Lakeland Industry & Community Association

Cold Lake Monitoring Site
Ambient Air Monitoring
Data Report
For
October 2010

Prepared By:

November 18, 2010

Lakeland Industry & Community Association
Cold Lake Monitoring Site
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
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Monitoring Location: Cold Lake
Data Period: October 2010

The monthly ambient data report:

- Prepared by Lily Lin
- Reviewed by Craig Snider

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

The 6-day analytical report for VOCs and PAHs:
Authorized by Petro Oh

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 – October 2010

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	0.04	2	17, 19	VAR	VAR	VAR	0.2	VAR	100.0
TRS (PPB)	-	-	-	-	0.00	0	ALL	ALL	VAR	VAR	0.0	ALL	100.0
NO_2 (PPB)	212	106	0	0	3.22	22	7	18	1.2	79(ENE)	7.2	7	100.0
NO (PPB)	-	-	-	-	0.67	35	1	7	0.9	24(NNE)	3.9	1	100.0
NOx (PPB)	-	-	-	-	4.12	44	1	7	0.9	24(NNE)	10.0	7	100.0
O_3 (PPB)	82	-	0	-	21.38	44	19	VAR	VAR	VAR	32.4	19	100.0
THC (PPM)	-	-	-	-	2.08	4.1	3	7	0.8	272(W)	2.5	31	100.0
PM 2.5 (UG/M^3)	-	30	-	0	4.63	28.9	28	12, 13	5.3, 4.5	220(SW), 238(SW)	15.3	28	98.5
TEMPERATURE (DEG C)	-	-	-	-	5.51	23.1	10	13	5.6	197(SSW)	14.7	6	100.0
RELATIVE HUMIDITY (%)	-	-	-	-	66.29	96	29, 30	VAR	VAR	VAR	93.9	29	100.0
VECTOR WS (KPH)	-	-	-	-	6.09	19.5	19	15	-	279(W)	11.8	25	100.0
VECTOR WD (DEGREES)	-	-	-	-	254(WSW)	-	-	-	-	-	-	-	100.0

VAR-VARIOUS

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

Passive Ambient Monitoring Network – October 2010

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION PASSIVE NETWORK			
NETWORK MAXIMUM			NETWORK AVERAGE
PARAMETER	STATION	READING (PPB)	READING (PPB)
SO_2	#27	1.2	0.3
H_2S	#27	0.55	0.11
NO_2	#28	3.9	1.4
O_3	#32	27.2	21.0

Volatile Organics Data Summary
LAKELAND INDUSTRY & COMMUNITY ASSOCIATION – COLD LAKE

Xontech Model 910A – October 5, 2010

Maximum reading (ug/m3)	Volatile Organic
<32.0	Hexachlorobutadiene

Xontech Model 910A – October 11, 2010

Maximum reading (ug/m3)	Volatile Organic
<32.0	Hexachlorobutadiene

Xontech Model 910A – October 17, 2010

Maximum reading (ug/m3)	Volatile Organic
<32.0	Hexachlorobutadiene

Xontech Model 910A – October 23, 2010

Maximum reading (ug/m3)	Volatile Organic
<32.0	Hexachlorobutadiene

Xontech Model 910A – October 29, 2010

Maximum reading (ug/m3)	Volatile Organic
<32.0	Hexachlorobutadiene

Polycyclic Aromatic Hydrocarbons (PAHs) Data Summary
LAKELAND INDUSTRY & COMMUNITY ASSOCIATION – COLD LAKE

PUF cartridge – October 5, 2010

Maximum reading (ng/m3)	Semi-Volatile Organic
<6.054	3-Methylcholanthrene

PUF cartridge – October 11, 2010

Maximum reading (ng/m3)	Semi-Volatile Organic
<6.055	3-Methylcholanthrene

PUF cartridge – October 17, 2010

Maximum reading (ng/m3)	Semi-Volatile Organic
<6.055	3-Methylcholanthrene

PUF cartridge – October 23, 2010

Maximum reading (ng/m3)	Semi-Volatile Organic
<6.055	3-Methylcholanthrene

PUF cartridge – October 29, 2010

Maximum reading (ng/m3)	Semi-Volatile Organic
<6.055	3-Methylcholanthrene

General Monthly Summary - Cold Lake

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

AQM STATION – LICA – COLD LAKE

Sulphur Dioxide (PPB)
- Analyzer make / model – Thermo 43i, S/N: 806528242

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

Total Reduced Sulphur (PPB)
- Analyzer make / model –TEI 450i, S/N: 812728560
- Converter - CD NOVA CDN 101, S/N: 250

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

Ozone (PPB)
- Analyzer make / model - TECO 49i, S/N: 700419951

The inlet filter was changed before the monthly calibration was started. One hour of maximum concentration data was invalidated on October 27th due to the data collection time of less than 75 % in an hour, reason unknown. Data was corrected using daily zero information.

General Monthly Summary - Cold Lake

AQM STATION – LICA – COLD LAKE

Total Hydrocarbon (PPM)

- Analyzer make / model -TECO 51C-LT, S/N: 427408718

No operational issues observed during the month. The inlet filter was changed before the monthly calibration was started. The Methane gas cylinder was replaced on October 26th. Data was corrected using daily zero information.

Nitrogen Dioxide (PPB)

- Analyzer make / model - TECO 42C, S/N: 427408716

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

Particulate Matter 2.5 (ug/m^3)

- Analyzer make / model –TEOM1405F, S/N: 1405A201620804

No operational issues observed during the month. A routine Teom audit was performed on October 26th. Following the audit, the Teom pump was rebuilt. A follow up Teom check was performed on October; replaced the inline filters, both Main and Bypass, performed a leak check, adjusted temperature and pressure, did a flow audit and adjusted flows. Data was corrected using Alberta air quality guideline for PM2.5 analyzer. If the data was between 0 to –3, the data was corrected to 0. If the data was below –3, the data was invalidated. 10 hours of data were invalidated as the data were below –3.0 ug/m^3.

General Monthly Summary - Cold Lake

AQM STATION – LICA – COLD LAKE

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

- System make / model – Met One 50.5, S/N: F1644

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

Relative Humidity (PERCENT)

- System make / model - Rotronic Hygroclip-S3

No operational issues observed during the month.

Ambient Temperature (DEGC)

- System make / model - Rotronic Hygroclip-S3

No operational issues observed during the month.

Trailer Temperature (DEGC)

- System make / model - R&R 61

No operational issues observed during the month.

Datalogger

- System make / model - ESC 8832, S/N: 263
- Software make / version - ESC v 5.51a

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

Trailer

No issue was observed during this month. The manifold and inlet were cleaned on October 7th.

General Monthly Summary - Cold Lake

AQM STATION – LICA – COLD LAKE

Air Quality Index (AQI)
The AQI data was adjusted to reflect regular monthly and daily calibrations, maintenance, and downtime. All AQI values recorded in October 2010 were within the Good range. The highest hourly concentration of PM2.5 was 28.9ug/m3 and an AQI value of 24, hour 12 AND 13 on October 28th. The highest hourly concentration of Ozone was 44 ppb and an AQI value of 22 on October 19th, in various hours.

Passive Network
The SO2 duplicated sample at station #29 is missing this month.

Volatile Organics (VOCs)
The volatile organics were sampled from October 5th to October 29th. The sampler was programmed to run for 24 hours, and, every 6 days per sample cycle. The values for the VOCs in this report were reported as ug/m3 in 3 significant figures.

Polycyclic Aromatic Hydrocarbons (PAHs)
The PAHs were sampled from October 5th to October 29th. The sampler was programmed to run for 24 hours, and, every 6 days per sample cycle. The values for the PAHs in this report were reported as ng/m3.
A calibration on the PUF+Hi Vol. was performed on October 28th. A flow calibration was also performed using the automatic method on October 28th.

Continuous Monitoring

Monthly Summaries, Graphs & Wind Roses

Air Quality Index

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

OCTOBER 2010

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	6	4	6	4	1	5	5	9	7	12	15	19	19	20	19	-	18	19	17	16	16	15	15	15	20
	PM2	PM2	PM2	PM2	O3_	PM2	PM2	PM2	PM2	O3_	O3_	O3_	O3_	O3_	O3_	**NA**	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_
2	16	15	15	15	14	14	13	12	13	14	15	15	15	16	-	18	18	15	11	7	8	13	16	12	18
	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	**NA**	O3_	O3_	O3_	PM2	PM2	PM2	PM2	PM2	PM2	O3_
3	11	7	10	6	8	6	8	3	8	10	14	16	17	-	18	18	16	14	15	14	14	13	15	16	18
	PM2	PM2	PM2	PM2	PM2	PM2	PM2	PM2	PM2	PM2	O3_	O3_	O3_	**NA**	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_
4	17	18	17	17	17	16	15	14	14	14	12	11	-	11	10	10	10	10	10	10	10	10	9	8	18
	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	**NA**	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_
5	7	6	6	6	8	10	10	-	-	-	-	-	-	-	17	17	17	17	15	16	16	16	15	11	17
	O3_	O3_	O3_	O3_	O3_	O3_	O3_	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_
6	12	11	14	13	14	13	11	11	11	14	-	-	-	-	-	16	15	17	17	15	14	13	10	7	17
	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	**NA**	**NA**	**NA**	**NA**	**NA**	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_
7	5	3	3	3	7	5	5	4	6	-	-	15	16	18	19	19	18	15	9	12	12	9	12	15	19
	O3_	O3_	PM2	O3_	O3_	PM2	PM2	PM2	O3_	**NA**	**NA**	O3_	O3_	O3_	O3_	O3_	O3_	O3_	PM2	PM2	PM2	PM2	O3_	O3_	O3_
8	15	14	13	13	12	10	9	9	-	13	15	14	12	11	13	15	17	17	13	13	12	6	6	5	17
	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	**NA**	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	PM2	O3_
9	4	5	5	3	2	4	2	-	6	16	17	18	-	21	21	21	20	18	13	18	18	17	14	10	21
	O3_	PM2	PM2	PM2	PM2	PM2	PM2	**NA**	O3_	O3_	O3_	O3_	**NA**	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_
10	12	10	13	12	12	11	-	10	10	11	13	14	15	15	14	14	13	10	11	17	19	18	18	17	19
	O3_	O3_	O3_	O3_	O3_	O3_	**NA**	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_
11	16	17	-	16	13	-	13	14	13	15	16	17	17	17	17	18	17	16	13	14	12	12	11	9	18
	O3_	O3_	**NA**	O3_	O3_	**NA**	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_
12	6	6	6	6	-	8	9	-	11	14	16	18	17	18	18	18	18	16	10	8	5	5	4	2	18
	O3_	O3_	O3_	O3_	**NA**	O3_	O3_	**NA**	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_
13	4	4	3	-	8	4	1	8	7	10	13	16	18	19	20	19	19	19	17	11	6	6	5	5	20
	PM2	PM2	O3_	**NA**	O3_	O3_	PM2	PM2	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	PM2	O3_
14	2	2	-	4	5	11	15	14	15	14	15	17	18	19	18	19	17	13	13	16	16	15	11	7	19
	PM2	PM2	**NA**	PM2	PM2	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	PM2	PM2	PM2	PM2	PM2	O3_	O3_
15	9	-	8	8	6	15	17	17	17	17	18	18	18	18	18	18	17	16	16	16	15	14	14	13	18
	O3_	**NA**	O3_	PM2	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_
16	-	13	13	13	11	9	8	9	9	10	12	13	15	16	17	18	17	12	7	7	6	5	3	-	18
	NA	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	PM2	**NA**	O3_
17	7	7	8	7	2	7	2	2	6	12	15	15	15	16	17	17	17	16	15	10	8	6	-	4	17
	PM2	PM2	PM2	PM2	O3_	PM2	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	**NA**	PM2	O3_
18	4	3	6	2	1	3	4	5	7	11	12	13	16	16	18	18	16	16	14	12	11	-	14	13	18
	O3_	O3_	PM2	O3_	PM2	PM2	PM2	PM2	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	**NA**	O3_	O3_	O3_
19	9	8	9	12	13	14	13	12	12	16	18	21	22	22	22	22	22	21	20	20	-	18	16	15	22
	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	**NA**	O3_	O3_	O3_	O3_
20	14	15	14	13	12	11	8	6	11	12	14	15	16	17	18	17	15	7	7	-	4	4	10	13	18
	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	**NA**	PM2	PM2	O3_	O3_	O3_
21	10	10	12	12	-	12	12	11	11	14	14	13	13	14	14	17	17	16	-	14	13	12	10	10	17
	O3_	O3_	O3_	O3_	**NA**	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	**NA**	O3_	O3_	O3_	O3_	O3_	O3_
22	11	13	12	14	14	14	13	12	12	13	14	15	14	15	14	14	13	-	13	13	13	13	13	12	15
	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	**NA**	O3_	O3_	O3_	O3_	O3_	O3_	O3_
23	11	12	12	12	12	11	10	9	10	11	12	12	12	12	12	12	-	10	11	10	10	11	10	10	12
	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	**NA**	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_
24	11	10	-	11	10	9	9	9	8	8	7	7	6	7	7	-	7	7	7	7	7	8	8	8	11
	O3_	O3_	**NA**	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	**NA**	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_
25	9	9	9	9	10	10	10	10	10	11	11	12	12	12	-	13	12	12	13	13	13	13	13	13	13
	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	**NA**	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_
26	13	13	14	14	14	14	-	-	14	15	14	14	14	-	-	-	-	-	13	14	15	15	15	15	15
	O3_	O3_	O3_	O3_	O3_	O3_	**NA**	**NA**	O3_	O3_	O3_	O3_	O3_	**NA**	**NA**	**NA**	**NA**	**NA**	O3_	O3_	O3_	O3_	O3_	O3_	O3_
27	-	14	14	14	14	14	13	13	14	14	14	13	-	13	13	13	12	9	7	6	5	9	9	6	14
	NA	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	**NA**	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_
28	7	7	5	6	7	10	10	-	6	13	17	-	**24**	**24**	16	15	18	22	20	18	13	9	9	8	24
	O3_	PM2	PM2	O3_	O3_	PM2	PM2	**NA**	O3_	PM2	PM2	**NA**	**PM2**	**PM2**	PM2	PM2	PM2	PM2	PM2	PM2	PM2	PM2	PM2	O3_	PM2
29	8	9	7	7	7	7	7	7	9	9	-	7	8	7	8	8	7	7	7	9	8	7	7	10	10
	O3_	PM2	O3_	O3_	O3_	O3_	PM2	PM2	PM2	PM2	**NA**	O3_	O3_	O3_	PM2	PM2	O3_	O3_	O3_	PM2	O3_	O3_	PM2	PM2	PM2
30	9	8	10	7	9	8	8	7	8	-	7	8	12	12	17	10	10	8	10	7	12	10	5	9	17
	PM2	PM2	PM2	PM2	PM2	PM2	PM2	PM2	PM2	**NA**	PM2	PM2	PM2	PM2	PM2	O3_	O3_	PM2	PM2	PM2	PM2	PM2	O3_	PM2	PM2
31	7	7	6	6	7	17	9	8	-	6	7	8	9	8	8	8	7	7	9	5	6	6	5	5	17
	PM2	PM2	O3_	PM2	PM2	PM2	PM2	PM2	**NA**	PM2	O3_	O3_	O3_	O3_	O3_	O3_	PM2	PM2	PM2	PM2	PM2	PM2	PM2	PM2	PM2
PEAK	17	18	17	17	17	17	17	17	17	17	18	21	24	24	22	22	22	22	20	20	19	18	18	17	
	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	

STATUS FLAG CODES	NA - NOT APPLICABLE

V - VARIOUS

AQI CLASS	OZONE (O_3)					PARTICULATE MATTER 2.5 (PM2)					NITROGEN DIOXIDE (NO_2)					SULPHUR DIOXIDE (SO_2)					FREQUENCY	
	HRS	%	MAX AQI	HR	DAY	HRS	%	MAX AQI	HR	DAY	HRS	%	MAX AQI	HR	DAY	HRS	%	MAX AQI	HR	DAY	HRS	%
VERY POOR (101-255)	0	0.0%	-	-	-	0	0.0%	-	-	-	0	0.0%	-	-	-	0	0.0%	-	-	-	0	0.0%
POOR (51-100)	0	0.0%	-	-	-	0	0.0%	-	-	-	0	0.0%	-	-	-	0	0.0%	-	-	-	0	0.0%
FAIR (26-50)	0	0.0%	-	-	-	0	0.0%	-	-	-	0	0.0%	-	-	-	0	0.0%	-	-	-	0	0.0%
GOOD (1-25)	557	74.9%	22	VAR	19	131	17.6%	24	12, 13	28	0	0.0%	-	-	-	0	0.0%	-	-	-	688	92.5%
OVERALL	557	74.9%	-	-	-	131	17.6%	-	-	-	0	0.0%	-	-	-	0	0.0%	-	-	-	688	92.5%
UNAVAILABLE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	56	7.5%

Sulphur Dioxide

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

OCTOBER 2010

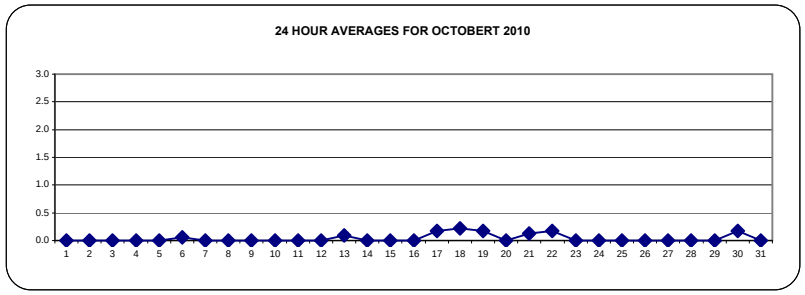
SULPHUR DIOXIDE (SO_2) hourly averages in ppb

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	**IZS**	0	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	**IZS**	0	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	**IZS**	0	0	0	0	0	0	0	0	0	0	0	0.0	24
4	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
5	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
6	0	0	0	0	0	0	0	0	0	0	**IZS**	**C**	**C**	**C**	**C**	0	1	0	0	0	0	0	0	0	1	0.1	24
7	0	0	0	0	0	0	0	0	0	**IZS**	**C**	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	**IZS**	0	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	**IZS**	0	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	**IZS**	0	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	**IZS**	0	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	**IZS**	0	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	**IZS**	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.1	24
14	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
15	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
16	**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
17	0	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	**IZS**	0	0	**2**	0.2	24
18	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	1	0	0	1	**IZS**	0	0	1	0.2	24
19	1	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**IZS**	0	0	0	**2**	0.2	24
20	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
21	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	**IZS**	0	0	0	0	0	1	0.1	24
22	0	0	1	0	0	0	1	1	1	0	0	0	0	0	0	0	0	**IZS**	0	0	0	0	0	0	1	0.2	24
23	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
24	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
25	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
26	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
27	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
28	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
29	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
30	0	0	0	0	0	0	0	0	0	**IZS**	0	0	0	1	1	1	1	0	0	0	0	0	0	0	1	0.2	24
31	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
HOURLY MAX	1	2	1	0	0	0	1	1	1	1	1	2	2	1	1	1	1	1	0	0	1	0	0	0			
HOURLY AVG	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0			

STATUS FLAG CODES

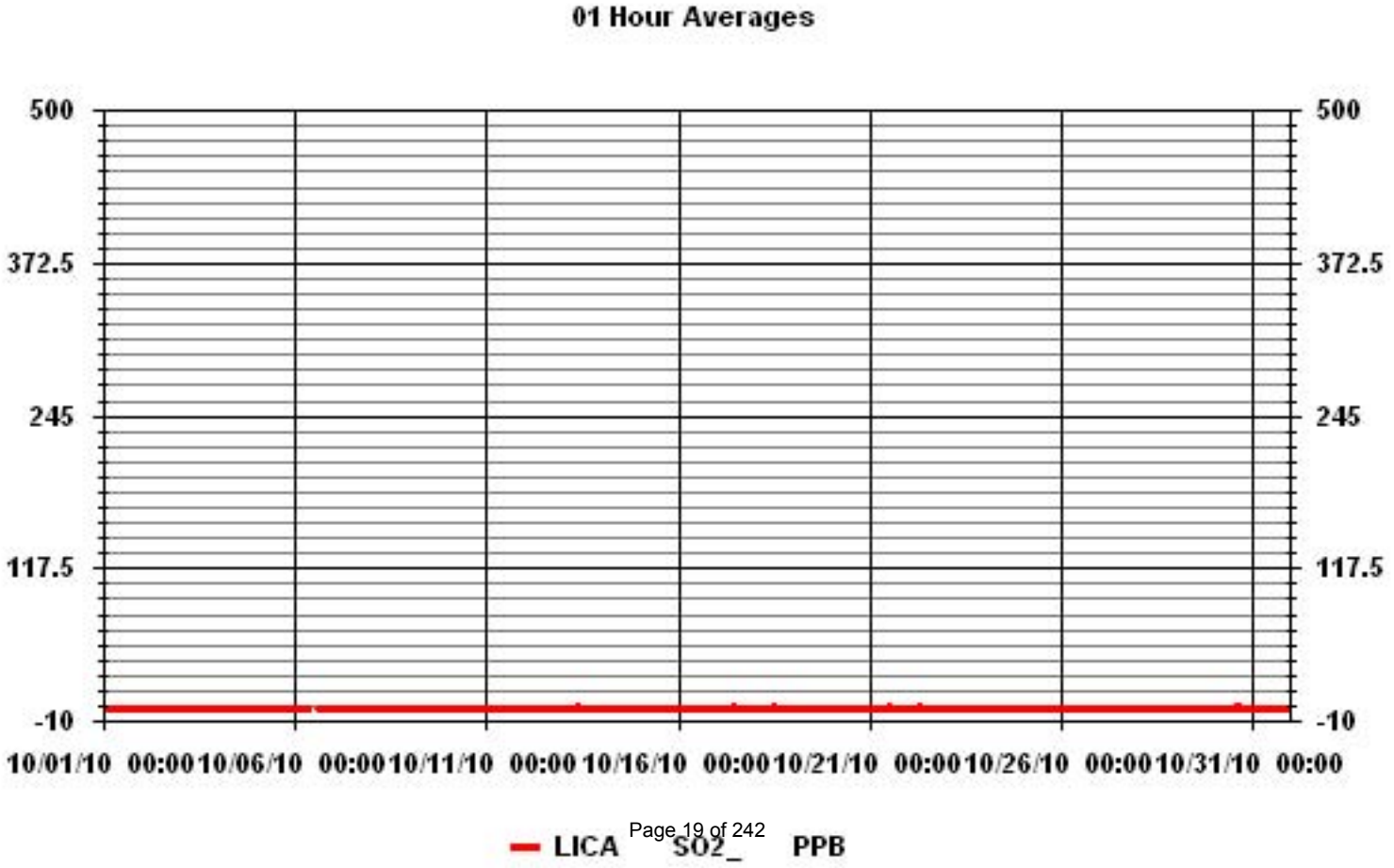
S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	- MAINTENANCE
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE



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:	24					
MAXIMUM 1-HR AVERAGE:	2	PPB	@ HOUR(S)	VAR	ON DAY(S)	17, 19
MAXIMUM 24-HR AVERAGE:	0.2	PPB			ON DAY(S)	VAR
IZS CALIBRATION TIME:	32	HRS	OPERATIONAL TIME:		744	HRS
MONTHLY CALIBRATION TIME:	5	HRS	AMD OPERATION UPTIME:		100.0	%
STANDARD DEVIATION:	0.21		MONTHLY AVERAGE:		0.04	PPB


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

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

OCTOBER 2010

SULPHUR DIOXIDE MAX instantaneous maximum in ppb

MST

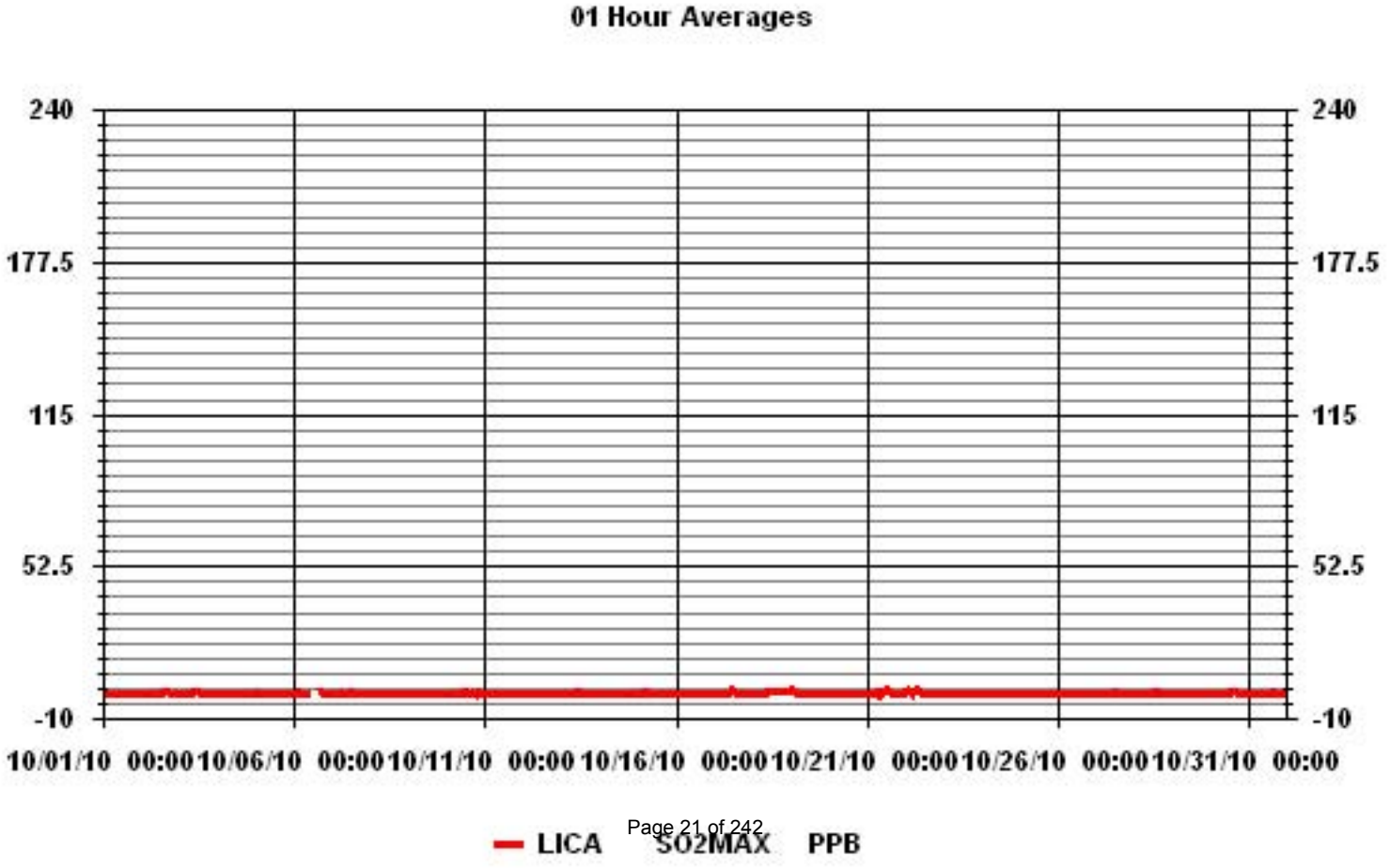
HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**IZS**	0	0	0	0	0	0	0	0	0	0.0	24
2	0	0	0	0	0	0	0	0	0	0	0	0	1	0	**IZS**	1	1	1	0	0	0	0	0	0	1	0.2	24
3	0	0	0	0	0	0	0	0	0	1	1	1	1	**IZS**	0	0	0	0	0	0	0	0	0	0	1	0.2	24
4	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
5	1	0	0	0	0	0	0	0	0	0	0	**IZS**	0	0	0	0	0	0	0	0	0	0	0	0	1	0.0	24
6	0	0	0	1	1	0	0	0	0	0	**IZS**	**C**	**C**	**C**	**C**	**C**	2	1	0	0	0	0	0	0	2	0.3	24
7	0	0	0	0	0	1	0	0	0	**IZS**	**C**	0	1	1	0	0	0	0	0	0	0	0	0	0	1	0.1	24
8	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
9	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
10	0	0	0	0	0	0	**IZS**	0	0	0	1	1	1	0	0	1	0	0	1	0	1	0	0	0	1	0.3	24
11	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
12	0	0	0	0	**IZS**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
13	0	0	0	**IZS**	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0.1	24
14	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
15	0	**IZS**	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.1	24
16	**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
17	0	0	0	0	0	0	0	0	0	0	1	2	2	1	0	0	0	0	0	0	0	0	**IZS**	0	2	0.3	24
18	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	**IZS**	1	1	1	0.6	24
19	2	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**IZS**	0	0	0	2	0.3	24
20	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
21	0	0	0	0	0	1	0	1	0	1	1	1	2	2	1	1	0	0	**IZS**	0	0	0	0	0	2	0.5	24
22	1	1	2	1	0	1	1	2	2	1	1	0	0	0	0	0	0	**IZS**	0	0	0	0	0	0	2	0.6	24
23	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
24	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
25	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
26	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
27	0	0	0	0	0	0	0	0	0	0	0	2	**IZS**	1	0	0	0	0	0	0	0	0	0	0	2	0.1	24
28	0	0	0	0	0	0	0	0	0	0	0	**IZS**	0	1	1	1	0	0	0	0	0	0	0	0	1	0.1	24
29	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
30	0	0	0	0	0	0	0	0	0	**IZS**	0	0	1	1	1	1	1	0	0	0	0	0	0	0	1	0.2	24
31	0	0	0	0	0	0	0	0	**IZS**	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	1	0.1	24
HOURLY MAX	2	2	2	1	1	1	1	2	2	1	1	2	2	2	1	1	2	1	1	1	1	0	1	1			
HOURLY AVG	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.3	0.3	0.4	0.3	0.2	0.3	0.2	0.1	0.1	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:	82					
MAXIMUM INSTANTANEOUS VALUE:	2	PPB	@ HOUR(S)	VAR	ON DAY(S)	VAR
IZS CALIBRATION TIME:	32	HRS	OPERATIONAL TIME:		744	HRS
MONTHLY CALIBRATION TIME:	6	HRS				
STANDARD DEVIATION:	0.38					


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

LICA
SO2_ / WDR Joint Frequency Distribution (Percent)

October 2010

Distribution By % Of Samples

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

Wind Parameter : WDR
Instrument Height : 10 Meters

Direction

	Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
<	20	1.83	2.68	3.81	4.66	9.19	4.80	13.15	4.10	2.68	5.37	14.00	11.31	10.46	3.25	2.54	6.08	100.00
<	60	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
<	110	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
<	170	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
<	340	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
>=	340	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
	Totals	1.83	2.68	3.81	4.66	9.19	4.80	13.15	4.10	2.68	5.37	14.00	11.31	10.46	3.25	2.54	6.08	

Calm : .00 %

Total # Operational Hours : 707

Distribution By Samples

Direction

	Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
<	20	13	19	27	33	65	34	93	29	19	38	99	80	74	23	18	43	707
<	60																	
<	110																	
<	170																	
<	340																	
>=	340																	
	Totals	13	19	27	33	65	34	93	29	19	38	99	80	74	23	18	43	

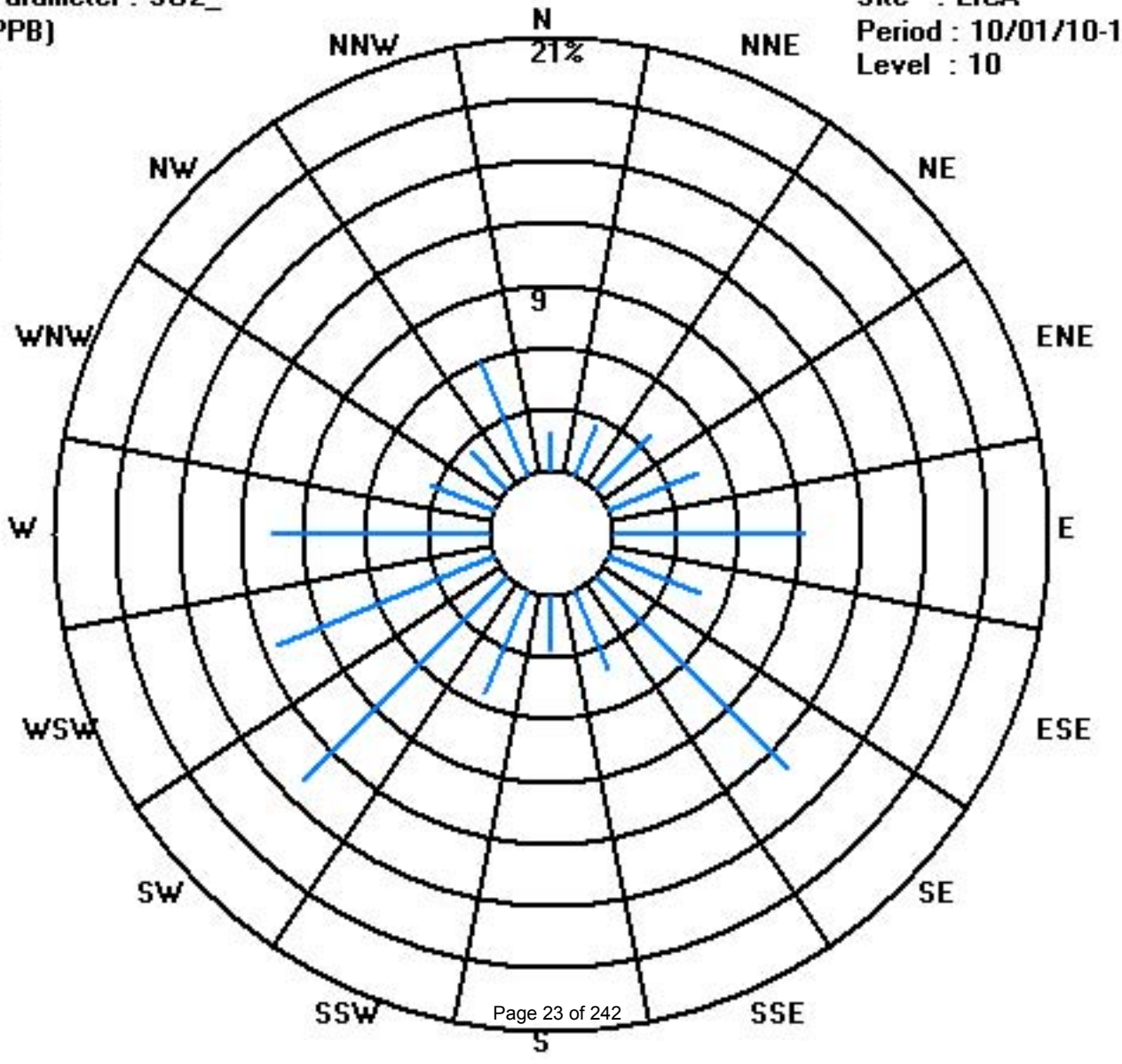
Calm : .00 %

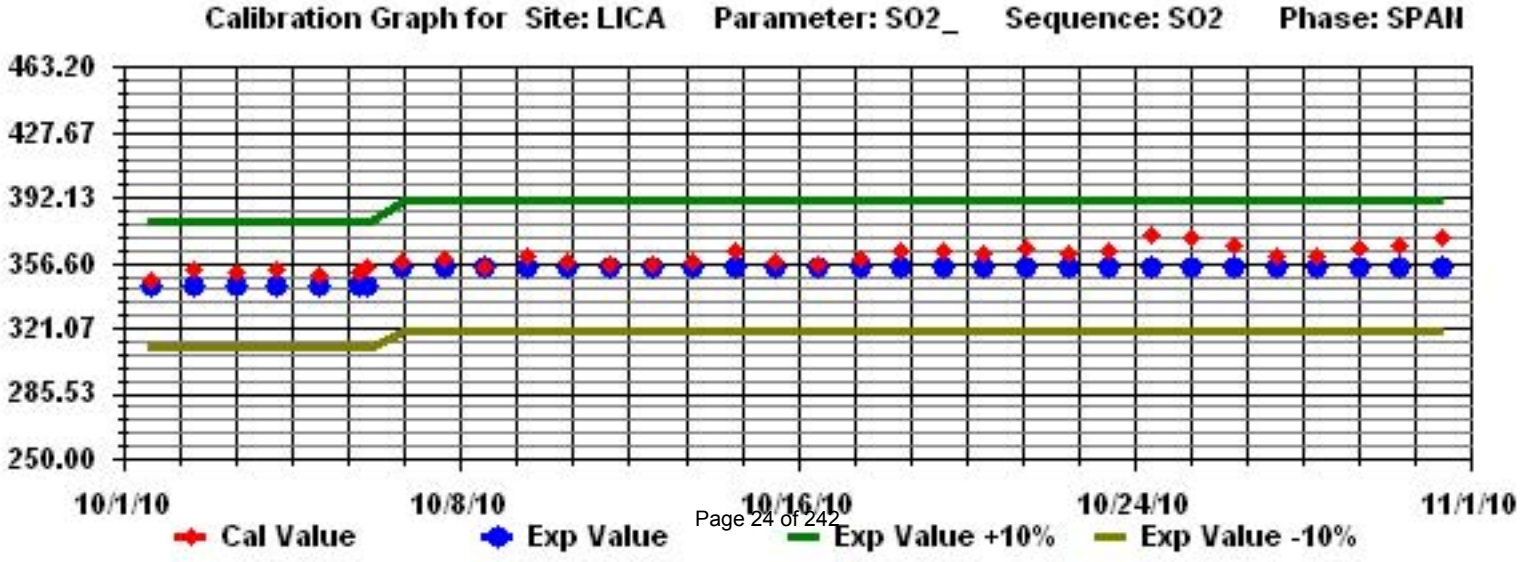
Total # Operational Hours : 707

Logger : 01 Parameter : SO2_
Class Limits (PPB)

>= 340
< 340
< 170
< 110
< 60
< 20

Site : LICA
Period : 10/01/10-10/31/10
Level : 10




Calibration Graph for Site: LICA Parameter: SO2_ Sequence: SO2 Phase: SPAN
463.20
427.67
392.13
356.60
321.07
285.53
250.00
10/1/10
10/8/10
10/16/10
10/24/10
11/1/10
Cal Value
Exp Value
Exp Value +10%
Exp Value -10%

Total Reduced Sulphur

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

OCTOBER 2010

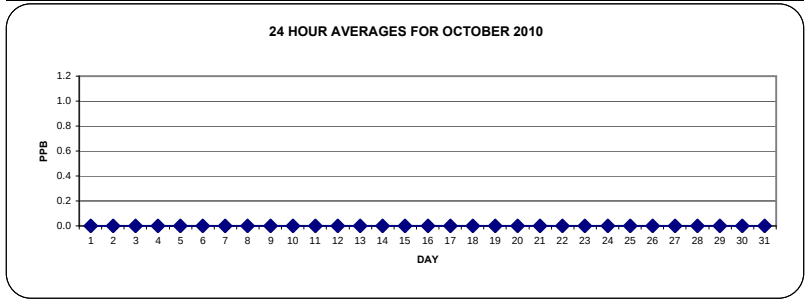
TOTAL REDUCED SULPHUR (TRS) hourly averages in ppb

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	**IZS**	0	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	**IZS**	0	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	**IZS**	0	0	0	0	0	0	0	0	0	0	0	0.0	24
4	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
5	0	0	0	0	0	0	0	**C**	**C**	**C**	**C**	**C**	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
6	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
7	0	0	0	0	0	0	0	0	0	**IZS**	**C**	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	**IZS**	0	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	**IZS**	0	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	**IZS**	0	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	**IZS**	0	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	**IZS**	0	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	**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
14	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
15	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
16	**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
17	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
18	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
19	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
20	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
21	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
22	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
23	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
24	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
25	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
26	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
27	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
28	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
29	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
30	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
31	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
HOURLY MAX	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
HOURLY AVG	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			

STATUS FLAG CODES

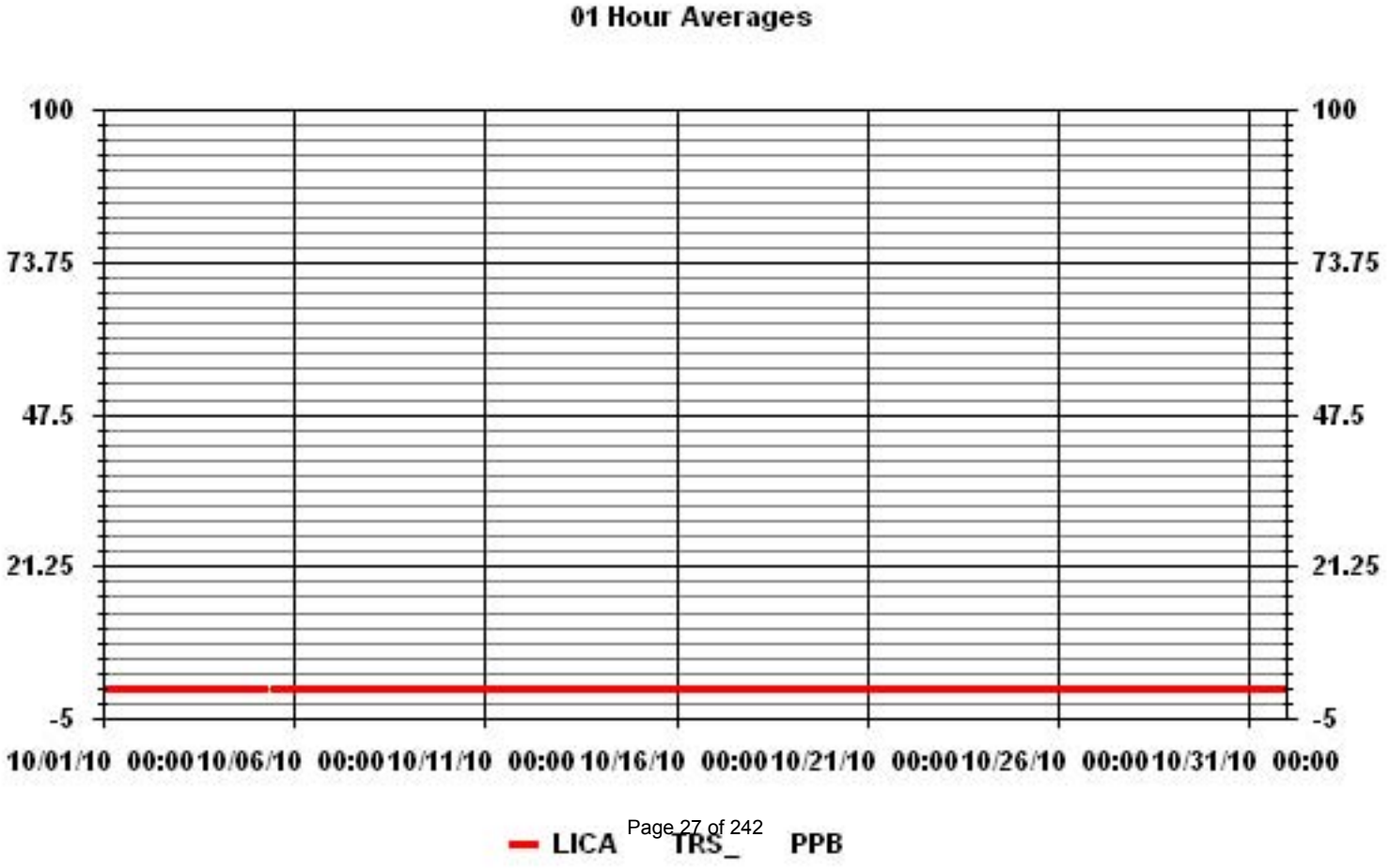
S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	- MISSING DATA
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE



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

MONTHLY SUMMARY

NUMBER OF 1-HR EXCEEDENCES:	0						
NUMBER OF 24-HR EXCEEDENCES:	0						
NUMBER OF NON-ZERO READINGS:	0						
MAXIMUM 1-HR AVERAGE:	0	PPB	@ HOUR(S)	ALL	ON DAY(S)	ALL	
MAXIMUM 24-HR AVERAGE:	0.0	PPB			ON DAY(S)	ALL	
					VAR-VARIOUS		
IZS CALIBRATION TIME:	31	HRS	OPERATIONAL TIME:			744	HRS
MONTHLY CALIBRATION TIME:	6	HRS	AMD OPERATION UPTIME:			100.0	%
STANDARD DEVIATION:	0.00		MONTHLY AVERAGE:			0.00	PPB


01 Hour Averages
100
73.75
47.5
21.25
-5
10/01/10 00:00
10/06/10 00:00
10/11/10 00:00
10/16/10 00:00
10/21/10 00:00
10/26/10 00:00
10/31/10 00:00
LICA TRS_ PPB

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

OCTOBER 2010

TOTAL REDUCED SULPHUR MAX instantaneous maximum in ppb

MST

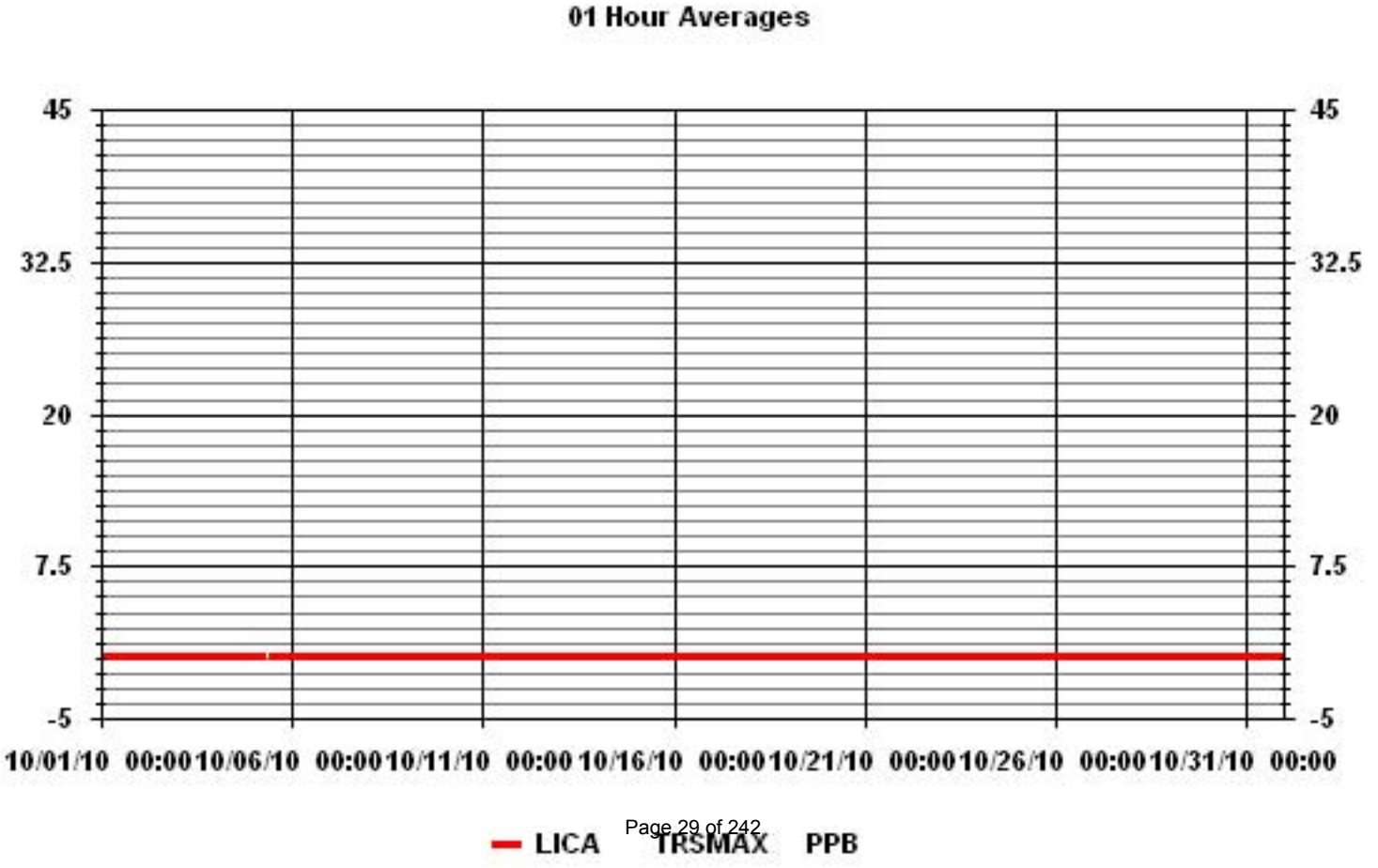
HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00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

STATUS FLAG CODES

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

MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:	0						
MAXIMUM INSTANTANEOUS VALUE:	0	PPB	@ HOUR(S)	ALL	ON DAY(S)	ALL	
				VAR - VARIOUS			
IZS CALIBRATION TIME:	31	HRS	OPERATIONAL TIME:			744	HRS
MONTHLY CALIBRATION TIME:	6	HRS					
STANDARD DEVIATION:	0.00						


01 Hour Averages
45
32.5
20
7.5
-5
10/01/10 00:00
10/06/10 00:00
10/11/10 00:00
10/16/10 00:00
10/21/10 00:00
10/26/10 00:00
10/31/10 00:00
LICA
TRSMAX
PPB

LICA
TRS_ / WD Joint Frequency Distribution (Percent)

October 2010

Distribution By % Of Samples

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

Wind Parameter : WD
Instrument Height : 10 Meters

Direction

	Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
<	3	1.83	2.68	3.81	4.66	9.19	4.80	13.15	4.10	2.68	5.37	14.14	11.31	10.32	3.25	2.54	6.08	100.00
<	10	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
<	50	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
>=	50	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
	Totals	1.83	2.68	3.81	4.66	9.19	4.80	13.15	4.10	2.68	5.37	14.14	11.31	10.32	3.25	2.54	6.08	

Calm : .00 %

Total # Operational Hours : 707

Distribution By Samples

Direction

	Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
<	3	13	19	27	33	65	34	93	29	19	38	100	80	73	23	18	43	707
<	10																	
<	50																	
>=	50																	
	Totals	13	19	27	33	65	34	93	29	19	38	100	80	73	23	18	43	

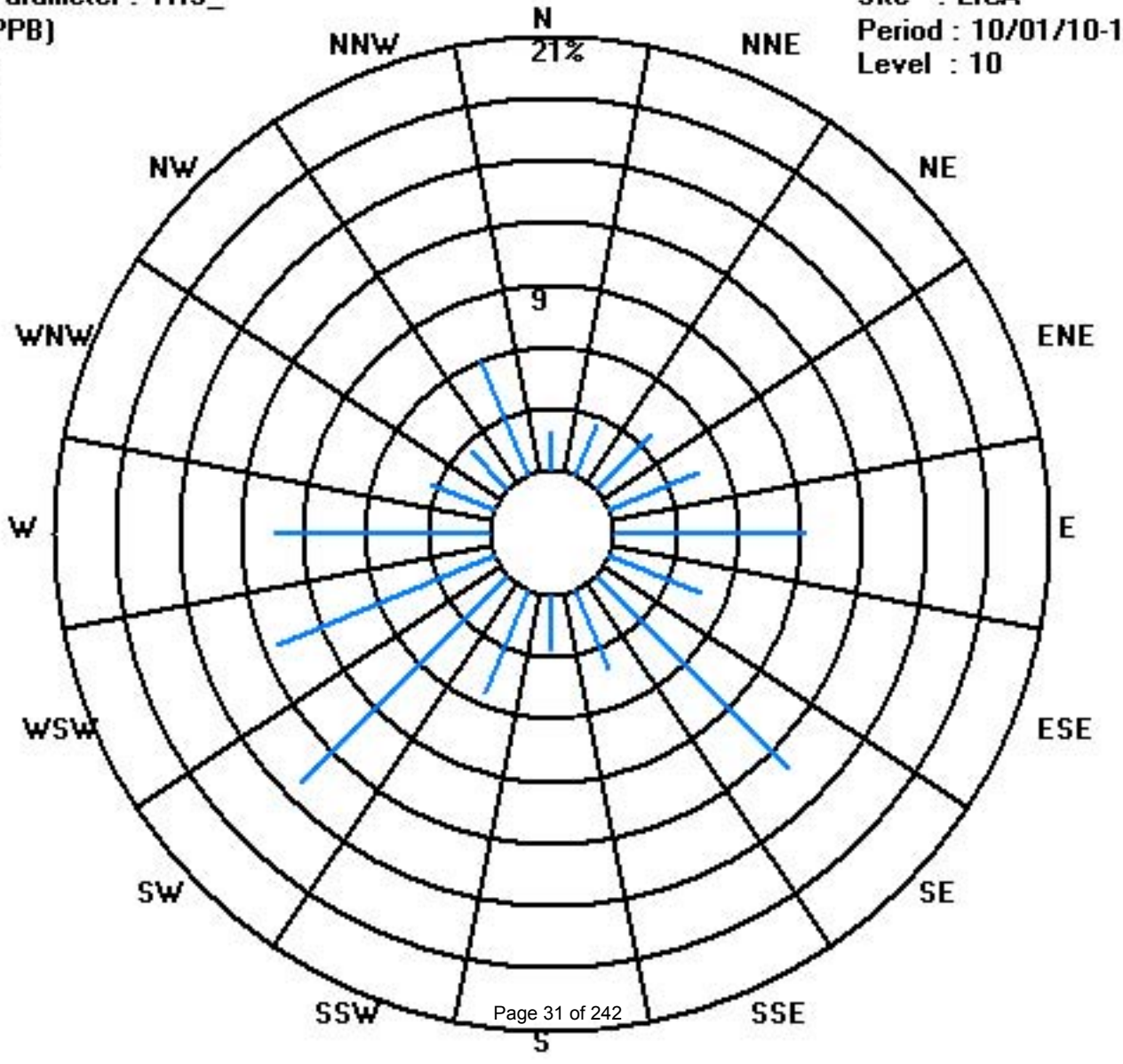
Calm : .00 %

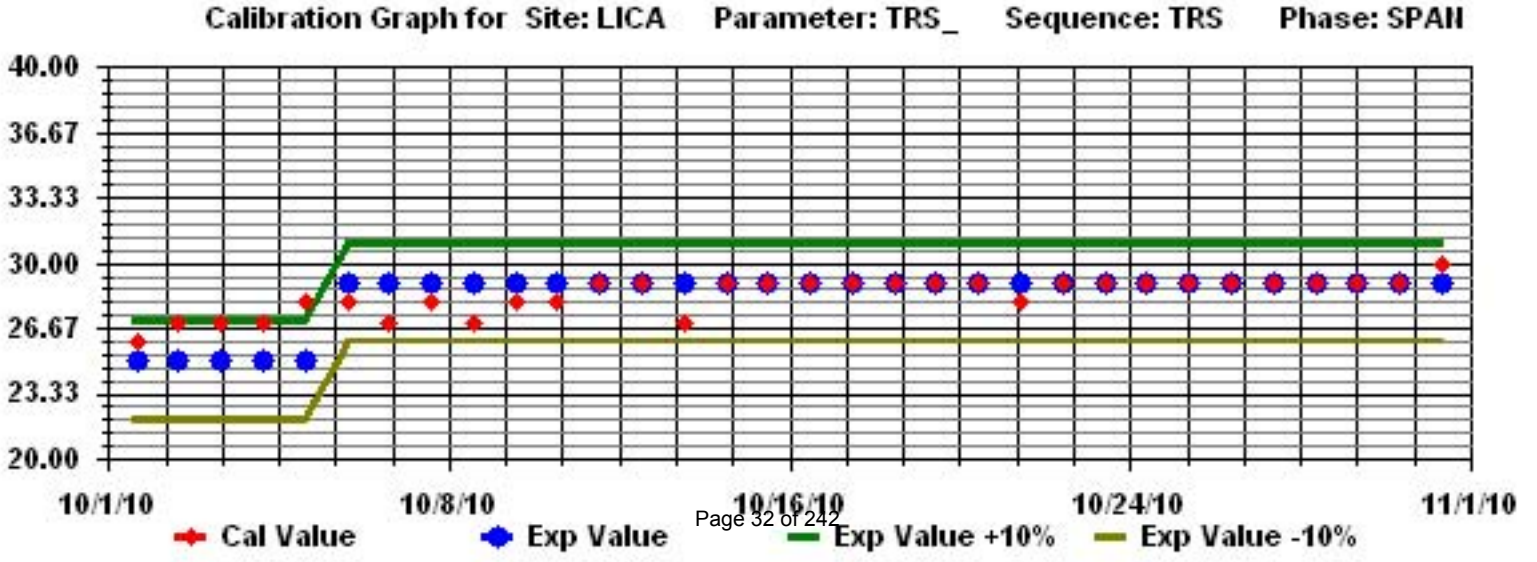
Total # Operational Hours : 707

Logger : 01 Parameter : TRS_
Class Limits (PPB)

>= 50
< 50
< 10
< 3

Site : LICA
Period : 10/01/10-10/31/10
Level : 10




Calibration Graph for Site: LICA Parameter: TRS_ Sequence: TRS Phase: SPAN
40.00
36.67
33.33
30.00
26.67
23.33
20.00
10/1/10
10/8/10
10/16/10
10/24/10
11/1/10
Cal Value
Exp Value
Exp Value +10%
Exp Value -10%

Total Hydrocarbons

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - COLD LAKE

OCTOBER 2010

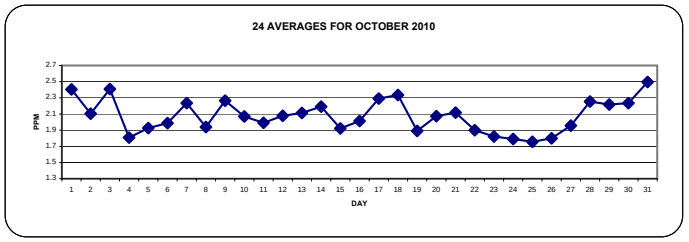
TOTAL HYDROCARBONS (THC) hourly averages in ppm

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	2.2	2.5	2.9	3.2	3.4	3.7	3.6	3.2	2.6	2.3	2.1	1.9	1.9	2.1	2.1	**IZS**	1.9	1.9	2	2	1.9	2	2	1.9	3.7	2.4	24
2	1.9	1.9	2	2	2	2	2	2	2	2	2	2	2.1	2.1	**IZS**	2	2.1	2.1	2.2	2.3	2.4	2.4	2.4	2.5	2.5	2.1	24
3	2.5	2.6	2.7	2.8	2.9	3.5	3.8	**4.1**	3.7	2.8	2	1.8	1.8	**IZS**	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.9	1.9	**4.1**	2.4	24
4	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	**IZS**	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	2	2.0	1.8	24
5	1.9	1.9	1.9	2.1	2.1	2	1.9	1.9	1.9	1.9	1.8	**IZS**	1.8	1.8	1.8	1.8	1.8	1.9	2	2	2	2	2	2.1	2.1	1.9	24
6	2.1	2.1	2	1.9	1.9	1.9	2	2	2	1.9	**IZS**	1.9	1.9	1.8	1.9	1.9	1.9	1.9	1.9	1.9	2	2.1	2.3	2.5	2.5	2.0	24
7	2.5	2.7	2.6	2.7	2.6	2.8	2.8	**C**	**C**	**C**	**C**	1.9	1.9	1.9	1.8	1.8	1.8	1.9	2.1	2.3	2.3	2.5	2	1.8	2.8	2.2	24
8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.9	**IZS**	1.8	1.9	1.9	2	2.1	2	1.9	1.8	1.8	1.9	2.1	2.1	2.2	2.2	2.2	2.2	1.9	24
9	2.3	2.4	2.6	2.8	2.9	3	3.1	**IZS**	2.6	2	1.9	1.9	1.9	2	2.1	2.1	2	2	2.1	2	2	2.1	2.1	2.2	3.1	2.3	24
10	2.2	2.3	2.3	2.3	2.3	2.2	**IZS**	2.2	2.2	2.2	2.2	2	2	2	2.1	2	1.9	2	2.1	1.8	1.8	1.8	1.8	1.9	2.3	2.1	24
11	2	1.9	1.8	1.9	2.2	**IZS**	2.1	1.9	2	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.9	1.9	1.9	2	2.3	2.2	2.3	2.6	2.6	2.0	24
12	2.3	2.5	2.5	2.5	**IZS**	2.1	2.1	2	2	2	2	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2	2.1	2.1	2.1	2.3	2.5	2.1	24
13	2.3	2.3	2.4	**IZS**	2.3	2.4	2.4	2.5	2.8	2.6	2	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.9	1.9	2	2	2	2	2.8	2.1	24
14	2.2	2.5	**IZS**	3.2	2.7	2	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2	2	2.2	2.3	2.5	2.5	2.5	2.4	2.3	3.2	2.2	24
15	2.1	**IZS**	2.5	2.5	2.4	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.9	2.5	1.9	24
16	**IZS**	2	2	2	2	2	2.2	2.3	2.1	2	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2	2	2.2	2.4	**IZS**	2.4	2.0	24
17	2.5	2.6	2.6	2.7	2.8	3	3	3	2.7	2.2	2	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2	2.2	**IZS**	2.3	3.0	2.3	24
18	2.4	2.4	2.5	2.7	2.9	2.9	2.9	2.9	2.7	2.5	2.6	2.4	2	1.9	1.9	1.9	1.9	2	2.1	2.1	2.2	**IZS**	1.9	2	2.9	2.3	24
19	2	2	2	2	1.9	1.9	2	2.1	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	**IZS**	1.8	1.9	2	2.1	1.9	24
20	2	2	2.1	2.2	2.2	2.2	2.2	2.2	2.3	2.1	2.1	2	2	1.9	1.9	1.9	1.9	1.9	2	**IZS**	2.1	2.2	2.1	2.2	2.3	2.1	24
21	2.2	2.2	2.1	2.3	2.2	2.2	2.4	2.4	2.4	2.4	2.4	2.3	2.2	2.1	2.1	1.8	1.8	1.8	**IZS**	1.8	1.8	1.8	2	2	2.4	2.1	24
22	2	1.9	2	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.9	1.9	1.9	**IZS**	1.9	1.9	1.8	1.9	1.9	1.9	2.0	1.9	24
23	1.9	1.9	1.8	1.8	1.8	1.8	1.9	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	1.9	1.8	24
24	1.8	1.8	1.8	1.8	1.8	2	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	**IZS**	1.8	1.8	1.8	1.8	1.7	1.7	1.7	1.7	2.0	1.8	24
25	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.8	1.8	1.8	1.8	1.8	**IZS**	1.7	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	24
26	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	**IZS**	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	24
27	1.8	1.8	1.8	1.9	1.9	1.8	1.9	1.9	1.9	1.9	1.9	1.9	**IZS**	1.9	1.9	2	2	2	2	2	2	2.2	2.3	2.3	2.3	2.0	24
28	2.3	2.3	2.3	2.3	2.2	2.3	2.3	2.3	**C**	2.5	2.6	**IZS**	2.4	2.1	2	2	2.1	2.1	2.3	2.3	2.3	2.2	2.2	2.2	2.6	2.3	24
29	2.1	2.2	2.3	2.4	2.5	2.4	2.4	2.5	2.4	2.4	**IZS**	2.3	2.4	2.4	2.2	2.1	2	2	2	2	2	2	2	2	2.5	2.2	24
30	2.1	2.1	2.2	2.2	2.1	2.2	2.1	2.2	2.3	**IZS**	2.3	2.5	2.5	2.4	2.3	2.3	2.1	2.2	2.2	2.3	2.3	2.2	2.1	2.2	2.5	2.2	24
31	2.2	2.1	2	2.1	2.2	2.2	2.2	2.1	**IZS**	2.1	2.3	2.4	2.3	2.4	2.7	2.7	2.9	2.8	2.9	2.9	2.9	3	3	3	3.0	**2.5**	24
HOURLY MAX	2.5	2.7	2.9	3.2	3.4	3.7	3.8	4.1	3.7	2.8	2.6	2.5	2.5	2.4	2.7	2.7	2.9	2.8	2.9	2.9	2.9	3.0	3.0	3.0			
HOURLY AVG	2.1	2.1	2.2	2.2	2.2	2.3	2.3	2.2	2.2	2.1	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.1	2.1	2.1			

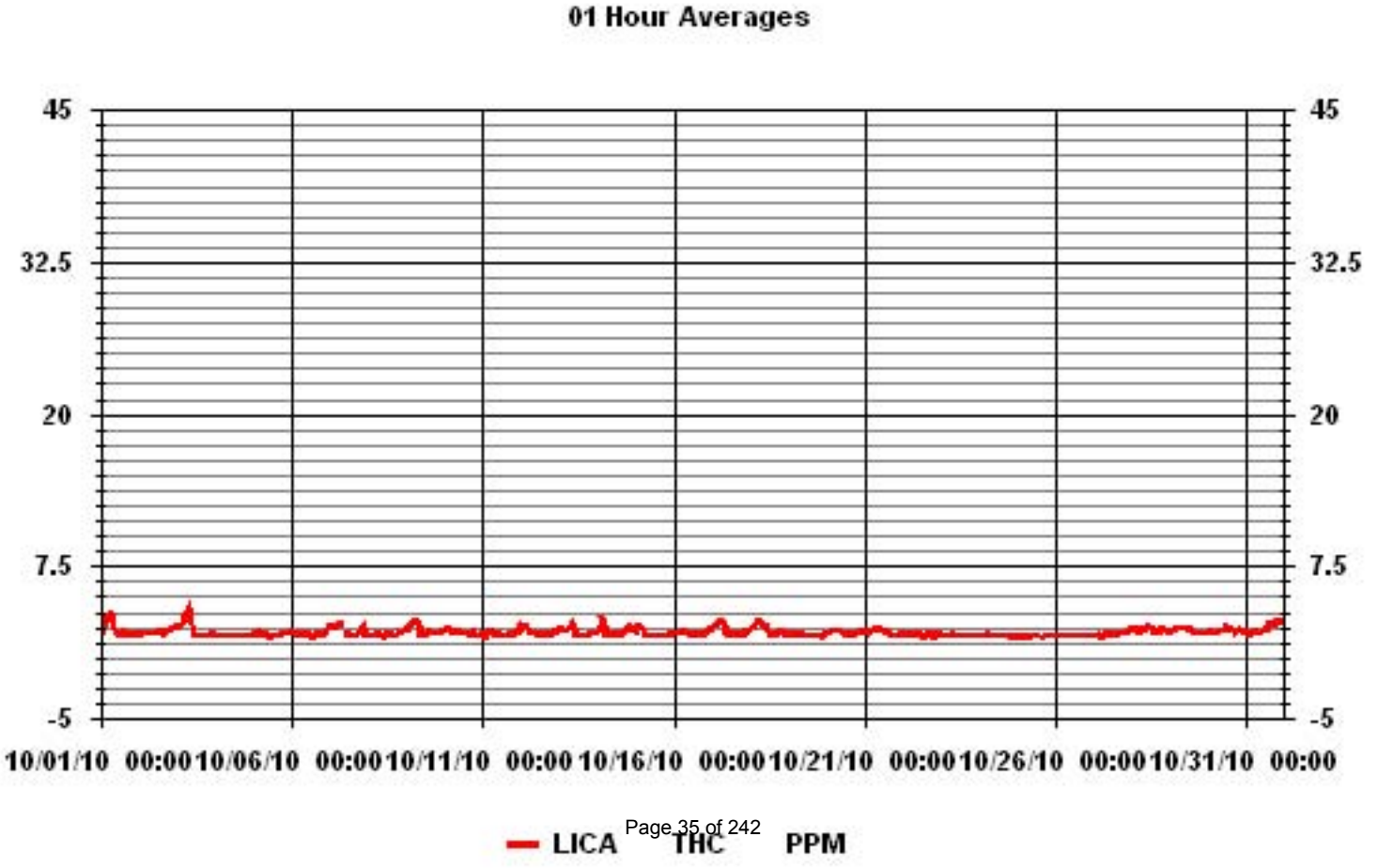
STATUS FLAG IZSODES

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



MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:	708					
MAXIMUM 1-HR AVERAGE:	4.1	PPM	@ HOUR(S)	7	ON DAY(S)	3
MAXIMUM 24-HR AVERAGE:	2.5	PPM			ON DAY(S)	31
IZS CALIBRATION TIME:	31	HRS	OPERATIONAL TIME:		744	HRS
MONTHLY CALIBRATION TIME:	31	HRS	AMD OPERATION UPTIME:		100.0	%
STANDARD DEVIATION:	0.33		MONTHLY AVERAGE:		2.08	PPM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45
32.5
20
7.5
-5
10/01/10 00:00
10/06/10 00:00
10/11/10 00:00
10/16/10 00:00
10/21/10 00:00
10/26/10 00:00
10/31/10 00:00
LICA THC PPM

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

OCTOBER 2010

TOTAL HYDROCARBONS MAX instantaneous maximum in ppm

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	2.3	2.9	3.1	3.5	4	4.1	4	3.6	3.2	2.3	2.3	2	2	2.2	2.4	**IZS**	2	2	2.2	2.1	2	2	2	2.1	4.1	2.6	24
2	2	2	2	2	2	2	2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	**IZS**	2.1	2.1	2.2	2.5	2.6	2.8	2.5	2.9	2.8	2.9	2.2	24
3	2.7	2.7	2.8	3.8	3.2	4.3	4.5	4.3	4.2	3.2	2.7	2	1.9	**IZS**	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2	1.9	1.9	4.5	2.7	24
4	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2	1.9	1.9	1.9	1.9	**IZS**	1.8	1.9	1.9	2	1.8	1.8	1.8	1.9	1.8	2	2	2	1.9	24
5	2	2.1	2	2.2	2.2	2	2	2	2	2	1.9	**IZS**	1.9	1.9	1.9	1.9	1.9	1.9	2.1	2	2.1	2.1	2.1	2.3	2.3	2.0	24
6	2.2	2.2	2	2	1.9	2	2.2	2.1	2.1	2	**IZS**	1.9	2	1.9	1.9	2.1	1.9	1.9	2	2.1	2.1	2.2	2.4	2.7	2.7	2.1	24
7	2.8	2.8	2.8	2.9	2.9	3.2	3.1	**C**	**C**	**C**	**C**	2	1.9	1.9	1.9	1.9	1.9	2	2.5	2.5	2.6	3.3	2.2	1.9	3.3	2.5	24
8	1.9	1.9	1.9	1.9	1.9	2	2.1	1.9	**IZS**	1.9	1.9	2	2.2	2.2	2.1	2.1	1.9	1.9	2.1	2.1	2.2	2.5	2.4	2.3	2.5	2.1	24
9	2.4	2.6	2.7	3.1	3.2	3.5	3.2	**IZS**	3.2	2.1	2.1	2.1	2	2.1	2.3	2.4	2.1	2.4	2.3	2.1	2.1	2.2	2.2	2.3	3.5	2.5	24
10	2.3	2.5	2.4	2.4	2.4	2.3	**IZS**	2.3	2.2	2.3	2.2	2.3	2.1	2.2	2.1	2.1	2	2.2	2.6	1.9	1.8	1.9	1.8	2	2.6	2.2	24
11	2.1	2	1.9	2.1	2.5	**IZS**	2.2	2	2.1	2	2.2	2	1.9	1.9	1.9	1.9	1.9	2	2.4	2.2	2.4	2.2	2.8	3.1	3.1	2.2	24
12	2.6	2.7	2.8	2.7	**IZS**	2.3	2.2	2.1	2	2.1	2.2	1.9	1.9	1.9	1.9	1.9	1.9	2	2.1	2.1	2.3	2.2	2.2	2.4	2.8	2.2	24
13	2.4	2.4	2.6	**IZS**	2.5	2.9	2.6	3.8	3.3	3.3	2.2	2.1	1.9	1.9	1.9	1.9	1.8	1.9	1.9	2.1	2.2	2.1	2.1	2.2	3.8	2.3	24
14	2.3	3	**IZS**	3.5	3.2	2.3	1.9	2	1.9	2.1	1.9	2	2	2	2	2	2.1	**4.7**	3	2.6	2.7	2.7	2.6	2.7	**4.7**	2.5	24
15	2.4	**IZS**	2.8	2.8	2.7	2.4	2	2	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.9	1.8	1.9	1.9	1.9	1.9	1.9	1.9	2	2.8	2.0	24
16	**IZS**	2	2	2	2.1	2.1	2.4	2.4	2.3	2.5	2	1.9	2	1.9	2	1.9	1.9	2	2.4	2.1	2.2	2.4	2.6	**IZS**	2.6	2.1	24
17	2.7	2.8	2.7	2.8	3.2	3.2	3.2	3.3	3.2	2.3	2.2	2	2	1.9	1.9	1.9	1.9	1.9	1.9	2	2.3	2.3	**IZS**	2.4	3.3	2.4	24
18	2.5	2.6	2.8	2.9	3.2	3.3	3	3.2	2.9	2.6	2.6	2.7	2.1	2	1.9	1.9	2	2	2.4	2.4	2.4	**IZS**	2	2.2	3.3	2.5	24
19	2.2	2	2.1	2	2	2	2.3	2.3	2	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.9	1.9	1.9	**IZS**	2	2	2	2.3	2.0	24
20	2.1	2.1	2.1	2.3	2.3	2.3	2.3	2.6	2.7	2.3	2.2	2.1	2.1	2	2	2	2	2.3	2.2	**IZS**	2.3	2.7	2.3	2.2	2.7	2.2	24
21	2.3	2.2	2.2	2.3	2.3	2.5	2.4	3.2	2.5	2.4	2.5	2.4	2.4	2.2	2.1	2.1	1.8	1.9	**IZS**	1.9	1.9	1.9	2	2	3.2	2.2	24
22	2.1	1.9	2.2	1.9	1.9	1.9	2	2	2	1.9	1.9	1.9	1.9	2.1	1.9	2.4	2.4	**IZS**	1.9	1.9	1.9	1.9	1.9	1.9	2.4	2.0	24
23	1.9	1.9	1.9	1.9	1.9	2	1.9	1.9	2	1.9	1.9	1.9	1.9	1.9	1.9	2.1	**IZS**	2	2.6	1.9	1.9	1.9	1.9	1.9	2.6	2.0	24
24	1.9	1.9	1.9	1.9	1.8	2.7	1.8	1.8	1.9	2.4	1.9	1.9	2.2	2.2	1.8	**IZS**	2.8	1.8	1.8	1.9	1.8	1.8	1.8	1.8	2.8	2.0	24
25	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	**IZS**	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	24
26	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.8	1.9	1.9	**IZS**	1.9	1.8	2	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2	1.9	24
27	1.9	1.9	1.9	1.9	1.9	1.9	2	2	1.9	2	1.9	2	**IZS**	2	2	2	2.1	2.1	2.2	2.1	2.1	2.2	2.4	2.4	2.4	2.0	24
28	2.4	2.4	2.5	2.4	2.3	2.4	2.4	2.4	**C**	2.6	2.7	**IZS**	2.5	2.2	2.1	2.2	2.2	2.1	2.6	2.4	2.5	2.2	2.3	2.3	2.7	2.4	24
29	2.2	2.3	2.4	2.4	2.5	2.4	2.5	2.7	2.5	2.4	**IZS**	2.4	2.5	2.4	2.4	2.3	2.1	2.1	2	2	2	2	2	2	2.7	2.3	24
30	2.1	2.2	2.2	2.2	2.2	2.3	2.2	2.3	2.4	**IZS**	2.4	2.6	2.5	2.4	2.4	2.4	2.3	2.2	2.3	2.4	2.6	2.3	2.2	2.3	2.6	2.3	24
31	2.3	2.2	2.1	2.3	2.6	2.4	2.4	2.4	**IZS**	2.3	2.4	2.5	2.4	2.5	2.8	3	3.2	3	3	3	3	3.2	3.2	3.4	3.4	2.7	24
HOURLY MAX	3	3	3	4	4	4	5	4	4	3	3	3	3	3	3	3	3	5	3	3	3	3	3	3			
HOURLY AVG	2.2	2.3	2.3	2.4	2.4	2.5	2.4	2.4	2.4	2.2	2.1	2.1	2.1	2.0	2.0	2.1	2.1	2.1	2.2	2.1	2.2	2.2	2.2	2.2			

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
BB	- BELOW BACKGROUND OF 1.5 PPM		

MONTHLY SUMMARY

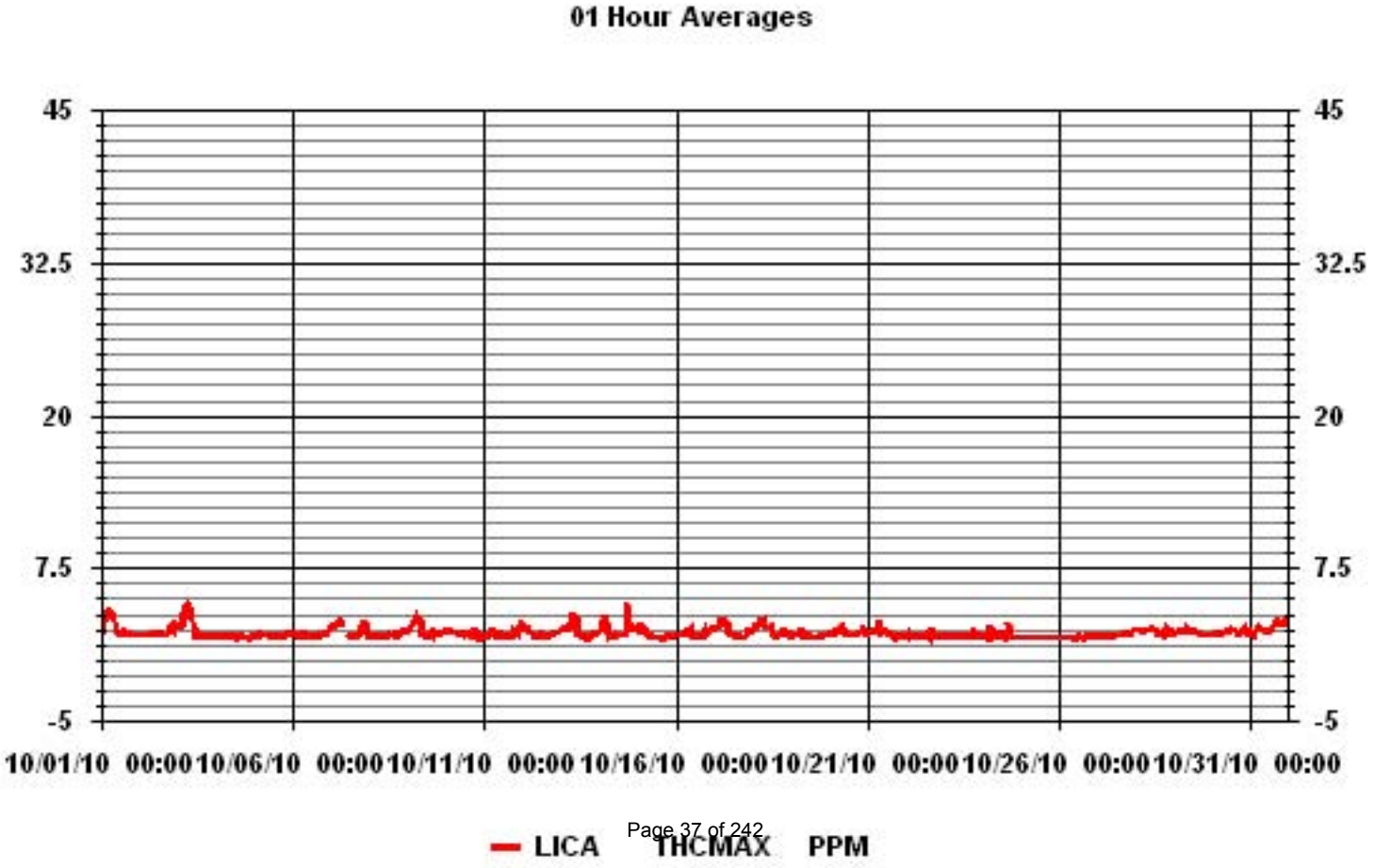
NUMBER OF NON-ZERO READINGS: 708

MAXIMUM INSTANTANEOUS VALUE: 4.7 PPM @ HOUR(S) 17 ON DAY(S) 14

IZS CALIBRATION TIME: 31 HRS OPERATIONAL TIME: 744 HRS

MONTHLY CALIBRATION TIME: 5 HRS

STANDARD DEVIATION: 0.43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45
32.5
20
7.5
-5
10/01/10 00:00
10/06/10 00:00
10/11/10 00:00
10/16/10 00:00
10/21/10 00:00
10/26/10 00:00
10/31/10 00:00
LICA THCMAX PPM

LICA
THC / WD Joint Frequency Distribution (Percent)

October 2010

Distribution By % Of Samples

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

Wind Parameter : WD
Instrument Height : 10 Meters

Direction

	Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
<	3.0	1.83	2.54	3.67	4.37	8.89	4.80	12.71	3.81	2.40	5.22	13.98	11.15	10.31	3.10	2.54	6.07	97.45
<	10.0	.00	.14	.14	.28	.28	.00	.42	.28	.28	.14	.00	.28	.28	.00	.00	.00	2.54
<	50.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
>=	50.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
	Totals	1.83	2.68	3.81	4.66	9.18	4.80	13.13	4.09	2.68	5.36	13.98	11.44	10.59	3.10	2.54	6.07	

Calm : .00 %

Total # Operational Hours : 708

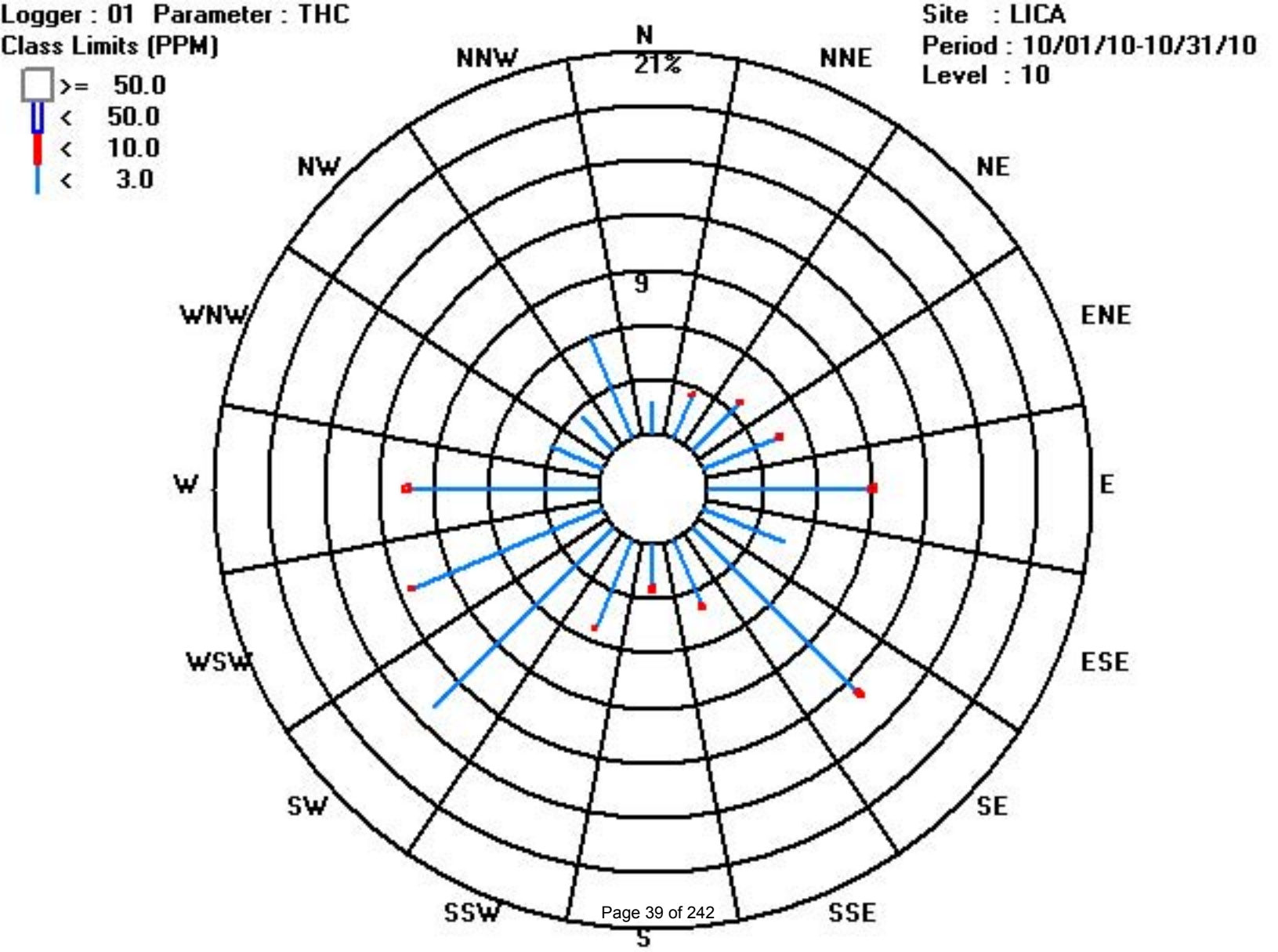
Distribution By Samples

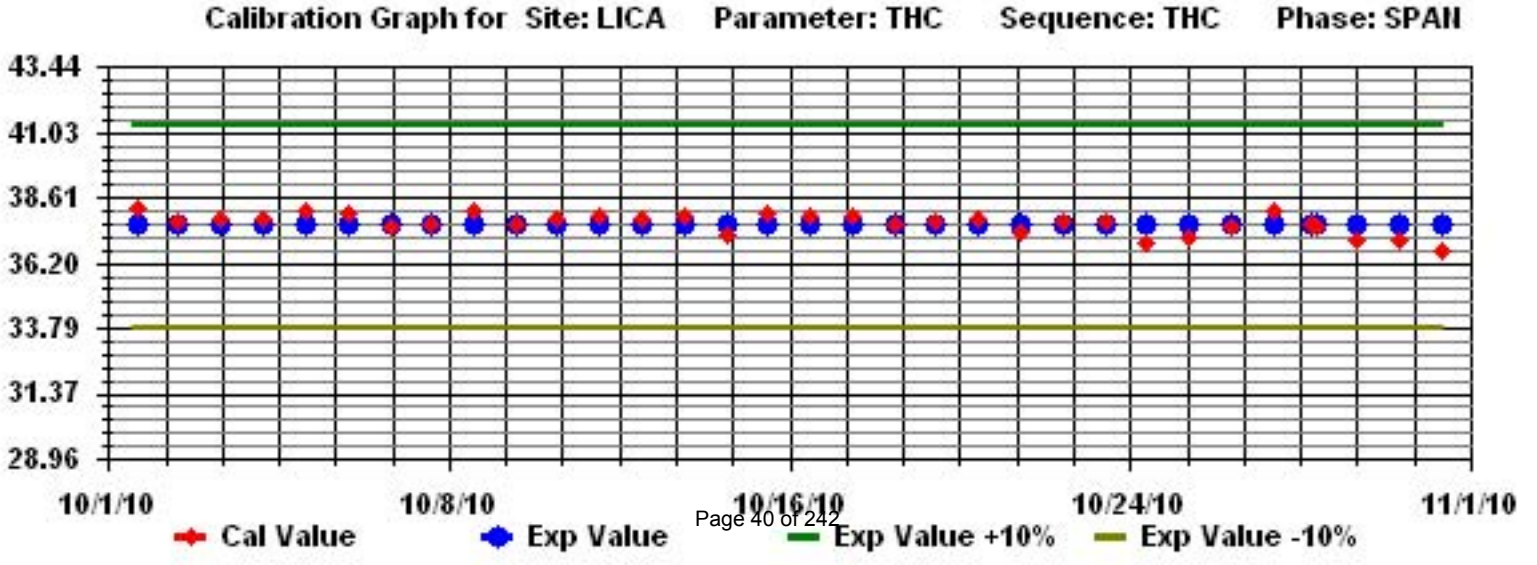
Direction

	Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
<	3.0	13	18	26	31	63	34	90	27	17	37	99	79	73	22	18	43	690
<	10.0		1	1	2	2		3	2	2	1		2	2				18
<	50.0																	
>=	50.0																	
	Totals	13	19	27	33	65	34	93	29	19	38	99	81	75	22	18	43	

Calm : .00 %

Total # Operational Hours : 708


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


Calibration Graph for Site: LICA Parameter: THC Sequence: THC Phase: SPAN
43.44
41.03
38.61
36.20
33.79
31.37
28.96
10/1/10
10/8/10
10/16/10
10/24/10
11/1/10
Cal Value
Exp Value
Exp Value +10%
Exp Value -10%

Particulate Matter 2.5

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

OCTOBER 2010

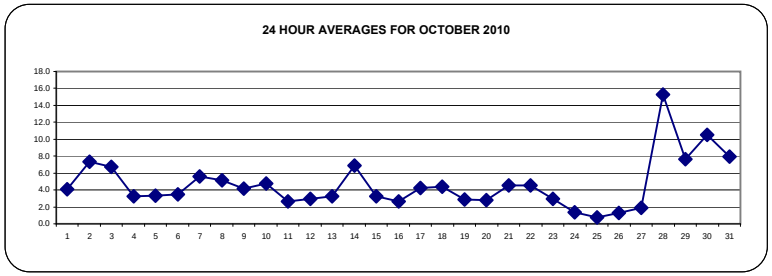
PARTICULATE MATTER 2.5 (PM2.5) hourly averages in ug/m^3

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	6.9	4.4	6.9	4.9	0	5.4	6.4	10.9	8.9	4.9	3.9	0	1.9	3.4	2.4	1.4	2.9	0	2.9	3.4	1.9	3.4	6.4	5.4	10.9	4.1	24
2	0.4	3.4	5.9	0.9	8.9	2.9	3.9	7.4	7.4	4.9	7.9	3.9	6.9	5.9	5.9	4.4	7.4	6.9	13.4	8.9	9.9	15.9	18.9	14.4	18.9	7.4	24
3	12.9	8.9	11.9	7.4	9.4	6.9	9.9	3.9	9.4	11.9	1.9	6.9	4.4	3.4	4.4	7.9	2.9	4.4	9.4	5.4	6.4	3.4	3.4	4.9	12.9	6.7	24
4	0	0	2.4	5.4	2.9	3.9	1.9	1.9	3.9	5.9	7.9	7.9	6.9	2.9	0	6.4	4.4	3.9	1.4	0.9	0	2.4	4.9	0	7.9	3.3	24
5	1.4	0	4.4	3.4	6.4	5.9	0.9	5.4	3.9	3.4	3.9	3.9	2.9	7.4	2.9	4.4	2.4	2.4	1.4	0.4	3.9	1.9	2.4	3.9	7.4	3.3	24
6	0.9	0.9	3.9	0.9	1.4	4.4	3.4	3.9	4.9	5.4	3.9	2.9	1.9	2.4	7.4	5.9	3.4	4.9	4.4	7.4	1.4	1.9	3.4	1.9	7.4	3.5	24
7	1.9	1.4	3.9	1.9	7.4	5.9	5.9	4.9	0.4	5.9	0	1.9	6.4	4.9	5.4	7.4	1.9	5.4	10.9	14.9	14.9	10.9	6.9	2.4	14.9	5.6	24
8	3.9	6.4	3.4	4.4	5.9	3.9	5.9	8.9	2.9	6.4	5.4	7.9	10.9	5.4	6.4	4.9	3.4	7.9	1.9	6.4	0	2.4	2.4	5.4	10.9	5.1	24
9	2.4	5.4	5.9	3.9	1.9	4.9	1.9	3.4	5.9	2.9	2.9	2.4	**N**	6.9	3.9	5.9	1.4	2.9	7.9	2.4	6.9	4.9	3.9	4.4	7.9	4.1	23
10	5.9	3.9	3.9	6.4	7.4	8.4	9.4	4.4	9.9	3.4	5.4	6.9	3.9	3.9	2.5	4.4	3.4	3.9	2.4	0	6.4	5.4	1.9	1.4	9.9	4.8	24
11	2.9	2.9	**N**	0	3	3.3	2.4	0.4	5.8	6.7	2.3	1.3	0.4	1.4	2.4	0.8	2.9	3.8	2	3.8	2.5	3.8	4.4	2.5	6.7	2.7	23
12	4.3	3.8	2.6	0.9	4.3	6.1	4.5	**N**	5.1	0	1.9	1.5	3.2	0	4	3.2	0.9	2	2.7	2.6	4.6	4.7	3.2	1.2	6.1	2.9	23
13	4.4	5.2	3.1	5.4	0	2.6	1.5	9.7	8.1	0.9	2.9	3.7	6.4	0	0	0.6	0	4.6	5.2	0.9	2.4	4.4	0.7	5.4	9.7	3.3	24
14	2.4	2.4	5.9	4.9	5.5	5	1.1	4.4	0.4	0	1.6	0	3.1	11.4	10	7.9	4.7	4.6	15.2	19	18.7	17.9	13.4	5.1	19.0	6.9	24
15	7.9	6	3.4	9.6	7.1	3.9	2.9	0	0	1.9	5.2	6	2.9	1.2	5.7	5.9	0.2	1.6	0.9	0	0.7	0.7	2.9	1.3	9.6	3.2	24
16	0.9	0	1.4	1.4	3.8	0.7	1.4	3.5	2.2	3.1	3	2.8	2.9	4.9	7.8	0.3	0	6.8	4.4	2.9	0.9	1.9	4	2.9	7.8	2.7	24
17	7.9	8	9.9	7.8	1.4	7.9	2.3	0	3.4	2.4	2.9	0	1.5	4.9	2.8	4.4	3.4	2.9	4.9	5.9	5	4.9	3.4	4.4	9.9	4.3	24
18	0.9	3.4	7.4	0.9	1.4	3.4	4.9	5.4	0	5.9	2.9	7.9	5.9	2.9	2.4	4.9	7.4	4.9	3.4	5.4	7.4	3.4	4.4	8.4	8.4	4.4	24
19	9.9	4.4	6.9	6.4	4.4	1.9	0	1.9	2.4	3.9	0	0	0.9	3.9	4.9	2.9	3.4	1.4	4.9	2.9	0	1.4	0	0	9.9	2.9	24
20	0	2.4	1.9	2.4	0.9	0	6.4	2.9	4.9	2.9	0	3.4	1.9	1.9	1.9	1.9	3.9	4.4	2.9	1.4	4.4	4.4	4.4	4.9	6.4	2.8	24
21	5.9	7.9	5.4	7.4	**N**	5.4	4.9	6.4	4.9	0	3.4	4.4	8.4	5.9	5.4	4.4	3.9	2.4	6.4	0	4.9	2.9	4.4	0	8.4	4.6	23
22	4.9	3.4	2.9	1.9	4.9	2.4	2.9	0.4	8.4	0	6.4	4.4	5.4	3.4	3.4	5.9	5.4	6.4	7.9	7.9	5.9	7.9	3.9	2.9	8.4	4.6	24
23	3.4	0.4	0	6.4	0.9	0	3.4	8.4	4.4	4.9	2.4	5.4	4.9	3.4	0	2.4	1.9	2.9	3.9	3.4	3.4	1.4	1.9	0.9	8.4	2.9	24
24	4.9	0.9	**N**	0.9	0	3.4	3.9	0	1.4	3.9	0.4	2.4	0.9	0	0	0.9	0	0	0.9	0.9	1.9	3.9	0	0	4.9	1.4	23
25	2.4	0	0	0	0.4	0	0	0	1.4	0	1.4	0	2.4	0	**N**	0.9	1.9	0.9	0	0	0.4	2.4	1.4	0.9	2.4	0.7	23
26	0	3.4	0.4	5.4	0	0	**N**	**N**	0	0	2.9	1.9	0	**N**	**C**	**C**	**C**	**C**	0	0	3	2.8	0.4	1.4	5.4	1.3	21
27	**N**	0	0	0	0.4	0	0	0.4	0.9	1.9	1.9	1.9	0	2.9	2.4	2.9	1.9	0.9	3.4	4.4	4.4	2.4	3.9	5.9	5.9	1.9	23
28	5.9	8.4	5.9	5.9	7.4	12.4	12.4	**M**	1.9	15.4	20.9	21.4	**28.9**	**28.9**	19.4	18.4	21.9	26.9	23.4	21.4	15.9	11.4	10.9	6.4	**28.9**	**15.3**	23
29	7.4	10.4	4.4	4.4	4.9	7.9	8.9	8.4	11.4	10.4	4.9	4.9	4.4	5.9	9.4	9.4	6.9	4.9	8.4	10.4	7.9	6.9	8.9	12.4	12.4	7.7	24
30	10.4	9.4	11.9	7.9	10.4	9.4	9.9	7.9	9.9	7.4	8.9	9.9	14.4	14.9	19.9	8.9	10.9	9.4	11.9	8.4	14.4	11.9	3.9	10.9	19.9	10.5	24
31	7.9	8.4	6.9	7.4	8.9	19.9	10.4	9.4	5.9	7.4	3.9	7.9	8.4	4.9	3.4	8.4	8.4	8.4	10.9	6.4	7.4	7.4	5.4	6.4	19.9	7.9	24
HOURLY MAX	13	10	12	10	10	20	12	11	11	15	21	21	29	29	20	18	22	27	23	21	19	18	19	14			
HOURLY AVG	4.4	4.1	4.6	4.1	4.1	4.8	4.5	4.4	4.5	4.3	4.0	4.4	5.1	5.0	5.0	4.9	4.1	4.8	5.8	5.1	5.4	5.2	4.5	4.1			

