:40	End Time (MST)	13:25

Calculated Conc. ppb	Indicated Response ppb	Correction Factor
0	0	N/A
150	151	0.9959
250	251	0.9972
401	393	1.0195

Correlation Coefficient	(≥ 0.995)	0.999731
Slope	(0.85 to 1.15)	0.982030
Intercept	(± 3% F.S.)	2.014938




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

Ozone

O_3 Calibration Report

Station Information

Calibration Date	June 5, 2008	Previous Calibration	May 21, 2008
Company	**Lakeland Industry & Community Association**		
Plant / Location	**LICA 1 - Cold Lake South**		
Start Time (MST)	7:00	End Time (MST)	10:00
Reason:		Monthly Calibration	
Barometric Pressure	708 mm Hg	Station Temperature	25 Deg C
DAS Output Voltage	0 - 10 Volts		

Equipment Information

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

Analyzer Settings

	Before Calibration		After Calibration	
Concentration Range	0 - 500 ppb			
Bench Temp/ Pressure	30.3	Deg C	29.4	Deg C
O_3 Set Level	29%		29%	
Bench Lamp/O3 Lamp				
Sample Flow A/B	0.737 LPM	0.749 LPM	0.736 LPM	0.747 LPM
Offset / Slope	0.7	1.049	0.7	1.049

Calibration Data

Dilution Flow Rate	Ozone Set Point	Calculated Concentration	Indicated Conc. (DAS)	Correction Factor
5000	0	0	0	N/A
5000	400	382	384	0.9948
5000	200	193	193	1.0000
5000	100	94	95	0.9895
5000	0	0	0	N/A
			Sum of Least Squares	N/A
			New Correction Factor	0.9948

	Before Calibration	After Calibration
Auto Zero	0	0
Auto Span	285	287
Sample Lines Connected		YES
Percent Change from Previous Calibration		0.3%