STATUS FLAG CODES

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

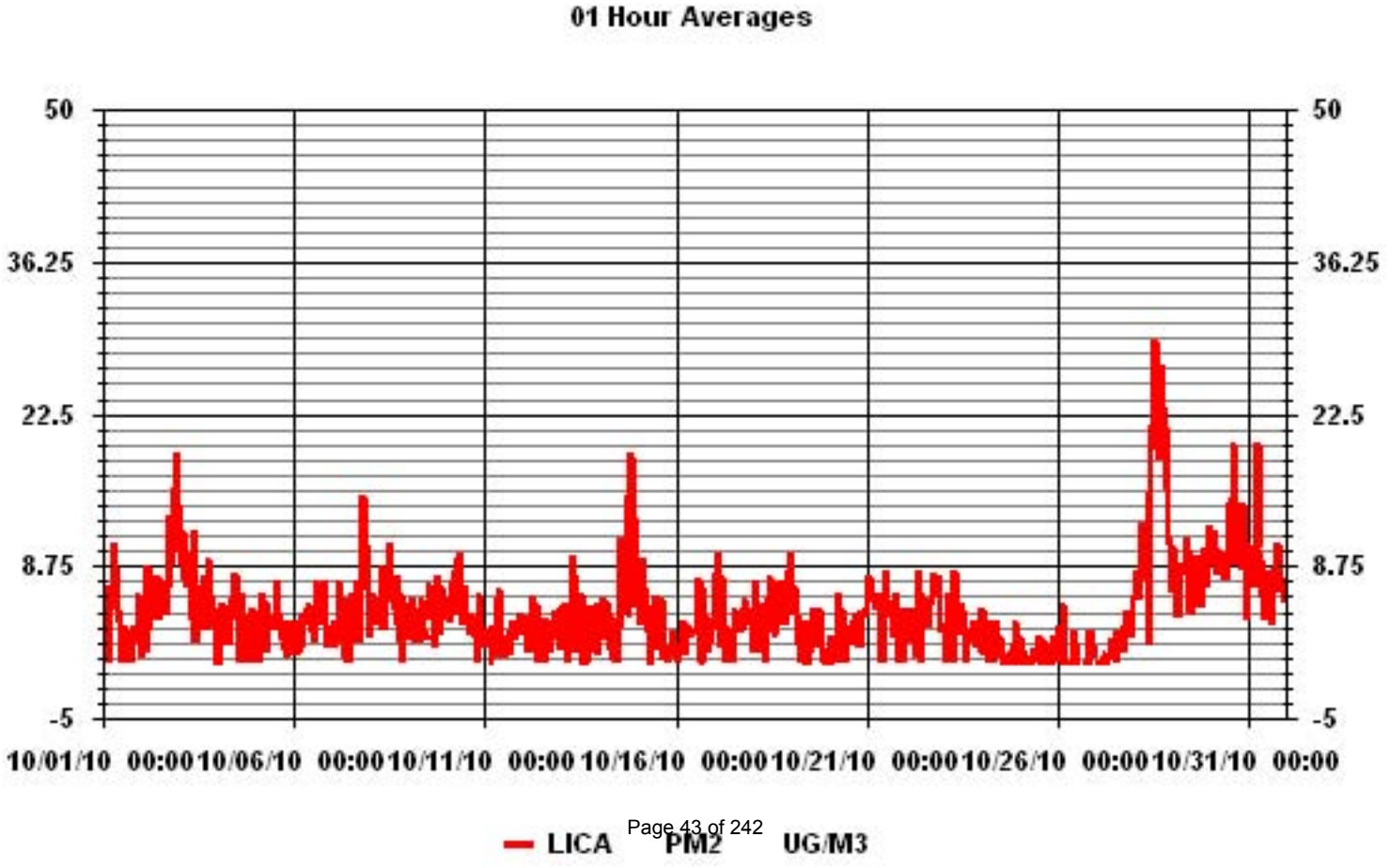


OBJECTIVE LIMIT: **ALBERTA ENVIRONMENT:** 1-HR - ug/m3 | 24-HR 30 ug/m3

MONTHLY SUMMARY

NUMBER OF 1-HR EXCEEDENCES:	-					
NUMBER OF 24-HR EXCEEDENCES:	0	PROPOSED CANADA WIDE GUIDELINE				
NUMBER OF NON-ZERO READINGS:	651					
MAXIMUM 1-HR AVERAGE:	28.9	UG/M^3	@ HOUR(S)	12, 13	ON DAY(S)	28
MAXIMUM 24-HR AVERAGE:	15.3	UG/M^3			ON DAY(S)	28

IZS CALIBRATION TIME:	0	HRS	OPERATIONAL TIME:	733	HRS
MONTHLY CALIBRATION TIME:	4	HRS	AMD OPERATION UPTIME:	98.5	%
STANDARD DEVIATION:	4.13		MONTHLY AVERAGE:	4.63	UG/M^3


01 Hour Averages
50
36.25
22.5
8.75
-5
10/01/10 00:00
10/06/10 00:00
10/11/10 00:00
10/16/10 00:00
10/21/10 00:00
10/26/10 00:00
10/31/10 00:00
LICA PM2 UG/M3

LICA
PM2 / WD Joint Frequency Distribution (Percent)

October 2010

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	1.78	3.01	3.97	4.80	8.91	4.66	13.30	3.84	2.60	5.34	14.54	11.65	10.83	3.01	2.46	5.21	100.00
<	60.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
<	80.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
<	120.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
<	240.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
>=	240.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
	Totals	1.78	3.01	3.97	4.80	8.91	4.66	13.30	3.84	2.60	5.34	14.54	11.65	10.83	3.01	2.46	5.21	

Calm : .00 %

Total # Operational Hours : 729

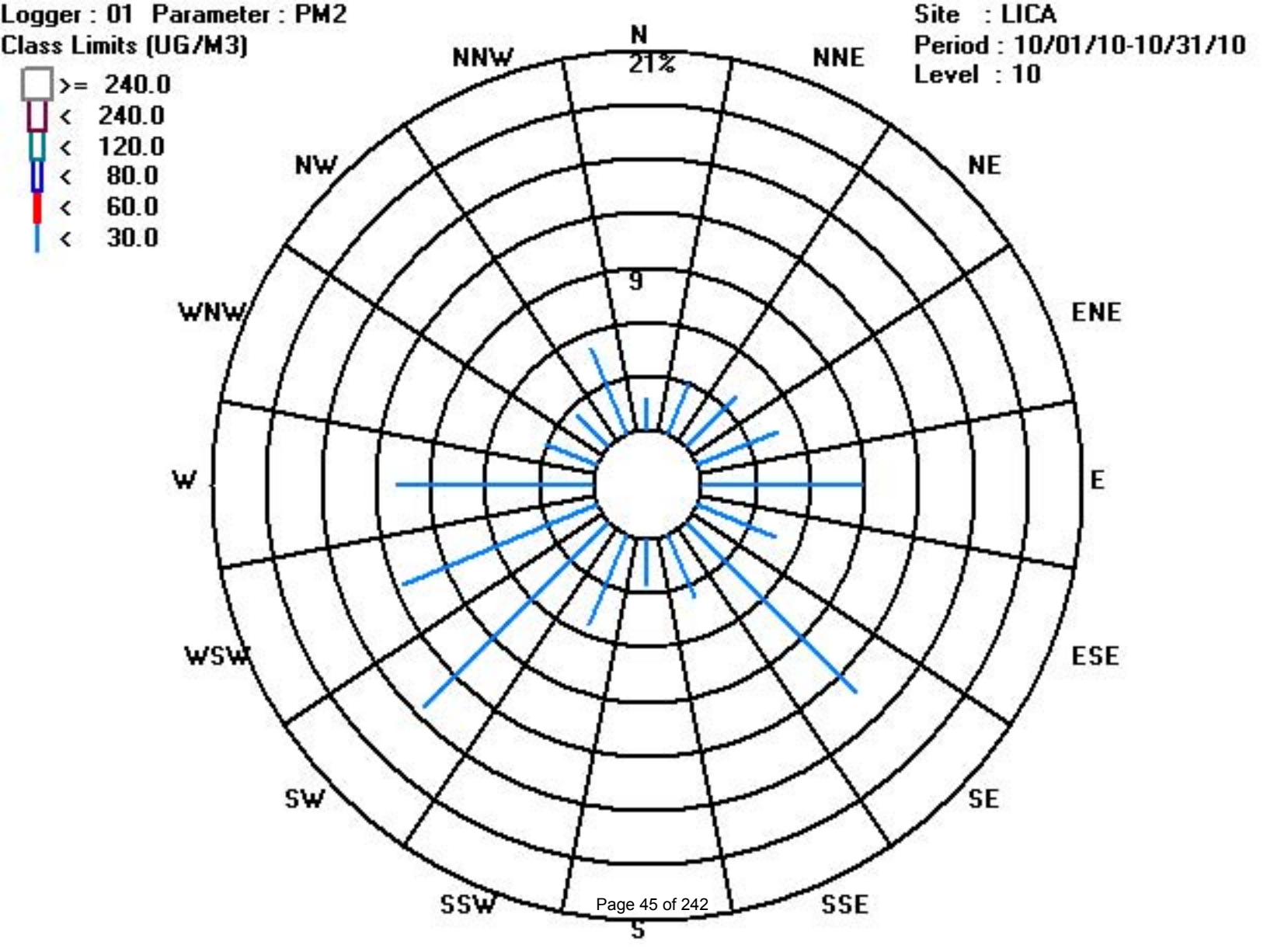
Distribution By Samples

Direction

	Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
<	30.0	13	22	29	35	65	34	97	28	19	39	106	85	79	22	18	38	729
<	60.0																	
<	80.0																	
<	120.0																	
<	240.0																	
>=	240.0																	
	Totals	13	22	29	35	65	34	97	28	19	39	106	85	79	22	18	38	

Calm : .00 %

Total # Operational Hours : 729


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

Nitrogen Dioxide

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

OCTOBER 2010

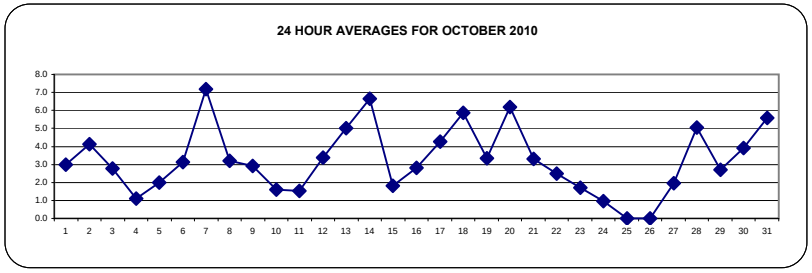
NITROGEN DIOXIDE hourly averages in ppb

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	6	6	5	6	6	6	7	9	5	2	1	0	0	0	0	**IZS**	1	1	2	2	1	1	1	1	9	3.0	24
2	1	1	1	1	1	2	2	4	2	1	1	1	2	2	**IZS**	2	2	5	14	13	7	11	11	8	14	4.1	24
3	5	5	4	3	3	4	3	3	7	6	2	1	0	**IZS**	1	1	2	4	2	2	3	2	1	0	7	2.8	24
4	0	0	0	0	0	2	2	2	2	1	2	3	**IZS**	2	1	1	3	1	1	0	1	0	0	1	3	1.1	24
5	2	3	2	3	2	2	3	**C**	**C**	**C**	**C**	**C**	**C**	**C**	0	1	1	1	2	3	2	2	2	3	3	2.0	24
6	2	2	2	3	3	3	5	6	5	3	**IZS**	1	1	1	2	4	5	3	2	3	4	3	4	5	6	3.1	24
7	5	6	4	6	3	10	9	8	8	**IZS**	**C**	2	2	1	2	4	4	9	**22**	20	15	12	5	1	**22**	**7.2**	24
8	0	0	0	0	2	7	7	6	**IZS**	3	2	3	3	3	3	2	1	2	6	5	5	6	4	4	7	3.2	24
9	2	3	4	5	6	7	7	**IZS**	7	2	1	1	0	0	1	1	1	3	7	2	2	1	2	2	7	2.9	24
10	1	3	2	2	2	2	**IZS**	2	2	2	2	1	1	1	1	2	2	2	3	1	1	1	0	1	3	1.6	24
11	3	1	0	1	3	**IZS**	3	1	2	1	0	0	0	0	0	0	0	1	3	2	4	3	3	4	4	1.5	24
12	1	2	2	2	**IZS**	5	6	6	5	2	1	0	0	0	0	0	1	2	7	5	9	8	6	8	9	3.4	24
13	6	4	5	**IZS**	3	6	12	10	7	7	5	3	2	1	0	0	0	1	3	10	9	6	7	8	12	5.0	24
14	7	9	**IZS**	9	9	8	2	5	1	1	1	0	1	1	1	2	3	6	18	17	19	15	12	6	19	6.7	24
15	5	**IZS**	5	7	8	3	2	2	3	2	1	0	0	0	0	0	0	0	1	0	1	1	0	1	8	1.8	24
16	**IZS**	2	1	1	2	2	3	4	3	2	1	1	1	0	0	0	1	6	8	5	5	6	8	**IZS**	8	2.8	24
17	8	9	9	7	5	5	4	4	4	3	2	3	3	2	2	2	2	2	3	4	4	6	**IZS**	5	9	4.3	24
18	4	3	4	6	9	9	9	11	7	5	6	5	3	3	2	2	5	6	9	9	10	**IZS**	4	4	11	5.9	24
19	10	12	9	5	4	3	5	6	8	2	1	0	0	0	0	1	0	1	1	1	**IZS**	2	3	3	12	3.3	24
20	3	2	3	4	6	7	12	15	6	5	3	2	1	1	0	1	4	16	13	**IZS**	14	14	7	3	16	6.2	24
21	6	7	4	3	4	5	4	5	4	2	2	3	4	4	4	2	1	2	**IZS**	2	1	1	3	3	7	3.3	24
22	3	2	4	1	1	2	3	6	5	2	3	1	1	1	1	1	3	**IZS**	5	4	2	2	2	2	6	2.5	24
23	2	1	1	1	1	3	3	4	3	2	1	1	1	1	2	2	**IZS**	2	2	2	1	1	1	1	4	1.7	24
24	1	0	0	1	1	1	1	1	1	1	2	2	3	2	1	**IZS**	1	1	1	1	0	0	0	0	3	1.0	24
25	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
26	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
27	0	0	0	0	0	0	1	2	1	1	1	1	**IZS**	1	1	2	3	5	5	5	6	4	3	3	6	2.0	24
28	3	2	3	4	3	4	4	7	6	6	5	**IZS**	5	5	7	6	7	8	7	6	6	5	4	3	8	5.0	24
29	3	3	3	3	3	3	3	5	3	3	**IZS**	2	2	3	3	3	2	2	2	2	2	2	2	3	5	2.7	24
30	4	3	4	4	4	5	4	4	4	**IZS**	3	3	3	4	4	4	4	5	4	4	5	4	3	4	5	3.9	24
31	5	5	3	6	7	7	9	6	**IZS**	2	2	2	2	3	4	5	8	10	7	8	7	8	6	6	10	5.6	24
HOURLY MAX	10	12	9	9	9	10	12	15	8	7	6	5	5	5	7	6	8	16	22	20	19	15	12	8			
HOURLY AVG	3.3	3.2	2.8	3.1	3.4	4.1	4.5	5.0	4.0	2.5	1.9	1.4	1.5	1.5	1.5	1.8	2.2	3.6	5.3	4.6	4.9	4.2	3.5	3.1			

STATUS FLAG CODES

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

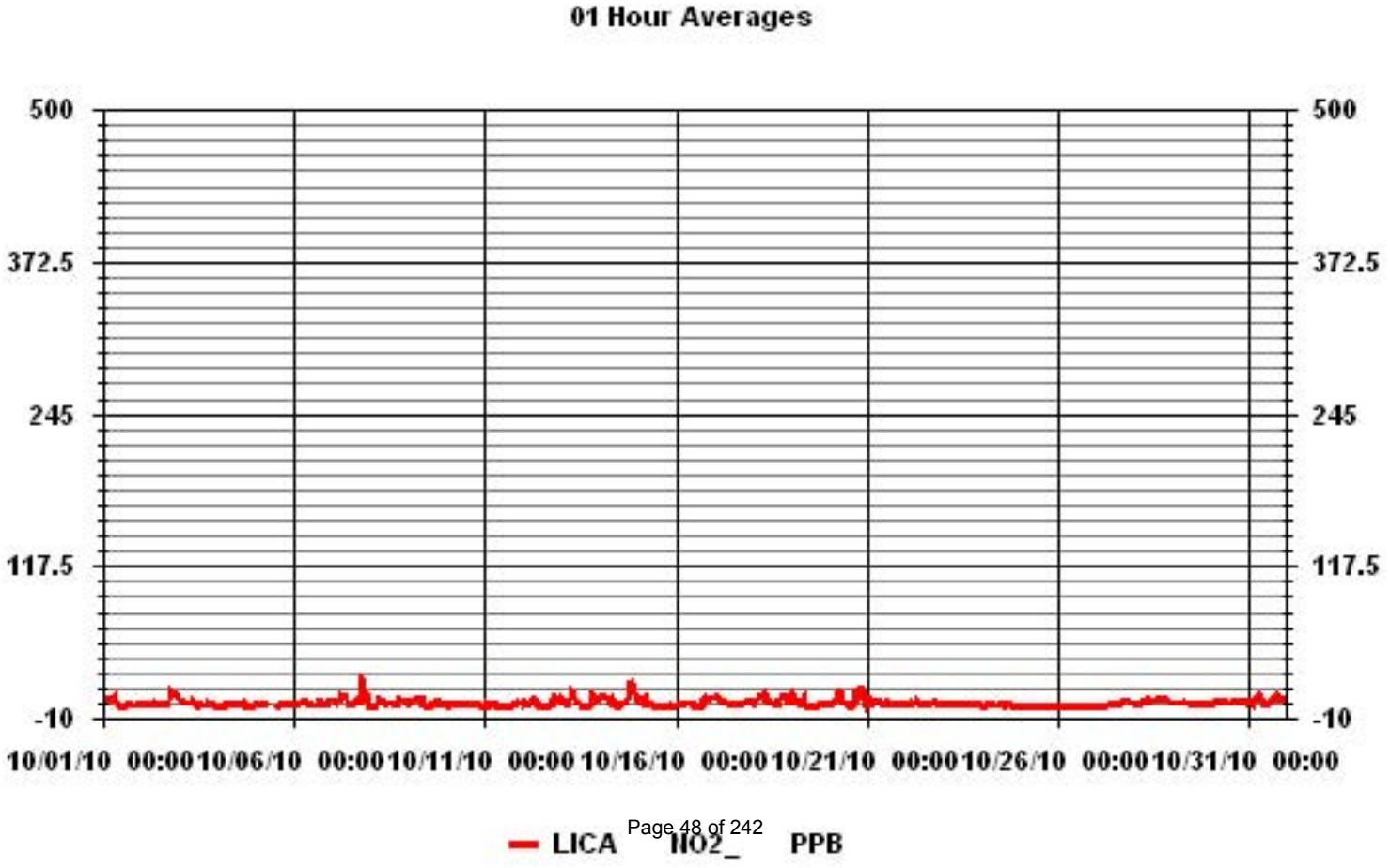


OBJECTIVE LIMIT: **ALBERTA ENVIRONMENT:** 1-HR 212 PPB | 24-HR 106 PPB

MONTHLY SUMMARY

NUMBER OF 1-HR EXCEEDENCES:	0					
NUMBER OF 24-HR EXCEEDENCES:	0					
NUMBER OF NON-ZERO READINGS:	590					
MAXIMUM 1-HR AVERAGE:	22	PPB	@ HOUR(S)	18	ON DAY(S)	7
MAXIMUM 24-HR AVERAGE:	7.2	PPB			ON DAY(S)	7

IZS CALIBRATION TIME:	31	HRS	OPERATIONAL TIME:	744	HRS
MONTHLY CALIBRATION TIME:	8	HRS	AMD OPERATION UPTIME:	100.0	%
STANDARD DEVIATION:	3.18		MONTHLY AVERAGE:	3.22	PPB


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

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

OCTOBER 2010

NITROGEN DIOXIDE MAX instantaneous maximum in ppb

MST

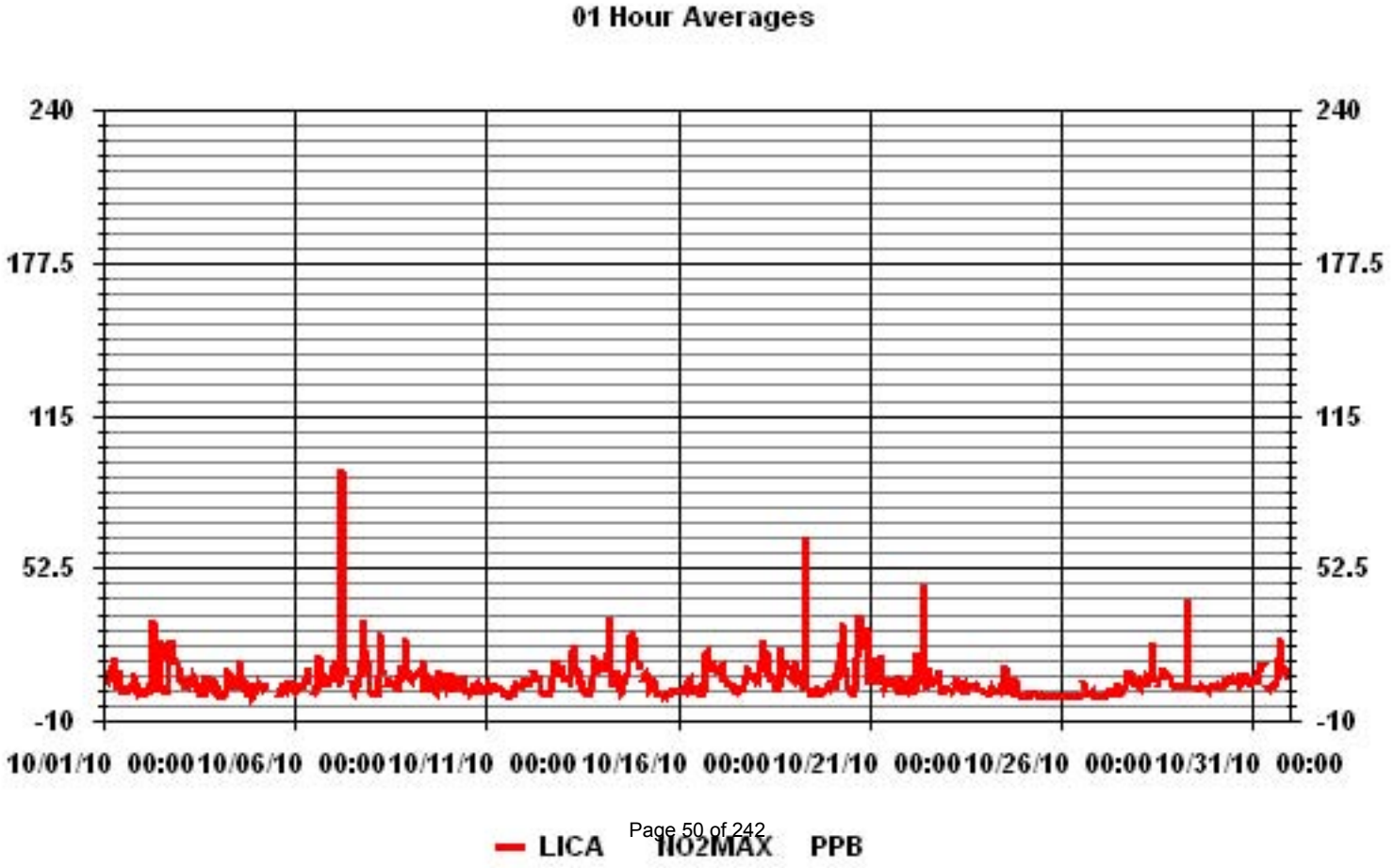
HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	10	8	7	9	8	9	12	16	10	3	11	2	2	4	2	**IZS**	4	5	4	9	5	2	3	1	16	6.3	24
2	1	1	1	2	2	4	4	31	8	8	3	2	23	16	**IZS**	2	4	14	22	22	13	16	14	12	31	9.8	24
3	7	6	6	4	4	7	5	6	9	8	6	3	1	**IZS**	1	1	9	7	4	3	5	7	2	1	9	4.9	24
4	2	0	0	1	1	12	4	5	10	3	4	6	**IZS**	13	4	4	7	3	1	1	5	0	1	3	13	3.9	24
5	4	6	5	4	3	4	4	**C**	**C**	**C**	**C**	**C**	**C**	**C**	1	3	4	4	3	6	4	5	4	6	6	4.1	24
6	3	4	3	4	4	4	6	7	11	6	**IZS**	2	4	2	3	17	7	11	5	5	7	6	7	7	17	5.9	24
7	12	15	10	10	4	**93**	13	12	10	**IZS**	**C**	6	3	2	5	5	8	15	28	31	20	16	10	2	93	15.0	24
8	1	1	1	1	9	26	11	10	**IZS**	5	6	6	6	5	4	5	2	8	12	8	9	24	11	8	26	7.8	24
9	7	6	7	8	9	10	9	**IZS**	13	3	3	10	2	4	4	3	2	7	11	5	9	3	7	3	13	6.3	24
10	4	9	3	3	7	6	**IZS**	7	4	2	8	2	2	1	2	2	4	4	5	3	1	3	1	4	9	3.8	24
11	5	2	2	3	5	**IZS**	4	3	3	3	1	1	1	0	0	1	1	4	6	3	5	3	5	7	7	3.0	24
12	4	6	6	5	**IZS**	10	7	7	7	7	2	1	1	1	1	1	2	7	15	8	15	12	9	12	15	6.3	24
13	8	6	8	**IZS**	5	16	19	21	9	12	6	6	3	2	1	1	1	3	7	17	14	9	15	12	21	8.7	24
14	10	13	**IZS**	11	18	32	4	8	4	11	7	3	1	2	5	8	9	14	25	26	25	21	16	12	32	12.4	24
15	12	**IZS**	7	9	10	8	3	4	6	6	1	1	1	1	0	1	0	1	1	1	2	2	2	2	12	3.5	24
16	**IZS**	3	2	2	4	3	6	7	5	2	2	2	3	1	1	1	2	17	18	12	10	12	14	**IZS**	18	5.9	24
17	11	12	11	12	7	7	5	5	5	4	3	4	4	2	3	3	3	6	5	13	8	8	**IZS**	9	13	6.5	24
18	7	8	7	10	15	23	12	19	9	6	8	8	4	4	2	4	20	8	10	11	14	**IZS**	8	7	23	9.7	24
19	12	14	11	7	6	5	7	32	65	4	1	1	1	3	1	4	1	1	2	2	**IZS**	4	5	4	65	8.4	24
20	6	4	4	8	8	14	22	30	8	9	5	4	2	1	1	3	16	33	30	**IZS**	22	19	28	5	33	12.3	24
21	10	11	7	5	14	14	6	17	6	3	4	5	7	5	5	6	4	5	**IZS**	7	1	3	5	5	17	6.7	24
22	6	3	4	3	1	18	5	10	11	5	46	3	5	12	4	6	6	**IZS**	7	10	5	2	2	2	46	7.7	24
23	3	3	3	2	3	6	5	7	5	3	4	2	2	5	4	4	**IZS**	4	5	4	3	3	2	2	7	3.7	24
24	2	1	1	2	4	3	2	2	3	2	4	4	12	13	2	**IZS**	3	2	3	7	1	1	1	0	13	3.3	24
25	0	1	0	0	0	1	1	1	1	0	0	1	0	0	**IZS**	1	0	0	0	0	0	0	0	0	1	0.3	24
26	0	0	0	0	0	0	0	0	0	0	0	0	0	**IZS**	5	1	1	1	1	2	0	0	0	0	5	0.5	24
27	0	0	0	0	1	1	2	2	1	1	1	4	**IZS**	3	2	3	4	9	9	8	10	6	4	7	10	3.4	24
28	5	4	6	5	5	8	7	9	7	22	7	**IZS**	5	7	8	8	11	9	9	8	8	5	5	4	22	7.5	24
29	4	4	4	4	4	4	5	39	5	4	**IZS**	4	3	3	4	5	4	4	3	3	2	3	4	4	39	5.3	24
30	4	4	5	4	5	6	5	6	6	**IZS**	8	5	7	6	6	5	9	6	7	8	6	5	5	6	9	5.8	24
31	7	8	5	10	14	11	12	13	**IZS**	4	3	4	4	5	5	7	16	24	9	10	11	10	8	8	24	9.0	24
HOURLY MAX	12	15	11	12	18	93	22	39	65	22	46	10	23	16	8	17	20	33	30	31	25	24	28	12			
HOURLY AVG	5.6	5.4	4.5	4.9	6.0	12.2	6.9	11.6	8.6	5.2	5.7	3.5	3.9	4.4	3.0	4.0	5.5	7.9	8.9	8.4	8.0	7.0	6.6	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:	660					
MAXIMUM INSTANTANEOUS VALUE:	93	PPB	@ HOUR(S)	5	ON DAY(S)	7
IZS CALIBRATION TIME:	31	HRS	OPERATIONAL TIME:		744	HRS
MONTHLY CALIBRATION TIME:	8	HRS				
STANDARD DEVIATION	7.08					


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

LICA
NO2_ / WD Joint Frequency Distribution (Percent)

October 2010

Distribution By % Of Samples

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

Wind Parameter : WD
Instrument Height : 10 Meters

Direction

Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 50	1.84	2.69	3.82	4.68	9.21	4.82	13.19	4.11	2.69	5.39	14.18	11.34	10.07	3.26	2.55	6.09	100.00
< 110	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
< 210	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
>= 210	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
Totals	1.84	2.69	3.82	4.68	9.21	4.82	13.19	4.11	2.69	5.39	14.18	11.34	10.07	3.26	2.55	6.09	

Calm : .00 %

Total # Operational Hours : 705

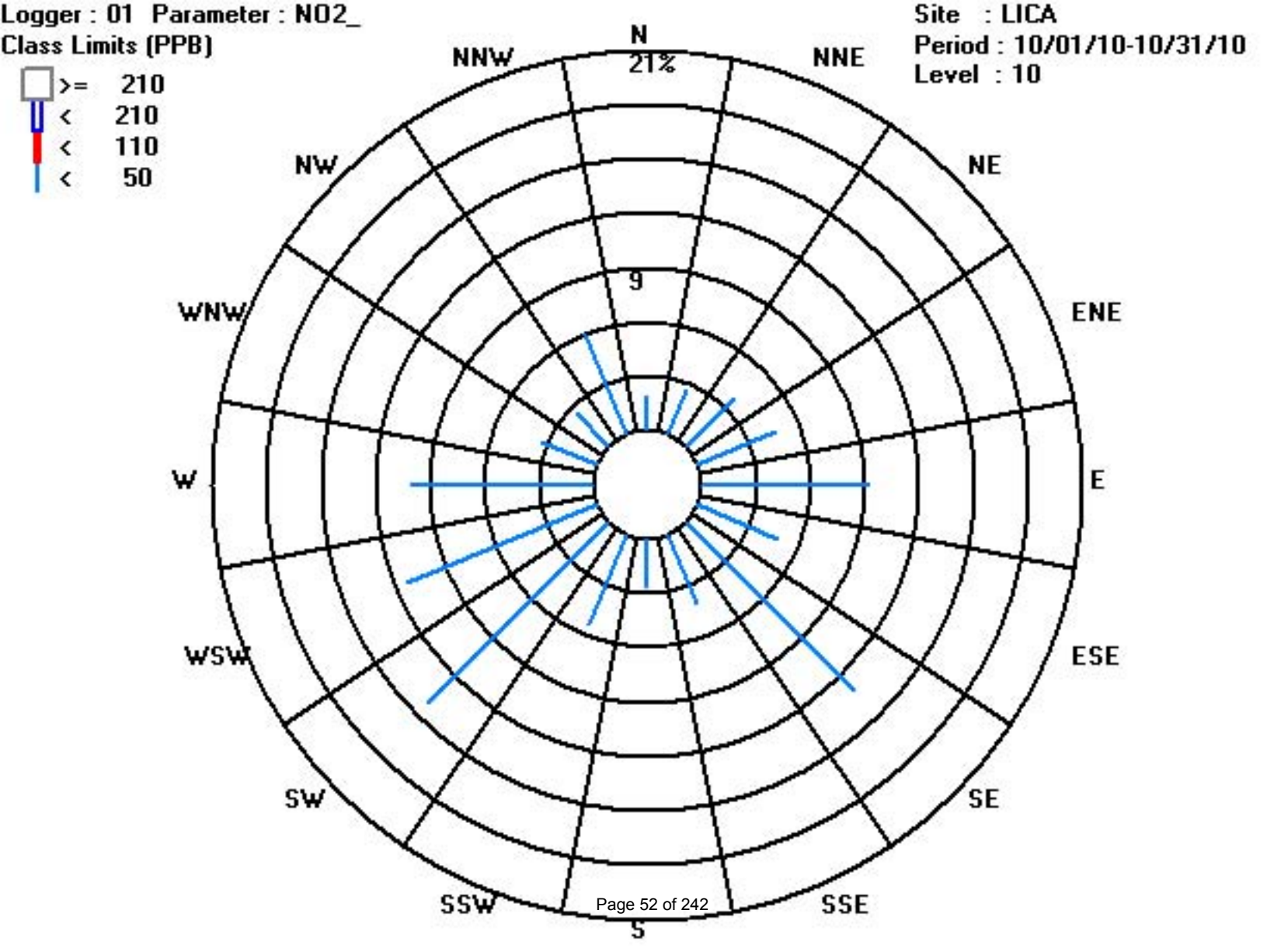
Distribution By Samples

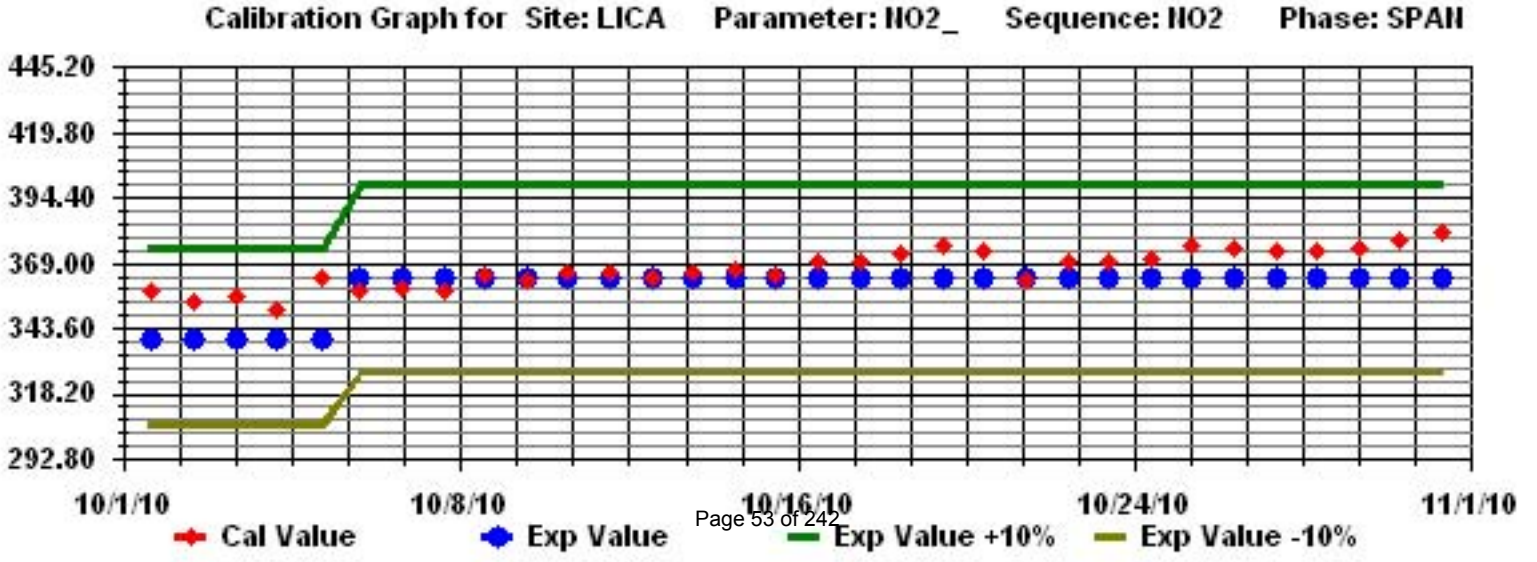
Direction

Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 50	13	19	27	33	65	34	93	29	19	38	100	80	71	23	18	43	705
< 110																	
< 210																	
>= 210																	
Totals	13	19	27	33	65	34	93	29	19	38	100	80	71	23	18	43	

Calm : .00 %

Total # Operational Hours : 705


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


Calibration Graph for Site: LICA Parameter: NO2_ Sequence: NO2 Phase: SPAN
445.20
419.80
394.40
369.00
343.60
318.20
292.80
10/1/10
10/8/10
10/16/10
10/24/10
11/1/10
Cal Value
Exp Value
Exp Value +10%
Exp Value -10%

Nitric Oxide

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

OCTOBER 2010

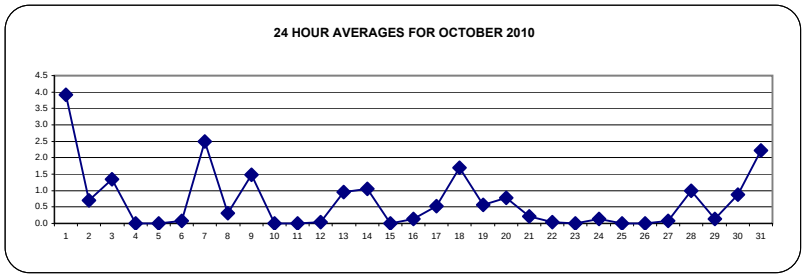
NITRIC OXIDE hourly averages in ppb

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	0	0	0	1	2	13	30	**35**	8	1	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	**35**	**3.9**	24
2	0	0	0	0	0	0	0	1	0	0	0	0	1	0	IZS	0	0	0	1	1	1	4	4	3	4	0.7	24
3	2	1	1	2	2	1	3	5	9	4	1	0	0	IZS	0	0	0	0	0	0	0	0	0	0	9	1.3	24
4	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
5	0	0	0	0	0	0	0	C	C	C	C	C	C	C	0	0	0	0	0	0	0	0	0	0	0	0.0	24
6	0	0	0	0	0	0	0	0	1	1	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.1	24
7	0	0	0	0	0	11	9	14	6	IZS	C	1	0	0	0	0	0	1	6	5	2	0	0	0	14	2.5	24
8	0	0	0	0	0	3	0	1	IZS	0	0	0	0	1	1	0	0	0	0	0	0	1	0	0	3	0.3	24
9	0	0	0	1	3	7	10	IZS	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13	1.5	24
10	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
11	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
12	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
13	0	0	0	IZS	0	1	7	5	3	3	2	1	0	0	0	0	0	0	0	0	0	0	0	0	7	1.0	24
14	0	0	IZS	3	5	1	0	0	0	0	0	0	0	0	0	0	0	0	2	3	4	5	1	0	5	1.0	24
15	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
16	IZS	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	IZS	1	0.1	24
17	2	4	2	0	0	0	0	1	2	1	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	4	0.5	24
18	0	0	0	0	6	4	5	17	3	1	1	1	0	0	0	0	1	0	0	0	0	IZS	0	0	17	1.7	24
19	0	0	0	0	0	0	0	2	11	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	11	0.6	24
20	0	0	0	0	0	0	1	5	1	2	1	1	0	0	0	0	0	1	1	IZS	4	1	0	0	5	0.8	24
21	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	0	0	0	IZS	0	0	0	0	0	1	0.2	24
22	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	IZS	0	0	0	0	0	0	1	0.0	24
23	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
24	0	0	0	0	0	0	0	0	0	0	0	0	2	1	0	IZS	0	0	0	0	0	0	0	0	2	0.1	24
25	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
26	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
27	0	0	0	0	0	0	0	0	0	0	0	1	IZS	1	0	0	0	0	0	0	0	0	0	0	1	0.1	24
28	0	0	0	0	0	0	0	0	1	7	3	IZS	3	3	3	2	1	0	0	0	0	0	0	0	7	1.0	24
29	0	0	0	0	0	0	0	3	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0.1	24
30	0	0	0	0	0	0	0	0	1	IZS	3	5	4	4	1	1	0	0	0	0	1	0	0	0	5	0.9	24
31	0	1	0	1	5	5	7	2	IZS	2	2	2	1	1	2	1	0	5	0	2	1	3	3	5	7	2.2	24
HOURLY MAX	2	4	2	3	6	13	30	35	13	7	3	5	4	4	3	2	1	5	6	5	4	5	4	5			
HOURLY AVG	0.1	0.2	0.1	0.3	0.8	1.5	2.4	3.1	2.2	0.8	0.6	0.4	0.4	0.4	0.3	0.1	0.1	0.2	0.3	0.4	0.4	0.5	0.3	0.3			

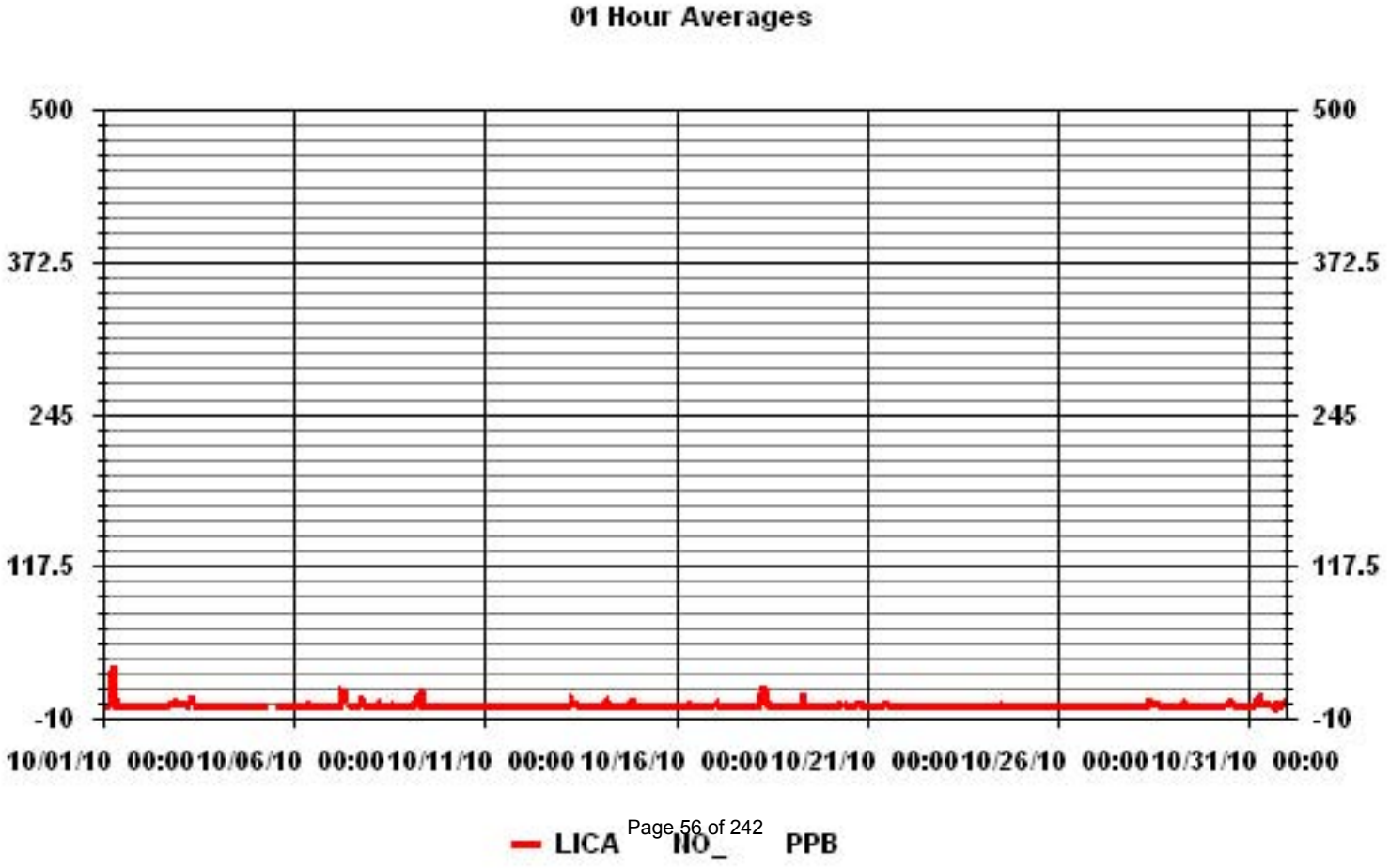
STATUS FLAG CODES

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



MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:		139					
MAXIMUM 1-HR AVERAGE:		35	PPB	@ HOUR(S)	7	ON DAY(S)	1
MAXIMUM 24-HR AVERAGE:		3.9	PPB			ON DAY(S)	1
IZS CALIBRATION TIME:	31	HRS	OPERATIONAL TIME:			744	HRS
MONTHLY CALIBRATION TIME:	8	HRS	AMD OPERATION UPTIME:			100.0	%
STANDARD DEVIATION:	2.45		MONTHLY AVERAGE:			0.67	PPB


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

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

OCTOBER 2010

NITRIC OXIDE MAX instantaneous maximum in ppb

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	4	1	3	3	4	63	38	48	25	1	2	1	1	6	3	**IZS**	4	3	1	11	2	0	0	0	63	9.7	24
2	0	0	0	0	0	0	0	10	4	1	3	0	16	12	**IZS**	0	1	0	11	8	13	7	7	13	16	4.6	24
3	4	4	9	5	6	6	6	7	13	6	4	8	0	**IZS**	0	0	5	0	0	0	3	0	0	0	13	3.7	24
4	0	0	0	0	0	3	0	0	7	1	2	4	**IZS**	6	3	1	2	3	1	1	4	0	0	0	7	1.7	24
5	0	1	1	0	0	1	0	**C**	**C**	**C**	**C**	**C**	**C**	**C**	0	1	1	1	0	0	0	0	0	0	1	0.4	24
6	0	2	0	0	0	0	0	1	4	1	**IZS**	0	1	1	0	4	1	5	0	3	0	0	0	0	5	1.0	24
7	5	4	1	0	0	**245**	35	21	12	**IZS**	**C**	4	0	0	1	0	3	42	42	38	11	0	0	0	**245**	21.1	24
8	0	0	0	0	3	23	1	8	**IZS**	3	1	2	0	2	1	1	0	0	0	0	0	17	4	0	23	2.9	24
9	2	10	2	3	7	20	20	**IZS**	33	1	1	2	0	1	1	1	1	0	0	2	3	2	0	0	33	4.9	24
10	0	3	0	0	2	4	**IZS**	1	2	1	7	0	2	1	0	0	1	0	0	0	0	1	0	1	7	1.1	24
11	1	0	0	1	0	**IZS**	0	0	1	1	0	0	0	0	0	0	0	0	4	0	0	1	0	0	4	0.4	24
12	0	1	2	1	**IZS**	1	1	2	2	2	0	0	0	2	0	0	0	0	4	0	2	4	1	0	4	1.1	24
13	0	1	3	**IZS**	2	14	41	12	8	6	3	3	0	1	0	0	0	0	0	4	2	0	3	2	41	4.6	24
14	1	4	**IZS**	9	8	11	1	1	0	1	3	6	0	0	3	0	1	1	10	12	10	9	4	3	12	4.3	24
15	2	**IZS**	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	1	0	1	0	2	0.3	24
16	**IZS**	1	0	2	3	1	0	3	5	1	1	0	0	0	0	0	0	2	3	2	0	0	15	**IZS**	15	1.8	24
17	7	8	7	5	1	1	0	5	4	1	1	1	1	0	0	2	0	1	2	2	0	0	**IZS**	1	8	2.2	24
18	0	7	5	4	24	28	9	47	7	4	3	2	1	1	0	0	23	1	0	1	3	**IZS**	1	1	47	7.5	24
19	0	2	2	3	2	1	2	92	92	0	0	0	0	0	0	1	0	0	0	0	**IZS**	2	2	1	92	8.8	24
20	1	1	6	3	2	1	6	27	3	4	2	2	1	0	0	0	5	14	23	**IZS**	66	11	11	0	66	8.2	24
21	0	1	0	0	4	5	0	9	1	1	1	1	3	1	1	3	0	0	**IZS**	0	0	0	0	1	9	1.4	24
22	1	0	0	0	0	6	0	2	9	8	17	2	7	1	10	1	1	**IZS**	2	2	1	1	0	0	17	3.1	24
23	0	0	0	1	1	2	1	2	3	1	3	1	1	16	1	3	**IZS**	2	2	1	0	1	0	0	16	1.8	24
24	0	0	0	0	1	1	1	1	1	1	1	1	11	11	2	**IZS**	1	1	2	7	2	0	0	0	11	2.0	24
25	0	0	0	0	0	0	0	0	0	0	0	1	0	0	**IZS**	0	3	0	0	0	0	0	0	0	3	0.2	24
26	0	0	0	0	0	0	0	0	0	0	0	0	0	**IZS**	10	0	3	0	0	1	0	0	0	0	10	0.6	24
27	0	0	0	0	0	0	0	0	0	0	0	3	**IZS**	1	1	1	1	4	2	0	1	3	1	1	4	0.8	24
28	2	0	1	0	0	0	1	1	2	45	5	**IZS**	6	6	5	11	12	2	1	1	6	0	0	0	45	4.7	24
29	0	0	0	0	0	0	0	53	1	1	**IZS**	1	1	1	2	5	3	0	0	0	0	0	0	0	53	3.0	24
30	0	0	0	0	0	0	2	4	2	**IZS**	9	6	5	6	3	3	5	0	1	2	7	4	0	1	9	2.6	24
31	1	5	1	3	14	16	19	7	**IZS**	7	3	5	5	2	2	2	2	65	3	7	7	11	8	13	65	9.0	24
HOURLY MAX	7	10	9	9	24	245	41	92	92	45	17	8	16	16	10	11	23	65	42	38	66	17	15	13			
HOURLY AVG	1.0	1.9	1.5	1.4	2.8	15.1	6.1	12.6	8.6	3.5	2.7	1.9	2.2	2.8	1.7	1.4	2.6	4.9	3.8	3.5	4.8	2.5	1.9	1.3			

STATUS FLAG CODES

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

MONTHLY SUMMARY

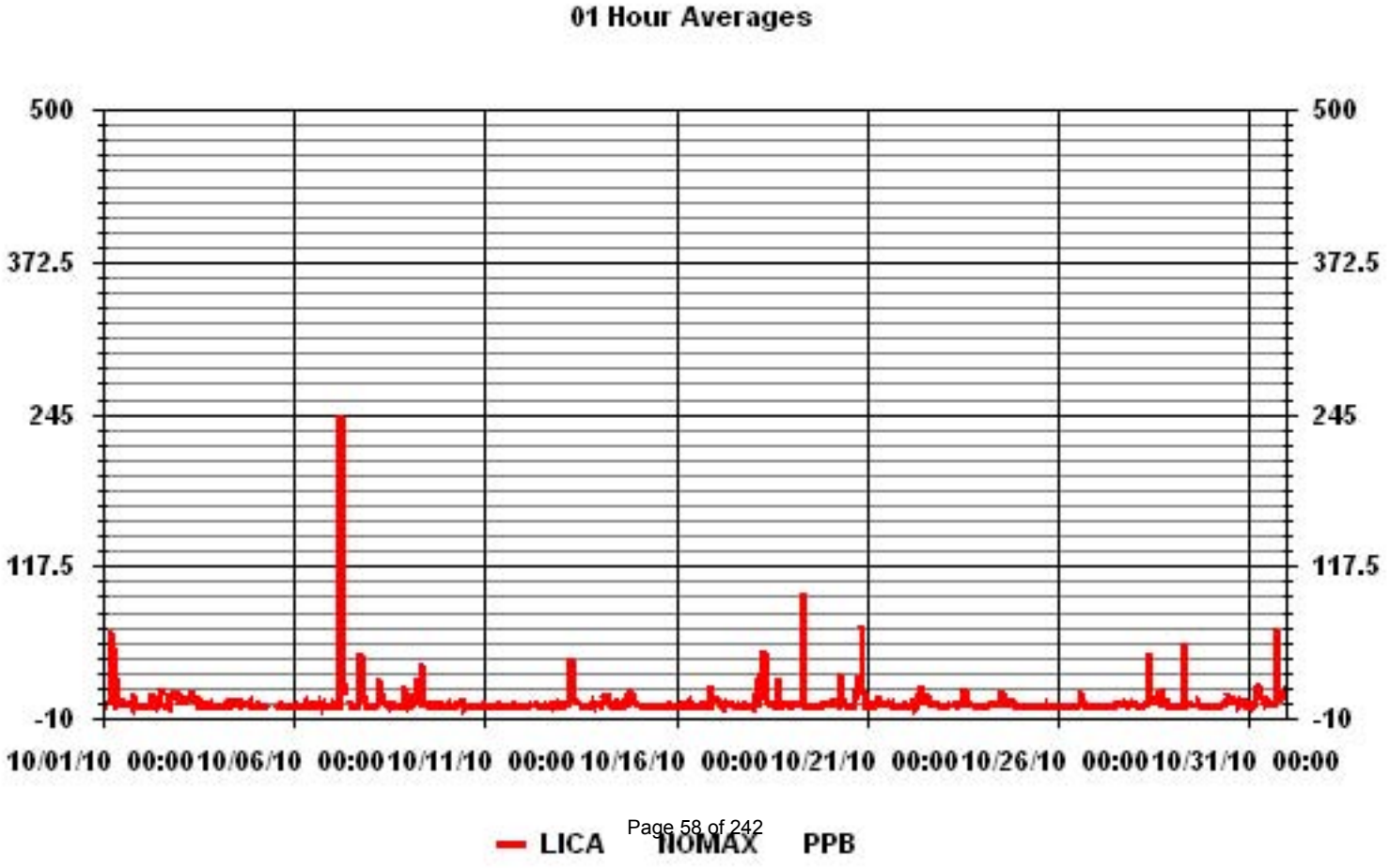
NUMBER OF NON-ZERO READINGS: 411

MAXIMUM INSTANTANEOUS VALUE: 245 PPB @ HOUR(S) 5 ON DAY(S) 7

IZS CALIBRATION TIME: 31 HRS OPERATIONAL TIME: 744 HRS

MONTHLY CALIBRATION TIME: 8 HRS

STANDARD DEVIATION 12.73


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

LICA
NO_ / WD Joint Frequency Distribution (Percent)

October 2010

Distribution By % Of Samples

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

Wind Parameter : WD
Instrument Height : 10 Meters

Direction

Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 50	1.84	2.69	3.82	4.68	9.21	4.82	13.19	4.11	2.69	5.39	14.18	11.34	10.07	3.26	2.55	6.09	100.00
< 110	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
< 210	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
>= 210	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
Totals	1.84	2.69	3.82	4.68	9.21	4.82	13.19	4.11	2.69	5.39	14.18	11.34	10.07	3.26	2.55	6.09	

Calm : .00 %

Total # Operational Hours : 705

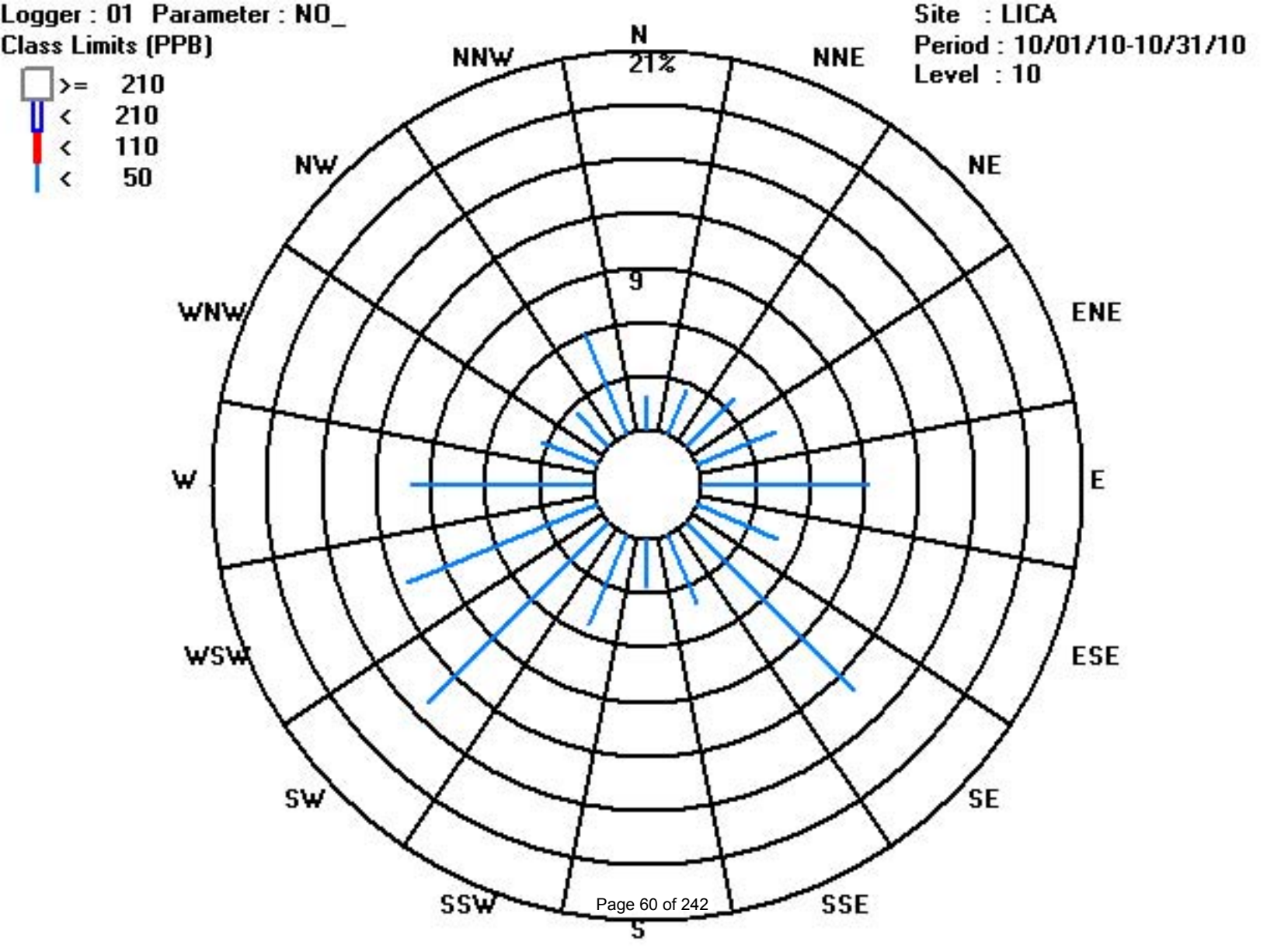
Distribution By Samples

Direction

Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 50	13	19	27	33	65	34	93	29	19	38	100	80	71	23	18	43	705
< 110																	
< 210																	
>= 210																	
Totals	13	19	27	33	65	34	93	29	19	38	100	80	71	23	18	43	

Calm : .00 %

Total # Operational Hours : 705


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

Oxides of Nitrogen

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

OCTOBER 2010

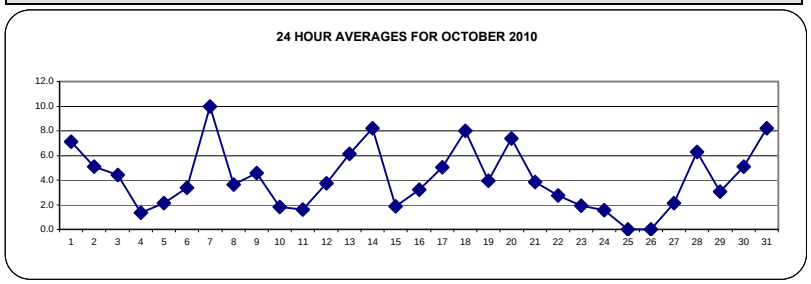
OXIDES OF NITROGEN hourly averages in ppb

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	7	6	6	7	8	19	37	**44**	13	3	2	0	0	0	0	**IZS**	1	1	2	3	2	1	1	1	**44**	7.1	24
2	1	1	1	1	1	2	2	5	3	1	1	2	3	2	**IZS**	2	3	5	15	15	8	15	16	12	16	5.1	24
3	7	6	5	6	5	6	7	8	17	11	3	1	1	**IZS**	1	1	2	4	2	2	3	2	1	0	17	4.4	24
4	0	0	0	0	0	2	2	3	3	1	2	3	**IZS**	2	2	2	4	1	1	1	1	0	0	1	4	1.3	24
5	2	4	3	3	2	2	3	**C**	**C**	**C**	**C**	**C**	**C**	**C**	0	1	1	1	2	3	2	2	2	3	4	2.1	24
6	2	2	2	3	3	3	5	6	7	5	**IZS**	2	2	1	2	4	5	3	2	3	4	3	4	5	7	3.4	24
7	5	6	4	6	3	21	18	22	15	**IZS**	**C**	4	2	2	3	4	5	10	29	26	17	12	5	1	29	**10.0**	24
8	0	0	0	0	2	10	7	8	**IZS**	3	3	3	3	4	4	3	1	2	6	5	5	7	4	4	10	3.7	24
9	2	4	4	6	10	14	17	**IZS**	21	2	2	1	0	1	1	1	1	2	7	2	2	1	2	2	21	4.6	24
10	1	4	3	2	3	2	**IZS**	2	2	2	2	2	1	1	2	2	2	2	3	1	1	1	0	1	4	1.8	24
11	3	1	0	1	3	**IZS**	3	1	2	2	1	0	0	0	0	0	0	1	3	2	4	3	3	4	4	1.6	24
12	1	2	3	2	**IZS**	5	6	7	7	3	2	0	0	0	0	0	1	2	8	5	9	8	7	8	9	3.7	24
13	6	4	5	**IZS**	3	7	20	15	11	10	7	4	3	1	0	0	0	1	3	10	9	6	8	8	20	6.1	24
14	8	10	**IZS**	12	14	10	3	5	1	2	2	1	1	1	2	2	3	6	21	21	23	21	13	7	23	8.2	24
15	5	**IZS**	5	7	8	3	2	2	3	3	1	0	0	0	0	0	0	0	0	0	1	1	1	1	8	1.9	24
16	**IZS**	2	1	2	3	2	3	5	4	3	2	1	1	1	0	0	1	6	8	6	5	6	9	**IZS**	9	3.2	24
17	10	13	11	8	5	5	4	5	6	4	3	4	4	2	2	2	2	3	3	4	4	6	**IZS**	6	13	5.0	24
18	4	3	4	6	16	14	15	28	11	7	8	7	4	3	2	2	6	6	9	9	11	**IZS**	5	4	28	8.0	24
19	10	12	9	5	4	4	5	8	19	3	1	0	0	0	0	1	0	0	1	1	**IZS**	2	3	3	19	4.0	24
20	3	3	3	4	6	7	13	21	7	8	5	3	2	1	1	1	5	18	14	**IZS**	18	16	8	3	21	7.4	24
21	6	7	4	3	4	6	4	6	5	3	4	5	6	5	5	2	1	2	**IZS**	2	1	1	3	3	7	3.8	24
22	3	2	4	1	1	2	3	6	6	3	4	1	2	1	2	2	3	**IZS**	5	4	3	2	2	1	6	2.7	24
23	2	1	1	1	2	4	3	4	4	2	1	1	1	2	2	2	**IZS**	3	2	2	1	1	1	1	4	1.9	24
24	1	0	0	1	1	2	1	1	2	2	3	3	5	4	2	**IZS**	2	1	2	2	1	0	0	0	5	1.6	24
25	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
26	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
27	0	0	0	0	0	0	1	1	1	1	1	3	**IZS**	2	2	2	3	5	5	5	7	4	3	3	7	2.1	24
28	3	2	3	4	4	4	4	7	7	14	9	**IZS**	8	8	10	9	9	8	7	6	6	5	4	3	14	6.3	24
29	3	3	3	3	3	3	3	8	4	3	**IZS**	3	3	3	4	3	3	3	2	2	2	2	2	3	8	3.1	24
30	4	3	4	4	4	5	4	4	5	**IZS**	7	8	8	9	6	5	5	5	5	5	6	4	3	4	9	5.1	24
31	5	6	3	7	12	13	16	9	**IZS**	4	4	5	4	5	6	7	9	16	7	10	9	11	10	11	16	8.2	24
HOURLY MAX	10	13	11	12	16	21	37	44	21	14	9	8	8	9	10	9	9	18	29	26	23	21	16	12			
HOURLY AVG	3.5	3.6	3.0	3.5	4.3	5.9	7.0	8.3	6.6	3.8	3.0	2.3	2.3	2.2	2.1	2.1	2.6	3.9	5.8	5.2	5.5	4.8	4.0	3.4			

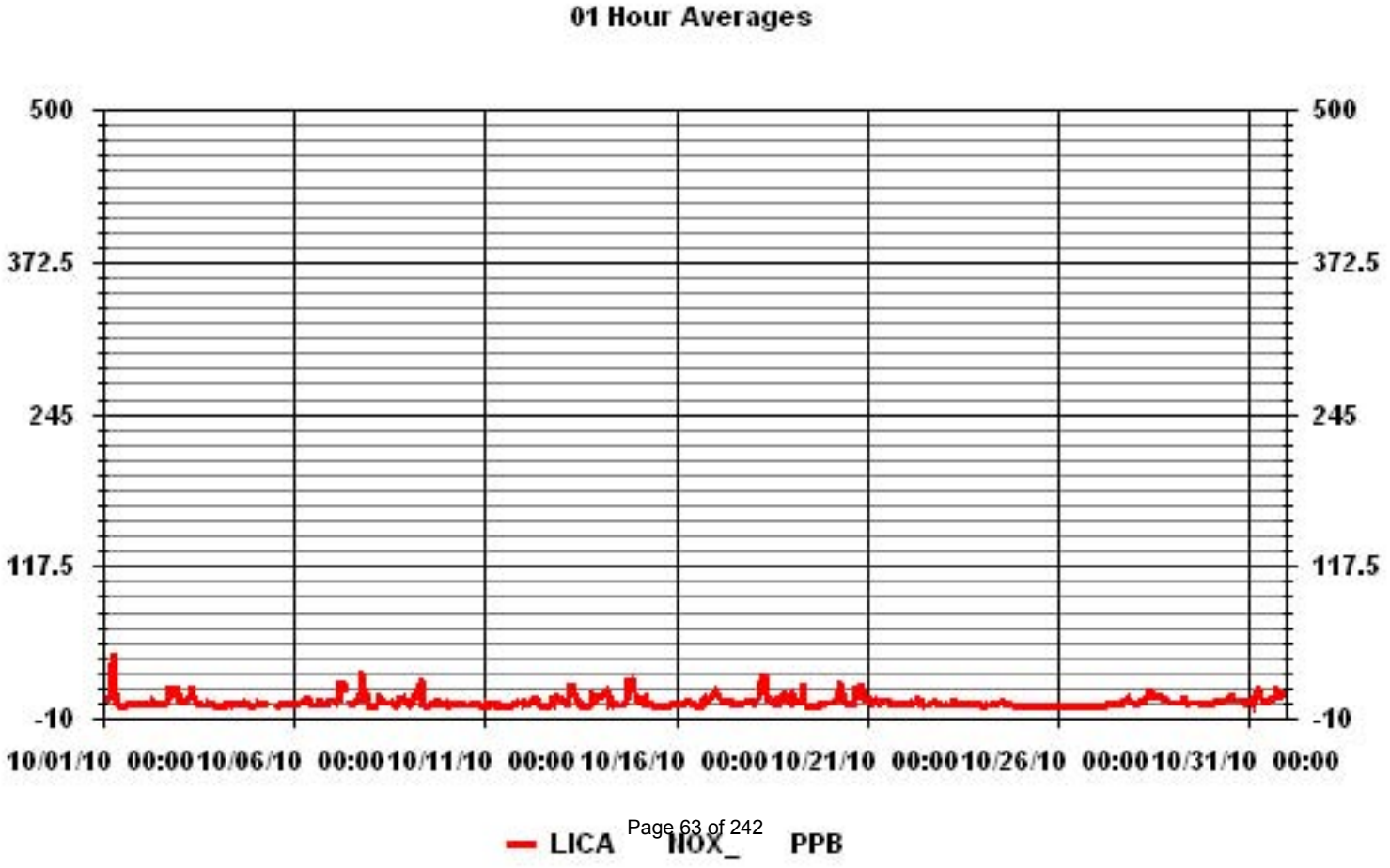
STATUS FLAG CODES

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



MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:	597					
MAXIMUM 1-HR AVERAGE:	44	PPB	@ HOUR(S)	7	ON DAY(S)	1
MAXIMUM 24-HR AVERAGE:	10.0	PPB			ON DAY(S)	7
IZS CALIBRATION TIME:	31	HRS	OPERATIONAL TIME:		744	HRS
MONTHLY CALIBRATION TIME:	8	HRS	AMD OPERATION UPTIME:		100.0	%
STANDARD DEVIATION:	4.82		MONTHLY AVERAGE:		4.12	PPB


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

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

OCTOBER 2010

OXIDES OF NITROGEN MAX instantaneous maximum in ppb

MST

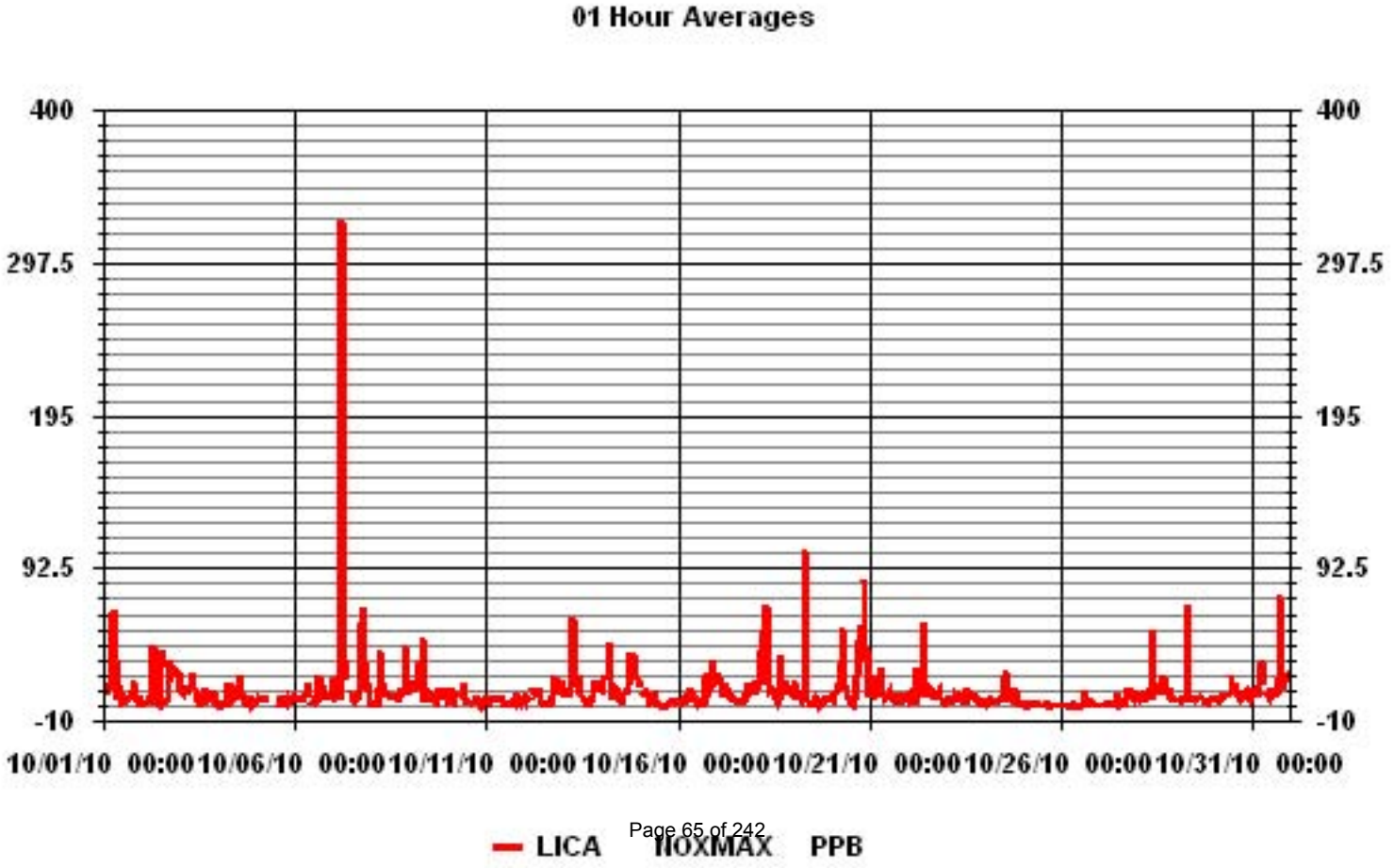
HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	11	10	10	13	13	62	50	64	33	4	14	3	4	6	4	**IZS**	6	8	5	17	7	3	4	1	64	15.3	24
2	1	1	2	2	2	5	5	41	10	9	3	2	38	28	**IZS**	3	5	15	30	28	26	20	22	22	41	13.9	24
3	11	9	13	9	11	10	11	14	22	14	9	5	2	**IZS**	2	2	12	7	4	4	8	8	3	1	22	8.3	24
4	2	0	1	1	2	15	4	5	16	4	5	10	**IZS**	19	7	5	9	3	2	3	6	0	1	4	19	5.4	24
5	5	7	6	5	4	4	4	**C**	**C**	**C**	**C**	**C**	**C**	**C**	1	5	6	5	3	6	4	5	4	6	7	4.7	24
6	3	7	4	4	4	4	7	8	15	8	**IZS**	3	5	2	3	21	8	15	5	8	7	7	8	7	21	7.1	24
7	17	18	11	11	4	**326**	46	32	20	**IZS**	**C**	8	4	3	6	6	11	56	61	66	30	17	10	2	**326**	34.8	24
8	1	1	1	1	12	38	12	14	**IZS**	8	8	7	6	6	6	6	2	8	12	8	9	41	15	8	41	10.0	24
9	10	17	10	12	16	28	29	**IZS**	43	4	4	12	2	5	4	4	3	8	12	8	11	4	8	3	43	11.2	24
10	4	12	4	3	9	8	**IZS**	8	7	4	15	3	3	3	2	3	5	4	5	3	1	5	2	4	15	5.1	24
11	7	3	2	3	5	**IZS**	5	4	4	5	1	1	1	1	1	1	1	4	8	3	5	3	6	7	8	3.5	24
12	4	7	7	6	**IZS**	11	8	9	10	10	3	2	2	1	1	1	2	7	20	8	17	17	10	12	20	7.6	24
13	8	8	11	**IZS**	7	29	59	32	17	18	9	8	4	4	1	1	1	3	7	17	14	10	16	13	59	12.9	24
14	12	18	**IZS**	20	22	42	5	9	4	12	11	4	2	2	8	9	11	14	33	33	33	28	20	15	42	16.0	24
15	15	**IZS**	8	9	10	8	3	4	6	7	2	1	2	1	0	1	0	1	2	3	3	3	2	3	15	4.1	24
16	**IZS**	3	2	4	5	4	7	8	11	4	4	2	4	2	1	1	2	20	22	14	11	13	29	**IZS**	29	7.9	24
17	19	20	19	16	7	9	6	11	9	6	5	5	5	3	3	3	3	7	6	16	8	9	**IZS**	11	20	9.0	24
18	8	16	11	14	38	50	22	67	16	10	11	11	6	6	3	5	34	8	10	12	16	**IZS**	9	8	67	17.0	24
19	13	16	12	8	8	5	8	105	101	5	2	1	1	4	1	6	0	1	2	2	**IZS**	5	5	5	105	13.7	24
20	7	5	8	11	9	16	28	52	11	14	7	6	3	2	1	4	21	44	52	**IZS**	82	29	39	5	82	19.8	24
21	11	12	7	5	19	19	6	25	8	4	5	7	10	7	6	9	4	5	**IZS**	7	1	3	6	6	25	8.3	24
22	8	3	4	3	1	25	5	11	18	14	56	6	12	14	13	8	6	**IZS**	9	11	6	3	3	2	56	10.5	24
23	4	4	3	3	5	8	6	8	6	5	8	3	3	12	5	8	**IZS**	7	7	5	3	4	3	2	12	5.3	24
24	3	1	2	2	4	4	3	3	3	4	5	6	20	23	4	**IZS**	5	4	6	12	4	1	1	1	23	5.3	24
25	1	1	0	1	1	1	1	1	1	1	1	1	0	0	**IZS**	1	1	0	1	0	0	1	0	0	1	0.7	24
26	1	0	0	0	0	1	0	1	1	0	1	0	1	**IZS**	9	1	5	1	1	4	0	0	0	0	9	1.2	24
27	0	0	0	1	1	1	2	2	2	2	1	7	**IZS**	4	3	5	4	12	9	8	12	8	5	8	12	4.2	24
28	7	5	7	5	5	8	7	10	9	50	12	**IZS**	10	13	12	18	20	11	11	8	11	5	5	4	50	11.0	24
29	4	4	5	4	5	5	6	67	6	5	**IZS**	6	4	5	6	7	6	4	3	3	2	3	4	4	67	7.3	24
30	4	4	5	4	6	6	6	7	7	**IZS**	18	11	12	13	10	7	10	6	8	9	11	9	5	7	18	8.0	24
31	9	12	6	13	29	25	31	16	**IZS**	8	6	10	10	7	7	8	18	74	10	17	18	20	17	21	74	17.0	24
HOURLY MAX	19	20	19	20	38	326	59	105	101	50	56	12	38	28	13	21	34	74	61	66	82	41	39	22			
HOURLY AVG	7.0	7.5	6.0	6.4	8.8	25.9	13.1	22.0	14.9	8.5	8.4	5.2	6.3	7.0	4.5	5.5	7.4	12.1	12.2	11.4	12.2	9.5	8.7	6.4			

STATUS FLAG CODES

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

MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:	678					
MAXIMUM INSTANTANEOUS VALUE:	326	PPB	@ HOUR(S)	5	ON DAY(S)	7
IZS CALIBRATION TIME:	31	HRS	OPERATIONAL TIME:		744	HRS
MONTHLY CALIBRATION TIME:	8	HRS				
STANDARD DEVIATION	16.94					


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

LICA
NOX_ / WD Joint Frequency Distribution (Percent)

October 2010

Distribution By % Of Samples

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

Wind Parameter : WD
Instrument Height : 10 Meters

Direction

	Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
<	50	1.84	2.69	3.82	4.68	9.21	4.82	13.19	4.11	2.69	5.39	14.18	11.34	10.07	3.26	2.55	6.09	100.00
<	110	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
<	210	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
>=	210	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
	Totals	1.84	2.69	3.82	4.68	9.21	4.82	13.19	4.11	2.69	5.39	14.18	11.34	10.07	3.26	2.55	6.09	

Calm : .00 %

Total # Operational Hours : 705

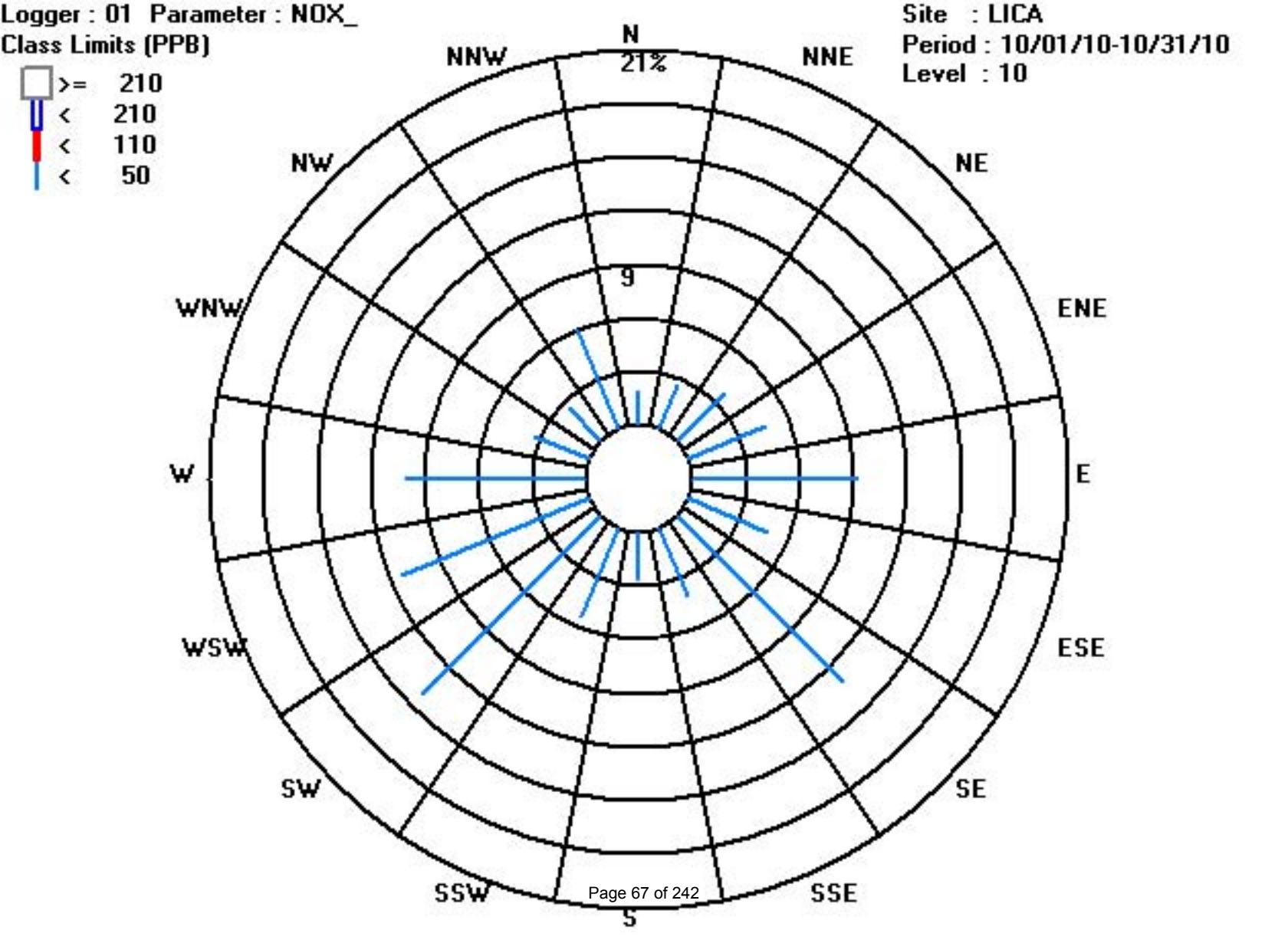
Distribution By Samples

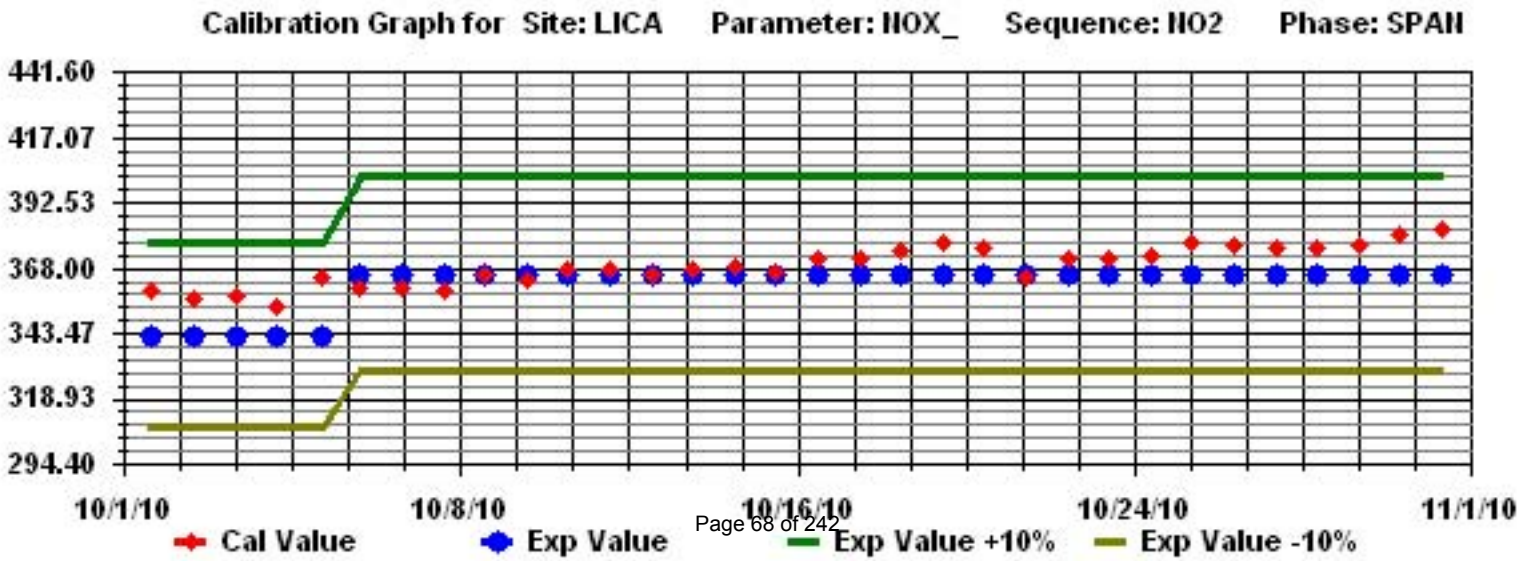
Direction

	Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
<	50	13	19	27	33	65	34	93	29	19	38	100	80	71	23	18	43	705
<	110																	
<	210																	
>=	210																	
	Totals	13	19	27	33	65	34	93	29	19	38	100	80	71	23	18	43	

Calm : .00 %

Total # Operational Hours : 705


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


Calibration Graph for Site: LICA Parameter: NOX_ Sequence: NO2 Phase: SPAN
441.60
417.07
392.53
368.00
343.47
318.93
294.40
10/1/10
10/8/10
10/16/10
10/24/10
11/1/10
Cal Value
Exp Value
Exp Value +10%
Exp Value -10%

Ozone

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

OCTOBER 2010

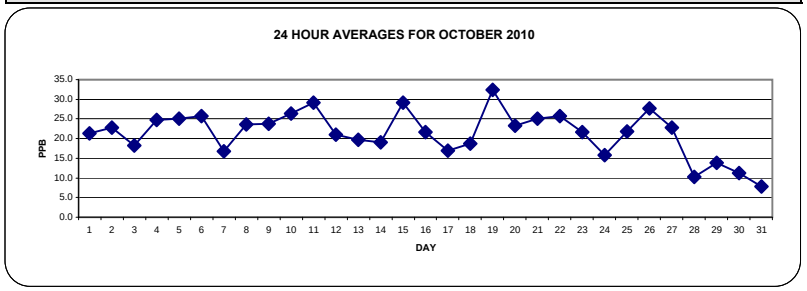
OZONE (O_3) hourly averages in ppb

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	3	3	2	2	1	0	0	1	14	24	30	37	38	39	38	**IZS**	36	37	34	32	32	30	29	30	39	21.4	24
2	31	30	30	29	28	27	25	23	26	28	30	30	30	32	**IZS**	35	35	30	12	7	5	1	0	0	35	22.8	24
3	0	0	0	0	0	0	0	1	6	16	28	32	34	**IZS**	35	36	32	28	29	28	27	26	29	31	36	18.2	24
4	34	35	34	34	33	31	30	28	28	27	23	22	**IZS**	22	20	19	19	19	20	20	19	19	18	15	35	24.7	24
5	14	11	12	11	16	20	19	20	22	27	30	**IZS**	33	34	34	34	34	33	30	31	31	31	30	21	34	25.1	24
6	24	21	27	26	28	25	22	21	22	27	**IZS**	**C**	**C**	**C**	**C**	32	30	34	34	30	27	26	19	14	34	25.7	24
7	10	6	6	6	14	4	1	2	11	**IZS**	**C**	30	32	36	37	37	36	29	6	3	4	8	23	29	37	16.8	24
8	29	28	26	26	24	19	18	18	**IZS**	26	29	28	24	22	25	29	33	33	26	25	23	12	12	8	33	23.6	24
9	7	4	4	2	0	0	0	**IZS**	11	31	33	36	42	42	41	41	40	36	25	36	36	34	28	19	42	23.8	24
10	23	20	25	24	23	22	**IZS**	20	19	21	25	28	29	29	28	28	26	19	22	33	38	35	35	33	38	26.3	24
11	31	33	33	31	26	**IZS**	26	27	26	29	32	33	34	34	34	35	34	32	26	28	24	23	21	17	35	29.1	24
12	12	12	11	11	**IZS**	16	17	17	21	28	32	35	34	35	35	36	35	31	19	16	9	10	8	4	36	21.0	24
13	6	6	6	**IZS**	15	7	1	3	14	20	25	31	35	38	39	38	38	38	33	21	12	11	9	8	39	19.7	24
14	4	3	**IZS**	0	2	22	30	27	30	28	29	34	35	37	36	37	34	25	6	3	1	0	2	13	37	19.0	24
15	18	**IZS**	16	10	12	30	34	34	33	34	35	36	36	36	36	35	33	32	32	31	29	27	27	26	36	29.2	24
16	**IZS**	26	26	25	21	17	16	17	18	20	24	26	29	32	33	35	34	23	14	14	12	10	6	**IZS**	35	21.7	24
17	2	0	1	4	4	3	4	4	12	23	29	29	30	31	33	33	34	31	30	19	15	11	**IZS**	6	34	16.9	24
18	7	6	5	4	2	2	0	3	14	21	23	25	31	32	35	35	31	31	27	24	21	**IZS**	27	26	35	18.8	24
19	17	15	18	23	26	27	25	23	24	32	36	42	44	44	43	44	43	42	40	39	**IZS**	36	32	30	**44**	**32.4**	24
20	28	29	28	26	23	21	15	12	22	24	28	30	32	34	35	34	30	14	14	**IZS**	6	6	19	26	35	23.3	24
21	20	20	23	23	24	23	23	22	22	27	27	26	26	27	28	33	34	31	**IZS**	28	26	24	19	19	34	25.0	24
22	21	26	24	27	28	27	26	23	23	25	27	29	27	29	28	27	25	**IZS**	25	25	26	26	25	24	29	25.8	24
23	22	23	23	23	23	21	19	18	19	22	24	24	24	24	23	23	**IZS**	20	22	20	20	21	20	20	24	21.7	24
24	21	20	22	21	20	18	17	17	15	15	13	13	12	13	13	**IZS**	13	13	13	13	14	15	16	16	22	15.8	24
25	17	17	18	18	19	20	19	20	20	21	22	23	23	23	**IZS**	25	24	24	25	25	25	25	25	25	25	21.9	24
26	26	26	27	27	27	27	27	28	28	29	28	27	28	**IZS**	28	28	27	27	26	28	29	29	29	29	29	27.6	24
27	28	27	28	28	28	27	26	25	27	27	27	26	**IZS**	26	26	25	23	18	14	12	9	17	17	12	28	22.7	24
28	13	11	9	12	14	14	13	11	12	11	11	**IZS**	10	9	8	8	6	4	5	7	7	12	14	16	16	10.3	24
29	15	15	14	14	14	14	14	12	13	14	**IZS**	14	15	14	13	13	13	14	14	15	15	14	13	12	15	13.8	24
30	11	12	11	11	9	8	8	8	8	**IZS**	8	8	10	12	22	19	20	14	13	10	9	9	10	9	22	11.3	24
31	9	9	12	5	3	1	2	4	**IZS**	11	13	15	17	16	16	16	12	5	7	2	3	1	0	0	17	7.8	24
HOURLY MAX	34	35	34	34	33	31	34	34	33	34	36	42	44	44	43	44	43	42	40	39	38	36	35	33			
HOURLY AVG	16.8	16.5	17.4	16.8	16.9	16.4	15.9	16.3	19.3	23.7	25.8	27.5	28.4	28.6	29.4	30.0	28.8	25.6	21.4	20.8	18.5	18.3	18.7	17.9			

STATUS FLAG CODES

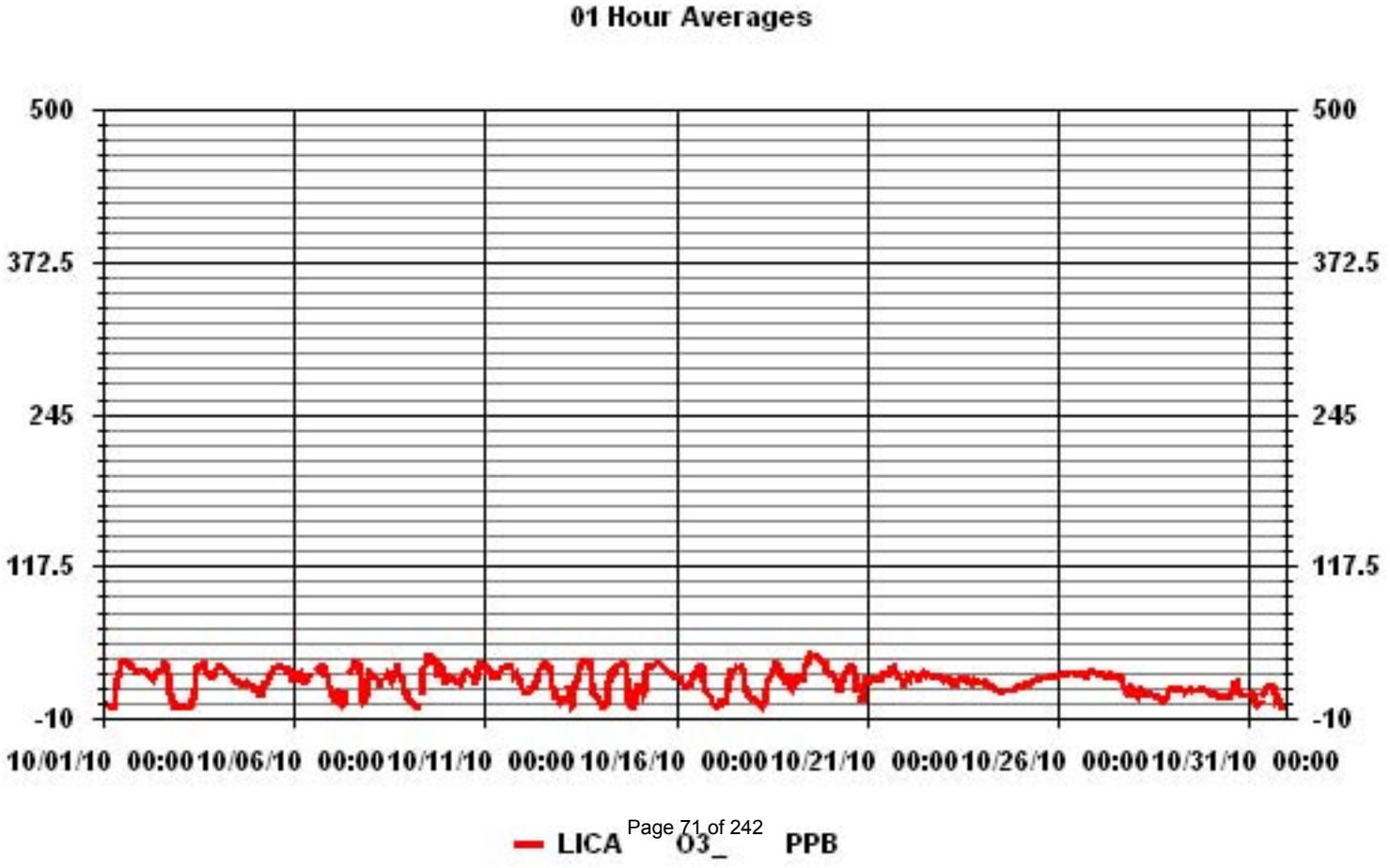
S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	- MISSING DATA
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE



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

MONTHLY SUMMARY

NUMBER OF 1-HR EXCEEDENCES:	0					
NUMBER OF NON-ZERO READINGS:	687					
MAXIMUM 1-HR AVERAGE:	44	PPB	@ HOUR(S)	VAR	ON DAY(S)	19
MAXIMUM 24-HR AVERAGE:	32.4	PPB			ON DAY(S)	19
					VAR-VARIOUS	
IZS CALIBRATION TIME:	32	HRS	OPERATIONAL TIME:		744	HRS
MONTHLY CALIBRATION TIME:	5	HRS	AMD OPERATION UPTIME		100.0	%
STANDARD DEVIATION	10.52		MONTHLY AVERAGE		21.38	PPB


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

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

OCTOBER 2010

OZONE MAX instantaneous maximum in ppb

MST

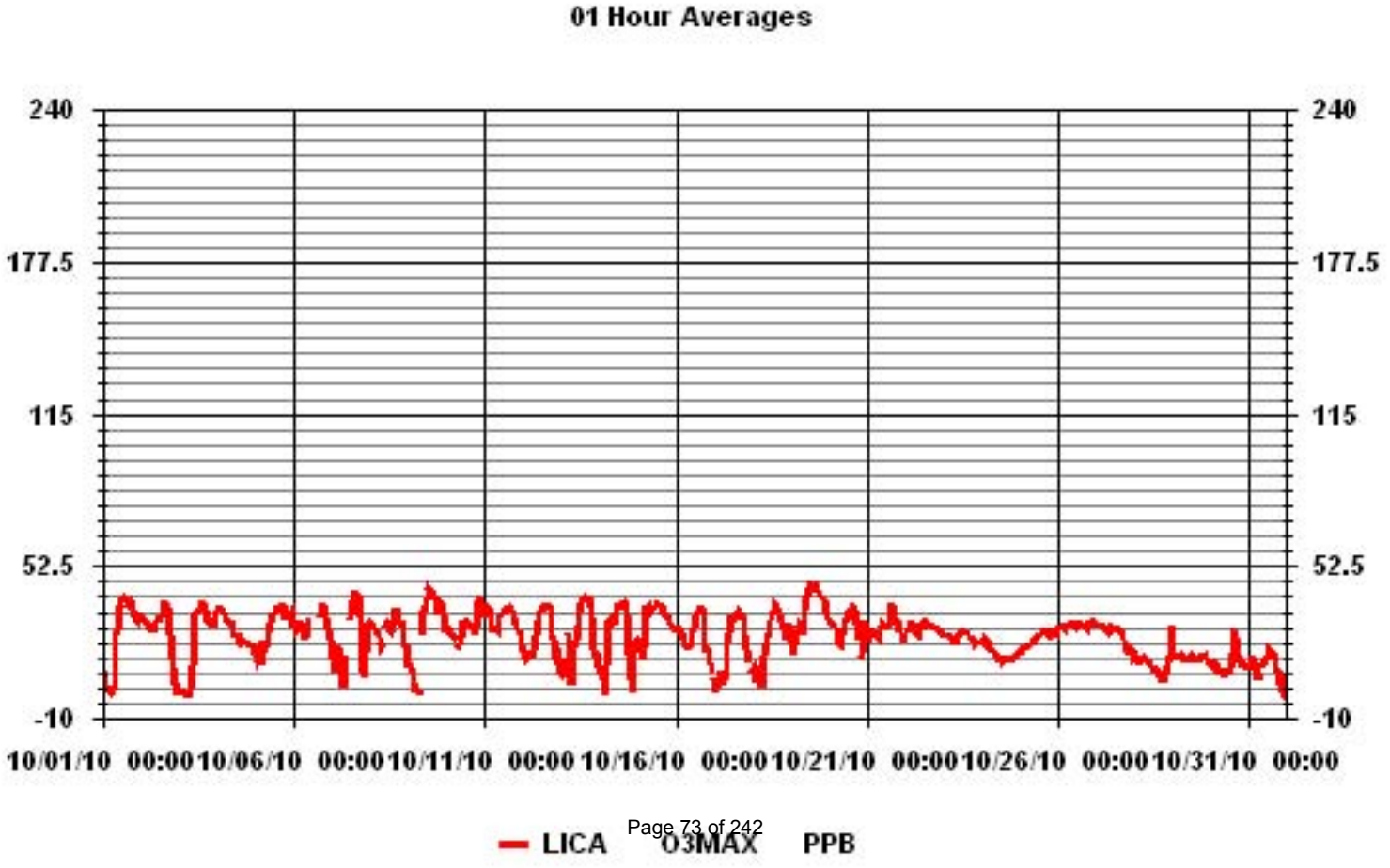
HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	9	5	4	3	2	1	2	3	24	26	36	38	39	40	39	**IZS**	37	38	36	33	33	31	30	32	40	23.5	24
2	32	31	30	30	29	28	27	25	27	30	31	31	32	34	**IZS**	37	37	36	25	15	11	5	1	1	37	25.4	24
3	1	1	1	1	0	0	0	3	12	20	33	34	35	**IZS**	37	37	35	31	30	30	29	29	31	34	37	20.2	24
4	35	35	35	35	34	32	31	30	29	29	24	24	**IZS**	24	22	21	22	21	21	21	21	20	20	17	35	26.2	24
5	16	13	14	12	21	21	20	22	25	29	32	**IZS**	34	35	35	35	36	36	32	32	33	33	34	28	36	27.3	24
6	30	27	28	28	29	28	23	23	24	30	**IZS**	**C**	**C**	**C**	**C**	**C**	33	36	36	33	32	28	27	23	36	28.8	24
7	15	9	12	15	20	11	4	4	15	**IZS**	**C**	32	33	38	42	40	40	32	18	10	7	17	29	30	42	21.5	24
8	29	29	28	26	26	24	20	21	**IZS**	29	30	29	27	26	28	34	34	34	30	29	29	21	20	12	34	26.7	24
9	12	10	10	5	2	2	1	**IZS**	26	34	36	39	44	43	42	42	41	40	33	37	37	35	33	26	44	27.4	24
10	27	27	26	25	24	23	**IZS**	20	21	23	29	29	30	30	29	28	27	24	27	38	40	37	36	36	40	28.5	24
11	33	33	35	34	28	**IZS**	27	28	27	32	33	34	34	35	35	36	35	34	29	31	27	25	25	21	36	30.9	24
12	18	15	16	15	**IZS**	17	19	19	24	30	34	35	35	36	36	36	36	35	24	23	15	16	13	9	36	24.2	24
13	8	9	14	**IZS**	24	12	4	5	19	22	28	34	37	39	40	39	39	39	37	32	19	15	18	12	40	23.7	24
14	9	7	**IZS**	1	12	30	31	30	31	29	31	36	36	37	37	38	37	33	17	7	4	1	17	22	38	23.2	24
15	23	**IZS**	20	14	19	35	35	36	34	35	36	37	37	37	36	36	34	33	32	32	30	28	28	27	37	31.0	24
16	**IZS**	26	27	26	23	20	20	18	20	21	25	27	32	33	34	35	35	33	17	19	18	13	10	**IZS**	35	24.2	24
17	5	1	3	8	8	4	8	6	21	25	31	31	32	32	34	35	34	33	31	25	19	14	**IZS**	10	35	19.6	24
18	11	8	9	6	4	4	3	16	21	24	25	30	33	34	37	36	35	33	30	27	24	**IZS**	28	29	37	22.0	24
19	22	16	20	25	26	29	28	24	29	35	40	43	45	45	44	45	44	43	41	40	**IZS**	38	34	32	**45**	34.3	24
20	30	30	29	29	28	24	22	21	24	27	30	31	34	35	36	36	35	29	24	**IZS**	16	17	29	29	36	28.0	24
21	25	21	26	26	26	25	24	23	26	29	28	27	27	28	29	36	36	33	**IZS**	30	27	26	23	21	36	27.0	24
22	25	27	25	29	29	29	28	26	25	27	29	30	29	30	29	28	28	**IZS**	27	27	27	27	26	25	30	27.5	24
23	24	24	24	24	24	23	21	21	23	24	25	26	26	25	25	25	**IZS**	23	23	21	22	22	21	21	26	23.3	24
24	22	21	23	22	22	20	18	18	16	16	14	14	13	14	14	**IZS**	14	14	14	14	15	16	17	17	23	16.9	24
25	17	18	19	19	19	20	20	21	21	22	23	24	24	24	**IZS**	26	26	25	26	25	26	26	26	25	26	22.7	24
26	27	27	27	28	27	28	28	29	29	29	29	28	29	**IZS**	29	29	28	28	27	29	29	29	30	30	30	28.4	24
27	29	**N**	28	28	28	28	27	26	27	28	28	27	**IZS**	27	27	26	25	23	19	18	16	19	18	15	29	24.4	23
28	16	14	13	13	14	15	14	14	13	12	12	**IZS**	10	10	8	8	8	6	6	8	11	13	16	28	28	12.3	24
29	16	16	15	15	15	16	15	14	14	15	**IZS**	15	16	15	15	14	14	15	15	15	16	15	14	13	16	14.9	24
30	12	13	12	12	10	9	9	9	8	**IZS**	9	9	11	17	27	20	23	16	14	12	12	11	11	11	27	12.9	24
31	12	14	14	10	13	6	7	7	**IZS**	13	14	16	19	18	17	17	15	9	11	4	5	2	0	1	19	10.6	24
HOURLY MAX	35	35	35	35	34	35	35	36	34	35	40	43	45	45	44	45	44	43	41	40	40	38	36	36			
HOURLY AVG	19.7	18.2	19.6	18.8	19.5	18.8	17.9	18.7	22.6	25.7	27.7	28.9	29.8	30.0	30.8	31.3	30.8	28.8	25.1	23.9	21.7	21.0	22.2	21.2			

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:	701					
MAXIMUM INSTANTANEOUS VALUE:	45	PPB	@ HOUR(S)	VAR	ON DAY(S)	19
IZS CALIBRATION TIME:	32	HRS	OPERATIONAL TIME:		743	HRS
MONTHLY CALIBRATION TIME:	6	HRS				
STANDARD DEVIATION	10.03					


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

LICA
O3_ / WD Joint Frequency Distribution (Percent)

October 2010

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	1.83	2.68	3.81	4.66	9.19	4.80	13.15	4.10	2.68	5.37	14.00	11.31	10.46	3.25	2.54	6.08	100.00
<	110	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
<	210	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
>=	210	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
	Totals	1.83	2.68	3.81	4.66	9.19	4.80	13.15	4.10	2.68	5.37	14.00	11.31	10.46	3.25	2.54	6.08	

Calm : .00 %

Total # Operational Hours : 707

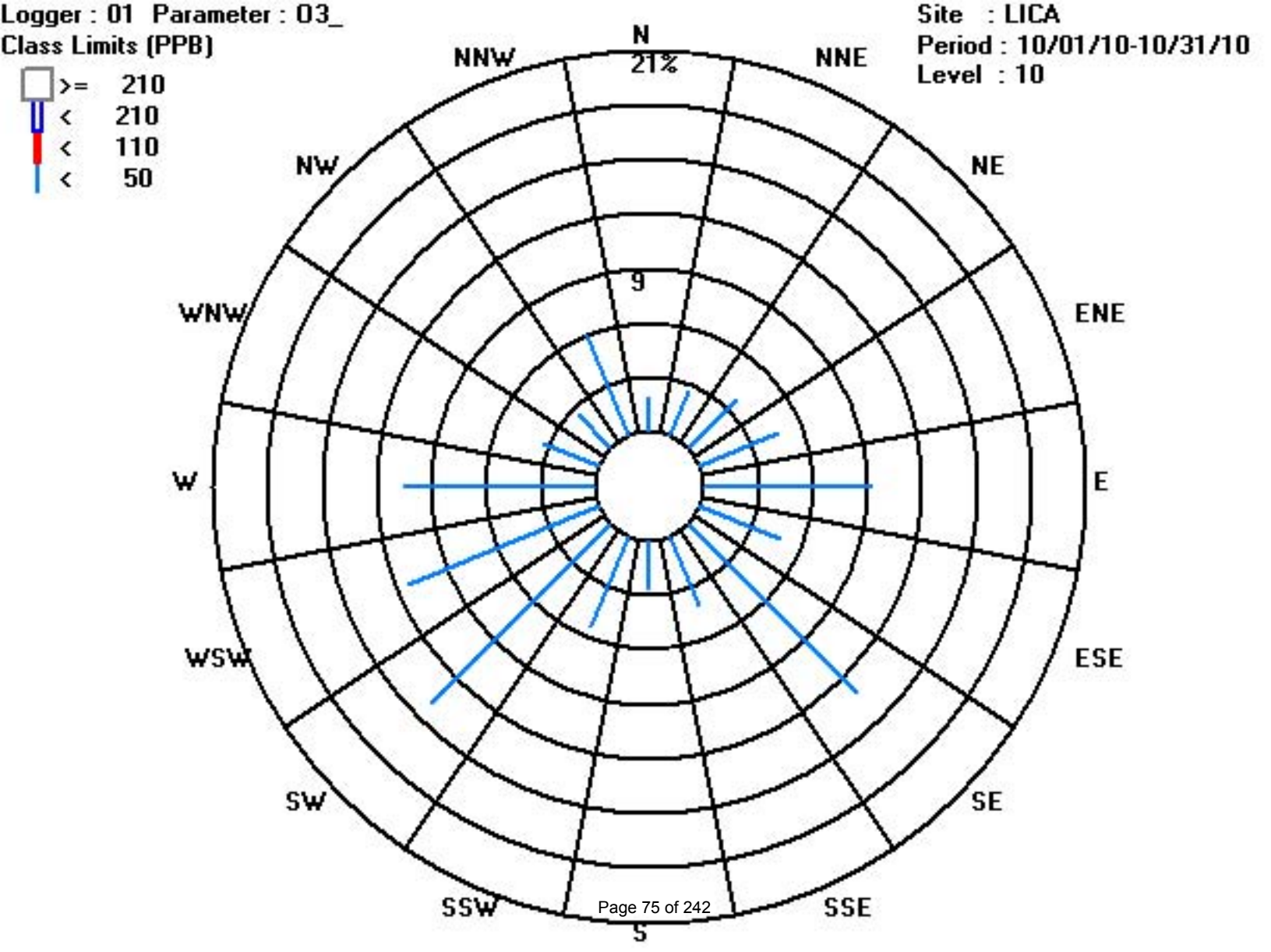
Distribution By Samples

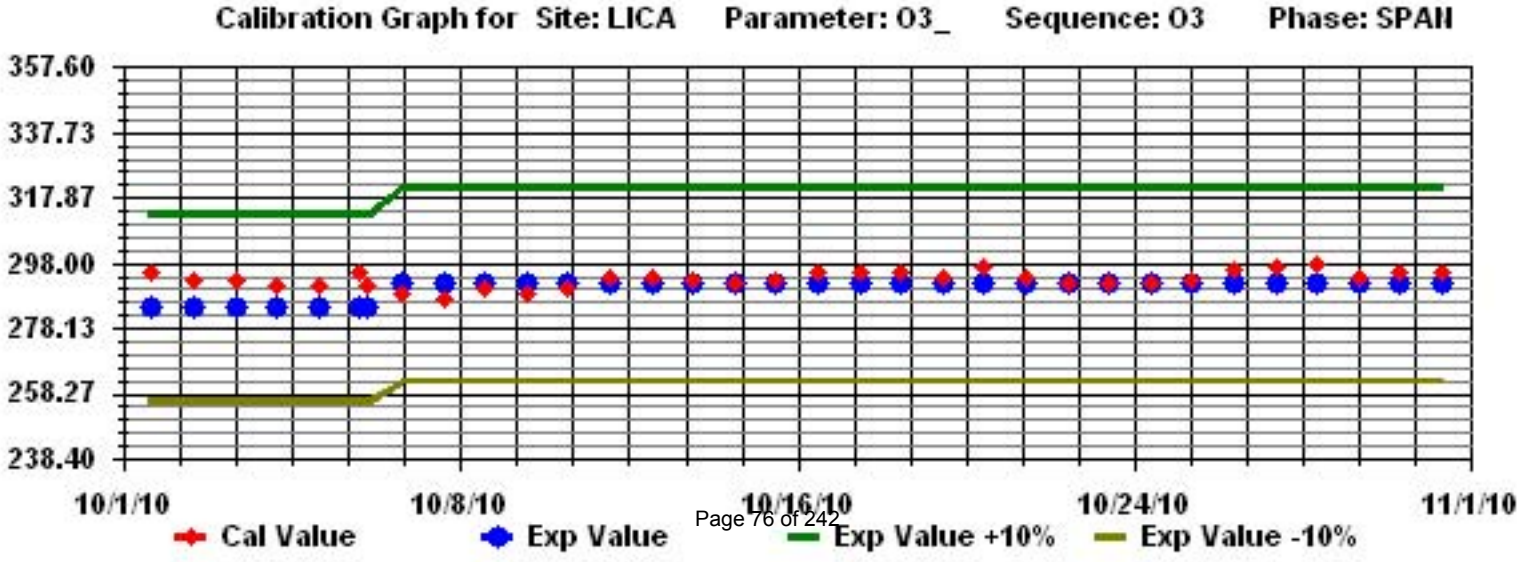
Direction

	Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
<	50	13	19	27	33	65	34	93	29	19	38	99	80	74	23	18	43	707
<	110																	
<	210																	
>=	210																	
	Totals	13	19	27	33	65	34	93	29	19	38	99	80	74	23	18	43	

Calm : .00 %

Total # Operational Hours : 707


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


Calibration Graph for Site: LICA Parameter: O3_ Sequence: O3 Phase: SPAN
357.60
337.73
317.87
298.00
278.13
258.27
238.40
10/1/10
10/8/10
10/16/10
10/24/10
11/1/10
Cal Value
Exp Value
Exp Value +10%
Exp Value -10%

Ambient Temperature

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

OCTOBER 2010

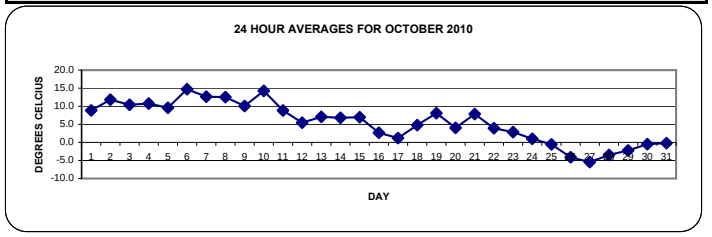
AMBIENT TEMPERATURE hourly averages (Degrees C)

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	0.6	0	-0.6	-1	-1.1	-1.4	-1.2	1.2	7.5	11.5	14.1	16.3	16.8	17.3	17.2	17.1	16.6	15.5	13.5	11.9	10.7	9.9	9.5	10.7	17.3	8.9	24
2	11.1	10.6	9.8	9.3	8.7	8	7.4	8.2	10.6	12.8	14.6	15.8	16.5	17.8	19	20	19.5	17.5	12.8	9.9	7.8	6.3	5.3	4.3	20.0	11.8	24
3	3.4	2.7	2.3	2	1.6	1.3	1.2	3	8.8	12.6	15.2	15.8	16.9	17.5	18.4	18.7	17.6	15.6	14.1	13.1	12.4	12.2	12	11.6	18.7	10.4	24
4	12.8	13.1	13	13.1	12.4	12.1	11.7	11.5	11.5	10.5	9.7	9.9	10.3	10.7	11.3	11.1	11.2	9.9	9.2	8.9	8.8	8.7	8.5	8.1	13.1	10.8	24
5	8.1	8.1	8	7.9	8.1	8.4	8	7.9	8.2	9.6	11.2	12	12.7	13.4	13.7	13.9	13.4	11.8	9.7	8.6	7.8	7.6	7.2	4.7	13.9	9.6	24
6	5.6	5.2	9.4	10.4	11.7	10.2	9.6	9.7	12.3	15.7	18.4	20.5	22.1	22.6	21.5	20.9	21.6	20.4	18.8	17	15.2	13.9	11.3	9.4	22.6	**14.7**	24
7	7.6	6.4	5.5	4.9	6.7	4.5	3.5	4.9	10.9	14.3	17.1	19.2	21.3	22.7	22.7	22	21.5	18.9	14	11.2	9.6	9.6	11.9	12.8	22.7	12.7	24
8	12.4	11.7	10.7	10.3	10.1	10.2	9.9	10.2	12.6	14.5	15.5	15.4	13.9	13.6	17.5	20	20.2	18	14.4	12.9	11	7.1	5.1	3.6	20.2	12.5	24
9	2.1	1.2	0.2	-0.1	-0.7	-1.2	-1.4	-0.4	6.1	11.2	14	17.3	20	20.2	20.2	20.2	20.6	18.2	13.9	14.5	14.3	13	10.6	7.5	20.6	10.1	24
10	8.5	7.9	9.1	8.9	8.5	7.9	7.5	7.6	10	13	17.7	20.3	22	**23.1**	22.5	22.7	21.8	17.5	17.8	16.8	14.7	12.5	12	11.8	**23.1**	14.3	24
11	11.8	11.7	11.5	9.8	8	7.3	6	4.9	6.2	9	10.3	11.7	12.4	13	13.4	13.1	12.7	10.7	7.5	7	5.6	4.1	2.7	1.6	13.4	8.8	24
12	-0.8	-1.6	-1.9	-1.5	1.5	3.1	3.3	3.9	6.2	8.3	10.1	11.4	12	12.4	12.6	12.7	12.2	10	5.9	3.4	2.6	2	1.7	1.5	12.7	5.5	24
13	1.1	0.9	1.2	2.3	1.6	0.1	0.7	0.8	4.8	8.4	11.5	14.4	16	16.7	16.6	16.6	15	13.3	10.6	7.9	4.5	2.8	1.5	0.4	16.7	7.1	24
14	-0.1	-0.6	-0.8	-1	-0.5	3.1	4.3	4.6	5.7	6.7	9.2	12.6	14.2	14	15.2	17	15.7	12.9	8.8	6.6	5.5	3.9	2.6	4	17.0	6.8	24
15	5	5.2	3.9	3.3	4.4	6.9	6.9	6.7	6.8	7.4	9.2	9.9	9.6	10.6	10.9	10.3	9.2	8.5	8.2	7	5.2	4.4	3.9	4.2	10.9	7.0	24
16	3.8	3.2	2.8	1.8	0.6	-0.7	-1.1	-0.7	1.1	3.2	5.3	6.9	8.2	9	9.2	9.1	8.5	5	1.1	-0.8	-1.8	-2.7	-3.2	-3.9	9.2	2.7	24
17	-4.5	-5.2	-5.7	-6.2	-6.4	-6.8	-7.2	-6.7	-1.2	4.2	7.1	8.1	9.1	9.3	10.1	10.7	9.7	7.6	5.8	1.7	-0.1	-0.8	-1.6	-2.2	10.7	1.2	24
18	-2.6	-3	-3.3	-3.6	-3.5	-3.6	-3.8	-3.3	1	3.9	5.6	8.4	11.4	13	14.1	13.6	11.7	10.7	8.9	7.3	7.4	8.5	8.7	7.3	14.1	4.8	24
19	6.3	5.7	5.1	5.1	5.1	5.5	4.8	4.4	7	9.8	11.8	12.7	13	12.6	12.9	13.1	11.4	10	9.1	8.6	7.1	6	4	3	13.1	8.1	24
20	1.2	1.2	1.1	0	-0.7	-1.6	-2.4	-2.3	0.7	3.6	6.2	8.4	9.9	10.8	10.8	10.7	10.1	5.8	3.4	3.6	3.4	3.6	4	5.1	10.8	4.0	24
21	4.9	4.8	4.5	4.4	5.2	5.2	4.8	4.6	5.6	7.2	8.4	9.9	11.4	13.3	14.7	15.7	14.5	12.2	9.1	8.9	7.3	5.5	3	3.2	15.7	7.8	24
22	4	4.7	4.6	4.5	4.3	4.2	3.9	4.1	4.2	4.3	4.4	4.5	4.5	4.6	4.4	3.7	3.4	3.2	3	2.9	3	3.1	3.3	3.3	4.7	3.9	24
23	2.8	2.1	2.2	2.2	2	1.6	2	2.2	2.5	3.1	3.5	3.9	4	4.2	4.1	3.9	3.6	3.2	3	2.9	2.7	2.5	2.2	1.9	4.2	2.8	24
24	1.8	1.7	1.7	1.7	1.4	1.3	1.2	1	1	0.9	0.9	0.7	0.5	0.6	0.9	0.9	0.9	1	1.1	0.9	0.7	0.6	0.4	0.2	1.8	1.0	24
25	0	-0.1	-0.2	-0.2	-0.3	-0.4	-0.5	-0.7	-0.7	-0.7	-0.5	-0.3	-0.1	0	0	-0.1	-0.4	-0.9	-1.1	-1.2	-1	-0.9	-1.2	-1.6	0.0	-0.5	24
26	-2.1	-2.7	-3.1	-3.5	-3.6	-3.8	-3.9	-4.1	-4.3	-4.5	-4.6	-4.5	-4.2	-3.9	-3.9	-4	-4.1	-4.4	-4.7	-5	-5.2	-5.1	-4.9	-4.8	-2.1	-4.1	24
27	-4.8	-4.9	-5.2	-5.5	-5.5	-5.5	-5.5	-5.8	-5.8	-5.6	-5.3	-4.6	-3.8	-2.7	-1.9	-2	-3.6	-5.2	-6.7	-7.6	-8.7	-7.7	-7.8	-9.1	-1.9	-5.5	24
28	-8.4	-9.7	**-10.3**	-8.7	-8	-7.3	-6.7	-6.2	-5.5	-4.5	-3.6	-2.3	-1.3	-0.3	0.1	0.4	0.2	0.1	0	0	0	-0.1	-0.4	-0.8	0.4	-3.5	24
29	-1	-1.2	-1.6	-1.7	-1.8	-2	-2.3	-2.7	-2.8	-2.7	-2.9	-2.7	-2.6	-2.3	-2.3	-2.4	-2.4	-2.3	-2.2	-2.2	-2.4	-2.4	-2.3	-2.3	-1.0	-2.2	24
30	-2.3	-2.4	-2.5	-2.4	-2.5	-2.7	-2.8	-3.4	-3.5	-3.4	-3	-1.5	1.5	3.8	5.4	5.5	4.1	1.8	0.6	-0.2	-0.5	-0.3	-0.3	-0.7	5.5	-0.5	24
31	-0.9	-1.2	-0.7	-2.9	-4.2	-5.2	-5.1	-5	-2.5	-0.3	0.9	2.8	4.4	5.8	6.6	6.8	4.9	1.1	0.6	-1.1	-1.5	-2.2	-2.8	-3.4	6.8	-0.2	24
HOURLY MAX	12.8	13.1	13.0	13.1	12.4	12.1	11.7	11.5	12.6	15.7	18.4	20.5	22.1	23.1	22.7	22.7	21.8	20.4	18.8	17.0	15.2	13.9	12.0	12.8			
HOURLY AVG	2.8	2.4	2.3	2.1	2.0	1.9	1.7	1.9	4.0	5.9	7.5	8.8	9.8	10.4	10.9	11.0	10.4	8.6	6.8	5.7	4.7	4.1	3.4	2.9			

STATUS FLAG CODES

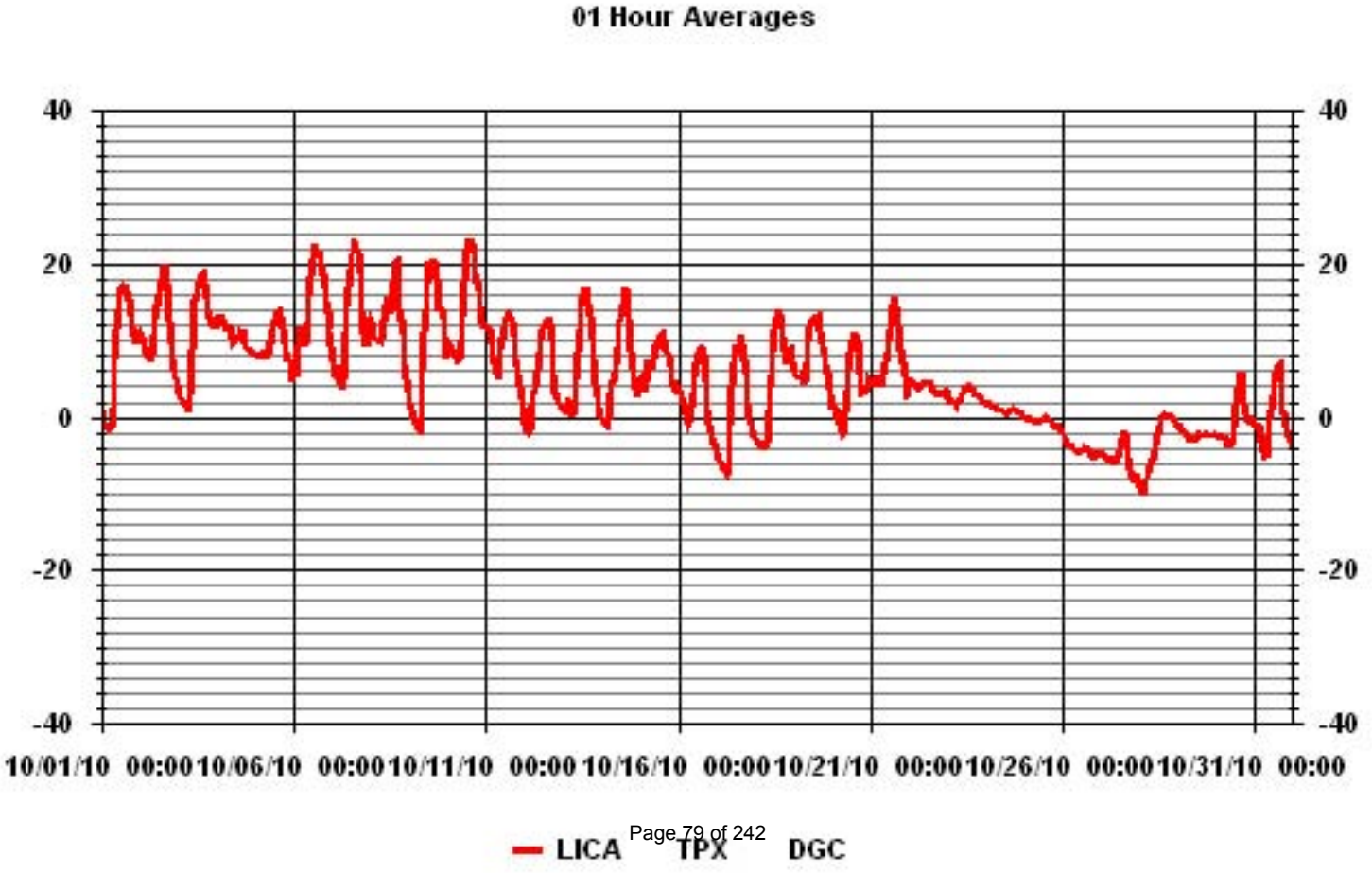
S	- OUT OF SERVICE	OD	- OUTSIDE DECTECTION LIMITS
N	- INVALID DATA	M	- MISSING DATA
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE



MONTHLY SUMMARY

MINIMUM 1-HR AVERAGE:	-10.3	^{O}C	@ HOUR(S)	2	ON DAY(S)	28
MAXIMUM 1-HR AVERAGE:	23.1	^{O}C	@ HOUR(S)	13	ON DAY(S)	10
MAXIMUM 24-HR AVERAGE:	14.7	^{O}C			ON DAY(S)	6
					VAR-VARIOUS	
CALIBRATION TIME:	0	HRS	OPERATIONAL TIME:		744	HRS
			AMD OPERATION UPTIME:		100.0	%
STANDARD DEVIATION:	7.07		MONTHLY AVERAGE:		5.51	^{O}C

*** Outside detection limits of sensor.**


01 Hour Averages
40
20
0
-20
-40
10/01/10 00:00
10/06/10 00:00
10/11/10 00:00
10/16/10 00:00
10/21/10 00:00
10/26/10 00:00
10/31/10 00:00
LICA
TPX
DGC

Relative Humidity

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

OCTOBER 2010

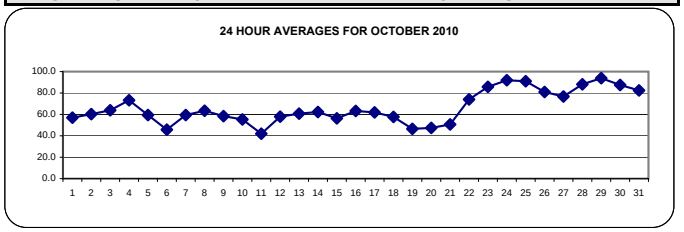
RELATIVE HUMIDITY hourly averages (%)

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	86	87	88	89	88	89	86	80	67	56	46	33	29	27	27	29	32	34	39	44	48	53	56	54	89	57.0	24
2	53	54	56	59	61	65	68	66	59	53	48	47	46	44	42	41	43	51	68	77	83	85	87	90	90	60.3	24
3	89	90	91	90	90	93	91	89	78	62	48	45	41	39	37	35	41	48	54	59	59	55	56	53	93	63.9	24
4	44	42	43	43	46	48	55	63	66	77	90	92	91	91	92	92	82	90	87	86	85	84	84	85	92	73.3	24
5	86	87	89	92	89	86	85	81	71	59	49	44	40	37	33	32	30	34	44	49	49	48	49	63	92	59.4	24
6	61	71	61	55	49	54	57	58	50	41	35	31	29	28	32	32	32	32	33	38	44	49	59	67	71	45.8	24
7	74	78	80	82	77	85	88	83	64	54	45	39	35	32	31	31	32	39	56	65	69	69	60	58	88	59.4	24
8	60	63	67	69	71	71	73	72	64	59	58	60	68	80	61	47	37	40	49	54	60	75	80	84	84	63.4	24
9	86	89	90	90	90	91	91	88	69	49	42	34	25	26	28	28	29	36	48	42	46	51	61	72	91	58.4	24
10	69	72	70	72	74	77	79	78	69	60	44	36	34	32	35	36	40	55	49	44	41	56	55	50	79	55.3	24
11	47	43	34	38	53	53	52	52	49	40	35	33	31	29	28	28	28	32	41	42	47	53	57	62	62	42.0	24
12	72	75	78	81	76	66	63	61	53	46	44	40	38	37	36	35	36	42	56	65	68	71	74	76	81	57.9	24
13	80	79	78	72	77	84	82	83	66	54	45	39	37	35	35	34	36	39	47	56	68	73	77	81	84	60.7	24
14	82	83	84	84	81	70	67	65	60	58	51	41	38	38	36	33	37	47	62	68	72	77	83	77	84	62.3	24
15	76	75	79	82	73	52	50	55	57	57	44	33	35	33	33	34	40	45	48	57	71	74	74	75	82	56.3	24
16	74	74	76	80	82	86	87	85	77	68	57	50	42	36	32	29	31	44	56	64	67	70	73	77	87	63.2	24
17	78	80	82	83	84	85	86	85	69	54	40	33	33	34	32	32	37	43	50	64	72	75	76	78	86	61.9	24
18	80	82	82	83	83	84	87	85	69	58	51	45	JULY	30	27	28	33	35	40	46	47	48	49	54	87	57.7	24
19	57	60	63	66	67	67	70	72	64	55	46	37	33	32	34	27	27	28	28	30	33	35	41	44	72	46.5	24
20	51	52	53	57	60	63	68	69	58	51	43	35	29	25	24	25	27	41	48	49	54	56	53	47	69	47.4	24
21	51	52	52	51	47	46	47	48	46	39	40	41	39	37	36	37	41	48	58	59	67	72	81	80	81	50.6	24
22	77	70	70	69	71	71	72	73	74	73	71	69	71	69	72	80	81	81	81	81	79	74	72	75	81	74.0	24
23	82	89	89	89	89	92	92	90	88	85	83	82	83	81	82	83	84	84	85	85	83	83	86	89	92	85.8	24
24	90	90	88	87	91	93	94	94	93	93	94	94	95	94	92	92	92	91	90	91	92	92	92	92	95	91.9	24
25	92	94	94	94	94	95	95	96	96	95	95	95	94	94	93	92	90	89	86	84	83	80	81	83	96	91.0	24
26	82	84	85	85	86	84	84	82	81	81	80	80	77	77	77	78	79	79	81	81	78	82	80	80	86	81.0	24
27	77	77	78	79	79	81	82	81	79	77	73	69	67	62	59	61	68	77	83	85	87	86	86	88	88	76.7	24
28	88	88	87	88	88	88	87	86	87	90	92	89	87	87	84	84	86	88	90	91	90	90	90	90	92	88.1	24
29	91	91	92	93	94	95	96	96	96	95	95	95	94	94	94	94	94	94	93	93	93	93	94	94	**96**	**93.9**	24
30	94	95	95	96	96	96	96	96	95	95	94	91	77	70	64	64	69	80	85	88	91	91	91	91	**96**	87.5	24
31	91	91	89	92	92	92	92	92	87	82	79	72	66	63	60	58	66	81	82	88	90	91	91	91	92	82.4	24
HOURLY MAX	94	95	95	96	96	96	96	96	96	95	95	95	95	94	94	94	94	94	93	93	93	93	94	94			
HOURLY AVG	74.8	76.0	76.2	77.1	77.4	77.5	78.1	77.5	71.0	65.0	59.9	55.6	53.5	51.4	49.9	49.4	51.0	56.4	61.8	65.3	68.3	70.7	72.5	74.2			

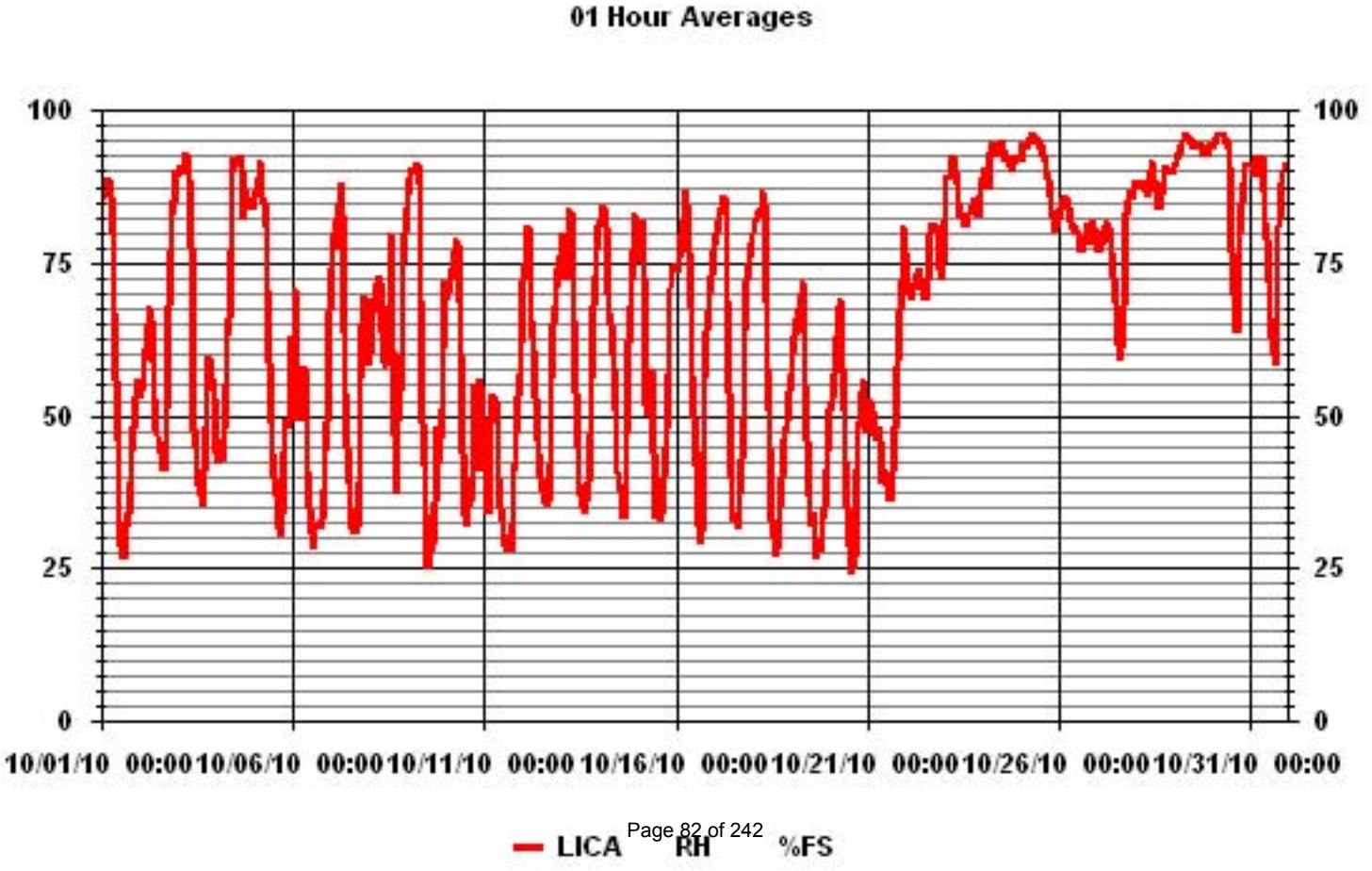
STATUS FLAG CODES

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



MONTHLY SUMMARY

MAXIMUM 1-HR AVERAGE:	96	%	@ HOUR(S)	VAR	ON DAY(S)	29, 30
MAXIMUM 24-HR AVERAGE:	93.9	%			ON DAY(S)	29
CALIBRATION TIME:	0	HRS	OPERATIONAL TIME:		744	HRS
			AMD OPERATION UPTIME:		100.0	%
STANDARD DEVIATION:	21.10		MONTHLY AVERAGE:		66.29	%


01 Hour Averages
100
75
50
25
0
10/01/10 00:00
10/06/10 00:00
10/11/10 00:00
10/16/10 00:00
10/21/10 00:00
10/26/10 00:00
10/31/10 00:00
LICA RH %FS

Vector Wind Speed

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

OCTOBER 2010

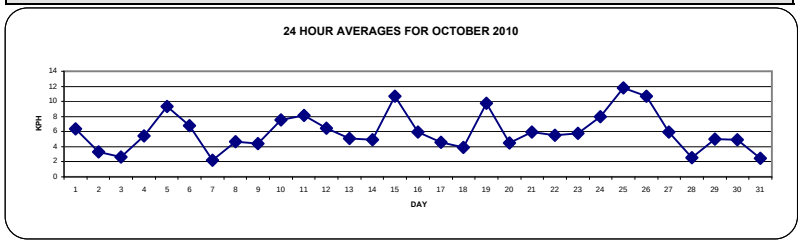
VECTOR WIND SPEED (WS) hourly averages (km/hr)

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	0.2	0.3	0.1	0	0.5	0.8	0.9	3.2	5.3	9.4	11.7	16.8	15.3	15.6	13.8	12.9	10.9	7.2	6.8	6.3	4.7	5.9	9	16.8	6.4	24
2	11.6	8.4	9.5	9.4	7.1	5.5	4.3	4.3	7	6.4	6.1	4.2	5.1	5.9	5.6	4.4	4.7	2.7	0.9	0.2	0	0.4	0.2	0.2	11.6	3.3	24
3	0.8	0.5	0.6	0.5	1	1.5	0.5	0.8	2.5	4.1	6.6	9.2	8.8	7	6.2	6.2	4	2.6	3.6	3.8	4.1	3	3.7	4.6	9.2	2.6	24
4	6.2	9.1	7.9	8.8	8.4	8.1	8.7	8.6	7.9	8.3	5.2	5.9	6.2	8.3	5.7	4.5	3.5	7.4	7.8	5.3	3.8	3.3	3.1	3.8	9.1	5.4	24
5	2.4	4.4	5.5	6.2	7.4	8.2	10.6	11.9	12	14	13.8	16.3	17.4	16.4	17.1	14.4	12.6	8	7.9	7.5	5.4	2.6	1.3	0.8	17.4	9.3	24
6	2.6	5	10.4	10.8	13.2	8.5	7	7.8	7.4	8.3	8.2	11.3	9.1	8.8	10.7	7.4	5.4	6.4	4.5	3.5	2.5	1.2	0.9	1	13.2	6.7	24
7	0.5	1.1	0.7	1.5	1.7	0.5	0.4	0.3	1.6	0.7	4.5	3.8	1.7	1.5	5.5	6.3	3.6	1.9	1.2	1	1.9	2.3	3.7	5.6	6.3	2.2	24
8	6.8	7.1	5.2	5.3	6.3	3.5	4	3.9	3.7	2.7	3.1	7.1	8.3	4.6	5.5	4.8	7.1	4.4	5.7	3.7	4.8	1.8	1.1	1	8.3	4.6	24
9	0.7	0.3	0.9	0.7	0.5	0.5	1.1	0.2	3.7	7.7	10.9	9.4	7.3	5.8	9.3	6.9	5.7	3.9	3.2	8.7	8	7.5	0.8	2.2	10.9	4.4	24
10	3.5	5	6.9	8.8	7.1	8.5	9.6	8.6	5.3	9.4	5.2	5.3	5.5	5.6	6.5	8.1	1.8	2.8	15.9	17.8	17.1	6.3	4	6.3	17.8	7.5	24
11	7	6.9	8.5	4.9	6.1	5.5	6.7	5.7	7	9.9	15.3	12.7	14.6	14.8	15.3	13.8	10.2	5.9	3.7	6.1	4.2	4	3	3.9	15.3	8.2	24
12	0.8	0.8	0.4	2	5.4	5.3	5.7	6.1	6.5	11.7	15.1	15.9	17.1	15.8	13.7	13.2	10.2	4.2	1.4	0.8	0.7	0.9	0.3	0.3	17.1	6.4	24
13	0.1	0.3	0.8	1.2	2.9	0.3	0.7	0.5	2.9	7.4	8.2	8.7	12.1	12.9	19.1	15.4	13.2	8	3.6	2	0.8	0.2	0.5	0.2	19.1	5.1	24
14	0.7	0.9	0.9	0.6	1.6	4.3	7.1	6	12.8	9.1	9.1	14.2	11.9	11.6	8.1	7.7	3.8	0.1	0.9	1.5	1.6	0.4	1.3	2.2	14.2	4.9	24
15	2.3	3.3	2.3	3.4	4.1	9.7	12.6	7.6	10.3	12	15.1	15.7	14.9	17.7	15.7	17.8	16.4	13.5	11.4	12.9	9.5	9.8	9	10	17.8	10.7	24
16	10.5	10.5	10.1	7.2	5.8	3.8	5	4.7	6.6	7.8	7.6	8.8	10.9	11.6	11.5	10.9	6.1	1.5	0.6	0.4	0.4	0.4	0.1	0.3	11.6	6.0	24
17	0.6	0.5	0.1	0.3	0.1	0.5	0.2	0.4	1.4	4.1	11.1	11.9	14	11.3	11.9	11.8	11.8	5.7	6	1.9	2.6	1.2	0.2	0.5	14.0	4.6	24
18	1.1	0.4	0.9	0.2	0.5	0.1	0.7	0.8	1.9	2.5	5	5	8.4	9	9.6	7.5	3.5	6.8	6.1	4.3	4.5	4.9	5.6	4.8	9.6	3.9	24
19	6.3	6.9	6.1	7.1	6.7	6.7	6	6	6.3	9.4	13.3	18.8	18.7	16.6	13.9	**19.5**	16	10.7	8.2	6.5	5.3	5.3	6.6	6.9	**19.5**	9.7	24
20	6.1	7.1	6.2	6.5	5.3	5.5	4.5	5.1	4.4	6.7	5.7	8	7.3	7.1	6.9	3.9	1.5	0.8	1	2	1.1	1.6	2.5	1.7	8.0	4.5	24
21	1.6	1.8	2.8	4.5	5.5	5.5	7.3	4.3	4	6.3	7.6	8	7.1	7.6	8.5	11.3	10	5.8	4.2	9.6	9.4	3.6	3.1	3.5	11.3	6.0	24
22	5.7	6.8	5.5	6.3	4.9	4.2	4.6	2.9	4.1	5.3	7.1	6.3	5.4	5.2	5.5	7.4	5.4	5.8	5.7	6.3	6.4	6	5.6	4.5	7.4	5.5	24
23	5	6.2	5.6	5.8	4.8	4.2	3.6	2.9	3.1	4.3	6.2	5.4	5.5	6.6	5.9	6.5	8.4	7.3	7.3	5.2	6.7	6.4	8.3	6.6	8.4	5.7	24
24	7.5	7.6	8.3	8.7	8.4	8	7.2	8.6	9.2	7.8	6	6.2	5.3	6.1	7.5	6.6	8.3	9.1	7.8	8.2	9.5	9.1	9.2	10.9	10.9	8.0	24
25	11.2	10.2	11.7	11.8	12.5	11.7	10	11.2	11.2	11.8	11.8	11.9	12.9	12.1	10.4	11.5	11	11.6	12.8	12.4	12.6	13.5	11.8	12.6	13.5	**11.8**	24
26	10.7	9.7	10.8	11	8.9	9.7	10.3	9.3	10.9	12.3	12.1	11.2	10.4	10.3	11.8	11.4	10.2	9.2	8.3	9.2	13.2	12.5	12.1	10.1	13.2	10.7	24
27	10	10.5	10.8	8.8	7.5	6.4	6.4	7.5	7.9	8.1	7.4	4.8	6.2	5.9	5.3	5.1	6.2	2.3	2.4	1	2.6	5.1	3.6	1.5	10.8	6.0	24
28	1.8	1.2	1.2	1.3	3.3	1.9	1.8	2	4.8	4.1	3.7	3.4	5.3	4.5	3.5	2	1.9	1	1.4	1.8	1.5	2.2	2.6	3.6	5.3	2.6	24
29	3.3	3.2	4.6	2.1	1.8	3.4	4.1	5	5	3.6	5.3	4.6	5.5	6.3	6.3	6.1	6.5	7.8	5.7	5.7	6.5	5.3	6	6.7	7.8	5.0	24
30	5.1	5.2	4.2	3.3	2.7	3.9	3.9	5.1	4.9	6.5	6.3	4	6.1	5.3	7.8	6.8	6.2	7.2	6.3	4	2.5	4.5	4.6	2.1	7.8	4.9	24
31	2.8	4.2	3.1	1.4	1	0.4	1.2	1.7	3.1	2.3	5.6	1.5	4.1	5.4	5.8	5.7	2.6	1.7	0.9	0.9	1.4	0.1	0.6	0.9	5.8	2.4	24
HOURLY MAX	11.6	10.5	11.7	11.8	13.2	11.7	12.6	11.9	12.8	14.0	15.3	18.8	18.7	17.7	19.1	19.5	16.4	13.5	15.9	17.8	17.1	13.5	12.1	12.6			
HOURLY AVG	4.4	4.7	4.9	4.9	4.9	4.7	5.1	4.9	5.9	7.1	8.3	8.7	9.4	9.1	9.4	9.0	7.4	5.7	5.3	5.2	5.1	4.2	3.9	4.1			

STATUS FLAG CODES

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

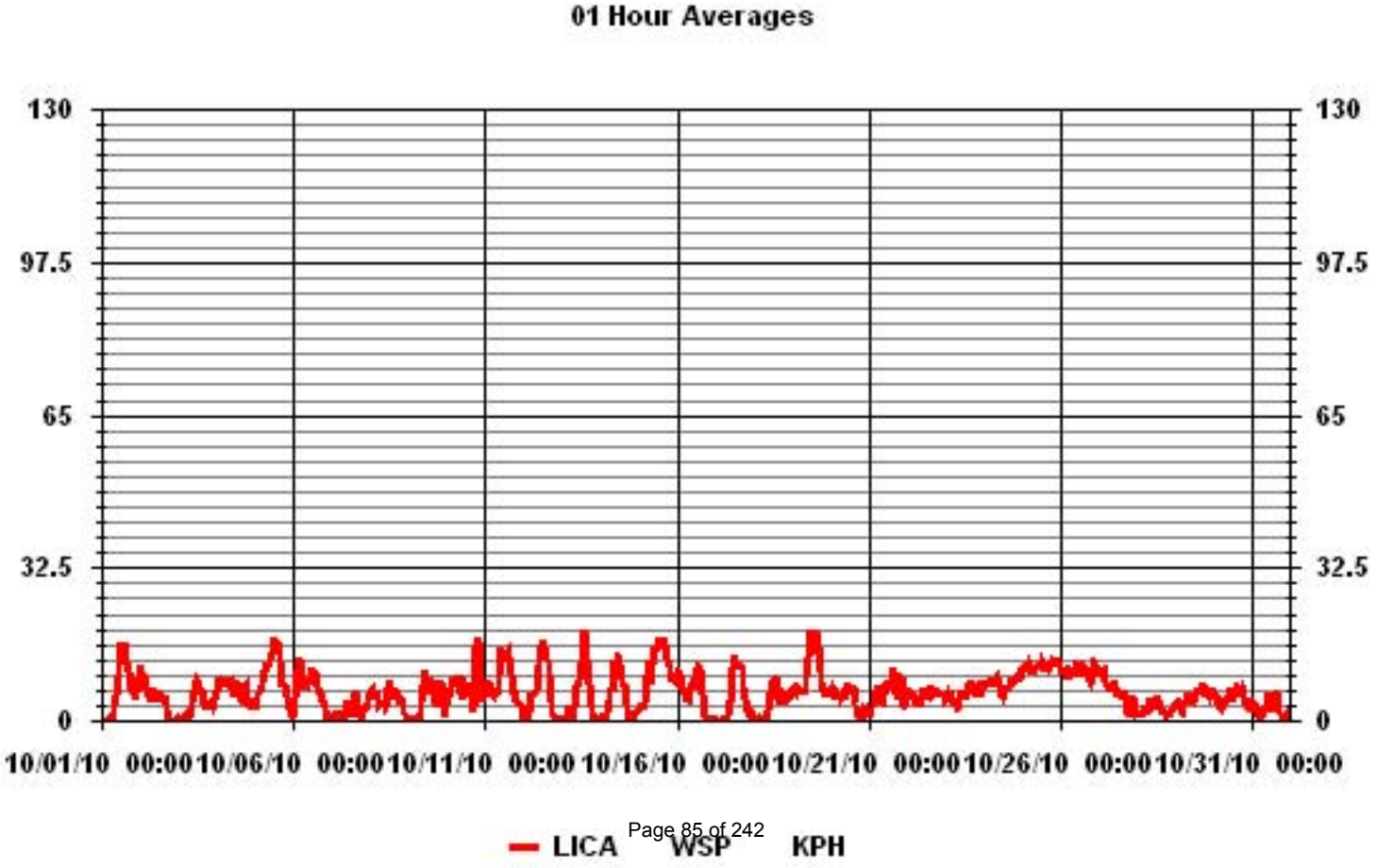


LAST CALIBRATION: November 5, 2008

MONTHLY SUMMARY

MAXIMUM 1-HR AVERAGE:	19.5	KPH	@ HOUR(S)	15	ON DAY(S)	19
MAXIMUM 24-HR AVERAGE:	11.8	KPH			ON DAY(S)	25

CALMS (≤ 0 KPH)	4.03	%	OPERATIONAL TIME:	744	HRS
MONTHLY CALIBRATION TIME:	0	HRS	AMD OPERATION UPTIME	100.0	%
STANDARD DEVIATION:	4.16		MONTHLY AVERAGE:	6.09	KPH


01 Hour Averages
130
97.5
65
32.5
0
10/01/10 00:00
10/06/10 00:00
10/11/10 00:00
10/16/10 00:00
10/21/10 00:00
10/26/10 00:00
10/31/10 00:00
LICA WSP KPH

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

OCTOBER 2010

VECTOR WIND SPEED MAX instantaneous maximum in km/hr

MST

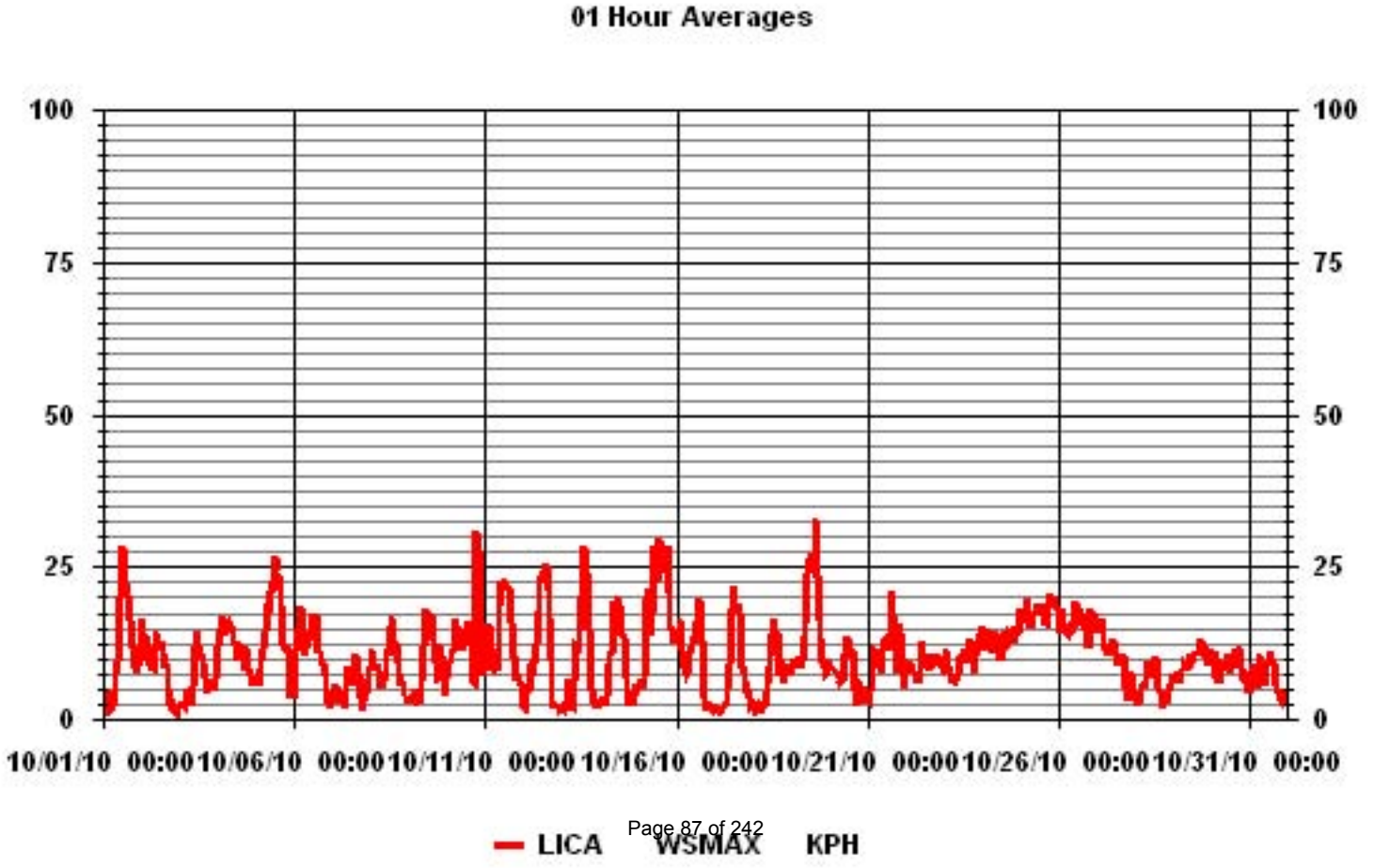
HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.
DAY																									
1	2.7	2.8	3	4.9	1.5	1.7	2.3	3.2	7.6	9.6	20.1	22	28.3	25	22.6	20.6	20.4	16.6	12.2	10.3	8.8	7.4	8.6	12	28.3
2	16.5	13.5	13.1	14	10.2	9.2	8.5	8.3	11.9	14.5	13.1	12.6	11.4	12.9	10.9	9	8.7	5.4	2.5	2	2.5	1.7	1.3	2.1	16.5
3	2.3	2.4	2.6	2.2	3.8	4.8	3	2.3	5.4	6.3	12	14.2	12.4	11.1	9.9	9.2	7.1	4.2	4.9	5.3	6.5	5.5	5.4	6.8	14.2
4	11.9	15	13.7	16.8	13.8	15.2	15.8	16.2	15.5	14.5	12.3	10.6	10.9	12.8	9.8	10.7	7.7	10.8	11.8	8.7	7.5	5.5	6.4	5.7	16.8
5	6.5	6.3	8	9.7	11.4	11.8	14.4	18.8	17.2	20.9	22.5	24.1	26.7	24.3	23.6	21.6	19	12.6	11.8	11	11.8	4.9	5.2	3.3	26.7
6	5.7	11.2	14.7	15	18.5	13.6	10.5	11.5	11.8	12.8	14.3	17.1	16.7	14.1	17.4	11.4	11.1	9.5	9.3	7.5	4	3	2	2.8	18.5
7	4.4	3.6	5.7	3.4	4.3	3.2	2.9	1.9	4.6	5.6	8.7	7	7.3	5.3	10.4	10.3	7.7	3.6	2	2	3.2	4.3	6.5	8.8	10.4
8	11	10.9	8.7	8.6	8.7	6.6	5.4	5.4	7.9	6.3	10.6	11.4	15.1	16.9	10.3	12.1	12.9	9.4	7.7	5.7	6.2	4.1	3.1	3	16.9
9	3.2	3.3	3.8	3.4	4.7	3.9	2.7	3.3	6.2	12.1	18	15.8	17.6	12.8	17.1	15	9.7	6.7	6.9	12.3	10.6	9.9	3.9	6.9	18
10	7	9.4	9.6	11.2	11.4	16.5	14.7	15.4	12.5	14.9	11.2	11.9	13.8	16	13.3	15.9	6.4	6.2	30.7	25.3	27.9	12.7	7	11.1	30.7
11	10.1	11.5	15.5	8	8.9	8.5	10.1	7.9	11.4	18.5	22.6	21.2	22.8	21.1	21.6	21.5	16.1	10.4	6.3	10.4	7.9	6.6	5.5	6.2	22.8
12	2.4	2.1	4.6	4.8	8.3	8.1	9.8	9.3	12.3	17.8	22.6	23.5	24.2	23.9	25.5	21.3	16.7	9.8	2.5	2.3	2.3	2.1	1.4	1.7	25.5
13	2	1.5	2	2.8	6.5	2.5	2.7	2.4	6.4	12.2	11.9	14.4	19.1	18.8	28.6	23	24.2	14.8	5.1	4.9	3	1.8	3.3	1.6	28.6
14	2.7	3.6	2.7	2.1	3.8	8.9	10.5	11	19.4	14.8	13.9	20.3	18.3	18.2	14	13.6	7.2	2.1	3.4	3.8	3.1	2.4	3.8	5.9	20.3
15	4.5	6.4	5.1	5.8	7.1	19.8	21.4	14.3	14.2	17.4	28.6	23.1	22.7	29.6	24.2	24.9	24.2	25.3	20.6	28.6	14.9	15.3	12.7	13.4	29.6
16	14.3	14.5	16.3	11.5	8.9	7.5	7	7.5	11	12	13.4	12.6	15.9	18.3	19.9	17.8	13	3.7	1.6	2.4	2.3	2.3	1.8	2.5	19.9
17	1.7	1.6	1.3	2	1	2	2.6	2.9	5.2	9.2	17.9	18	21.9	17.3	18.6	18.5	17.7	8.7	8	4.3	4.9	4	2.1	2.4	21.9
18	3.3	1.6	1.8	2.4	2	1.7	2.3	2.4	4.5	5.7	8.5	10.5	13.8	16.5	14	14	7	10.1	8.6	6	7.6	8.8	8	7.4	16.5
19	8.4	9.6	8.5	9.9	8.3	10.2	8.3	9.7	13.5	15.8	23.9	26.1	27.1	26	26.9	**32.9**	23.7	16.7	13.5	9.5	8.8	7.7	8.2	9.2	**32.9**
20	9.2	8.7	8.4	8.3	8.1	7.1	6	6.3	6.4	10.7	9.9	13.4	12.3	11.5	11.2	8.2	5.2	2.1	6.5	4.3	2.5	3.6	5.4	4	13.4
21	3.2	2.9	4.7	11.2	10.9	10.1	10.5	8.7	7.4	11.5	12.8	13.1	12.5	11.3	13.9	20.8	17.1	11.4	7.5	15.8	14.2	8.8	5.3	6	20.8
22	9.4	9.2	8.4	9.5	7.9	7.8	7.6	5.7	7	8.8	12.6	11.1	9.4	8.8	8.2	10.7	8.7	8.9	9.6	10.1	10.1	9.1	9.2	8.7	12.6
23	9.8	11.7	7.6	8.6	7.9	6.5	6.3	6.7	7	7.7	10.3	10.7	9.7	11.5	9.2	10.4	13	11.2	10.8	7.6	10.7	11.4	13.9	13.4	13.9
24	15.4	11.1	13.4	13.2	14.8	12.1	10.9	13.3	14.5	12.8	10.4	10.3	11.7	12.3	14.2	12.1	12.5	14.5	14.3	12.6	15.2	14.2	14.3	18.2	18.2
25	16.6	15.9	17.6	17.1	19.6	17.4	15.5	15.1	17.7	16.9	18.8	17.6	18.7	18.1	17.4	15.9	15.8	19	20.6	18.1	19.7	20.3	18	18.5	20.6
26	15.8	14.3	18	15.5	14.5	14.1	15.4	13.9	16.1	17	19.5	15.9	16.2	17.8	17.4	16.2	15.2	14.5	11.8	14.5	18.2	15.5	17.7	16	19.5
27	14.3	15.7	14.7	16.5	12.8	11.7	10.4	11	11.7	11.5	13.3	11	9.8	8.6	9.8	10.1	10.6	5.2	6.5	2.8	6.9	7.8	6.2	2.9	16.5
28	4.4	2.3	2.8	4.3	5.6	5.8	5.4	9.1	9.1	7.7	7.3	7.3	9.7	9.7	5.5	5.2	4.8	1.9	3.1	3.3	3.2	4.6	5.8	7.4	9.7
29	6.7	6	7.8	5.7	7.2	8.2	9.3	8.9	9.1	8.2	10.7	9.2	10.2	10.8	10.9	10.9	11.9	13	11	10.6	11	9.5	9.6	11.3	13
30	9.9	10.2	7.5	7.7	5.9	7.7	8.9	8.5	8.4	9.8	10.5	7.7	9	8.5	11.6	10.7	10.3	11.8	8.7	6.8	6.6	6.9	7.9	4.8	11.8
31	4.8	9.2	8.7	6.1	5.8	5.3	10.5	6.8	6.1	5.4	9.4	8.9	11.2	10.6	10.1	9.3	6	4.6	3.9	3.4	4.7	3.1	3.7	3.1	11.2
PEAK	16.6	15.9	18.0	17.1	19.6	19.8	21.4	18.8	19.4	20.9	28.6	26.1	28.3	29.6	28.6	32.9	24.2	25.3	30.7	28.6	27.9	20.3	18.0	18.5	

STATUS FLAG CODES

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

MONTHLY SUMMARY

MAXIMUM INSTANTANEOUS READING	32.9	KPH	@ HOUR(S)	15
			ON DAY(S)	19


01 Hour Averages
100
75
50
25
0
10/01/10 00:00
10/06/10 00:00
10/11/10 00:00
10/16/10 00:00
10/21/10 00:00
10/26/10 00:00
10/31/10 00:00
LICA WSMAX KPH

LICA
WSP / WD Joint Frequency Distribution (Percent)

October 2010

Distribution By % Of Samples

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

Wind Parameter : WD
Instrument Height : 10 Meters

Direction

	Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
<	6.0	.53	1.34	2.01	2.82	4.56	3.36	6.04	3.36	2.41	4.30	8.46	5.10	1.61	1.20	.53	.80	48.52
<	12.0	.67	1.34	1.74	1.47	4.16	1.20	5.24	.26	.00	.80	5.37	5.64	3.76	1.07	1.34	4.03	38.17
<	20.0	.13	.13	.00	.00	.00	.00	.94	.00	.00	.00	.13	.53	4.83	.53	.67	1.34	9.27
<	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	1.34	2.82	3.76	4.30	8.73	4.56	12.23	3.62	2.41	5.10	13.97	11.29	10.21	2.82	2.55	6.18	

Calm : 4.03 %

Total # Operational Hours : 744

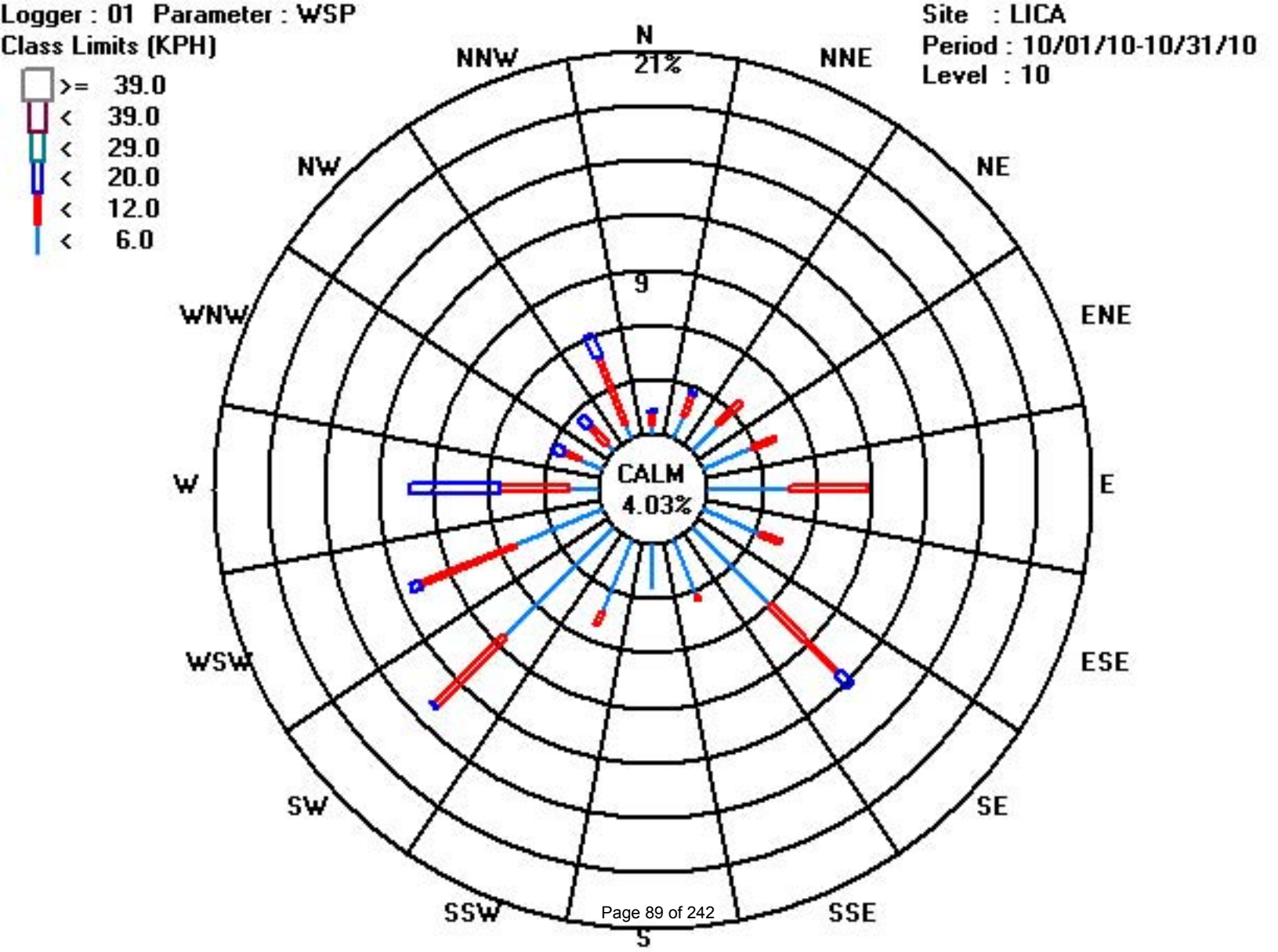
Distribution By Samples

Direction

	Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
<	6.0	4	10	15	21	34	25	45	25	18	32	63	38	12	9	4	6	361
<	12.0	5	10	13	11	31	9	39	2		6	40	42	28	8	10	30	284
<	20.0	1	1					7				1	4	36	4	5	10	69
<	29.0																	
<	39.0																	
>=	39.0																	
	Totals	10	21	28	32	65	34	91	27	18	38	104	84	76	21	19	46	

Calm : 4.03 %

Total # Operational Hours : 744


Logger : 01 Parameter : WSP
Class Limits (KPH)
>= 39.0
< 39.0
< 29.0
< 20.0
< 12.0
< 6.0
Site : LICA
Period : 10/01/10-10/31/10
Level : 10
N
21%
NNE
NE
ENE
E
ESE
SE
SSE
S
SSW
SW
WSW
W
WNW
NW
NNW
9
CALM
4.03%

Vector Wind Direction

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

OCTOBER 2010

VECTOR WIND DIRECTION (WD) hourly averages in degrees

MST

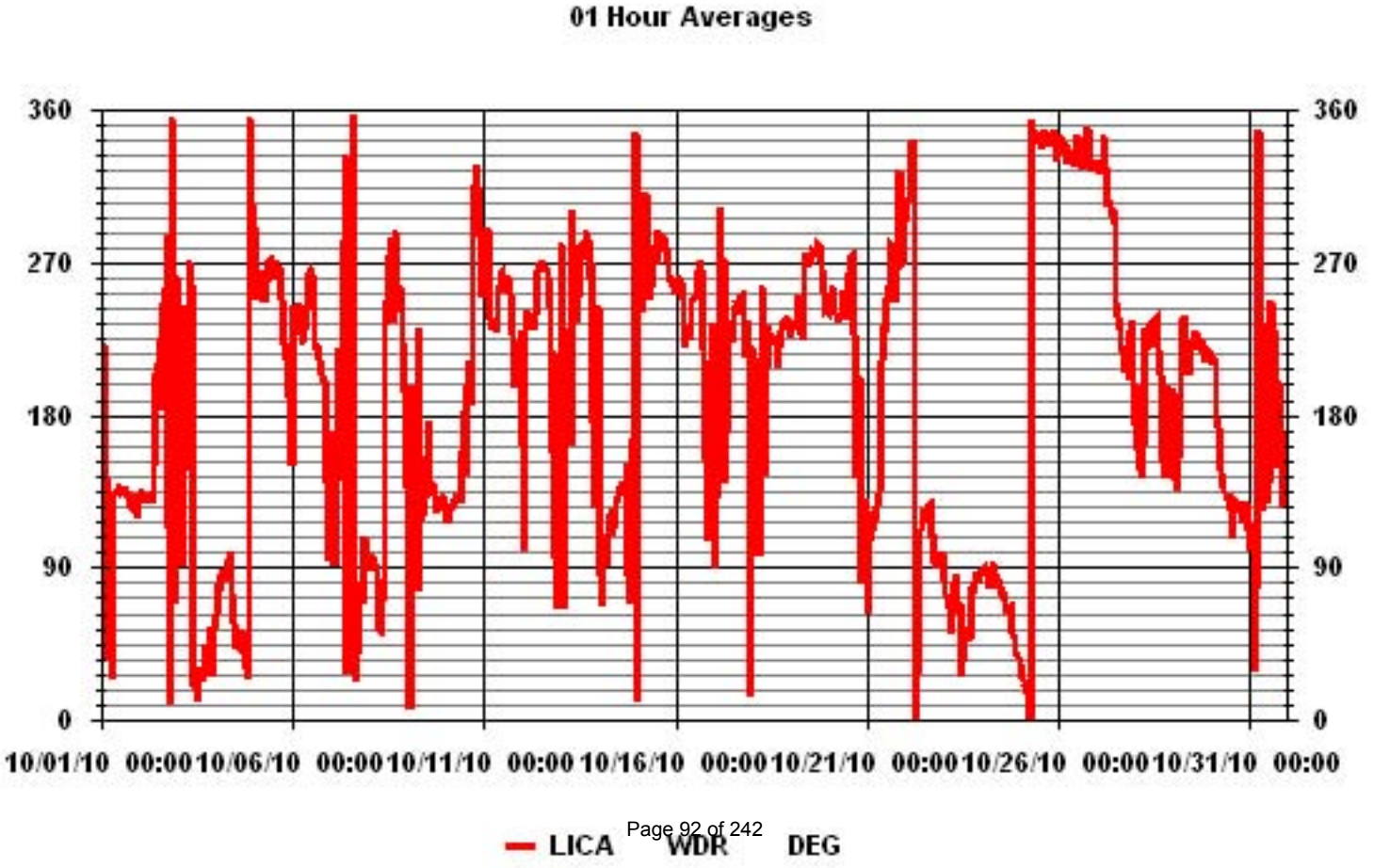
HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	24-HOUR	24-HOUR AVG	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	AVG.	QUANDRANT	RDGS.
DAY																											
1	118	222	149	144	35	80	69	24	134	135	133	139	134	135	134	138	135	134	127	126	125	124	119	132	131	SE	24
2	133	136	133	131	128	131	132	128	134	150	205	211	183	225	246	243	255	286	114	9	356	167	68	262	159	SSE	24
3	141	203	219	90	237	245	147	272	250	256	22	20	10	27	31	22	30	44	36	37	55	26	38	53	24	NNE	24
4	62	80	76	86	88	83	83	88	95	99	75	58	42	50	43	41	54	39	42	31	24	356	306	286	64	ENE	24
5	287	248	258	259	265	254	246	254	259	270	271	260	268	271	267	268	267	249	221	224	213	192	170	150	257	WSW	24
6	245	241	233	239	246	228	222	230	236	259	263	266	264	244	218	222	214	213	205	199	202	141	120	93	235	SW	24
7	170	101	91	168	220	141	216	269	283	333	27	58	87	31	358	23	39	81	79	74	68	108	90	95	57	ENE	24
8	93	88	98	93	90	79	55	54	83	70	233	247	274	284	234	280	289	276	247	256	242	224	194	137	239	WSW	24
9	173	6	197	94	90	170	75	231	118	120	128	131	155	176	140	141	140	134	122	127	130	126	133	124	134	SE	24
10	127	116	120	124	126	129	129	133	131	128	159	182	144	197	212	204	185	291	316	327	316	286	262	250	173	S	24
11	260	273	290	237	232	230	237	229	231	256	264	265	253	260	255	263	252	229	196	224	220	223	215	230	250	WSW	24
12	163	100	236	242	231	235	234	230	239	265	269	267	271	264	268	267	262	245	157	218	95	113	66	81	258	WSW	24
13	282	65	100	219	231	227	161	301	239	235	239	249	280	281	272	277	289	285	259	272	176	124	139	244	267	W	24
14	84	106	67	94	91	110	122	109	125	122	113	128	132	137	141	137	136	151	86	68	72	166	333	347	122	ESE	24
15	10	306	243	241	264	311	306	282	248	255	273	272	269	289	284	276	286	277	270	278	259	262	257	252	275	W	24
16	252	256	262	259	249	234	220	228	227	225	247	248	251	262	261	271	266	219	153	212	106	160	173	234	250	WSW	24
17	89	131	140	204	303	197	273	139	169	226	228	227	236	244	248	239	250	251	246	213	228	236	14	189	236	SW	24
18	221	215	140	145	96	127	256	144	166	208	233	221	228	225	224	222	208	219	230	235	236	236	239	233	224	SW	24
19	226	232	232	235	241	251	229	224	243	269	275	273	268	277	276	279	274	282	281	271	267	253	242	243	262	W	24
20	241	243	256	244	241	237	237	238	238	254	236	241	264	261	273	274	229	142	185	203	80	112	131	125	242	WSW	24
21	76	63	106	123	112	118	126	133	136	212	232	228	249	256	247	281	280	276	246	324	319	323	271	272	251	WSW	24
22	294	308	306	330	341	343	0	27	67	112	113	121	124	116	127	128	108	111	94	91	91	92	92	99	83	E	24
23	84	75	69	70	50	71	82	62	86	70	69	25	34	53	55	49	47	78	80	79	87	81	83	85	67	ENE	24
24	88	90	91	89	79	79	85	93	85	80	82	79	74	71	76	69	63	65	66	52	49	41	39	38	70	ENE	24
25	34	26	24	22	18	17	0	355	349	348	345	347	343	337	345	348	343	339	346	338	346	349	337	329	353	N	24
26	342	346	337	335	341	329	331	335	330	326	336	332	345	336	327	325	335	341	350	342	331	323	328	329	334	NNW	24
27	331	324	322	328	346	327	320	304	306	297	302	293	247	239	232	222	218	205	216	213	200	229	236	173	291	WNW	24
28	198	160	147	179	142	162	232	224	219	234	235	227	220	238	239	220	205	154	153	143	196	196	178	196	207	SSW	24
29	143	143	135	155	193	216	237	239	214	204	223	219	223	220	230	218	222	225	218	213	212	212	218	217	213	SSW	24
30	209	214	212	179	173	149	147	139	135	131	131	124	133	107	128	129	129	125	122	126	116	127	127	113	138	SE	24
31	100	113	115	29	77	348	216	130	124	165	128	234	140	245	245	231	222	148	200	153	163	124	152	169	169	SSE	24
HOURLY AVG	342	346	337	335	346	348	331	355	349	348	345	347	345	337	358	348	343	341	350	342	356	356	337	347			

STATUS FLAG CODES

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

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

MONTHLY CALIBRATION TIME:	0	HRS	OPERATIONAL TIME:	744	HRS
STANDARD DEVIATION	88.43		AMD OPERATION UPTIME	100.0	%
			MONTHLY AVERAGE	254	DEG


01 Hour Averages
360
270
180
90
0
10/01/10 00:00
10/06/10 00:00
10/11/10 00:00
10/16/10 00:00
10/21/10 00:00
10/26/10 00:00
10/31/10 00:00
LICA WDR DEG

Standard Deviation Wind Direction

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

OCTOBER 2010

STANDARD DEVIATION WIND DIRECTION (STDWDIR) hourly averages in degrees

MST

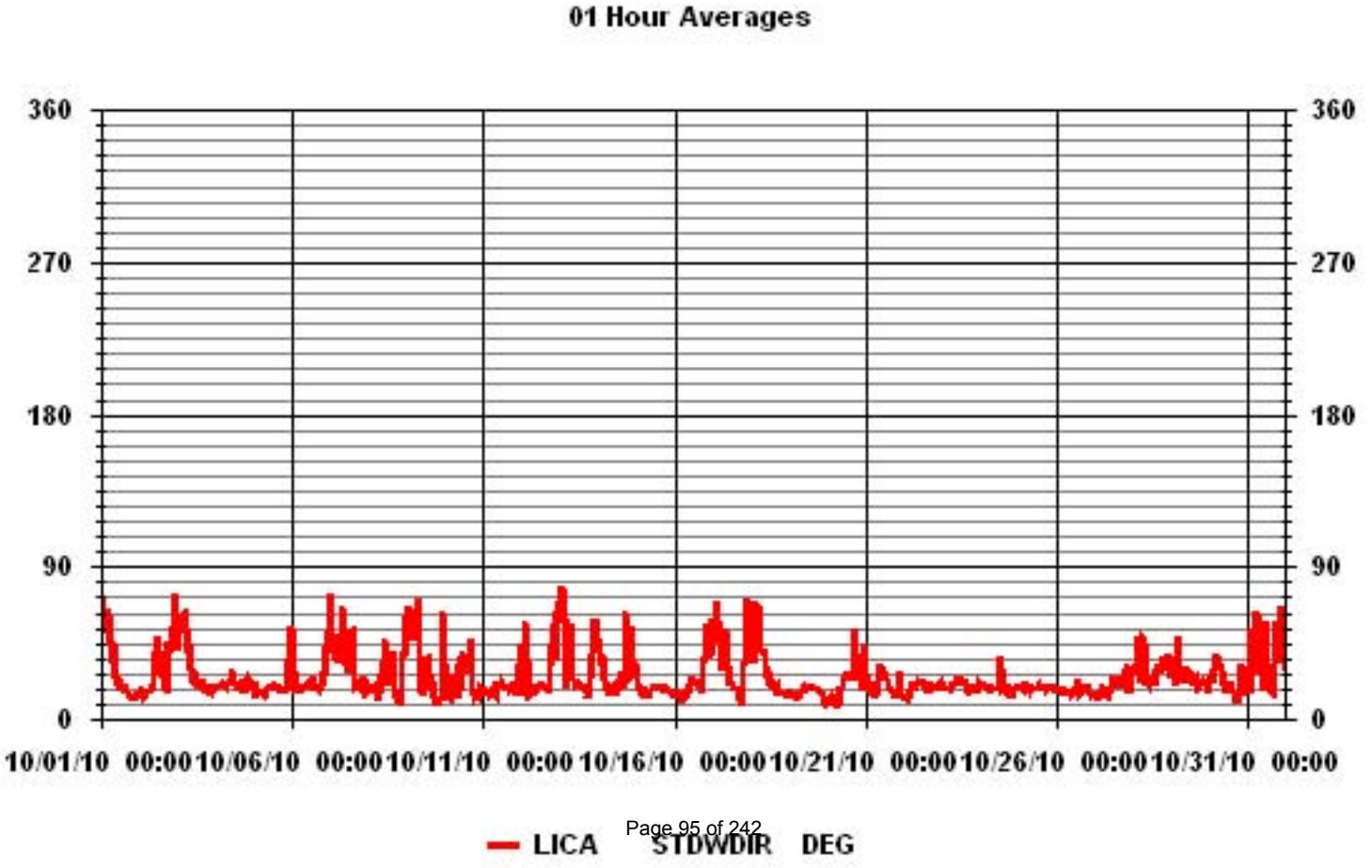
HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00
DAY																								
1	72	58	61	50	66	62	45	33	46	25	20	24	18	20	18	21	17	15	13	13	14	15	14	15
2	16	19	13	14	15	17	17	18	21	34	39	49	41	27	25	31	18	15	46	39	54	51	75	40
3	47	55	51	62	63	54	39	46	30	21	29	21	18	24	22	20	21	18	18	17	14	20	17	19
4	19	19	20	22	20	20	19	22	22	23	29	24	21	17	20	21	24	18	18	21	24	23	22	17
5	19	14	15	16	17	17	14	16	18	19	20	19	21	20	19	20	19	16	16	16	17	35	44	55
6	26	27	17	18	15	18	20	19	21	21	22	20	22	25	19	18	19	18	20	26	27	43	45	52
7	74	40	50	36	33	50	32	67	54	55	33	28	51	52	45	18	19	19	23	21	15	25	16	17
8	18	15	19	19	15	22	11	15	27	34	48	22	20	35	22	40	15	16	10	12	8	40	37	61
9	65	67	46	60	53	56	46	71	18	18	15	17	36	36	27	26	24	14	10	10	12	12	64	34
10	20	16	13	12	26	16	16	15	33	16	37	40	34	38	27	29	47	17	14	16	14	19	18	14
11	17	18	16	15	17	18	16	15	21	21	19	22	20	20	19	19	17	18	22	18	16	14	32	13
12	45	31	57	35	15	16	16	17	20	18	19	20	20	21	20	19	19	18	31	45	56	35	64	69
13	65	79	57	61	18	45	42	57	24	20	21	24	18	20	20	19	17	15	12	24	38	60	53	59
14	49	34	34	39	24	18	14	20	15	20	21	15	17	20	28	25	18	64	56	24	25	55	35	32
15	32	23	18	13	20	13	13	17	16	18	20	19	20	18	19	20	17	18	19	19	17	17	16	14
16	15	16	17	16	11	12	15	18	17	19	26	23	22	22	22	20	20	16	33	37	57	41	37	59
17	45	48	69	45	58	29	43	50	53	32	21	21	19	19	18	19	16	13	9	33	34	71	70	32
18	43	39	34	69	60	67	41	40	42	33	24	29	22	20	23	19	21	16	16	15	16	15	15	16
19	17	16	15	14	11	14	14	17	19	18	20	19	20	19	20	20	18	18	17	18	17	15	10	9
20	10	12	14	12	10	9	8	9	19	20	25	23	27	26	23	28	22	54	40	25	30	16	29	45
21	28	18	17	14	22	16	13	20	24	32	23	26	26	24	20	19	18	17	12	18	13	28	15	14
22	13	13	12	14	18	20	20	20	21	23	23	21	22	21	19	15	21	21	20	19	19	20	21	22
23	19	18	18	18	19	18	20	21	22	25	22	25	21	22	24	18	17	19	17	18	19	18	18	21
24	20	20	21	19	18	18	16	20	19	18	18	19	37	31	18	19	17	19	19	15	14	18	19	18
25	18	20	20	18	21	19	19	17	19	19	18	18	18	21	19	19	19	17	18	18	18	19	17	15
26	18	19	17	16	17	15	15	18	14	16	18	17	22	22	15	16	17	20	18	19	15	14	15	15
27	15	13	13	16	21	16	15	15	14	16	19	24	23	24	23	26	18	22	28	28	33	16	17	26
28	31	33	39	48	21	49	48	46	19	23	21	25	22	29	20	32	27	30	38	28	35	33	39	25
29	27	32	19	38	49	24	24	21	25	31	24	30	23	20	24	25	19	20	21	23	21	21	18	18
30	25	25	28	29	39	31	34	30	22	17	15	23	17	22	16	13	14	10	14	18	33	14	18	27
31	19	16	54	34	54	64	30	30	26	42	17	57	34	28	18	17	26	38	57	37	33	67	52	30

STATUS FLAG CODES

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

LAST CALIBRATION: November 5, 2008

CALIBRATION TIME: 0 HRS OPERATIONAL TIME: 744 HRS


01 Hour Averages
360
270
180
90
0
10/01/10 00:00
10/06/10 00:00
10/11/10 00:00
10/16/10 00:00
10/21/10 00:00
10/26/10 00:00
10/31/10 00:00
LICA STDWDIR DEG

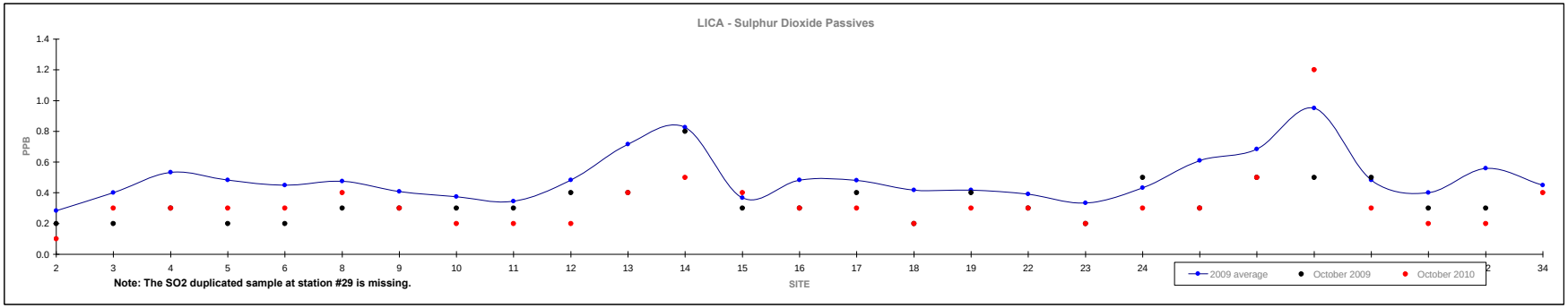
Non-Continuous Monitoring

Passive Summary Results for October 2010

Lakeland Industry & Community Association

Sulphur Dioxide
ppb

	2009																									October 2010	
	2	3	4	5	6	8	9	10	11	12	13	14	15	16	17	18	19	22	23	24	25	26	27	28	29	32	34	Reading	Site
Mean	0.3	0.4	0.5	0.5	0.5	0.5	0.4	0.4	0.3	0.5	0.7	0.8	0.4	0.5	0.5	0.4	0.4	0.4	0.3	0.4	0.6	0.7	1.0	0.5	0.4	0.6	0.5	0.3	-
Minimum	0.1	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.3	0.2	0.2	0.2	0.4	<0.1	#22
Maximum	0.9	0.9	1.3	1.1	1.2	0.9	1.0	0.9	0.8	1.1	1.2	2.2	0.9	1.1	1.0	1.3	0.8	0.9	0.8	1.1	1.4	1.4	2.6	0.9	0.8	1.2	0.5	0.9	#14



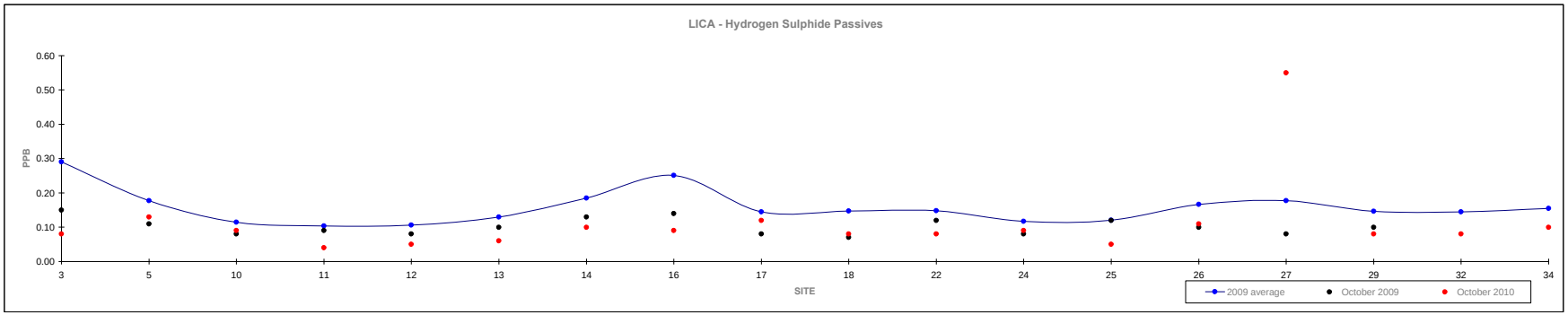
Note: The SO2 duplicated sample at station #29 is missing.