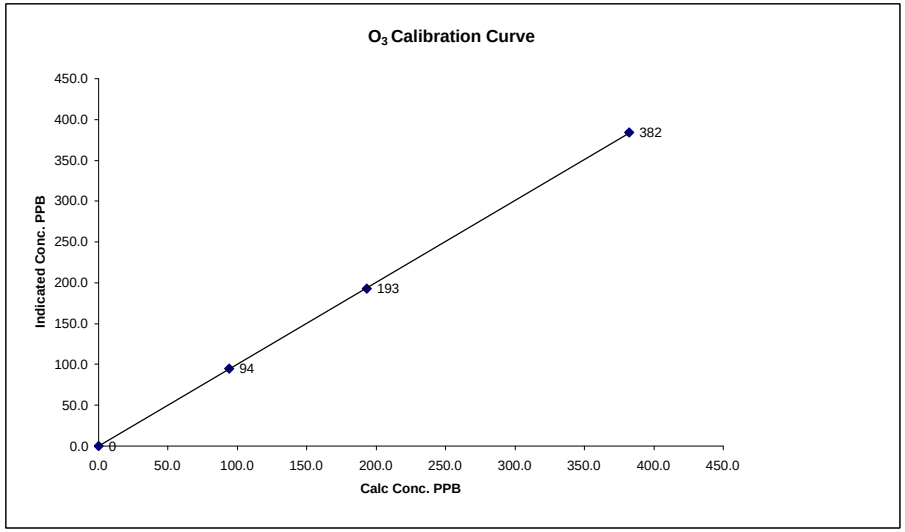
Calibration Performed by: Shea Beaton

O_3 Calibration Curve

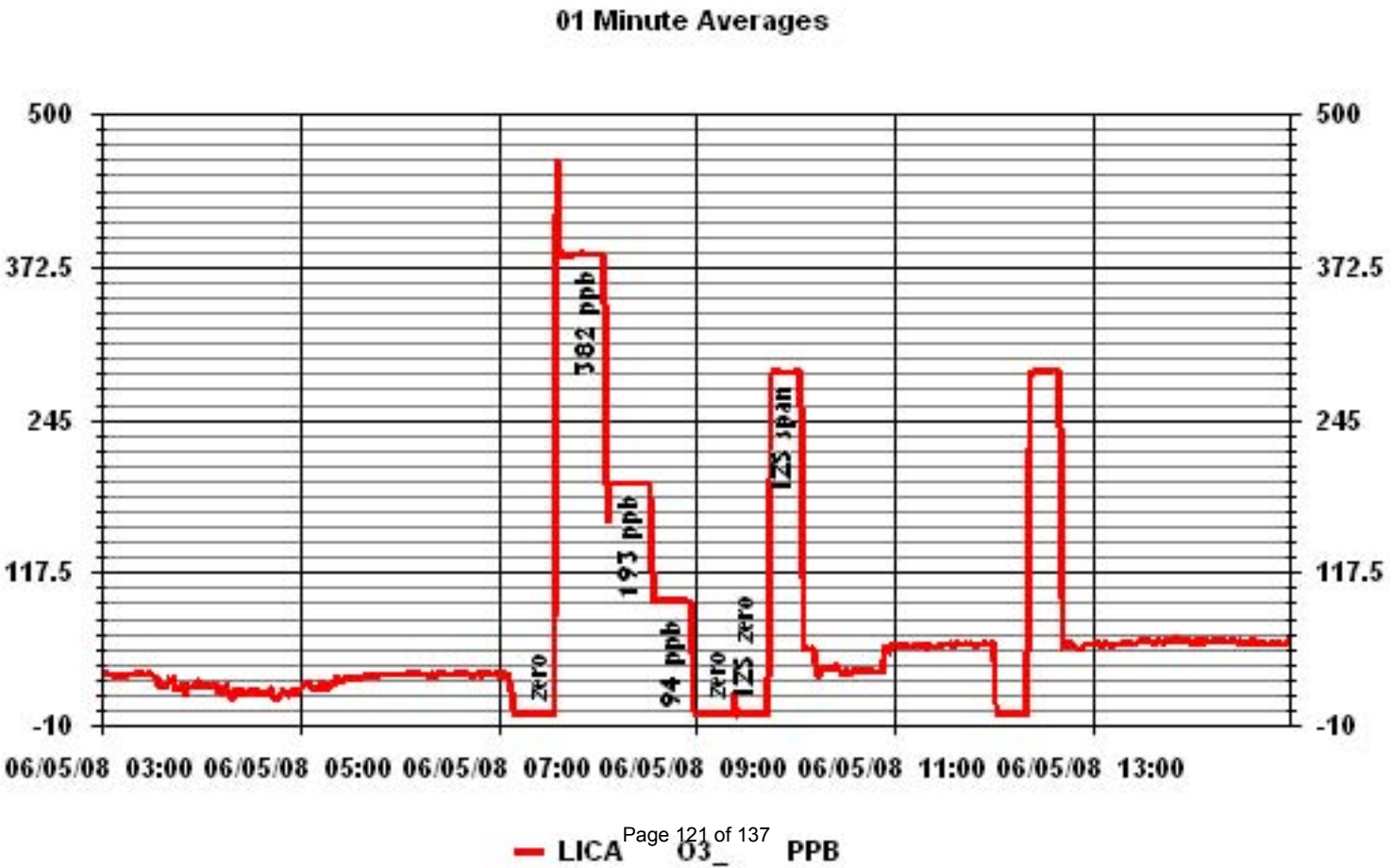
Calibration Date	June 5, 2008		
Company	**Lakeland Industry & Community Association**		
Plant / Location	**LICA 1 - Cold Lake South**		
Start Time (MST)	7:00	End Time (MST)	10:00

Calculated Conc. ppb	Indicated Response ppb	Correction Factor
0	0	n/a
94	95	0.9895
193	193	1.0000
382	384	0.9948

Correlation Coefficient	(≥ 0.995)	0.999986
Slope	(0.85 to 1.15)	1.004447
Intercept	(± 3% F.S.)	0.006319



Notes: pressure =700.5 mmHg , Bench Lamp = 53.6, O3 Lamp = 67.7


01 Minute Averages
500
372.5
245
117.5
-10
zero
382 ppb
193 ppb
94 ppb
zero
IZS zero
IZS span
06/05/08 03:00
06/05/08 05:00
06/05/08 07:00
06/05/08 09:00
06/05/08 11:00
06/05/08 13:00
LICA O3_ PPB