Passive Summary Results for October 2010

Lakeland Industry & Community Association

Hydrogen Sulphide
ppb

	2009																		October 2010	
	3	5	10	11	12	13	14	16	17	18	22	24	25	26	27	29	32	34	Reading	Site
Mean	0.29	0.18	0.12	0.10	0.11	0.13	0.19	0.25	0.15	0.15	0.15	0.12	0.12	0.17	0.18	0.15	0.15	0.16	0.11	-
Minimum	0.05	0.09	0.03	0.03	0.05	0.03	0.11	0.07	0.08	0.05	0.04	0.06	0.03	0.06	0.07	0.04	0.10	0.10	0.05	#25
Maximum	0.80	0.29	0.20	0.16	0.21	0.20	0.30	0.54	0.26	0.29	0.24	0.24	0.18	0.28	0.35	0.28	0.19	0.21	0.36	#27

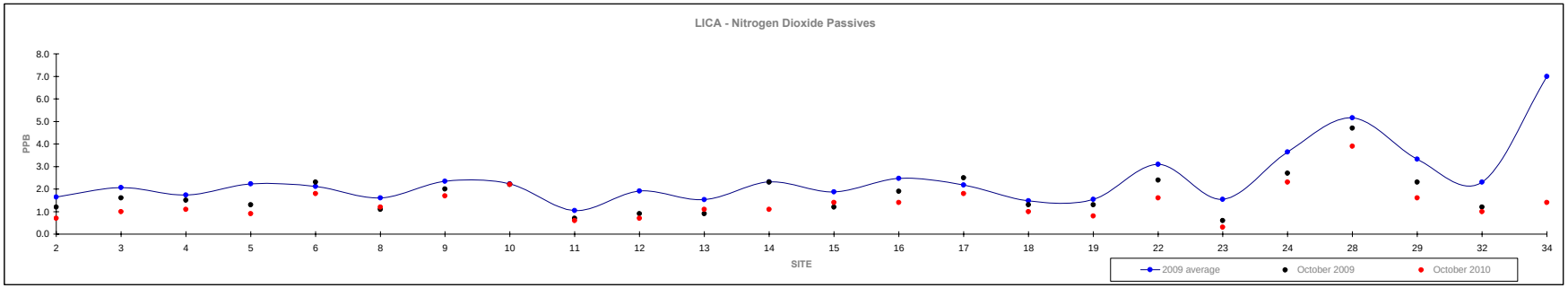


Passive Summary Results for October 2010

Lakeland Industry & Community Association

Nitrogen Dioxide
ppb

	2009																							October 2010	
	2	**3**	**4**	**5**	**6**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**22**	**23**	**24**	**28**	**29**	**32**	**34**	**Reading**	**Site**
Mean	1.6	2.1	1.7	2.2	2.1	1.6	2.4	2.2	1.0	1.9	1.5	2.3	1.9	2.5	2.2	1.5	1.5	3.1	1.5	3.6	5.2	3.3	2.3	7.0	1.0	-
Minimum	0.9	0.8	0.8	1.0	0.8	0.9	1.5	0.4	0.5	0.5	0.9	0.9	1.0	1.7	0.7	0.7	0.9	0.2	0.4	2.7	1.0	0.5	1.2	5.6	0.4	#13
Maximum	2.9	4.6	3.7	5.0	4.4	3.0	4.0	5.0	2.0	6.4	2.9	6.1	3.6	3.9	4.1	3.5	2.4	7.2	2.6	5.6	10.6	7.0	3.0	8.4	2.9	#28

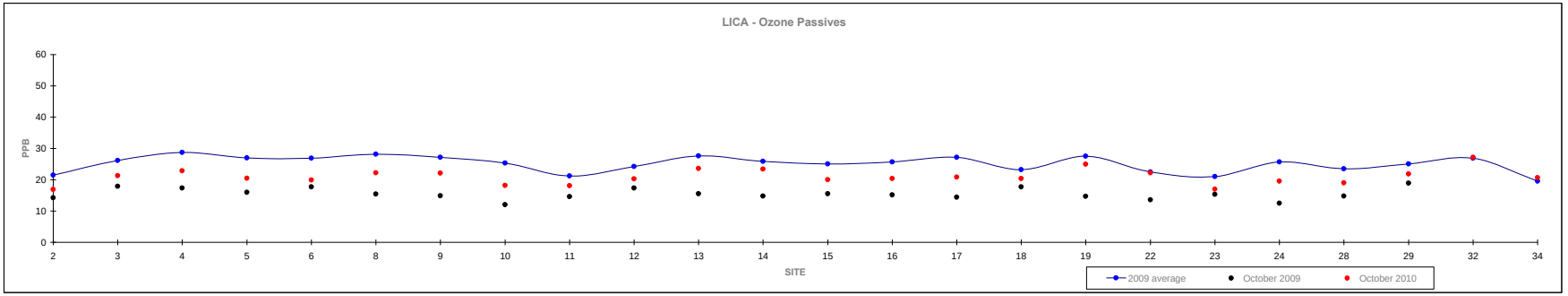


Passive Summary Results for October 2010

Lakeland Industry & Community Association

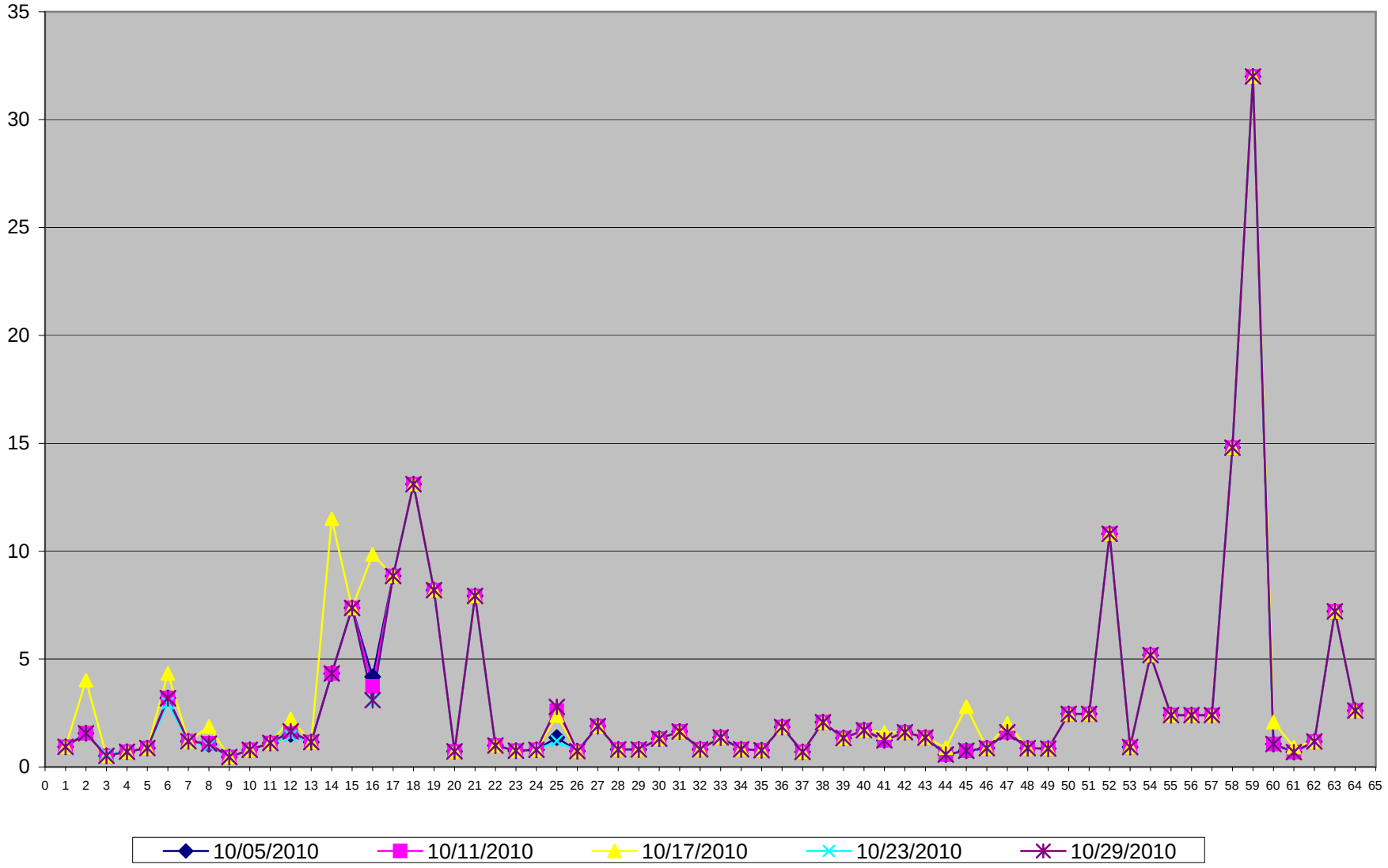
Ozone
ppb

	2009																							October 2010	
	2	3	4	5	6	8	9	10	11	12	13	14	15	16	17	18	19	22	23	24	28	29	32	34	Reading	Site
Mean	21.5	26.2	28.8	26.9	26.9	28.2	27.2	25.4	21.2	24.2	27.7	25.9	25.1	25.7	27.2	23.3	27.6	22.5	21.0	25.7	23.5	25.0	26.9	19.6	16.9	-
Minimum	12.8	14.2	17.9	17.3	16.0	17.7	15.4	14.9	12.0	14.6	17.3	15.5	14.8	15.5	15.1	13.8	17.7	14.7	13.6	15.3	12.5	14.8	18.9	18.5	12.6	#11
Maximum	32.3	38.6	47.5	37.9	43.6	38.6	42.6	38.2	30.2	46.0	36.5	35.4	42.3	36.7	46.5	36.2	41.7	32.6	32.6	40.5	37.7	40.0	32.0	20.6	20.5	#32



Volatile Organics

Volatile Organics in ug/m3 Site: LICA - Cold Lake South



1	2,2,4-Trimethylpentane	33	1,1,2,2-Tetrachloroethane
2	Carbon Disulfide	34	cis-1,3-Dichloropropene
3	Propene	35	trans-1,3-Dichloropropene
4	Vinyl Acetate	36	1,2-Dichloropropane
5	Vinyl Bromide	37	Bromomethane
6	Dichlorodifluoromethane (FREON 12)	38	Bromoform
7	1,2-Dichlorotetrafluoroethane	39	Bromodichloromethane
8	Chloromethane	40	Dibromochloromethane
9	Vinyl Chloride	41	Heptane
10	Chloroethane	42	Trichloroethylene
11	1,3-Butadiene	43	Tetrachloroethylene
12	Trichlorofluoromethane (FREON 11)	44	Benzene
13	Trichlorotrifluoroethane	45	Toluene
14	Ethanol	46	Ethylbenzeze
15	2-Propanol	47	p+m-Xylene
16	2-Propanone	48	o-Xylene
17	Wethyl Ethyl Ketone (2-Butanone)	49	Styrene
18	Methyl Isobutyl Ketone	50	1,3,5-Trimethylbenzene
19	Methyl Butyl Ketone (2-Hexanone)	51	1,2,4-Trimethylbenzene
20	Methyl t-butyl ether (MTBE)	52	4-ethyltoluene
21	Ethyl Acetate	53	Chlorobenzene
22	1,1-Dichloroethylene	54	Benzyl chloride
23	cis-1,2-Dichloroethylene	55	1,3-Dichlorobenzene
24	trans-1,2-Dichloroethylene	56	1,4-Dichlorobenzene
25	Methylene Chloride (Dichloromethane)	57	1,2-Dichlorobenzene
26	Chloroform	58	1,2,4-Trichlorobenzene
27	Carbon Tetrachloride	59	Hexachlorobutadiene
28	1,1-Dichloroethane	60	Hexane
29	1,2-Dichloroethane	61	Cyclohexane
30	Ethylene Dibromide	62	Tetrahydrofuran
31	1,1,1-Trichloroethane	63	1,4-Dioxane
32	1,1,2-Trichloroethane	64	Xylene (Total)

Polycyclic Aromatic Hydrocarbons

Polycyclic Aromatic Hydrocarbons (PAHs) Results for October 2010

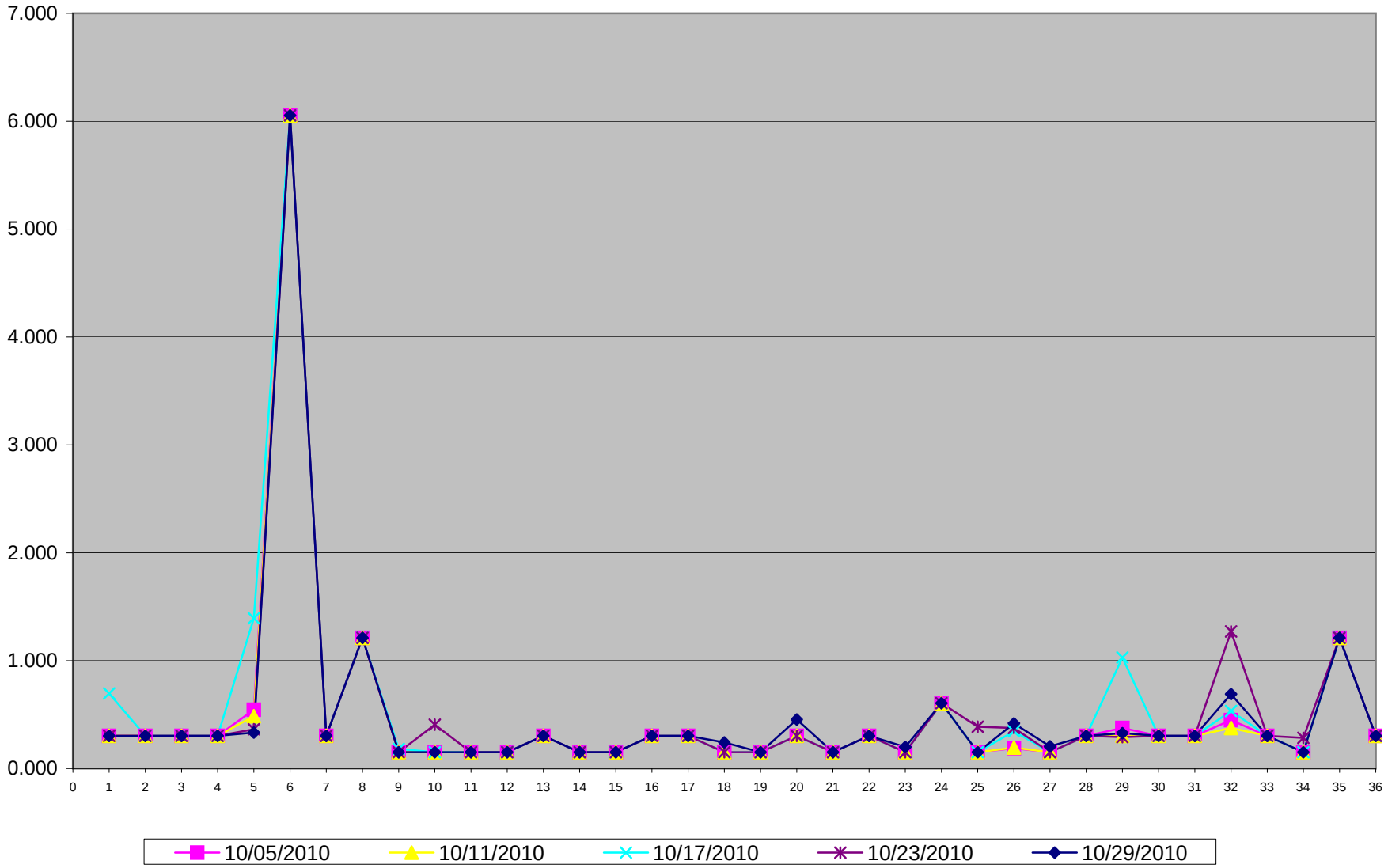
LICA- Cold Lake South Site

Unit: ng/m3

	PAHs	10/05/2010	10/11/2010	10/17/2010	10/23/2010	10/29/2010
	Sample Volume (unit: m3)	330.34	330.33	330.32	330.32	330.33
1	1-Methylnaphthalene	0.303	0.303	0.696	0.303	0.303
2	1-Methylphenanthrene	0.303	0.303	0.303	0.303	0.303
3	2-Chloronaphthalene	0.303	0.303	0.303	0.303	0.303
4	2-Methlyanthracene	0.303	0.303	0.303	0.303	0.303
5	2-Methylnaphthalene	0.545	0.484	1.393	0.363	0.333
6	3-Methylcholanthrene	6.054	6.055	6.055	6.055	6.055
7	7,12-Dimethylbenzo(a)anthracene	0.303	0.303	0.303	0.303	0.303
8	9,10-Dimethylanthracene	1.211	1.211	1.211	1.211	1.211
9	Acenaphthene	0.151	0.151	0.182	0.151	0.151
10	Acenaphthylene	0.151	0.151	0.151	0.406	0.151
11	Anthracene	0.151	0.151	0.151	0.151	0.151
12	Benzo(a)anthracene	0.151	0.151	0.151	0.151	0.151
13	Benzo(a)fluorene	0.303	0.303	0.303	0.303	0.303
14	Benzo(a)pyrene	0.151	0.151	0.151	0.151	0.151
15	Benzo(b)fluoranthene	0.151	0.151	0.151	0.151	0.151
16	Benzo(b)fluorene	0.303	0.303	0.303	0.303	0.303
17	Benzo(e)pyrene	0.303	0.303	0.303	0.303	0.303
18	Benzo(g,h,I)perylene	0.151	0.151	0.151	0.151	0.242
19	Benzo(k)fluoranthene	0.151	0.151	0.151	0.151	0.151
20	Biphenyl	0.303	0.303	0.303	0.303	0.454
21	Chrysene	0.151	0.151	0.151	0.151	0.151
22	Coronene	0.303	0.303	0.303	0.303	0.303
23	Dibenz(a,h)anthracene	0.151	0.151	0.151	0.151	0.200
24	Dibenzo(a,e)pyrene	0.605	0.605	0.605	0.605	0.605
25	Fluoranthene	0.151	0.151	0.151	0.388	0.151
26	Fluorene	0.188	0.194	0.345	0.375	0.418
27	Indeno(1,2,3-cd)pyrene	0.151	0.151	0.151	0.151	0.206
28	m-Terphenyl	0.303	0.303	0.303	0.303	0.303
29	Naphthalene	0.375	0.303	1.029	0.291	0.327
30	o-Terphenyl	0.303	0.303	0.303	0.303	0.303
31	Perylene	0.303	0.303	0.303	0.303	0.303
32	Phenanthrene	0.448	0.375	0.533	1.271	0.690
33	p-Terphenyl	0.303	0.303	0.303	0.303	0.303
34	Pyrene	0.151	0.151	0.151	0.285	0.151
35	Quinoline	1.211	1.211	1.211	1.211	1.211
36	Tetralin	0.303	0.303	0.303	0.303	0.303

Note: - values were calculated by the formula of [reading (ug) x 1000 / sample volume (m3)].
- Where the analytical results are less than the minimum detection limit (MDL), the MDL has been used in calculations.

PAHs in ng/m3 Site: LICA - Cold Lake South



1	1-Methylnaphthalene
2	1-Methylphenanthrene
3	2-Chloronaphthalene
4	2-Methlyanthracene
5	2-Methylnaphthalene
6	3-Methylcholanthrene
7	7,12-Dimethylbenzo(a)anthracene
8	9,10-Dimethylanthracene
9	Acenaphthene
10	Acenaphthylene
11	Anthracene
12	Benzo(a)anthracene
13	Benzo(a)fluorene
14	Benzo(a)pyrene
15	Benzo(b)fluoranthene
16	Benzo(b)fluorene
17	Benzo(e)pyrene
18	Benzo(g,h,I)perylene
19	Benzo(k)fluoranthene
20	Biphenyl
21	Chrysene
22	Coronene
23	Dibenz(a,h)anthracene
24	Dibenzo(a,e)pyrene
25	Fluoranthene
26	Fluorene
27	Indeno(1,2,3-cd)pyrene
28	m-Terphenyl
29	Naphthalene
30	o-Terphenyl
31	Perylene
32	Phenanthrene
33	p-Terphenyl
34	Pyrene
35	Quinoline
36	Tetralin

Calibration Reports

Sulphur Dioxide

SO_2 Calibration Report

Station Information

Calibration Date	November 3, 2010		Previous Calibration	October 6, 2010	
Company	**Lakeland Community and Industry Association**				
Plant / Location	**LICA 1 - Cold Lake South**				
Start Time (MST)	7:26		End Time (MST)	11:05	
Reason:	Monthly Calibraiton				
Barometric Pressure	NA	mmHg	Station Temperature	23	Deg C
Cal Gas	51.4	ppm	Cal Gas Expiry date	5/8/2012	
DAS Output Voltage	0 - 1	Volts			

Equipment Information

Analyzer Make / Model:	Thermon 43i	S/N :	806528242	Method:	UV absorbtion
Converter Make / Model:	NA	S/N :	NA		
Calibrator Make / Model:	API 700	S/N :	831	Method:	Dilution
DAS Make / Model:	ESC 8832	S/N :	3485		
Flow Meter:	API 700	S/N :	831		

Analyzer Settings

	Before Calibration				After Calibration			
Concentration Range				0 - 500 ppb				
Sample Flow / Box Temp	454	ccm	28.4	Deg C	450	ccm	29.2	Deg C
HVPS / Lamp Setting	-632		745		-632		743	
PMT / RxCell Temp	OK	Deg C	45.3	Deg C	OK	Deg C	45.2	Deg C
Converter / IZS Temp	NA	Deg C	44.9	Deg C	NA	Deg C	45.0	Deg C
Offset / Slope	5.4		1.026		5.4		1.026	

Calibration Data

Dilution Flow Rate	Source Gas Flow Rate	Calculated Concentration	Indicated Conc. (DAS)	Correction Factor
4999	0	0	0	N/A
4961	38.9	400	400	0.9997
4977	19.4	200	201	0.9929
4982	14.6	150	151	0.9946
4999	0	0	0	N/A
			Sum of Least Squares	0.2801
			New Correction Factor	0.9997

	Before Calibration	After Calibration
Auto Zero	0.2	0.2
Auto Span	360	358
Sample Lines Connected		**YES**
Percent Change from Previous Calibration		-0.2%

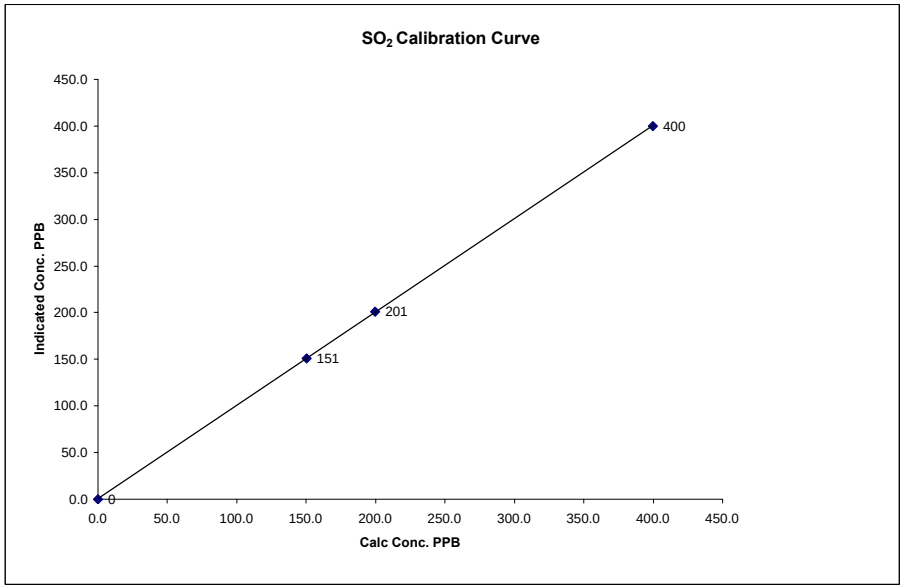
Calibration Performed by: Ting Xyu

SO_2 Calibration Curve

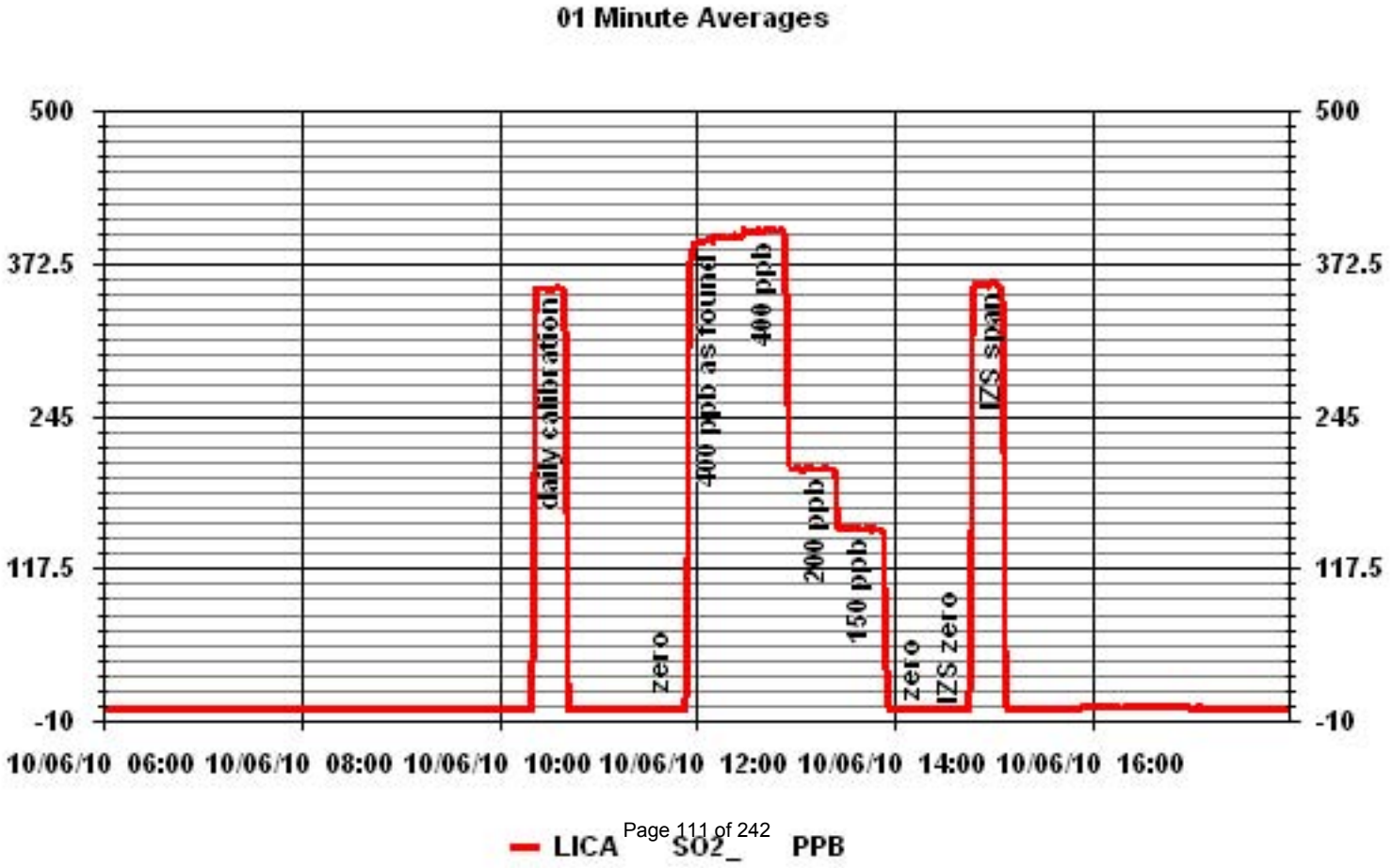
Calibration Date	November 3, 2010			
Company	**Lakeland Community and Industry Association**			
Plant / Location	**LICA 1 - Cold Lake South**			
Start Time (MST)	7:26	End Time (MST)	11:05	

Calculated Conc. ppb	Indicated Response ppb	Correction Factor
0	0	n/a
150	151	0.9946
200	201	0.9929
400	400	0.9997

Correlation Coefficient	(≥ 0.995)	0.999984
Slope	(0.85 to 1.15)	1.000103
Intercept	(± 3% F.S.)	0.564258



Notes: When started the third point, there was calibration gas pressure warning, checked and found out the wire which connected analyzer and calibration gas cylinder was damaged, fixed it and re-did the point.


01 Minute Averages
500
372.5
245
117.5
-10
daily calibration
zero
400 ppb as found
400 ppb
200 ppb
150 ppb
zero
IZS zero
IZS span
10/06/10 06:00 10/06/10 08:00 10/06/10 10:00 10/06/10 12:00 10/06/10 14:00 10/06/10 16:00
LICA SO2_ PPB

Total Reduced Sulphur

TRS Calibration Report

Station Information

Calibration Date	November 2, 2010		Previous Calibration	October 5, 2010	
Company	Lakeland Industry & Community Association				
Plant / Location	LICA 1 - Cold Lake South				
Start Time (MST)	7:58		End Time (MST)	11:51	
Reason:	Post Repair Calibration				
Barometric Pressure	NA	mm Hg	Station Temperature	24	Deg C
Cal Gas	10.6	ppm	Cal Gas Expiry date	May 12, 2011	
DAS Output Voltage	0 - 10	Volts			

Equipment Information

Analyzer Make / Model:	TEI 450i	S/N :	812728560	Method:	Fluorescent
Converter Make / Model:	CD Nova CDN 101	S/N :	250		
Calibrator Make / Model:	API 700	S/N :	831	Method:	Dilution
DAS Make / Model:	ESC 8832	S/N :	3485		
Flow Meter:	API 700	S/N :	831		

Analyzer Settings

	Before Calibration				After Calibration			
Concentration Range	0 -100 ppb							
Sample Flow / Box Temp	357	ccm	31.8	Deg C	358	ccm	33.1	Deg C
HVPS / Lamp Setting	-623.1		757		-623.1		755	
PMT / RxCell Temp	OK	Deg C	45.0	Deg C	OK	Deg C	45.0	Deg C
Converter / IZS Temp	850	Deg C	45.0	Deg C	849	Deg C	45.0	Deg C
Offset / Slope	11.5		1.197		11.2		1.171	

Calibration Data

Dilution Flow Rate	Source Gas Flow Rate	Calculated Concentration	Indicated Conc. (DAS)	Correction Factor
4999	0	0	0	N/A
4962	37.7	80	81	0.9868
4962	37.7	80	80	0.9991
4983	18.8	40	40	0.9960
4988	10.9	23	23	1.0049
4998	0	0	0	N/A
			Sum of Least Squares	0.9989
			New Correction Factor	0.9991

	Before Calibration	After Calibration
Auto Zero	0.0	0.1
Auto Span	30	30
Sample Lines Connected		YES
Percent Change from Previous Calibration		1.3%

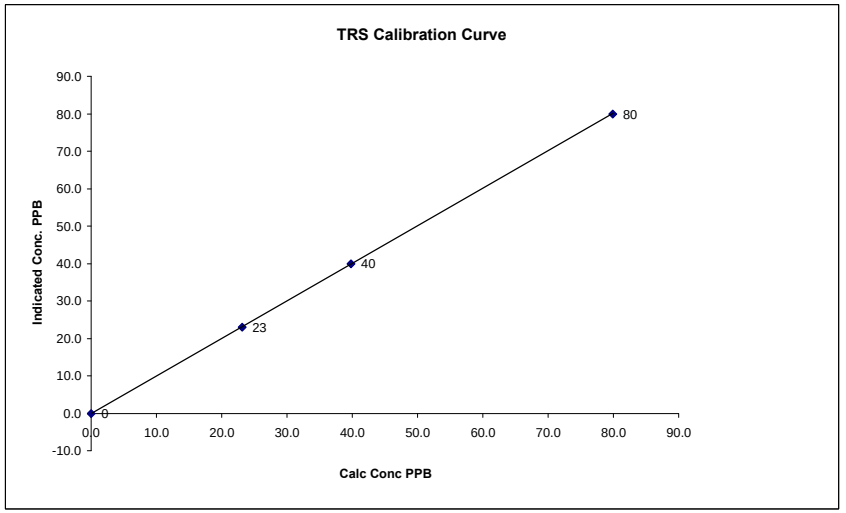
Calibration Performed by: Ting Xu

TRS Calibration Curve

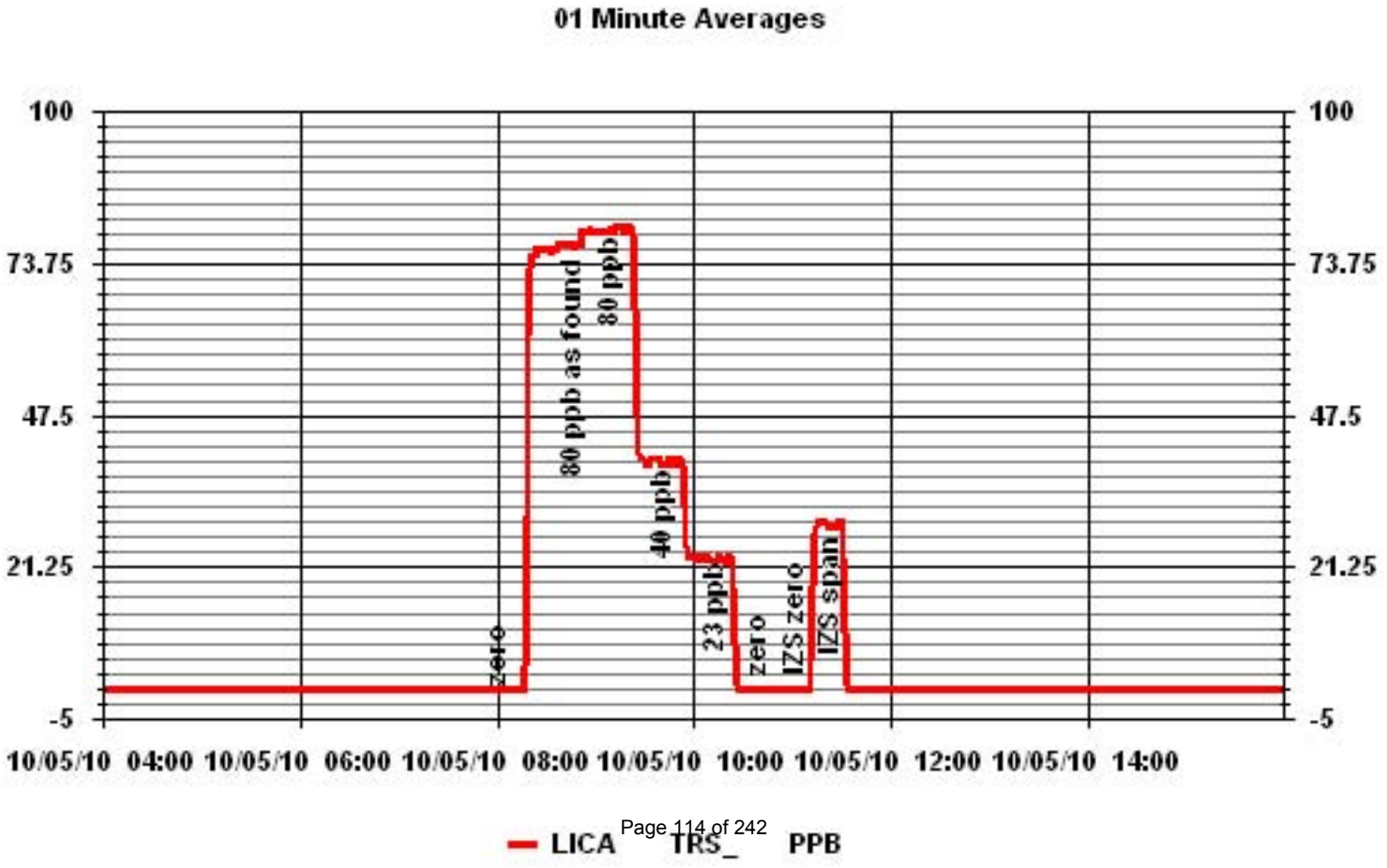
Calibration Date	November 2, 2010		
Company	Lakeland Industry & Community Association		
Plant / Location	LICA 1 - Cold Lake South		
Start Time (MST)	7:58	End Time (MST)	11:51

Calculated Conc. ppb	Indicated Response ppb	Correction Factor
0	0	n/a
23	23	1.0049
40	40	0.9960
80	80	0.9991

Correlation Coefficient	(≥ 0.995)	0.999991
Slope	(0.85 to 1.15)	1.001534
Intercept	(± 3% F.S.)	-0.025689



Notes:


01 Minute Averages
100
73.75
47.5
21.25
-5
zero
80 ppb as found
80 ppb
40 ppb
23 ppb
zero
IZS zero
IZS span
10/05/10 04:00
10/05/10 06:00
10/05/10 08:00
10/05/10 10:00
10/05/10 12:00
10/05/10 14:00
LICA TRS_ PPB

Total Hydrocarbons

THC Calibration Report

Station Information

Calibration Date:	November 2, 2010		Previous Calibration	October 7, 2010	
Company:	**Lakeland Industry and Community Association**				
Plant / Location:	**LICA1/Cold Lake**				
Start Time (MST)	11:14		End Time (MST)	14:30	
Reason:	Monthly Calibration				
Barometric Pressure:	NA	mmHg	Station Temperature:	23	Deg C
Calibrator:	API 700		S/N:	831	
Cal Gas Concentration:	207Prop/602Meth	ppm	Cal Gas Expiry Date:	8/21/2011	
DAS make & Model:	ESC 8832		S/N :	3485	
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	psi	8	psi
Air Pressure	20	psi	20	psi

Calibration Data

Dilution Flow	Source Gas Flow	Calculated Concentration	Indicated Concentration	Correction Factor
1999	0	0.0	0.0	N/A
1999	70	39.6	40.5	0.9784
1999	70	39.6	39.9	0.9931
1999	35	20.2	20.2	0.9977
1999	20	11.6	11.5	1.0089
1999	0	0.0	0.0	N/A
			Correction Factor:	0.9931

Percent Change

Previous Calibration Correction Factor:	0.9931
Current Correction Factor Before Span Adjust:	0.9784
Percent Change:	1.5%

IZS Calibration Data

	Before Calibration	After Calibration
Auto Zero	0.0	0.0
Auto Span	37.2	36.9
Sample Lines Connected		**YES**

Cylinder Pressures		
Span	1350 psi	
Hydrogen	500 psi	
Zero Air	32 psi	Maxxam-owned API 701 zero air supply with catalytic oxidizer

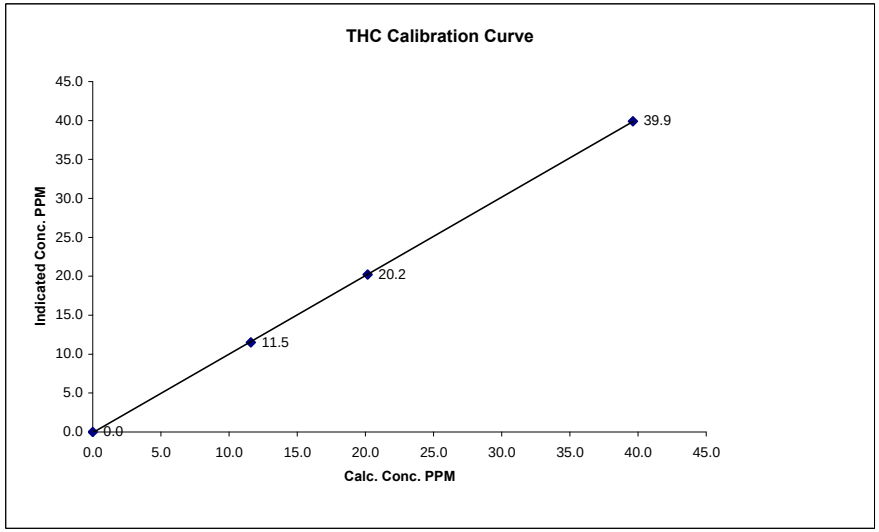
Calibration Performed by: Ting Xu

THC Calibration Curve

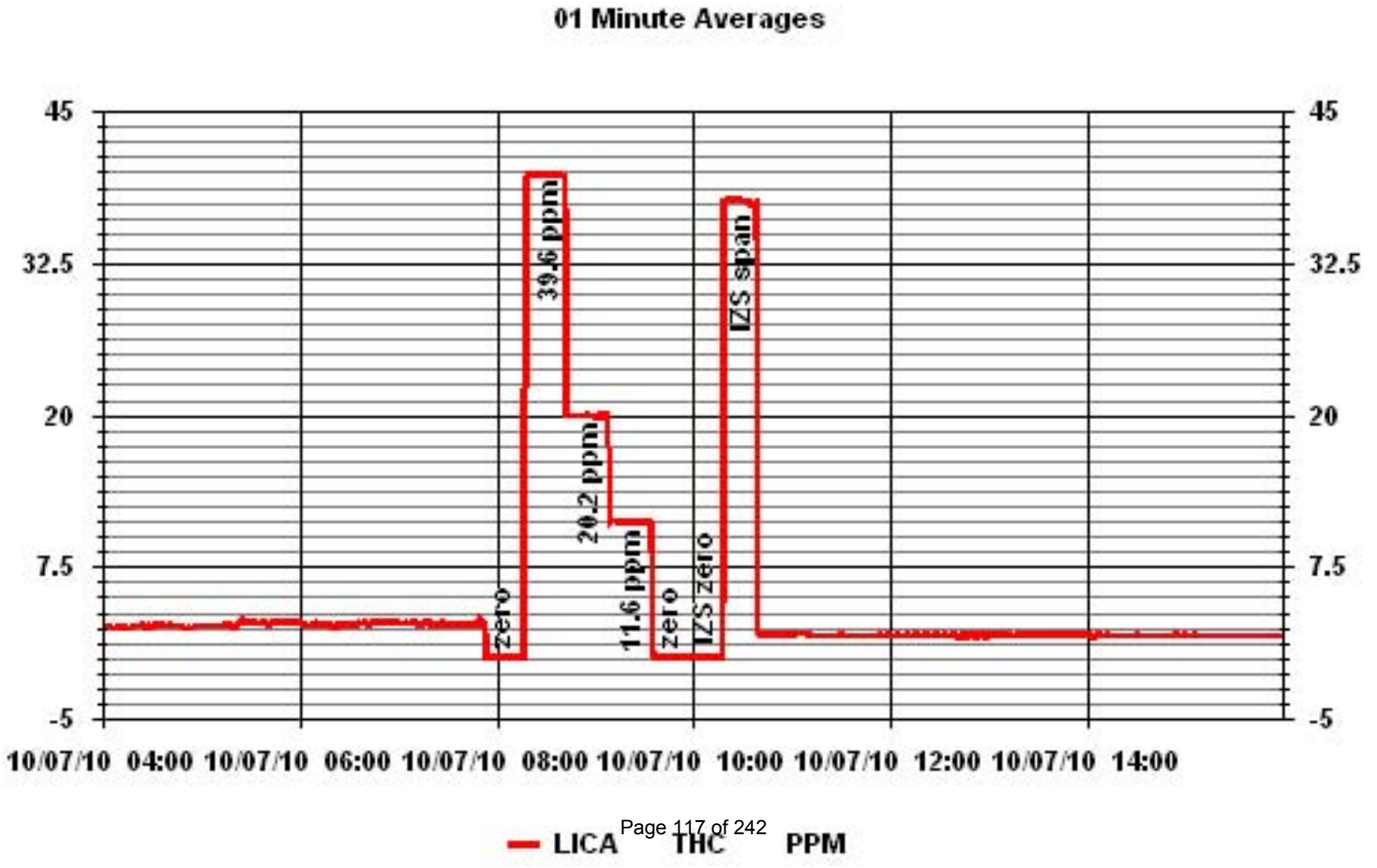
Calibration Date	November 2, 2010				
Company	**Lakeland Industry and Community Association**				
Plant / Location	**LICA1/Cold Lake**				
Start Time (MST)	11:14	End Time	(MST)	14:30	

Calculated Conc. ppm	Indicated Response ppm	Correction Factor
0.0	0.0	
11.6	11.5	1.0089
20.2	20.2	0.9977
39.6	39.9	0.9931

Correlation Coefficient	(≥ 0.995)	0.999974
Slope	(0.85 to 1.15)	1.008001
Intercept	(± 3% F.S.)	-0.088576



Notes:


01 Minute Averages
45
32.5
20
7.5
-5
zero
39.6 ppm
20.2 ppm
11.6 ppm
zero
IZS zero
IZS span
10/07/10 04:00
10/07/10 06:00
10/07/10 08:00
10/07/10 10:00
10/07/10 12:00
10/07/10 14:00
LICA THC PPM

Particulate Matter 2.5

TEOM 1405F Audit

Station		Audit Transfer Standard	
Date:	November 8, 2010	Make/Model:	Streamline FTS
Station Name:	LICA 1	Serial Number:	Hi 091001
Location:	Cold Lake South	Cell s/n:	Lo 091099
Operator:	LICA	Thermometer s/n:	VWR90758398

Sampler		Set-up and current Sampler readings	
Make/Model	Thermo Scientific Series 1405F	F-Main Set Pt (l/min)	3.00
Unit #	AMU 1775	F-Aux Set Pt (l/min)	13.67
Unit s/n	1405A201620804	Filter Load (%)	22.7%
Firmware Ver.	1.52	K_o Factor	14578.0
Parameter	PM 2.5 (with FDMS)	Temp (^oC)	3.0
		Press (ATM)	0.928

Conversion from mmHg or "Hg to ATM (Atmospheres)

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

Note: Tolerances are noted as BOLD in Brackets

Audit

Status

Noise **<0.10*u* g**	0.004	Warnings	None
Pump Vacuum **<0.40atm**	0.33		

Temperature/Pressure

Measured Temp **(± 2 °C)**	3.0	**D °C**	0.0
Measured Press **(± 0.01atm)**	0.932	**DATM**	-0.004

Flow Audit

Indicated Main Flow (l/min)	3.00	Main Flow Drift **(±10.0%)**	1.33%
Measured Main Flow (l/min)	2.98	Flow Adjusted to Measured?	Yes
Indicated Bypass Flow (l/min)	13.67	Bypass Flow Drift **(±10.0%)**	2.33%
Measured Bypass Flow (l/min)	13.67	Flow Adjusted to Measured?	Yes

Leak Check

Main **(< 0.15 l/min)**	NA
Aux **(< 0.6 l/min)**	NA

Instrument Setup

Flow Control = Active

Report Conditions = Standard (25.0 C and 1atm)

K_o Factor

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

Start Time: 12:16 **Finish Time:** 13:24

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

New Filter Loading %: NA

Comments: Filter has been changed on Oct 26, 2010, no need to change.

Auditor/s: Shea Beaton / Ting Xu

Nitrogen Dioxide

NOx - NO- NO_2 Calibration Report

Station Information

Calibration Date	November 2, 2010		Previous Calibration	October 5, 2010	
Company	LICA		Plant/Location	**LICA 1 - Cold Lake South**	
Start Time (MST)	7:59		End Time (MST)	13:36	
Reason:	Monthly Calibration			Other	
Barometric Pressure	NA mmHg	Station Temperature	23 Deg C	MFCF	#VALUE!
Cal Gas Concentration	NOx 50.8 ppm	NO 50.4 ppm	Cal Gas Expiry date	05-Aug-12	
DAS Output Voltage	0 - 10 Volts		Chart Rec. Output	NA Volts	

Equipment Information

Analyzer Make / Model:	TECO 42C	S/N :	427408716	Method:	Chemiluminescent
Calibrator Make / Model:	Environics 6100	S/N:	4760		
DAS Make / Model:	ESC 8832	S/N :	3485		
Chart Recorder Make / Model:	NA	S/N:	NA		
Flow Meter:	Environics 6100	S/N :	4760		

Analyzer Settings

	Before Calibration					After Calibration			
Concentration Range					0 - 500 ppb				
Sample Flow/Conv. Temp	717	ccm	317	Deg C		719	ccm	317.0	Deg C
Ozone Flow / Vacuum	OK	ccm	181.4	"Hg-A		OK	ccm	182.2	"Hg-A
HVPS / A ZERO	-821	Volts	NA	MV		-821	Volts	NA	MV
Rx/ Temp / PMT Temp	49.7	Deg C	-2.5	Deg C		49.5	Deg C	-2.4	Deg C
Box Temp / IZS Temp	27.0	Deg C	OK	Deg C		28.7	Deg C	OK	Deg C
Offset	3.9	NOx	3.6	NO		3.8	NOx	3.5	NO
Slope	1.009	NOx	0.920	NO		1.009	NOx	0.908	NO
NO_2 COEF / Conv Efficency	0.998	NO2	NA			0.998	NO2	NA	

Dilution Calibration Data

Dilution Air Flow Rate	Source Flow Rate	O3 Set Point	Calculated Concentration			Indicated Concentration			Correction Factor	
			NOx	NO	NO2	NOx	NO	NO2	NOx	NO
4995	0.0	-----	0	0	-----	0	0	0	-----	-----
4956	39.6	-----	403	400	-----	408	405	3	0.9870	0.9865
4956	39.6	-----	403	400	-----	403	400	3	0.9992	0.9988
4975	19.8	-----	201	200	-----	202	201	2	0.9969	0.9940
4984	9.9	-----	101	100	-----	102	101	1	0.9873	0.9892
4995	0.0	-----	0	0	0	0	0	0	-----	-----

Gas Phase Titration Calibration Data

Dilution Air Flow Rate	Source Flow Rate	O3 Set Point	Calculated Concentration			Indicated Concentration			NO_2 Correction Factor	NO2 Conv Efficency
			NOx	NO	NO2	NOx	NO	NO2		
4957	39.6	-----	403	399	-----	402	399	3	-----	-----
4956	39.6	350	403	-----	331	402	71	331	1.0091	100.00%
4956	39.6	150	403	-----	146	402	256	146	1.0210	100.00%
4956	39.6	75	403	-----	74	401	328	73	1.0571	98.59%

Linearity		Sum of Least Squares	NOx= 0.998	NO= 0.997	NO2= 1.001		
OK? Yes	No	Correction Factors:	NOx= 0.9992	NO= 0.9988	NO2= 1.0091		
				Average Converter Efficiency= 99.53%			

	Before Calibration					After Calibration			
Auto Zero	0.1	NOx	0.2	NO2		0.1	NOx	0.2	NO2
Auto Span	378	NOx	376	NO2		375	NOx	373	NO2
				Sample Lines Connected		YES			

Notes

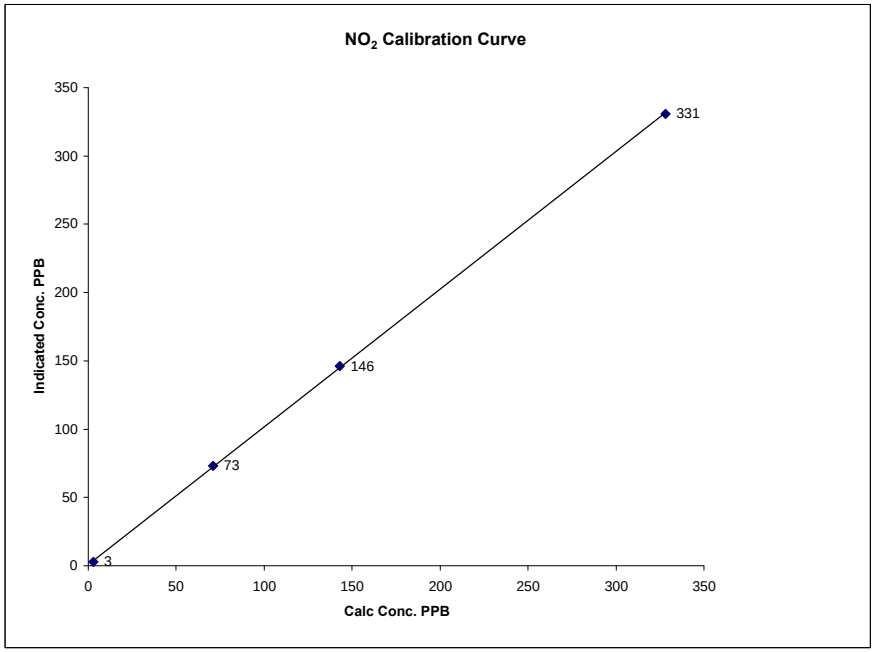
Calibration Performed by: Ting Xu

NO_2 Calibration Curve

Calibration Date	November 2, 2010		
Company	LICA		
Plant / Location	**LICA 1 - Cold Lake South**		
Start Time (MST)	7:59	End Time (MST)	13:36

Calculated Conc. ppb	Indicated Response ppb	Correction Factor
3	3	N/A
71	73	0.9726
143	146	0.9795
328	331	0.9909

Correlation Coefficient	(≥ 0.995)	0.999961
Slope	(0.85 to 1.15)	1.007905
Intercept	(± 3% F.S.)	0.92300

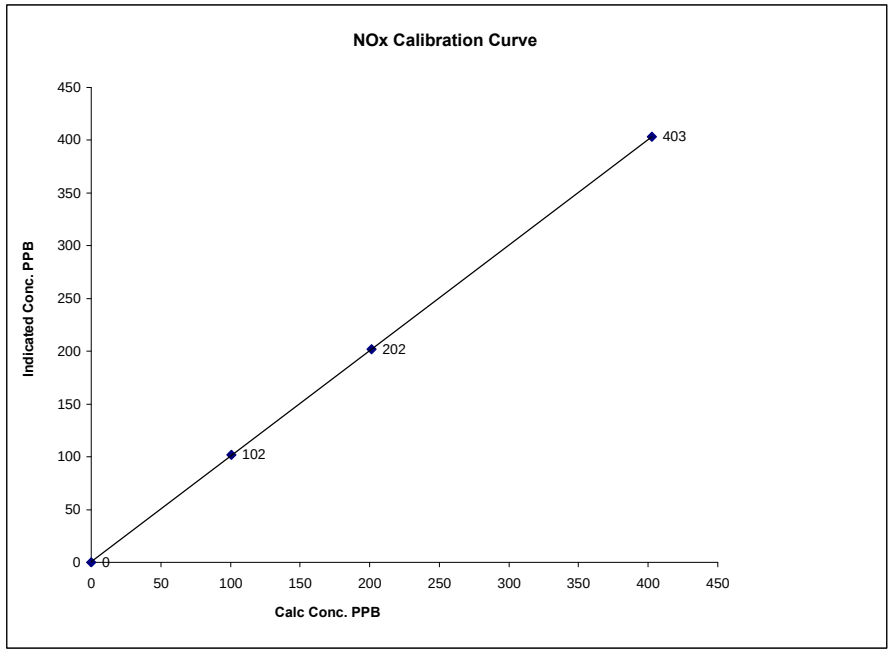


Notes:

NOx Calibration Curve

Calibration Date	November 2, 2010				
Company	LICA				
Plant / Location	LICA 1 - Cold Lake South				
Start Time (MST)	7:59	End Time (MST)	13:36		

Calculated Conc. ppb	Indicated Response ppb	Correction Factor	Correlation Coefficient	(≥ 0.995)	0.999990
			Slope	(0.85 to 1.15)	0.999867
0	0	N/A	Intercept	(± 3% F.S.)	0.57979
101	102	0.9873			
201	202	0.9969			
403	403	0.9992			

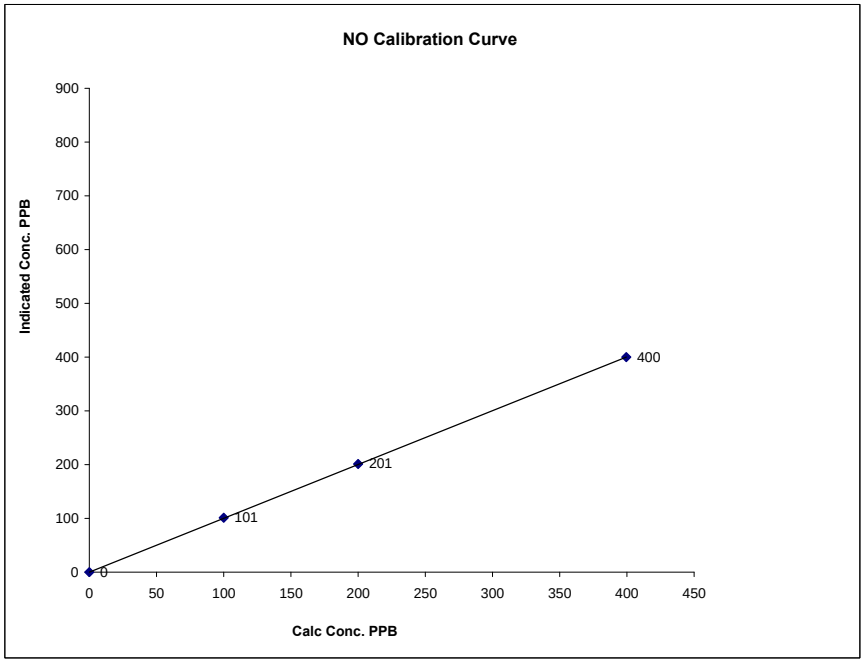


Notes:

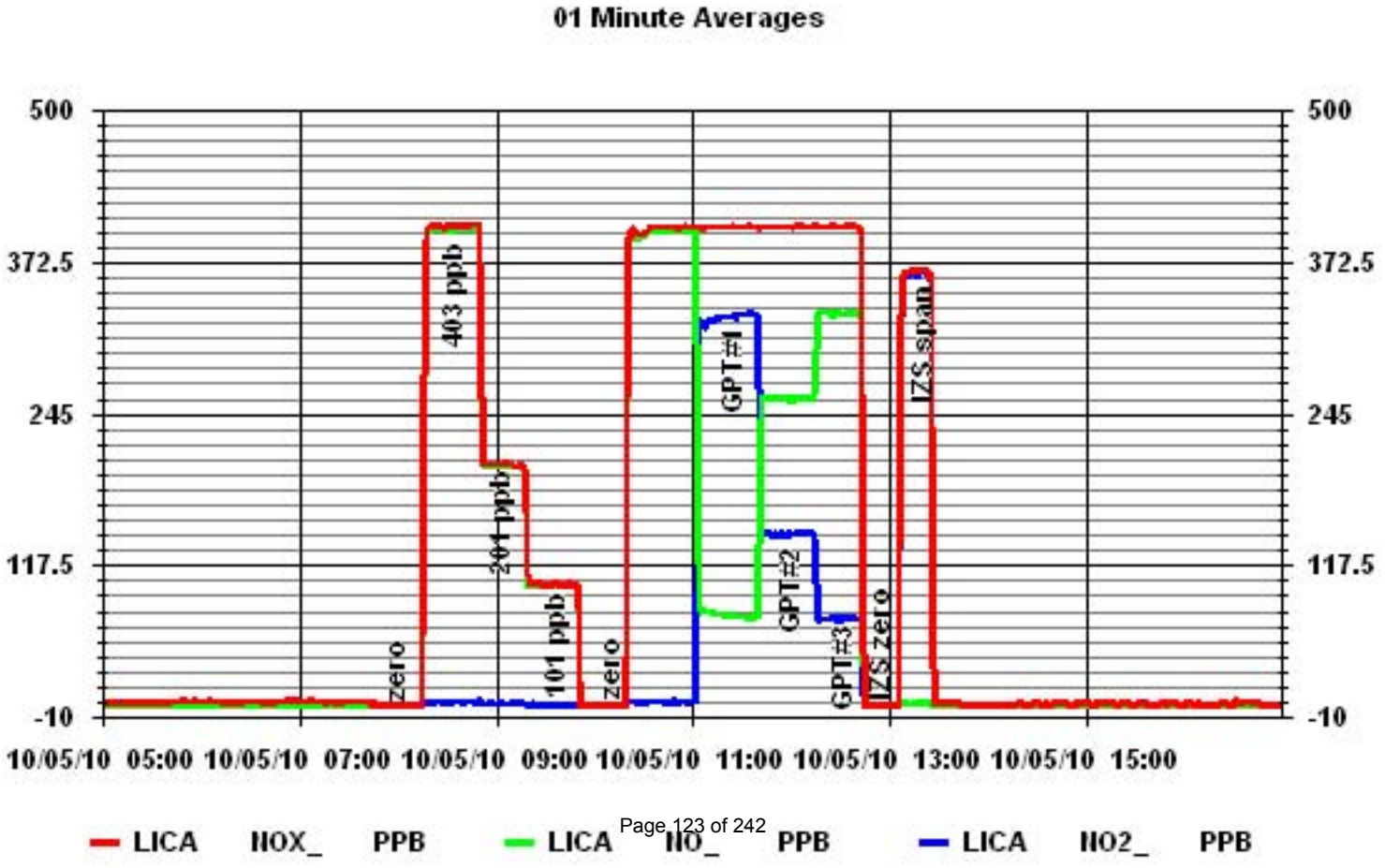
NO Calibration Curve

Calibration Date	November 2, 2010				
Company	LICA				
Plant / Location	LICA 1 - Cold Lake South				
Start Time (MST)	7:59	End Time (MST)	13:36		

Calculated Conc. ppb	Indicated Response ppb	Correction Factor	Correlation Coefficient	(≥ 0.995)	0.999990
			Slope	(0.85 to 1.15)	0.997747
0	0	N/A	Intercept	(± 3% F.S.)	1.9362
100	101	0.9892			
200	201	0.9940			
400	400	0.9988			



Notes:


01 Minute Averages
500
372.5
245
117.5
-10
zero
403 ppb
201 ppb
101 ppb
zero
GPT#1
GPT#2
GPT#3
IZS zero
IZS span
10/05/10 05:00
10/05/10 07:00
10/05/10 09:00
10/05/10 11:00
10/05/10 13:00
10/05/10 15:00
LICA NOX_ PPB
LICA NO_ PPB
LICA NO2_ PPB

Ozone

O_3 Calibration Report

Station Information

Calibration Date	November 2, 2010	Previous Calibration	October 6, 2010
Company	**Lakeland Industry & Community Association**		
Plant / Location	**LICA 1 - Cold Lake South**		
Start Time (MST)	12:55	End Time (MST)	16:11
Reason:		Monthly Calibration	
Barometric Pressure	NA mm Hg	Station Temperature	23 Deg C
DAS Output Voltage	0 - 10 Volts		

Equipment Information

Analyzer Make / Model:	TEI 49i	S/N :	700419951	Method:	Fluorescent
Calibrator Make / Model:	Environics 6100	S/N :	4760	Method:	GPT
DAS Make / Model:	ESC 8832	S/N :	3485		

Analyzer Settings

	Before Calibration		After Calibration	
Concentration Range	0 - 500 ppb			
Cell A Flow/ Cell B Flow	740 ccm	755 ccm	745 ccm	759 ccm
Pressure	707 mmHg		714 mmHg	
Bench Lamp Temp	53.5 Deg C		53.5 Deg C	
O_3 Lamp/Box Temp	67.6 Deg C	29.1 Deg C	67.7 Deg C	28.7 Deg C
Offset / Slope	0.7	-	0.7	0.996

Calibration Data

Dilution Flow Rate	Ozone Set Point	Calculated Concentration	Indicated Conc. (DAS)	Correction Factor
4996	0	0	0	N/A
4966	350	328	328	1.0000
4996	150	143	142	1.0070
4996	75	71	70	1.0143
4996	0	0	0	N/A
			Sum of Least Squares	N/A
			New Correction Factor	1.0000

	Before Calibration	After Calibration
Auto Zero	-0.05	-0.06
Auto Span	295	295
Sample Lines Connected		YES
Percent Change from Previous Calibration		-0.3%

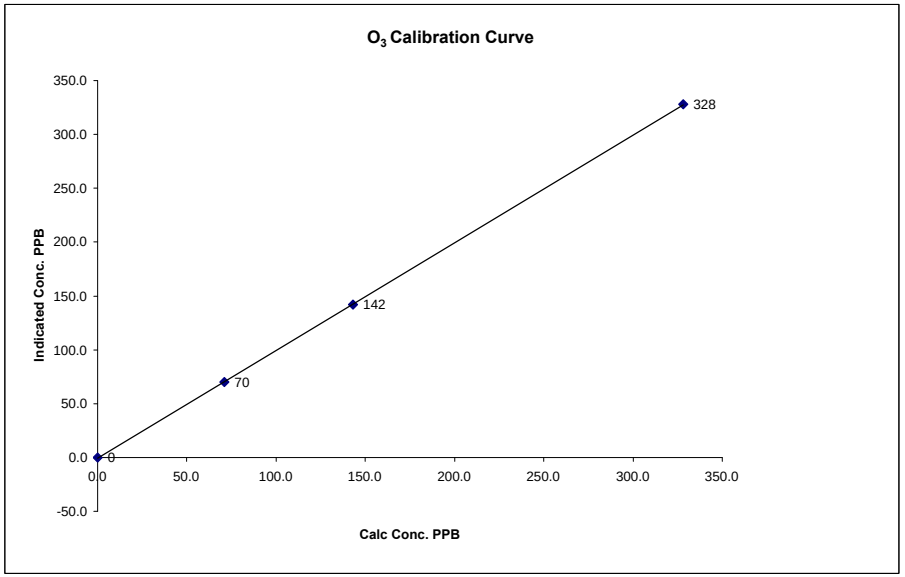
Calibration Performed by: Ting Xu

O_3 Calibration Curve

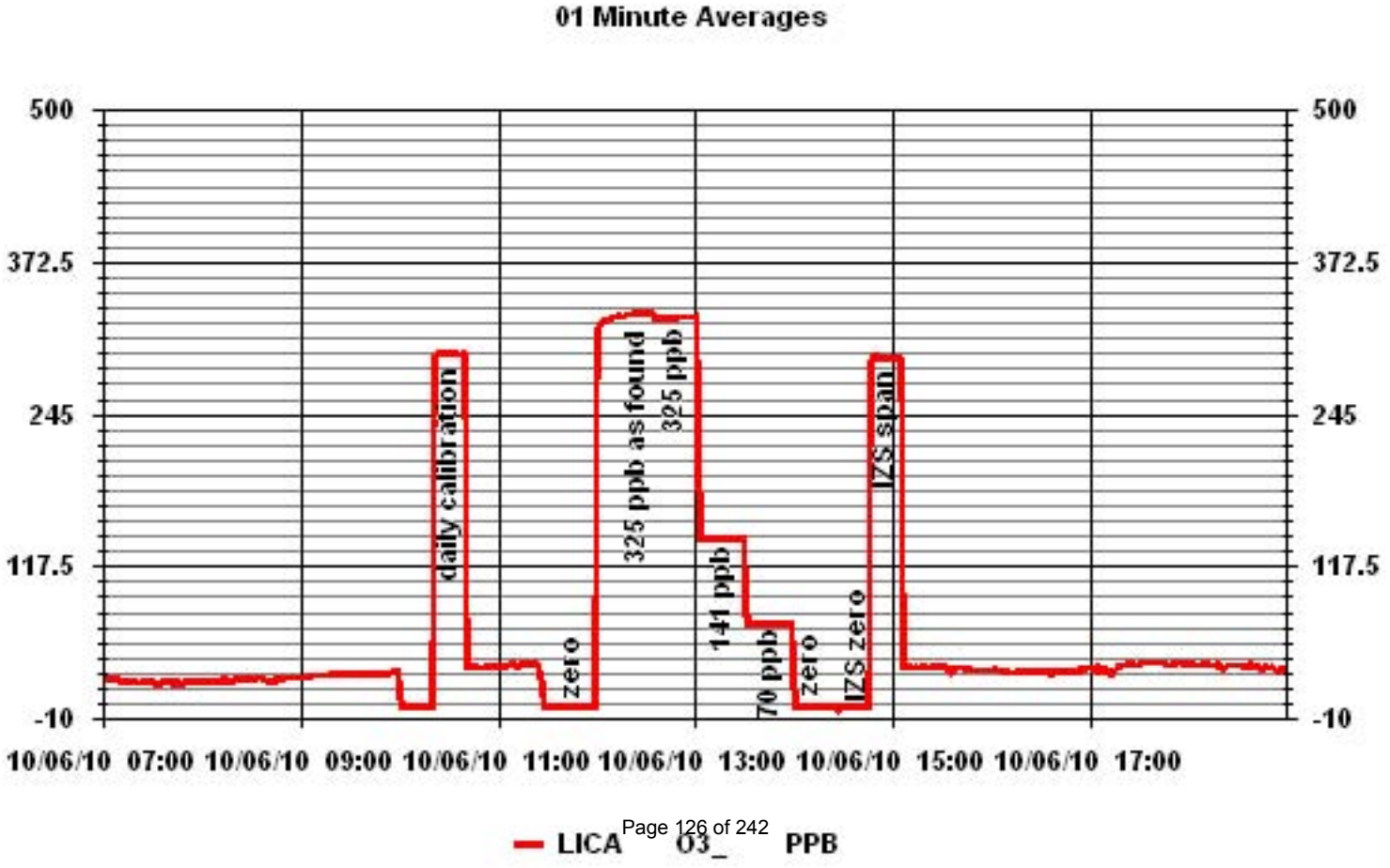
Calibration Date	November 2, 2010		
Company	**Lakeland Industry & Community Association**		
Plant / Location	**LICA 1 - Cold Lake South**		
Start Time (MST)	12:55	End Time (MST)	16:11

Calculated Conc. ppb	Indicated Response ppb	Correction Factor
0	0	n/a
71	70	1.0143
143	142	1.0070
328	328	1.0000

Correlation Coefficient	(≥ 0.995)	0.999984
Slope	(0.85 to 1.15)	1.000956
Intercept	(± 3% F.S.)	-0.629517



Notes:


01 Minute Averages
500
372.5
245
117.5
-10
daily calibration
zero
325 ppb as found
325 ppb
141 ppb
70 ppb
zero
IZS zero
IZS span
10/06/10 07:00 10/06/10 09:00 10/06/10 11:00 10/06/10 13:00 10/06/10 15:00 10/06/10 17:00
LICA O3_ PPB

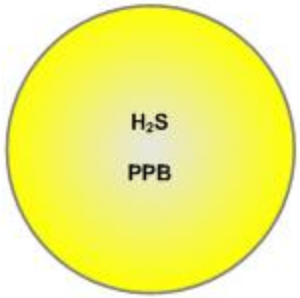
Passive Bubble Maps

Lakeland Industry & Community Association
H_2S Passive Bubble Map

OCTOBER 2010

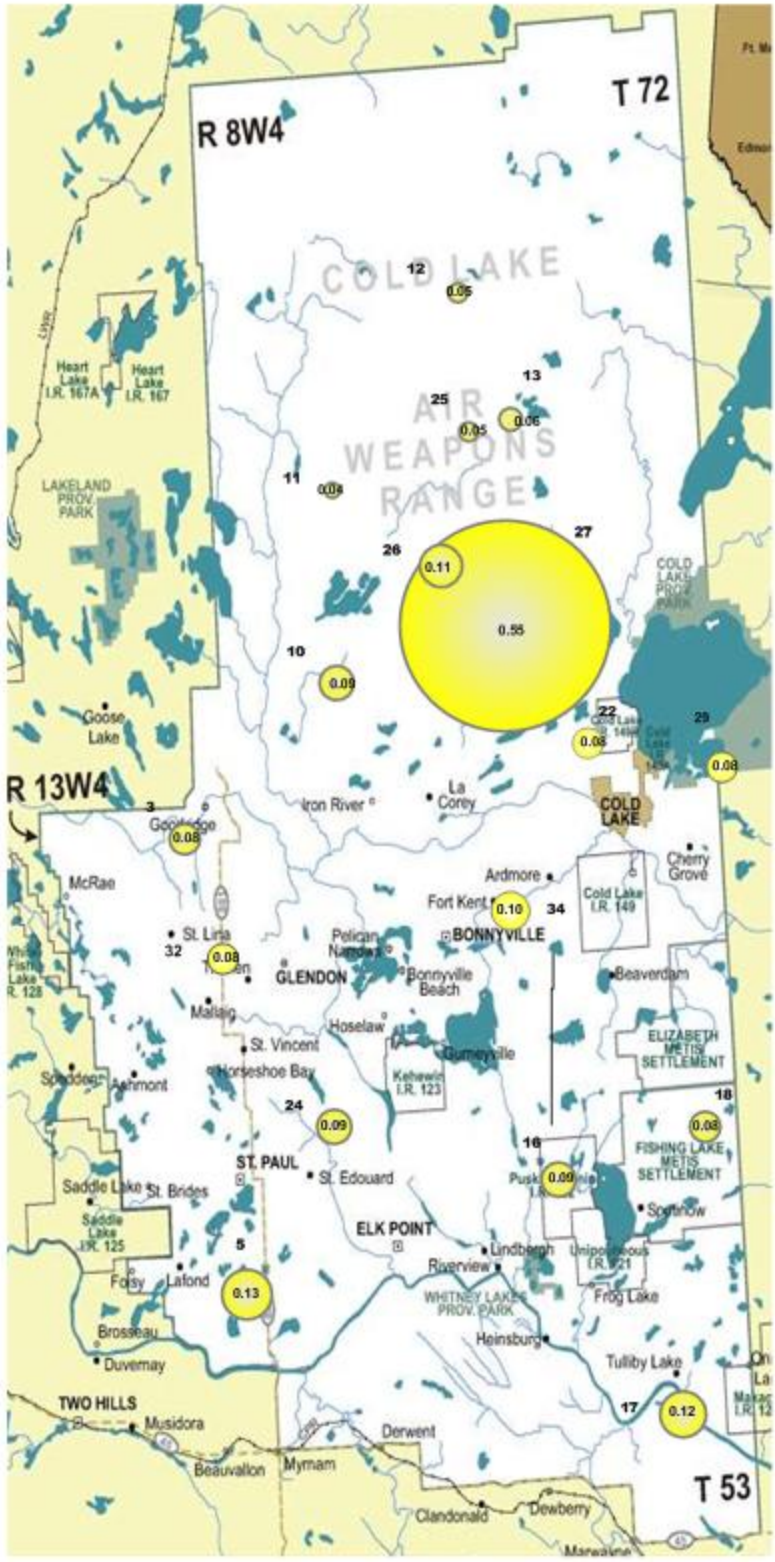
PASSIVE STATIONS

		DUPLICATE
3 – Therien	0.08 PPB	0.07 PPB
5 – Lake Eliza	0.13 PPB	NA
10 – La Corey	0.09 PPB	NA
11 – Wolf Lake	0.05 PPB	0.03 PPB
12 – Foster Creek	0.05 PPB	NA
13 – Primrose	0.06 PPB	0.06 PPB
14 – Maskwa	0.10 PPB	NA
16 – Frog Lake	0.09 PPB	0.09 PPB
17 – Clear Range	0.12 PPB	NA
18 – Fishing Lake	0.07 PPB	0.08 PPB
22 – Cold Lake South	0.08 PPB	NA
24 – Fort George	0.09 PPB	NA
25 – Burnt Lake	0.05 PPB	0.05 PPB
26 – Mahihkan	0.11 PPB	NA
27 – Mahkeses	0.55 PPB	0.54 PPB
29 – Cold Lake South 2	0.08 PPB	NA
32 – St. Lina	0.08 PPB	NA
34 – Portable	0.10 PPB	NA



Summary

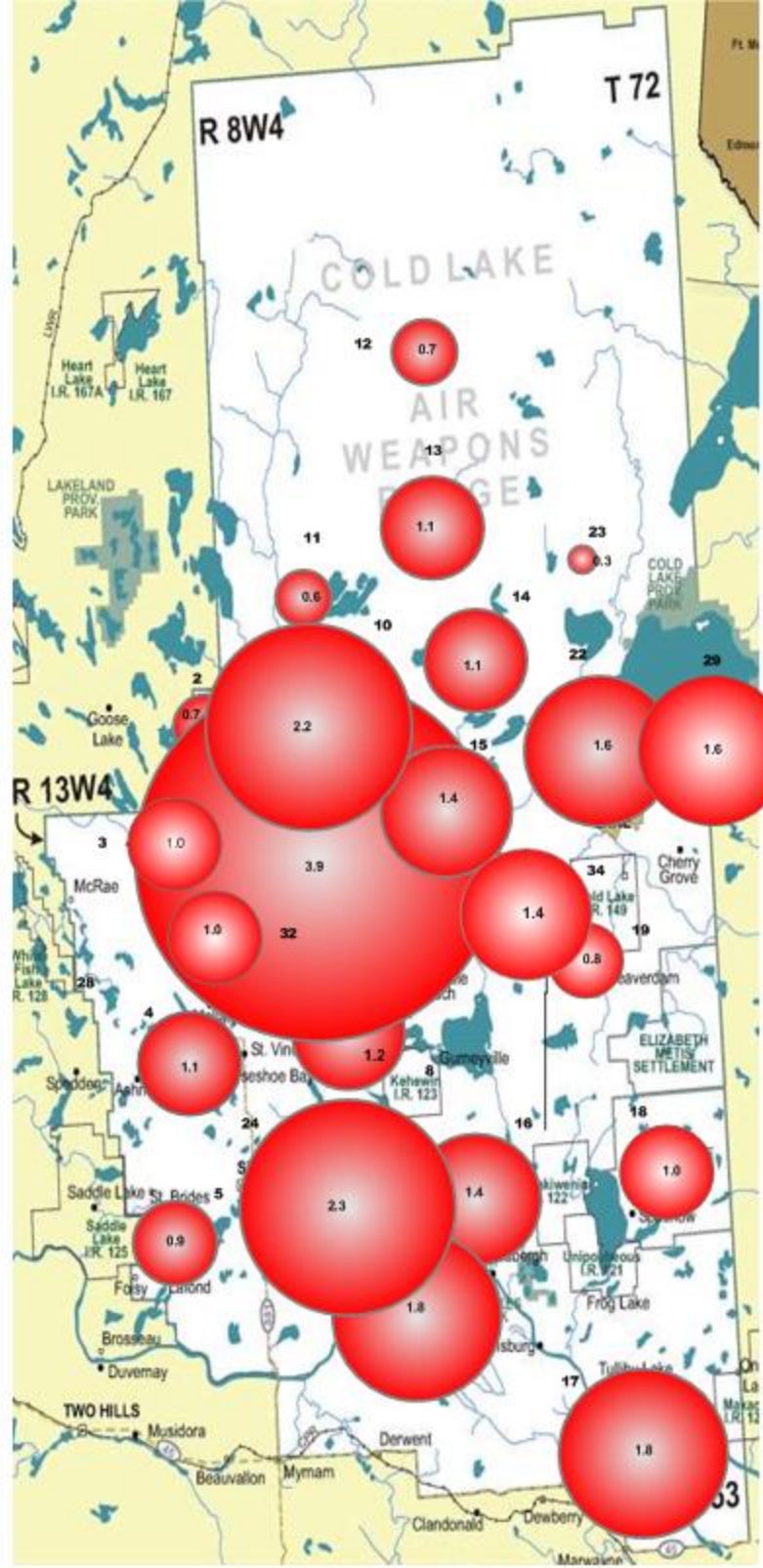
Minimum : 0.04 PPB – Wolf Lake
Maximum: 0.55 PPB – Mahkeses
Average: 0.11 PPB *Includes Duplicates



Lakeland Industry & Community Association
NO_2 Passive Bubble Map

OCTOBER 2010

PASSIVE STATIONS		DUPLICATE
2 – Sand River	0.6 PPB	0.7 PPB
3 – Therien	1.0 PPB	NA
4 – Flat Lake	1.2 PPB	0.9 PPB
5 – Lake Eliza	0.9 PPB	NA
6 – Telegraph Creek	1.6 PPB	1.9 PPB
8 – Muriel-Kehewin	1.2 PPB	NA
9 – Dupre	2.0 PPB	1.3 PPB
10 – La Corey	2.2 PPB	NA
11 – Wolf Lake	0.6 PPB	0.5 PPB
12 – Foster Creek	0.7 PPB	NA
13 – Primrose	1.1 PPB	1.1 PPB
14 – Maskwa	1.1 PPB	NA
15 – Ardmore	1.7 PPB	1.0 PPB
16 – Frog Lake	1.4 PPB	NA
17 – Clear Range	1.7 PPB	1.8 PPB
18 – Fishing Lake	1.0 PPB	NA
19 – Beaverdam	0.7 PPB	0.8 PPB
22 – Cold Lake South	1.6 PPB	NA
23 – Medley-Martineau	0.3 PPB	NA
24 – Fort George	1.9 PPB	2.7 PPB
28 – Town of Bonnyville	3.9 PPB	NA
29 – Cold Lake South 2	1.5 PPB	1.7 PPB
32 – St. Lina	1.0 PPB	NA
34 – Portable	1.4 PPB	NA



Summary

Minimum : 0.3 PPB – Medley-Martineau
Maximum: 3.9 PPB – Town of Bonnyville
Average: 1.4 PPB *Includes Duplicates

Lakeland Industry & Community Association
O_3 Passive Bubble Map

OCTOBER 2010

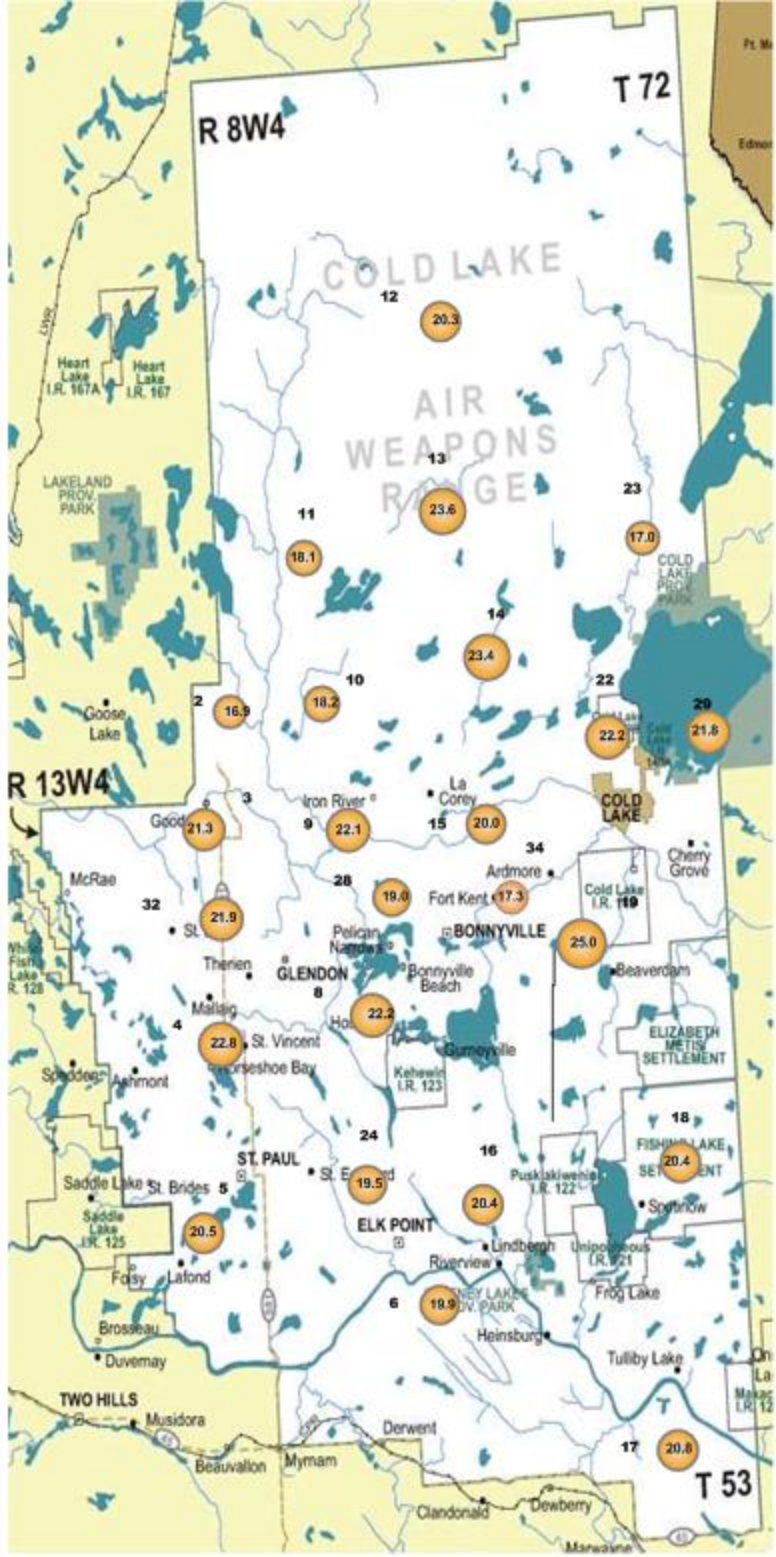
PASSIVE STATIONS

		DUPLICATE
2 – Sand River	16.9 PPB	17.1 PPB
3 – Therien	21.3 PPB	NA
4 – Flat Lake	23.0 PPB	22.6 PPB
5 – Lake Eliza	20.5 PPB	NA
6 – Telegraph Creek	19.4 PPB	20.4 PPB
8 – Muriel-Kehewin	22.2 PPB	NA
9 – Dupre	21.8 PPB	22.4 PPB
10 – La Corey	18.2 PPB	NA
11 – Wolf Lake	18.0 PPB	18.1 PPB
12 – Foster Creek	20.3 PPB	NA
13 – Primrose	23.4 PPB	23.8 PPB
14 – Maskwa	23.4 PPB	NA
15 – Ardmore	19.6 PPB	20.3 PPB
16 – Frog Lake	20.4 PPB	NA
17 – Clear Range	21.0 PPB	20.6 PPB
18 – Fishing Lake	20.4 PPB	NA
19 – Beaverdam	24.9 PPB	25.1 PPB
22 – Cold Lake South	22.2 PPB	NA
23 – Medley-Martineau	17.0 PPB	NA
24 – Fort George	19.9 PPB	19.1 PPB
28 – Town of Bonnyville	19.0 PPB	NA
29 – Cold Lake South 2	20.7 PPB	22.9 PPB
32 – St. Lina	27.2 PPB	NA
34 – Portable	20.6 PPB	NA

O_3 PPB

Summary

Minimum : 16.9 PPB –Sand River
Maximum: 27.2 PPB –St. Lina
Average: 21.0 PPB *Includes Duplicates



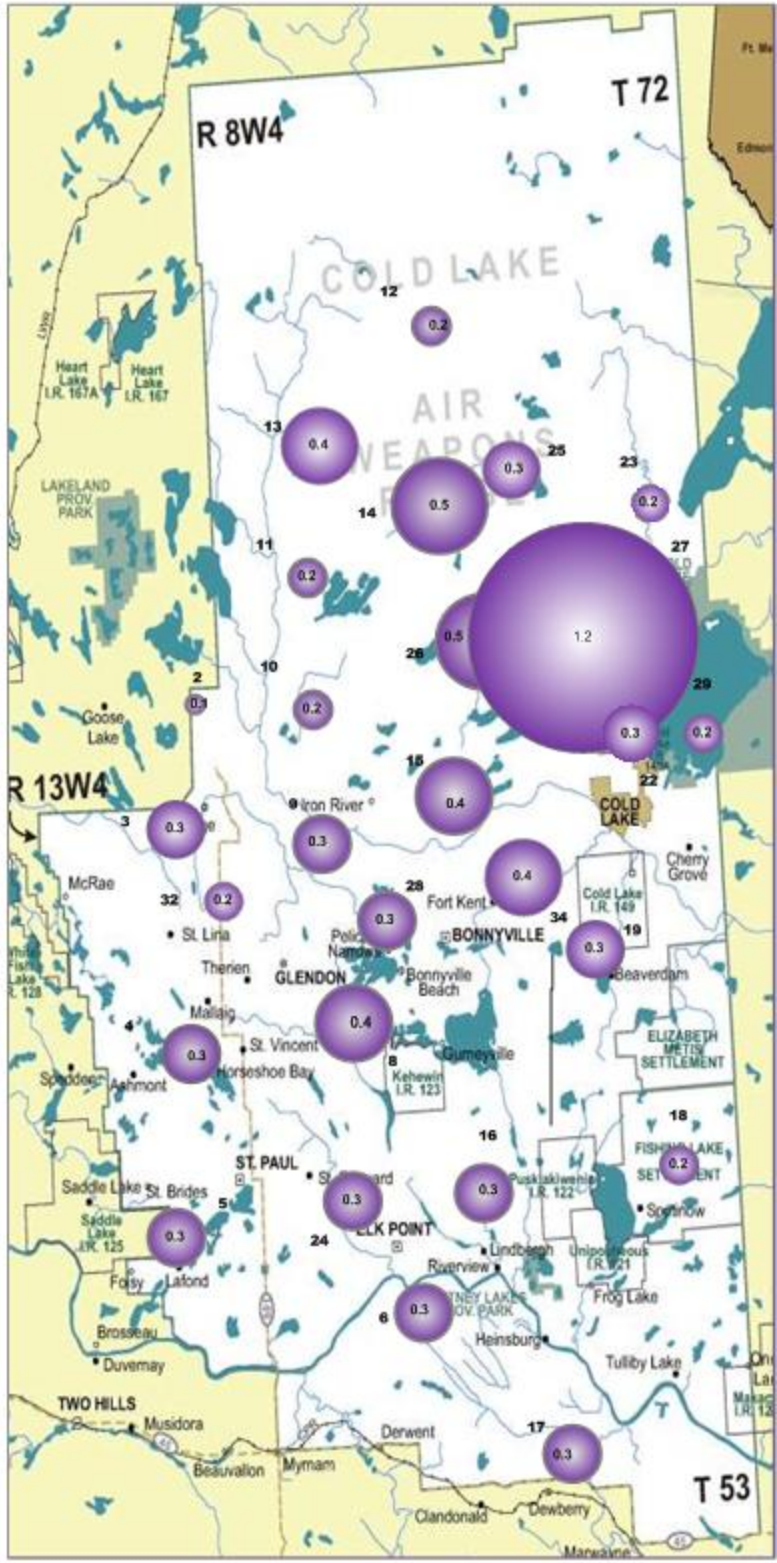
Lakeland Industry & Community Association
SO_2 Passive Bubble Map

OCTOBER 2010

PASSIVE STATIONS		DUPLICATE
2 – Sand River	0.1 PPB	0.1 PPB
3 – Therien	0.3 PPB	NA
4 – Flat Lake	0.3 PPB	0.3 PPB
5 – Lake Eliza	0.3 PPB	NA
6 – Telegraph Creek	0.3 PPB	0.3 PPB
8 – Muriel-Kehewin	0.4 PPB	NA
9 – Dupre	0.3 PPB	0.3 PPB
10 – La Corey	0.2 PPB	NA
11 – Wolf Lake	0.2 PPB	0.2 PPB
12 – Foster Creek	0.2 PPB	NA
13 – Primrose	0.4 PPB	0.3 PPB
14 – Maskwa	0.5 PPB	NA
15 – Ardmore	0.3 PPB	0.4 PPB
16 – Frog Lake	0.3 PPB	NA
17 – Clear Range	0.3 PPB	0.3 PPB
18 – Fishing Lake	0.2 PPB	NA
19 – Beaverdam	0.3 PPB	0.3 PPB
22 – Cold Lake South	0.3 PPB	NA
23 – Medley-Martineau	0.2 PPB	NA
24 – Fort George	0.2 PPB	0.4 PPB
25 – Burnt Lake	0.3 PPB	NA
26 – Mahikan	0.5 PPB	0.4 PPB
27 – Mahkeses	1.2 PPB	NA
28 – Town of Bonnyville	0.3 PPB	0.3 PPB
29 – Cold Lake South 2	0.1 PPB	MISSING
32 – St. Lina	0.2 PPB	NA
34 – Portable	0.4 PPB	NA

Summary

Minimum : 01 PPB – Sand River
Maximum: 1.2 PPB –Mahkeses
Average: 0.3 PPB *Includes Duplicates



Passive Field Data

Field Notes

ID	SAMPLER	START		END		NOTES
		DATE	TIME	DATE	TIME	
2	$SO_2/NO_2/O_3$	09/28/10	09:49	10/27/10	09:50	
2A (Dup)	$SO_2/NO_2/O_3$	09/28/10	09:49	10/27/10	09:50	
3	$H_2S/SO_2/NO_2/O_3$	09/28/10	09:05	10/27/10	09:05	
3A (Dup)	H_2S	09/28/10	09:05	10/27/10	09:05	
4	$SO_2/NO_2/O_3$	09/29/10	14:16	10/29/10	14:09	
4A (Dup)	$SO_2/NO_2/O_3$	09/29/10	14:16	10/29/10	14:09	
5	$H_2S/SO_2/NO_2/O_3$	09/29/10	13:27	10/29/10	13:20	
5A (Dup)	NA	NA	NA	NA	NA	
6	$SO_2/NO_2/O_3$	09/29/10	11:41	10/29/10	11:44	
6A (Dup)	$SO_2/NO_2/O_3$	09/29/10	11:41	10/29/10	11:44	
8	$SO_2/NO_2/O_3$	09/29/10	15:19	10/29/10	15:08	
8A (Dup)	NA	NA	NA	NA	NA	
9	$SO_2/NO_2/O_3$	09/27/10	14:17	10/28/10	10:56	
9A (Dup)	$SO_2/NO_2/O_3$	09/27/10	14:17	10/28/10	10:56	
10	$H_2S/SO_2/NO_2/O_3$	09/27/10	14:48	10/27/10	10:54	
10A (Dup)	NA	NA	NA	NA	NA	
11	$H_2S/SO_2/NO_2/O_3$	09/27/10	15:25	10/27/10	11:41	
11A (Dup)	$H_2S/SO_2/NO_2/O_3$	09/27/10	15:25	10/27/10	11:41	
12	$H_2S/SO_2/NO_2/O_3$	09/28/10	12:17	10/27/10	13:26	
12A (Dup)	NA	NA	NA	NA	NA	
13	$H_2S/SO_2/NO_2/O_3$	09/28/10	14:32	10/27/10	15:21	
13A (Dup)	$H_2S/SO_2/NO_2/O_3$	09/28/10	14:32	10/27/10	15:21	
14	$H_2S/SO_2/NO_2/O_3$	09/28/10	15:37	10/27/10	16:24	
14A (Dup)	NA	NA	NA	NA	NA	
15	$SO_2/NO_2/O_3$	09/27/10	11:55	10/28/10	13:09	
15A (Dup)	$SO_2/NO_2/O_3$	09/27/10	11:55	10/28/10	13:09	
16	$H_2S/SO_2/NO_2/O_3$	09/29/10	09:55	10/29/10	09:59	
16A (Dup)	H_2S	09/29/10	09:55	10/29/10	09:59	

ID	SAMPLER	START		END		NOTES
		DATE	TIME	DATE	TIME	
17	$H_2S/SO_2/NO_2/O_3$	09/29/10	10:54	10/29/10	10:52	
17A (Dup)	$SO_2/NO_2/O_3$	09/29/10	10:54	10/29/10	10:52	
18	$H_2S/SO_2/NO_2/O_3$	09/29/10	08:59	10/29/10	09:06	
18A (Dup)	H_2S	09/29/10	08:59	10/29/10	09:06	
19	$SO_2/NO_2/O_3$	09/29/10	07:44	10/29/10	07:49	
19A (Dup)	$SO_2/NO_2/O_3$	09/29/10	07:44	10/29/10	07:49	
22	$H_2S/SO_2/NO_2/O_3$	09/27/10	10:40	10/28/10	13:52	
22A (Dup)	NA	NA	NA	NA	NA	
23	$SO_2/NO_2/O_3$	09/27/10	17:00	10/28/10	09:25	
23A (Dup)	NA	NA	NA	NA	NA	
24	$H_2S/SO_2/NO_2/O_3$	09/29/10	12:24	10/29/10	12:28	
24A (Dup)	$SO_2/NO_2/O_3$	09/29/10	12:24	10/29/10	12:28	
25	H_2S/SO_2	09/28/10	13:58	10/27/10	14:51	
25A (Dup)	H_2S	09/28/10	13:58	10/27/10	14:51	
26	H_2S/SO_2	09/28/10	15:10	10/27/10	15:53	
26A (Dup)	SO_2	09/28/10	15:10	10/27/10	15:53	
27	H_2S/SO_2	09/28/10	15:58	10/27/10	16:41	
27A (Dup)	H_2S	09/28/10	15:58	10/27/10	16:41	
28	$SO_2/NO_2/O_3$	09/27/10	13:48	10/28/10	11:16	
28A (Dup)	SO_2	09/27/10	13:48	10/28/10	11:16	
29	$H_2S/SO_2/NO_2/O_3$	09/27/10	11:01	10/28/10	14:06	
29A (Dup)	NO_2/O_3	09/27/10	11:01	10/28/10	14:06	SO2 sample is missing.
32	$H_2S/SO_2/NO_2/O_3$	09/28/10	08:11	10/27/10	08:20	
32A(Dup)	NA	NA	NA	NA	NA	
34	$H_2S/SO_2/NO_2/O_3$	09/27/10	13:01	10/28/10	11:49	
34A(Dup)	NA	NA	NA	NA	NA	

Passive Network Laboratory Analysis

Maxxam

Your Project #: 2010/09/27 - 2010/10/27
Site:LICA

Attention: MICHAEL BISAGA
LAKELAND INDUSTRY AND COMMUNITY ASSOCIATION
PO BOX 8237
5107W- 50TH STREET
BONNYVILLE, AB
CANADA T9N 2J5

Report Date: 2010/11/10

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B0A6262
Received: 2010/11/02, 10:51

Sample Matrix: Air
Samples Received: 45

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
H2S Passive Analysis (1)	25	2010/11/05	2010/11/10	EINDSOP-00150	Tang.Passive H2S in
NO2 Passive Analysis (1)	35	2010/11/09	2010/11/10	EINDSOP-00148	Tang Passive NO2 in
O3 Passive Analysis (1)	35	2010/11/10	2010/11/10	EINDSOP-00197	EPA 300 R2.1
SO2 Passive Analysis (1)	40	2010/11/09	2010/11/10	EINDSOP-00149	Tang Passive SO2 in

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

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

Encryption Key

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

LEVI MANCHAK,
Email: LManchak@maxxam.ca
Phone# (780) 378-8500

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Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Total cover pages: 1

Maxxam Job #: B0A6262
Report Date: 2010/11/10

LAKELAND INDUSTRY AND COMMUNITY ASSOCIATION
Client Project #: 2010/09/27 - 2010/10/27
Site Reference: LICA
Sampler Initials: SB

RESULTS OF CHEMICAL ANALYSES OF AIR

Maxxam ID		Y12687	Y12688	Y12689	Y12690	Y12691		
Sampling Date		2010/09/28 09:49	2010/09/28 09:49	2010/09/28 09:05	2010/09/28 09:05	2010/09/29 14:16		
	Units	**2**	**2A (DUP)**	**3**	**3A (DUP)**	**4**	**RDL**	**QC Batch**
Passive Monitoring								
Calculated H2S	ppb			0.09	0.07		0.02	4401696
Calculated NO2	ppb	0.6	0.7	1.0		1.2	0.1	4411552
Calculated O3	ppb	16.7	17.1	21.3		23.0	0.1	4416038
Calculated SO2	ppb	0.1	0.1	0.3		0.3	0.1	4411567

RDL = Reportable Detection Limit

Maxxam ID		Y12692	Y12693	Y12694	Y12695	Y12696		
Sampling Date		2010/09/29 14:16	2010/09/29 13:27	2010/09/29 11:41	2010/09/29 11:41	2010/09/29 15:19		
	Units	**4A (DUP)**	**5**	**6**	**6A (DUP)**	**8**	**RDL**	**QC Batch**
Passive Monitoring								
Calculated H2S	ppb		0.13				0.02	4401696
Calculated NO2	ppb	0.9	0.9	1.6	1.9	1.2	0.1	4411552
Calculated O3	ppb	22.6	20.5	19.4	20.4	22.2	0.1	4416038
Calculated SO2	ppb	0.3	0.3	0.3	0.3	0.4	0.1	4411567

RDL = Reportable Detection Limit

Maxxam ID		Y12697	Y12698	Y12699	Y12700	Y12701		
Sampling Date		2010/09/27 14:17	2010/09/27 14:17	2010/09/27 14:48	2010/09/27 15:25	2010/09/27 15:25		
	Units	**9**	**9A (DUP)**	**10**	**11**	**11A (DUP)**	**RDL**	**QC Batch**
Passive Monitoring								
Calculated H2S	ppb			0.09	0.05	0.03	0.02	4401696
Calculated NO2	ppb	2.0	1.3	2.2	0.6	0.5	0.1	4411552
Calculated O3	ppb	21.8	22.4	18.2	18.0	18.1	0.1	4416038
Calculated SO2	ppb	0.3	0.3	0.2	0.2	0.2	0.1	4411567

RDL = Reportable Detection Limit

Maxxam Job #: B0A6262
Report Date: 2010/11/10

LAKELAND INDUSTRY AND COMMUNITY ASSOCIATION
Client Project #: 2010/09/27 - 2010/10/27
Site Reference: LICA
Sampler Initials: SB

RESULTS OF CHEMICAL ANALYSES OF AIR

Maxxam ID		Y12703		Y12705	Y12706	Y12707		
Sampling Date		2010/09/28 12:17		2010/09/28 14:32	2010/09/28 14:32	2010/09/28 14:37		
	Units	**12**	**QC Batch**	**13**	**13A (DUP)**	**14**	**RDL**	**QC Batch**
Passive Monitoring								
Calculated H2S	ppb	0.05	4401696	0.06	0.06	0.10	0.02	4401696
Calculated NO2	ppb	0.7	4411552	1.1	1.1	1.1	0.1	4411552
Calculated O3	ppb	20.3	4416038	23.4	23.8	23.4	0.1	4416039
Calculated SO2	ppb	0.2	4411567	0.4	0.3	0.5	0.1	4411567

RDL = Reportable Detection Limit

Maxxam ID		Y12708	Y12709	Y12710	Y12711	Y12712		
Sampling Date		2010/09/27 11:55	2010/09/27 11:55	2010/09/29 09:55	2010/09/29 09:55	2010/09/29 10:54		
	Units	**15**	**15A (DUP)**	**16**	**16A (DUP)**	**17**	**RDL**	**QC Batch**
Passive Monitoring								
Calculated H2S	ppb			0.09	0.09	0.12	0.02	4401696
Calculated NO2	ppb	1.7	1.0	1.4		1.7	0.1	4411554
Calculated O3	ppb	19.6	20.3	20.4		21.0	0.1	4416039
Calculated SO2	ppb	0.3	0.4	0.3		0.3	0.1	4411569

RDL = Reportable Detection Limit

Maxxam ID		Y12713	Y12714	Y12716	Y12718	Y12719		
Sampling Date		2010/09/29 10:54	2010/09/29 08:59	2010/09/29 08:59	2010/09/29 07:44	2010/09/29 07:44		
	Units	**17A (DUP)**	**18**	**18A (DUP)**	**19**	**19A (DUP)**	**RDL**	**QC Batch**
Passive Monitoring								
Calculated H2S	ppb		0.07	0.08			0.02	4401696
Calculated NO2	ppb	1.8	1.0		0.7	0.8	0.1	4411554
Calculated O3	ppb	20.6	20.4		24.9	25.1	0.1	4416039
Calculated SO2	ppb	0.3	0.2		0.3	0.3	0.1	4411569

RDL = Reportable Detection Limit

Maxxam Job #: B0A6262
Report Date: 2010/11/10

LAKELAND INDUSTRY AND COMMUNITY ASSOCIATION
Client Project #: 2010/09/27 - 2010/10/27
Site Reference: LICA
Sampler Initials: SB

RESULTS OF CHEMICAL ANALYSES OF AIR

Maxxam ID		Y12720	Y12721	Y12722	Y12723	Y12724		
Sampling Date		2010/09/27 10:40	2010/09/27 17:00	2010/09/29 12:24	2010/09/29 12:24	2010/09/28 13:58		
	Units	**22**	**23**	**24**	**24A (DUP)**	**25**	**RDL**	**QC Batch**
Passive Monitoring								
Calculated H2S	ppb	0.08		0.09		0.05	0.02	4401696
Calculated NO2	ppb	1.6	0.3	1.9	2.7		0.1	4411554
Calculated O3	ppb	22.2	17.0	19.9	19.1		0.1	4416039
Calculated SO2	ppb	0.3	0.2	0.2	0.4	0.3	0.1	4411569

RDL = Reportable Detection Limit

Maxxam ID		Y12725	Y12726	Y12727	Y12728	Y12729		
Sampling Date		2010/09/28 13:58	2010/09/28 15:10	2010/09/28 15:10	2010/09/28 15:58	2010/09/28 15:58		
	Units	**25A (DUP)**	**26**	**26A (DUP)**	**27**	**27A (DUP)**	**RDL**	**QC Batch**
Passive Monitoring								
Calculated H2S	ppb	0.05	0.11		0.55	0.54	0.02	4401696
Calculated SO2	ppb		0.5	0.4	1.2		0.1	4411569

RDL = Reportable Detection Limit

Maxxam ID		Y12730	Y12731	Y12732	Y12733	Y13059		
Sampling Date		2010/09/27 13:48	2010/09/27 13:48	2010/09/27 11:01	2010/09/27 11:01	2010/09/28 08:11		
	Units	**28**	**28A (DUP)**	**29**	**29A (DUP)**	**32**	**RDL**	**QC Batch**
Passive Monitoring								
Calculated H2S	ppb			0.08		0.08	0.02	4401696
Calculated NO2	ppb	3.9		1.5	1.7	1.0	0.1	4411554
Calculated O3	ppb	19.0		20.7	22.9	27.2	0.1	4416039
Calculated SO2	ppb	0.3	0.3	0.2	MISSING	0.2	0.1	4411569

RDL = Reportable Detection Limit

Maxxam Job #: B0A6262
Report Date: 2010/11/10

LAKELAND INDUSTRY AND COMMUNITY ASSOCIATION
Client Project #: 2010/09/27 - 2010/10/27
Site Reference: LICA
Sampler Initials: SB

RESULTS OF CHEMICAL ANALYSES OF AIR

Maxxam ID		Y13060		
Sampling Date		2010/09/27 13:01		
	Units	**34**	**RDL**	**QC Batch**
Passive Monitoring				
Calculated H2S	ppb	0.10	0.02	4401696
Calculated NO2	ppb	1.4	0.1	4411554
Calculated O3	ppb	20.6	0.1	4416039
Calculated SO2	ppb	0.4	0.1	4411569

RDL = Reportable Detection Limit

General Comments

Sample: Y12733 for SO2 parameter was returned to the lab. - DF

Results relate only to the items tested.