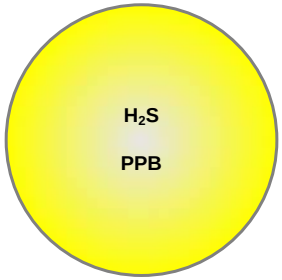
Passive Bubble Maps

Lakeland Industry & Community Association
H_2S Passive Bubble Map

JUNE 2008

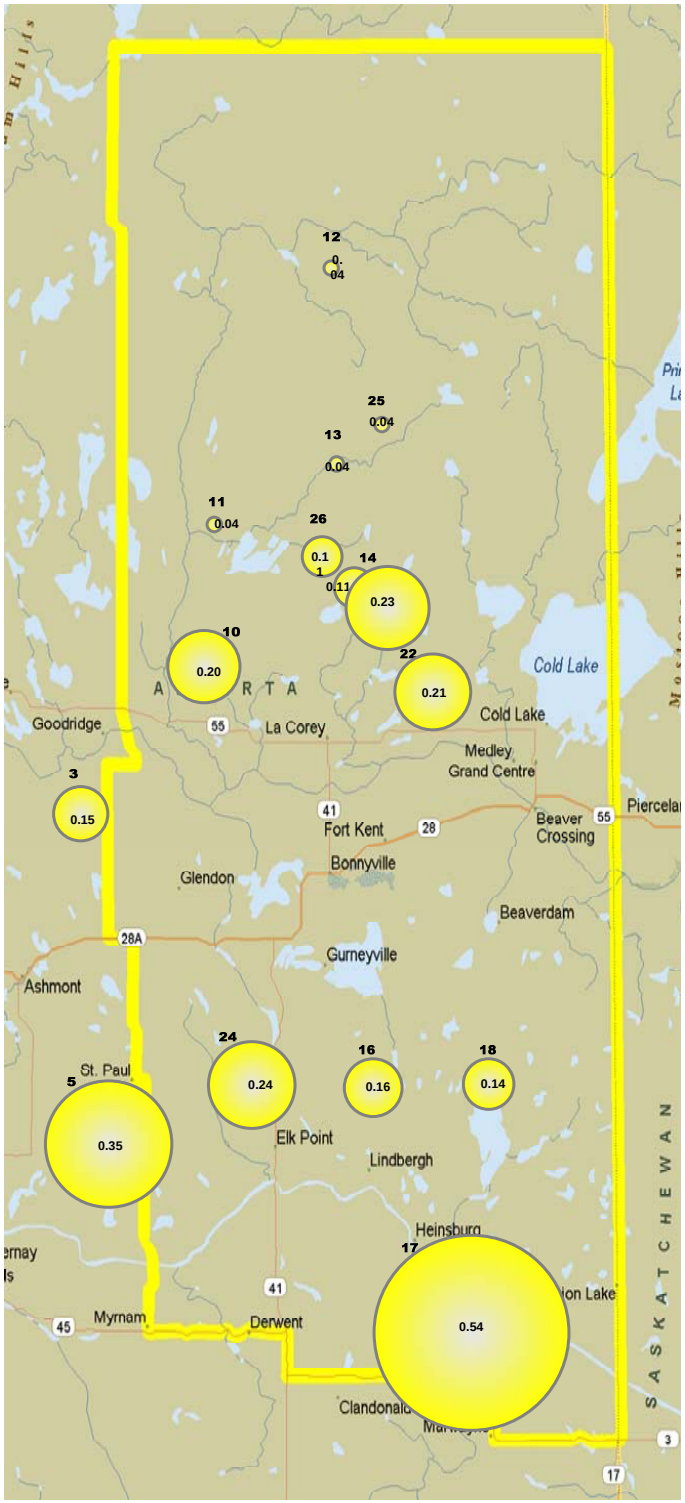
PASSIVE STATIONS

3 – Therien	0.15 PPB
5 – Lake Eliza	0.35 PPB
10 – La Corey	0.20 PPB
11 – Wolf Lake	0.04 PPB
12 – Foster Creek	0.04 PPB
13 – Primrose	0.04 PPB
14 – Maskwa	0.11 PPB
16 – Frog Lake	0.16 PPB
17 – Clear Range	0.54 PPB
18 – Fishing Lake	0.14 PPB
22 – Cold Lake South	0.21 PPB
24 – Fort George	0.24 PPB
25 – Burnt Lake	0.04 PPB
26 – Mahihkan	0.11 PPB
27 – Hilda Lake	0.23 PPB



Summary

Minimum : 0.04 PPB – Various
Maximum: 0.54 PPB – Clear Range
Average: 0.10 PPB *Includes Duplicates

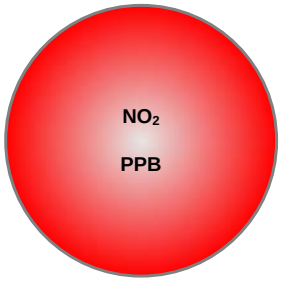


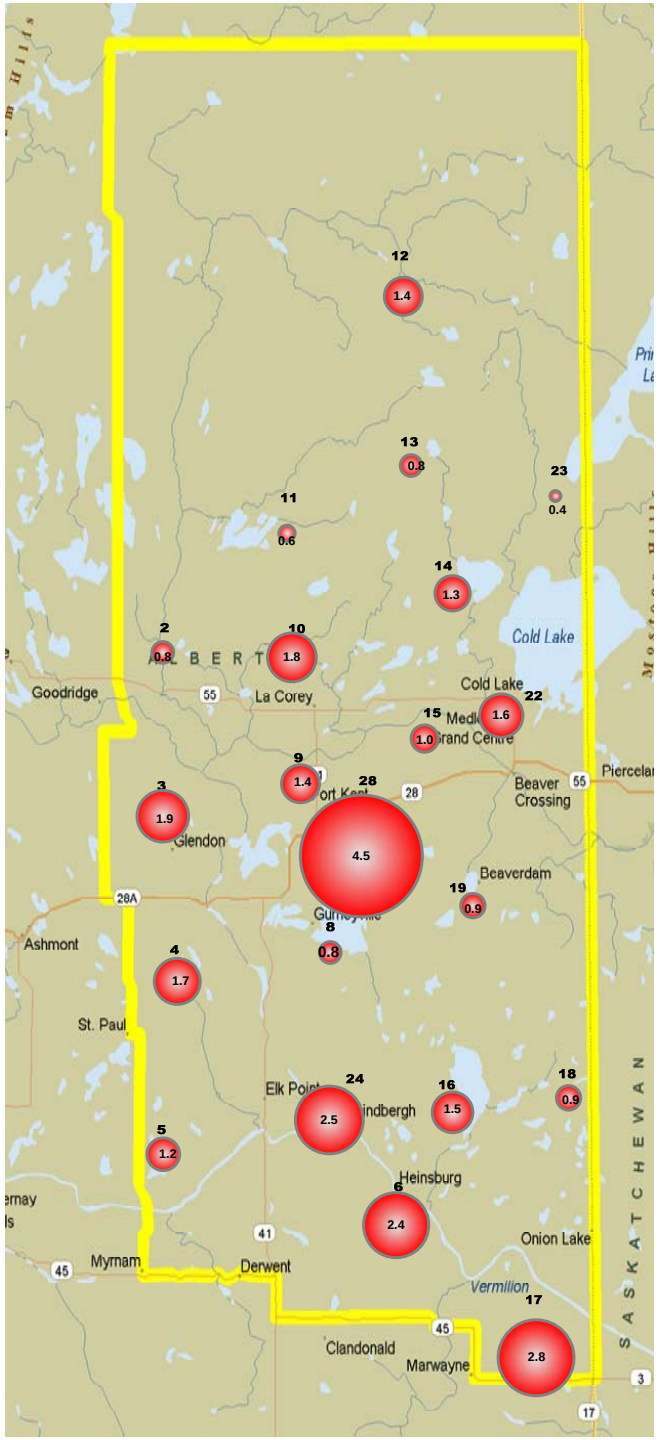
Lakeland Industry & Community Association
NO_2 Passive Bubble Map

JUNE 2008

PASSIVE STATIONS

2 – Sand River	0.8 PPB
3 – Therien	1.9 PPB
4 – Flat Lake	1.7 PPB
5 – Lake Eliza	1.2 PPB
6 – Telegraph Creek	2.4 PPB
8 – Muriel-Kehewin	0.8 PPB
9 – Dupre	1.4 PPB
10 – La Corey	1.8 PPB
11 – Wolf Lake	0.6 PPB
12 – Foster Creek	1.4 PPB
13 – Primrose	0.8 PPB
13A – Primrose	0.7 PPB
14 – Maskwa	1.3 PPB
14A – Maskwa	1.3 PPB
15 – Ardmore	1.0 PPB
16 – Frog Lake	1.5 PPB
17 – Clear Range	2.7 PPB
18 – Fishing Lake	0.9 PPB
19 – Beaverdam	0.9 PPB
22 – Cold Lake South	1.6 PPB
23 – Medley-Martineau	0.4 PPB
24 – Fort George	2.5 PPB
28 – Town of Bonnyville	4.5 PPB