LAKELAND INDUSTRY AND COMMUNITY ASSOCIATION
Attention: MICHAEL BISAGA
Client Project #: 2010/09/27 - 2010/10/27
P.O. #:
Site Reference: LICA

Quality Assurance Report

Maxxam Job Number: PB0A6262

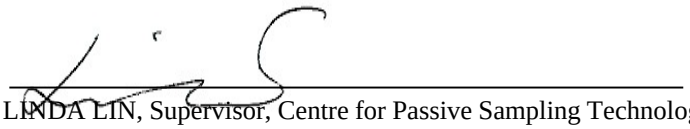
QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
4401696	TM5	Calibration Check	Calculated H2S	2010/11/05		103	%	80 - 120
		Spiked Blank	Calculated H2S	2010/11/05		100	%	N/A
4411552	DF4	Calibration Check	Calculated NO2	2010/11/09		99	%	76 - 118
		Spiked Blank	Calculated NO2	2010/11/09		96	%	N/A
		Method Blank	Calculated NO2	2010/11/09	<0.1		ppb	
4411554	DF4	Calibration Check	Calculated NO2	2010/11/09		98	%	76 - 118
		Spiked Blank	Calculated NO2	2010/11/09		97	%	N/A
		Method Blank	Calculated NO2	2010/11/09	<0.1		ppb	
4411567	DF4	Calibration Check	Calculated SO2	2010/11/09		102	%	95 - 105
		Spiked Blank	Calculated SO2	2010/11/09		99	%	N/A
		Method Blank	Calculated SO2	2010/11/09	<0.1		ppb	
4411569	DF4	Calibration Check	Calculated SO2	2010/11/09		102	%	95 - 105
		Spiked Blank	Calculated SO2	2010/11/09		99	%	N/A
		Method Blank	Calculated SO2	2010/11/09	<0.1		ppb	
4416038	OZ	Calibration Check	Calculated O3	2010/11/10		99	%	91 - 107
		Spiked Blank	Calculated O3	2010/11/10		100	%	N/A
		Method Blank	Calculated O3	2010/11/10	<0.1		ppb	
4416039	OZ	Calibration Check	Calculated O3	2010/11/10		99	%	91 - 107
		Spiked Blank	Calculated O3	2010/11/10		100	%	N/A
		Method Blank	Calculated O3	2010/11/10	<0.1		ppb	

Calibration Check: A calibration standard analyzed at different times to evaluate on-going calibration accuracy.
Spiked Blank: A blank matrix to which a known amount of the analyte has been added. Used to evaluate analyte recovery.
Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

Validation Signature Page

Maxxam Job #: B0A6262

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).



LINDA LIN, Supervisor, Centre for Passive Sampling Technology

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Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Volatile Organics Laboratory Analysis

Maxxam Analytics

Xontech Model 910A VOC Sample Collection Data Sheet

Client: LICA
Location: Cold Lake South
Station ID: Lica 1
Field Sample ID: LICA VOC/ CLS /Oct 05, 10

Sampler s/n: 6167
Canister ID: 7818
Canister Installation Date/Time: Oct 04, 2010 @ 14:04 mst
Canister Removal Date/Time: Oct 06, 2010 @ 7:33 mst

Date and Time Information			
Sample Date	Start Time (MST)	End Time (MST)	Elapsed Time (Hours)
05-Oct-10	05/10/2010 0:00	06/10/2010 0:00	24.00

Flow Settings		
Meter Reading (sccm)	Pot Set Pt.	Pump Pressure Setting (psig)
10.0	597	25

Canister Information	
Initial Canister Vacuum (inHg)	Final Canister Pressure (psig)
-28	20

Canister valve open prior to sampling?: YES / NO
Timer set to 0.00 minutes prior to sampling? YES / NO
Canister valve closed prior to disconnection?: YES / NO

Comments: System leak check prior to sampling. COC # 3476

Technician Signiture: Ting Xu

Your C.O.C. #: 3476

Attention: Michael Bisaga
Maxxam Analytics
2608 6A Ave.
Cold Lake, AB
CANADA T9M 2C7

Report Date: 2010/10/27

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B0E2421
Received: 2010/10/08, 10:41

Sample Matrix: AIR
Samples Received: 2

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Method Reference
Canister Pressure (TO-15)	2	N/A	2010/10/24	BRL SOP-00304	EPA TO-15
Volatile Organics in Air (TO-15) (1)	2	N/A	2010/10/24	BRL SOP-00304	EPA TO-15

(1) Air sampling canisters have been cleaned in accordance with U.S. EPA Method TO14A. At the end of the cleaning, evacuation, and pressurization cycles, one canister was selected and was pressurized with Zero Air. This canister was then analyzed via TO14A on a GC/MS. The canister must have been found to contain <0.2 ppbv concentration of all target analytes in order for the batch to have been considered clean. Each canister also underwent a leak check prior to shipment.

Please Note: SUMMA® canister samples will be retained by Maxxam for a period of 5 calendar days from the date of this report, after which time they will be cleaned for reuse. If you require a longer sample storage period, please contact your service representative.

Encryption Key

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

THERESA STEPHENSON, Project Manager
Email: TStephenson@maxxam.ca
Phone# (905) 817-5763

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Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Total cover pages: 1

Maxxam Analytics

Maxxam Job #: B0E2421
Report Date: 2010/10/27

RESULTS OF ANALYSES OF AIR

Maxxam ID		HL2133	HL2134	
Sampling Date		2010/10/05	2010/10/05	
COC Number		3476	3476	
	Units	**LICA VOC \ CLS \ OCT05,10 - 7818**	**LICA VOC \ PORT \ OCT05,10 - 7782**	**QC Batch**
Volatile Organics				
Pressure on Receipt	psig	20	21	2307729

QC Batch = Quality Control Batch

Maxxam Job #: B0E2421
Report Date: 2010/10/27

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		HL2133			HL2134				
Sampling Date		2010/10/05			2010/10/05				
COC Number		3476			3476				
	Units	**LICA VOC \ CLS \ OCT05,10 - 7818**	**ug/m3**	**DL (ug/m3)**	**LICA VOC \ PORT \ OCT05,10 - 7782**	**RDL**	**ug/m3**	**DL (ug/m3)**	**QC Batch**
Volatile Organics									
2,2,4-Trimethylpentane	ppbv	<0.20	<0.934	0.934	<0.20	0.20	<0.934	0.934	2307805
Carbon Disulfide	ppbv	<0.50	<1.56	1.56	<0.50	0.50	<1.56	1.56	2307805
Propene	ppbv	<0.30	<0.516	0.516	<0.30	0.30	<0.516	0.516	2307805
Vinyl Acetate	ppbv	<0.20	<0.704	0.704	<0.20	0.20	<0.704	0.704	2307805
Vinyl Bromide	ppbv	<0.20	<0.875	0.875	<0.20	0.20	<0.875	0.875	2307805
Dichlorodifluoromethane (FREON 12)	ppbv	0.65	3.20	0.989	0.65	0.20	3.20	0.989	2307805
1,2-Dichlorotetrafluoroethane	ppbv	<0.17	<1.19	1.19	<0.17	0.17	<1.19	1.19	2307805
Chloromethane	ppbv	0.51	1.05	0.620	0.49	0.30	1.02	0.620	2307805
Vinyl Chloride	ppbv	<0.18	<0.460	0.460	<0.18	0.18	<0.460	0.460	2307805
Chloroethane	ppbv	<0.30	<0.792	0.792	<0.30	0.30	<0.792	0.792	2307805
1,3-Butadiene	ppbv	<0.50	<1.11	1.11	<0.50	0.50	<1.11	1.11	2307805
Trichlorofluoromethane (FREON 11)	ppbv	0.27	1.51	1.12	0.27	0.20	1.54	1.12	2307805
Trichlorotrifluoroethane	ppbv	<0.15	<1.15	1.15	<0.15	0.15	<1.15	1.15	2307805
Ethanol	ppbv	<2.3	<4.33	4.33	<2.3	2.3	<4.33	4.33	2307805
2-propanol	ppbv	<3.0	<7.37	7.37	<3.0	3.0	<7.37	7.37	2307805
2-Propanone	ppbv	1.76	4.18	1.90	1.94	0.80	4.60	1.90	2307805
Methyl Ethyl Ketone (2-Butanone)	ppbv	<3.0	<8.85	8.85	<3.0	3.0	<8.85	8.85	2307805
Methyl Isobutyl Ketone	ppbv	<3.2	<13.1	13.1	<3.2	3.2	<13.1	13.1	2307805
Methyl Butyl Ketone (2-Hexanone)	ppbv	<2.0	<8.19	8.19	<2.0	2.0	<8.19	8.19	2307805
Methyl t-butyl ether (MTBE)	ppbv	<0.20	<0.721	0.721	<0.20	0.20	<0.721	0.721	2307805
Ethyl Acetate	ppbv	<2.2	<7.93	7.93	<2.2	2.2	<7.93	7.93	2307805
1,1-Dichloroethylene	ppbv	<0.25	<0.991	0.991	<0.25	0.25	<0.991	0.991	2307805
cis-1,2-Dichloroethylene	ppbv	<0.19	<0.753	0.753	<0.19	0.19	<0.753	0.753	2307805
trans-1,2-Dichloroethylene	ppbv	<0.20	<0.793	0.793	<0.20	0.20	<0.793	0.793	2307805
Methylene Chloride(Dichloromethane)	ppbv	0.39	1.36	1.04	0.38	0.30	1.34	1.04	2307805
Chloroform	ppbv	<0.15	<0.732	0.732	<0.15	0.15	<0.732	0.732	2307805
Carbon Tetrachloride	ppbv	<0.30	<1.89	1.89	<0.30	0.30	<1.89	1.89	2307805
1,1-Dichloroethane	ppbv	<0.20	<0.809	0.809	<0.20	0.20	<0.809	0.809	2307805
1,2-Dichloroethane	ppbv	<0.20	<0.809	0.809	<0.20	0.20	<0.809	0.809	2307805
Ethylene Dibromide	ppbv	<0.17	<1.31	1.31	<0.17	0.17	<1.31	1.31	2307805

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		HL2133			HL2134				
Sampling Date		2010/10/05			2010/10/05				
COC Number		3476			3476				
	Units	**LICA VOC \ CLS \ OCT05,10 - 7818**	**ug/m3**	**DL (ug/m3)**	**LICA VOC \ PORT \ OCT05,10 - 7782**	**RDL**	**ug/m3**	**DL (ug/m3)**	**QC Batch**
1,1,1-Trichloroethane	ppbv	<0.30	<1.64	1.64	<0.30	0.30	<1.64	1.64	2307805
1,1,2-Trichloroethane	ppbv	<0.15	<0.818	0.818	<0.15	0.15	<0.818	0.818	2307805
1,1,2,2-Tetrachloroethane	ppbv	<0.20	<1.37	1.37	<0.20	0.20	<1.37	1.37	2307805
cis-1,3-Dichloropropene	ppbv	<0.18	<0.817	0.817	<0.18	0.18	<0.817	0.817	2307805
trans-1,3-Dichloropropene	ppbv	<0.17	<0.772	0.772	<0.17	0.17	<0.772	0.772	2307805
1,2-Dichloropropane	ppbv	<0.40	<1.85	1.85	<0.40	0.40	<1.85	1.85	2307805
Bromomethane	ppbv	<0.18	<0.699	0.699	<0.18	0.18	<0.699	0.699	2307805
Bromoform	ppbv	<0.20	<2.07	2.07	<0.20	0.20	<2.07	2.07	2307805
Bromodichloromethane	ppbv	<0.20	<1.34	1.34	<0.20	0.20	<1.34	1.34	2307805
Dibromochloromethane	ppbv	<0.20	<1.70	1.70	<0.20	0.20	<1.70	1.70	2307805
Heptane	ppbv	<0.30	<1.23	1.23	<0.30	0.30	<1.23	1.23	2307805
Trichloroethylene	ppbv	<0.30	<1.61	1.61	<0.30	0.30	<1.61	1.61	2307805
Tetrachloroethylene	ppbv	<0.20	<1.36	1.36	<0.20	0.20	<1.36	1.36	2307805
Benzene	ppbv	<0.18	<0.575	0.575	<0.18	0.18	<0.575	0.575	2307805
Toluene	ppbv	<0.20	<0.753	0.753	<0.20	0.20	<0.753	0.753	2307805
Ethylbenzene	ppbv	<0.20	<0.868	0.868	<0.20	0.20	<0.868	0.868	2307805
p+m-Xylene	ppbv	<0.37	<1.61	1.61	<0.37	0.37	<1.61	1.61	2307805
o-Xylene	ppbv	<0.20	<0.868	0.868	<0.20	0.20	<0.868	0.868	2307805
Styrene	ppbv	<0.20	<0.852	0.852	<0.20	0.20	<0.852	0.852	2307805
1,3,5-Trimethylbenzene	ppbv	<0.50	<2.46	2.46	<0.50	0.50	<2.46	2.46	2307805
1,2,4-Trimethylbenzene	ppbv	<0.50	<2.46	2.46	<0.50	0.50	<2.46	2.46	2307805
4-ethyltoluene	ppbv	<2.2	<10.8	10.8	<2.2	2.2	<10.8	10.8	2307805
Chlorobenzene	ppbv	<0.20	<0.921	0.921	<0.20	0.20	<0.921	0.921	2307805
Benzyl chloride	ppbv	<1.0	<5.18	5.18	<1.0	1.0	<5.18	5.18	2307805
1,3-Dichlorobenzene	ppbv	<0.40	<2.40	2.40	<0.40	0.40	<2.40	2.40	2307805
1,4-Dichlorobenzene	ppbv	<0.40	<2.40	2.40	<0.40	0.40	<2.40	2.40	2307805
1,2-Dichlorobenzene	ppbv	<0.40	<2.40	2.40	<0.40	0.40	<2.40	2.40	2307805
1,2,4-Trichlorobenzene	ppbv	<2.0	<14.8	14.8	<2.0	2.0	<14.8	14.8	2307805
Hexachlorobutadiene	ppbv	<3.0	<32.0	32.0	<3.0	3.0	<32.0	32.0	2307805
Hexane	ppbv	<0.30	<1.06	1.06	<0.30	0.30	<1.06	1.06	2307805
Cyclohexane	ppbv	<0.20	<0.688	0.688	<0.20	0.20	<0.688	0.688	2307805
Tetrahydrofuran	ppbv	<0.40	<1.18	1.18	<0.40	0.40	<1.18	1.18	2307805

QC Batch = Quality Control Batch

Maxxam Analytics

Maxxam Job #: B0E2421
Report Date: 2010/10/27

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		HL2133			HL2134				
Sampling Date		2010/10/05			2010/10/05				
COC Number		3476			3476				
	Units	**LICA VOC \ CLS \ OCT05,10 - 7818**	**ug/m3**	**DL (ug/m3)**	**LICA VOC \ PORT \ OCT05,10 - 7782**	**RDL**	**ug/m3**	**DL (ug/m3)**	**QC Batch**
1,4-Dioxane	ppbv	<2.0	<7.21	7.21	<2.0	2.0	<7.21	7.21	2307805
Xylene (Total)	ppbv	<0.60	<2.61	2.61	<0.60	0.60	<2.61	2.61	2307805
Surrogate Recovery (%)									
Bromochloromethane	%	68	N/A	N/A	66		N/A	N/A	2307805
D5-Chlorobenzene	%	63	N/A	N/A	61		N/A	N/A	2307805
Difluorobenzene	%	69	N/A	N/A	67		N/A	N/A	2307805

N/A = Not Applicable
QC Batch = Quality Control Batch

Maxxam Analytics

Maxxam Job #: B0E2421
Report Date: 2010/10/27

Test Summary

Maxxam ID	HL2133	**Collected**	2010/10/05
Sample ID	LICA VOC \ CLS \ OCT05,10 - 7818	**Shipped**	
Matrix	AIR	**Received**	2010/10/08

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Canister Pressure (TO-15)	PRES	2307729	N/A	2010/10/24	LSY
Volatile Organics in Air (TO-15)	GC/MS	2307805	N/A	2010/10/24	LSY

Maxxam ID	HL2134	**Collected**	2010/10/05
Sample ID	LICA VOC \ PORT \ OCT05,10 - 7782	**Shipped**	
Matrix	AIR	**Received**	2010/10/08

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Canister Pressure (TO-15)	PRES	2307729	N/A	2010/10/24	LSY
Volatile Organics in Air (TO-15)	GC/MS	2307805	N/A	2010/10/24	LSY

GENERAL COMMENTS

Results relate only to the items tested.

Maxxam Analytics
Attention: Michael Bisaga
Client Project #:
P.O. #:
Project name:

Quality Assurance Report

Maxxam Job Number: GB0E2421

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2307805	LSY	Spiked Blank	Bromochloromethane	2010/10/24		106	%	60 - 140
			D5-Chlorobenzene	2010/10/24		107	%	60 - 140
			Difluorobenzene	2010/10/24		109	%	60 - 140
			2,2,4-Trimethylpentane	2010/10/24		103	%	70 - 130
			Carbon Disulfide	2010/10/24		97	%	70 - 130
			Propene	2010/10/24		101	%	70 - 130
			Vinyl Acetate	2010/10/24		122	%	70 - 130
			Vinyl Bromide	2010/10/24		102	%	70 - 130
			Dichlorodifluoromethane (FREON 12)	2010/10/24		95	%	70 - 130
			1,2-Dichlorotetrafluoroethane	2010/10/24		116	%	70 - 130
			Chloromethane	2010/10/24		101	%	70 - 130
			Vinyl Chloride	2010/10/24		100	%	70 - 130
			Chloroethane	2010/10/24		94	%	70 - 130
			1,3-Butadiene	2010/10/24		103	%	70 - 130
			Trichlorofluoromethane (FREON 11)	2010/10/24		92	%	70 - 130
			Trichlorotrifluoroethane	2010/10/24		89	%	70 - 130
			Ethanol	2010/10/24		105	%	70 - 130
			2-propanol	2010/10/24		110	%	70 - 130
			2-Propanone	2010/10/24		106	%	70 - 130
			Methyl Ethyl Ketone (2-Butanone)	2010/10/24		117	%	70 - 130
			Methyl Isobutyl Ketone	2010/10/24		108	%	70 - 130
			Methyl Butyl Ketone (2-Hexanone)	2010/10/24		109	%	70 - 130
			Methyl t-butyl ether (MTBE)	2010/10/24		111	%	70 - 130
			Ethyl Acetate	2010/10/24		109	%	70 - 130
			1,1-Dichloroethylene	2010/10/24		98	%	70 - 130
			cis-1,2-Dichloroethylene	2010/10/24		100	%	70 - 130
			trans-1,2-Dichloroethylene	2010/10/24		101	%	70 - 130
			Methylene Chloride(Dichloromethane)	2010/10/24		97	%	70 - 130
			Chloroform	2010/10/24		93	%	70 - 130
			Carbon Tetrachloride	2010/10/24		98	%	70 - 130
			1,1-Dichloroethane	2010/10/24		97	%	70 - 130
			1,2-Dichloroethane	2010/10/24		96	%	70 - 130
			Ethylene Dibromide	2010/10/24		101	%	70 - 130
			1,1,1-Trichloroethane	2010/10/24		98	%	70 - 130
			1,1,2-Trichloroethane	2010/10/24		99	%	70 - 130
			1,1,2,2-Tetrachloroethane	2010/10/24		88	%	70 - 130
			cis-1,3-Dichloropropene	2010/10/24		111	%	70 - 130
			trans-1,3-Dichloropropene	2010/10/24		122	%	70 - 130
			1,2-Dichloropropane	2010/10/24		98	%	70 - 130
			Bromomethane	2010/10/24		91	%	70 - 130
			Bromoform	2010/10/24		120	%	70 - 130
			Bromodichloromethane	2010/10/24		105	%	70 - 130
			Dibromochloromethane	2010/10/24		120	%	70 - 130
			Heptane	2010/10/24		105	%	70 - 130
			Trichloroethylene	2010/10/24		93	%	70 - 130
			Tetrachloroethylene	2010/10/24		96	%	70 - 130
			Benzene	2010/10/24		98	%	70 - 130
			Toluene	2010/10/24		106	%	70 - 130
			Ethylbenzene	2010/10/24		96	%	70 - 130
			p+m-Xylene	2010/10/24		94	%	70 - 130
			o-Xylene	2010/10/24		93	%	70 - 130
			Styrene	2010/10/24		100	%	70 - 130
			1,3,5-Trimethylbenzene	2010/10/24		92	%	70 - 130
			1,2,4-Trimethylbenzene	2010/10/24		91	%	70 - 130
			4-ethyltoluene	2010/10/24		101	%	70 - 130

Maxxam Analytics
Attention: Michael Bisaga
Client Project #:
P.O. #:
Project name:

Quality Assurance Report (Continued)

Maxxam Job Number: GB0E2421

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2307805	LSY	Spiked Blank	Chlorobenzene	2010/10/24		84	%	70 - 130
			Benzyl chloride	2010/10/24		114	%	70 - 130
			1,3-Dichlorobenzene	2010/10/24		85	%	70 - 130
			1,4-Dichlorobenzene	2010/10/24		85	%	70 - 130
			1,2-Dichlorobenzene	2010/10/24		85	%	70 - 130
			1,2,4-Trichlorobenzene	2010/10/24		75	%	70 - 130
			Hexachlorobutadiene	2010/10/24		76	%	70 - 130
			Hexane	2010/10/24		98	%	70 - 130
			Cyclohexane	2010/10/24		103	%	70 - 130
			Tetrahydrofuran	2010/10/24		111	%	70 - 130
			1,4-Dioxane	2010/10/24		102	%	70 - 130
		Method Blank	Bromochloromethane	2010/10/24		83	%	60 - 140
			D5-Chlorobenzene	2010/10/24		76	%	60 - 140
			Difluorobenzene	2010/10/24		87	%	60 - 140
			2,2,4-Trimethylpentane	2010/10/24	<0.20		ppbv	
			Carbon Disulfide	2010/10/24	<0.50		ppbv	
			Propene	2010/10/24	<0.30		ppbv	
			Vinyl Acetate	2010/10/24	<0.20		ppbv	
			Vinyl Bromide	2010/10/24	<0.20		ppbv	
			Dichlorodifluoromethane (FREON 12)	2010/10/24	<0.20		ppbv	
			1,2-Dichlorotetrafluoroethane	2010/10/24	<0.17		ppbv	
			Chloromethane	2010/10/24	<0.30		ppbv	
			Vinyl Chloride	2010/10/24	<0.18		ppbv	
			Chloroethane	2010/10/24	<0.30		ppbv	
			1,3-Butadiene	2010/10/24	<0.50		ppbv	
			Trichlorofluoromethane (FREON 11)	2010/10/24	<0.20		ppbv	
			Trichlorotrifluoroethane	2010/10/24	<0.15		ppbv	
			Ethanol	2010/10/24	<2.3		ppbv	
			2-propanol	2010/10/24	<3.0		ppbv	
			2-Propanone	2010/10/24	<0.80		ppbv	
			Methyl Ethyl Ketone (2-Butanone)	2010/10/24	<3.0		ppbv	
			Methyl Isobutyl Ketone	2010/10/24	<3.2		ppbv	
			Methyl Butyl Ketone (2-Hexanone)	2010/10/24	<2.0		ppbv	
			Methyl t-butyl ether (MTBE)	2010/10/24	<0.20		ppbv	
			Ethyl Acetate	2010/10/24	<2.2		ppbv	
			1,1-Dichloroethylene	2010/10/24	<0.25		ppbv	
			cis-1,2-Dichloroethylene	2010/10/24	<0.19		ppbv	
			trans-1,2-Dichloroethylene	2010/10/24	<0.20		ppbv	
			Methylene Chloride(Dichloromethane)	2010/10/24	0.31, RDL=0.30		ppbv	
			Chloroform	2010/10/24	<0.15		ppbv	
			Carbon Tetrachloride	2010/10/24	<0.30		ppbv	
			1,1-Dichloroethane	2010/10/24	<0.20		ppbv	
			1,2-Dichloroethane	2010/10/24	<0.20		ppbv	
			Ethylene Dibromide	2010/10/24	<0.17		ppbv	
			1,1,1-Trichloroethane	2010/10/24	<0.30		ppbv	
			1,1,2-Trichloroethane	2010/10/24	<0.15		ppbv	
			1,1,2,2-Tetrachloroethane	2010/10/24	<0.20		ppbv	
			cis-1,3-Dichloropropene	2010/10/24	<0.18		ppbv	
			trans-1,3-Dichloropropene	2010/10/24	<0.17		ppbv	
			1,2-Dichloropropane	2010/10/24	<0.40		ppbv	
			Bromomethane	2010/10/24	<0.18		ppbv	
			Bromoform	2010/10/24	<0.20		ppbv	
			Bromodichloromethane	2010/10/24	<0.20		ppbv	
			Dibromochloromethane	2010/10/24	<0.20		ppbv	
			Heptane	2010/10/24	<0.30		ppbv	

Maxxam Analytics
Attention: Michael Bisaga
Client Project #:
P.O. #:
Project name:

Quality Assurance Report (Continued)

Maxxam Job Number: GB0E2421

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2307805	LSY	Method Blank	Trichloroethylene	2010/10/24	<0.30		ppbv	
			Tetrachloroethylene	2010/10/24	<0.20		ppbv	
			Benzene	2010/10/24	<0.18		ppbv	
			Toluene	2010/10/24	<0.20		ppbv	
			Ethylbenzene	2010/10/24	<0.20		ppbv	
			p+m-Xylene	2010/10/24	<0.37		ppbv	
			o-Xylene	2010/10/24	<0.20		ppbv	
			Styrene	2010/10/24	<0.20		ppbv	
			1,3,5-Trimethylbenzene	2010/10/24	<0.50		ppbv	
			1,2,4-Trimethylbenzene	2010/10/24	<0.50		ppbv	
			4-ethyltoluene	2010/10/24	<2.2		ppbv	
			Chlorobenzene	2010/10/24	<0.20		ppbv	
			Benzyl chloride	2010/10/24	<1.0		ppbv	
			1,3-Dichlorobenzene	2010/10/24	<0.40		ppbv	
			1,4-Dichlorobenzene	2010/10/24	<0.40		ppbv	
			1,2-Dichlorobenzene	2010/10/24	<0.40		ppbv	
			1,2,4-Trichlorobenzene	2010/10/24	<2.0		ppbv	
			Hexachlorobutadiene	2010/10/24	<3.0		ppbv	
			Hexane	2010/10/24	<0.30		ppbv	
			Cyclohexane	2010/10/24	<0.20		ppbv	
			Tetrahydrofuran	2010/10/24	<0.40		ppbv	
			1,4-Dioxane	2010/10/24	<2.0		ppbv	
			Xylene (Total)	2010/10/24	<0.60		ppbv	

Spiked Blank: A blank matrix to which a known amount of the analyte has been added. Used to evaluate analyte recovery.
Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.
Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.

Maxxam Analytics

Xontech Model 910A VOC Sample Collection Data Sheet

Client: LICA
Location: Cold Lake South
Station ID: Lica 1
Field Sample ID: LICA VOC/ CLS /Oct 11, 10

Sampler s/n: 6167
Canister ID: 7831
Canister Installation Date/Time: Oct 08, 2010 @ 7:20 mst
Canister Removal Date/Time: Oct 12, 2010 @ 7:24 mst

Date and Time Information			
Sample Date	Start Time (MST)	End Time (MST)	Elapsed Time (Hours)
11-Oct-10	11/10/2010 0:00	12/10/2010 0:00	24.00

Flow Settings		
Meter Reading (sccm)	Pot Set Pt.	Pump Pressure Setting (psig)
10.0	597	25

Canister Information	
Initial Canister Vacuum (inHg)	Final Canister Pressure (psig)
-28	20

Canister valve open prior to sampling?: YES / NO
Timer set to 0.00 minutes prior to sampling? YES / NO
Canister valve closed prior to disconnection?: YES / NO

Comments: System leak check prior to sampling. COC # 2323

Technician Signiture: Ting Xu

Your C.O.C. #: 2323

Attention: Michael Bisaga
Maxxam Analytics
2608 6A Ave.
Cold Lake, AB
CANADA T9M 2C7

Report Date: 2010/10/28

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B0E4926
Received: 2010/10/14, 10:15

Sample Matrix: AIR
Samples Received: 2

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Method Reference
Canister Pressure (TO-15)	2	N/A	2010/10/26	BRL SOP-00304	EPA TO-15
Volatile Organics in Air (TO-15) (1)	2	N/A	2010/10/26	BRL SOP-00304	EPA TO-15

(1) Air sampling canisters have been cleaned in accordance with U.S. EPA Method TO14A. At the end of the cleaning, evacuation, and pressurization cycles, one canister was selected and was pressurized with Zero Air. This canister was then analyzed via TO14A on a GC/MS. The canister must have been found to contain <0.2 ppbv concentration of all target analytes in order for the batch to have been considered clean. Each canister also underwent a leak check prior to shipment.

Please Note: SUMMA® canister samples will be retained by Maxxam for a period of 5 calendar days from the date of this report, after which time they will be cleaned for reuse. If you require a longer sample storage period, please contact your service representative.

Encryption Key

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

THERESA STEPHENSON, Project Manager
Email: TStephenson@maxxam.ca
Phone# (905) 817-5763

==========

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. For Service Group specific validation please refer to the Validation Signature Page.

Total cover pages: 1

Maxxam Analytics

Maxxam Job #: B0E4926
Report Date: 2010/10/28

RESULTS OF ANALYSES OF AIR

Maxxam ID		HM4633	HM4634	
Sampling Date		2010/10/11	2010/10/11	
COC Number		2323	2323	
	Units	**LICA VOC/CLS/OCT 11, 2010 - 7831**	**LICA VOC/PORT/OCT 11, 2010 - 7857**	**QC Batch**
Volatile Organics				
Pressure on Receipt	psig	20	21	2309731

QC Batch = Quality Control Batch

Maxxam Analytics International Corporation o/a Maxxam Analytics 6740 Campobello Road, Mississauga, Ontario, L5N 2L8 Tel: (905) 817-5700 Toll-Free: 800-563-6266 Fax: (905) 817-5777 www.maxxam.ca

Maxxam Analytics

Maxxam Job #: B0E4926
Report Date: 2010/10/28

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		HM4633			HM4634				
Sampling Date		2010/10/11			2010/10/11				
COC Number		2323			2323				
	Units	**LICA VOC/CLS/OCT 11, 2010 - 7831**	**ug/m3**	**DL (ug/m3)**	**LICA VOC/PORT/OCT 11, 2010 - 7857**	**RDL**	**ug/m3**	**DL (ug/m3)**	**QC Batch**
Volatile Organics									
2,2,4-Trimethylpentane	ppbv	<0.20	<0.934	0.934	<0.20	0.20	<0.934	0.934	2309736
Carbon Disulfide	ppbv	<0.50	<1.56	1.56	<0.50	0.50	<1.56	1.56	2309736
Propene	ppbv	<0.30	<0.516	0.516	<0.30	0.30	<0.516	0.516	2309736
Vinyl Acetate	ppbv	<0.20	<0.704	0.704	<0.20	0.20	<0.704	0.704	2309736
Vinyl Bromide	ppbv	<0.20	<0.875	0.875	<0.20	0.20	<0.875	0.875	2309736
Dichlorodifluoromethane (FREON 12)	ppbv	0.65	3.20	0.989	0.89	0.20	4.38	0.989	2309736
1,2-Dichlorotetrafluoroethane	ppbv	<0.17	<1.19	1.19	<0.17	0.17	<1.19	1.19	2309736
Chloromethane	ppbv	0.53	1.10	0.620	0.71	0.30	1.47	0.620	2309736
Vinyl Chloride	ppbv	<0.18	<0.460	0.460	<0.18	0.18	<0.460	0.460	2309736
Chloroethane	ppbv	<0.30	<0.792	0.792	<0.30	0.30	<0.792	0.792	2309736
1,3-Butadiene	ppbv	<0.50	<1.11	1.11	<0.50	0.50	<1.11	1.11	2309736
Trichlorofluoromethane (FREON 11)	ppbv	0.29	1.63	1.12	0.40	0.20	2.27	1.12	2309736
Trichlorotrifluoroethane	ppbv	<0.15	<1.15	1.15	0.15	0.15	1.15	1.15	2309736
Ethanol	ppbv	<2.3	<4.33	4.33	<2.3	2.3	<4.33	4.33	2309736
2-propanol	ppbv	<3.0	<7.37	7.37	<3.0	3.0	<7.37	7.37	2309736
2-Propanone	ppbv	1.58	3.74	1.90	2.04	0.80	4.84	1.90	2309736
Methyl Ethyl Ketone (2-Butanone)	ppbv	<3.0	<8.85	8.85	<3.0	3.0	<8.85	8.85	2309736
Methyl Isobutyl Ketone	ppbv	<3.2	<13.1	13.1	<3.2	3.2	<13.1	13.1	2309736
Methyl Butyl Ketone (2-Hexanone)	ppbv	<2.0	<8.19	8.19	<2.0	2.0	<8.19	8.19	2309736
Methyl t-butyl ether (MTBE)	ppbv	<0.20	<0.721	0.721	<0.20	0.20	<0.721	0.721	2309736
Ethyl Acetate	ppbv	<2.2	<7.93	7.93	<2.2	2.2	<7.93	7.93	2309736
1,1-Dichloroethylene	ppbv	<0.25	<0.991	0.991	<0.25	0.25	<0.991	0.991	2309736
cis-1,2-Dichloroethylene	ppbv	<0.19	<0.753	0.753	<0.19	0.19	<0.753	0.753	2309736
trans-1,2-Dichloroethylene	ppbv	<0.20	<0.793	0.793	<0.20	0.20	<0.793	0.793	2309736
Methylene Chloride(Dichloromethane)	ppbv	0.75	2.60	1.04	0.81	0.30	2.80	1.04	2309736
Chloroform	ppbv	<0.15	<0.732	0.732	<0.15	0.15	<0.732	0.732	2309736
Carbon Tetrachloride	ppbv	<0.30	<1.89	1.89	<0.30	0.30	<1.89	1.89	2309736
1,1-Dichloroethane	ppbv	<0.20	<0.809	0.809	<0.20	0.20	<0.809	0.809	2309736
1,2-Dichloroethane	ppbv	<0.20	<0.809	0.809	<0.20	0.20	<0.809	0.809	2309736
Ethylene Dibromide	ppbv	<0.17	<1.31	1.31	<0.17	0.17	<1.31	1.31	2309736

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Maxxam Job #: B0E4926
Report Date: 2010/10/28

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		HM4633			HM4634				
Sampling Date		2010/10/11			2010/10/11				
COC Number		2323			2323				
	Units	**LICA VOC/CLS/OCT 11, 2010 - 7831**	**ug/m3**	**DL (ug/m3)**	**LICA VOC/PORT/OCT 11, 2010 - 7857**	**RDL**	**ug/m3**	**DL (ug/m3)**	**QC Batch**
1,1,1-Trichloroethane	ppbv	<0.30	<1.64	1.64	<0.30	0.30	<1.64	1.64	2309736
1,1,2-Trichloroethane	ppbv	<0.15	<0.818	0.818	<0.15	0.15	<0.818	0.818	2309736
1,1,2,2-Tetrachloroethane	ppbv	<0.20	<1.37	1.37	<0.20	0.20	<1.37	1.37	2309736
cis-1,3-Dichloropropene	ppbv	<0.18	<0.817	0.817	<0.18	0.18	<0.817	0.817	2309736
trans-1,3-Dichloropropene	ppbv	<0.17	<0.772	0.772	<0.17	0.17	<0.772	0.772	2309736
1,2-Dichloropropane	ppbv	<0.40	<1.85	1.85	<0.40	0.40	<1.85	1.85	2309736
Bromomethane	ppbv	<0.18	<0.699	0.699	<0.18	0.18	<0.699	0.699	2309736
Bromoform	ppbv	<0.20	<2.07	2.07	<0.20	0.20	<2.07	2.07	2309736
Bromodichloromethane	ppbv	<0.20	<1.34	1.34	<0.20	0.20	<1.34	1.34	2309736
Dibromochloromethane	ppbv	<0.20	<1.70	1.70	<0.20	0.20	<1.70	1.70	2309736
Heptane	ppbv	<0.30	<1.23	1.23	<0.30	0.30	<1.23	1.23	2309736
Trichloroethylene	ppbv	<0.30	<1.61	1.61	<0.30	0.30	<1.61	1.61	2309736
Tetrachloroethylene	ppbv	<0.20	<1.36	1.36	<0.20	0.20	<1.36	1.36	2309736
Benzene	ppbv	<0.18	<0.575	0.575	<0.18	0.18	<0.575	0.575	2309736
Toluene	ppbv	<0.20	<0.753	0.753	<0.20	0.20	<0.753	0.753	2309736
Ethylbenzene	ppbv	<0.20	<0.868	0.868	<0.20	0.20	<0.868	0.868	2309736
p+m-Xylene	ppbv	<0.37	<1.61	1.61	<0.37	0.37	<1.61	1.61	2309736
o-Xylene	ppbv	<0.20	<0.868	0.868	<0.20	0.20	<0.868	0.868	2309736
Styrene	ppbv	<0.20	<0.852	0.852	<0.20	0.20	<0.852	0.852	2309736
1,3,5-Trimethylbenzene	ppbv	<0.50	<2.46	2.46	<0.50	0.50	<2.46	2.46	2309736
1,2,4-Trimethylbenzene	ppbv	<0.50	<2.46	2.46	<0.50	0.50	<2.46	2.46	2309736
4-ethyltoluene	ppbv	<2.2	<10.8	10.8	<2.2	2.2	<10.8	10.8	2309736
Chlorobenzene	ppbv	<0.20	<0.921	0.921	<0.20	0.20	<0.921	0.921	2309736
Benzyl chloride	ppbv	<1.0	<5.18	5.18	<1.0	1.0	<5.18	5.18	2309736
1,3-Dichlorobenzene	ppbv	<0.40	<2.40	2.40	<0.40	0.40	<2.40	2.40	2309736
1,4-Dichlorobenzene	ppbv	<0.40	<2.40	2.40	<0.40	0.40	<2.40	2.40	2309736
1,2-Dichlorobenzene	ppbv	<0.40	<2.40	2.40	<0.40	0.40	<2.40	2.40	2309736
1,2,4-Trichlorobenzene	ppbv	<2.0	<14.8	14.8	<2.0	2.0	<14.8	14.8	2309736
Hexachlorobutadiene	ppbv	<3.0	<32.0	32.0	<3.0	3.0	<32.0	32.0	2309736
Hexane	ppbv	<0.30	<1.06	1.06	<0.30	0.30	<1.06	1.06	2309736
Cyclohexane	ppbv	<0.20	<0.688	0.688	<0.20	0.20	<0.688	0.688	2309736
Tetrahydrofuran	ppbv	<0.40	<1.18	1.18	<0.40	0.40	<1.18	1.18	2309736

QC Batch = Quality Control Batch

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Maxxam Analytics

Maxxam Job #: B0E4926
Report Date: 2010/10/28

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		HM4633			HM4634				
Sampling Date		2010/10/11			2010/10/11				
COC Number		2323			2323				
	Units	**LICA VOC/CLS/OCT 11, 2010 - 7831**	**ug/m3**	**DL (ug/m3)**	**LICA VOC/PORT/OCT 11, 2010 - 7857**	**RDL**	**ug/m3**	**DL (ug/m3)**	**QC Batch**
1,4-Dioxane	ppbv	<2.0	<7.21	7.21	<2.0	2.0	<7.21	7.21	2309736
Xylene (Total)	ppbv	<0.60	<2.61	2.61	<0.60	0.60	<2.61	2.61	2309736
Surrogate Recovery (%)									
Bromochloromethane	%	88	N/A	N/A	90		N/A	N/A	2309736
D5-Chlorobenzene	%	88	N/A	N/A	95		N/A	N/A	2309736
Difluorobenzene	%	91	N/A	N/A	93		N/A	N/A	2309736

N/A = Not Applicable
QC Batch = Quality Control Batch

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Maxxam Job #: B0E4926
Report Date: 2010/10/28

Test Summary

Maxxam ID	HM4633	**Collected**	2010/10/11
Sample ID	LICA VOC/CLS/OCT 11, 2010 - 7831	**Shipped**	
Matrix	AIR	**Received**	2010/10/14

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Canister Pressure (TO-15)	PRES	2309731	N/A	2010/10/26	MMU
Volatile Organics in Air (TO-15)	GC/MS	2309736	N/A	2010/10/26	MMU

Maxxam ID	HM4634	**Collected**	2010/10/11
Sample ID	LICA VOC/PORT/OCT 11, 2010 - 7857	**Shipped**	
Matrix	AIR	**Received**	2010/10/14

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Canister Pressure (TO-15)	PRES	2309731	N/A	2010/10/26	MMU
Volatile Organics in Air (TO-15)	GC/MS	2309736	N/A	2010/10/26	MMU

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GENERAL COMMENTS

Results relate only to the items tested.

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Maxxam Analytics
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P.O. #:
Project name:

Quality Assurance Report

Maxxam Job Number: GB0E4926

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2309736	MMU	Spiked Blank	Bromochloromethane	2010/10/26		95	%	60 - 140
			D5-Chlorobenzene	2010/10/26		94	%	60 - 140
			Difluorobenzene	2010/10/26		96	%	60 - 140
			2,2,4-Trimethylpentane	2010/10/26		98	%	70 - 130
			Carbon Disulfide	2010/10/26		95	%	70 - 130
			Propene	2010/10/26		101	%	70 - 130
			Vinyl Acetate	2010/10/26		99	%	70 - 130
			Vinyl Bromide	2010/10/26		100	%	70 - 130
			Dichlorodifluoromethane (FREON 12)	2010/10/26		99	%	70 - 130
			1,2-Dichlorotetrafluoroethane	2010/10/26		113	%	70 - 130
			Chloromethane	2010/10/26		103	%	70 - 130
			Vinyl Chloride	2010/10/26		104	%	70 - 130
			Chloroethane	2010/10/26		104	%	70 - 130
			1,3-Butadiene	2010/10/26		104	%	70 - 130
			Trichlorofluoromethane (FREON 11)	2010/10/26		99	%	70 - 130
			Trichlorotrifluoroethane	2010/10/26		99	%	70 - 130
			Ethanol	2010/10/26		83	%	70 - 130
			2-propanol	2010/10/26		95	%	70 - 130
			2-Propanone	2010/10/26		106	%	70 - 130
			Methyl Ethyl Ketone (2-Butanone)	2010/10/26		87	%	70 - 130
			Methyl Isobutyl Ketone	2010/10/26		92	%	70 - 130
			Methyl Butyl Ketone (2-Hexanone)	2010/10/26		96	%	70 - 130
			Methyl t-butyl ether (MTBE)	2010/10/26		97	%	70 - 130
			Ethyl Acetate	2010/10/26		99	%	70 - 130
			1,1-Dichloroethylene	2010/10/26		104	%	70 - 130
			cis-1,2-Dichloroethylene	2010/10/26		104	%	70 - 130
			trans-1,2-Dichloroethylene	2010/10/26		99	%	70 - 130
			Methylene Chloride(Dichloromethane)	2010/10/26		93	%	70 - 130
			Chloroform	2010/10/26		103	%	70 - 130
			Carbon Tetrachloride	2010/10/26		99	%	70 - 130
			1,1-Dichloroethane	2010/10/26		101	%	70 - 130
			1,2-Dichloroethane	2010/10/26		100	%	70 - 130
			Ethylene Dibromide	2010/10/26		92	%	70 - 130
			1,1,1-Trichloroethane	2010/10/26		98	%	70 - 130
			1,1,2-Trichloroethane	2010/10/26		93	%	70 - 130
			1,1,2,2-Tetrachloroethane	2010/10/26		82	%	70 - 130
			cis-1,3-Dichloropropene	2010/10/26		100	%	70 - 130
			trans-1,3-Dichloropropene	2010/10/26		100	%	70 - 130
			1,2-Dichloropropane	2010/10/26		99	%	70 - 130
			Bromomethane	2010/10/26		103	%	70 - 130
			Bromoform	2010/10/26		91	%	70 - 130
			Bromodichloromethane	2010/10/26		95	%	70 - 130
			Dibromochloromethane	2010/10/26		94	%	70 - 130
			Heptane	2010/10/26		87	%	70 - 130
			Trichloroethylene	2010/10/26		94	%	70 - 130
			Tetrachloroethylene	2010/10/26		87	%	70 - 130
			Benzene	2010/10/26		99	%	70 - 130
			Toluene	2010/10/26		94	%	70 - 130
			Ethylbenzene	2010/10/26		92	%	70 - 130
			p+m-Xylene	2010/10/26		89	%	70 - 130
			o-Xylene	2010/10/26		87	%	70 - 130
			Styrene	2010/10/26		89	%	70 - 130
			1,3,5-Trimethylbenzene	2010/10/26		78	%	70 - 130
			1,2,4-Trimethylbenzene	2010/10/26		75	%	70 - 130
			4-ethyltoluene	2010/10/26		74	%	70 - 130

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Client Project #:
P.O. #:
Project name:

Quality Assurance Report (Continued)

Maxxam Job Number: GB0E4926

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2309736	MMU	Spiked Blank	Chlorobenzene	2010/10/26		91	%	70 - 130
			Benzyl chloride	2010/10/26		80	%	70 - 130
			1,3-Dichlorobenzene	2010/10/26		73	%	70 - 130
			1,4-Dichlorobenzene	2010/10/26		73	%	70 - 130
			1,2-Dichlorobenzene	2010/10/26		71	%	70 - 130
			1,2,4-Trichlorobenzene	2010/10/26		81	%	70 - 130
			Hexachlorobutadiene	2010/10/26		82	%	70 - 130
			Hexane	2010/10/26		89	%	70 - 130
			Cyclohexane	2010/10/26		94	%	70 - 130
			Tetrahydrofuran	2010/10/26		100	%	70 - 130
			1,4-Dioxane	2010/10/26		72	%	70 - 130
		Method Blank	Bromochloromethane	2010/10/26		91	%	60 - 140
			D5-Chlorobenzene	2010/10/26		93	%	60 - 140
			Difluorobenzene	2010/10/26		93	%	60 - 140
			2,2,4-Trimethylpentane	2010/10/26	<0.20		ppbv	
			Carbon Disulfide	2010/10/26	<0.50		ppbv	
			Propene	2010/10/26	<0.30		ppbv	
			Vinyl Acetate	2010/10/26	<0.20		ppbv	
			Vinyl Bromide	2010/10/26	<0.20		ppbv	
			Dichlorodifluoromethane (FREON 12)	2010/10/26	<0.20		ppbv	
			1,2-Dichlorotetrafluoroethane	2010/10/26	<0.17		ppbv	
			Chloromethane	2010/10/26	<0.30		ppbv	
			Vinyl Chloride	2010/10/26	<0.18		ppbv	
			Chloroethane	2010/10/26	<0.30		ppbv	
			1,3-Butadiene	2010/10/26	<0.50		ppbv	
			Trichlorofluoromethane (FREON 11)	2010/10/26	<0.20		ppbv	
			Trichlorotrifluoroethane	2010/10/26	<0.15		ppbv	
			Ethanol	2010/10/26	<2.3		ppbv	
			2-propanol	2010/10/26	<3.0		ppbv	
			2-Propanone	2010/10/26	<0.80		ppbv	
			Methyl Ethyl Ketone (2-Butanone)	2010/10/26	<3.0		ppbv	
			Methyl Isobutyl Ketone	2010/10/26	<3.2		ppbv	
			Methyl Butyl Ketone (2-Hexanone)	2010/10/26	<2.0		ppbv	
			Methyl t-butyl ether (MTBE)	2010/10/26	<0.20		ppbv	
			Ethyl Acetate	2010/10/26	<2.2		ppbv	
			1,1-Dichloroethylene	2010/10/26	<0.25		ppbv	
			cis-1,2-Dichloroethylene	2010/10/26	<0.19		ppbv	
			trans-1,2-Dichloroethylene	2010/10/26	<0.20		ppbv	
			Methylene Chloride(Dichloromethane)	2010/10/26	0.69, RDL=0.30		ppbv	
			Chloroform	2010/10/26	<0.15		ppbv	
			Carbon Tetrachloride	2010/10/26	<0.30		ppbv	
			1,1-Dichloroethane	2010/10/26	<0.20		ppbv	
			1,2-Dichloroethane	2010/10/26	<0.20		ppbv	
			Ethylene Dibromide	2010/10/26	<0.17		ppbv	
			1,1,1-Trichloroethane	2010/10/26	<0.30		ppbv	
			1,1,2-Trichloroethane	2010/10/26	<0.15		ppbv	
			1,1,2,2-Tetrachloroethane	2010/10/26	<0.20		ppbv	
			cis-1,3-Dichloropropene	2010/10/26	<0.18		ppbv	
			trans-1,3-Dichloropropene	2010/10/26	<0.17		ppbv	
			1,2-Dichloropropane	2010/10/26	<0.40		ppbv	
			Bromomethane	2010/10/26	<0.18		ppbv	
			Bromoform	2010/10/26	<0.20		ppbv	
			Bromodichloromethane	2010/10/26	<0.20		ppbv	
			Dibromochloromethane	2010/10/26	<0.20		ppbv	
			Heptane	2010/10/26	<0.30		ppbv	

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Quality Assurance Report (Continued)

Maxxam Job Number: GB0E4926

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2309736	MMU	Method Blank	Trichloroethylene	2010/10/26	<0.30		ppbv	
			Tetrachloroethylene	2010/10/26	<0.20		ppbv	
			Benzene	2010/10/26	<0.18		ppbv	
			Toluene	2010/10/26	<0.20		ppbv	
			Ethylbenzene	2010/10/26	<0.20		ppbv	
			p+m-Xylene	2010/10/26	<0.37		ppbv	
			o-Xylene	2010/10/26	<0.20		ppbv	
			Styrene	2010/10/26	<0.20		ppbv	
			1,3,5-Trimethylbenzene	2010/10/26	<0.50		ppbv	
			1,2,4-Trimethylbenzene	2010/10/26	<0.50		ppbv	
			4-ethyltoluene	2010/10/26	<2.2		ppbv	
			Chlorobenzene	2010/10/26	<0.20		ppbv	
			Benzyl chloride	2010/10/26	<1.0		ppbv	
			1,3-Dichlorobenzene	2010/10/26	<0.40		ppbv	
			1,4-Dichlorobenzene	2010/10/26	<0.40		ppbv	
			1,2-Dichlorobenzene	2010/10/26	<0.40		ppbv	
			1,2,4-Trichlorobenzene	2010/10/26	<2.0		ppbv	
			Hexachlorobutadiene	2010/10/26	<3.0		ppbv	
			Hexane	2010/10/26	<0.30		ppbv	
			Cyclohexane	2010/10/26	<0.20		ppbv	
			Tetrahydrofuran	2010/10/26	<0.40		ppbv	
			1,4-Dioxane	2010/10/26	<2.0		ppbv	
			Xylene (Total)	2010/10/26	<0.60		ppbv	
		RPD - Sample/Sample Dup	2,2,4-Trimethylpentane	2010/10/26	NC		%	25
			Carbon Disulfide	2010/10/26	12.3		%	25
			Propene	2010/10/26	NC		%	25
			Vinyl Acetate	2010/10/26	NC		%	25
			Vinyl Bromide	2010/10/26	NC		%	25
			Dichlorodifluoromethane (FREON 12)	2010/10/26	NC		%	25
			1,2-Dichlorotetrafluoroethane	2010/10/26	NC		%	25
			Chloromethane	2010/10/26	NC		%	25
			Vinyl Chloride	2010/10/26	NC		%	25
			Chloroethane	2010/10/26	NC		%	25
			1,3-Butadiene	2010/10/26	NC		%	25
			Trichlorofluoromethane (FREON 11)	2010/10/26	NC		%	25
			Trichlorotrifluoroethane	2010/10/26	NC		%	25
			Ethanol	2010/10/26	NC		%	25
			2-propanol	2010/10/26	NC		%	25
			2-Propanone	2010/10/26	8.0		%	25
			Methyl Ethyl Ketone (2-Butanone)	2010/10/26	NC		%	25
			Methyl Isobutyl Ketone	2010/10/26	NC		%	25
			Methyl Butyl Ketone (2-Hexanone)	2010/10/26	NC		%	25
			Methyl t-butyl ether (MTBE)	2010/10/26	NC		%	25
			Ethyl Acetate	2010/10/26	NC		%	25
			1,1-Dichloroethylene	2010/10/26	NC		%	25
			cis-1,2-Dichloroethylene	2010/10/26	NC		%	25
			trans-1,2-Dichloroethylene	2010/10/26	NC		%	25
			Methylene Chloride(Dichloromethane)	2010/10/26	17.4		%	25
			Chloroform	2010/10/26	NC		%	25
			Carbon Tetrachloride	2010/10/26	NC		%	25
			1,1-Dichloroethane	2010/10/26	NC		%	25
			1,2-Dichloroethane	2010/10/26	NC		%	25
			Ethylene Dibromide	2010/10/26	NC		%	25

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Quality Assurance Report (Continued)

Maxxam Job Number: GB0E4926

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2309736	MMU	RPD - Sample/Sample Dup	1,1,1-Trichloroethane	2010/10/26	NC		%	25
			1,1,2-Trichloroethane	2010/10/26	NC		%	25
			1,1,2,2-Tetrachloroethane	2010/10/26	NC		%	25
			cis-1,3-Dichloropropene	2010/10/26	NC		%	25
			trans-1,3-Dichloropropene	2010/10/26	NC		%	25
			1,2-Dichloropropane	2010/10/26	NC		%	25
			Bromomethane	2010/10/26	NC		%	25
			Bromoform	2010/10/26	NC		%	25
			Bromodichloromethane	2010/10/26	NC		%	25
			Dibromochloromethane	2010/10/26	NC		%	25
			Heptane	2010/10/26	NC		%	25
			Trichloroethylene	2010/10/26	NC		%	25
			Tetrachloroethylene	2010/10/26	NC		%	25
			Benzene	2010/10/26	NC		%	25
			Toluene	2010/10/26	NC		%	25
			Ethylbenzene	2010/10/26	NC		%	25
			p+m-Xylene	2010/10/26	NC		%	25
			o-Xylene	2010/10/26	NC		%	25
			Styrene	2010/10/26	NC		%	25
			1,3,5-Trimethylbenzene	2010/10/26	NC		%	25
			1,2,4-Trimethylbenzene	2010/10/26	NC		%	25
			4-ethyltoluene	2010/10/26	NC		%	25
			Chlorobenzene	2010/10/26	NC		%	25
			Benzyl chloride	2010/10/26	NC		%	25
			1,3-Dichlorobenzene	2010/10/26	NC		%	25
			1,4-Dichlorobenzene	2010/10/26	NC		%	25
			1,2-Dichlorobenzene	2010/10/26	NC		%	25
			1,2,4-Trichlorobenzene	2010/10/26	NC		%	25
			Hexachlorobutadiene	2010/10/26	NC		%	25
			Hexane	2010/10/26	NC		%	25
			Cyclohexane	2010/10/26	NC		%	25
			Tetrahydrofuran	2010/10/26	NC		%	25
			1,4-Dioxane	2010/10/26	NC		%	25
			Xylene (Total)	2010/10/26	NC		%	25

Spiked Blank: A blank matrix to which a known amount of the analyte has been added. Used to evaluate analyte recovery.
Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.
Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.
NC (RPD): The RPD was not calculated. The level of analyte detected in the parent sample and its duplicate was not sufficiently significant to permit a reliable calculation.

Maxxam Analytics International Corporation o/a Maxxam Analytics 6740 Campobello Road, Mississauga, Ontario, L5N 2L8 Tel: (905) 817-5700 Toll-Free: 800-563-6266 Fax: (905) 817-5777 www.maxxam.ca

Maxxam Analytics

Xontech Model 910A VOC Sample Collection Data Sheet

Client: LICA
Location: Cold Lake South
Station ID: Lica 1
Field Sample ID: LICA VOC/ CLS /Oct 17, 10

Sampler s/n: 6167
Canister ID: 7854
Canister Installation Date/Time: Oct 15, 2010 @ 7:25 mst
Canister Removal Date/Time: Oct 18, 2010 @ 9:15 mst

Date and Time Information			
Sample Date	Start Time (MST)	End Time (MST)	Elapsed Time (Hours)
17-Oct-10	17/10/2010 0:00	18/10/2010 0:00	24.00

Flow Settings		
Meter Reading (sccm)	Pot Set Pt.	Pump Pressure Setting (psig)
10.0	597	25

Canister Information	
Initial Canister Vacuum (inHg)	Final Canister Pressure (psig)
-28	20

Canister valve open prior to sampling?: YES / NO
Timer set to 0.00 minutes prior to sampling? YES / NO
Canister valve closed prior to disconnection?: YES / NO

Comments: System leak check prior to sampling. COC # 2325

Technician Signiture: Ting Xu

Success Through Science®

Your C.O.C. #: 2325

Attention: Michael Bisaga
Maxxam Analytics
2608 6A Ave.
Cold Lake, AB
CANADA T9M 2C7

Report Date: 2010/11/03

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B0F0576
Received: 2010/10/22, 09:35

Sample Matrix: AIR
Samples Received: 2

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Method Reference
Canister Pressure (TO-15)	2	N/A	2010/10/29	BRL SOP-00304	EPA TO-15
Volatile Organics in Air (TO-15) (1)	2	N/A	2010/10/29	BRL SOP-00304	EPA TO-15

(1) Air sampling canisters have been cleaned in accordance with U.S. EPA Method TO14A. At the end of the cleaning, evacuation, and pressurization cycles, one canister was selected and was pressurized with Zero Air. This canister was then analyzed via TO14A on a GC/MS. The canister must have been found to contain <0.2 ppbv concentration of all target analytes in order for the batch to have been considered clean. Each canister also underwent a leak check prior to shipment.

Please Note: SUMMA® canister samples will be retained by Maxxam for a period of 5 calendar days from the date of this report, after which time they will be cleaned for reuse. If you require a longer sample storage period, please contact your service representative.

Encryption Key

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

THERESA STEPHENSON, Project Manager
Email: TStephenson@maxxam.ca
Phone# (905) 817-5763

==========

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. For Service Group specific validation please refer to the Validation Signature Page.

Total cover pages: 1

Maxxam Analytics

Maxxam Job #: B0F0576
Report Date: 2010/11/03

RESULTS OF ANALYSES OF AIR

Maxxam ID		HP1553	HP1554	
Sampling Date		2010/10/17	2010/10/17	
COC Number		2325	2325	
	Units	**LICA VOC/CLS/OCT 17,2010 - T854**	**LICA VOC/PORT/OCT 17,2010 - T790**	**QC Batch**
Volatile Organics				
Pressure on Receipt	psig	20	22	2314917

QC Batch = Quality Control Batch

Maxxam Job #: B0F0576
Report Date: 2010/11/03

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		HP1553			HP1554				
Sampling Date		2010/10/17			2010/10/17				
COC Number		2325			2325				
	Units	**LICA VOC/CLS/OCT 17,2010 - T854**	**ug/m3**	**DL (ug/m3)**	**LICA VOC/PORT/OCT 17,2010 - T790**	**RDL**	**ug/m3**	**DL (ug/m3)**	**QC Batch**
Volatile Organics									
2,2,4-Trimethylpentane	ppbv	<0.20	<0.934	0.934	<0.20	0.20	<0.934	0.934	2314914
Carbon Disulfide	ppbv	1.29	4.02	1.56	<0.50	0.50	<1.56	1.56	2314914
Propene	ppbv	<0.30	<0.516	0.516	<0.30	0.30	<0.516	0.516	2314914
Vinyl Acetate	ppbv	<0.20	<0.704	0.704	<0.20	0.20	<0.704	0.704	2314914
Vinyl Bromide	ppbv	<0.20	<0.875	0.875	<0.20	0.20	<0.875	0.875	2314914
Dichlorodifluoromethane (FREON 12)	ppbv	0.87	4.33	0.989	0.89	0.20	4.41	0.989	2314914
1,2-Dichlorotetrafluoroethane	ppbv	<0.17	<1.19	1.19	<0.17	0.17	<1.19	1.19	2314914
Chloromethane	ppbv	0.90	1.87	0.620	0.88	0.30	1.82	0.620	2314914
Vinyl Chloride	ppbv	<0.18	<0.460	0.460	<0.18	0.18	<0.460	0.460	2314914
Chloroethane	ppbv	<0.30	<0.792	0.792	<0.30	0.30	<0.792	0.792	2314914
1,3-Butadiene	ppbv	<0.50	<1.11	1.11	<0.50	0.50	<1.11	1.11	2314914
Trichlorofluoromethane (FREON 11)	ppbv	0.40	2.23	1.12	0.43	0.20	2.43	1.12	2314914
Trichlorotrifluoroethane	ppbv	<0.15	<1.15	1.15	<0.15	0.15	<1.15	1.15	2314914
Ethanol	ppbv	6.1	11.5	4.33	<2.3	2.3	<4.33	4.33	2314914
2-propanol	ppbv	<3.0	<7.37	7.37	<3.0	3.0	<7.37	7.37	2314914
2-Propanone	ppbv	4.15	9.85	1.90	3.56	0.80	8.47	1.90	2314914
Methyl Ethyl Ketone (2-Butanone)	ppbv	<3.0	<8.85	8.85	<3.0	3.0	<8.85	8.85	2314914
Methyl Isobutyl Ketone	ppbv	<3.2	<13.1	13.1	<3.2	3.2	<13.1	13.1	2314914
Methyl Butyl Ketone (2-Hexanone)	ppbv	<2.0	<8.19	8.19	<2.0	2.0	<8.19	8.19	2314914
Methyl t-butyl ether (MTBE)	ppbv	<0.20	<0.721	0.721	<0.20	0.20	<0.721	0.721	2314914
Ethyl Acetate	ppbv	<2.2	<7.93	7.93	<2.2	2.2	<7.93	7.93	2314914
1,1-Dichloroethylene	ppbv	<0.25	<0.991	0.991	<0.25	0.25	<0.991	0.991	2314914
cis-1,2-Dichloroethylene	ppbv	<0.19	<0.753	0.753	<0.19	0.19	<0.753	0.753	2314914
trans-1,2-Dichloroethylene	ppbv	<0.20	<0.793	0.793	<0.20	0.20	<0.793	0.793	2314914
Methylene Chloride(Dichloromethane)	ppbv	0.68	2.38	1.04	0.67	0.30	2.34	1.04	2314914
Chloroform	ppbv	<0.15	<0.732	0.732	<0.15	0.15	<0.732	0.732	2314914
Carbon Tetrachloride	ppbv	<0.30	<1.89	1.89	<0.30	0.30	<1.89	1.89	2314914
1,1-Dichloroethane	ppbv	<0.20	<0.809	0.809	<0.20	0.20	<0.809	0.809	2314914
1,2-Dichloroethane	ppbv	<0.20	<0.809	0.809	<0.20	0.20	<0.809	0.809	2314914
Ethylene Dibromide	ppbv	<0.17	<1.31	1.31	<0.17	0.17	<1.31	1.31	2314914
1,1,1-Trichloroethane	ppbv	<0.30	<1.64	1.64	<0.30	0.30	<1.64	1.64	2314914

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam Job #: B0F0576
Report Date: 2010/11/03

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		HP1553			HP1554				
Sampling Date		2010/10/17			2010/10/17				
COC Number		2325			2325				
	Units	**LICA VOC/CLS/OCT 17,2010 - T854**	**ug/m3**	**DL (ug/m3)**	**LICA VOC/PORT/OCT 17,2010 - T790**	**RDL**	**ug/m3**	**DL (ug/m3)**	**QC Batch**
1,1,2-Trichloroethane	ppbv	<0.15	<0.818	0.818	<0.15	0.15	<0.818	0.818	2314914
1,1,2,2-Tetrachloroethane	ppbv	<0.20	<1.37	1.37	<0.20	0.20	<1.37	1.37	2314914
cis-1,3-Dichloropropene	ppbv	<0.18	<0.817	0.817	<0.18	0.18	<0.817	0.817	2314914
trans-1,3-Dichloropropene	ppbv	<0.17	<0.772	0.772	<0.17	0.17	<0.772	0.772	2314914
1,2-Dichloropropane	ppbv	<0.40	<1.85	1.85	<0.40	0.40	<1.85	1.85	2314914
Bromomethane	ppbv	<0.18	<0.699	0.699	<0.18	0.18	<0.699	0.699	2314914
Bromoform	ppbv	<0.20	<2.07	2.07	<0.20	0.20	<2.07	2.07	2314914
Bromodichloromethane	ppbv	<0.20	<1.34	1.34	<0.20	0.20	<1.34	1.34	2314914
Dibromochloromethane	ppbv	<0.20	<1.70	1.70	<0.20	0.20	<1.70	1.70	2314914
Heptane	ppbv	0.39	1.60	1.23	<0.30	0.30	<1.23	1.23	2314914
Trichloroethylene	ppbv	<0.30	<1.61	1.61	<0.30	0.30	<1.61	1.61	2314914
Tetrachloroethylene	ppbv	<0.20	<1.36	1.36	<0.20	0.20	<1.36	1.36	2314914
Benzene	ppbv	0.28	0.889	0.575	<0.18	0.18	<0.575	0.575	2314914
Toluene	ppbv	0.74	2.80	0.753	<0.20	0.20	<0.753	0.753	2314914
Ethylbenzene	ppbv	<0.20	<0.868	0.868	<0.20	0.20	<0.868	0.868	2314914
p+m-Xylene	ppbv	0.47	2.02	1.61	<0.37	0.37	<1.61	1.61	2314914
o-Xylene	ppbv	<0.20	<0.868	0.868	<0.20	0.20	<0.868	0.868	2314914
Styrene	ppbv	<0.20	<0.852	0.852	<0.20	0.20	<0.852	0.852	2314914
1,3,5-Trimethylbenzene	ppbv	<0.50	<2.46	2.46	<0.50	0.50	<2.46	2.46	2314914
1,2,4-Trimethylbenzene	ppbv	<0.50	<2.46	2.46	<0.50	0.50	<2.46	2.46	2314914
4-ethyltoluene	ppbv	<2.2	<10.8	10.8	<2.2	2.2	<10.8	10.8	2314914
Chlorobenzene	ppbv	<0.20	<0.921	0.921	<0.20	0.20	<0.921	0.921	2314914
Benzyl chloride	ppbv	<1.0	<5.18	5.18	<1.0	1.0	<5.18	5.18	2314914
1,3-Dichlorobenzene	ppbv	<0.40	<2.40	2.40	<0.40	0.40	<2.40	2.40	2314914
1,4-Dichlorobenzene	ppbv	<0.40	<2.40	2.40	<0.40	0.40	<2.40	2.40	2314914
1,2-Dichlorobenzene	ppbv	<0.40	<2.40	2.40	<0.40	0.40	<2.40	2.40	2314914
1,2,4-Trichlorobenzene	ppbv	<2.0	<14.8	14.8	<2.0	2.0	<14.8	14.8	2314914
Hexachlorobutadiene	ppbv	<3.0	<32.0	32.0	<3.0	3.0	<32.0	32.0	2314914
Hexane	ppbv	0.59	2.08	1.06	0.34	0.30	1.20	1.06	2314914
Cyclohexane	ppbv	0.27	0.923	0.688	0.46	0.20	1.60	0.688	2314914
Tetrahydrofuran	ppbv	<0.40	<1.18	1.18	<0.40	0.40	<1.18	1.18	2314914
1,4-Dioxane	ppbv	<2.0	<7.21	7.21	<2.0	2.0	<7.21	7.21	2314914
Xylene (Total)	ppbv	<0.60	<2.61	2.61	<0.60	0.60	<2.61	2.61	2314914

QC Batch = Quality Control Batch

Maxxam Analytics

Maxxam Job #: B0F0576
Report Date: 2010/11/03

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		HP1553			HP1554				
Sampling Date		2010/10/17			2010/10/17				
COC Number		2325			2325				
	Units	**LICA VOC/CLS/OCT 17,2010 - T854**	**ug/m3**	**DL (ug/m3)**	**LICA VOC/PORT/OCT 17,2010 - T790**	**RDL**	**ug/m3**	**DL (ug/m3)**	**QC Batch**
Surrogate Recovery (%)									
Bromochloromethane	%	82	N/A	N/A	80		N/A	N/A	2314914
D5-Chlorobenzene	%	87	N/A	N/A	81		N/A	N/A	2314914
Difluorobenzene	%	91	N/A	N/A	89		N/A	N/A	2314914

N/A = Not Applicable
QC Batch = Quality Control Batch

Test Summary

Maxxam ID	HP1553	**Collected**	2010/10/17
Sample ID	LICA VOC/CLS/OCT 17,2010 - T854	**Shipped**	
Matrix	AIR	**Received**	2010/10/22

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Canister Pressure (TO-15)	PRES	2314917	N/A	2010/10/29	MMU
Volatile Organics in Air (TO-15)	GC/MS	2314914	N/A	2010/10/29	MMU

Maxxam ID	HP1554	**Collected**	2010/10/17
Sample ID	LICA VOC/PORT/OCT 17,2010 - T790	**Shipped**	
Matrix	AIR	**Received**	2010/10/22

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Canister Pressure (TO-15)	PRES	2314917	N/A	2010/10/29	MMU
Volatile Organics in Air (TO-15)	GC/MS	2314914	N/A	2010/10/29	MMU

GENERAL COMMENTS

Results relate only to the items tested.

Maxxam Analytics
Attention: Michael Bisaga
Client Project #:
P.O. #:
Project name:

Quality Assurance Report

Maxxam Job Number: GB0F0576

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2314914	MMU	Spiked Blank	Bromochloromethane	2010/10/29		100	%	60 - 140
			D5-Chlorobenzene	2010/10/29		104	%	60 - 140
			Difluorobenzene	2010/10/29		106	%	60 - 140
			2,2,4-Trimethylpentane	2010/10/29		106	%	70 - 130
			Carbon Disulfide	2010/10/29		105	%	70 - 130
			Propene	2010/10/29		112	%	70 - 130
			Vinyl Acetate	2010/10/29		109	%	70 - 130
			Vinyl Bromide	2010/10/29		101	%	70 - 130
			Dichlorodifluoromethane (FREON 12)	2010/10/29		106	%	70 - 130
			1,2-Dichlorotetrafluoroethane	2010/10/29		119	%	70 - 130
			Chloromethane	2010/10/29		113	%	70 - 130
			Vinyl Chloride	2010/10/29		112	%	70 - 130
			Chloroethane	2010/10/29		113	%	70 - 130
			1,3-Butadiene	2010/10/29		111	%	70 - 130
			Trichlorofluoromethane (FREON 11)	2010/10/29		104	%	70 - 130
			Trichlorotrifluoroethane	2010/10/29		104	%	70 - 130
			Ethanol	2010/10/29		103	%	70 - 130
			2-propanol	2010/10/29		103	%	70 - 130
			2-Propanone	2010/10/29		115	%	70 - 130
			Methyl Ethyl Ketone (2-Butanone)	2010/10/29		97	%	70 - 130
			Methyl Isobutyl Ketone	2010/10/29		102	%	70 - 130
			Methyl Butyl Ketone (2-Hexanone)	2010/10/29		106	%	70 - 130
			Methyl t-butyl ether (MTBE)	2010/10/29		102	%	70 - 130
			Ethyl Acetate	2010/10/29		110	%	70 - 130
			1,1-Dichloroethylene	2010/10/29		105	%	70 - 130
			cis-1,2-Dichloroethylene	2010/10/29		116	%	70 - 130
			trans-1,2-Dichloroethylene	2010/10/29		105	%	70 - 130
			Methylene Chloride(Dichloromethane)	2010/10/29		100	%	70 - 130
			Chloroform	2010/10/29		109	%	70 - 130
			Carbon Tetrachloride	2010/10/29		97	%	70 - 130
			1,1-Dichloroethane	2010/10/29		110	%	70 - 130
			1,2-Dichloroethane	2010/10/29		105	%	70 - 130
			Ethylene Dibromide	2010/10/29		97	%	70 - 130
			1,1,1-Trichloroethane	2010/10/29		98	%	70 - 130
			1,1,2-Trichloroethane	2010/10/29		99	%	70 - 130
			1,1,2,2-Tetrachloroethane	2010/10/29		87	%	70 - 130
			cis-1,3-Dichloropropene	2010/10/29		106	%	70 - 130
			trans-1,3-Dichloropropene	2010/10/29		106	%	70 - 130
			1,2-Dichloropropane	2010/10/29		114	%	70 - 130
			Bromomethane	2010/10/29		107	%	70 - 130
			Bromoform	2010/10/29		92	%	70 - 130
			Bromodichloromethane	2010/10/29		101	%	70 - 130
			Dibromochloromethane	2010/10/29		100	%	70 - 130
			Heptane	2010/10/29		94	%	70 - 130
			Trichloroethylene	2010/10/29		92	%	70 - 130
			Tetrachloroethylene	2010/10/29		88	%	70 - 130
			Benzene	2010/10/29		103	%	70 - 130
			Toluene	2010/10/29		100	%	70 - 130
			Ethylbenzene	2010/10/29		95	%	70 - 130
			p+m-Xylene	2010/10/29		92	%	70 - 130
			o-Xylene	2010/10/29		91	%	70 - 130
			Styrene	2010/10/29		87	%	70 - 130
			1,3,5-Trimethylbenzene	2010/10/29		77	%	70 - 130
			1,2,4-Trimethylbenzene	2010/10/29		73	%	70 - 130
			4-ethyltoluene	2010/10/29		77	%	70 - 130

Maxxam Analytics
Attention: Michael Bisaga
Client Project #:
P.O. #:
Project name:

Quality Assurance Report (Continued)

Maxxam Job Number: GB0F0576

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2314914	MMU	Spiked Blank	Chlorobenzene	2010/10/29		91	%	70 - 130
			Benzyl chloride	2010/10/29		76	%	70 - 130
			1,3-Dichlorobenzene	2010/10/29		71	%	70 - 130
			1,4-Dichlorobenzene	2010/10/29		69 (1)	%	70 - 130
			1,2-Dichlorobenzene	2010/10/29		67 (1)	%	70 - 130
			1,2,4-Trichlorobenzene	2010/10/29		72	%	70 - 130
			Hexachlorobutadiene	2010/10/29		77	%	70 - 130
			Hexane	2010/10/29		96	%	70 - 130
			Cyclohexane	2010/10/29		96	%	70 - 130
			Tetrahydrofuran	2010/10/29		113	%	70 - 130
			1,4-Dioxane	2010/10/29		91	%	70 - 130
		Method Blank	Bromochloromethane	2010/10/29		92	%	60 - 140
			D5-Chlorobenzene	2010/10/29		95	%	60 - 140
			Difluorobenzene	2010/10/29		101	%	60 - 140
			2,2,4-Trimethylpentane	2010/10/29	<0.20		ppbv	
			Carbon Disulfide	2010/10/29	<0.50		ppbv	
			Propene	2010/10/29	<0.30		ppbv	
			Vinyl Acetate	2010/10/29	<0.20		ppbv	
			Vinyl Bromide	2010/10/29	<0.20		ppbv	
			Dichlorodifluoromethane (FREON 12)	2010/10/29	<0.20		ppbv	
			1,2-Dichlorotetrafluoroethane	2010/10/29	<0.17		ppbv	
			Chloromethane	2010/10/29	<0.30		ppbv	
			Vinyl Chloride	2010/10/29	<0.18		ppbv	
			Chloroethane	2010/10/29	<0.30		ppbv	
			1,3-Butadiene	2010/10/29	<0.50		ppbv	
			Trichlorofluoromethane (FREON 11)	2010/10/29	<0.20		ppbv	
			Trichlorotrifluoroethane	2010/10/29	<0.15		ppbv	
			Ethanol	2010/10/29	<2.3		ppbv	
			2-propanol	2010/10/29	<3.0		ppbv	
			2-Propanone	2010/10/29	<0.80		ppbv	
			Methyl Ethyl Ketone (2-Butanone)	2010/10/29	<3.0		ppbv	
			Methyl Isobutyl Ketone	2010/10/29	<3.2		ppbv	
			Methyl Butyl Ketone (2-Hexanone)	2010/10/29	<2.0		ppbv	
			Methyl t-butyl ether (MTBE)	2010/10/29	<0.20		ppbv	
			Ethyl Acetate	2010/10/29	<2.2		ppbv	
			1,1-Dichloroethylene	2010/10/29	<0.25		ppbv	
			cis-1,2-Dichloroethylene	2010/10/29	<0.19		ppbv	
			trans-1,2-Dichloroethylene	2010/10/29	<0.20		ppbv	
			Methylene Chloride(Dichloromethane)	2010/10/29	<0.90		ppbv	
			Chloroform	2010/10/29	<0.15		ppbv	
			Carbon Tetrachloride	2010/10/29	<0.30		ppbv	
			1,1-Dichloroethane	2010/10/29	<0.20		ppbv	
			1,2-Dichloroethane	2010/10/29	<0.20		ppbv	
			Ethylene Dibromide	2010/10/29	<0.17		ppbv	
			1,1,1-Trichloroethane	2010/10/29	<0.30		ppbv	
			1,1,2-Trichloroethane	2010/10/29	<0.15		ppbv	
			1,1,2,2-Tetrachloroethane	2010/10/29	<0.20		ppbv	
			cis-1,3-Dichloropropene	2010/10/29	<0.18		ppbv	
			trans-1,3-Dichloropropene	2010/10/29	<0.17		ppbv	
			1,2-Dichloropropane	2010/10/29	<0.40		ppbv	
			Bromomethane	2010/10/29	<0.18		ppbv	
			Bromoform	2010/10/29	<0.20		ppbv	
			Bromodichloromethane	2010/10/29	<0.20		ppbv	
			Dibromochloromethane	2010/10/29	<0.20		ppbv	
			Heptane	2010/10/29	<0.30		ppbv	

Maxxam Analytics
Attention: Michael Bisaga
Client Project #:
P.O. #:
Project name:

Quality Assurance Report (Continued)

Maxxam Job Number: GB0F0576

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2314914	MMU	Method Blank	Trichloroethylene	2010/10/29	<0.30		ppbv	
			Tetrachloroethylene	2010/10/29	<0.20		ppbv	
			Benzene	2010/10/29	<0.18		ppbv	
			Toluene	2010/10/29	<0.20		ppbv	
			Ethylbenzene	2010/10/29	<0.20		ppbv	
			p+m-Xylene	2010/10/29	<0.37		ppbv	
			o-Xylene	2010/10/29	<0.20		ppbv	
			Styrene	2010/10/29	<0.20		ppbv	
			1,3,5-Trimethylbenzene	2010/10/29	<0.50		ppbv	
			1,2,4-Trimethylbenzene	2010/10/29	<0.50		ppbv	
			4-ethyltoluene	2010/10/29	<2.2		ppbv	
			Chlorobenzene	2010/10/29	<0.20		ppbv	
			Benzyl chloride	2010/10/29	<1.0		ppbv	
			1,3-Dichlorobenzene	2010/10/29	<0.40		ppbv	
			1,4-Dichlorobenzene	2010/10/29	<0.40		ppbv	
			1,2-Dichlorobenzene	2010/10/29	<0.40		ppbv	
			1,2,4-Trichlorobenzene	2010/10/29	<2.0		ppbv	
			Hexachlorobutadiene	2010/10/29	<3.0		ppbv	
			Hexane	2010/10/29	<0.30		ppbv	
			Cyclohexane	2010/10/29	<0.20		ppbv	
			Tetrahydrofuran	2010/10/29	<0.40		ppbv	
			1,4-Dioxane	2010/10/29	<2.0		ppbv	
			Xylene (Total)	2010/10/29	<0.60		ppbv	

Spiked Blank: A blank matrix to which a known amount of the analyte has been added. Used to evaluate analyte recovery.
Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.
Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.
(1) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.

Maxxam Analytics

Xontech Model 910A VOC Sample Collection Data Sheet

Client: LICA
Location: Cold Lake South
Station ID: Lica 1
Field Sample ID: LICA VOC/ CLS /Oct 23, 10

Sampler s/n: 6167
Canister ID: 7866
Canister Installation Date/Time: Oct 22, 2010 @ 7:20 mst
Canister Removal Date/Time: Oct 26, 2010 @ 7:22 mst

Date and Time Information			
Sample Date	Start Time (MST)	End Time (MST)	Elapsed Time (Hours)
23-Oct-10	23/10/2010 0:00	24/10/2010 0:00	24.00

Flow Settings		
Meter Reading (sccm)	Pot Set Pt.	Pump Pressure Setting (psig)
10.0	597	25

Canister Information	
Initial Canister Vacuum (inHg)	Final Canister Pressure (psig)
-28	20

Canister valve open prior to sampling?: YES / NO
Timer set to 0.00 minutes prior to sampling? YES / NO
Canister valve closed prior to disconnection?: YES / NO

Comments: System leak check prior to sampling. COC # 4874

Technician Signiture: Ting Xu

Success Through Science®

Your C.O.C. #: 4874

Attention: Michael Bisaga
Maxxam Analytics
2608 6A Ave.
Cold Lake, AB
CANADA T9M 2C7

Report Date: 2010/11/09

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B0F3644
Received: 2010/10/28, 10:50

Sample Matrix: AIR
Samples Received: 2

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Method Reference
Canister Pressure (TO-15)	2	N/A	2010/11/03	BRL SOP-00304	EPA TO-15
Volatile Organics in Air (TO-15) (1)	2	N/A	2010/11/03	BRL SOP-00304	EPA TO-15

(1) Air sampling canisters have been cleaned in accordance with U.S. EPA Method TO14A. At the end of the cleaning, evacuation, and pressurization cycles, one canister was selected and was pressurized with Zero Air. This canister was then analyzed via TO14A on a GC/MS. The canister must have been found to contain <0.2 ppbv concentration of all target analytes in order for the batch to have been considered clean. Each canister also underwent a leak check prior to shipment.