Summary

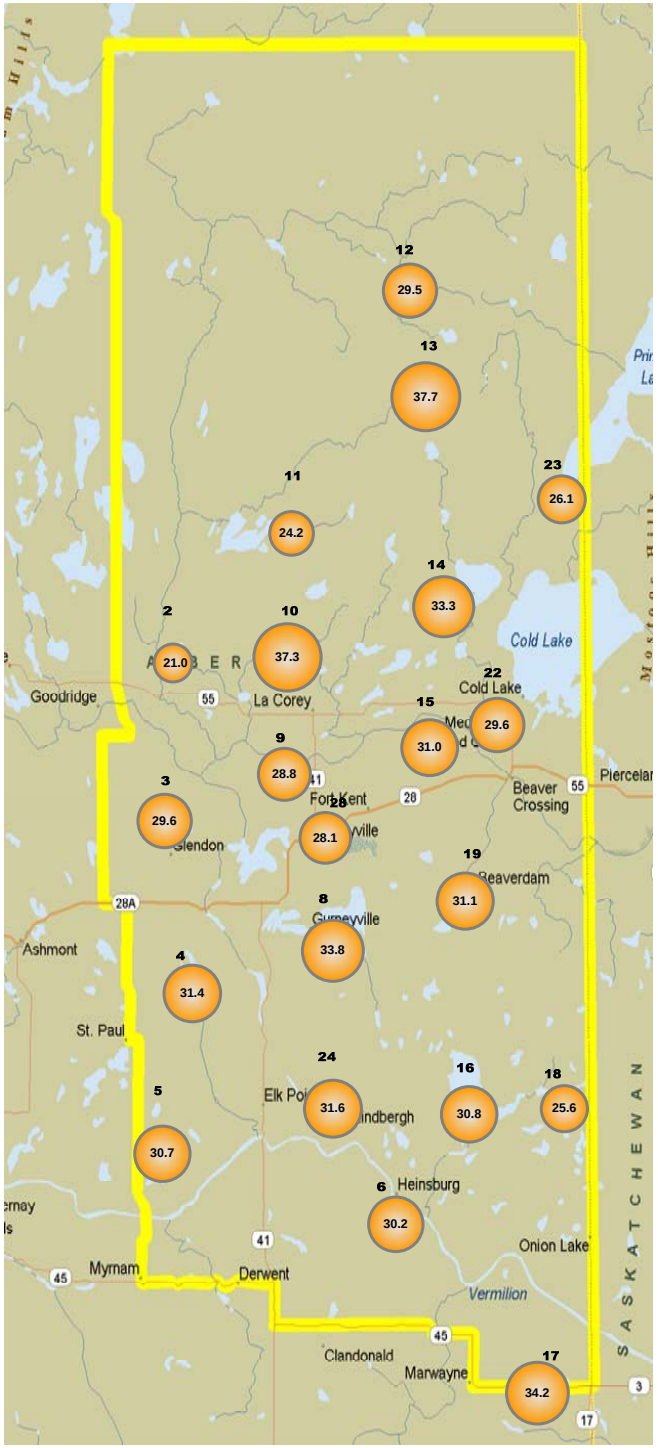
Minimum : 0.4 PPB – Medley-Martineau
Maximum: 4.5 PPB – Town of Bonnyville
Average: 1.5 PPB *Includes Duplicates

Lakeland Industry & Community Association
O_3 Passive Bubble Map

JUNE 2008

PASSIVE STATIONS

2 – Sand River	21.0 PPB
3 – Therien	29.6 PPB
4 – Flat Lake	31.4 PPB
5 – Lake Eliza	30.7 PPB
6 – Telegraph Creek	30.2 PPB
8 – Muriel-Kehewin	33.8 PPB
9 – Dupre	28.8 PPB
10 – La Corey	37.3 PPB
11 – Wolf Lake	24.2 PPB
12 – Foster Creek	29.5 PPB
13 – Primrose	36.5 PPB
13A – Primrose	38.9 PPB
14 – Maskwa	33.1 PPB
14A – Maskwa	33.5 PPB
15 – Ardmore	31.0 PPB
16 – Frog Lake	30.8 PPB
17 – Clear Range	34.2 PPB
18 – Fishing Lake	25.6 PPB
19 – Beaverdam	31.1 PPB
22 – Cold Lake South	29.6 PPB
23 – Medley-Martineau	26.1 PPB
24 – Fort George	31.6 PPB
28 – Town of Bonnyville	28.1 PPB