Please Note: SUMMA® canister samples will be retained by Maxxam for a period of 5 calendar days from the date of this report, after which time they will be cleaned for reuse. If you require a longer sample storage period, please contact your service representative.

Encryption Key

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

THERESA STEPHENSON, Project Manager
Email: TStephenson@maxxam.ca
Phone# (905) 817-5763

==========

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. For Service Group specific validation please refer to the Validation Signature Page.

Total cover pages: 1

Maxxam Analytics

Maxxam Job #: B0F3644
Report Date: 2010/11/09

RESULTS OF ANALYSES OF AIR

Maxxam ID		HQ9360	HQ9361	
Sampling Date		2010/10/23	2010/10/23	
COC Number		4874	4874	
	Units	**LICA VOC\CLS\OCT 23,10 - 7866**	**LICA VOC\PORT\ OCT 23,10 - 7819**	**QC Batch**
Volatile Organics				
Pressure on Receipt	psig	20	21	2320983

QC Batch = Quality Control Batch

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Maxxam Analytics

Maxxam Job #: B0F3644
Report Date: 2010/11/09

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		HQ9360			HQ9361				
Sampling Date		2010/10/23			2010/10/23				
COC Number		4874			4874				
	Units	**LICA VOC\CLS\OCT 23,10 - 7866**	**ug/m3**	**DL (ug/m3)**	**LICA VOC\PORT\ OCT 23,10 - 7819**	**RDL**	**ug/m3**	**DL (ug/m3)**	**QC Batch**
Volatile Organics									
2,2,4-Trimethylpentane	ppbv	<0.20	<0.934	0.934	<0.20	0.20	<0.934	0.934	2320996
Carbon Disulfide	ppbv	<0.50	<1.56	1.56	<0.50	0.50	<1.56	1.56	2320996
Propene	ppbv	0.34	0.588	0.516	0.40	0.30	0.692	0.516	2320996
Vinyl Acetate	ppbv	<0.20	<0.704	0.704	<0.20	0.20	<0.704	0.704	2320996
Vinyl Bromide	ppbv	<0.20	<0.875	0.875	<0.20	0.20	<0.875	0.875	2320996
Dichlorodifluoromethane (FREON 12)	ppbv	0.60	2.95	0.989	0.58	0.20	2.87	0.989	2320996
1,2-Dichlorotetrafluoroethane	ppbv	<0.17	<1.19	1.19	<0.17	0.17	<1.19	1.19	2320996
Chloromethane	ppbv	0.48	0.997	0.620	0.46	0.30	0.950	0.620	2320996
Vinyl Chloride	ppbv	<0.18	<0.460	0.460	<0.18	0.18	<0.460	0.460	2320996
Chloroethane	ppbv	<0.30	<0.792	0.792	<0.30	0.30	<0.792	0.792	2320996
1,3-Butadiene	ppbv	<0.50	<1.11	1.11	<0.50	0.50	<1.11	1.11	2320996
Trichlorofluoromethane (FREON 11)	ppbv	0.26	1.44	1.12	0.24	0.20	1.37	1.12	2320996
Trichlorotrifluoroethane	ppbv	<0.15	<1.15	1.15	<0.15	0.15	<1.15	1.15	2320996
Ethanol	ppbv	<2.3	<4.33	4.33	<2.3	2.3	<4.33	4.33	2320996
2-propanol	ppbv	<3.0	<7.37	7.37	<3.0	3.0	<7.37	7.37	2320996
2-Propanone	ppbv	1.28	3.04	1.90	0.87	0.80	2.06	1.90	2320996
Methyl Ethyl Ketone (2-Butanone)	ppbv	<3.0	<8.85	8.85	<3.0	3.0	<8.85	8.85	2320996
Methyl Isobutyl Ketone	ppbv	<3.2	<13.1	13.1	<3.2	3.2	<13.1	13.1	2320996
Methyl Butyl Ketone (2-Hexanone)	ppbv	<2.0	<8.19	8.19	<2.0	2.0	<8.19	8.19	2320996
Methyl t-butyl ether (MTBE)	ppbv	<0.20	<0.721	0.721	<0.20	0.20	<0.721	0.721	2320996
Ethyl Acetate	ppbv	<2.2	<7.93	7.93	<2.2	2.2	<7.93	7.93	2320996
1,1-Dichloroethylene	ppbv	<0.25	<0.991	0.991	<0.25	0.25	<0.991	0.991	2320996
cis-1,2-Dichloroethylene	ppbv	<0.19	<0.753	0.753	<0.19	0.19	<0.753	0.753	2320996
trans-1,2-Dichloroethylene	ppbv	<0.20	<0.793	0.793	<0.20	0.20	<0.793	0.793	2320996
Methylene Chloride(Dichloromethane)	ppbv	0.34	1.20	1.04	0.33	0.30	1.16	1.04	2320996
Chloroform	ppbv	<0.15	<0.732	0.732	<0.15	0.15	<0.732	0.732	2320996
Carbon Tetrachloride	ppbv	<0.30	<1.89	1.89	<0.30	0.30	<1.89	1.89	2320996
1,1-Dichloroethane	ppbv	<0.20	<0.809	0.809	<0.20	0.20	<0.809	0.809	2320996
1,2-Dichloroethane	ppbv	<0.20	<0.809	0.809	<0.20	0.20	<0.809	0.809	2320996
Ethylene Dibromide	ppbv	<0.17	<1.31	1.31	<0.17	0.17	<1.31	1.31	2320996

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Maxxam Analytics

Maxxam Job #: B0F3644
Report Date: 2010/11/09

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		HQ9360			HQ9361				
Sampling Date		2010/10/23			2010/10/23				
COC Number		4874			4874				
	Units	**LICA VOC\CLS\OCT 23,10 - 7866**	**ug/m3**	**DL (ug/m3)**	**LICA VOC\PORT\ OCT 23,10 - 7819**	**RDL**	**ug/m3**	**DL (ug/m3)**	**QC Batch**
1,1,1-Trichloroethane	ppbv	<0.30	<1.64	1.64	<0.30	0.30	<1.64	1.64	2320996
1,1,2-Trichloroethane	ppbv	<0.15	<0.818	0.818	<0.15	0.15	<0.818	0.818	2320996
1,1,2,2-Tetrachloroethane	ppbv	<0.20	<1.37	1.37	<0.20	0.20	<1.37	1.37	2320996
cis-1,3-Dichloropropene	ppbv	<0.18	<0.817	0.817	<0.18	0.18	<0.817	0.817	2320996
trans-1,3-Dichloropropene	ppbv	<0.17	<0.772	0.772	<0.17	0.17	<0.772	0.772	2320996
1,2-Dichloropropane	ppbv	<0.40	<1.85	1.85	<0.40	0.40	<1.85	1.85	2320996
Bromomethane	ppbv	<0.18	<0.699	0.699	<0.18	0.18	<0.699	0.699	2320996
Bromoform	ppbv	<0.20	<2.07	2.07	<0.20	0.20	<2.07	2.07	2320996
Bromodichloromethane	ppbv	<0.20	<1.34	1.34	<0.20	0.20	<1.34	1.34	2320996
Dibromochloromethane	ppbv	<0.20	<1.70	1.70	<0.20	0.20	<1.70	1.70	2320996
Heptane	ppbv	<0.30	<1.23	1.23	<0.30	0.30	<1.23	1.23	2320996
Trichloroethylene	ppbv	<0.30	<1.61	1.61	<0.30	0.30	<1.61	1.61	2320996
Tetrachloroethylene	ppbv	<0.20	<1.36	1.36	<0.20	0.20	<1.36	1.36	2320996
Benzene	ppbv	<0.18	<0.575	0.575	<0.18	0.18	<0.575	0.575	2320996
Toluene	ppbv	<0.20	<0.753	0.753	<0.20	0.20	<0.753	0.753	2320996
Ethylbenzene	ppbv	<0.20	<0.868	0.868	<0.20	0.20	<0.868	0.868	2320996
p+m-Xylene	ppbv	<0.37	<1.61	1.61	<0.37	0.37	<1.61	1.61	2320996
o-Xylene	ppbv	<0.20	<0.868	0.868	<0.20	0.20	<0.868	0.868	2320996
Styrene	ppbv	<0.20	<0.852	0.852	<0.20	0.20	<0.852	0.852	2320996
1,3,5-Trimethylbenzene	ppbv	<0.50	<2.46	2.46	<0.50	0.50	<2.46	2.46	2320996
1,2,4-Trimethylbenzene	ppbv	<0.50	<2.46	2.46	<0.50	0.50	<2.46	2.46	2320996
4-ethyltoluene	ppbv	<2.2	<10.8	10.8	<2.2	2.2	<10.8	10.8	2320996
Chlorobenzene	ppbv	<0.20	<0.921	0.921	<0.20	0.20	<0.921	0.921	2320996
Benzyl chloride	ppbv	<1.0	<5.18	5.18	<1.0	1.0	<5.18	5.18	2320996
1,3-Dichlorobenzene	ppbv	<0.40	<2.40	2.40	<0.40	0.40	<2.40	2.40	2320996
1,4-Dichlorobenzene	ppbv	<0.40	<2.40	2.40	<0.40	0.40	<2.40	2.40	2320996
1,2-Dichlorobenzene	ppbv	<0.40	<2.40	2.40	<0.40	0.40	<2.40	2.40	2320996
1,2,4-Trichlorobenzene	ppbv	<2.0	<14.8	14.8	<2.0	2.0	<14.8	14.8	2320996
Hexachlorobutadiene	ppbv	<3.0	<32.0	32.0	<3.0	3.0	<32.0	32.0	2320996
Hexane	ppbv	<0.30	<1.06	1.06	<0.30	0.30	<1.06	1.06	2320996
Cyclohexane	ppbv	<0.20	<0.688	0.688	<0.20	0.20	<0.688	0.688	2320996
Tetrahydrofuran	ppbv	<0.40	<1.18	1.18	<0.40	0.40	<1.18	1.18	2320996

QC Batch = Quality Control Batch

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Maxxam Analytics

Maxxam Job #: B0F3644
Report Date: 2010/11/09

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		HQ9360			HQ9361				
Sampling Date		2010/10/23			2010/10/23				
COC Number		4874			4874				
	Units	**LICA VOC\CLS\OCT 23,10 - 7866**	**ug/m3**	**DL (ug/m3)**	**LICA VOC\PORT\ OCT 23,10 - 7819**	**RDL**	**ug/m3**	**DL (ug/m3)**	**QC Batch**
1,4-Dioxane	ppbv	<2.0	<7.21	7.21	<2.0	2.0	<7.21	7.21	2320996
Xylene (Total)	ppbv	<0.60	<2.61	2.61	<0.60	0.60	<2.61	2.61	2320996
Surrogate Recovery (%)									
Bromochloromethane	%	83	N/A	N/A	85		N/A	N/A	2320996
D5-Chlorobenzene	%	80	N/A	N/A	85		N/A	N/A	2320996
Difluorobenzene	%	82	N/A	N/A	86		N/A	N/A	2320996

N/A = Not Applicable
QC Batch = Quality Control Batch

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Maxxam Analytics

Maxxam Job #: B0F3644
Report Date: 2010/11/09

Test Summary

Maxxam ID HQ9360 **Collected** 2010/10/23
Sample ID LICA VOC\CLS\OCT 23,10 - 7866 **Shipped**
Matrix AIR **Received** 2010/10/28

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Canister Pressure (TO-15)	PRES	2320983	N/A	2010/11/03	DVO
Volatile Organics in Air (TO-15)	GC/MS	2320996	N/A	2010/11/03	DVO

Maxxam ID HQ9361 **Collected** 2010/10/23
Sample ID LICA VOC\PORT\ OCT 23,10 - 7819 **Shipped**
Matrix AIR **Received** 2010/10/28

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Canister Pressure (TO-15)	PRES	2320983	N/A	2010/11/03	DVO
Volatile Organics in Air (TO-15)	GC/MS	2320996	N/A	2010/11/03	DVO

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Maxxam Analytics

Maxxam Job #: B0F3644
Report Date: 2010/11/09

GENERAL COMMENTS

Results relate only to the items tested.

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Maxxam Analytics
Attention: Michael Bisaga
Client Project #:
P.O. #:
Project name:

Quality Assurance Report

Maxxam Job Number: GB0F3644

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2320996	DVO	Spiked Blank	Bromochloromethane	2010/11/03		102	%	60 - 140
			D5-Chlorobenzene	2010/11/03		105	%	60 - 140
			Difluorobenzene	2010/11/03		104	%	60 - 140
			2,2,4-Trimethylpentane	2010/11/03		79	%	70 - 130
			Carbon Disulfide	2010/11/03		69 (1)	%	70 - 130
			Propene	2010/11/03		74	%	70 - 130
			Vinyl Acetate	2010/11/03		82	%	70 - 130
			Vinyl Bromide	2010/11/03		81	%	70 - 130
			Dichlorodifluoromethane (FREON 12)	2010/11/03		85	%	70 - 130
			1,2-Dichlorotetrafluoroethane	2010/11/03		91	%	70 - 130
			Chloromethane	2010/11/03		80	%	70 - 130
			Vinyl Chloride	2010/11/03		77	%	70 - 130
			Chloroethane	2010/11/03		76	%	70 - 130
			1,3-Butadiene	2010/11/03		65 (1)	%	70 - 130
			Trichlorofluoromethane (FREON 11)	2010/11/03		76	%	70 - 130
			Trichlorotrifluoroethane	2010/11/03		75	%	70 - 130
			Ethanol	2010/11/03		91	%	70 - 130
			2-propanol	2010/11/03		84	%	70 - 130
			2-Propanone	2010/11/03		77	%	70 - 130
			Methyl Ethyl Ketone (2-Butanone)	2010/11/03		91	%	70 - 130
			Methyl Isobutyl Ketone	2010/11/03		79	%	70 - 130
			Methyl Butyl Ketone (2-Hexanone)	2010/11/03		87	%	70 - 130
			Methyl t-butyl ether (MTBE)	2010/11/03		82	%	70 - 130
			Ethyl Acetate	2010/11/03		81	%	70 - 130
			1,1-Dichloroethylene	2010/11/03		78	%	70 - 130
			cis-1,2-Dichloroethylene	2010/11/03		79	%	70 - 130
			trans-1,2-Dichloroethylene	2010/11/03		78	%	70 - 130
			Methylene Chloride(Dichloromethane)	2010/11/03		71	%	70 - 130
			Chloroform	2010/11/03		78	%	70 - 130
			Carbon Tetrachloride	2010/11/03		79	%	70 - 130
			1,1-Dichloroethane	2010/11/03		75	%	70 - 130
			1,2-Dichloroethane	2010/11/03		78	%	70 - 130
			Ethylene Dibromide	2010/11/03		75	%	70 - 130
			1,1,1-Trichloroethane	2010/11/03		78	%	70 - 130
			1,1,2-Trichloroethane	2010/11/03		76	%	70 - 130
			1,1,2,2-Tetrachloroethane	2010/11/03		74	%	70 - 130
			cis-1,3-Dichloropropene	2010/11/03		80	%	70 - 130
			trans-1,3-Dichloropropene	2010/11/03		81	%	70 - 130
			1,2-Dichloropropane	2010/11/03		77	%	70 - 130
			Bromomethane	2010/11/03		76	%	70 - 130
			Bromoform	2010/11/03		85	%	70 - 130
			Bromodichloromethane	2010/11/03		77	%	70 - 130
			Dibromochloromethane	2010/11/03		82	%	70 - 130
			Heptane	2010/11/03		75	%	70 - 130
			Trichloroethylene	2010/11/03		77	%	70 - 130
			Tetrachloroethylene	2010/11/03		76	%	70 - 130
			Benzene	2010/11/03		77	%	70 - 130
			Toluene	2010/11/03		77	%	70 - 130
			Ethylbenzene	2010/11/03		80	%	70 - 130
			p+m-Xylene	2010/11/03		86	%	70 - 130
			o-Xylene	2010/11/03		78	%	70 - 130
			Styrene	2010/11/03		77	%	70 - 130
			1,3,5-Trimethylbenzene	2010/11/03		76	%	70 - 130
			1,2,4-Trimethylbenzene	2010/11/03		75	%	70 - 130
			4-ethyltoluene	2010/11/03		78	%	70 - 130

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Maxxam Analytics
Attention: Michael Bisaga
Client Project #:
P.O. #:
Project name:

Quality Assurance Report (Continued)

Maxxam Job Number: GB0F3644

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2320996	DVO	Spiked Blank	Chlorobenzene	2010/11/03		76	%	70 - 130
			Benzyl chloride	2010/11/03		88	%	70 - 130
			1,3-Dichlorobenzene	2010/11/03		72	%	70 - 130
			1,4-Dichlorobenzene	2010/11/03		73	%	70 - 130
			1,2-Dichlorobenzene	2010/11/03		72	%	70 - 130
			1,2,4-Trichlorobenzene	2010/11/03		123	%	70 - 130
			Hexachlorobutadiene	2010/11/03		90	%	70 - 130
			Hexane	2010/11/03		75	%	70 - 130
			Cyclohexane	2010/11/03		78	%	70 - 130
			Tetrahydrofuran	2010/11/03		82	%	70 - 130
			1,4-Dioxane	2010/11/03		98	%	70 - 130
		Method Blank	Bromochloromethane	2010/11/03		90	%	60 - 140
			D5-Chlorobenzene	2010/11/03		88	%	60 - 140
			Difluorobenzene	2010/11/03		91	%	60 - 140
			2,2,4-Trimethylpentane	2010/11/03	<0.20		ppbv	
			Carbon Disulfide	2010/11/03	<0.50		ppbv	
			Propene	2010/11/03	<0.30		ppbv	
			Vinyl Acetate	2010/11/03	<0.20		ppbv	
			Vinyl Bromide	2010/11/03	<0.20		ppbv	
			Dichlorodifluoromethane (FREON 12)	2010/11/03	<0.20		ppbv	
			1,2-Dichlorotetrafluoroethane	2010/11/03	<0.17		ppbv	
			Chloromethane	2010/11/03	<0.30		ppbv	
			Vinyl Chloride	2010/11/03	<0.18		ppbv	
			Chloroethane	2010/11/03	<0.30		ppbv	
			1,3-Butadiene	2010/11/03	<0.50		ppbv	
			Trichlorofluoromethane (FREON 11)	2010/11/03	<0.20		ppbv	
			Trichlorotrifluoroethane	2010/11/03	<0.15		ppbv	
			Ethanol	2010/11/03	<2.3		ppbv	
			2-propanol	2010/11/03	<3.0		ppbv	
			2-Propanone	2010/11/03	<0.80		ppbv	
			Methyl Ethyl Ketone (2-Butanone)	2010/11/03	<3.0		ppbv	
			Methyl Isobutyl Ketone	2010/11/03	<3.2		ppbv	
			Methyl Butyl Ketone (2-Hexanone)	2010/11/03	<2.0		ppbv	
			Methyl t-butyl ether (MTBE)	2010/11/03	<0.20		ppbv	
			Ethyl Acetate	2010/11/03	<2.2		ppbv	
			1,1-Dichloroethylene	2010/11/03	<0.25		ppbv	
			cis-1,2-Dichloroethylene	2010/11/03	<0.19		ppbv	
			trans-1,2-Dichloroethylene	2010/11/03	<0.20		ppbv	
			Methylene Chloride(Dichloromethane)	2010/11/03	<0.30		ppbv	
			Chloroform	2010/11/03	<0.15		ppbv	
			Carbon Tetrachloride	2010/11/03	<0.30		ppbv	
			1,1-Dichloroethane	2010/11/03	<0.20		ppbv	
			1,2-Dichloroethane	2010/11/03	<0.20		ppbv	
			Ethylene Dibromide	2010/11/03	<0.17		ppbv	
			1,1,1-Trichloroethane	2010/11/03	<0.30		ppbv	
			1,1,2-Trichloroethane	2010/11/03	<0.15		ppbv	
			1,1,2,2-Tetrachloroethane	2010/11/03	<0.20		ppbv	
			cis-1,3-Dichloropropene	2010/11/03	<0.18		ppbv	
			trans-1,3-Dichloropropene	2010/11/03	<0.17		ppbv	
			1,2-Dichloropropane	2010/11/03	<0.40		ppbv	
			Bromomethane	2010/11/03	<0.18		ppbv	
			Bromoform	2010/11/03	<0.20		ppbv	
			Bromodichloromethane	2010/11/03	<0.20		ppbv	
			Dibromochloromethane	2010/11/03	<0.20		ppbv	
			Heptane	2010/11/03	<0.30		ppbv	

Maxxam Analytics
Attention: Michael Bisaga
Client Project #:
P.O. #:
Project name:

Quality Assurance Report (Continued)

Maxxam Job Number: GB0F3644

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2320996	DVO	Method Blank	Trichloroethylene	2010/11/03	<0.30		ppbv	
			Tetrachloroethylene	2010/11/03	<0.20		ppbv	
			Benzene	2010/11/03	<0.18		ppbv	
			Toluene	2010/11/03	<0.20		ppbv	
			Ethylbenzene	2010/11/03	<0.20		ppbv	
			p+m-Xylene	2010/11/03	<0.37		ppbv	
			o-Xylene	2010/11/03	<0.20		ppbv	
			Styrene	2010/11/03	<0.20		ppbv	
			1,3,5-Trimethylbenzene	2010/11/03	<0.50		ppbv	
			1,2,4-Trimethylbenzene	2010/11/03	<0.50		ppbv	
			4-ethyltoluene	2010/11/03	<2.2		ppbv	
			Chlorobenzene	2010/11/03	<0.20		ppbv	
			Benzyl chloride	2010/11/03	<1.0		ppbv	
			1,3-Dichlorobenzene	2010/11/03	<0.40		ppbv	
			1,4-Dichlorobenzene	2010/11/03	<0.40		ppbv	
			1,2-Dichlorobenzene	2010/11/03	<0.40		ppbv	
			1,2,4-Trichlorobenzene	2010/11/03	<2.0		ppbv	
			Hexachlorobutadiene	2010/11/03	<3.0		ppbv	
			Hexane	2010/11/03	<0.30		ppbv	
			Cyclohexane	2010/11/03	<0.20		ppbv	
			Tetrahydrofuran	2010/11/03	<0.40		ppbv	
			1,4-Dioxane	2010/11/03	<2.0		ppbv	
			Xylene (Total)	2010/11/03	<0.60		ppbv	

Spiked Blank: A blank matrix to which a known amount of the analyte has been added. Used to evaluate analyte recovery.
Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.
Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.
(1) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.

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MAXXAM

Xontech Model 910A VOC Sample Collection Data Sheet

Client: LICA
Location: Cold Lake South
Station ID: Lica 1
Field Sample ID: LICA VOC/ CLS /Oct 29, 10

Sampler s/n: 6167
Canister ID: 7838
Canister Installation Date/Time: Oct 28, 2010 @ 13:12 mst
Canister Removal Date/Time: Nov 01, 2010 @ 9:02 mst

Date and Time Information			
Sample Date	Start Time (MST)	End Time (MST)	Elapsed Time (Hours)
29-Oct-10	29/10/2010 0:00	30/10/2010 0:00	24.00

Flow Settings		
Meter Reading (sccm)	Pot Set Pt.	Pump Pressure Setting (psig)
10.0	597	25

Canister Information	
Initial Canister Vacuum (inHg)	Final Canister Pressure (psig)
-28	20

Canister valve open prior to sampling?: YES / NO
Timer set to 0.00 minutes prior to sampling? YES / NO
Canister valve closed prior to disconnection?: YES / NO

Comments: System leak check prior to sampling. COC # 2327

Technician Signiture: Ting Xu

Your C.O.C. #: 2327

Attention: Michael Bisaga
Maxxam Analytics
2608 6A Ave.
Cold Lake, AB
CANADA T9M 2C7

Report Date: 2010/11/15

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B0F9274
Received: 2010/11/05, 09:51

Sample Matrix: AIR
Samples Received: 2

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Method Reference
Canister Pressure (TO-15)	2	N/A	2010/11/10	BRL SOP-00304	EPA TO-15
Volatile Organics in Air (TO-15) (1)	2	N/A	2010/11/10	BRL SOP-00304	EPA TO-15

(1) Air sampling canisters have been cleaned in accordance with U.S. EPA Method TO14A. At the end of the cleaning, evacuation, and pressurization cycles, one canister was selected and was pressurized with Zero Air. This canister was then analyzed via TO14A on a GC/MS. The canister must have been found to contain <0.2 ppbv concentration of all target analytes in order for the batch to have been considered clean. Each canister also underwent a leak check prior to shipment.

Please Note: SUMMA® canister samples will be retained by Maxxam for a period of 5 calendar days from the date of this report, after which time they will be cleaned for reuse. If you require a longer sample storage period, please contact your service representative.

Encryption Key

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

THERESA STEPHENSON, Project Manager
Email: TStephenson@maxxam.ca
Phone# (905) 817-5763

==========

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. For Service Group specific validation please refer to the Validation Signature Page.

Total cover pages: 1

Maxxam Analytics

Maxxam Job #: B0F9274
Report Date: 2010/11/15

RESULTS OF ANALYSES OF AIR

Maxxam ID		HT7155	HT7156	
Sampling Date		2010/10/29	2010/10/29	
COC Number		2327	2327	
	Units	**LICA VOC\CLS\OCT 29,10**	**LICA VOC\PORT\OCT 29,10**	**QC Batch**
Volatile Organics				
Pressure on Receipt	psig	20	21	2328261

QC Batch = Quality Control Batch

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Maxxam Job #: B0F9274
Report Date: 2010/11/15

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		HT7155			HT7156				
Sampling Date		2010/10/29			2010/10/29				
COC Number		2327			2327				
	Units	**LICA VOC\CLS\OCT 29,10**	**ug/m3**	**DL (ug/m3)**	**LICA VOC\PORT\OCT 29,10**	**RDL**	**ug/m3**	**DL (ug/m3)**	**QC Batch**
Volatile Organics									
2,2,4-Trimethylpentane	ppbv	<0.20	<0.934	0.934	<0.20	0.20	<0.934	0.934	2327012
Carbon Disulfide	ppbv	<0.50	<1.56	1.56	<0.50	0.50	<1.56	1.56	2327012
Propene	ppbv	<0.30	<0.516	0.516	<0.30	0.30	<0.516	0.516	2327012
Vinyl Acetate	ppbv	<0.20	<0.704	0.704	<0.20	0.20	<0.704	0.704	2327012
Vinyl Bromide	ppbv	<0.20	<0.875	0.875	<0.20	0.20	<0.875	0.875	2327012
Dichlorodifluoromethane (FREON 12)	ppbv	0.64	3.18	0.989	0.61	0.20	3.04	0.989	2327012
1,2-Dichlorotetrafluoroethane	ppbv	<0.17	<1.19	1.19	<0.17	0.17	<1.19	1.19	2327012
Chloromethane	ppbv	0.53	1.08	0.620	0.50	0.30	1.04	0.620	2327012
Vinyl Chloride	ppbv	<0.18	<0.460	0.460	<0.18	0.18	<0.460	0.460	2327012
Chloroethane	ppbv	<0.30	<0.792	0.792	<0.30	0.30	<0.792	0.792	2327012
1,3-Butadiene	ppbv	<0.50	<1.11	1.11	<0.50	0.50	<1.11	1.11	2327012
Trichlorofluoromethane (FREON 11)	ppbv	0.29	1.65	1.12	0.28	0.20	1.59	1.12	2327012
Trichlorotrifluoroethane	ppbv	<0.15	<1.15	1.15	<0.15	0.15	<1.15	1.15	2327012
Ethanol	ppbv	<2.3	<4.33	4.33	<2.3	2.3	<4.33	4.33	2327012
2-propanol	ppbv	<3.0	<7.37	7.37	<3.0	3.0	<7.37	7.37	2327012
2-Propanone	ppbv	1.30	3.09	1.90	2.08	0.80	4.93	1.90	2327012
Methyl Ethyl Ketone (2-Butanone)	ppbv	<3.0	<8.85	8.85	<3.0	3.0	<8.85	8.85	2327012
Methyl Isobutyl Ketone	ppbv	<3.2	<13.1	13.1	<3.2	3.2	<13.1	13.1	2327012
Methyl Butyl Ketone (2-Hexanone)	ppbv	<2.0	<8.19	8.19	<2.0	2.0	<8.19	8.19	2327012
Methyl t-butyl ether (MTBE)	ppbv	<0.20	<0.721	0.721	<0.20	0.20	<0.721	0.721	2327012
Ethyl Acetate	ppbv	<2.2	<7.93	7.93	<2.2	2.2	<7.93	7.93	2327012
1,1-Dichloroethylene	ppbv	<0.25	<0.991	0.991	<0.25	0.25	<0.991	0.991	2327012
cis-1,2-Dichloroethylene	ppbv	<0.19	<0.753	0.753	<0.19	0.19	<0.753	0.753	2327012
trans-1,2-Dichloroethylene	ppbv	<0.20	<0.793	0.793	<0.20	0.20	<0.793	0.793	2327012
Methylene Chloride(Dichloromethane)	ppbv	<0.80	<2.78	2.78	<0.80	0.80	<2.78	2.78	2327012
Chloroform	ppbv	<0.15	<0.732	0.732	<0.15	0.15	<0.732	0.732	2327012
Carbon Tetrachloride	ppbv	<0.30	<1.89	1.89	<0.30	0.30	<1.89	1.89	2327012
1,1-Dichloroethane	ppbv	<0.20	<0.809	0.809	<0.20	0.20	<0.809	0.809	2327012
1,2-Dichloroethane	ppbv	<0.20	<0.809	0.809	<0.20	0.20	<0.809	0.809	2327012
Ethylene Dibromide	ppbv	<0.17	<1.31	1.31	<0.17	0.17	<1.31	1.31	2327012
1,1,1-Trichloroethane	ppbv	<0.30	<1.64	1.64	<0.30	0.30	<1.64	1.64	2327012

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		HT7155			HT7156				
Sampling Date		2010/10/29			2010/10/29				
COC Number		2327			2327				
	Units	**LICA VOC\CLS\OCT 29,10**	**ug/m3**	**DL (ug/m3)**	**LICA VOC\PORT\OCT 29,10**	**RDL**	**ug/m3**	**DL (ug/m3)**	**QC Batch**
1,1,2-Trichloroethane	ppbv	<0.15	<0.818	0.818	<0.15	0.15	<0.818	0.818	2327012
1,1,2,2-Tetrachloroethane	ppbv	<0.20	<1.37	1.37	<0.20	0.20	<1.37	1.37	2327012
cis-1,3-Dichloropropene	ppbv	<0.18	<0.817	0.817	<0.18	0.18	<0.817	0.817	2327012
trans-1,3-Dichloropropene	ppbv	<0.17	<0.772	0.772	<0.17	0.17	<0.772	0.772	2327012
1,2-Dichloropropane	ppbv	<0.40	<1.85	1.85	<0.40	0.40	<1.85	1.85	2327012
Bromomethane	ppbv	<0.18	<0.699	0.699	<0.18	0.18	<0.699	0.699	2327012
Bromoform	ppbv	<0.20	<2.07	2.07	<0.20	0.20	<2.07	2.07	2327012
Bromodichloromethane	ppbv	<0.20	<1.34	1.34	<0.20	0.20	<1.34	1.34	2327012
Dibromochloromethane	ppbv	<0.20	<1.70	1.70	<0.20	0.20	<1.70	1.70	2327012
Heptane	ppbv	<0.30	<1.23	1.23	<0.30	0.30	<1.23	1.23	2327012
Trichloroethylene	ppbv	<0.30	<1.61	1.61	<0.30	0.30	<1.61	1.61	2327012
Tetrachloroethylene	ppbv	<0.20	<1.36	1.36	<0.20	0.20	<1.36	1.36	2327012
Benzene	ppbv	<0.18	<0.575	0.575	<0.18	0.18	<0.575	0.575	2327012
Toluene	ppbv	<0.20	<0.753	0.753	<0.20	0.20	<0.753	0.753	2327012
Ethylbenzene	ppbv	<0.20	<0.868	0.868	<0.20	0.20	<0.868	0.868	2327012
p+m-Xylene	ppbv	<0.37	<1.61	1.61	<0.37	0.37	<1.61	1.61	2327012
o-Xylene	ppbv	<0.20	<0.868	0.868	<0.20	0.20	<0.868	0.868	2327012
Styrene	ppbv	<0.20	<0.852	0.852	<0.20	0.20	<0.852	0.852	2327012
1,3,5-Trimethylbenzene	ppbv	<0.50	<2.46	2.46	<0.50	0.50	<2.46	2.46	2327012
1,2,4-Trimethylbenzene	ppbv	<0.50	<2.46	2.46	<0.50	0.50	<2.46	2.46	2327012
4-ethyltoluene	ppbv	<2.2	<10.8	10.8	<2.2	2.2	<10.8	10.8	2327012
Chlorobenzene	ppbv	<0.20	<0.921	0.921	<0.20	0.20	<0.921	0.921	2327012
Benzyl chloride	ppbv	<1.0	<5.18	5.18	<1.0	1.0	<5.18	5.18	2327012
1,3-Dichlorobenzene	ppbv	<0.40	<2.40	2.40	<0.40	0.40	<2.40	2.40	2327012
1,4-Dichlorobenzene	ppbv	<0.40	<2.40	2.40	<0.40	0.40	<2.40	2.40	2327012
1,2-Dichlorobenzene	ppbv	<0.40	<2.40	2.40	<0.40	0.40	<2.40	2.40	2327012
1,2,4-Trichlorobenzene	ppbv	<2.0	<14.8	14.8	<2.0	2.0	<14.8	14.8	2327012
Hexachlorobutadiene	ppbv	<3.0	<32.0	32.0	<3.0	3.0	<32.0	32.0	2327012
Hexane	ppbv	<0.30	<1.06	1.06	<0.30	0.30	<1.06	1.06	2327012
Cyclohexane	ppbv	<0.20	<0.688	0.688	<0.20	0.20	<0.688	0.688	2327012
Tetrahydrofuran	ppbv	<0.40	<1.18	1.18	<0.40	0.40	<1.18	1.18	2327012
1,4-Dioxane	ppbv	<2.0	<7.21	7.21	<2.0	2.0	<7.21	7.21	2327012
Xylene (Total)	ppbv	<0.60	<2.61	2.61	<0.60	0.60	<2.61	2.61	2327012

QC Batch = Quality Control Batch

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Maxxam Analytics

Maxxam Job #: B0F9274
Report Date: 2010/11/15

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		HT7155			HT7156				
Sampling Date		2010/10/29			2010/10/29				
COC Number		2327			2327				
	Units	**LICA VOC\CLS\OCT 29,10**	**ug/m3**	**DL (ug/m3)**	**LICA VOC\PORT\OCT 29,10**	**RDL**	**ug/m3**	**DL (ug/m3)**	**QC Batch**
Surrogate Recovery (%)									
Bromochloromethane	%	79	N/A	N/A	81		N/A	N/A	2327012
D5-Chlorobenzene	%	74	N/A	N/A	76		N/A	N/A	2327012
Difluorobenzene	%	81	N/A	N/A	81		N/A	N/A	2327012

N/A = Not Applicable
QC Batch = Quality Control Batch

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Maxxam Analytics

Maxxam Job #: B0F9274
Report Date: 2010/11/15

Test Summary

Maxxam ID HT7155 **Collected** 2010/10/29
Sample ID LICA VOC\CLS\OCT 29,10 **Shipped**
Matrix AIR **Received** 2010/11/05

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Canister Pressure (TO-15)	PRES	2328261	N/A	2010/11/10	DVO
Volatile Organics in Air (TO-15)	GC/MS	2327012	N/A	2010/11/10	DVO

Maxxam ID HT7155 Dup **Collected** 2010/10/29
Sample ID LICA VOC\CLS\OCT 29,10 **Shipped**
Matrix AIR **Received** 2010/11/05

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Volatile Organics in Air (TO-15)	GC/MS	2327012	N/A	2010/11/10	DVO

Maxxam ID HT7156 **Collected** 2010/10/29
Sample ID LICA VOC\PORT\OCT 29,10 **Shipped**
Matrix AIR **Received** 2010/11/05

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Canister Pressure (TO-15)	PRES	2328261	N/A	2010/11/10	DVO
Volatile Organics in Air (TO-15)	GC/MS	2327012	N/A	2010/11/10	DVO

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Maxxam Analytics

Maxxam Job #: B0F9274
Report Date: 2010/11/15

GENERAL COMMENTS

Results relate only to the items tested.

Maxxam Analytics International Corporation o/a Maxxam Analytics 6740 Campobello Road, Mississauga, Ontario, L5N 2L8 Tel: (905) 817-5700 Toll-Free: 800-563-6266 Fax: (905) 817-5777 www.maxxam.ca

Maxxam Analytics
Attention: Michael Bisaga
Client Project #:
P.O. #:
Project name:

Quality Assurance Report

Maxxam Job Number: GB0F9274

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2327012	DVO	Spiked Blank	Bromochloromethane	2010/11/10		92	%	60 - 140
			D5-Chlorobenzene	2010/11/10		90	%	60 - 140
			Difluorobenzene	2010/11/10		94	%	60 - 140
			2,2,4-Trimethylpentane	2010/11/10		87	%	70 - 130
			Carbon Disulfide	2010/11/10		75	%	70 - 130
			Propene	2010/11/10		83	%	70 - 130
			Vinyl Acetate	2010/11/10		94	%	70 - 130
			Vinyl Bromide	2010/11/10		85	%	70 - 130
			Dichlorodifluoromethane (FREON 12)	2010/11/10		84	%	70 - 130
			1,2-Dichlorotetrafluoroethane	2010/11/10		93	%	70 - 130
			Chloromethane	2010/11/10		84	%	70 - 130
			Vinyl Chloride	2010/11/10		84	%	70 - 130
			Chloroethane	2010/11/10		80	%	70 - 130
			1,3-Butadiene	2010/11/10		86	%	70 - 130
			Trichlorofluoromethane (FREON 11)	2010/11/10		81	%	70 - 130
			Trichlorotrifluoroethane	2010/11/10		82	%	70 - 130
			Ethanol	2010/11/10		90	%	70 - 130
			2-propanol	2010/11/10		88	%	70 - 130
			2-Propanone	2010/11/10		87	%	70 - 130
			Methyl Ethyl Ketone (2-Butanone)	2010/11/10		95	%	70 - 130
			Methyl Isobutyl Ketone	2010/11/10		93	%	70 - 130
			Methyl Butyl Ketone (2-Hexanone)	2010/11/10		90	%	70 - 130
			Methyl t-butyl ether (MTBE)	2010/11/10		90	%	70 - 130
			Ethyl Acetate	2010/11/10		92	%	70 - 130
			1,1-Dichloroethylene	2010/11/10		85	%	70 - 130
			cis-1,2-Dichloroethylene	2010/11/10		86	%	70 - 130
			trans-1,2-Dichloroethylene	2010/11/10		86	%	70 - 130
			Methylene Chloride(Dichloromethane)	2010/11/10		71	%	70 - 130
			Chloroform	2010/11/10		84	%	70 - 130
			Carbon Tetrachloride	2010/11/10		88	%	70 - 130
			1,1-Dichloroethane	2010/11/10		85	%	70 - 130
			1,2-Dichloroethane	2010/11/10		85	%	70 - 130
			Ethylene Dibromide	2010/11/10		87	%	70 - 130
			1,1,1-Trichloroethane	2010/11/10		86	%	70 - 130
			1,1,2-Trichloroethane	2010/11/10		86	%	70 - 130
			1,1,2,2-Tetrachloroethane	2010/11/10		81	%	70 - 130
			cis-1,3-Dichloropropene	2010/11/10		92	%	70 - 130
			trans-1,3-Dichloropropene	2010/11/10		92	%	70 - 130
			1,2-Dichloropropane	2010/11/10		86	%	70 - 130
			Bromomethane	2010/11/10		77	%	70 - 130
			Bromoform	2010/11/10		93	%	70 - 130
			Bromodichloromethane	2010/11/10		88	%	70 - 130
			Dibromochloromethane	2010/11/10		94	%	70 - 130
			Heptane	2010/11/10		89	%	70 - 130
			Trichloroethylene	2010/11/10		83	%	70 - 130
			Tetrachloroethylene	2010/11/10		86	%	70 - 130
			Benzene	2010/11/10		86	%	70 - 130
			Toluene	2010/11/10		90	%	70 - 130
			Ethylbenzene	2010/11/10		88	%	70 - 130
			p+m-Xylene	2010/11/10		87	%	70 - 130
			o-Xylene	2010/11/10		88	%	70 - 130
			Styrene	2010/11/10		85	%	70 - 130
			1,3,5-Trimethylbenzene	2010/11/10		86	%	70 - 130
			1,2,4-Trimethylbenzene	2010/11/10		86	%	70 - 130
			4-ethyltoluene	2010/11/10		89	%	70 - 130

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Maxxam Analytics
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Quality Assurance Report (Continued)

Maxxam Job Number: GB0F9274

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2327012	DVO	Spiked Blank	Chlorobenzene	2010/11/10		81	%	70 - 130
			Benzyl chloride	2010/11/10		94	%	70 - 130
			1,3-Dichlorobenzene	2010/11/10		80	%	70 - 130
			1,4-Dichlorobenzene	2010/11/10		82	%	70 - 130
			1,2-Dichlorobenzene	2010/11/10		79	%	70 - 130
			1,2,4-Trichlorobenzene	2010/11/10		103	%	70 - 130
			Hexachlorobutadiene	2010/11/10		88	%	70 - 130
			Hexane	2010/11/10		85	%	70 - 130
			Cyclohexane	2010/11/10		90	%	70 - 130
			Tetrahydrofuran	2010/11/10		91	%	70 - 130
			1,4-Dioxane	2010/11/10		91	%	70 - 130
			Xylene (Total)	2010/11/10		87	%	N/A
		Method Blank	Bromochloromethane	2010/11/10		80	%	60 - 140
			D5-Chlorobenzene	2010/11/10		74	%	60 - 140
			Difluorobenzene	2010/11/10		81	%	60 - 140
			2,2,4-Trimethylpentane	2010/11/10	<0.20		ppbv	
			Carbon Disulfide	2010/11/10	<0.50		ppbv	
			Propene	2010/11/10	<0.30		ppbv	
			Vinyl Acetate	2010/11/10	<0.20		ppbv	
			Vinyl Bromide	2010/11/10	<0.20		ppbv	
			Dichlorodifluoromethane (FREON 12)	2010/11/10	<0.20		ppbv	
			1,2-Dichlorotetrafluoroethane	2010/11/10	<0.17		ppbv	
			Chloromethane	2010/11/10	<0.30		ppbv	
			Vinyl Chloride	2010/11/10	<0.18		ppbv	
			Chloroethane	2010/11/10	<0.30		ppbv	
			1,3-Butadiene	2010/11/10	<0.50		ppbv	
			Trichlorofluoromethane (FREON 11)	2010/11/10	<0.20		ppbv	
			Trichlorotrifluoroethane	2010/11/10	<0.15		ppbv	
			Ethanol	2010/11/10	<2.3		ppbv	
			2-propanol	2010/11/10	<3.0		ppbv	
			2-Propanone	2010/11/10	<0.80		ppbv	
			Methyl Ethyl Ketone (2-Butanone)	2010/11/10	<3.0		ppbv	
			Methyl Isobutyl Ketone	2010/11/10	<3.2		ppbv	
			Methyl Butyl Ketone (2-Hexanone)	2010/11/10	<2.0		ppbv	
			Methyl t-butyl ether (MTBE)	2010/11/10	<0.20		ppbv	
			Ethyl Acetate	2010/11/10	<2.2		ppbv	
			1,1-Dichloroethylene	2010/11/10	<0.25		ppbv	
			cis-1,2-Dichloroethylene	2010/11/10	<0.19		ppbv	
			trans-1,2-Dichloroethylene	2010/11/10	<0.20		ppbv	
			Methylene Chloride(Dichloromethane)	2010/11/10	<0.80		ppbv	
			Chloroform	2010/11/10	<0.15		ppbv	
			Carbon Tetrachloride	2010/11/10	<0.30		ppbv	
			1,1-Dichloroethane	2010/11/10	<0.20		ppbv	
			1,2-Dichloroethane	2010/11/10	<0.20		ppbv	
			Ethylene Dibromide	2010/11/10	<0.17		ppbv	
			1,1,1-Trichloroethane	2010/11/10	<0.30		ppbv	
			1,1,2-Trichloroethane	2010/11/10	<0.15		ppbv	
			1,1,2,2-Tetrachloroethane	2010/11/10	<0.20		ppbv	
			cis-1,3-Dichloropropene	2010/11/10	<0.18		ppbv	
			trans-1,3-Dichloropropene	2010/11/10	<0.17		ppbv	
			1,2-Dichloropropane	2010/11/10	<0.40		ppbv	
			Bromomethane	2010/11/10	<0.18		ppbv	
			Bromoform	2010/11/10	<0.20		ppbv	
			Bromodichloromethane	2010/11/10	<0.20		ppbv	
			Dibromochloromethane	2010/11/10	<0.20		ppbv	

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Maxxam Analytics
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Quality Assurance Report (Continued)

Maxxam Job Number: GB0F9274

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2327012	DVO	Method Blank	Heptane	2010/11/10	<0.30		ppbv	
			Trichloroethylene	2010/11/10	<0.30		ppbv	
			Tetrachloroethylene	2010/11/10	<0.20		ppbv	
			Benzene	2010/11/10	<0.18		ppbv	
			Toluene	2010/11/10	<0.20		ppbv	
			Ethylbenzene	2010/11/10	<0.20		ppbv	
			p+m-Xylene	2010/11/10	<0.37		ppbv	
			o-Xylene	2010/11/10	<0.20		ppbv	
			Styrene	2010/11/10	<0.20		ppbv	
			1,3,5-Trimethylbenzene	2010/11/10	<0.50		ppbv	
			1,2,4-Trimethylbenzene	2010/11/10	<0.50		ppbv	
			4-ethyltoluene	2010/11/10	<2.2		ppbv	
			Chlorobenzene	2010/11/10	<0.20		ppbv	
			Benzyl chloride	2010/11/10	<1.0		ppbv	
			1,3-Dichlorobenzene	2010/11/10	<0.40		ppbv	
			1,4-Dichlorobenzene	2010/11/10	<0.40		ppbv	
			1,2-Dichlorobenzene	2010/11/10	<0.40		ppbv	
			1,2,4-Trichlorobenzene	2010/11/10	<2.0		ppbv	
			Hexachlorobutadiene	2010/11/10	<3.0		ppbv	
			Hexane	2010/11/10	<0.30		ppbv	
			Cyclohexane	2010/11/10	<0.20		ppbv	
			Tetrahydrofuran	2010/11/10	<0.40		ppbv	
			1,4-Dioxane	2010/11/10	<2.0		ppbv	
			Xylene (Total)	2010/11/10	<0.60		ppbv	
		RPD - Sample/Sample Dup	2,2,4-Trimethylpentane	2010/11/10	NC		%	25
			Carbon Disulfide	2010/11/10	NC		%	25
			Propene	2010/11/10	NC		%	25
			Vinyl Acetate	2010/11/10	NC		%	25
			Vinyl Bromide	2010/11/10	NC		%	25
			Dichlorodifluoromethane (FREON 12)	2010/11/10	NC		%	25
			1,2-Dichlorotetrafluoroethane	2010/11/10	NC		%	25
			Chloromethane	2010/11/10	NC		%	25
			Vinyl Chloride	2010/11/10	NC		%	25
			Chloroethane	2010/11/10	NC		%	25
			1,3-Butadiene	2010/11/10	NC		%	25
			Trichlorofluoromethane (FREON 11)	2010/11/10	NC		%	25
			Trichlorotrifluoroethane	2010/11/10	NC		%	25
			Ethanol	2010/11/10	NC		%	25
			2-propanol	2010/11/10	NC		%	25
			2-Propanone	2010/11/10	NC		%	25
			Methyl Ethyl Ketone (2-Butanone)	2010/11/10	NC		%	25
			Methyl Isobutyl Ketone	2010/11/10	NC		%	25
			Methyl Butyl Ketone (2-Hexanone)	2010/11/10	NC		%	25
			Methyl t-butyl ether (MTBE)	2010/11/10	NC		%	25
			Ethyl Acetate	2010/11/10	NC		%	25
			1,1-Dichloroethylene	2010/11/10	NC		%	25
			cis-1,2-Dichloroethylene	2010/11/10	NC		%	25
			trans-1,2-Dichloroethylene	2010/11/10	NC		%	25
			Methylene Chloride(Dichloromethane)	2010/11/10	NC		%	25
			Chloroform	2010/11/10	NC		%	25
			Carbon Tetrachloride	2010/11/10	NC		%	25
			1,1-Dichloroethane	2010/11/10	NC		%	25
			1,2-Dichloroethane	2010/11/10	NC		%	25

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Quality Assurance Report (Continued)

Maxxam Job Number: GB0F9274

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2327012	DVO	RPD - Sample/Sample Dup	Ethylene Dibromide	2010/11/10	NC		%	25
			1,1,1-Trichloroethane	2010/11/10	NC		%	25
			1,1,2-Trichloroethane	2010/11/10	NC		%	25
			1,1,2,2-Tetrachloroethane	2010/11/10	NC		%	25
			cis-1,3-Dichloropropene	2010/11/10	NC		%	25
			trans-1,3-Dichloropropene	2010/11/10	NC		%	25
			1,2-Dichloropropane	2010/11/10	NC		%	25
			Bromomethane	2010/11/10	NC		%	25
			Bromoform	2010/11/10	NC		%	25
			Bromodichloromethane	2010/11/10	NC		%	25
			Dibromochloromethane	2010/11/10	NC		%	25
			Heptane	2010/11/10	NC		%	25
			Trichloroethylene	2010/11/10	NC		%	25
			Tetrachloroethylene	2010/11/10	NC		%	25
			Benzene	2010/11/10	NC		%	25
			Toluene	2010/11/10	NC		%	25
			Ethylbenzene	2010/11/10	NC		%	25
			p+m-Xylene	2010/11/10	NC		%	25
			o-Xylene	2010/11/10	NC		%	25
			Styrene	2010/11/10	NC		%	25
			1,3,5-Trimethylbenzene	2010/11/10	NC		%	25
			1,2,4-Trimethylbenzene	2010/11/10	NC		%	25
			4-ethyltoluene	2010/11/10	NC		%	25
			Chlorobenzene	2010/11/10	NC		%	25
			Benzyl chloride	2010/11/10	NC		%	25
			1,3-Dichlorobenzene	2010/11/10	NC		%	25
			1,4-Dichlorobenzene	2010/11/10	NC		%	25
			1,2-Dichlorobenzene	2010/11/10	NC		%	25
			1,2,4-Trichlorobenzene	2010/11/10	NC		%	25
			Hexachlorobutadiene	2010/11/10	NC		%	25
			Hexane	2010/11/10	NC		%	25
			Cyclohexane	2010/11/10	NC		%	25
			Tetrahydrofuran	2010/11/10	NC		%	25
			1,4-Dioxane	2010/11/10	NC		%	25
			Xylene (Total)	2010/11/10	NC		%	25

Spiked Blank: A blank matrix to which a known amount of the analyte has been added. Used to evaluate analyte recovery.
Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.
Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.
NC (RPD): The RPD was not calculated. The level of analyte detected in the parent sample and its duplicate was not sufficiently significant to permit a reliable calculation.

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Polycyclic Aromatic Hydrocarbons Laboratory Analysis

Maxxam Analytics

Tisch Hi-Vol PUF+ Sample Collection Data Sheet

Client: Lica
Location: Cold Lake South
Station ID: Lica1
Field Sample ID: LICA PUF/CLS/Oct 05, 10

Puf+ s/n: 100-1020
Motor s/n: 1138
Installation Date/Time: Oct 05, 2010 @ 14:21 mst
Removal Date/Time: Oct 05, 2010 @ 8:01 mst

Date and Time Information			
Sample Date	Start Time (MST)	End Time (MST)	Elapsed Time (Hours)
05-Oct-10	05/10/2010 0:00	06/10/2010 0:00	24.00

PUF and QFF Information			
Date Received	Date Shipped	Puf Expiration Date	QFF Prep Date
04-Oct-10	06-Oct-10	14-Oct-10	????

Set Flow Rate (slpm): 230

Date of Last Calibration: 05-May-10

Sampling Data			
Average Pressure(mmHg)	AverageFlow (Qstd slpm)	Average Tempurature (C)	Volume (Vstd m^3)
714	229	10.2	330.34

Time set correctly prior to sampling? YES
Timer set correctly prior to sampling? YES
Sampling data saved to memory card after sampling? YES

Comments: COC# 3477
GB0D7193 PUFF # 1
Ran with a 102mm Quartz Fiber Filter - Sample ID - LICA QFF/CLS/Oct 05, 10

- Noticed condensation on the PUFF glass holder

Technician Signiture: Ting Xu

Your C.O.C. #: 3477

Attention: Michael Bisaga
Maxxam Analytics
2608 6A Ave.
Cold Lake, AB
CANADA T9M 2C7

Report Date: 2010/10/17

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B0E2644
Received: 2010/10/08, 10:20

Sample Matrix: PUF AND FILTER
Samples Received: 2

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Method Reference
PAH's in Air (CARB429mod)	2	2010/10/12	2010/10/14	BRL SOP-00201	CARB429(ARBM1,M2)mod

Encryption Key

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

THERESA STEPHENSON, Project Manager
Email: Theresa.Stephenson@MaxxamAnalytics.com
Phone# (905) 817-5763

==========

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. For Service Group specific validation please refer to the Validation Signature Page.

Total cover pages: 1

Maxxam Analytics

Maxxam Job #: B0E2644
Report Date: 2010/10/17

SEMI-VOLATILE ORGANICS BY GC-MS (PUF AND FILTER)

Maxxam ID		HL3136	HL3137		
Sampling Date		2010/10/05	2010/10/05		
COC Number		3477	3477		
	Units	**LICA PUFF+QFF/CLS/OCT 05,10**	**LICA PUFF+QFF/PORT/OCT 05,10**	**RDL**	**QC Batch**
Semivolatile Organics					
1-Methylnaphthalene	ug	0.10	<0.10	0.10	2297320
1-Methylphenanthrene	ug	<0.10	<0.10	0.10	2297320
2-Chloronaphthalene	ug	<0.10	<0.10	0.10	2297320
2-Methylanthracene	ug	<0.10	<0.10	0.10	2297320
2-Methylnaphthalene	ug	0.18	<0.10	0.10	2297320
3-Methylcholanthrene	ug	<2.0	<2.0	2.0	2297320
7,12-Dimethylbenzo(a)anthracene	ug	<0.10	<0.10	0.10	2297320
9,10-Dimethylanthracene	ug	<0.40	<0.40	0.40	2297320
Acenaphthene	ug	<0.050	<0.050	0.050	2297320
Acenaphthylene	ug	<0.050	<0.050	0.050	2297320
Anthracene	ug	<0.050	<0.050	0.050	2297320
Benzo(a)anthracene	ug	<0.050	<0.050	0.050	2297320
Benzo(a)fluorene	ug	<0.10	<0.10	0.10	2297320
Benzo(a)pyrene	ug	<0.050	<0.050	0.050	2297320
Benzo(b)fluoranthene	ug	<0.050	<0.050	0.050	2297320
Benzo(b)fluorene	ug	<0.10	<0.10	0.10	2297320
Benzo(e)pyrene	ug	<0.10	<0.10	0.10	2297320
Benzo(g,h,i)perylene	ug	<0.050	<0.050	0.050	2297320
Benzo(k)fluoranthene	ug	<0.050	<0.050	0.050	2297320
Biphenyl	ug	<0.10	<0.10	0.10	2297320
Chrysene	ug	<0.050	<0.050	0.050	2297320
Coronene	ug	<0.10	<0.10	0.10	2297320
Dibenz(a,h)anthracene	ug	<0.050	<0.050	0.050	2297320
Dibenzo(a,e)pyrene	ug	<0.20	<0.20	0.20	2297320
Fluoranthene	ug	<0.050	<0.050	0.050	2297320
Fluorene	ug	0.062	<0.050	0.050	2297320
Indeno(1,2,3-cd)pyrene	ug	<0.050	<0.050	0.050	2297320
m-Terphenyl	ug	<0.10	<0.10	0.10	2297320
Naphthalene	ug	0.124	<0.072	0.072	2297320
o-Terphenyl	ug	<0.10	<0.10	0.10	2297320
Perylene	ug	<0.10	<0.10	0.10	2297320

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Maxxam Analytics

Maxxam Job #: B0E2644
Report Date: 2010/10/17

SEMI-VOLATILE ORGANICS BY GC-MS (PUF AND FILTER)

Maxxam ID		HL3136	HL3137		
Sampling Date		2010/10/05	2010/10/05		
COC Number		3477	3477		
	Units	**LICA PUFF+QFF/CLS/OCT 05,10**	**LICA PUFF+QFF/PORT/OCT 05,10**	**RDL**	**QC Batch**
Phenanthrene	ug	0.148	0.108	0.050	2297320
p-Terphenyl	ug	<0.10	<0.10	0.10	2297320
Pyrene	ug	<0.050	<0.050	0.050	2297320
Quinoline	ug	<0.40	<0.40	0.40	2297320
Tetralin	ug	<0.10	<0.10	0.10	2297320
Surrogate Recovery (%)					
D10-2-Methylnaphthalene	%	70	76		2297320
D10-Fluoranthene	%	92	94		2297320
D10-Fluorene (FS)	%	7.8 (1)	8.0 (1)		2297320
D10-Phenanthrene	%	84	88		2297320
D12-Benzo(a)anthracene	%	88	86		2297320
D12-Benzo(a)pyrene	%	92	90		2297320
D12-Benzo(b)fluoranthene	%	86	86		2297320
D12-Benzo(ghi)perylene	%	92	92		2297320
D12-Benzo(k)fluoranthene	%	84	84		2297320
D12-Chrysene	%	80	78		2297320
D12-Indeno(1,2,3-cd)pyrene	%	90	92		2297320
D12-Perylene	%	90	88		2297320
D14-Dibenzo(a,h)anthracene	%	92	94		2297320
D14-Terphenyl (FS)	%	77	76		2297320
D8-Acenaphthylene	%	80	88		2297320
D8-Naphthalene	%	66	72		2297320

QC Batch = Quality Control Batch
(1) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.

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Maxxam Analytics

Maxxam Job #: B0E2644
Report Date: 2010/10/17

Test Summary

Maxxam ID	HL3136	**Collected**	2010/10/05
Sample ID	LICA PUFF+QFF/CLS/OCT 05,10	**Shipped**	
Matrix	PUF AND FILTER	**Received**	2010/10/08

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
PAH's in Air (CARB429mod)	GC/MS	2297320	2010/10/12	2010/10/14	JIW

Maxxam ID	HL3137	**Collected**	2010/10/05
Sample ID	LICA PUFF+QFF/PORT/OCT 05,10	**Shipped**	
Matrix	PUF AND FILTER	**Received**	2010/10/08

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
PAH's in Air (CARB429mod)	GC/MS	2297320	2010/10/12	2010/10/14	JIW

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Maxxam Analytics

Maxxam Job #: B0E2644
Report Date: 2010/10/17

GENERAL COMMENTS

PAHMS-F(WS:2297320)
9.10-Dimethylanthracene and 7,12-Dimethylbenzo(a)anthracene are above 25% RSD in initial calibration. No positives found for these 2 compounds.

Not calibrated for Benzo(b)Anthracene, Picene, Dibenzo(a,c) anthracene and Triphenylene. An estimated mdl for each of these compounds is 0.1ug.
Since Dibenzo(a,c) anthracene co-elutes with Dibenz(a,h) anthracene and Triphenylene with Chrysene each would have a value below estimated mdl.
Benzo(b)Anthracene elutes after Benzo(a)Anthracene and Chysene. Picene elutes after Dibenz(a,h) anthracene. Searched for ions specific to these 2 compounds in the appropriate retention time range with no possible positives detected.

Sample HL3136-01: PAHMS-F(WS:2297320)
Low D10-Fluorene field spike recovery. Suspect sample matrix as cause due to acceptable recovery of D14-Terphenyl field spike.

Sample HL3137-01: PAHMS-F(WS:2297320)
Low D10-Fluorene field spike recovery. Suspect sample matrix as cause due to acceptable recovery of D14-Terphenyl field spike.

Results relate only to the items tested.

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Maxxam Analytics
Attention: Michael Bisaga
Client Project #:
P.O. #:
Project name:

Quality Assurance Report

Maxxam Job Number: GB0E2644

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2297320	JIW	Spiked Blank	D10-2-Methylnaphthalene	2010/10/14		80	%	50 - 150
			D10-Fluoranthene	2010/10/14		92	%	50 - 150
			D10-Phenanthrene	2010/10/14		84	%	50 - 150
			D12-Benzo(a)anthracene	2010/10/14		86	%	50 - 150
			D12-Benzo(a)pyrene	2010/10/14		92	%	50 - 150
			D12-Benzo(b)fluoranthene	2010/10/14		88	%	50 - 150
			D12-Benzo(ghi)perylene	2010/10/14		94	%	50 - 150
			D12-Benzo(k)fluoranthene	2010/10/14		86	%	50 - 150
			D12-Chrysene	2010/10/14		80	%	50 - 150
			D12-Indeno(1,2,3-cd)pyrene	2010/10/14		92	%	50 - 150
			D12-Perylene	2010/10/14		92	%	50 - 150
			D14-Dibenzo(a,h)anthracene	2010/10/14		94	%	50 - 150
			D8-Acenaphthylene	2010/10/14		86	%	50 - 150
			D8-Naphthalene	2010/10/14		78	%	50 - 150
			Acenaphthene	2010/10/14		81	%	60 - 130
		RPD	Acenaphthene	2010/10/14	2.5		%	50
		Spiked Blank	Acenaphthylene	2010/10/14		86	%	60 - 130
		RPD	Acenaphthylene	2010/10/14	1.5		%	50
		Spiked Blank	Anthracene	2010/10/14		84	%	60 - 130
		RPD	Anthracene	2010/10/14	1.8		%	50
		Spiked Blank	Benzo(a)anthracene	2010/10/14		75	%	60 - 130
		RPD	Benzo(a)anthracene	2010/10/14	0		%	50
		Spiked Blank	Benzo(a)pyrene	2010/10/14		71	%	60 - 130
		RPD	Benzo(a)pyrene	2010/10/14	0.7		%	50
		Spiked Blank	Benzo(b)fluoranthene	2010/10/14		74	%	60 - 130
		RPD	Benzo(b)fluoranthene	2010/10/14	2.4		%	50
		Spiked Blank	Benzo(g,h,i)perylene	2010/10/14		80	%	60 - 130
		RPD	Benzo(g,h,i)perylene	2010/10/14	1.6		%	50
		Spiked Blank	Benzo(k)fluoranthene	2010/10/14		79	%	60 - 130
		RPD	Benzo(k)fluoranthene	2010/10/14	2.2		%	50
		Spiked Blank	Chrysene	2010/10/14		76	%	60 - 130
		RPD	Chrysene	2010/10/14	0.7		%	50
		Spiked Blank	Dibenz(a,h)anthracene	2010/10/14		78	%	60 - 130
		RPD	Dibenz(a,h)anthracene	2010/10/14	3.5		%	50
		Spiked Blank	Fluoranthene	2010/10/14		89	%	60 - 130
		RPD	Fluoranthene	2010/10/14	2.8		%	50
		Spiked Blank	Fluorene	2010/10/14		81	%	60 - 130
		RPD	Fluorene	2010/10/14	1.2		%	50
		Spiked Blank	Indeno(1,2,3-cd)pyrene	2010/10/14		79	%	60 - 130
		RPD	Indeno(1,2,3-cd)pyrene	2010/10/14	2.5		%	50
		Spiked Blank	Naphthalene	2010/10/14		68	%	60 - 130
		RPD	Naphthalene	2010/10/14	4.5		%	50
		Spiked Blank	Phenanthrene	2010/10/14		79	%	60 - 130
		RPD	Phenanthrene	2010/10/14	0.6		%	50
		Spiked Blank	Pyrene	2010/10/14		81	%	60 - 130
		RPD	Pyrene	2010/10/14	3.0		%	50
		Method Blank	D10-2-Methylnaphthalene	2010/10/14		76	%	50 - 150
			D10-Fluoranthene	2010/10/14		90	%	50 - 150
			D10-Phenanthrene	2010/10/14		80	%	50 - 150
			D12-Benzo(a)anthracene	2010/10/14		84	%	50 - 150
			D12-Benzo(a)pyrene	2010/10/14		90	%	50 - 150
			D12-Benzo(b)fluoranthene	2010/10/14		82	%	50 - 150
			D12-Benzo(ghi)perylene	2010/10/14		92	%	50 - 150
			D12-Benzo(k)fluoranthene	2010/10/14		84	%	50 - 150
			D12-Chrysene	2010/10/14		80	%	50 - 150

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Maxxam Analytics
Attention: Michael Bisaga
Client Project #:
P.O. #:
Project name:

Quality Assurance Report (Continued)

Maxxam Job Number: GB0E2644

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2297320	JIW	Method Blank	D12-Indeno(1,2,3-cd)pyrene	2010/10/14		90	%	50 - 150
			D12-Perylene	2010/10/14		92	%	50 - 150
			D14-Dibenzo(a,h)anthracene	2010/10/14		92	%	50 - 150
			D8-Acenaphthylene	2010/10/14		82	%	50 - 150
			D8-Naphthalene	2010/10/14		74	%	50 - 150
			1-Methylnaphthalene	2010/10/14	<0.10		ug	
			1-Methylphenanthrene	2010/10/14	<0.10		ug	
			2-Chloronaphthalene	2010/10/14	<0.10		ug	
			2-Methylanthracene	2010/10/14	<0.10		ug	
			2-Methylnaphthalene	2010/10/14	<0.10		ug	
			3-Methylcholanthrene	2010/10/14	<2.0		ug	
			7,12-Dimethylbenzo(a)anthracene	2010/10/14	<0.10		ug	
			9,10-Dimethylanthracene	2010/10/14	<0.40		ug	
			Acenaphthene	2010/10/14	<0.050		ug	
			Acenaphthylene	2010/10/14	<0.050		ug	
			Anthracene	2010/10/14	<0.050		ug	
			Benzo(a)anthracene	2010/10/14	<0.050		ug	
			Benzo(a)fluorene	2010/10/14	<0.10		ug	
			Benzo(a)pyrene	2010/10/14	<0.050		ug	
			Benzo(b)fluoranthene	2010/10/14	<0.050		ug	
			Benzo(b)fluorene	2010/10/14	<0.10		ug	
			Benzo(e)pyrene	2010/10/14	<0.10		ug	
			Benzo(g,h,i)perylene	2010/10/14	<0.050		ug	
			Benzo(k)fluoranthene	2010/10/14	<0.050		ug	
			Biphenyl	2010/10/14	<0.10		ug	
			Chrysene	2010/10/14	<0.050		ug	
			Coronene	2010/10/14	<0.10		ug	
			Dibenz(a,h)anthracene	2010/10/14	<0.050		ug	
			Dibenzo(a,e)pyrene	2010/10/14	<0.20		ug	
			Fluoranthene	2010/10/14	<0.050		ug	
			Fluorene	2010/10/14	<0.050		ug	
			Indeno(1,2,3-cd)pyrene	2010/10/14	<0.050		ug	
			m-Terphenyl	2010/10/14	<0.10		ug	
			Naphthalene	2010/10/14	<0.072		ug	
			o-Terphenyl	2010/10/14	<0.10		ug	
			Perylene	2010/10/14	<0.10		ug	
			Phenanthrene	2010/10/14	<0.050		ug	
			p-Terphenyl	2010/10/14	<0.10		ug	
			Pyrene	2010/10/14	<0.050		ug	
			Quinoline	2010/10/14	<0.40		ug	
			Tetralin	2010/10/14	<0.10		ug	

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.
Spiked Blank: A blank matrix to which a known amount of the analyte has been added. Used to evaluate analyte recovery.
Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.
Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.

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Maxxam Analytics

Tisch Hi-Vol PUF+ Sample Collection Data Sheet

Client: Lica
Location: Cold Lake South
Station ID: Lica1
Field Sample ID: LICA PUF/CLS/Oct 11, 10

Puf+ s/n: 100-1020
Motor s/n: 1138
Installation Date/Time: Oct 08, 2010 @ 7:25 mst
Removal Date/Time: Oct 12, 2010 @ 7:31mst

Date and Time Information			
Sample Date	Start Time (MST)	End Time (MST)	Elapsed Time (Hours)
11-Oct-10	11/10/2010 0:00	12/10/2010 0:00	24.00

PUF and QFF Information			
Date Received	Date Shipped	Puf Expiration Date	QFF Prep Date
07-Oct-10	12-Oct-10	19-Oct-10	????

Set Flow Rate (slpm): 230

Date of Last Calibration: 05-May-10

Sampling Data			
Average Pressure(mmHg)	AverageFlow (Qstd slpm)	Average Tempurature (C)	Volume (Vstd m^3)
711	229	9.8	330.33

Time set correctly prior to sampling? YES
Timer set correctly prior to sampling? YES
Sampling data saved to memory card after sampling? YES

Comments: COC# 2324
GB0D7198 PUFF # 1
Ran with a 102mm Quartz Fiber Filter - Sample ID - LICA QFF/CLS/Oct 11 , 10

- Noticed condensation on the PUFF glass holder

Technician Signiture: Ting Xu

Your C.O.C. #: 2324

Attention: Michael Bisaga
Maxxam Analytics
2608 6A Ave.
Cold Lake, AB
CANADA T9M 2C7

Report Date: 2010/10/19

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B0E5009
Received: 2010/10/14, 09:30

Sample Matrix: PUF AND FILTER
Samples Received: 2

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Method Reference
PAH's in Air (CARB429mod)	2	2010/10/15	2010/10/18	BRL SOP-00201	CARB429(ARBM1,M2)mod

Encryption Key

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

THERESA STEPHENSON, Project Manager
Email: Theresa.Stephenson@MaxxamAnalytics.com
Phone# (905) 817-5763

==========

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. For Service Group specific validation please refer to the Validation Signature Page.

Total cover pages: 1

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Maxxam Analytics

Maxxam Job #: B0E5009
Report Date: 2010/10/19

SEMI-VOLATILE ORGANICS BY GC-MS (PUF AND FILTER)

Maxxam ID		HM5324	HM5325		
Sampling Date		2010/10/11	2010/10/11		
COC Number		2324	2324		
	Units	**LICA PUFF/QFF/CLS/OCT 11,2010**	**LICA PUFF/QFF/PORT/OCT 11,2010**	**RDL**	**QC Batch**
Semivolatile Organics					
1-Methylnaphthalene	ug	<0.10	<0.10	0.10	2300182
1-Methylphenanthrene	ug	<0.10	<0.10	0.10	2300182
2-Chloronaphthalene	ug	<0.10	<0.10	0.10	2300182
2-Methylanthracene	ug	<0.10	<0.10	0.10	2300182
2-Methylnaphthalene	ug	0.16	<0.10	0.10	2300182
3-Methylcholanthrene	ug	<2.0	<2.0	2.0	2300182
7,12-Dimethylbenzo(a)anthracene	ug	<0.10	<0.10	0.10	2300182
9,10-Dimethylanthracene	ug	<0.40	<0.40	0.40	2300182
Acenaphthene	ug	<0.050	<0.050	0.050	2300182
Acenaphthylene	ug	<0.050	<0.050	0.050	2300182
Anthracene	ug	<0.050	<0.050	0.050	2300182
Benzo(a)anthracene	ug	<0.050	<0.050	0.050	2300182
Benzo(a)fluorene	ug	<0.10	<0.10	0.10	2300182
Benzo(a)pyrene	ug	<0.050	<0.050	0.050	2300182
Benzo(b)fluoranthene	ug	<0.050	<0.050	0.050	2300182
Benzo(b)fluorene	ug	<0.10	<0.10	0.10	2300182
Benzo(e)pyrene	ug	<0.10	<0.10	0.10	2300182
Benzo(g,h,i)perylene	ug	<0.050	<0.050	0.050	2300182
Benzo(k)fluoranthene	ug	<0.050	<0.050	0.050	2300182
Biphenyl	ug	<0.10	<0.10	0.10	2300182
Chrysene	ug	<0.050	<0.050	0.050	2300182
Coronene	ug	<0.10	<0.10	0.10	2300182
Dibenz(a,h)anthracene	ug	<0.050	<0.050	0.050	2300182
Dibenzo(a,e)pyrene	ug	<0.20	<0.20	0.20	2300182
Fluoranthene	ug	<0.050	<0.050	0.050	2300182
Fluorene	ug	0.064	<0.050	0.050	2300182
Indeno(1,2,3-cd)pyrene	ug	<0.050	<0.050	0.050	2300182
m-Terphenyl	ug	<0.10	<0.10	0.10	2300182
Naphthalene	ug	0.100	<0.072	0.072	2300182
o-Terphenyl	ug	<0.10	<0.10	0.10	2300182
Perylene	ug	<0.10	<0.10	0.10	2300182

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Maxxam Analytics

Maxxam Job #: B0E5009
Report Date: 2010/10/19

SEMI-VOLATILE ORGANICS BY GC-MS (PUF AND FILTER)

Maxxam ID		HM5324	HM5325		
Sampling Date		2010/10/11	2010/10/11		
COC Number		2324	2324		
	Units	**LICA PUFF/QFF/CLS/OCT 11,2010**	**LICA PUFF/QFF/PORT/OCT 11,2010**	**RDL**	**QC Batch**
Phenanthrene	ug	0.124	0.082	0.050	2300182
p-Terphenyl	ug	<0.10	<0.10	0.10	2300182
Pyrene	ug	<0.050	<0.050	0.050	2300182
Quinoline	ug	<0.40	<0.40	0.40	2300182
Tetralin	ug	<0.10	<0.10	0.10	2300182
Surrogate Recovery (%)					
D10-2-Methylnaphthalene	%	72	82		2300182
D10-Fluoranthene	%	96	92		2300182
D10-Fluorene (FS)	%	12 (1)	14 (1)		2300182
D10-Phenanthrene	%	86	84		2300182
D12-Benzo(a)anthracene	%	86	84		2300182
D12-Benzo(a)pyrene	%	92	92		2300182
D12-Benzo(b)fluoranthene	%	88	86		2300182
D12-Benzo(ghi)perylene	%	92	94		2300182
D12-Benzo(k)fluoranthene	%	86	90		2300182
D12-Chrysene	%	78	82		2300182
D12-Indeno(1,2,3-cd)pyrene	%	92	92		2300182
D12-Perylene	%	92	96		2300182
D14-Dibenzo(a,h)anthracene	%	94	94		2300182
D14-Terphenyl (FS)	%	78	78		2300182
D8-Acenaphthylene	%	80	88		2300182
D8-Naphthalene	%	68	78		2300182

QC Batch = Quality Control Batch
(1) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.

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Maxxam Analytics

Maxxam Job #: B0E5009
Report Date: 2010/10/19

Test Summary

Maxxam ID	HM5324	**Collected**	2010/10/11
Sample ID	LICA PUFF/QFF/CLS/OCT 11,2010	**Shipped**	
Matrix	PUF AND FILTER	**Received**	2010/10/14

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
PAH's in Air (CARB429mod)	GC/MS	2300182	2010/10/15	2010/10/18	JIW

Maxxam ID	HM5325	**Collected**	2010/10/11
Sample ID	LICA PUFF/QFF/PORT/OCT 11,2010	**Shipped**	
Matrix	PUF AND FILTER	**Received**	2010/10/14

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
PAH's in Air (CARB429mod)	GC/MS	2300182	2010/10/15	2010/10/18	JIW

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Maxxam Analytics

Maxxam Job #: B0E5009
Report Date: 2010/10/19

GENERAL COMMENTS

PAHMS-F(WS:2300182)
9.10-Dimethylanthracene and 7,12-Dimethylbenzo(a)anthracene are above 25% RSD in initial calibration. No positives found for these 2 compounds.

7,12-Dimethylbenzo(a)anthracene is above 25% RSD in continuing calibration.

Not calibrated for Benzo(b)Anthracene, Picene, Dibenzo(a,c) anthracene and Triphenylene. An estimated mdl for each of these compounds is 0.1ug.
Since Dibenzo(a,c) anthracene co-elutes with Dibenz(a,h) anthracene and Triphenylene with Chrysene each would have a value below estimated mdl.
Benzo(b)Anthracene elutes after Benzo(a)Anthracene and Chysene. Picene elutes after Dibenz(a,h) anthracene. Searched for ions specific to these 2 compounds in the appropriate retention time range with no possible positives detected.

Sample HM5324-01: PAHMS-F(WS:2300182)
Low D10-Fluorene field spike recovery.

Sample HM5325-01: PAHMS-F(WS:2300182)
Low D10-Fluorene field spike recovery.

Results relate only to the items tested.

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Maxxam Analytics
Attention: Michael Bisaga
Client Project #:
P.O. #:
Project name:

Quality Assurance Report

Maxxam Job Number: GB0E5009

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2300182	JIW	Spiked Blank	D10-2-Methylnaphthalene	2010/10/18		88	%	50 - 150
			D10-Fluoranthene	2010/10/18		94	%	50 - 150
			D10-Phenanthrene	2010/10/18		84	%	50 - 150
			D12-Benzo(a)anthracene	2010/10/18		82	%	50 - 150
			D12-Benzo(a)pyrene	2010/10/18		90	%	50 - 150
			D12-Benzo(b)fluoranthene	2010/10/18		86	%	50 - 150
			D12-Benzo(ghi)perylene	2010/10/18		94	%	50 - 150
			D12-Benzo(k)fluoranthene	2010/10/18		92	%	50 - 150
			D12-Chrysene	2010/10/18		88	%	50 - 150
			D12-Indeno(1,2,3-cd)pyrene	2010/10/18		92	%	50 - 150
			D12-Perylene	2010/10/18		92	%	50 - 150
			D14-Dibenzo(a,h)anthracene	2010/10/18		92	%	50 - 150
			D8-Acenaphthylene	2010/10/18		86	%	50 - 150
			D8-Naphthalene	2010/10/18		86	%	50 - 150
			Acenaphthene	2010/10/18		83	%	60 - 130
		RPD	Acenaphthene	2010/10/18	1.8		%	50
		Spiked Blank	Acenaphthylene	2010/10/18		84	%	60 - 130
		RPD	Acenaphthylene	2010/10/18	2.6		%	50
		Spiked Blank	Anthracene	2010/10/18		84	%	60 - 130
		RPD	Anthracene	2010/10/18	1.8		%	50
		Spiked Blank	Benzo(a)anthracene	2010/10/18		73	%	60 - 130
		RPD	Benzo(a)anthracene	2010/10/18	3.7		%	50
		Spiked Blank	Benzo(a)pyrene	2010/10/18		72	%	60 - 130
		RPD	Benzo(a)pyrene	2010/10/18	0		%	50
		Spiked Blank	Benzo(b)fluoranthene	2010/10/18		74	%	60 - 130
		RPD	Benzo(b)fluoranthene	2010/10/18	0.3		%	50
		Spiked Blank	Benzo(g,h,i)perylene	2010/10/18		81	%	60 - 130
		RPD	Benzo(g,h,i)perylene	2010/10/18	0.6		%	50
		Spiked Blank	Benzo(k)fluoranthene	2010/10/18		86	%	60 - 130
		RPD	Benzo(k)fluoranthene	2010/10/18	1.7		%	50
		Spiked Blank	Chrysene	2010/10/18		83	%	60 - 130
		RPD	Chrysene	2010/10/18	2.4		%	50
		Spiked Blank	Dibenz(a,h)anthracene	2010/10/18		77	%	60 - 130
		RPD	Dibenz(a,h)anthracene	2010/10/18	0.6		%	50
		Spiked Blank	Fluoranthene	2010/10/18		89	%	60 - 130
		RPD	Fluoranthene	2010/10/18	0.3		%	50
		Spiked Blank	Fluorene	2010/10/18		82	%	60 - 130
		RPD	Fluorene	2010/10/18	0.6		%	50
		Spiked Blank	Indeno(1,2,3-cd)pyrene	2010/10/18		80	%	60 - 130
		RPD	Indeno(1,2,3-cd)pyrene	2010/10/18	0.6		%	50
		Spiked Blank	Naphthalene	2010/10/18		74	%	60 - 130
		RPD	Naphthalene	2010/10/18	0		%	50
		Spiked Blank	Phenanthrene	2010/10/18		76	%	60 - 130
		RPD	Phenanthrene	2010/10/18	3.2		%	50
		Spiked Blank	Pyrene	2010/10/18		83	%	60 - 130
		RPD	Pyrene	2010/10/18	1.8		%	50
		Method Blank	D10-2-Methylnaphthalene	2010/10/18		88	%	50 - 150
			D10-Fluoranthene	2010/10/18		96	%	50 - 150
			D10-Phenanthrene	2010/10/18		82	%	50 - 150
			D12-Benzo(a)anthracene	2010/10/18		86	%	50 - 150
			D12-Benzo(a)pyrene	2010/10/18		96	%	50 - 150
			D12-Benzo(b)fluoranthene	2010/10/18		90	%	50 - 150
			D12-Benzo(ghi)perylene	2010/10/18		98	%	50 - 150
			D12-Benzo(k)fluoranthene	2010/10/18		92	%	50 - 150
			D12-Chrysene	2010/10/18		86	%	50 - 150

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Maxxam Analytics
Attention: Michael Bisaga
Client Project #:
P.O. #:
Project name:

Quality Assurance Report (Continued)

Maxxam Job Number: GB0E5009

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2300182	JIW	Method Blank	D12-Indeno(1,2,3-cd)pyrene	2010/10/18		96	%	50 - 150
			D12-Perylene	2010/10/18		98	%	50 - 150
			D14-Dibenzo(a,h)anthracene	2010/10/18		96	%	50 - 150
			D8-Acenaphthylene	2010/10/18		88	%	50 - 150
			D8-Naphthalene	2010/10/18		84	%	50 - 150
			1-Methylnaphthalene	2010/10/18	<0.10		ug	
			1-Methylphenanthrene	2010/10/18	<0.10		ug	
			2-Chloronaphthalene	2010/10/18	<0.10		ug	
			2-Methylanthracene	2010/10/18	<0.10		ug	
			2-Methylnaphthalene	2010/10/18	<0.10		ug	
			3-Methylcholanthrene	2010/10/18	<2.0		ug	
			7,12-Dimethylbenzo(a)anthracene	2010/10/18	<0.10		ug	
			9,10-Dimethylanthracene	2010/10/18	<0.40		ug	
			Acenaphthene	2010/10/18	<0.050		ug	
			Acenaphthylene	2010/10/18	<0.050		ug	
			Anthracene	2010/10/18	<0.050		ug	
			Benzo(a)anthracene	2010/10/18	<0.050		ug	
			Benzo(a)fluorene	2010/10/18	<0.10		ug	
			Benzo(a)pyrene	2010/10/18	<0.050		ug	
			Benzo(b)fluoranthene	2010/10/18	<0.050		ug	
			Benzo(b)fluorene	2010/10/18	<0.10		ug	
			Benzo(e)pyrene	2010/10/18	<0.10		ug	
			Benzo(g,h,i)perylene	2010/10/18	<0.050		ug	
			Benzo(k)fluoranthene	2010/10/18	<0.050		ug	
			Biphenyl	2010/10/18	<0.10		ug	
			Chrysene	2010/10/18	<0.050		ug	
			Coronene	2010/10/18	<0.10		ug	
			Dibenz(a,h)anthracene	2010/10/18	<0.050		ug	
			Dibenzo(a,e)pyrene	2010/10/18	<0.20		ug	
			Fluoranthene	2010/10/18	<0.050		ug	
			Fluorene	2010/10/18	<0.050		ug	
			Indeno(1,2,3-cd)pyrene	2010/10/18	<0.050		ug	
			m-Terphenyl	2010/10/18	<0.10		ug	
			Naphthalene	2010/10/18	<0.072		ug	
			o-Terphenyl	2010/10/18	<0.10		ug	
			Perylene	2010/10/18	<0.10		ug	
			Phenanthrene	2010/10/18	<0.050		ug	
			p-Terphenyl	2010/10/18	<0.10		ug	
			Pyrene	2010/10/18	<0.050		ug	
			Quinoline	2010/10/18	<0.40		ug	
			Tetralin	2010/10/18	<0.10		ug	

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.
Spiked Blank: A blank matrix to which a known amount of the analyte has been added. Used to evaluate analyte recovery.
Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.
Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.

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Maxxam Analytics

Tisch Hi-Vol PUF+ Sample Collection Data Sheet

Client: Lica
Location: Cold Lake South
Station ID: Lica1
Field Sample ID: LICA PUF/CLS/Oct 17, 10

Puf+ s/n: 100-1020
Motor s/n: 1138
Installation Date/Time: Oct 15, 2010 @ 7:33 mst
Removal Date/Time: Oct 18, 2010 @ 9:23 mst

Date and Time Information			
Sample Date	Start Time (MST)	End Time (MST)	Elapsed Time (Hours)
17-Oct-10	17/10/2010 0:00	18/10/2010 0:00	24.00

PUF and QFF Information			
Date Received	Date Shipped	Puf Expiration Date	QFF Prep Date
14-Oct-10	18-Oct-10	26-Oct-10	????

Set Flow Rate (slpm): 230

Date of Last Calibration: 05-May-10

Sampling Data			
Average Pressure(mmHg)	AverageFlow (Qstd slpm)	Average Tempurature (C)	Volume (Vstd m^3)
714	229	2.1	330.32

Time set correctly prior to sampling? YES
Timer set correctly prior to sampling? YES
Sampling data saved to memory card after sampling? YES

Comments: COC# 2326
GB0D7266 PUFF # 1
Ran with a 102mm Quartz Fiber Filter - Sample ID - LICA QFF/CLS/Oct 17 , 10

- Noticed condensation on the PUFF glass holder

Technician Signiture: Ting Xu

Success Through Science®

Your C.O.C. #: 2326

Attention: Michael Bisaga
Maxxam Analytics
2608 6A Ave.
Cold Lake, AB
CANADA T9M 2C7

Report Date: 2010/10/29

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B0E8276
Received: 2010/10/20, 09:15

Sample Matrix: PUF AND FILTER
Samples Received: 2

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Method Reference
PAH's in Air (CARB429mod)	2	2010/10/22	2010/10/27	BRL SOP-00201	CARB429(ARBM1,M2)mod

Encryption Key

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

THERESA STEPHENSON, Project Manager
Email: TStephenson@maxxam.ca
Phone# (905) 817-5763

==========

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. For Service Group specific validation please refer to the Validation Signature Page.

Total cover pages: 1

Maxxam Job #: B0E8276
Report Date: 2010/10/29

SEMI-VOLATILE ORGANICS BY GC-MS (PUF AND FILTER)

Maxxam ID		HO0979	HO0980		
Sampling Date		2010/10/17	2010/10/17		
COC Number		2326	2326		
	Units	**LICA PUFF/QFF/CLS/OCT17, 2010**	**LICA PUFF/QFF/PORT/OCT17, 2010**	**RDL**	**QC Batch**
Semivolatile Organics					
1-Methylnaphthalene	ug	0.23	<0.10	0.10	2306251
1-Methylphenanthrene	ug	<0.10	<0.10	0.10	2306251
2-Chloronaphthalene	ug	<0.10	<0.10	0.10	2306251
2-Methylanthracene	ug	<0.10	<0.10	0.10	2306251
2-Methylnaphthalene	ug	0.46	<0.10	0.10	2306251
3-Methylcholanthrene	ug	<2.0	<2.0	2.0	2306251
7,12-Dimethylbenzo(a)anthracene	ug	<0.10	<0.10	0.10	2306251
9,10-Dimethylanthracene	ug	<0.40	<0.40	0.40	2306251
Acenaphthene	ug	0.060	<0.050	0.050	2306251
Acenaphthylene	ug	<0.050	<0.050	0.050	2306251
Anthracene	ug	<0.050	<0.050	0.050	2306251
Benzo(a)anthracene	ug	<0.050	<0.050	0.050	2306251
Benzo(a)fluorene	ug	<0.10	<0.10	0.10	2306251
Benzo(a)pyrene	ug	<0.050	<0.050	0.050	2306251
Benzo(b)fluoranthene	ug	<0.050	<0.050	0.050	2306251
Benzo(b)fluorene	ug	<0.10	<0.10	0.10	2306251
Benzo(e)pyrene	ug	<0.10	<0.10	0.10	2306251
Benzo(g,h,i)perylene	ug	<0.050	<0.050	0.050	2306251
Benzo(k)fluoranthene	ug	<0.050	<0.050	0.050	2306251
Biphenyl	ug	<0.10	<0.10	0.10	2306251
Chrysene	ug	<0.050	<0.050	0.050	2306251
Coronene	ug	<0.10	<0.10	0.10	2306251
Dibenz(a,h)anthracene	ug	<0.050	<0.050	0.050	2306251
Dibenzo(a,e)pyrene	ug	<0.20	<0.20	0.20	2306251
Fluoranthene	ug	<0.050	<0.050	0.050	2306251
Fluorene	ug	0.114	0.072	0.050	2306251
Indeno(1,2,3-cd)pyrene	ug	<0.050	<0.050	0.050	2306251
m-Terphenyl	ug	<0.10	<0.10	0.10	2306251
Naphthalene	ug	0.340	0.074	0.072	2306251
o-Terphenyl	ug	<0.10	<0.10	0.10	2306251
Perylene	ug	<0.10	<0.10	0.10	2306251

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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SEMI-VOLATILE ORGANICS BY GC-MS (PUF AND FILTER)

Maxxam ID		HO0979	HO0980		
Sampling Date		2010/10/17	2010/10/17		
COC Number		2326	2326		
	Units	**LICA PUFF/QFF/CLS/OCT17, 2010**	**LICA PUFF/QFF/PORT/OCT17, 2010**	**RDL**	**QC Batch**
Phenanthrene	ug	0.176	0.140	0.050	2306251
p-Terphenyl	ug	<0.10	<0.10	0.10	2306251
Pyrene	ug	<0.050	<0.050	0.050	2306251
Quinoline	ug	<0.40	<0.40	0.40	2306251
Tetralin	ug	<0.10	<0.10	0.10	2306251
Surrogate Recovery (%)					
D10-2-Methylnaphthalene	%	60	72		2306251
D10-Fluoranthene	%	98	98		2306251
D10-Fluorene (FS)	%	15 (1)	14 (1)		2306251
D10-Phenanthrene	%	86	88		2306251
D12-Benzo(a)anthracene	%	94	96		2306251
D12-Benzo(a)pyrene	%	94	98		2306251
D12-Benzo(b)fluoranthene	%	88	94		2306251
D12-Benzo(ghi)perylene	%	100	104		2306251
D12-Benzo(k)fluoranthene	%	90	92		2306251
D12-Chrysene	%	80	84		2306251
D12-Indeno(1,2,3-cd)pyrene	%	102	106		2306251
D12-Perylene	%	94	98		2306251
D14-Dibenzo(a,h)anthracene	%	104	106		2306251
D14-Terphenyl (FS)	%	80	82		2306251
D8-Acenaphthylene	%	72	84		2306251
D8-Naphthalene	%	54	66		2306251

QC Batch = Quality Control Batch
(1) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.

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Maxxam Analytics

Maxxam Job #: B0E8276
Report Date: 2010/10/29

Test Summary

Maxxam ID	HO0979	**Collected**	2010/10/17
Sample ID	LICA PUFF/QFF/CLS/OCT17, 2010	**Shipped**	
Matrix	PUF AND FILTER	**Received**	2010/10/20

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
PAH's in Air (CARB429mod)	GC/MS	2306251	2010/10/22	2010/10/27	WZ

Maxxam ID	HO0980	**Collected**	2010/10/17
Sample ID	LICA PUFF/QFF/PORT/OCT17, 2010	**Shipped**	
Matrix	PUF AND FILTER	**Received**	2010/10/20

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
PAH's in Air (CARB429mod)	GC/MS	2306251	2010/10/22	2010/10/27	WZ

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Maxxam Analytics

Maxxam Job #: B0E8276
Report Date: 2010/10/29

GENERAL COMMENTS

PAHMS-F
9.10-Dimethylanthracene and 7,12-Dimethylbenzo(a)anthracene are above 25% RSD in initial calibation. No positives found for these 2 compounds.

Not calibrated for Benzo(b)Anthracene, Picene, Dibenzo(a,c) anthracene or Triphenylene. An estimated mdl for each of these compounds is 0.1ug .
Since Dibenzo(a,c) anthracene co-elutes with Dibenzo(a,h) anthracene and Triphenylene with Chrysene each would have a value below estimated mdl.
Benzo(b)Anthracene elutes after Benzo(a)Anthracene and Chysene. Picene elutes after Dibenzo(a,h) anthracene. Searched for ions specific to these 2 compounds in the appropriate retention time range with no possible positives detected.

Low recovery of Naphthalene in spike and spike:dup is OK.

Sample HO0979-01: PAHMS-F

Low d10-fluorene field spike recovery. Suspect sample matrix as cause due to acceptable recovery of d14-terphenyl field spike.

Sample HO0980-01: PAHMS-F

Low d10-fluorene field spike recovery. Suspect sample matrix as cause due to acceptable recovery of d14-terphenyl field spike.

Results relate only to the items tested.