Summary

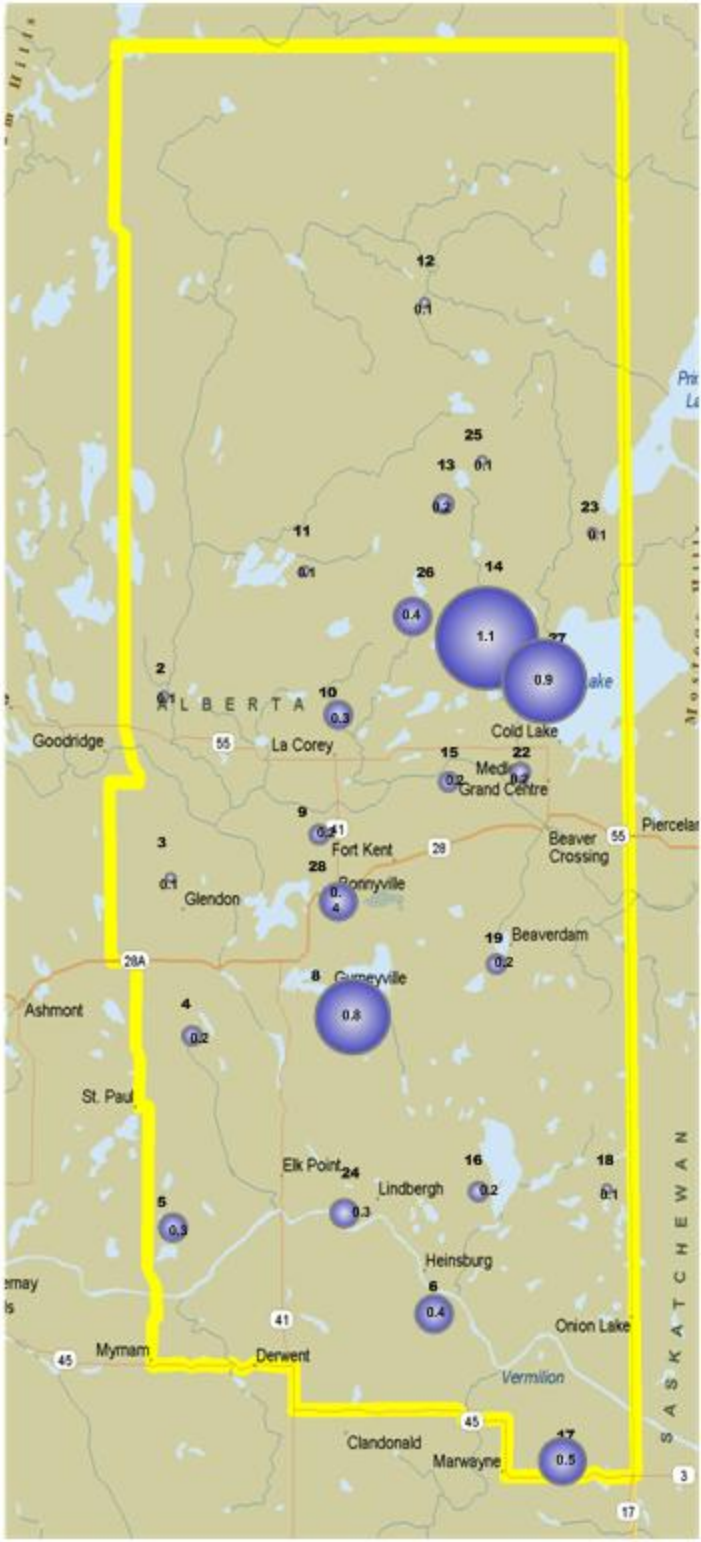
Minimum : 21.0 PPB – Sand River
Maximum: 37.7 PPB – Primrose
Average: 30.27 PPB *Includes Duplicates

Lakeland Industry & Community Association
SO_2 Passive Bubble Map

JUNE 2008

PASSIVE STATIONS

2 – Sand River	0.1 PPB
3 – Therien	0.1 PPB
4 – Flat Lake	0.2 PPB
5 – Lake Eliza	0.3 PPB
6 – Telegraph Creek	0.4 PPB
8 – Muriel-Kehewin	0.8 PPB
9 – Dupre	0.2 PPB
10 – La Corey	0.3 PPB
111 – Wolf Lake	0.1 PPB
12 – Foster Creek	0.1 PPB
13 – Primrose	0.2 PPB
13A – Primrose	0.2 PPB
14 – Maskwa	0.9 PPB
14A – Maskwa	1.2 PPB
15 – Ardmore	0.2 PPB
16 – Frog Lake	0.2 PPB
17 – Clear Range	0.5 PPB
18 – Fishing Lake	0.1 PPB
19 – Beaverdam	0.2 PPB
22 – Cold Lake South	0.2 PPB
23 – Medley-Martineau	0.1 PPB
24 – Fort George	0.3 PPB
25 – Burnt Lake	0.1 PPB
26 – Mahihkan	0.4 PPB
27 – Hilda Lake	0.9 PPB
28 – Town of Bonnyville	0.4 PPB



Summary

Minimum : 0.1 PPB – VARIOUS
Maximum: 1.1 PPB – Maskwa
Average: 0.3 PPB *Includes Duplicates

Passive Network Laboratory Analysis

Your Project #: 2008/06/02 - 2008/06/30
Site:LICA

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

Report Date: 2008/07/22

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: A832982
Received: 2008/07/07, 08:23

Sample Matrix: Air
Samples Received: 1

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
NO2 Passive Analysis (1)	1	2008/07/18	2008/07/22		EDM SOP-0318
O3 Passive Analysis (1)	1	2008/07/16	2008/07/22		EDM SOP-0317
SO2 Passive Analysis (1)	1	2008/07/18	2008/07/22		EDM SOP-0319

Sample Matrix: Air
Samples Received: 27

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
H2S Passive Analysis (1)	15	2008/07/18	2008/07/22		EDM SOP-0320
H2S Passive Analysis (1)	2	2008/07/22	2008/07/22		EDM SOP-0320
NO2 Passive Analysis (1)	22	2008/07/18	2008/07/22		EDM SOP-0318
O3 Passive Analysis (1)	22	2008/07/16	2008/07/22		EDM SOP-0317
SO2 Passive Analysis (1)	1	2008/07/16	2008/07/22		EDM SOP-0319
SO2 Passive Analysis (1)	24	2008/07/18	2008/07/22		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.

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

Your Project #: 2008/06/02 - 2008/06/30
Site:LICA

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

Report Date: 2008/07/22

CERTIFICATE OF ANALYSIS

-2-

==========

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

Total cover pages: 2

Maxxam Job #: A832982
Report Date: 2008/07/22

LAKELAND INDUSTRY AND COMMUNITY ASSOCIATION
Client Project #: 2008/06/02 - 2008/06/30
Site Reference: LICA
Sampler Initials: SB

RESULTS OF CHEMICAL ANALYSES OF AIR

Maxxam ID		K54190		
Sampling Date		2008/06/02 15:05		
	Units	**12A**	**RDL**	**QC Batch**
Passive Montioring				
Calculated NO2	ppb	0.7	0.1	2443175
Calculated O3	ppb	38.9	0.1	2437580
Calculated SO2	ppb	0.2	0.1	2443177

RDL = Reportable Detection Limit

Maxxam Analytics Inc

Maxxam Job #: A832982
Report Date: 2008/07/22

LAKELAND INDUSTRY AND COMMUNITY ASSOCIATION
Client Project #: 2008/06/02 - 2008/06/30
Site Reference: LICA
Sampler Initials: SB

RESULTS OF CHEMICAL ANALYSES OF AIR

Maxxam ID		K54170	K54171	K54172	K54173		
Sampling Date		2008/06/02 10:20	2008/06/02 09:50	2008/06/03 15:00	2008/06/03 14:25		
	Units	**1**	**2**	**3**	**4**	**RDL**	**QC Batch**
Passive Montioring							
Calculated H2S	ppb		0.15		0.35	0.02	2443749
Calculated NO2	ppb	0.8	1.9	1.7	1.2	0.1	2443175
Calculated O3	ppb	21.0	29.6	31.4	30.7	0.1	2437580
Calculated SO2	ppb	<0.1	0.1	0.2	0.3	0.1	2443177

RDL = Reportable Detection Limit

Maxxam ID		K54174	K54175	K54176	K54177		
Sampling Date		2008/06/03 13:10	2008/06/03 15:45	2008/06/02 09:15	2008/06/02 11:05		
	Units	**5**	**7**	**8**	**9**	**RDL**	**QC Batch**
Passive Montioring							
Calculated H2S	ppb				0.20	0.02	2443749
Calculated NO2	ppb	2.4	0.8	1.4	1.8	0.1	2443175
Calculated O3	ppb	30.2	33.8	28.8	37.3	0.1	2437580
Calculated SO2	ppb	0.4	0.8	0.2	0.3	0.1	2443177

RDL = Reportable Detection Limit

Maxxam ID		K54178	K54179	K54180	K54181		
Sampling Date		2008/06/02 11:40	2008/06/02 13:20	2008/06/02 15:05	2008/06/02 16:05		
	Units	**10**	**11**	**12**	**13**	**RDL**	**QC Batch**
Passive Montioring							
Calculated H2S	ppb	0.04	0.04	0.04	0.11	0.02	2443749
Calculated NO2	ppb	0.6	1.4	0.8	1.3	0.1	2443175
Calculated O3	ppb	24.2	29.5	36.5	33.1	0.1	2437580
Calculated SO2	ppb	<0.1	<0.1	0.2	0.9	0.1	2443177