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Maxxam Analytics
Attention: Michael Bisaga
Client Project #:
P.O. #:
Project name:

Quality Assurance Report

Maxxam Job Number: GB0E8276

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2306251	WZ	Spiked Blank	D10-2-Methylnaphthalene	2010/10/26		72	%	50 - 150
			D10-Fluoranthene	2010/10/26		90	%	50 - 150
			D10-Phenanthrene	2010/10/26		80	%	50 - 150
			D12-Benzo(a)anthracene	2010/10/26		90	%	50 - 150
			D12-Benzo(a)pyrene	2010/10/26		92	%	50 - 150
			D12-Benzo(b)fluoranthene	2010/10/26		88	%	50 - 150
			D12-Benzo(ghi)perylene	2010/10/26		100	%	50 - 150
			D12-Benzo(k)fluoranthene	2010/10/26		84	%	50 - 150
			D12-Chrysene	2010/10/26		80	%	50 - 150
			D12-Indeno(1,2,3-cd)pyrene	2010/10/26		100	%	50 - 150
			D12-Perylene	2010/10/26		92	%	50 - 150
			D14-Dibenzo(a,h)anthracene	2010/10/26		100	%	50 - 150
			D8-Acenaphthylene	2010/10/26		82	%	50 - 150
			D8-Naphthalene	2010/10/26		68	%	50 - 150
			Acenaphthene	2010/10/26		73	%	60 - 130
		RPD	Acenaphthene	2010/10/27	8.2		%	50
		Spiked Blank	Acenaphthylene	2010/10/26		80	%	60 - 130
		RPD	Acenaphthylene	2010/10/27	7.2		%	50
		Spiked Blank	Anthracene	2010/10/26		75	%	60 - 130
		RPD	Anthracene	2010/10/27	9.5		%	50
		Spiked Blank	Benzo(a)anthracene	2010/10/26		78	%	60 - 130
		RPD	Benzo(a)anthracene	2010/10/27	6.5		%	50
		Spiked Blank	Benzo(a)pyrene	2010/10/26		70	%	60 - 130
		RPD	Benzo(a)pyrene	2010/10/27	6.9		%	50
		Spiked Blank	Benzo(b)fluoranthene	2010/10/26		77	%	60 - 130
		RPD	Benzo(b)fluoranthene	2010/10/27	0		%	50
		Spiked Blank	Benzo(g,h,i)perylene	2010/10/26		84	%	60 - 130
		RPD	Benzo(g,h,i)perylene	2010/10/27	4.9		%	50
		Spiked Blank	Benzo(k)fluoranthene	2010/10/26		78	%	60 - 130
		RPD	Benzo(k)fluoranthene	2010/10/27	9.8		%	50
		Spiked Blank	Chrysene	2010/10/26		77	%	60 - 130
		RPD	Chrysene	2010/10/27	4.8		%	50
		Spiked Blank	Dibenz(a,h)anthracene	2010/10/26		84	%	60 - 130
		RPD	Dibenz(a,h)anthracene	2010/10/27	5.2		%	50
		Spiked Blank	Fluoranthene	2010/10/26		85	%	60 - 130
		RPD	Fluoranthene	2010/10/27	6.5		%	50
		Spiked Blank	Fluorene	2010/10/26		75	%	60 - 130
		RPD	Fluorene	2010/10/27	8.0		%	50
		Spiked Blank	Indeno(1,2,3-cd)pyrene	2010/10/26		84	%	60 - 130
		RPD	Indeno(1,2,3-cd)pyrene	2010/10/27	4.9		%	50
		Spiked Blank	Naphthalene	2010/10/26		60 (1)	%	60 - 130
		RPD	Naphthalene	2010/10/27	2.9		%	50
		Spiked Blank	Phenanthrene	2010/10/26		75	%	60 - 130
		RPD	Phenanthrene	2010/10/27	8.0		%	50
		Spiked Blank	Pyrene	2010/10/26		79	%	60 - 130
		RPD	Pyrene	2010/10/27	6.5		%	50
		Method Blank	D10-2-Methylnaphthalene	2010/10/27		72	%	50 - 150
			D10-Fluoranthene	2010/10/27		96	%	50 - 150
			D10-Phenanthrene	2010/10/27		84	%	50 - 150
			D12-Benzo(a)anthracene	2010/10/27		92	%	50 - 150
			D12-Benzo(a)pyrene	2010/10/27		96	%	50 - 150
			D12-Benzo(b)fluoranthene	2010/10/27		92	%	50 - 150
			D12-Benzo(ghi)perylene	2010/10/27		104	%	50 - 150
			D12-Benzo(k)fluoranthene	2010/10/27		86	%	50 - 150
			D12-Chrysene	2010/10/27		80	%	50 - 150

Maxxam Analytics
Attention: Michael Bisaga
Client Project #:
P.O. #:
Project name:

Quality Assurance Report (Continued)

Maxxam Job Number: GB0E8276

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2306251	WZ	Method Blank	D12-Indeno(1,2,3-cd)pyrene	2010/10/27		104	%	50 - 150
			D12-Perylene	2010/10/27		98	%	50 - 150
			D14-Dibenzo(a,h)anthracene	2010/10/27		106	%	50 - 150
			D8-Acenaphthylene	2010/10/27		82	%	50 - 150
			D8-Naphthalene	2010/10/27		66	%	50 - 150
			1-Methylnaphthalene	2010/10/27	<0.10		ug	
			1-Methylphenanthrene	2010/10/27	<0.10		ug	
			2-Chloronaphthalene	2010/10/27	<0.10		ug	
			2-Methylanthracene	2010/10/27	<0.10		ug	
			2-Methylnaphthalene	2010/10/27	<0.10		ug	
			3-Methylcholanthrene	2010/10/27	<2.0		ug	
			7,12-Dimethylbenzo(a)anthracene	2010/10/27	<0.10		ug	
			9,10-Dimethylanthracene	2010/10/27	<0.40		ug	
			Acenaphthene	2010/10/27	<0.050		ug	
			Acenaphthylene	2010/10/27	<0.050		ug	
			Anthracene	2010/10/27	<0.050		ug	
			Benzo(a)anthracene	2010/10/27	<0.050		ug	
			Benzo(a)fluorene	2010/10/27	<0.10		ug	
			Benzo(a)pyrene	2010/10/27	<0.050		ug	
			Benzo(b)fluoranthene	2010/10/27	<0.050		ug	
			Benzo(b)fluorene	2010/10/27	<0.10		ug	
			Benzo(e)pyrene	2010/10/27	<0.10		ug	
			Benzo(g,h,i)perylene	2010/10/27	<0.050		ug	
			Benzo(k)fluoranthene	2010/10/27	<0.050		ug	
			Biphenyl	2010/10/27	<0.10		ug	
			Chrysene	2010/10/27	<0.050		ug	
			Coronene	2010/10/27	<0.10		ug	
			Dibenz(a,h)anthracene	2010/10/27	<0.050		ug	
			Dibenzo(a,e)pyrene	2010/10/27	<0.20		ug	
			Fluoranthene	2010/10/27	<0.050		ug	
			Fluorene	2010/10/27	<0.050		ug	
			Indeno(1,2,3-cd)pyrene	2010/10/27	<0.050		ug	
			m-Terphenyl	2010/10/27	<0.10		ug	
			Naphthalene	2010/10/27	<0.072		ug	
			o-Terphenyl	2010/10/27	<0.10		ug	
			Perylene	2010/10/27	<0.10		ug	
			Phenanthrene	2010/10/27	<0.050		ug	
			p-Terphenyl	2010/10/27	<0.10		ug	
			Pyrene	2010/10/27	<0.050		ug	
			Quinoline	2010/10/27	<0.40		ug	
			Tetralin	2010/10/27	<0.10		ug	

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.
Spiked Blank: A blank matrix to which a known amount of the analyte has been added. Used to evaluate analyte recovery.
Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.
Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.
(1) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.

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Maxxam Analytics

Tisch Hi-Vol PUF+ Sample Collection Data Sheet

Client: Lica
Location: Cold Lake South
Station ID: Lica1
Field Sample ID: LICA PUF/CLS/Oct 23, 10

Puf+ s/n: 100-1020
Motor s/n: 1138
Installation Date/Time: Oct 22, 2010 @ 7:30 mst
Removal Date/Time: Oct 26, 2010 @ 7:38 mst

Date and Time Information			
Sample Date	Start Time (MST)	End Time (MST)	Elapsed Time (Hours)
23-Oct-10	23/10/2010 0:00	24/10/2010 0:00	24.00

PUF and QFF Information			
Date Received	Date Shipped	Puf Expiration Date	QFF Prep Date
21-Oct-10	26-Oct-10	02-Nov-10	????

Set Flow Rate (slpm): 230

Date of Last Calibration: 05-May-10

Sampling Data			
Average Pressure(mmHg)	AverageFlow (Qstd slpm)	Average Tempurature (C)	Volume (Vstd m^3)
711	229	3.5	330.32

Time set correctly prior to sampling? YES
Timer set correctly prior to sampling? YES
Sampling data saved to memory card after sampling? YES

Comments: COC# 4875
GB0D7360 PUFF # 1
Ran with a 102mm Quartz Fiber Filter - Sample ID - LICA QFF/CLS/Oct 23 , 10

- Noticed condensation on the PUFF glass holder

Technician Signiture: Ting Xu

Success Through Science®

Your C.O.C. #: 4875

Attention: Michael Bisaga
Maxxam Analytics
2608 6A Ave.
Cold Lake, AB
CANADA T9M 2C7

Report Date: 2010/11/02

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B0F3808
Received: 2010/10/28, 09:15

Sample Matrix: PUF AND FILTER
Samples Received: 2

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Method Reference
PAH's in Air (CARB429mod)	2	2010/10/29	2010/11/01	BRL SOP-00201	CARB429(ARBM1,M2)mod

Encryption Key

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

THERESA STEPHENSON, Project Manager
Email: TStephenson@maxxam.ca
Phone# (905) 817-5763

==========

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. For Service Group specific validation please refer to the Validation Signature Page.

Total cover pages: 1

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Maxxam Analytics

Maxxam Job #: B0F3808
Report Date: 2010/11/02

SEMI-VOLATILE ORGANICS BY GC-MS (PUF AND FILTER)

Maxxam ID		HR0073	HR0074		
Sampling Date		2010/10/23	2010/10/23		
COC Number		4875	4875		
	Units	**LICA PUFF/QFF/CLS/OCT 23,10**	**LICA PUFF/QFF/PORT/OCT 23,10**	**RDL**	**QC Batch**
Semivolatile Organics					
1-Methylnaphthalene	ug	<0.10	<0.10	0.10	2313482
1-Methylphenanthrene	ug	<0.10	<0.10	0.10	2313482
2-Chloronaphthalene	ug	<0.10	<0.10	0.10	2313482
2-Methylanthracene	ug	<0.10	<0.10	0.10	2313482
2-Methylnaphthalene	ug	0.12	<0.10	0.10	2313482
3-Methylcholanthrene	ug	<2.0	<2.0	2.0	2313482
7,12-Dimethylbenzo(a)anthracene	ug	<0.10	<0.10	0.10	2313482
9,10-Dimethylanthracene	ug	<0.40	<0.40	0.40	2313482
Acenaphthene	ug	<0.050	<0.050	0.050	2313482
Acenaphthylene	ug	0.134	<0.050	0.050	2313482
Anthracene	ug	<0.050	<0.050	0.050	2313482
Benzo(a)anthracene	ug	<0.050	<0.050	0.050	2313482
Benzo(a)fluorene	ug	<0.10	<0.10	0.10	2313482
Benzo(a)pyrene	ug	<0.050	<0.050	0.050	2313482
Benzo(b)fluoranthene	ug	<0.050	<0.050	0.050	2313482
Benzo(b)fluorene	ug	<0.10	<0.10	0.10	2313482
Benzo(e)pyrene	ug	<0.10	<0.10	0.10	2313482
Benzo(g,h,i)perylene	ug	<0.050	<0.050	0.050	2313482
Benzo(k)fluoranthene	ug	<0.050	<0.050	0.050	2313482
Biphenyl	ug	<0.10	<0.10	0.10	2313482
Chrysene	ug	<0.050	<0.050	0.050	2313482
Coronene	ug	<0.10	<0.10	0.10	2313482
Dibenz(a,h)anthracene	ug	<0.050	<0.050	0.050	2313482
Dibenzo(a,e)pyrene	ug	<0.20	<0.20	0.20	2313482
Fluoranthene	ug	0.128	<0.050	0.050	2313482
Fluorene	ug	0.124	0.074	0.050	2313482
Indeno(1,2,3-cd)pyrene	ug	<0.050	<0.050	0.050	2313482
m-Terphenyl	ug	<0.10	<0.10	0.10	2313482
Naphthalene	ug	0.096	<0.072	0.072	2313482
o-Terphenyl	ug	<0.10	<0.10	0.10	2313482
Perylene	ug	<0.10	<0.10	0.10	2313482

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Maxxam Analytics

Maxxam Job #: B0F3808
Report Date: 2010/11/02

SEMI-VOLATILE ORGANICS BY GC-MS (PUF AND FILTER)

Maxxam ID		HR0073	HR0074		
Sampling Date		2010/10/23	2010/10/23		
COC Number		4875	4875		
	Units	**LICA PUFF/QFF/CLS/OCT 23,10**	**LICA PUFF/QFF/PORT/OCT 23,10**	**RDL**	**QC Batch**
Phenanthrene	ug	0.420	0.150	0.050	2313482
p-Terphenyl	ug	<0.10	<0.10	0.10	2313482
Pyrene	ug	0.094	<0.050	0.050	2313482
Quinoline	ug	<0.40	<0.40	0.40	2313482
Tetralin	ug	<0.10	<0.10	0.10	2313482
Surrogate Recovery (%)					
D10-2-Methylnaphthalene	%	70	90		2313482
D10-Fluoranthene	%	82	96		2313482
D10-Fluorene (FS)	%	23 (1)	21 (1)		2313482
D10-Phenanthrene	%	76	90		2313482
D12-Benzo(a)anthracene	%	78	92		2313482
D12-Benzo(a)pyrene	%	82	98		2313482
D12-Benzo(b)fluoranthene	%	76	90		2313482
D12-Benzo(ghi)perylene	%	82	100		2313482
D12-Benzo(k)fluoranthene	%	80	94		2313482
D12-Chrysene	%	74	88		2313482
D12-Indeno(1,2,3-cd)pyrene	%	80	98		2313482
D12-Perylene	%	82	100		2313482
D14-Dibenzo(a,h)anthracene	%	80	98		2313482
D14-Terphenyl (FS)	%	71	84		2313482
D8-Acenaphthylene	%	74	96		2313482
D8-Naphthalene	%	68	88		2313482

QC Batch = Quality Control Batch
(1) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.

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Maxxam Analytics

Maxxam Job #: B0F3808
Report Date: 2010/11/02

Test Summary

Maxxam ID	HR0073	**Collected**	2010/10/23
Sample ID	LICA PUFF/QFF/CLS/OCT 23,10	**Shipped**	
Matrix	PUF AND FILTER	**Received**	2010/10/28

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
PAH's in Air (CARB429mod)	GC/MS	2313482	2010/10/29	2010/11/01	JIW

Maxxam ID	HR0074	**Collected**	2010/10/23
Sample ID	LICA PUFF/QFF/PORT/OCT 23,10	**Shipped**	
Matrix	PUF AND FILTER	**Received**	2010/10/28

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
PAH's in Air (CARB429mod)	GC/MS	2313482	2010/10/29	2010/11/01	JIW

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Maxxam Analytics

Maxxam Job #: B0F3808
Report Date: 2010/11/02

GENERAL COMMENTS

PAHMS-F(WS:2313482)
9.10-Dimethylanthracene and 7,12-Dimethylbenzo(a)anthracene are above 25% RSD in initial calibration. No positives found for these 2 compounds.

7,12-Dimethylbenzo(a)anthracene is above 25% RSD in continuing calibration.

Pyrene is statistically out of control at 77.3% recovery in the spike:dup. Spike recovery is in control. Acceptance criteria met for both spike and dup. Data reported and flagged.

Not calibrated for Benzo(b)Anthracene, Picene, Dibenzo(a,c) anthracene and Triphenylene. An estimated mdl for each of these compounds is 0.1ug.
Since Dibenzo(a,c) anthracene co-elutes with Dibenz(a,h) anthracene and Triphenylene with Chrysene each would have a value below estimated mdl.
Benzo(b)Anthracene elutes after Benzo(a)Anthracene and Chysene. Picene elutes after Dibenz(a,h) anthracene. Searched for ions specific to these 2 compounds in the appropriate retention time range with no possible positives detected.

Sample HR0073-01: PAHMS-F(WS:2313482)
Low D10-Fluorene field spike recovery.

Sample HR0074-01: PAHMS-F(WS:2313482)
Low D10-Fluorene field spike recovery.

Results relate only to the items tested.

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Maxxam Analytics
Attention: Michael Bisaga
Client Project #:
P.O. #:
Project name:

Quality Assurance Report

Maxxam Job Number: GB0F3808

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2313482	JIW	Spiked Blank	D10-2-Methylnaphthalene	2010/11/01		88	%	50 - 150
			D10-Fluoranthene	2010/11/01		88	%	50 - 150
			D10-Phenanthrene	2010/11/01		82	%	50 - 150
			D12-Benzo(a)anthracene	2010/11/01		86	%	50 - 150
			D12-Benzo(a)pyrene	2010/11/01		94	%	50 - 150
			D12-Benzo(b)fluoranthene	2010/11/01		86	%	50 - 150
			D12-Benzo(ghi)perylene	2010/11/01		92	%	50 - 150
			D12-Benzo(k)fluoranthene	2010/11/01		90	%	50 - 150
			D12-Chrysene	2010/11/01		86	%	50 - 150
			D12-Indeno(1,2,3-cd)pyrene	2010/11/01		90	%	50 - 150
			D12-Perylene	2010/11/01		94	%	50 - 150
			D14-Dibenzo(a,h)anthracene	2010/11/01		92	%	50 - 150
			D8-Acenaphthylene	2010/11/01		90	%	50 - 150
			D8-Naphthalene	2010/11/01		86	%	50 - 150
			Acenaphthene	2010/11/01		86	%	60 - 130
		RPD	Acenaphthene	2010/11/01	1.7		%	50
		Spiked Blank	Acenaphthylene	2010/11/01		89	%	60 - 130
		RPD	Acenaphthylene	2010/11/01	1.7		%	50
		Spiked Blank	Anthracene	2010/11/01		76	%	60 - 130
		RPD	Anthracene	2010/11/01	3.0		%	50
		Spiked Blank	Benzo(a)anthracene	2010/11/01		76	%	60 - 130
		RPD	Benzo(a)anthracene	2010/11/01	1.6		%	50
		Spiked Blank	Benzo(a)pyrene	2010/11/01		72	%	60 - 130
		RPD	Benzo(a)pyrene	2010/11/01	2.4		%	50
		Spiked Blank	Benzo(b)fluoranthene	2010/11/01		76	%	60 - 130
		RPD	Benzo(b)fluoranthene	2010/11/01	0.3		%	50
		Spiked Blank	Benzo(g,h,i)perylene	2010/11/01		81	%	60 - 130
		RPD	Benzo(g,h,i)perylene	2010/11/01	0.6		%	50
		Spiked Blank	Benzo(k)fluoranthene	2010/11/01		84	%	60 - 130
		RPD	Benzo(k)fluoranthene	2010/11/01	3.5		%	50
		Spiked Blank	Chrysene	2010/11/01		84	%	60 - 130
		RPD	Chrysene	2010/11/01	0.9		%	50
		Spiked Blank	Dibenz(a,h)anthracene	2010/11/01		78	%	60 - 130
		RPD	Dibenz(a,h)anthracene	2010/11/01	0.3		%	50
		Spiked Blank	Fluoranthene	2010/11/01		85	%	60 - 130
		RPD	Fluoranthene	2010/11/01	0.3		%	50
		Spiked Blank	Fluorene	2010/11/01		83	%	60 - 130
		RPD	Fluorene	2010/11/01	1.5		%	50
		Spiked Blank	Indeno(1,2,3-cd)pyrene	2010/11/01		80	%	60 - 130
		RPD	Indeno(1,2,3-cd)pyrene	2010/11/01	0.3		%	50
		Spiked Blank	Naphthalene	2010/11/01		74	%	60 - 130
		RPD	Naphthalene	2010/11/01	4.3		%	50
		Spiked Blank	Phenanthrene	2010/11/01		77	%	60 - 130
		RPD	Phenanthrene	2010/11/01	0.3		%	50
		Spiked Blank	Pyrene	2010/11/01		77	%	60 - 130
		RPD	Pyrene	2010/11/01	0		%	50
		Method Blank	D10-2-Methylnaphthalene	2010/11/01		88	%	50 - 150
			D10-Fluoranthene	2010/11/01		90	%	50 - 150
			D10-Phenanthrene	2010/11/01		80	%	50 - 150
			D12-Benzo(a)anthracene	2010/11/01		82	%	50 - 150
			D12-Benzo(a)pyrene	2010/11/01		94	%	50 - 150
			D12-Benzo(b)fluoranthene	2010/11/01		90	%	50 - 150
			D12-Benzo(ghi)perylene	2010/11/01		94	%	50 - 150
			D12-Benzo(k)fluoranthene	2010/11/01		92	%	50 - 150
			D12-Chrysene	2010/11/01		88	%	50 - 150

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Maxxam Analytics
Attention: Michael Bisaga
Client Project #:
P.O. #:
Project name:

Quality Assurance Report (Continued)

Maxxam Job Number: GB0F3808

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2313482	JIW	Method Blank	D12-Indeno(1,2,3-cd)pyrene	2010/11/01		92	%	50 - 150
			D12-Perylene	2010/11/01		98	%	50 - 150
			D14-Dibenzo(a,h)anthracene	2010/11/01		90	%	50 - 150
			D8-Acenaphthylene	2010/11/01		90	%	50 - 150
			D8-Naphthalene	2010/11/01		86	%	50 - 150
			1-Methylnaphthalene	2010/11/01	<0.10		ug	
			1-Methylphenanthrene	2010/11/01	<0.10		ug	
			2-Chloronaphthalene	2010/11/01	<0.10		ug	
			2-Methylanthracene	2010/11/01	<0.10		ug	
			2-Methylnaphthalene	2010/11/01	<0.10		ug	
			3-Methylcholanthrene	2010/11/01	<2.0		ug	
			7,12-Dimethylbenzo(a)anthracene	2010/11/01	<0.10		ug	
			9,10-Dimethylanthracene	2010/11/01	<0.40		ug	
			Acenaphthene	2010/11/01	<0.050		ug	
			Acenaphthylene	2010/11/01	<0.050		ug	
			Anthracene	2010/11/01	<0.050		ug	
			Benzo(a)anthracene	2010/11/01	<0.050		ug	
			Benzo(a)fluorene	2010/11/01	<0.10		ug	
			Benzo(a)pyrene	2010/11/01	<0.050		ug	
			Benzo(b)fluoranthene	2010/11/01	<0.050		ug	
			Benzo(b)fluorene	2010/11/01	<0.10		ug	
			Benzo(e)pyrene	2010/11/01	<0.10		ug	
			Benzo(g,h,i)perylene	2010/11/01	<0.050		ug	
			Benzo(k)fluoranthene	2010/11/01	<0.050		ug	
			Biphenyl	2010/11/01	<0.10		ug	
			Chrysene	2010/11/01	<0.050		ug	
			Coronene	2010/11/01	<0.10		ug	
			Dibenz(a,h)anthracene	2010/11/01	<0.050		ug	
			Dibenzo(a,e)pyrene	2010/11/01	<0.20		ug	
			Fluoranthene	2010/11/01	<0.050		ug	
			Fluorene	2010/11/01	<0.050		ug	
			Indeno(1,2,3-cd)pyrene	2010/11/01	<0.050		ug	
			m-Terphenyl	2010/11/01	<0.10		ug	
			Naphthalene	2010/11/01	<0.072		ug	
			o-Terphenyl	2010/11/01	<0.10		ug	
			Perylene	2010/11/01	<0.10		ug	
			Phenanthrene	2010/11/01	<0.050		ug	
			p-Terphenyl	2010/11/01	<0.10		ug	
			Pyrene	2010/11/01	<0.050		ug	
			Quinoline	2010/11/01	<0.40		ug	
			Tetralin	2010/11/01	<0.10		ug	

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.
Spiked Blank: A blank matrix to which a known amount of the analyte has been added. Used to evaluate analyte recovery.
Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.
Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.

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MAXXAM

Tisch Hi-Vol PUF+ Sample Collection Data Sheet

Client: Lica
Location: Cold Lake South
Station ID: Lica1
Field Sample ID: LICA PUF/CLS/Oct 29, 10

Puf+ s/n: 100-1020
Motor s/n: 1138
Installation Date/Time: Oct 28, 2010 @ 13:28 mst
Removal Date/Time: Nov 01,2010 @ 9:09 mst

Date and Time Information			
Sample Date	Start Time (MST)	End Time (MST)	Elapsed Time (Hours)
29-Oct-10	29/10/2010 0:00	30/10/2010 0:00	24.00

PUF and QFF Information			
Date Received	Date Shipped	Puf Expiration Date	QFF Prep Date
27-Oct-10	01-Nov-10	08-Nov-10	????

Set Flow Rate (slpm): 230

Date of Last Calibration: 05-May-10

Sampling Data			
Average Pressure(mmHg)	AverageFlow (Qstd slpm)	Average Tempurature (C)	Volume (Vstd m^3)
709	229	-1.1	330.33

Time set correctly prior to sampling? YES
Timer set correctly prior to sampling? YES
Sampling data saved to memory card after sampling? YES

Comments: COC# 2328
GB0D7382 PUFF # 1
Ran with a 102mm Quartz Fiber Filter - Sample ID - LICA QFF/CLS/Oct 29 , 10

- Noticed condensation on the PUFF glass holder

Technician Signiture: Ting Xu

Your C.O.C. #: 2328

Attention: Michael Bisaga
Maxxam Analytics
2608 6A Ave.
Cold Lake, AB
CANADA T9M 2C7

Report Date: 2010/11/09

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B0F7014
Received: 2010/11/03, 09:28

Sample Matrix: PUF AND FILTER
Samples Received: 2

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Method Reference
PAH's in Air (CARB429mod)	2	2010/11/04	2010/11/09	BRL SOP-00201	CARB429(ARBM1,M2)mod

Encryption Key

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

THERESA STEPHENSON, Project Manager
Email: TStephenson@maxxam.ca
Phone# (905) 817-5763

==========

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. For Service Group specific validation please refer to the Validation Signature Page.

Total cover pages: 1

SEMI-VOLATILE ORGANICS BY GC-MS (PUF AND FILTER)

Maxxam ID		HS5583	HS5584		
Sampling Date		2010/10/29	2010/10/29		
COC Number		2328	2328		
	Units	**LICA PUFF/QFF/CLS/OCT 29, 10**	**LICA PUFF/QFF/PORT/OCT 29, 10**	**RDL**	**QC Batch**
Semivolatile Organics					
1-Methylnaphthalene	ug	<0.10	<0.10	0.10	2321284
1-Methylphenanthrene	ug	<0.10	<0.10	0.10	2321284
2-Chloronaphthalene	ug	<0.10	<0.10	0.10	2321284
2-Methylanthracene	ug	<0.10	<0.10	0.10	2321284
2-Methylnaphthalene	ug	0.11	0.11	0.10	2321284
3-Methylcholanthrene	ug	<2.0	<2.0	2.0	2321284
7,12-Dimethylbenzo(a)anthracene	ug	<0.10	<0.10	0.10	2321284
9,10-Dimethylanthracene	ug	<0.40	<0.40	0.40	2321284
Acenaphthene	ug	<0.050	<0.050	0.050	2321284
Acenaphthylene	ug	<0.050	<0.050	0.050	2321284
Anthracene	ug	<0.050	<0.050	0.050	2321284
Benzo(a)anthracene	ug	<0.050	<0.050	0.050	2321284
Benzo(a)fluorene	ug	<0.10	<0.10	0.10	2321284
Benzo(a)pyrene	ug	<0.050	<0.050	0.050	2321284
Benzo(b)fluoranthene	ug	<0.050	<0.050	0.050	2321284
Benzo(b)fluorene	ug	<0.10	<0.10	0.10	2321284
Benzo(e)pyrene	ug	<0.10	<0.10	0.10	2321284
Benzo(g,h,i)perylene	ug	0.080	0.068	0.050	2321284
Benzo(k)fluoranthene	ug	<0.050	<0.050	0.050	2321284
Biphenyl	ug	0.15	0.16	0.10	2321284
Chrysene	ug	<0.050	<0.050	0.050	2321284
Coronene	ug	<0.10	<0.10	0.10	2321284
Dibenz(a,h)anthracene	ug	0.066	0.056	0.050	2321284
Dibenzo(a,e)pyrene	ug	<0.20	<0.20	0.20	2321284
Fluoranthene	ug	<0.050	0.072	0.050	2321284
Fluorene	ug	0.138	0.166	0.050	2321284
Indeno(1,2,3-cd)pyrene	ug	0.068	0.056	0.050	2321284
m-Terphenyl	ug	<0.10	<0.10	0.10	2321284
Naphthalene	ug	0.108	0.130	0.072	2321284
o-Terphenyl	ug	<0.10	<0.10	0.10	2321284
Perylene	ug	<0.10	<0.10	0.10	2321284

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam Analytics

Maxxam Job #: B0F7014
Report Date: 2010/11/09

SEMI-VOLATILE ORGANICS BY GC-MS (PUF AND FILTER)

Maxxam ID		HS5583	HS5584		
Sampling Date		2010/10/29	2010/10/29		
COC Number		2328	2328		
	Units	**LICA PUFF/QFF/CLS/OCT 29, 10**	**LICA PUFF/QFF/PORT/OCT 29, 10**	**RDL**	**QC Batch**
Phenanthrene	ug	0.228	0.314	0.050	2321284
p-Terphenyl	ug	<0.10	<0.10	0.10	2321284
Pyrene	ug	<0.050	<0.050	0.050	2321284
Quinoline	ug	<0.40	<0.40	0.40	2321284
Tetralin	ug	<0.10	<0.10	0.10	2321284
Surrogate Recovery (%)					
D10-2-Methylnaphthalene	%	74	80		2321284
D10-Fluoranthene	%	100	100		2321284
D10-Fluorene (FS)	%	33 (1)	25 (1)		2321284
D10-Phenanthrene	%	92	92		2321284
D12-Benzo(a)anthracene	%	110	108		2321284
D12-Benzo(a)pyrene	%	104	104		2321284
D12-Benzo(b)fluoranthene	%	98	98		2321284
D12-Benzo(ghi)perylene	%	104	106		2321284
D12-Benzo(k)fluoranthene	%	96	96		2321284
D12-Chrysene	%	90	88		2321284
D12-Indeno(1,2,3-cd)pyrene	%	106	108		2321284
D12-Perylene	%	102	100		2321284
D14-Dibenzo(a,h)anthracene	%	108	108		2321284
D14-Terphenyl (FS)	%	88	87		2321284
D8-Acenaphthylene	%	82	88		2321284
D8-Naphthalene	%	70	74		2321284

QC Batch = Quality Control Batch
(1) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.

Maxxam Analytics

Maxxam Job #: B0F7014
Report Date: 2010/11/09

Test Summary

Maxxam ID	HS5583	**Collected**	2010/10/29
Sample ID	LICA PUFF/QFF/CLS/OCT 29, 10	**Shipped**	
Matrix	PUF AND FILTER	**Received**	2010/11/03

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
PAH's in Air (CARB429mod)	GC/MS	2321284	2010/11/04	2010/11/09	JIW

Maxxam ID	HS5584	**Collected**	2010/10/29
Sample ID	LICA PUFF/QFF/PORT/OCT 29, 10	**Shipped**	
Matrix	PUF AND FILTER	**Received**	2010/11/03

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
PAH's in Air (CARB429mod)	GC/MS	2321284	2010/11/04	2010/11/09	JIW

Maxxam Job #: B0F7014
Report Date: 2010/11/09

GENERAL COMMENTS

PAHMS-F(WS:2321284)
7,12-Dimethylbenzo(a)anthracene is above 25% RSD in initial calibration. No positive found for this compound.

Not calibrated for Benzo(b)Anthracene, Picene, Dibenzo(a,c) anthracene and Triphenylene. An estimated mdl for each of these compounds is 0.1ug.
Since Dibenzo(a,c) anthracene co-elutes with Dibenz(a,h) anthracene and Triphenylene with Chrysene each would have a value below estimated mdl.
Benzo(b)Anthracene elutes after Benzo(a)Anthracene and Chysene. Picene elutes after Dibenz(a,h) anthracene. Searched for ions specific to these 2 compounds in the appropriate retention time range with no possible positives detected.

Sample HS5583-01: PAHMS-F(WS:2321284)
Low D10-Fluorene field spike recovery. Suspect sample matrix as cause due to acceptable recovery of D14-Terphenyl field spike.

Sample HS5584-01: PAHMS-F(WS:2321284)
Low D10-Fluorene field spike recovery. Suspect sample matrix as cause due to acceptable recovery of D14-Terphenyl field spike.

Results relate only to the items tested.

Maxxam Analytics
Attention: Michael Bisaga
Client Project #:
P.O. #:
Project name:

Quality Assurance Report

Maxxam Job Number: GB0F7014

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2321284	JIW	Spiked Blank	D10-2-Methylnaphthalene	2010/11/08		86	%	50 - 150
			D10-Fluoranthene	2010/11/08		100	%	50 - 150
			D10-Phenanthrene	2010/11/08		96	%	50 - 150
			D12-Benzo(a)anthracene	2010/11/08		104	%	50 - 150
			D12-Benzo(a)pyrene	2010/11/08		104	%	50 - 150
			D12-Benzo(b)fluoranthene	2010/11/08		98	%	50 - 150
			D12-Benzo(ghi)perylene	2010/11/08		104	%	50 - 150
			D12-Benzo(k)fluoranthene	2010/11/08		96	%	50 - 150
			D12-Chrysene	2010/11/08		90	%	50 - 150
			D12-Indeno(1,2,3-cd)pyrene	2010/11/08		106	%	50 - 150
			D12-Perylene	2010/11/08		102	%	50 - 150
			D14-Dibenzo(a,h)anthracene	2010/11/08		108	%	50 - 150
			D8-Acenaphthylene	2010/11/08		88	%	50 - 150
			D8-Naphthalene	2010/11/08		82	%	50 - 150
			Acenaphthene	2010/11/08		84	%	60 - 130
		RPD	Acenaphthene	2010/11/08	6.2		%	50
		Spiked Blank	Acenaphthylene	2010/11/08		85	%	60 - 130
		RPD	Acenaphthylene	2010/11/08	4.8		%	50
		Spiked Blank	Anthracene	2010/11/08		84	%	60 - 130
		RPD	Anthracene	2010/11/08	4.3		%	50
		Spiked Blank	Benzo(a)anthracene	2010/11/08		89	%	60 - 130
		RPD	Benzo(a)anthracene	2010/11/08	0.6		%	50
		Spiked Blank	Benzo(a)pyrene	2010/11/08		81	%	60 - 130
		RPD	Benzo(a)pyrene	2010/11/08	2.2		%	50
		Spiked Blank	Benzo(b)fluoranthene	2010/11/08		91	%	60 - 130
		RPD	Benzo(b)fluoranthene	2010/11/08	1.7		%	50
		Spiked Blank	Benzo(g,h,i)perylene	2010/11/08		102	%	60 - 130
		RPD	Benzo(g,h,i)perylene	2010/11/08	3.5		%	50
		Spiked Blank	Benzo(k)fluoranthene	2010/11/08		86	%	60 - 130
		RPD	Benzo(k)fluoranthene	2010/11/08	1.5		%	50
		Spiked Blank	Chrysene	2010/11/08		86	%	60 - 130
		RPD	Chrysene	2010/11/08	0.9		%	50
		Spiked Blank	Dibenz(a,h)anthracene	2010/11/08		105	%	60 - 130
		RPD	Dibenz(a,h)anthracene	2010/11/08	3.4		%	50
		Spiked Blank	Fluoranthene	2010/11/08		94	%	60 - 130
		RPD	Fluoranthene	2010/11/08	2.4		%	50
		Spiked Blank	Fluorene	2010/11/08		86	%	60 - 130
		RPD	Fluorene	2010/11/08	7.2		%	50
		Spiked Blank	Indeno(1,2,3-cd)pyrene	2010/11/08		102	%	60 - 130
		RPD	Indeno(1,2,3-cd)pyrene	2010/11/08	2.5		%	50
		Spiked Blank	Naphthalene	2010/11/08		77	%	60 - 130
		RPD	Naphthalene	2010/11/08	5.7		%	50
		Spiked Blank	Phenanthrene	2010/11/08		87	%	60 - 130
		RPD	Phenanthrene	2010/11/08	6.5		%	50
		Spiked Blank	Pyrene	2010/11/08		87	%	60 - 130
		RPD	Pyrene	2010/11/08	3.5		%	50
		Method Blank	D10-2-Methylnaphthalene	2010/11/09		82	%	50 - 150
			D10-Fluoranthene	2010/11/09		100	%	50 - 150
			D10-Phenanthrene	2010/11/09		92	%	50 - 150
			D12-Benzo(a)anthracene	2010/11/09		108	%	50 - 150
			D12-Benzo(a)pyrene	2010/11/09		102	%	50 - 150
			D12-Benzo(b)fluoranthene	2010/11/09		98	%	50 - 150
			D12-Benzo(ghi)perylene	2010/11/09		104	%	50 - 150
			D12-Benzo(k)fluoranthene	2010/11/09		92	%	50 - 150
			D12-Chrysene	2010/11/09		88	%	50 - 150

Maxxam Analytics
Attention: Michael Bisaga
Client Project #:
P.O. #:
Project name:

Quality Assurance Report (Continued)

Maxxam Job Number: GB0F7014

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2321284	JIW	Method Blank	D12-Indeno(1,2,3-cd)pyrene	2010/11/09		106	%	50 - 150
			D12-Perylene	2010/11/09		98	%	50 - 150
			D14-Dibenzo(a,h)anthracene	2010/11/09		106	%	50 - 150
			D8-Acenaphthylene	2010/11/09		84	%	50 - 150
			D8-Naphthalene	2010/11/09		78	%	50 - 150
			1-Methylnaphthalene	2010/11/09	<0.10		ug	
			1-Methylphenanthrene	2010/11/09	<0.10		ug	
			2-Chloronaphthalene	2010/11/09	<0.10		ug	
			2-Methylanthracene	2010/11/09	<0.10		ug	
			2-Methylnaphthalene	2010/11/09	<0.10		ug	
			3-Methylcholanthrene	2010/11/09	<2.0		ug	
			7,12-Dimethylbenzo(a)anthracene	2010/11/09	<0.10		ug	
			9,10-Dimethylanthracene	2010/11/09	<0.40		ug	
			Acenaphthene	2010/11/09	<0.050		ug	
			Acenaphthylene	2010/11/09	<0.050		ug	
			Anthracene	2010/11/09	<0.050		ug	
			Benzo(a)anthracene	2010/11/09	<0.050		ug	
			Benzo(a)fluorene	2010/11/09	<0.10		ug	
			Benzo(a)pyrene	2010/11/09	<0.050		ug	
			Benzo(b)fluoranthene	2010/11/09	<0.050		ug	
			Benzo(b)fluorene	2010/11/09	<0.10		ug	
			Benzo(e)pyrene	2010/11/09	<0.10		ug	
			Benzo(g,h,i)perylene	2010/11/09	<0.050		ug	
			Benzo(k)fluoranthene	2010/11/09	<0.050		ug	
			Biphenyl	2010/11/09	<0.10		ug	
			Chrysene	2010/11/09	<0.050		ug	
			Coronene	2010/11/09	<0.10		ug	
			Dibenz(a,h)anthracene	2010/11/09	<0.050		ug	
			Dibenzo(a,e)pyrene	2010/11/09	<0.20		ug	
			Fluoranthene	2010/11/09	<0.050		ug	
			Fluorene	2010/11/09	<0.050		ug	
			Indeno(1,2,3-cd)pyrene	2010/11/09	<0.050		ug	
			m-Terphenyl	2010/11/09	<0.10		ug	
			Naphthalene	2010/11/09	<0.072		ug	
			o-Terphenyl	2010/11/09	<0.10		ug	
			Perylene	2010/11/09	<0.10		ug	
			Phenanthrene	2010/11/09	<0.050		ug	
			p-Terphenyl	2010/11/09	<0.10		ug	
			Pyrene	2010/11/09	<0.050		ug	
			Quinoline	2010/11/09	<0.40		ug	
			Tetralin	2010/11/09	<0.10		ug	

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.
Spiked Blank: A blank matrix to which a known amount of the analyte has been added. Used to evaluate analyte recovery.
Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.
Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.

Lakeland Industry & Community Association

Maskwa Monitoring Site
Ambient Air Monitoring
Data Report
For
October 2010

Prepared By:

November 8, 2010

Lakeland Industry & Community Association
Ambient Air Monitoring
Maskwa

Table of Contents

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: Maskwa
Data Period: October 2010

The monthly ambient data report:

- Prepared by Lily Lin
- Reviewed by Craig Snider

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.

The calibrations conducted at the LICA - Maskwa Air Monitoring Stations conform to the following Maxxam Standard Operation Procedures:

- CAL SOP-00211
- CAL SOP-00209
- CAL SOP-00213
- CAL SOP-00214
- CAL SOP-00208

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. All calibration's and maintenance conforms to the procedures outlined in the *Air Monitoring Directive, Appendix A-10, Section 1.6.*

MONTHLY CONTINUOUS DATA SUMMARY
LAKELAND INDUSTRY & COMMUNITY ASSOCIATION – MASKWA

Continuous Ambient Monitoring – October 2010

LICA MASKWA 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									
SO2 (PPB)	172	57	0	0	0.33	28	15	6	8	303(WNW)	3.1	15	100.0
H2S (PPB)	10	3	0	0	0.01	2	1	5	0.1	302(WNW)	0.1	1, 3	100.0
THC (PPM)	-	-	-	-	2.07	3.0	31	22, 23	1.1, 1	124(ESE), 74(ENE)	2.5	31	100.0
NOx (PPB)	-	-	-	-	3.61	67	7	7	1.4	293(WNW)	9.2	28	100.0
NO (PPB)	-	-	-	-	0.65	47	7	7	1.4	293(WNW)	4.0	7	100.0
NO_2 (PPB)	212	106	0	0	2.94	26	2	21	0.9	188(S)	8.1	28	100.0
VECTOR WS (KPH)	-	-	-	-	5.77	17.5	19	11	-	284(WNW)	9.5	25	100.0
VECTOR WD (DEGREES)	-	-	-	-	251(WSW)	-	-	-	-	-	-	-	100.0
RELATIVE HUMIDITY (%)	-	-	-	-	64.48	91	2, 3	VAR	VAR	VAR	88.7	29	100.0
TEMPERATURE (DEG C)	-	-	-	-	5.29	23.4	7	13	3.3	80(E)	14.5	6	100.0
BAROMETRIC PRESSURE (MILIBAR)	-	-	-	-	940	956	1	VAR	VAR	VAR	952.8	1	100.0
PRECIPITATION (MM)	-	-	-	-	0.01	1.1	24	10	8.9	80(E)	4.3	24	100.0

VAR-VARIOUS

General Monthly Summary

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 – Maskwa

Sulphur Dioxide (PPB)

- Analyzer make / model - API 100E, S/N: 508

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

Hydrogen Sulphide (PPB)

- Analyzer make / model - API 101E, S/N: 511

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

Total HydroCarbon (PPM)

- Analyzer make / model –TECO 51C-LT, S/N: 436609738

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

General Monthly Summary

AQM STATION – LICA – Maskwa

Nitrogen Dioxide (PPB)

- Analyzer make / model - API 200E, S/N:594

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

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

- System make / model - Met One 50.5H, S/N: H10703

The wind system is reported as vector wind speed and vector wind direction. The wind system worked well throughout the month.

Relative Humidity (PERCENT)

- System make / model - Met One 083

No operational issues observed during the month.

Precipitation (MM)

- System make / model - Met One 387

No operational issues observed during this month. The tipping bucket was checked on October 28th by pouring water into tipping bucket to cause 21 tips; the DAS read 2.1mm correctly. The heater was checked and the screens were removed for winter as well.

General Monthly Summary

AQM STATION – LICA – Maskwa

Barometric Pressure (MILLIBAR)

- System make / model - Met One 092

No operation issue was observed during the month.

Ambient Temperature (DEGC)

- System make / model - Met One 060

No operational issue was observed during the month.

Trailer Temperature (DEG C)

- System make / model – R&R 61

No operational issue was observed during the month.

Standard Deviation Wind Direction (DEG)

- System make / model –Met One 50.5H

No operational issue was observed during the month.

General Monthly Summary

AQM STATION – LICA – Maskwa

Datalogger

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

No operational issue was observed during the month.

Trailer

The manifold and inlet pipe were cleaned on October 13th. The throw-away filter in the Bard heating/cooling system was replaced on October 28th.

Continuous Monitoring

Monthly Summaries, Graphs & Wind Roses

Sulphur Dioxide

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - MASKWA

OCTOBER 2010

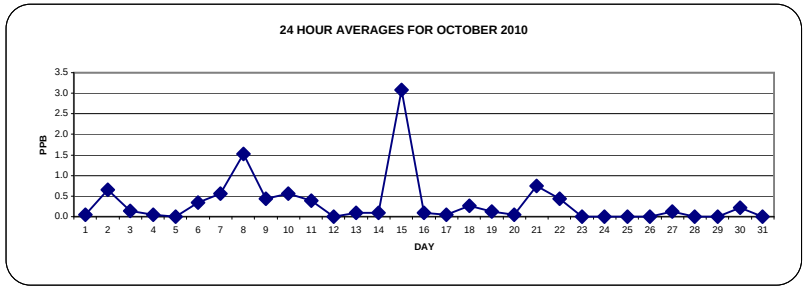
SULPHUR DIOXIDE (SO_2) hourly averages in ppb

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	**IZS**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0.0	24
2	0	**IZS**	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	0	0	0	0	0	0	1	0.7	24
3	**IZS**	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	**IZS**	3	0.1	24
4	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	**IZS**	0	1	0.0	24
5	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
6	0	0	0	0	0	0	0	1	1	0	0	1	1	0	0	0	0	1	1	0	**IZS**	0	1	1	1	0.3	24
7	0	0	0	1	1	1	0	1	1	2	1	2	2	1	0	0	0	0	0	**IZS**	0	0	0	0	2	0.6	24
8	0	0	0	0	0	0	0	0	0	0	1	2	0	6	1	2	19	1	**IZS**	0	0	1	1	1	19	1.5	24
9	2	1	1	0	0	0	0	1	0	0	0	1	0	0	0	0	0	**IZS**	1	1	0	1	1	0	2	0.4	24
10	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	**IZS**	0	0	0	0	4	0	0	4	0.6	24
11	0	1	8	0	0	0	0	0	0	0	0	0	0	0	0	**IZS**	0	0	0	0	0	0	0	0	8	0.4	24
12	0	0	0	0	0	0	0	0	0	0	0	**C**	**C**	**C**	**C**	**C**	0	0	0	0	0	0	0	0	0	0.0	24
13	0	0	0	0	0	0	0	0	0	1	1	0	0	**IZS**	**C**	0	0	0	0	0	0	0	0	0	1	0.1	24
14	0	0	0	0	0	0	0	0	0	0	0	0	**IZS**	0	0	1	1	0	0	0	0	0	0	0	1	0.1	24
15	0	0	1	2	2	6	**28**	14	0	0	4	**IZS**	0	2	0	9	1	0	0	1	1	0	0	0	**28**	**3.1**	24
16	0	0	0	2	0	0	0	0	0	0	**IZS**	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0.1	24
17	0	0	0	0	0	0	0	0	0	**IZS**	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0.0	24
18	0	0	0	0	0	0	0	0	**IZS**	0	1	1	0	0	0	0	0	0	1	1	1	1	0	0	1	0.3	24
19	0	0	0	0	0	0	0	**IZS**	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	3	0.1	24
20	0	0	0	0	0	0	**IZS**	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.0	24
21	0	0	0	0	0	**IZS**	0	0	1	0	0	0	1	1	0	1	2	0	0	0	0	2	4	5	5	0.7	24
22	0	1	0	0	**IZS**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	2	2	2	2	0.4	24
23	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
24	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
25	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
26	**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
27	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	**IZS**	0	1	0.1	24
28	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
29	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
30	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	0	0	0	**IZS**	0	0	0	0	1	0.2	24
31	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
HOURLY MAX	2	1	8	2	2	6	28	14	1	3	4	2	3	6	1	9	19	1	1	2	1	4	4	5			
HOURLY AVG	0.1	0.1	0.4	0.2	0.1	0.3	1.0	0.6	0.2	0.2	0.4	0.4	0.4	0.5	0.1	0.6	0.8	0.1	0.1	0.2	0.1	0.4	0.3	0.3			

STATUS FLAG CODES

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

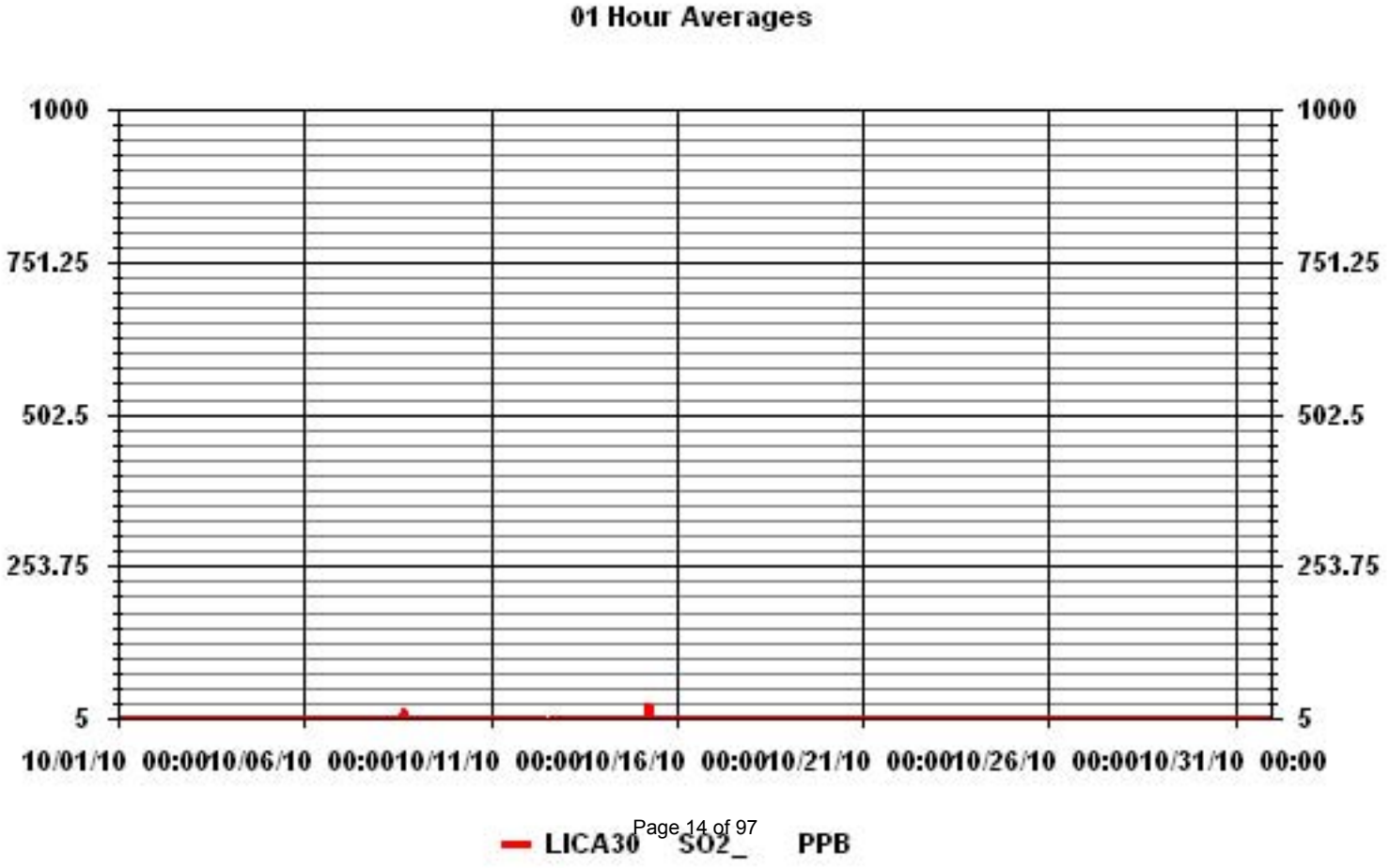


OBJECTIVE LIMIT: **ALBERTA ENVIRONMENT:** 1-HR 172 PPB | 24-HR 57 PPB

MONTHLY SUMMARY

NUMBER OF 1-HR EXCEEDENCES:	0					
NUMBER OF 24-HR EXCEEDENCES:	0					
NUMBER OF NON-ZERO READINGS:	115					
MAXIMUM 1-HR AVERAGE:	28	PPB	@ HOUR(S)	6	ON DAY(S)	15
MAXIMUM 24-HR AVERAGE:	3.1	PPB			ON DAY(S)	15

IZS CALIBRATION TIME:	32	HRS	OPERATIONAL TIME:	744	HRS
MONTHLY CALIBRATION TIME:	6	HRS	AMD OPERATION UPTIME:	100.0	%
STANDARD DEVIATION:	1.56		MONTHLY AVERAGE:	0.33	PPB


01 Hour Averages
1000
751.25
502.5
253.75
5
10/01/10 00:00
10/06/10 00:00
10/11/10 00:00
10/16/10 00:00
10/21/10 00:00
10/26/10 00:00
10/31/10 00:00
LICA30 SO2_ PPB

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *MASKWA*

OCTOBER 2010

SULPHUR DIOXIDE MAX instantaneous maximum in ppb

MST

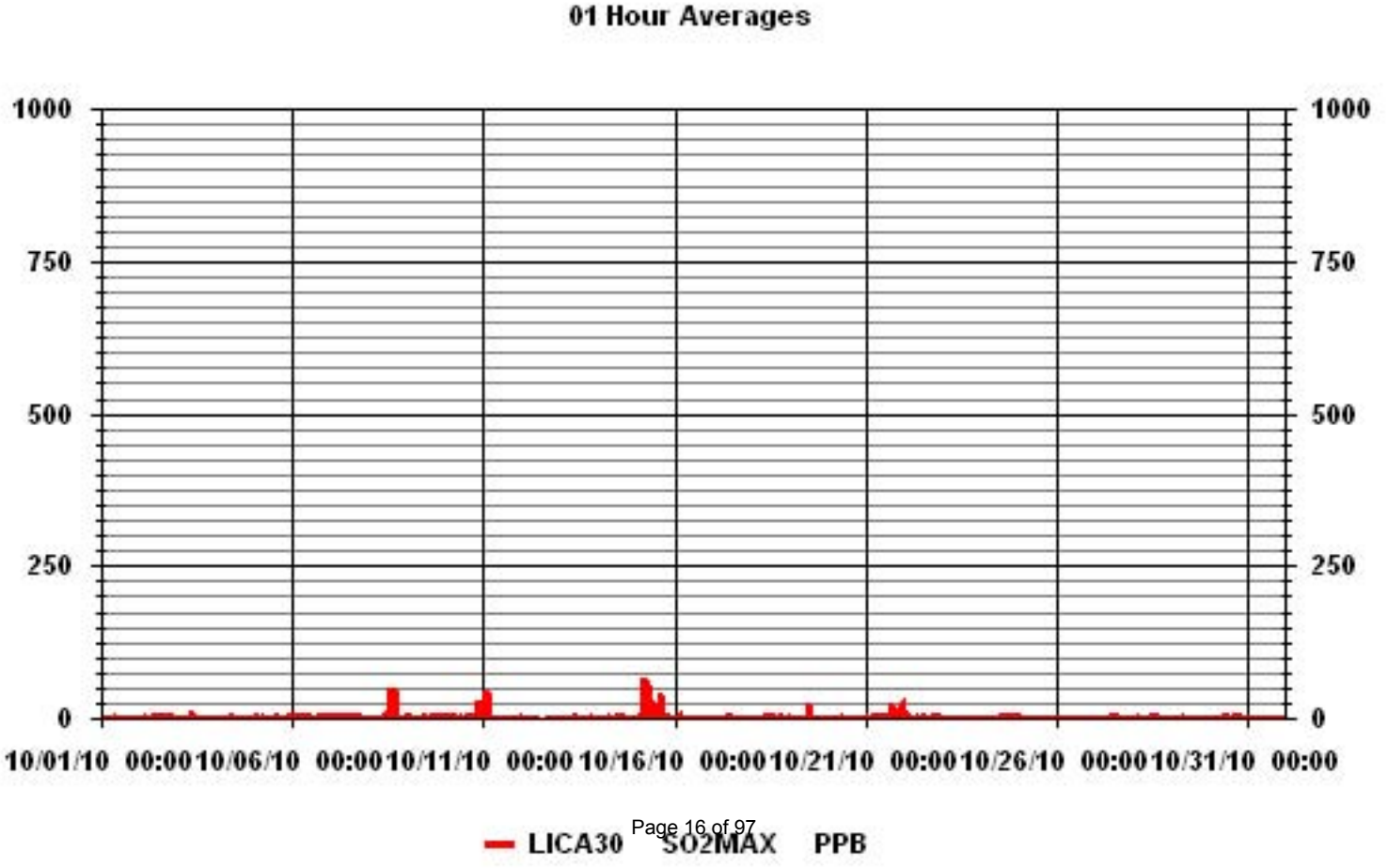
HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	0	0	**IZS**	0	0	1	0	0	1	1	0	0	0	0	0	0	0	2	1	0	0	0	0	0	2	0.3	24
2	1	**IZS**	2	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	2	1.0	24
3	**IZS**	0	0	0	0	1	0	0	0	13	0	0	0	0	0	0	0	0	0	0	0	0	0	**IZS**	13	0.6	24
4	0	0	0	0	0	0	0	0	0	0	4	0	0	1	0	1	0	0	0	0	0	0	**IZS**	2	4	0.3	24
5	1	1	1	1	0	1	1	0	0	1	0	0	0	0	3	0	0	0	1	2	1	**IZS**	1	1	3	0.7	24
6	1	1	1	1	1	1	1	1	1	1	1	2	3	0	1	0	1	1	1	1	**IZS**	1	1	1	3	1.0	24
7	1	1	1	1	1	1	1	2	3	3	1	6	4	4	1	1	1	1	1	**IZS**	0	0	0	0	6	1.5	24
8	0	0	0	0	0	0	0	0	0	0	6	10	2	48	13	23	51	7	**IZS**	0	1	2	1	2	51	7.2	24
9	3	3	3	1	0	1	0	3	1	0	1	1	1	0	1	1	1	**IZS**	4	4	1	1	1	1	4	1.4	24
10	1	1	1	1	1	1	1	1	1	2	2	1	2	1	1	1	**IZS**	1	4	0	10	27	0	0	27	2.7	24
11	0	5	45	1	0	0	0	0	0	0	0	0	0	0	0	**IZS**	0	0	0	0	0	0	0	1	45	2.3	24
12	1	0	0	0	0	0	0	0	0	0	0	**C**	**C**	**C**	**C**	**C**	0	0	0	0	0	0	0	0	1	0.1	24
13	0	0	0	0	0	0	0	0	1	1	1	1	0	**IZS**	**C**	0	0	0	0	1	1	0	0	0	1	0.3	24
14	0	0	0	0	0	0	0	1	1	0	0	0	**IZS**	1	1	1	1	1	0	0	0	0	0	0	1	0.3	24
15	0	1	2	3	8	**64**	48	58	1	1	26	**IZS**	0	26	4	39	9	1	0	3	5	1	0	0	**64**	13.0	24
16	0	0	1	5	1	0	0	0	0	0	**IZS**	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0.3	24
17	0	0	0	0	0	0	0	0	0	**IZS**	1	1	1	1	0	0	0	0	0	0	0	0	0	0	1	0.2	24
18	0	0	0	0	0	0	0	0	**IZS**	1	1	1	1	1	1	1	0	1	1	2	2	1	0	0	2	0.6	24
19	1	1	0	0	0	0	0	**IZS**	0	0	0	3	23	1	1	0	0	0	0	1	2	0	0	0	23	1.4	24
20	0	0	0	0	0	0	**IZS**	0	0	3	3	1	0	0	0	0	0	0	0	0	0	0	0	0	3	0.3	24
21	0	1	1	0	0	**IZS**	1	1	1	1	1	1	1	2	1	7	24	1	2	1	1	14	24	27	27	4.9	24
22	1	6	1	1	**IZS**	1	0	0	1	1	0	1	1	1	0	1	0	1	2	6	4	5	4	4	6	1.8	24
23	1	0	0	**IZS**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.0	24
24	0	0	**IZS**	0	0	0	0	1	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	0.6	24
25	1	**IZS**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.0	24
26	**IZS**	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**IZS**	1	0.0	24
27	0	0	0	0	0	0	0	0	0	1	2	3	4	5	1	1	0	0	0	0	0	0	**IZS**	0	5	0.7	24
28	0	0	0	1	1	0	0	0	1	0	1	1	1	1	1	1	1	0	0	0	0	**IZS**	0	0	1	0.4	24
29	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	**IZS**	0	0	0	1	0.1	24
30	0	0	0	0	0	0	0	0	1	1	1	1	1	1	2	2	1	1	1	**IZS**	0	0	0	0	2	0.6	24
31	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
HOURLY MAX	3	6	45	5	8	64	48	58	3	13	26	10	23	48	13	39	51	7	4	6	10	27	24	27			
HOURLY AVG	0.4	0.7	2.0	0.6	0.5	2.4	1.9	2.3	0.5	1.1	1.8	1.2	1.6	3.3	1.2	2.8	3.1	0.7	0.7	0.8	1.0	1.9	1.2	1.4			

STATUS FLAG CODES

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

MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:	287					
MAXIMUM INSTANTANEOUS VALUE:	64	PPB	@ HOUR(S)	5	ON DAY(S)	15
IZS CALIBRATION TIME:	32	HRS	OPERATIONAL TIME:		744	HRS
MONTHLY CALIBRATION TIME:	6	HRS				
STANDARD DEVIATION:	5.78					


01 Hour Averages
1000
750
500
250
0
10/01/10 00:00
10/06/10 00:00
10/11/10 00:00
10/16/10 00:00
10/21/10 00:00
10/26/10 00:00
10/31/10 00:00
LICA30 SO2MAX PPB

LICA30
SO2_ / WDR Joint Frequency Distribution (Percent)

October 2010

Distribution By % Of Samples

Logger Id : 30
Site Name : LICA30
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	6.23	3.96	7.64	7.50	4.10	3.25	3.82	5.38	5.52	13.73	12.03	5.52	10.33	6.23	1.55	2.97	99.85
< 60	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.14	.00	.00	.14
< 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	6.23	3.96	7.64	7.50	4.10	3.25	3.82	5.38	5.52	13.73	12.03	5.52	10.33	6.37	1.55	2.97	

Calm : .00 %

Total # Operational Hours : 706

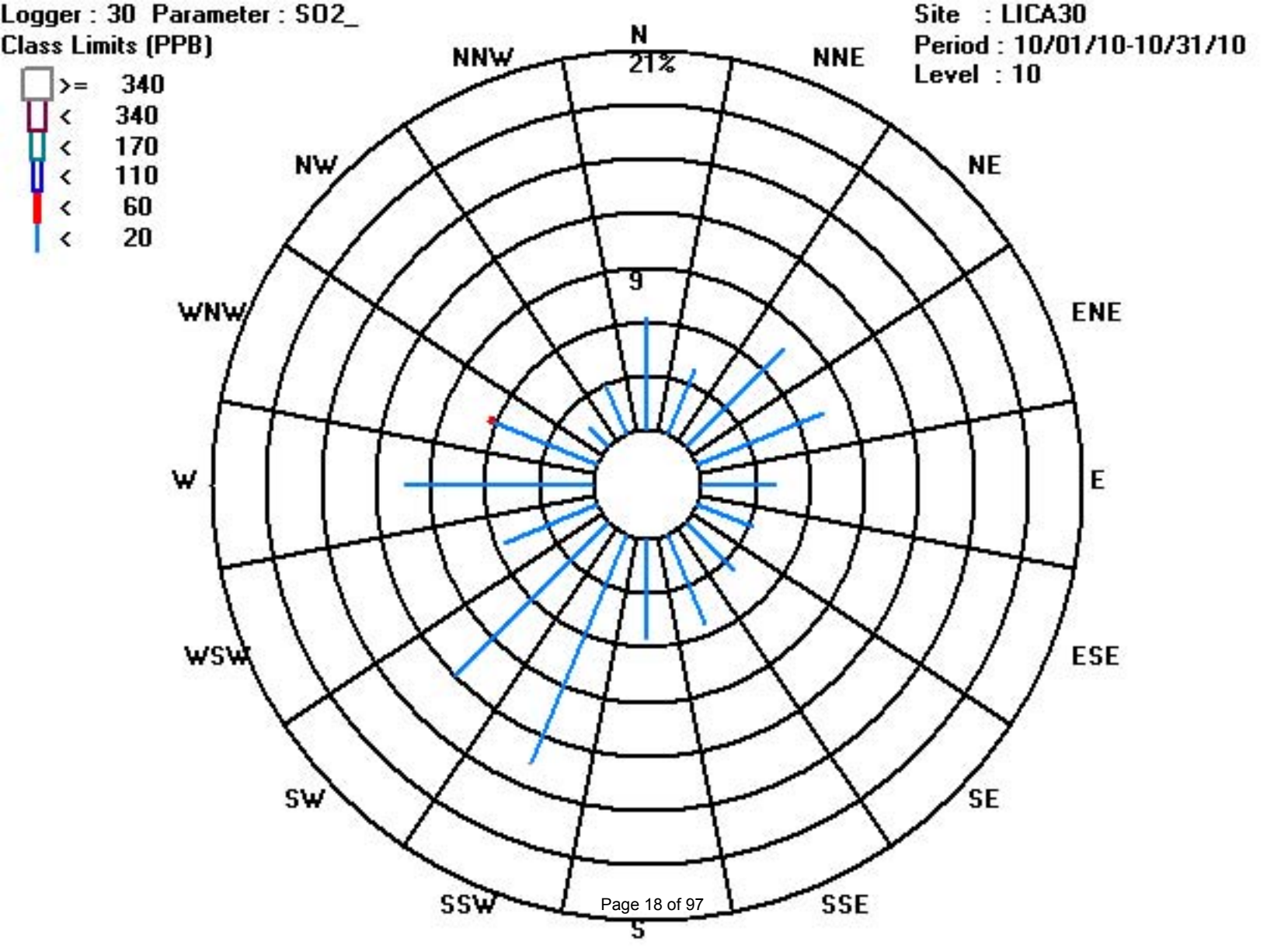
Distribution By Samples

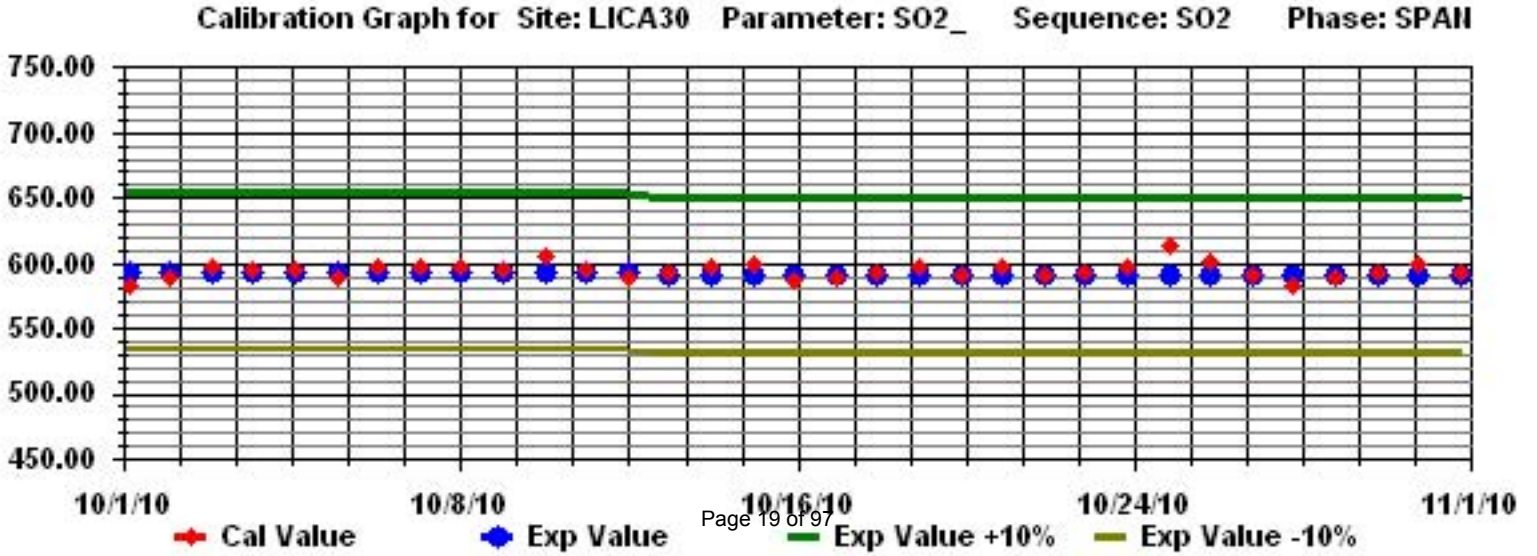
Direction

Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 20	44	28	54	53	29	23	27	38	39	97	85	39	73	44	11	21	705
< 60														1			1
< 110																	
< 170																	
< 340																	
>= 340																	
Totals	44	28	54	53	29	23	27	38	39	97	85	39	73	45	11	21	

Calm : .00 %

Total # Operational Hours : 706


Logger : 30 Parameter : SO2_
Class Limits (PPB)
>= 340
< 340
< 170
< 110
< 60
< 20
Site : LICA30
Period : 10/01/10-10/31/10
Level : 10
N
21%
NNE
NE
ENE
E
ESE
SE
SSE
S
SSW
SW
WSW
W
WNW
NW
NNW
9


Calibration Graph for Site: LICA30 Parameter: SO2_ Sequence: SO2 Phase: SPAN
750.00
700.00
650.00
600.00
550.00
500.00
450.00
10/1/10
10/8/10
10/16/10
10/24/10
11/1/10
Cal Value
Exp Value
Exp Value +10%
Exp Value -10%

Hydrogen Sulphide

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - MASKWA

OCTOBER 2010

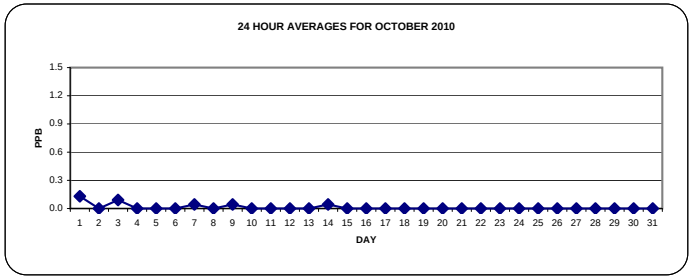
HYDROGEN SULPHIDE (H_2S) hourly averages in ppb

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

STATUS FLAG CODES

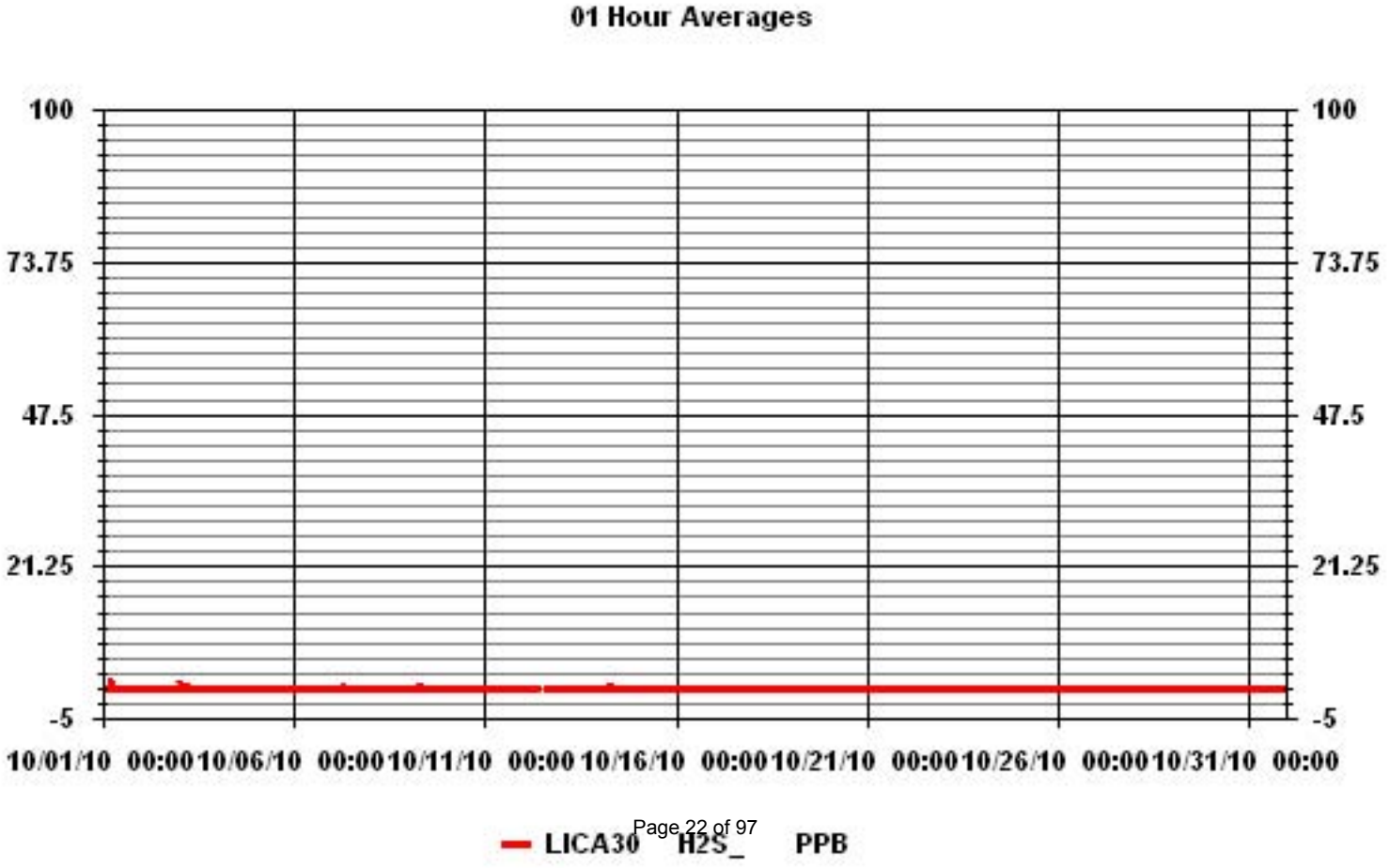
S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	- MAINTENANCE
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE



OBJECTIVE LIMIT: **ALBERTA ENVIRONMENT:** 1-HR 10 PPB | 24-HR 3 PPB

MONTHLY SUMMARY

NUMBER OF 1-HR EXCEEDENCES:	0					
NUMBER OF 24-HR EXCEEDENCES:	0					
NUMBER OF NON-ZERO READINGS:	7					
MAXIMUM 1-HR AVERAGE:	2	PPB	@ HOUR(S)	5	ON DAY(S)	1
MAXIMUM 24-HR AVERAGE:	0.1	PPB			ON DAY(S)	1, 3
					VAR-VARIOUS	
IZS CALIBRATION TIME:	32	HRS	OPERATIONAL TIME:		744	HRS
MONTHLY CALIBRATION TIME:	5	HRS	AMD OPERATION UPTIME:		100.0	%
STANDARD DEVIATION:	0.12		MONTHLY AVERAGE:		0.01	PPB


01 Hour Averages
100
73.75
47.5
21.25
-5
10/01/10 00:00
10/06/10 00:00
10/11/10 00:00
10/16/10 00:00
10/21/10 00:00
10/26/10 00:00
10/31/10 00:00
LICA30 H2S_ PPB

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *MASKWA*

OCTOBER 2010

HYDROGEN SULPHIDE MAX instantaneous maximum in ppb

MST

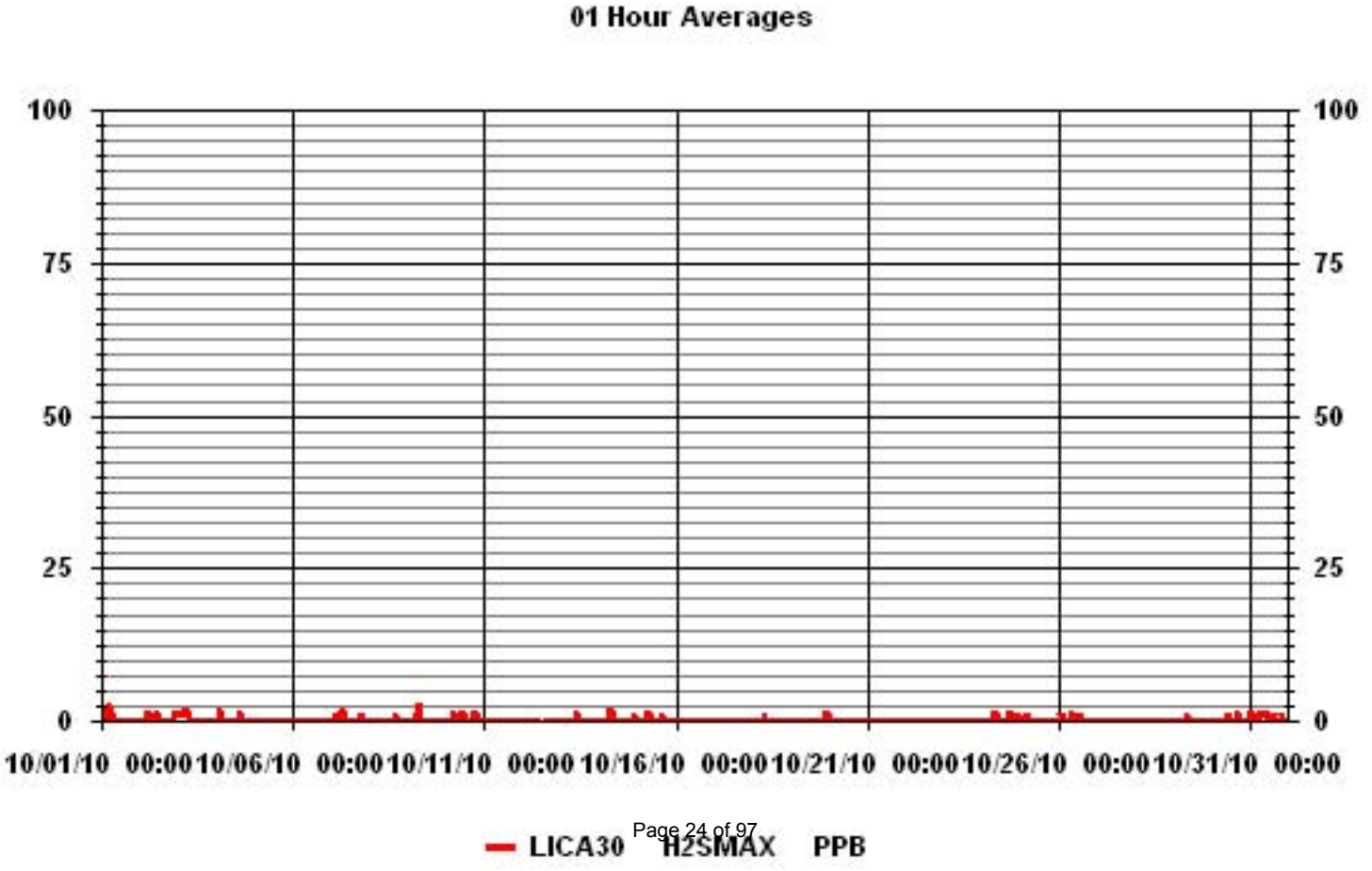
HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00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

STATUS FLAG CODES

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

MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:	69					
MAXIMUM INSTANTANEOUS VALUE:	3	PPB	@ HOUR(S)	5	ON DAY(S)	1
IZS CALIBRATION TIME:	32	HRS	OPERATIONAL TIME:		744	HRS
MONTHLY CALIBRATION TIME:	5	HRS				
STANDARD DEVIATION:	0.36					


01 Hour Averages
100
75
50
25
0
10/01/10 00:00
10/06/10 00:00
10/11/10 00:00
10/16/10 00:00
10/21/10 00:00
10/26/10 00:00
10/31/10 00:00
LICA30 H2SMAX PPB

LICA30
H2S_ / WDR Joint Frequency Distribution (Percent)

October 2010

Distribution By % Of Samples

Logger Id : 30
Site Name : LICA30
Parameter : H2S_
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
< 3	6.22	3.96	7.63	7.49	4.10	3.25	3.81	5.37	5.51	13.71	12.02	5.51	10.46	6.36	1.55	2.97	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	6.22	3.96	7.63	7.49	4.10	3.25	3.81	5.37	5.51	13.71	12.02	5.51	10.46	6.36	1.55	2.97	

Calm : .00 %

Total # Operational Hours : 707

Distribution By Samples

Direction

Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 3	44	28	54	53	29	23	27	38	39	97	85	39	74	45	11	21	707
< 10																	
< 50																	
>= 50																	
Totals	44	28	54	53	29	23	27	38	39	97	85	39	74	45	11	21	

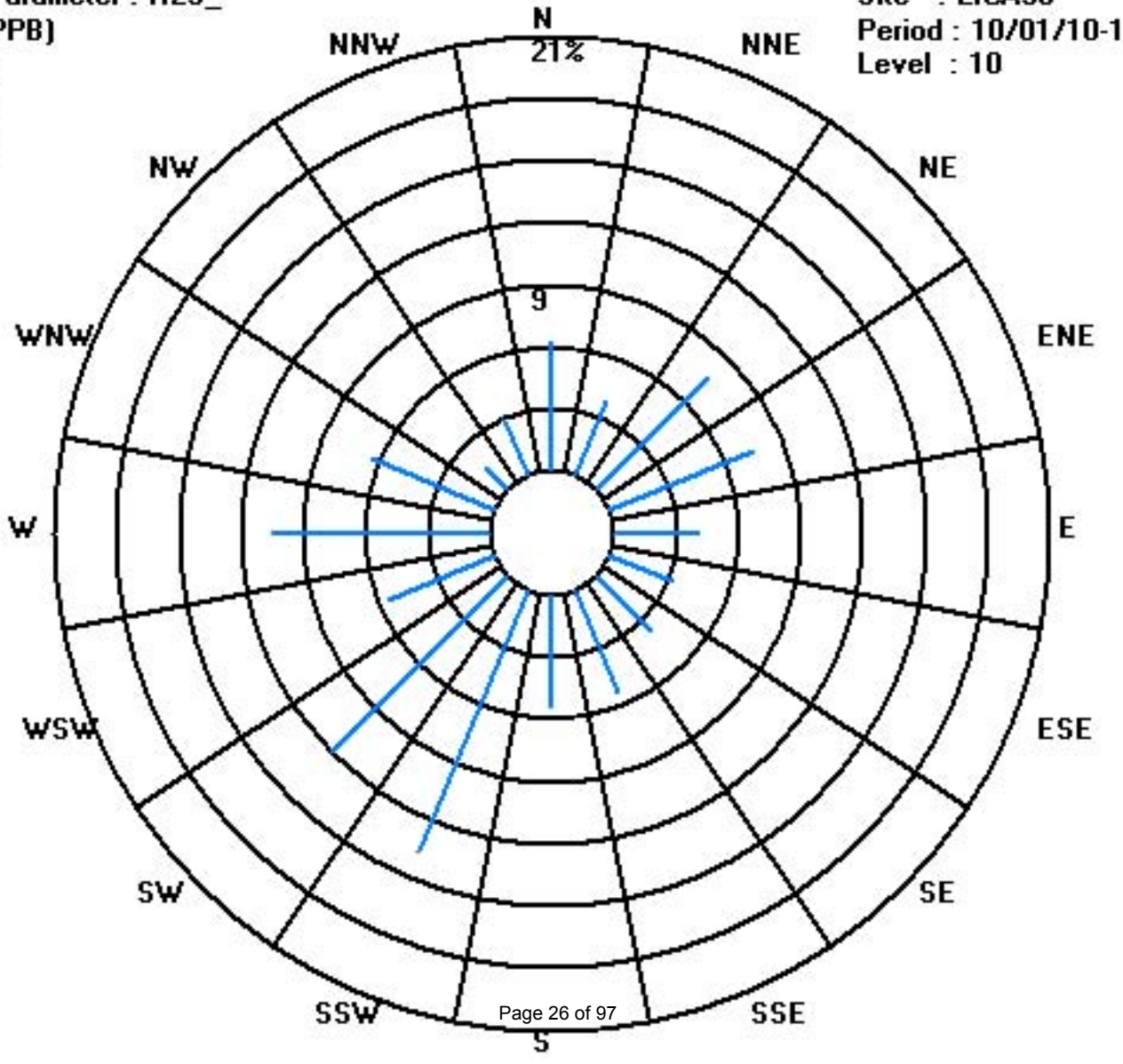
Calm : .00 %

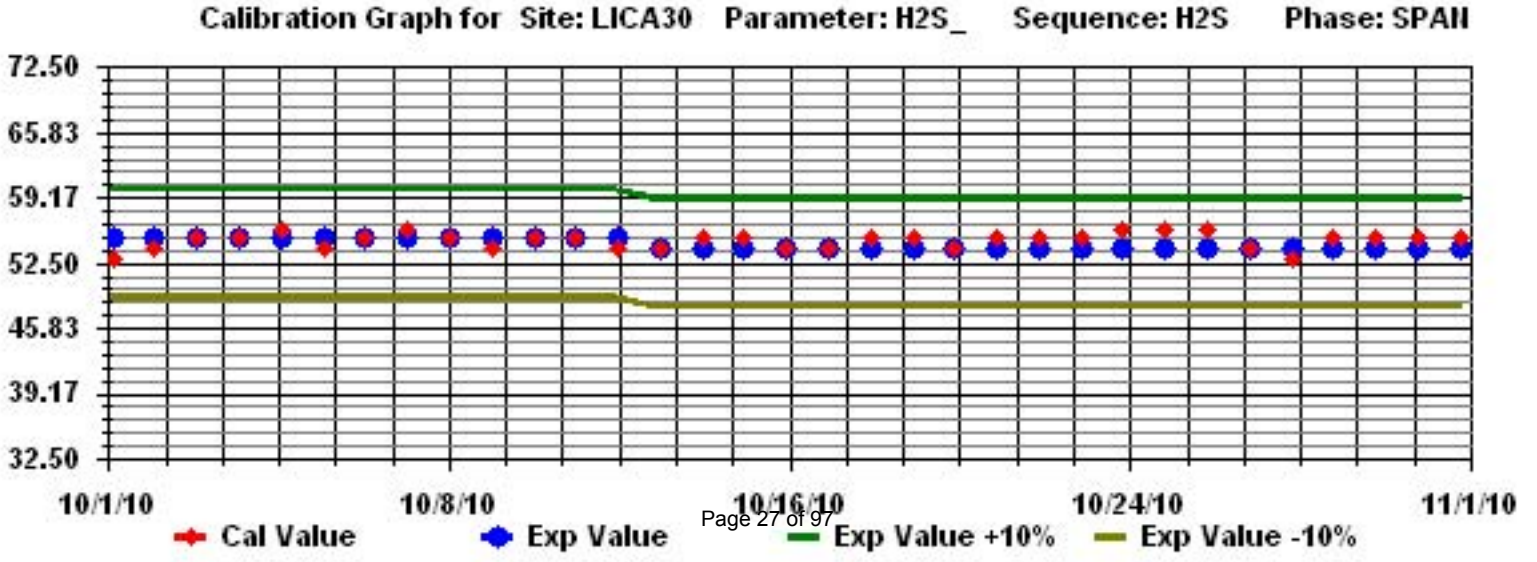
Total # Operational Hours : 707

Logger : 30 Parameter : H2S_
Class Limits (PPB)

>= 50
< 50
< 10
< 3

Site : LICA30
Period : 10/01/10-10/31/10
Level : 10




Calibration Graph for Site: LICA30 Parameter: H2S_ Sequence: H2S Phase: SPAN
72.50
65.83
59.17
52.50
45.83
39.17
32.50
10/1/10
10/8/10
10/16/10
10/24/10
11/1/10
Cal Value
Exp Value
Exp Value +10%
Exp Value -10%

Total Hydrocarbons

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION -MASKWA

OCTOBER 2010

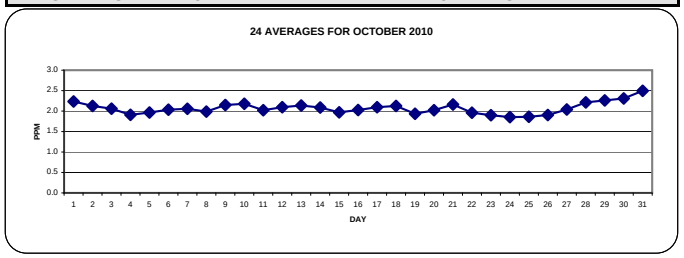
TOTAL HYDROCARBONS hourly averages in ppm

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	2.4	2.4	**IZS**	2.6	2.6	2.6	2.5	2.5	2.3	2.3	2.3	2.1	2	2.1	2.3	2.1	2.1	2	2.1	2	2	2	2	2.1	2.6	2.2	24
2	2.1	**IZS**	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.2	2.1	24
3	**IZS**	2.4	2.4	2.3	2.2	2.3	2.3	2.3	2.2	2	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2	2	1.9	**IZS**	2.4	2.1	24
4	2	2	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	**IZS**	1.9	2.0	1.9	24
5	1.9	1.9	1.9	1.9	2	1.9	1.9	1.9	1.9	2	2	1.9	1.9	1.9	2	2	2	2	2	2.1	2.1	**IZS**	2.1	2	2.1	2.0	24
6	2.1	2.1	2.1	2.1	2	2	2.1	2.3	2.1	2	2	2	2	1.9	1.9	1.9	1.9	2	2	2	**IZS**	2	2.1	2.2	2.3	2.0	24
7	2.1	2.2	2.1	2.1	2.1	2.3	2.3	2.5	2.6	2.2	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	**IZS**	2	1.9	1.9	1.9	2.6	2.1	24
8	2	2	2	1.9	1.9	2	2	2	2	1.9	2	2	2	2	1.9	1.9	2	2	**IZS**	2	2	2	2.1	2.1	2.1	2.0	24
9	2.2	2.1	2.2	2.1	2.2	2.3	2.3	2.3	2.4	2	2	2	2	2	2.2	2.3	2	**IZS**	2	2.1	2.1	2.2	2.2	2.2	2.4	2.1	24
10	2.2	2.2	2.2	2.4	2.4	2.4	2.4	2.3	2.4	2.4	2.3	2.2	2.1	2.1	2.2	2.2	**IZS**	2.2	1.9	1.9	1.9	2	1.9	1.9	2.4	2.2	24
11	1.9	2.2	2.1	2	2	2	2	2	2	2	2	2	2	1.9	1.9	**IZS**	2	2	2	2.1	2.1	2.1	2.1	2.1	2.2	2.0	24
12	2.3	2.2	2.1	2.2	2.3	2.2	2.2	2.1	2	2	2	2	2	2	**IZS**	2	2	2	2	2	2.1	2.2	2.2	2.1	2.3	2.1	24
13	2.2	2.3	2.4	2.5	2.5	2.4	2.3	2.4	**C**	**C**	**C**	**C**	2	1.9	**IZS**	1.9	1.9	1.9	1.9	2	2	2	2	2.1	2.5	2.1	24
14	2.2	2.3	2.1	2.1	2	2	1.9	2	1.9	2	2	2	**IZS**	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.3	2.2	2.2	2.3	2.1	24
15	2.3	2.2	2.1	2	2	1.9	2	1.9	1.9	1.9	1.9	**IZS**	1.9	1.9	1.9	2	1.9	2	1.9	2	2	1.9	1.9	1.9	2.3	2.0	24
16	1.9	1.9	2	2	2	2	2	2.2	2.1	2.1	**IZS**	2	2	2	2	2	2	2	2	2	2	2	2.1	2.3	2.3	2.0	24
17	2.3	2.3	2.3	2.3	2.2	2.1	2.1	2.1	2.1	**IZS**	2.2	2.1	2.1	2	2	2	2	2	2	2	2	2	2	2	2.3	2.1	24
18	2	2.1	2.1	2.2	2.2	2.2	2.3	2.4	**IZS**	2.3	2.3	2.3	2.2	2.1	2	1.9	2	2	2	2	2.1	2.2	2	2	2.4	2.1	24
19	2	2.1	2.1	2	2	1.9	1.9	**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	2	1.9	1.9	1.9	2.1	1.9	24
20	1.9	1.9	2	2	2	2	**IZS**	2	2	2	2.1	2	2	2	2	2	2	2	2	2	2.1	2.1	2.2	2.2	2.2	2.0	24
21	2.3	2.3	2.3	2.3	2.3	**IZS**	2.4	2.4	2.5	2.5	2.5	2.4	2.2	2	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2	2	2.5	2.2	24
22	2	2	2	2	**IZS**	2	2	2	2	2	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2	2	2	2	2	2.0	2.0	24
23	1.9	1.9	1.9	**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	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	24
24	1.9	1.9	**IZS**	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	24
25	1.8	**IZS**	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	24
26	**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	1.9	1.9	1.9	2	1.9	1.9	1.9	1.9	**IZS**	2.0	1.9	24
27	1.9	1.9	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2.1	2.2	2.2	2.2	2.2	**IZS**	2.2	2.2	2.0	24
28	2.1	2.1	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.3	2.3	2.2	2.3	2.2	2.2	2.1	**IZS**	2.3	2.3	2.3	2.2	24
29	2.3	2.3	2.2	2.2	2.2	2.3	2.4	2.5	2.5	2.5	2.5	2.5	2.5	2.3	2.2	2.1	2.1	2.1	2.1	2.1	**IZS**	2	2	2.1	2.5	2.3	24
30	2.1	2.1	2.1	2.1	2.1	2.1	2.3	2.3	2.3	2.3	2.3	2.4	2.5	2.4	2.5	2.5	2.5	2.3	2.3	**IZS**	2.4	2.4	2.4	2.4	2.5	2.3	24
31	2.3	2.3	2.3	2.2	2.2	2.3	2.2	2.3	2.3	2.4	2.5	2.5	2.4	2.4	2.7	2.6	2.5	2.5	**IZS**	2.8	2.8	2.8	2.9	**3**	**3.0**	**2.5**	24
HOURLY MAX	2.4	2.4	2.4	2.6	2.6	2.6	2.5	2.5	2.6	2.5	2.5	2.5	2.5	2.4	2.7	2.6	2.5	2.5	2.3	2.8	2.8	2.8	2.9	3.0	3.0		
HOURLY AVG	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1			