RDL = Reportable Detection Limit

Maxxam Job #: A832982
Report Date: 2008/07/22

LAKELAND INDUSTRY AND COMMUNITY ASSOCIATION
Client Project #: 2008/06/02 - 2008/06/30
Site Reference: LICA
Sampler Initials: SB

RESULTS OF CHEMICAL ANALYSES OF AIR

Maxxam ID		K54182	K54183	K54184	K54185		
Sampling Date		2008/06/02 08:10	2008/06/03 11:45	2008/06/03 12:25	2008/06/03 11:00		
	Units	**14**	**15**	**16**	**17**	**RDL**	**QC Batch**
Passive Montioring							
Calculated H2S	ppb		0.16	0.54	0.14	0.02	2443749
Calculated NO2	ppb	1.0	1.5	2.8	0.9	0.1	2443175
Calculated O3	ppb	31.0	30.8	34.2	25.6	0.1	2437580
Calculated SO2	ppb	0.2	0.2	0.5	0.1	0.1	2443177

RDL = Reportable Detection Limit

Maxxam ID		K54186	K54187	K54188	K54189		
Sampling Date		2008/06/03 10:05	2008/06/02 07:10	2008/06/03 08:15	2008/06/03 13:45		
	Units	**18**	**19**	**20**	**21**	**RDL**	**QC Batch**
Passive Montioring							
Calculated H2S	ppb		0.21		0.24	0.02	2443749
Calculated NO2	ppb	0.9	1.6	0.4	2.5	0.1	2443175
Calculated O3	ppb	31.1	29.6	26.1	31.6	0.1	2437580
Calculated SO2	ppb	0.2	0.2	0.1	0.3	0.1	2443177

RDL = Reportable Detection Limit

Maxxam ID		K54191	K54194	K54195	K54196		
Sampling Date		2008/06/02 16:05	2008/06/02 14:45	2008/06/02 15:45	2008/06/02 16:25		
	Units	**13A**	**22**	**23**	**24**	**RDL**	**QC Batch**
Passive Montioring							
Calculated H2S	ppb		0.04	0.11	0.23	0.02	2443749
Calculated NO2	ppb	1.3				0.1	2443175
Calculated O3	ppb	33.5				0.1	2437580
Calculated SO2	ppb	1.2	0.1	0.4	0.9	0.1	2443177

RDL = Reportable Detection Limit

Maxxam Job #: A832982
Report Date: 2008/07/22

LAKELAND INDUSTRY AND COMMUNITY ASSOCIATION
Client Project #: 2008/06/02 - 2008/06/30
Site Reference: LICA
Sampler Initials: SB

RESULTS OF CHEMICAL ANALYSES OF AIR

Maxxam ID		K54197	K78077	K78078		
Sampling Date		2008/06/02 08:35	2008/06/02 16:05	2008/06/02 13:20		
	Units	**25**	**13A**	**17A**	**RDL**	**QC Batch**
Passive Montioring						
Calculated H2S	ppb		0.04	0.03	0.02	2443749
Calculated NO2	ppb	4.5			0.1	2443175
Calculated O3	ppb	28.1			0.1	2437580
Calculated SO2	ppb	0.4			0.1	2443177

RDL = Reportable Detection Limit

General Comments

Results relate only to the items tested.

LAKELAND INDUSTRY AND COMMUNITY ASSOCIATION
Attention: MICHAEL BISAGA
Client Project #: 2008/06/02 - 2008/06/30
P.O. #:
Site Reference: LICA

Quality Assurance Report

Maxxam Job Number: PA832982

QA/QC Batch Num Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
2437580 LM1	Calibration Check	Calculated O3	2008/07/16		99	%	91 - 107
	SPIKE	Calculated O3	2008/07/16		101	%	N/A
	BLANK	Calculated O3	2008/07/16	0.2, RDL=0.1		ppb	
2443175 DF4	Calibration Check	Calculated NO2	2008/07/18		100	%	76 - 118
	SPIKE	Calculated NO2	2008/07/18		100	%	N/A
	BLANK	Calculated NO2	2008/07/18	<0.1		ppb	
2443177 DF4	Calibration Check	Calculated SO2	2008/07/18		105	%	95 - 105
	SPIKE	Calculated SO2	2008/07/18		97	%	N/A
	BLANK	Calculated SO2	2008/07/18	<0.1		ppb	
2443749 TM5	Calibration Check	Calculated H2S	2008/07/22		97	%	80 - 120
	SPIKE	Calculated H2S	2008/07/22		99	%	N/A

N/A = Not Applicable

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

Passive Field Data

Field Notes

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