STATUS FLAG CODES

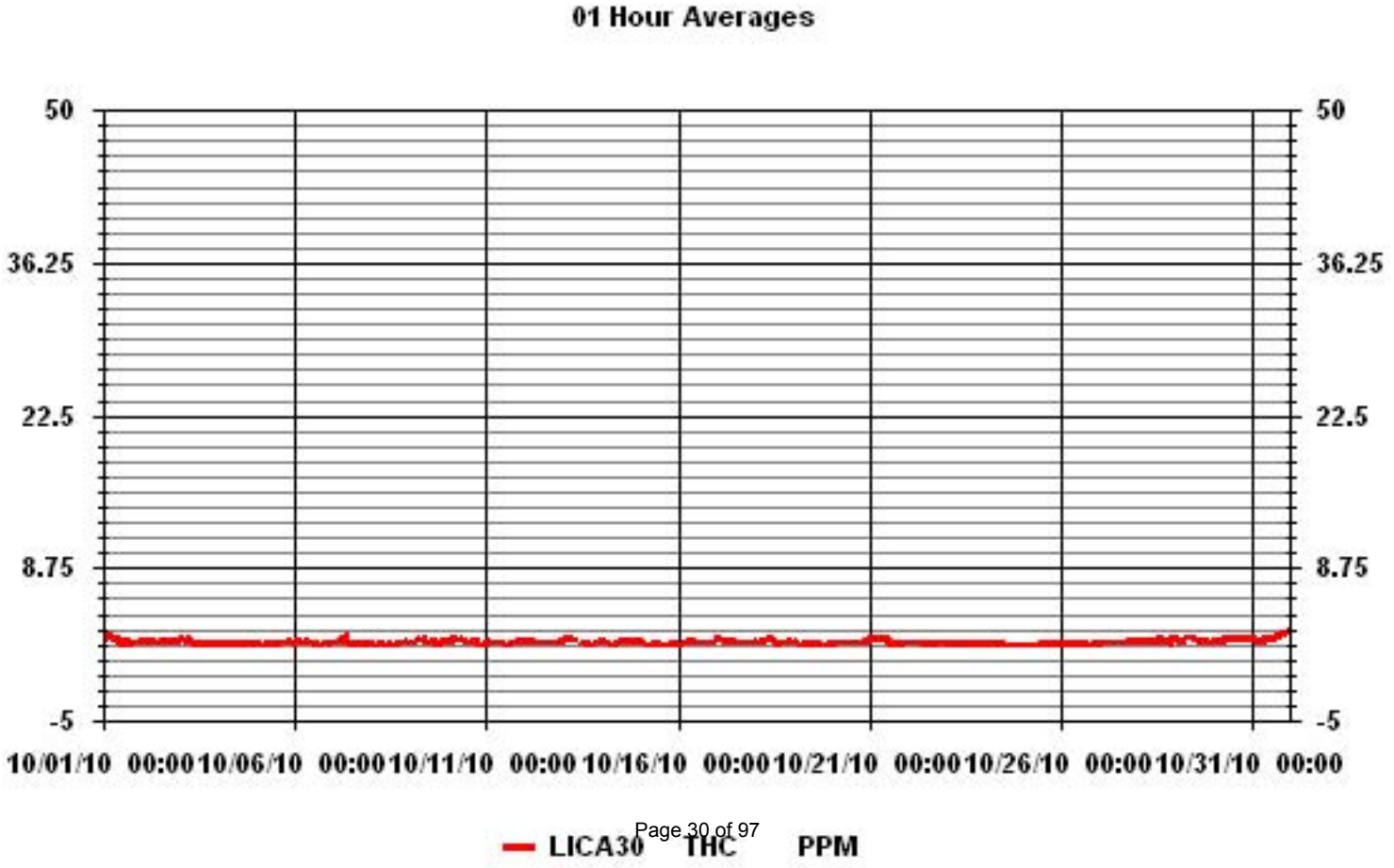
S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	- MAINTENANCE
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE



MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:	707					
MAXIMUM 1-HR AVERAGE:	3.0	PPM	@ HOUR(S)	22, 23	ON DAY(S)	31
MAXIMUM 24-HR AVERAGE:	2.5	PPM			ON DAY(S)	31
					VAR- VARIOUS	

IZS CALIBRATION TIME:	33	HRS	OPERATIONAL TIME:	744	HRS
MONTHLY CALIBRATION TIME:	4	HRS	AMD OPERATION UPTIME:	100.0	%
STANDARD DEVIATION:	0.19		MONTHLY AVERAGE:	2.07	PPM


01 Hour Averages
50
36.25
22.5
8.75
-5
10/01/10 00:00
10/06/10 00:00
10/11/10 00:00
10/16/10 00:00
10/21/10 00:00
10/26/10 00:00
10/31/10 00:00
LICA30 THC PPM

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *MASKWA*

OCTOBER 2010

TOTAL HYDROCARBONS MAX instantaneous maximum in ppm

MST

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

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
BB	- BELOW BACKGROUND OF 1.5 PPM		

MONTHLY SUMMARY

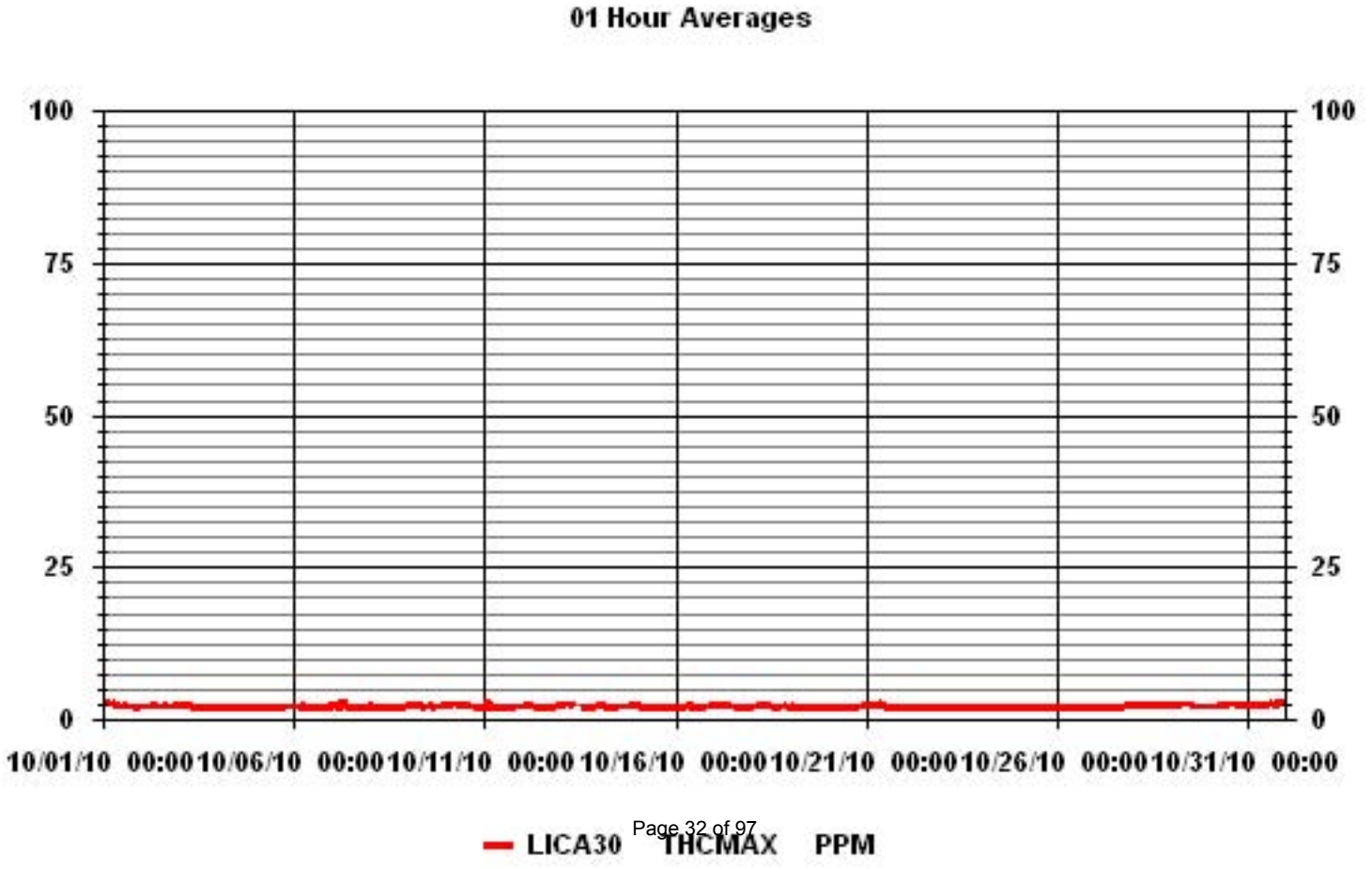
NUMBER OF NON-ZERO READINGS: 706

MAXIMUM INSTANTANEOUS VALUE: 3.1 PPM @ HOUR(S) 23 ON DAY(S) 31

IZS CALIBRATION TIME: 33 HRS OPERATIONAL TIME: 744 HRS

MONTHLY CALIBRATION TIME: 5 HRS

STANDARD DEVIATION: 0.22


01 Hour Averages
100
75
50
25
0
10/01/10 00:00
10/06/10 00:00
10/11/10 00:00
10/16/10 00:00
10/21/10 00:00
10/26/10 00:00
10/31/10 00:00
LICA30 THCMAX PPM

LICA30
THC / WDR Joint Frequency Distribution (Percent)

October 2010

Distribution By % Of Samples

Logger Id : 30
Site Name : LICA30
Parameter : THC
Units : PPM

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
<	3.0	6.22	3.96	7.63	7.35	4.10	3.25	3.67	5.37	5.51	13.43	11.73	5.51	10.74	6.64	1.55	2.97	99.71
<	10.0	.00	.00	.00	.14	.00	.00	.14	.00	.00	.00	.00	.00	.00	.00	.00	.00	.28
<	50.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
>=	50.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
	Totals	6.22	3.96	7.63	7.49	4.10	3.25	3.81	5.37	5.51	13.43	11.73	5.51	10.74	6.64	1.55	2.97	

Calm : .00 %

Total # Operational Hours : 707

Distribution By Samples

Direction

	Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
<	3.0	44	28	54	52	29	23	26	38	39	95	83	39	76	47	11	21	705
<	10.0				1			1										2
<	50.0																	
>=	50.0																	
	Totals	44	28	54	53	29	23	27	38	39	95	83	39	76	47	11	21	

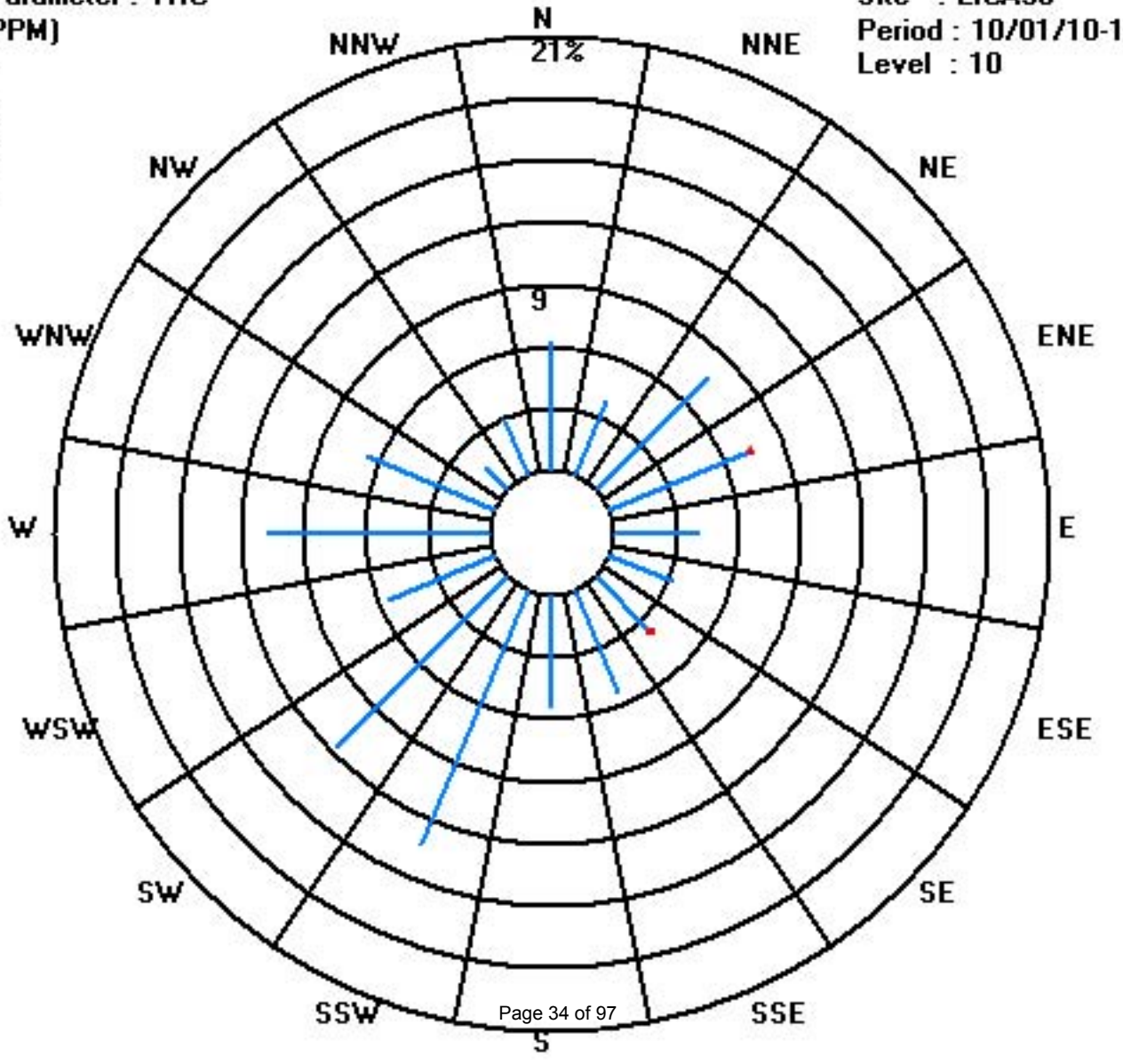
Calm : .00 %

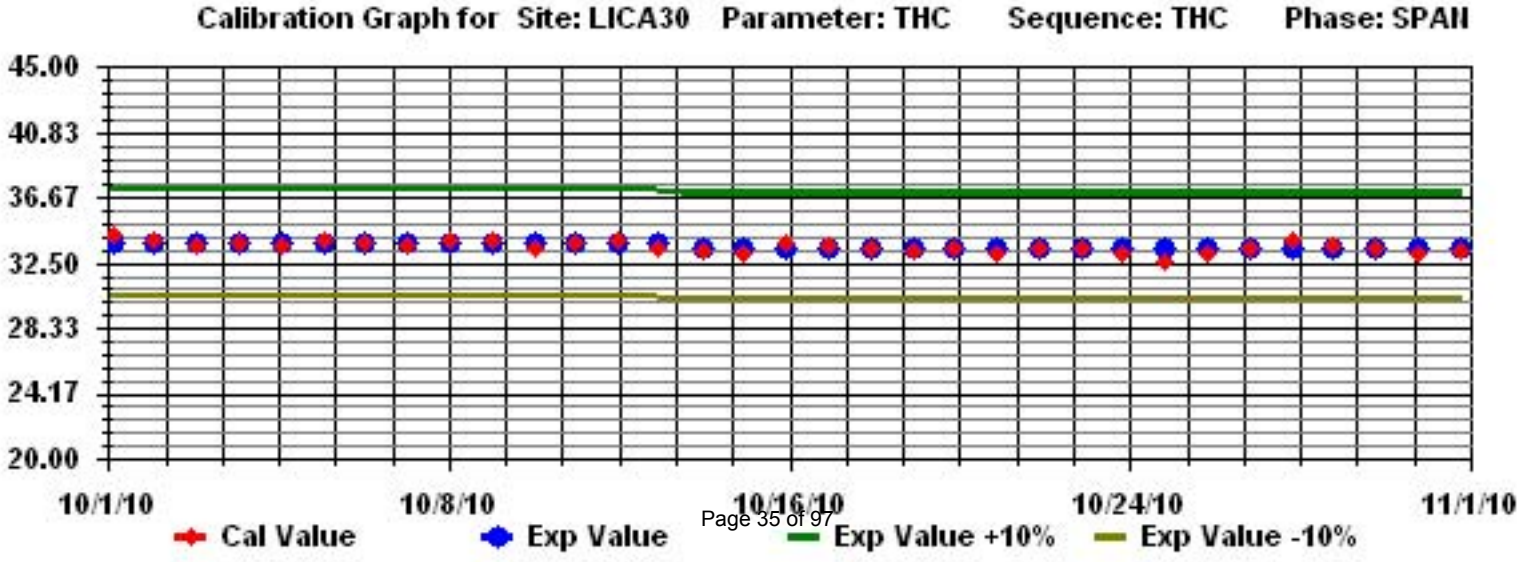
Total # Operational Hours : 707

Logger : 30 Parameter : THC
Class Limits (PPM)

>= 50.0
< 50.0
< 10.0
< 3.0

Site : LICA30
Period : 10/01/10-10/31/10
Level : 10




Calibration Graph for Site: LICA30 Parameter: THC Sequence: THC Phase: SPAN
45.00
40.83
36.67
32.50
28.33
24.17
20.00
10/1/10
10/8/10
10/16/10
10/24/10
11/1/10
Cal Value
Exp Value
Exp Value +10%
Exp Value -10%

Nitrogen Dioxide

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - MASKWA

OCTOBER 2010

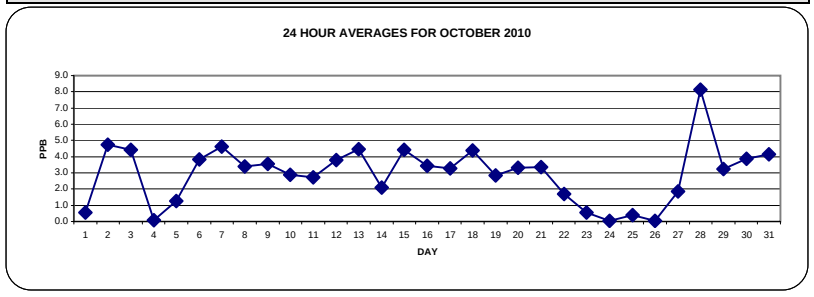
NITROGEN DIOXIDE hourly averages in ppb

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	1	1	**IZS**	2	0	1	1	1	1	1	1	0	0	0	0	0	0	1	1	0	0	0	0	1	2	0.6	24
2	1	**IZS**	3	3	3	3	3	3	3	2	3	2	3	3	2	3	3	5	5	3	6	**26**	15	6	**26**	4.7	24
3	**IZS**	7	10	14	17	23	15	4	3	3	1	0	0	0	0	0	0	0	0	0	0	0	0	**IZS**	23	4.4	24
4	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	**IZS**	0	2	0.1	24
5	0	2	1	2	3	2	2	2	2	2	1	0	0	0	1	1	1	0	2	2	1	**IZS**	1	1	3	1.3	24
6	2	2	2	4	2	7	8	11	6	4	3	2	2	1	2	2	4	6	4	2	**IZS**	3	4	5	11	3.8	24
7	3	3	3	4	3	12	16	21	16	7	2	4	4	3	1	1	1	1	1	**IZS**	0	0	0	0	21	4.6	24
8	1	0	0	0	0	0	0	0	0	0	3	9	4	5	1	1	8	6	**IZS**	1	4	11	10	14	14	3.4	24
9	7	8	9	3	4	4	4	9	8	2	1	2	1	1	1	1	1	**IZS**	2	3	2	3	3	3	9	3.6	24
10	2	2	2	2	3	3	3	3	3	3	3	2	2	2	2	2	**IZS**	3	2	1	2	10	8	1	10	2.9	24
11	3	10	12	4	1	1	2	2	1	1	1	1	1	1	1	**IZS**	1	1	2	3	4	3	3	4	12	2.7	24
12	6	4	4	5	6	8	9	9	4	2	2	1	1	1	**IZS**	1	1	1	3	6	3	3	4	3	9	3.8	24
13	4	3	3	3	4	6	7	9	**C**	**C**	**C**	**C**	**C**	**C**	**C**	1	2	1	5	14	3	3	5	3	14	4.5	24
14	4	3	2	1	1	2	1	3	1	1	1	1	**IZS**	2	2	2	3	3	3	2	2	2	3	3	4	2.1	24
15	3	3	5	6	5	4	18	11	3	3	4	**IZS**	1	1	1	7	3	3	2	7	6	5	1	0	18	4.4	24
16	2	4	5	9	6	1	7	6	5	2	**IZS**	2	1	1	1	1	2	4	2	1	4	5	3	5	9	3.4	24
17	5	5	5	5	5	5	6	6	5	**IZS**	3	3	3	2	1	1	0	0	3	1	1	5	2	3	6	3.3	24
18	3	2	2	2	2	3	3	5	**IZS**	6	7	7	5	4	3	3	3	6	6	5	7	7	4	6	7	4.4	24
19	4	6	5	5	4	2	10	**IZS**	2	2	1	1	4	2	2	1	1	1	1	2	6	1	1	1	10	2.8	24
20	1	3	2	3	5	7	**IZS**	7	6	7	9	2	1	1	1	1	2	2	3	2	2	3	3	3	9	3.3	24
21	3	4	3	2	3	**IZS**	3	3	5	3	4	4	5	3	2	2	3	4	3	2	3	4	5	4	5	3.3	24
22	2	2	2	3	**IZS**	1	4	3	1	0	0	0	0	0	0	1	0	1	1	4	2	3	4	5	5	1.7	24
23	1	0	0	**IZS**	0	1	1	1	1	1	1	1	1	1	1	0	0	0	0	1	0	1	0	0	1	0.6	24
24	0	1	**IZS**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.0	24
25	0	**IZS**	0	0	0	1	2	1	0	1	0	0	1	0	0	1	1	1	0	0	0	0	0	0	2	0.4	24
26	**IZS**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	**IZS**	1	0.0	24
27	0	0	0	0	0	0	1	1	1	1	1	3	4	4	4	4	3	2	3	2	3	3	**IZS**	3	4	1.9	24
28	4	4	5	10	7	6	10	9	9	8	9	11	10	8	10	11	11	12	10	9	6	**IZS**	4	4	12	**8.1**	24
29	4	3	3	3	2	3	3	5	5	4	3	2	2	2	4	4	3	3	2	2	**IZS**	3	4	5	5	3.2	24
30	4	4	3	4	4	4	4	4	4	3	4	4	4	4	5	5	5	4	3	**IZS**	4	3	3	3	5	3.9	24
31	3	3	3	2	1	1	3	9	5	4	3	3	3	3	4	6	7	6	**IZS**	8	6	5	4	3	9	4.1	24
HOURLY MAX	7	10	12	14	17	23	18	21	16	8	9	11	10	8	10	11	11	12	10	14	7	26	15	14			
HOURLY AVG	2.5	3.1	3.2	3.4	3.0	3.7	4.9	4.9	3.4	2.5	2.5	2.3	2.2	1.8	1.8	2.1	2.3	2.6	2.4	2.9	2.7	3.9	3.2	3.1			

STATUS FLAG CODES

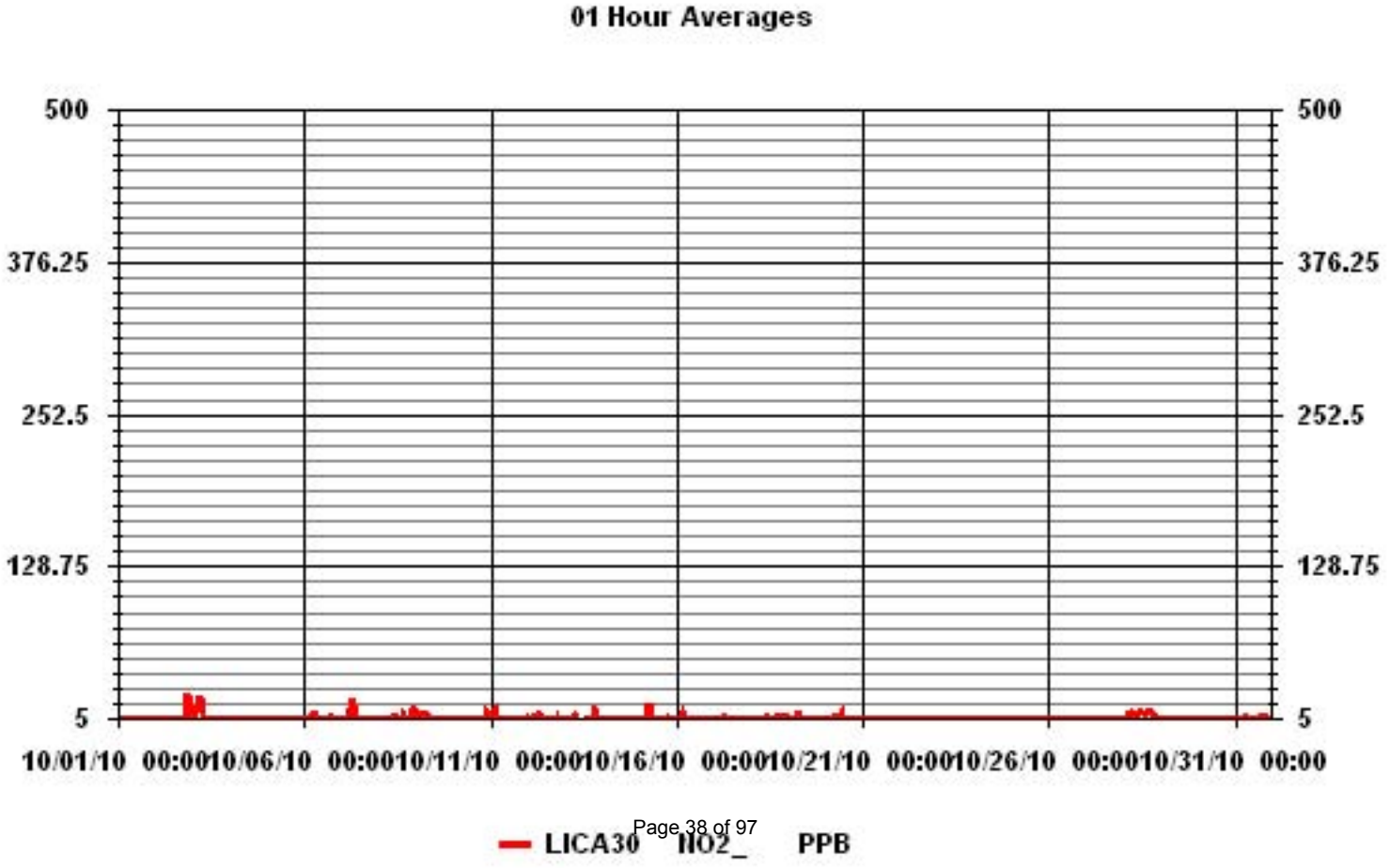
S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	- MAINTENANCE
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE



OBJECTIVE LIMIT: **ALBERTA ENVIRONMENT:** 1-HR 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:	558						
MAXIMUM 1-HR AVERAGE:	26	PPB	@ HOUR(S)	21	ON DAY(S)	2	
MAXIMUM 24-HR AVERAGE:	8.1	PPB			ON DAY(S)	28	
IZS CALIBRATION TIME:	32	HRS	OPERATIONAL TIME:		744	HRS	
MONTHLY CALIBRATION TIME:	7	HRS	AMD OPERATION UPTIME:		100.0	%	
STANDARD DEVIATION:	3.18		MONTHLY AVERAGE:		2.94	PPB	


01 Hour Averages
500
376.25
252.5
128.75
5
10/01/10 00:00
10/06/10 00:00
10/11/10 00:00
10/16/10 00:00
10/21/10 00:00
10/26/10 00:00
10/31/10 00:00
LICA30 NO2_ PPB

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *MASKWA*

OCTOBER 2010

NITROGEN DIOXIDE MAX instantaneous maximum in ppb

MST

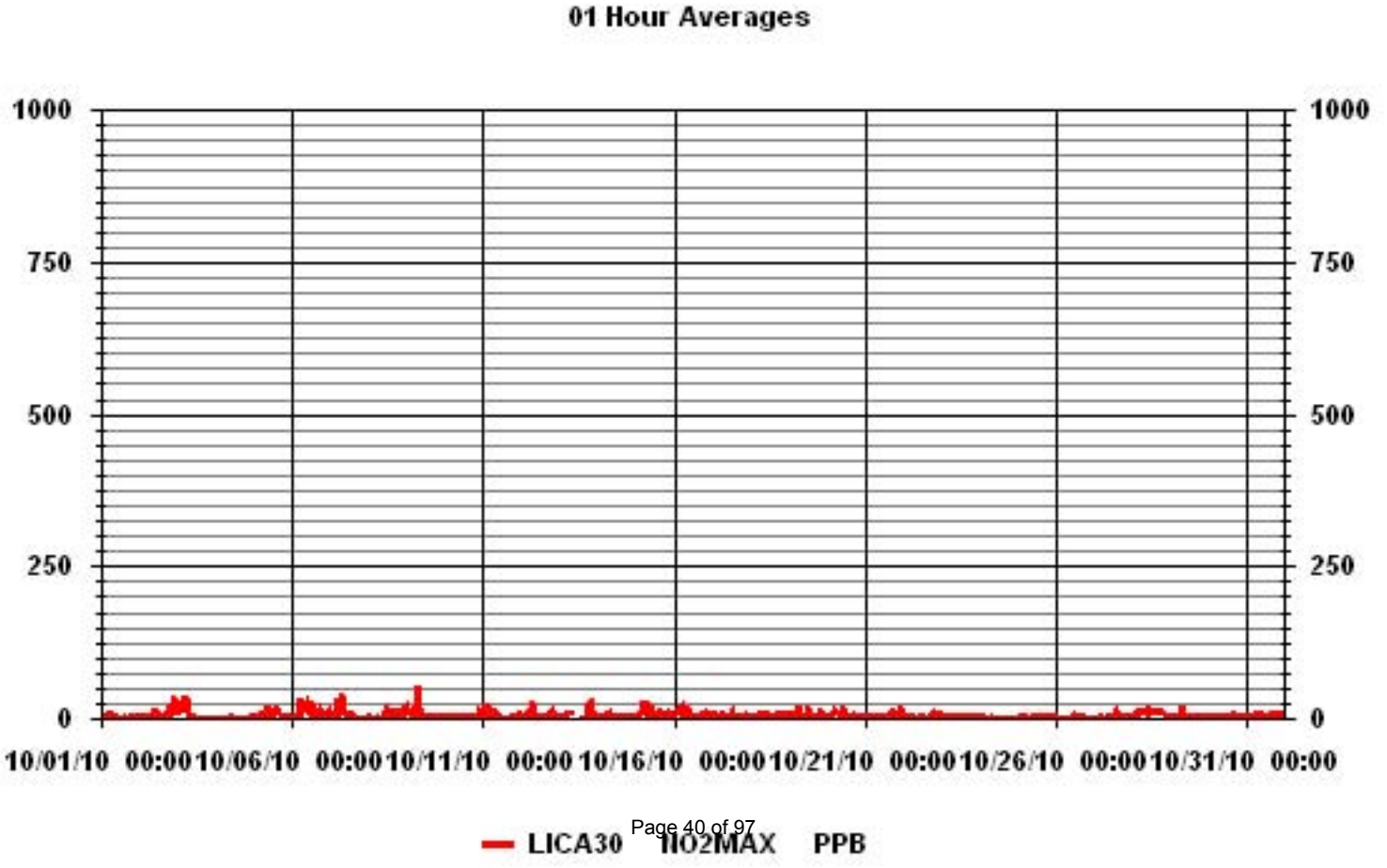
HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	2	2	**IZS**	4	2	13	6	7	2	2	2	1	0	0	1	1	1	2	2	1	1	1	1	1	13	2.4	24
2	1	**IZS**	4	4	3	4	5	5	4	7	17	4	4	5	3	6	5	10	14	3	17	33	32	9	33	8.7	24
3	**IZS**	13	15	29	24	35	26	8	4	6	1	1	0	0	0	0	0	0	0	0	0	0	0	**IZS**	35	7.4	24
4	0	0	0	0	0	0	0	0	0	0	9	0	0	0	1	0	0	0	0	0	0	0	**IZS**	1	9	0.5	24
5	1	3	4	6	5	12	4	9	12	19	3	1	2	9	18	5	13	3	4	5	3	**IZS**	2	2	19	6.3	24
6	2	3	3	4	4	26	26	21	20	25	15	6	29	3	16	5	7	13	6	4	**IZS**	5	10	14	29	11.6	24
7	6	4	4	7	5	26	26	41	20	11	4	8	7	7	2	1	1	1	2	**IZS**	0	0	0	0	41	8.0	24
8	3	0	0	0	0	0	1	1	0	1	7	14	8	9	3	3	17	10	**IZS**	2	14	16	15	19	19	6.2	24
9	10	12	12	6	6	22	9	**55**	21	7	2	2	2	2	2	2	2	**IZS**	5	6	2	4	4	4	**55**	8.7	24
10	4	2	2	3	5	5	4	4	4	4	4	3	3	2	3	3	**IZS**	4	3	3	7	17	15	3	17	4.7	24
11	6	14	24	17	3	3	6	17	4	2	2	2	1	2	1	**IZS**	1	2	3	4	5	4	4	6	24	5.8	24
12	7	5	5	6	8	12	15	30	8	3	2	2	2	6	**IZS**	2	3	2	11	14	4	4	5	5	30	7.0	24
13	5	4	4	4	6	8	9	10	**C**	**C**	**C**	**C**	**C**	**C**	**C**	2	3	2	21	24	7	5	7	6	24	7.5	24
14	5	4	3	2	2	6	2	7	2	2	2	2	**IZS**	3	3	3	4	4	3	3	2	3	4	4	7	3.3	24
15	3	4	7	9	9	24	25	24	6	4	15	**IZS**	2	7	4	17	8	7	7	9	10	11	5	2	25	9.5	24
16	5	9	10	14	18	2	14	7	22	4	**IZS**	2	2	2	2	2	4	7	2	2	9	6	5	6	22	6.8	24
17	7	7	7	6	5	6	7	8	6	**IZS**	4	4	10	3	3	3	1	1	5	2	3	7	3	5	10	4.9	24
18	5	3	3	4	4	9	7	8	**IZS**	8	9	8	7	5	5	5	5	9	8	9	8	8	7	8	9	6.6	24
19	6	7	7	6	7	5	17	**IZS**	5	3	3	4	20	4	3	2	2	2	2	8	17	1	2	2	20	5.9	24
20	3	4	3	4	14	11	**IZS**	10	8	12	19	7	2	2	2	2	7	3	4	3	3	4	5	5	19	6.0	24
21	5	6	5	3	4	**IZS**	4	4	6	5	5	5	6	5	4	4	7	10	6	2	4	9	16	14	16	6.0	24
22	3	5	3	4	**IZS**	2	7	6	2	1	1	1	3	4	1	3	1	5	3	10	7	7	6	9	10	4.1	24
23	4	0	0	**IZS**	1	1	5	3	1	1	1	2	2	2	1	1	1	1	1	1	1	1	1	1	5	1.4	24
24	1	1	**IZS**	1	0	0	0	3	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0.3	24
25	0	**IZS**	1	1	1	3	4	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	4	1.2	24
26	**IZS**	0	0	0	0	0	0	0	1	0	1	5	1	1	1	1	1	1	1	1	0	0	0	**IZS**	5	0.7	24
27	0	0	0	1	1	1	1	2	2	3	2	5	7	13	8	7	7	3	3	3	3	4	**IZS**	4	13	3.5	24
28	5	5	10	13	9	10	12	12	12	9	21	12	12	10	13	13	13	13	11	11	7	**IZS**	5	4	21	10.5	24
29	4	4	3	3	3	4	4	20	6	6	4	3	4	3	5	5	4	3	3	3	**IZS**	4	5	5	20	4.7	24
30	5	5	4	4	5	5	5	5	4	4	5	5	5	5	6	7	6	5	4	**IZS**	6	4	4	4	7	4.9	24
31	4	4	4	4	2	2	10	11	7	6	4	4	3	4	6	7	9	7	**IZS**	9	9	6	6	4	11	5.7	24
HOURLY MAX	10	14	24	29	24	35	26	55	22	25	21	14	29	13	18	17	17	13	21	24	17	33	32	19			
HOURLY AVG	3.9	4.5	5.1	5.6	5.2	8.6	8.7	11.3	6.6	5.4	5.7	3.9	5.0	4.0	4.1	3.8	4.5	4.4	4.7	4.9	5.2	5.7	5.9	5.1			

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:	627					
MAXIMUM INSTANTANEOUS VALUE:	55	PPB	@ HOUR(S)	7	ON DAY(S)	9
IZS CALIBRATION TIME:	32	HRS	OPERATIONAL TIME:		744	HRS
MONTHLY CALIBRATION TIME:	7	HRS				
STANDARD DEVIATION	6.08					


01 Hour Averages
1000
750
500
250
0
10/01/10 00:00
10/06/10 00:00
10/11/10 00:00
10/16/10 00:00
10/21/10 00:00
10/26/10 00:00
10/31/10 00:00
LICA30 TIO2MAX PPB

LICA30
NO2_ / WDR Joint Frequency Distribution (Percent)

October 2010

Distribution By % Of Samples

Logger Id : 30
Site Name : LICA30
Parameter : NO2_
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
< 50	6.24	3.97	7.65	7.51	4.11	3.26	3.82	5.39	5.53	13.47	11.77	5.53	10.49	6.66	1.56	2.97	100.00
< 110	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
< 210	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
>= 210	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
Totals	6.24	3.97	7.65	7.51	4.11	3.26	3.82	5.39	5.53	13.47	11.77	5.53	10.49	6.66	1.56	2.97	

Calm : .00 %

Total # Operational Hours : 705

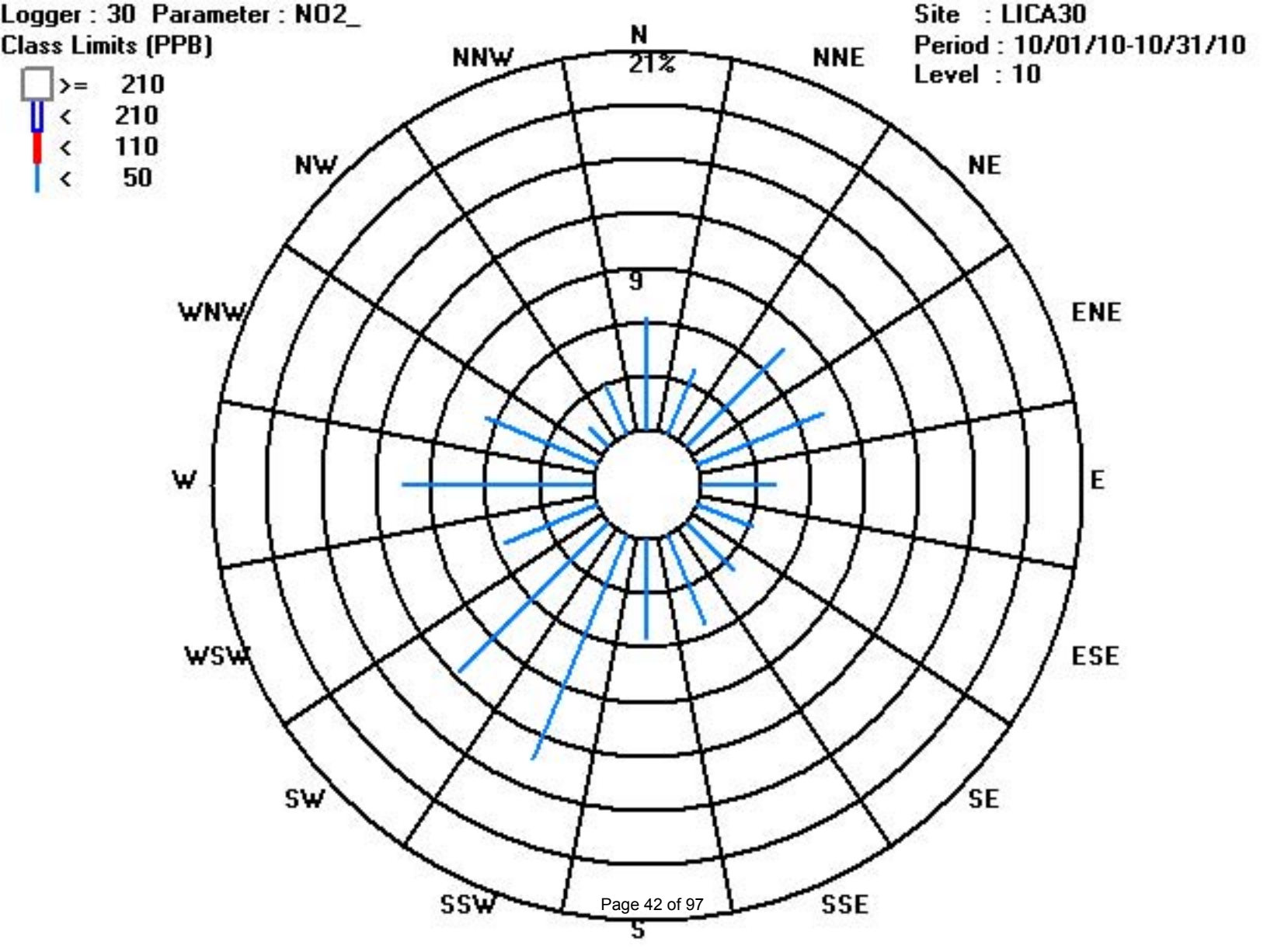
Distribution By Samples

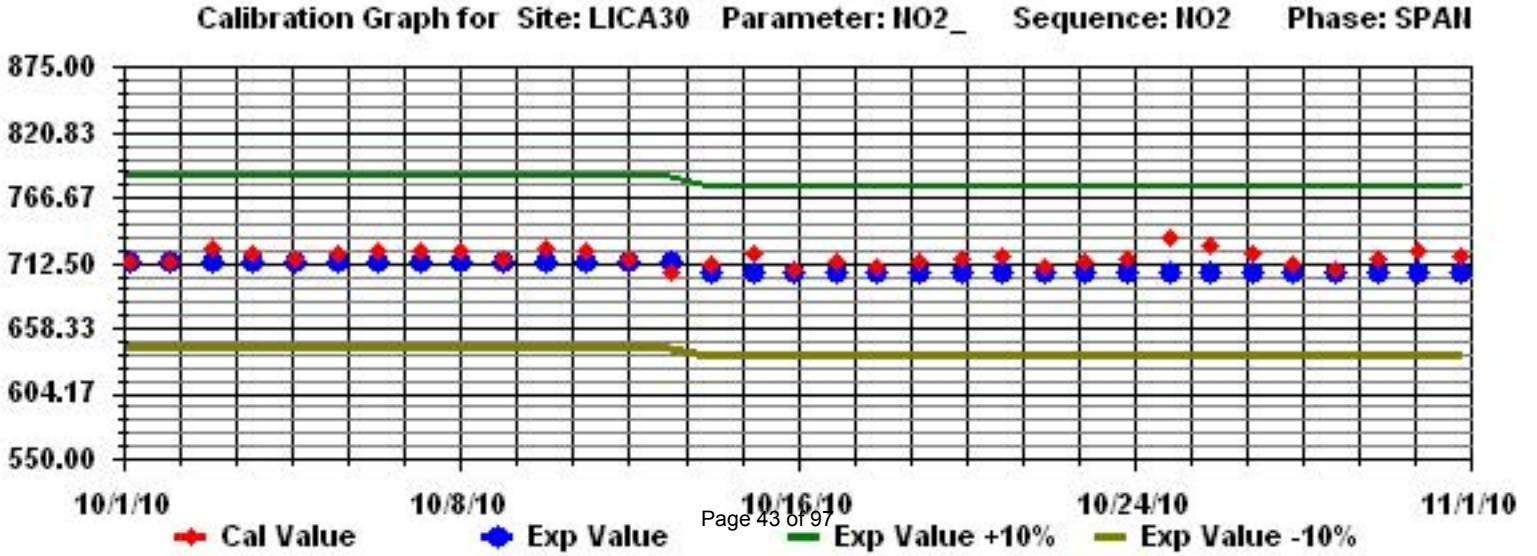
Direction

Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 50	44	28	54	53	29	23	27	38	39	95	83	39	74	47	11	21	705
< 110																	
< 210																	
>= 210																	
Totals	44	28	54	53	29	23	27	38	39	95	83	39	74	47	11	21	

Calm : .00 %

Total # Operational Hours : 705


Logger : 30 Parameter : NO2_
Class Limits (PPB)
>= 210
< 210
< 110
< 50
Site : LICA30
Period : 10/01/10-10/31/10
Level : 10
N
21%
NNE
NE
ENE
E
ESE
SE
SSE
S
SSW
SW
WSW
W
WNW
NW
NNW
9


Calibration Graph for Site: LICA30 Parameter: NO2_ Sequence: NO2 Phase: SPAN
875.00
820.83
766.67
712.50
658.33
604.17
550.00
10/1/10
10/8/10
10/16/10
10/24/10
11/1/10
Cal Value
Exp Value
Exp Value +10%
Exp Value -10%

Nitric Oxide

LAKELAND INDUSTRY & COMMUNITY ASSCOICATION - MASKWA

OCTOBER 2010

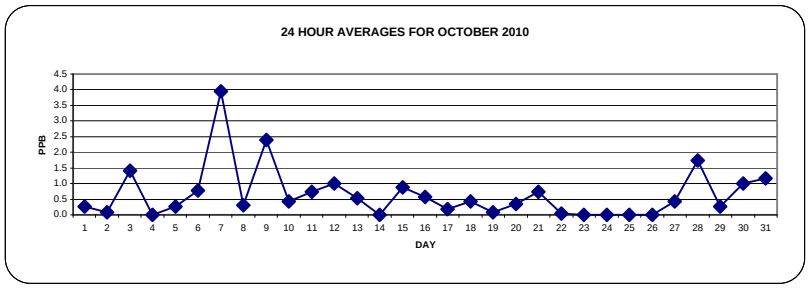
NITRIC OXIDE hourly averages in ppb

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	**IZS**	0	0	4	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0.3	24
2	0	**IZS**	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0.1	24
3	**IZS**	0	0	2	2	21	4	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**IZS**	21	1.4	24
4	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
5	0	0	0	0	0	1	1	1	1	1	0	0	0	0	1	0	0	0	0	0	0	**IZS**	0	0	1	0.3	24
6	0	0	0	0	0	2	2	4	3	3	2	1	1	0	0	0	0	0	0	0	**IZS**	0	0	0	4	0.8	24
7	0	0	0	0	0	14	11	**47**	16	3	0	0	0	0	0	0	0	0	0	**IZS**	0	0	0	0	**47**	**4.0**	24
8	0	0	0	0	0	0	0	0	0	0	0	2	0	1	0	0	1	0	**IZS**	0	0	1	1	1	2	0.3	24
9	1	1	1	0	1	4	1	28	16	1	1	0	0	0	0	0	0	**IZS**	0	0	0	0	0	0	28	2.4	24
10	0	0	0	1	1	1	0	1	1	2	1	1	1	0	0	0	**IZS**	0	0	0	0	0	0	0	2	0.4	24
11	0	1	2	0	1	1	1	2	1	1	1	1	0	0	0	**IZS**	0	0	1	0	1	1	1	1	2	0.7	24
12	1	1	1	1	1	2	1	3	2	1	1	1	0	0	**IZS**	1	0	0	1	1	1	1	1	1	3	1.0	24
13	1	1	1	1	1	1	1	2	**C**	**C**	**C**	**C**	**C**	**C**	**C**	0	0	0	0	0	0	0	0	0	2	0.5	24
14	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
15	0	0	0	0	0	0	4	1	0	0	2	**IZS**	1	2	1	4	1	1	0	1	1	1	0	0	4	0.9	24
16	1	1	0	2	0	1	1	1	4	2	**IZS**	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0.6	24
17	0	0	0	0	0	0	0	0	1	**IZS**	1	1	1	0	0	0	0	0	0	0	0	0	0	0	1	0.2	24
18	0	0	0	0	0	0	0	0	**IZS**	2	2	3	2	1	0	0	0	0	0	0	0	0	0	0	3	0.4	24
19	0	0	0	0	0	0	1	**IZS**	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0.1	24
20	0	0	0	0	0	0	**IZS**	0	1	3	4	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0.3	24
21	0	0	0	0	0	**IZS**	1	1	1	2	2	2	2	1	1	0	0	0	0	1	0	1	1	1	2	0.7	24
22	0	0	1	0	**IZS**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.0	24
23	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
24	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
25	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
26	**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
27	0	0	0	0	0	0	0	0	0	0	0	1	3	3	2	1	0	0	0	0	0	0	**IZS**	0	3	0.4	24
28	0	0	0	0	0	0	1	1	3	2	5	9	6	3	5	4	1	0	0	0	0	**IZS**	0	0	9	1.7	24
29	0	0	0	0	0	0	0	1	0	1	1	0	1	1	1	0	0	0	0	0	**IZS**	0	0	0	1	0.3	24
30	0	0	0	0	0	0	0	0	1	1	2	4	5	4	4	2	0	0	0	**IZS**	0	0	0	0	5	1.0	24
31	0	0	0	0	0	1	2	5	6	5	1	2	1	1	2	1	0	0	**IZS**	0	0	0	0	0	6	1.2	24
HOURLY MAX	1	1	2	2	2	21	11	47	16	5	5	9	6	4	5	4	1	1	1	1	1	1	1	1			
HOURLY AVG	0.1	0.2	0.2	0.2	0.2	1.8	1.1	3.3	2.0	1.1	0.9	1.0	0.9	0.6	0.6	0.4	0.1	0.0	0.1	0.1	0.1	0.2	0.1	0.1			

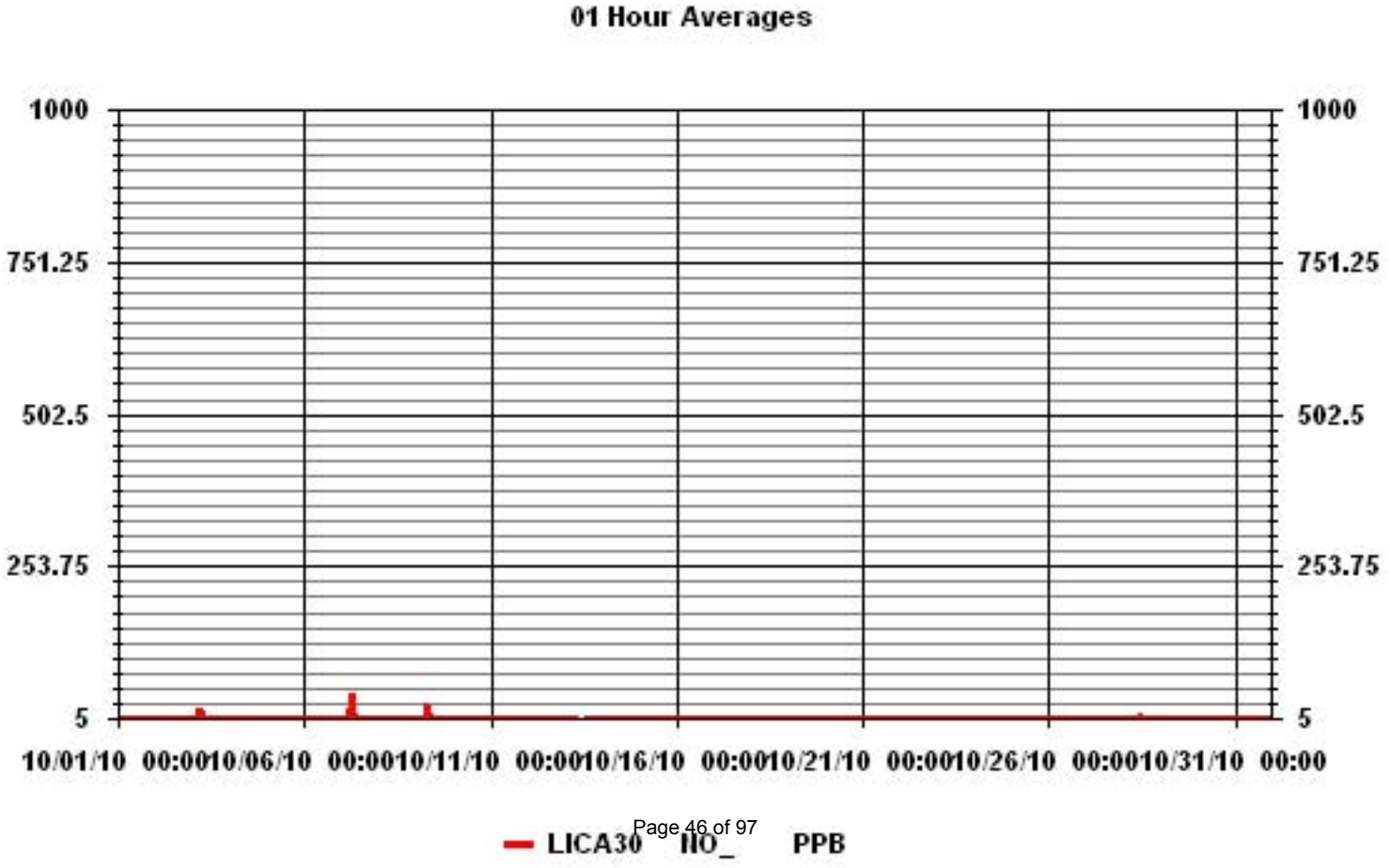
STATUS FLAG CODES

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



MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:	186						
MAXIMUM 1-HR AVERAGE:	47	PPB	@ HOUR(S)	7	ON DAY(S)	7	
MAXIMUM 24-HR AVERAGE:	4.0	PPB			ON DAY(S)	7	
IZS CALIBRATION TIME:	32	HRS	OPERATIONAL TIME:		744	HRS	
MONTHLY CALIBRATION TIME:	7	HRS	AMD OPERATION UPTIME:		100.0	%	
STANDARD DEVIATION:	2.60		MONTHLY AVERAGE:		0.65	PPB	


01 Hour Averages
1000
751.25
502.5
253.75
5
10/01/10 00:00
10/06/10 00:00
10/11/10 00:00
10/16/10 00:00
10/21/10 00:00
10/26/10 00:00
10/31/10 00:00
LICA30 NO_ PPB

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *MASKWA*

OCTOBER 2010

NITRIC OXIDE MAX instantaneous maximum in ppb

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	0	0	**IZS**	0	0	56	10	19	2	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	56	3.9	24
2	0	**IZS**	0	0	0	0	0	1	1	7	26	2	2	2	0	1	0	0	9	0	0	3	2	0	26	2.4	24
3	**IZS**	2	2	43	6	98	63	1	2	3	0	0	0	0	0	0	0	0	0	0	0	0	0	**IZS**	98	10.0	24
4	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	**IZS**	1	2	0.1	24
5	0	1	1	3	1	10	5	6	9	3	2	1	1	12	12	11	9	1	1	0	0	**IZS**	0	0	12	3.9	24
6	0	0	0	0	2	22	28	30	37	42	13	5	17	1	14	2	2	0	0	0	**IZS**	0	1	2	42	9.5	24
7	0	0	0	3	0	77	60	134	27	7	1	3	2	2	0	0	0	0	0	**IZS**	0	0	0	0	134	13.7	24
8	0	0	0	0	0	0	0	0	0	0	2	7	1	5	0	0	5	0	**IZS**	1	1	1	1	1	7	1.1	24
9	1	1	1	1	5	63	4	**200**	42	8	1	1	1	1	1	1	1	**IZS**	1	1	1	1	1	1	**200**	14.7	24
10	1	1	1	1	1	1	1	2	2	2	2	1	1	1	1	1	**IZS**	1	1	1	1	2	1	1	2	1.2	24
11	1	2	8	1	1	2	4	23	4	1	1	1	1	1	1	**IZS**	1	1	1	1	1	1	1	1	23	2.6	24
12	1	1	1	1	1	3	4	44	3	2	2	2	1	9	**IZS**	2	1	2	2	2	1	1	1	1	44	3.8	24
13	1	1	1	1	2	2	3	3	**C**	**C**	**C**	**C**	**C**	**C**	**C**	1	0	0	1	0	0	0	0	0	3	0.9	24
14	0	0	0	0	0	3	0	0	0	0	0	0	**IZS**	0	0	0	0	0	0	0	0	0	0	0	3	0.1	24
15	0	0	0	0	0	9	9	5	0	1	10	**IZS**	2	6	3	13	4	1	1	2	3	1	1	1	13	3.1	24
16	1	1	1	4	1	3	2	12	36	4	**IZS**	2	0	1	0	0	0	0	0	0	0	0	0	0	36	3.0	24
17	0	0	1	0	0	1	3	3	2	**IZS**	2	2	14	1	1	2	0	0	0	0	0	0	0	0	14	1.4	24
18	0	0	0	0	0	5	1	1	**IZS**	3	4	6	3	2	2	1	0	0	0	0	0	0	0	0	6	1.2	24
19	0	0	0	0	1	0	4	**IZS**	3	0	1	2	11	1	0	0	0	0	0	0	0	0	0	0	11	1.0	24
20	0	0	0	0	2	1	**IZS**	1	3	6	9	3	0	0	0	0	1	1	0	0	0	0	0	0	9	1.2	24
21	0	0	0	0	0	**IZS**	2	1	2	2	4	4	4	2	2	1	1	1	1	1	1	2	4	4	4	1.7	24
22	1	1	1	1	**IZS**	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	0.3	24
23	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
24	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
25	0	**IZS**	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.0	24
26	**IZS**	0	0	0	0	0	0	0	0	0	0	14	0	0	1	1	0	0	0	0	0	0	0	**IZS**	14	0.7	24
27	0	0	0	0	0	1	0	1	1	1	2	3	6	14	5	3	0	0	0	0	0	0	**IZS**	1	14	1.7	24
28	0	0	1	1	1	2	4	9	28	3	28	13	10	6	10	6	3	1	0	1	0	**IZS**	0	0	28	5.5	24
29	0	1	1	0	0	1	2	33	1	3	2	1	1	3	3	1	1	0	0	0	**IZS**	1	1	1	33	2.5	24
30	0	1	0	0	0	2	0	1	1	2	4	5	6	6	7	4	1	0	0	**IZS**	1	1	0	0	7	1.8	24
31	0	0	0	0	0	7	7	8	11	10	2	3	2	2	3	2	1	0	**IZS**	1	0	1	0	0	11	2.6	24
HOURLY MAX	1	2	8	43	6	98	63	200	42	42	28	14	17	14	14	13	9	2	9	2	3	3	4	4			
HOURLY AVG	0.2	0.4	0.7	2.0	0.8	12.3	7.2	18.0	7.5	3.8	4.2	2.8	3.0	2.6	2.3	1.8	1.0	0.3	0.6	0.4	0.3	0.5	0.5	0.6			

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

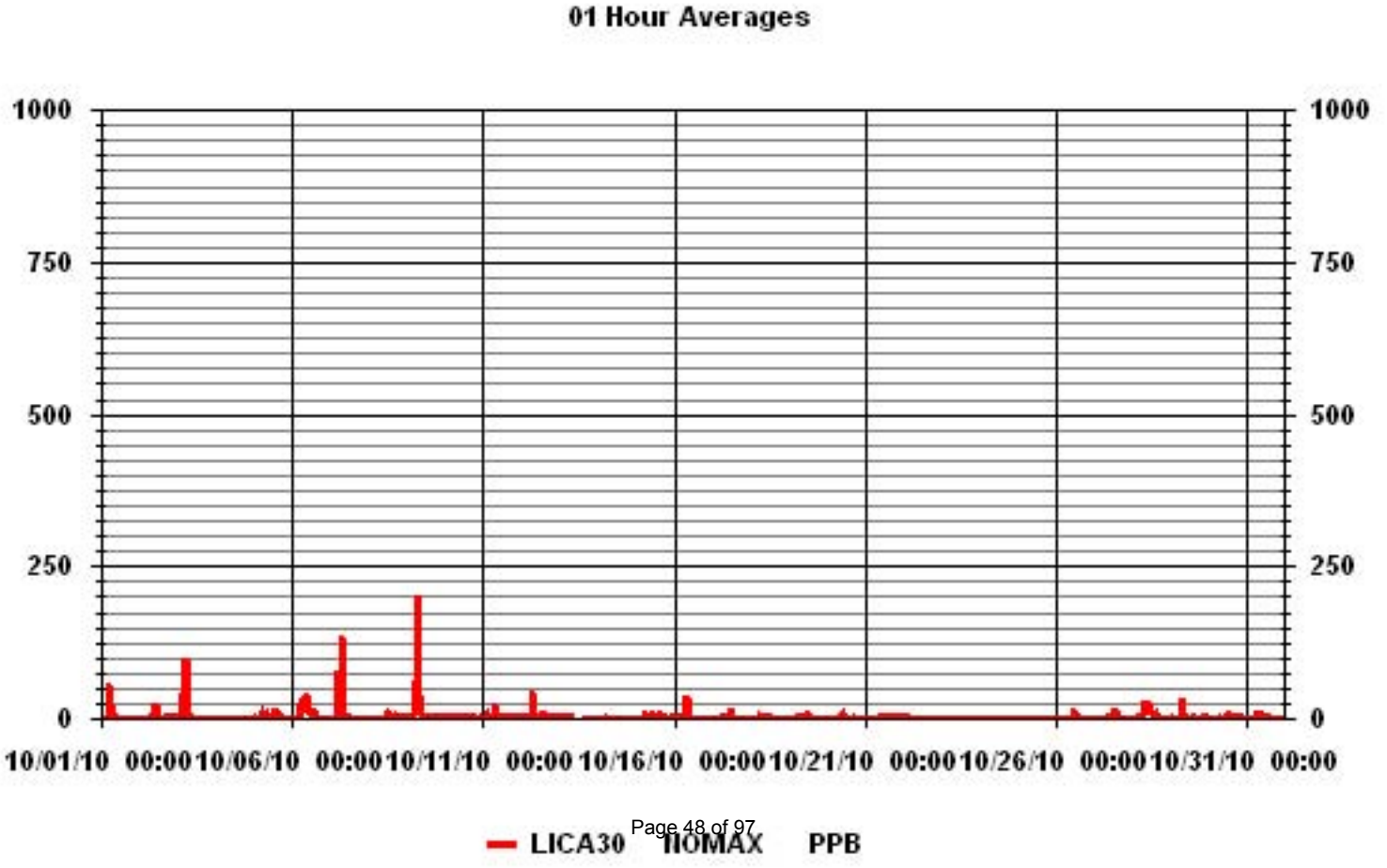
NUMBER OF NON-ZERO READINGS: 353

MAXIMUM INSTANTANEOUS VALUE: 200 PPB @ HOUR(S) 7 ON DAY(S) 9

IZS CALIBRATION TIME: 32 HRS OPERATIONAL TIME: 744 HRS

MONTHLY CALIBRATION TIME: 7 HRS

STANDARD DEVIATION 12.15


01 Hour Averages
1000
750
500
250
0
10/01/10 00:00
10/06/10 00:00
10/11/10 00:00
10/16/10 00:00
10/21/10 00:00
10/26/10 00:00
10/31/10 00:00
LICA30 HOMAX PPB

LICA30
NO_ / WDR Joint Frequency Distribution (Percent)

October 2010

Distribution By % Of Samples

Logger Id : 30
Site Name : LICA30
Parameter : NO_
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
< 50	6.24	3.97	7.65	7.51	4.11	3.26	3.82	5.39	5.53	13.47	11.77	5.53	10.49	6.66	1.56	2.97	100.00
< 110	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
< 210	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
>= 210	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
Totals	6.24	3.97	7.65	7.51	4.11	3.26	3.82	5.39	5.53	13.47	11.77	5.53	10.49	6.66	1.56	2.97	

Calm : .00 %

Total # Operational Hours : 705

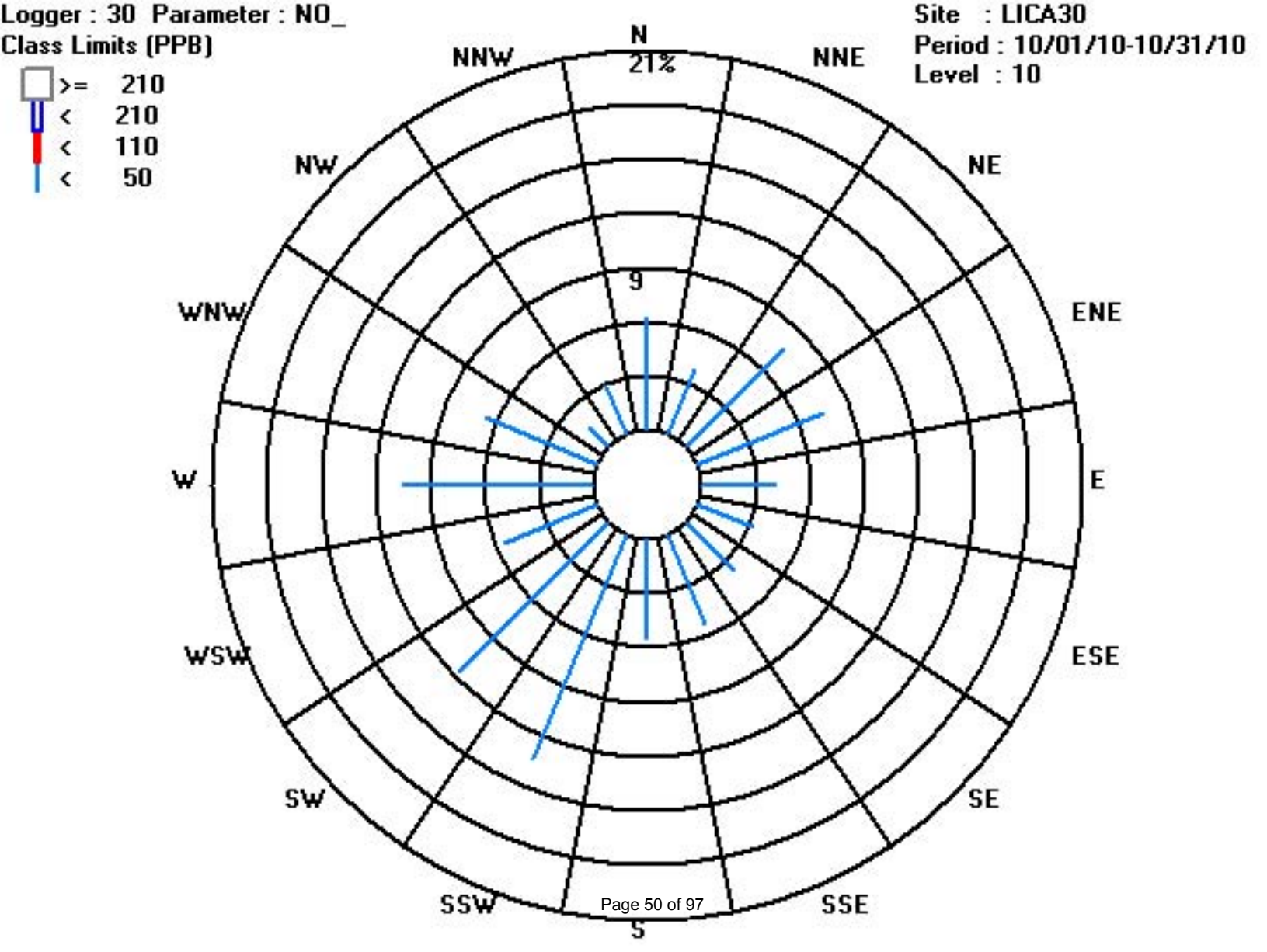
Distribution By Samples

Direction

Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 50	44	28	54	53	29	23	27	38	39	95	83	39	74	47	11	21	705
< 110																	
< 210																	
>= 210																	
Totals	44	28	54	53	29	23	27	38	39	95	83	39	74	47	11	21	

Calm : .00 %

Total # Operational Hours : 705


Logger : 30 Parameter : NO_
Class Limits (PPB)
>= 210
< 210
< 110
< 50
Site : LICA30
Period : 10/01/10-10/31/10
Level : 10
N
21%
NNE
NE
ENE
E
ESE
SE
SSE
S
SSW
SW
WSW
W
WNW
NW
NNW
9

Oxides of Nitrogen

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - MASKWA

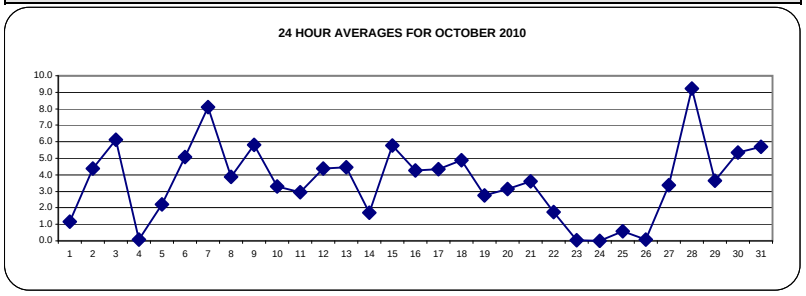
OCTOBER 2010

OXIDES OF NITROGEN hourly averages in ppb

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	1	1	**IZS**	2	1	6	2	3	2	2	1	1	0	0	0	0	0	1	1	1	0	0	1	1	6	1.2	24
2	1	**IZS**	2	2	2	2	3	3	2	2	4	2	3	3	2	3	2	5	4	2	6	26	15	5	26	4.4	24
3	**IZS**	7	11	16	20	45	20	5	4	5	1	1	0	0	0	0	0	0	0	0	0	0	0	**IZS**	45	6.1	24
4	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	**IZS**	0	2	0.1	24
5	0	2	2	3	4	4	4	4	3	3	2	1	2	1	3	2	2	0	2	2	1	**IZS**	2	2	4	2.2	24
6	2	2	2	4	3	10	11	15	10	8	6	4	4	2	3	3	5	7	5	2	**IZS**	2	3	4	15	5.1	24
7	3	2	2	3	3	25	26	**67**	31	11	2	4	4	3	0	0	0	0	0	**IZS**	0	0	0	0	**67**	8.1	24
8	1	0	0	0	0	0	0	0	0	0	3	12	5	8	2	1	10	6	**IZS**	1	4	11	11	14	14	3.9	24
9	7	8	9	4	4	7	4	37	24	2	2	2	2	1	2	2	1	**IZS**	2	3	2	3	3	3	37	5.8	24
10	3	2	2	2	4	3	3	4	4	5	4	3	3	2	2	3	**IZS**	3	2	1	2	10	8	1	10	3.3	24
11	3	11	13	4	1	1	2	4	2	1	1	1	1	1	1	**IZS**	1	1	2	3	4	3	3	4	13	3.0	24
12	6	4	5	6	7	10	10	11	5	3	2	1	2	1	**IZS**	2	1	1	3	7	3	3	5	3	11	4.4	24
13	4	4	4	4	5	6	8	11	**C**	**C**	**C**	**C**	**C**	**C**	**C**	1	1	0	4	14	2	2	4	2	14	4.5	24
14	3	2	1	1	0	1	0	2	0	0	0	0	**IZS**	2	3	3	3	3	3	2	2	2	2	4	4	1.7	24
15	3	3	5	6	5	5	22	13	3	3	7	**IZS**	2	3	3	12	5	5	3	8	8	6	2	1	22	5.8	24
16	3	5	6	11	7	2	8	8	10	5	**IZS**	3	1	1	1	1	2	4	2	1	4	5	3	5	11	4.3	24
17	5	5	5	5	5	5	7	7	6	**IZS**	6	6	6	4	3	2	1	2	3	2	2	6	3	4	7	4.3	24
18	4	3	3	3	3	4	5	7	**IZS**	8	8	9	7	5	3	2	2	5	5	5	6	6	4	5	9	4.9	24
19	3	5	4	4	3	1	10	**IZS**	3	2	2	1	6	2	2	1	1	1	1	2	6	1	1	1	10	2.7	24
20	1	3	2	3	5	8	**IZS**	7	6	10	13	2	0	0	0	0	1	1	2	1	1	2	2	2	13	3.1	24
21	2	3	2	1	2	**IZS**	3	3	5	4	6	6	7	4	3	2	3	4	3	2	3	5	6	4	7	3.6	24
22	2	2	2	2	**IZS**	2	4	3	1	0	0	0	0	0	0	0	0	1	1	4	2	4	4	6	6	1.7	24
23	0	0	0	**IZS**	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.0	24
24	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
25	0	**IZS**	1	0	0	1	3	1	0	1	0	0	1	1	1	1	1	1	0	0	0	0	0	0	3	0.6	24
26	**IZS**	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	**IZS**	1	0.1	24
27	0	0	1	1	1	1	2	2	2	3	3	6	9	9	7	7	4	3	4	3	4	4	**IZS**	2	9	3.4	24
28	3	3	5	10	6	5	10	9	11	9	13	19	15	11	15	14	12	11	9	9	5	**IZS**	4	4	19	**9.2**	24
29	4	4	3	3	3	3	4	6	5	5	4	3	3	3	5	4	3	3	2	2	**IZS**	3	4	5	6	3.7	24
30	4	4	4	4	4	5	4	5	5	5	7	8	10	9	9	8	6	5	3	**IZS**	5	3	3	3	10	5.3	24
31	3	3	3	2	1	2	5	14	12	10	4	6	4	5	7	8	8	7	**IZS**	9	6	5	4	3	14	5.7	24
HOURLY MAX	7	11	13	16	20	45	26	67	31	11	13	19	15	11	15	14	12	11	9	14	8	26	15	14			
HOURLY AVG	2.4	3.0	3.4	3.5	3.3	5.5	6.0	8.4	5.4	3.7	3.6	3.5	3.3	2.7	2.7	2.7	2.5	2.7	2.3	3.0	2.7	3.9	3.3	3.0			

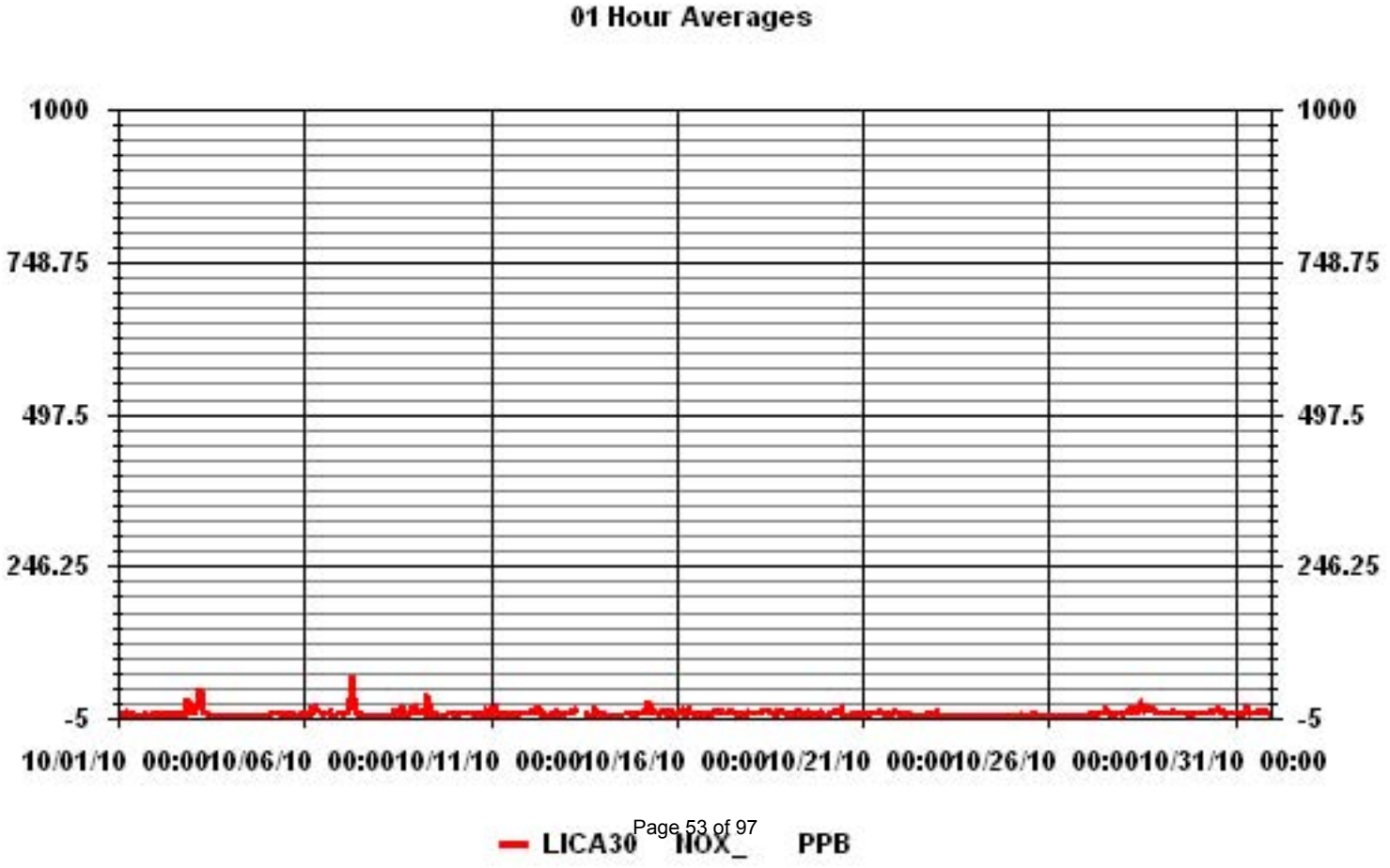
STATUS FLAG CODES

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



MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:	547						
MAXIMUM 1-HR AVERAGE:	67	PPB	@ HOUR(S)	7	ON DAY(S)	7	
MAXIMUM 24-HR AVERAGE:	9.2	PPB			ON DAY(S)	28	
IZS CALIBRATION TIME:	32	HRS	OPERATIONAL TIME:		744	HRS	
MONTHLY CALIBRATION TIME:	7	HRS	AMD OPERATION UPTIME:		100.0	%	
STANDARD DEVIATION:	5.00		MONTHLY AVERAGE:		3.61	PPB	


01 Hour Averages
1000
748.75
497.5
246.25
-5
10/01/10 00:00
10/06/10 00:00
10/11/10 00:00
10/16/10 00:00
10/21/10 00:00
10/26/10 00:00
10/31/10 00:00
LICA30 NOX_ PPB

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *MASKWA*

OCTOBER 2010

OXIDES OF NITROGEN MAX instantaneous maximum in ppb

MST

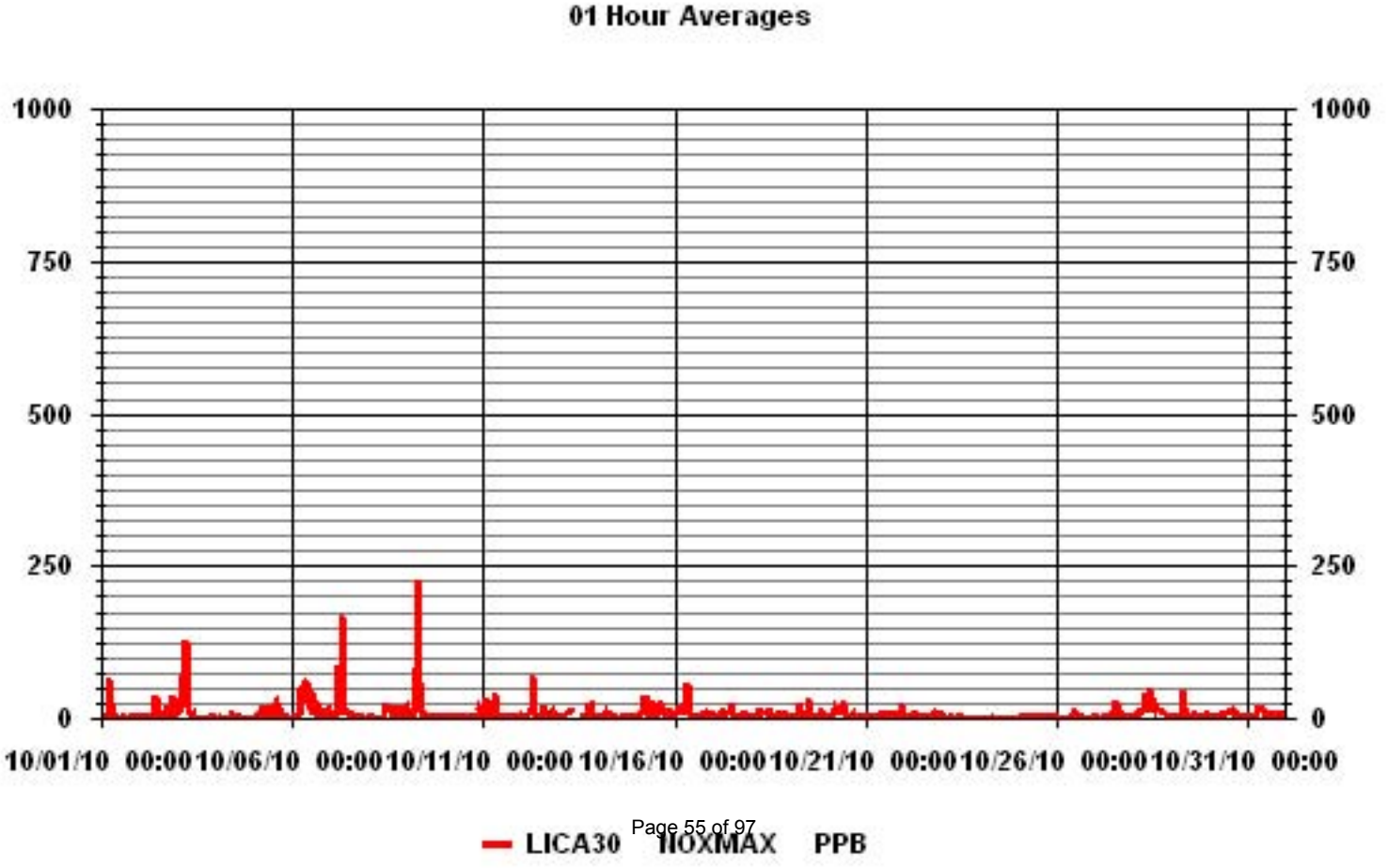
HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	2	2	**IZS**	5	3	64	16	25	4	3	3	2	1	1	1	1	1	2	1	1	1	1	1	1	64	6.2	24
2	2	**IZS**	3	3	3	3	4	4	4	14	37	4	6	6	3	7	5	10	22	3	17	35	34	8	37	10.3	24
3	**IZS**	14	17	69	31	129	83	10	6	9	2	2	1	0	0	0	0	0	0	0	1	1	1	**IZS**	129	17.1	24
4	0	0	1	1	0	0	0	0	0	1	10	0	0	1	1	1	1	0	0	0	0	0	**IZS**	2	10	0.8	24
5	1	3	4	10	6	22	9	14	17	22	4	3	3	22	26	14	20	4	5	6	3	**IZS**	2	3	26	9.7	24
6	2	3	4	4	7	47	52	39	44	61	29	12	45	5	31	8	9	14	6	4	**IZS**	5	12	15	61	19.9	24
7	5	3	3	10	5	85	79	169	46	17	5	11	9	8	1	1	1	1	1	**IZS**	1	1	0	0	169	20.1	24
8	4	1	0	1	1	0	2	0	0	1	10	22	9	15	4	5	22	10	**IZS**	2	14	17	15	20	22	7.6	24
9	10	13	12	7	10	84	13	**226**	62	14	2	3	2	2	2	2	2	**IZS**	6	7	2	4	4	4	**226**	21.4	24
10	3	2	2	3	6	5	4	5	5	5	5	4	3	3	4	4	**IZS**	4	4	3	7	19	15	3	19	5.1	24
11	6	15	32	17	3	4	9	40	8	2	2	2	1	2	2	**IZS**	2	2	3	4	5	4	5	7	40	7.7	24
12	7	5	5	6	8	15	17	69	9	4	4	3	3	15	**IZS**	4	3	2	12	15	4	5	5	5	69	9.8	24
13	5	4	4	5	8	8	11	13	**C**	**C**	**C**	**C**	**C**	**C**	**C**	3	3	1	21	23	7	4	6	5	23	7.7	24
14	4	3	2	1	1	8	1	6	1	1	1	1	**IZS**	3	4	3	4	4	3	3	2	3	3	4	8	2.9	24
15	4	4	7	9	10	33	34	30	7	5	26	**IZS**	4	13	8	30	11	9	8	12	12	12	6	3	34	12.9	24
16	6	10	11	17	19	4	16	12	56	9	**IZS**	4	2	3	2	2	4	7	2	2	9	6	5	6	56	9.3	24
17	7	7	8	6	5	8	10	10	7	**IZS**	8	8	25	5	5	6	2	2	6	3	4	8	5	5	25	7.0	24
18	6	4	4	5	5	15	8	11	**IZS**	10	12	13	9	6	6	5	4	8	7	8	7	7	6	7	15	7.5	24
19	5	6	5	5	7	5	20	**IZS**	8	4	3	7	31	5	4	3	2	2	2	8	17	1	2	2	31	6.7	24
20	3	4	3	4	17	12	**IZS**	11	10	18	27	9	2	1	2	1	7	2	3	2	2	3	4	4	27	6.6	24
21	4	5	4	3	3	**IZS**	4	4	7	6	7	8	8	7	6	4	8	10	7	3	4	10	19	17	19	6.9	24
22	3	5	3	4	**IZS**	2	8	7	2	1	2	2	4	5	1	3	1	6	4	11	8	8	7	9	11	4.6	24
23	4	1	0	**IZS**	0	0	4	2	1	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	4	0.7	24
24	0	0	**IZS**	1	0	0	0	3	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0.3	24
25	0	**IZS**	1	1	2	3	5	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	5	1.3	24
26	**IZS**	0	0	0	0	0	0	0	1	1	1	15	1	1	2	2	1	1	2	0	0	0	0	**IZS**	15	1.3	24
27	1	1	1	1	2	2	2	4	4	4	5	9	14	26	14	11	8	4	5	4	5	5	**IZS**	3	26	5.9	24
28	4	4	10	12	8	11	12	20	39	11	48	23	21	15	23	17	14	13	11	11	6	**IZS**	5	5	48	14.9	24
29	5	4	4	3	4	5	6	47	6	10	6	4	5	6	8	6	4	4	3	3	**IZS**	4	6	6	47	6.9	24
30	5	5	4	5	5	6	5	6	6	6	9	10	11	11	14	10	7	6	4	**IZS**	6	5	4	4	14	6.7	24
31	4	4	4	3	2	9	18	19	17	16	6	7	6	6	9	9	10	8	**IZS**	10	9	6	6	5	19	8.4	24
HOURLY MAX	10	15	32	69	31	129	83	226	62	61	48	23	45	26	31	30	22	14	22	23	17	35	34	20			
HOURLY AVG	3.9	4.6	5.4	7.4	6.0	19.6	15.1	26.9	13.1	8.8	9.5	6.6	7.9	6.5	6.3	5.4	5.2	4.6	5.1	5.1	5.3	6.0	6.2	5.3			

STATUS FLAG CODES

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

MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:	632					
MAXIMUM INSTANTANEOUS VALUE:	226	PPB	@ HOUR(S)	7	ON DAY(S)	9
IZS CALIBRATION TIME:	32	HRS	OPERATIONAL TIME:		744	HRS
MONTHLY CALIBRATION TIME:	7	HRS				
STANDARD DEVIATION	15.65					


01 Hour Averages
1000
750
500
250
0
10/01/10 00:00
10/06/10 00:00
10/11/10 00:00
10/16/10 00:00
10/21/10 00:00
10/26/10 00:00
10/31/10 00:00
LICA30 NOXMAX PPB

LICA30
NOX_ / WDR Joint Frequency Distribution (Percent)

October 2010

Distribution By % Of Samples

Logger Id : 30
Site Name : LICA30
Parameter : NOX_
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
< 50	6.24	3.97	7.65	7.51	4.11	3.26	3.82	5.39	5.53	13.47	11.77	5.53	10.49	6.52	1.56	2.97	99.85
< 110	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.14	.00	.00	.14
< 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	6.24	3.97	7.65	7.51	4.11	3.26	3.82	5.39	5.53	13.47	11.77	5.53	10.49	6.66	1.56	2.97	

Calm : .00 %

Total # Operational Hours : 705

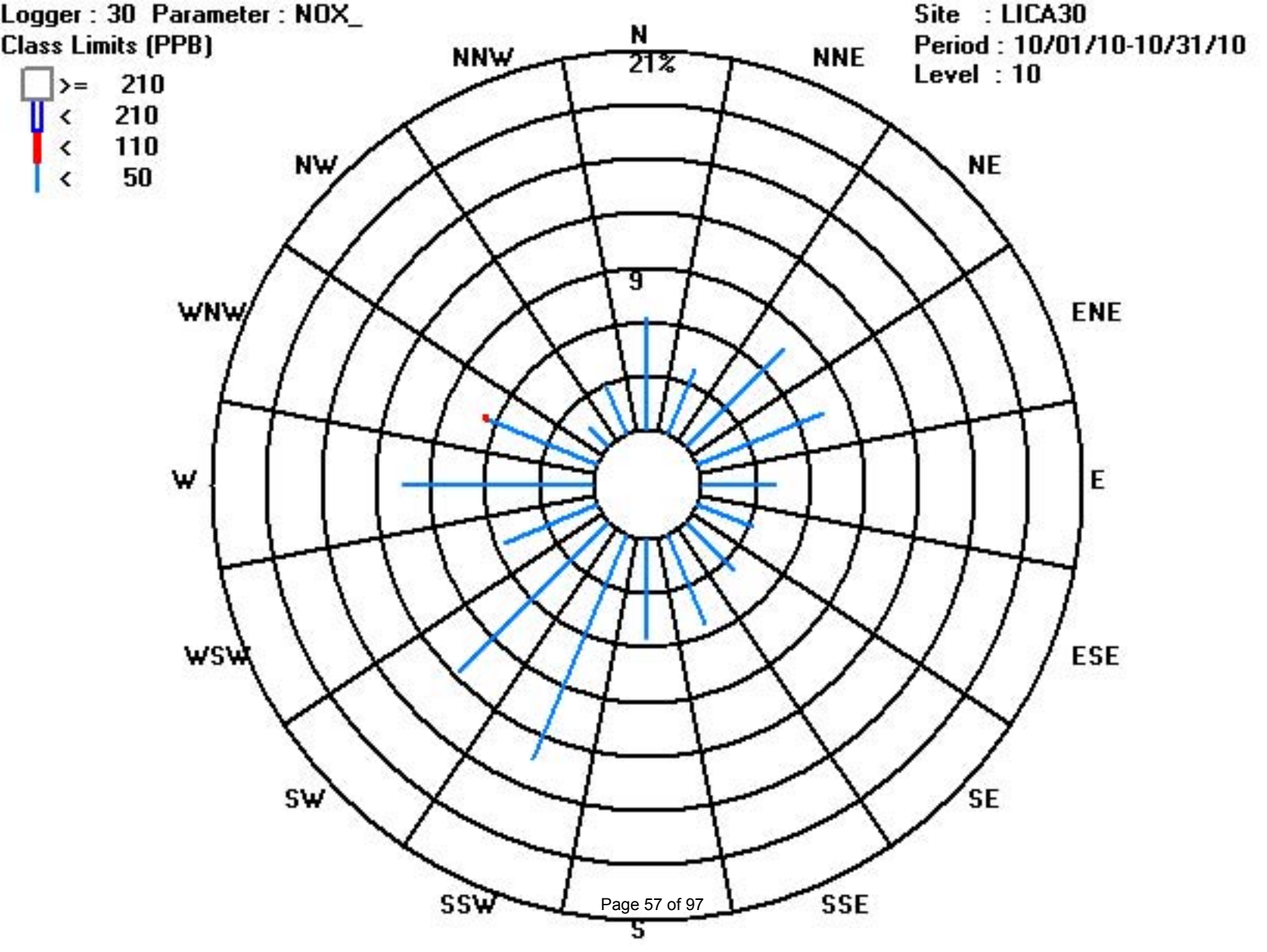
Distribution By Samples

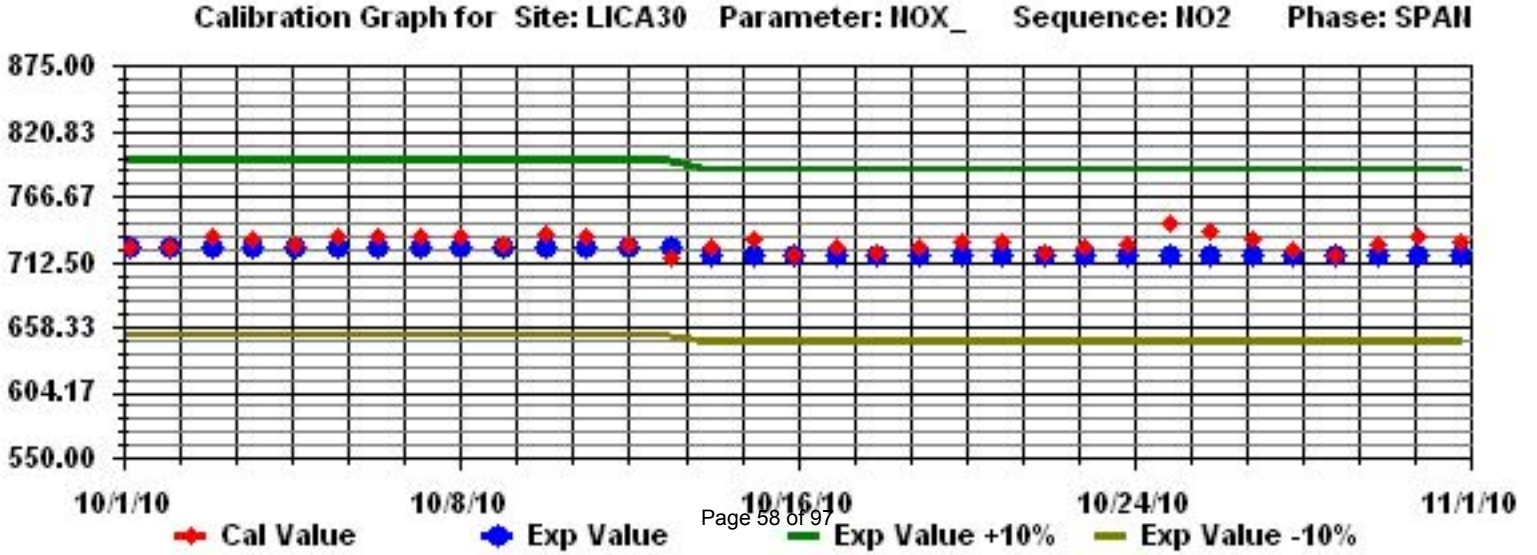
Direction

Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 50	44	28	54	53	29	23	27	38	39	95	83	39	74	46	11	21	704
< 110														1			1
< 210																	
>= 210																	
Totals	44	28	54	53	29	23	27	38	39	95	83	39	74	47	11	21	

Calm : .00 %

Total # Operational Hours : 705


Logger : 30 Parameter : NOX_
Class Limits (PPB)
>= 210
< 210
< 110
< 50
Site : LICA30
Period : 10/01/10-10/31/10
Level : 10
N
21%
NNE
NE
ENE
E
ESE
SE
SSE
S
SSW
SW
WSW
W
WNW
NW
NNW
9


Calibration Graph for Site: LICA30 Parameter: NOX_ Sequence: NO2 Phase: SPAN
875.00
820.83
766.67
712.50
658.33
604.17
550.00
10/1/10
10/8/10
10/16/10
10/24/10
11/1/10
Cal Value
Exp Value
Exp Value +10%
Exp Value -10%

Temperature

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - MASKWA

OCTOBER 2010

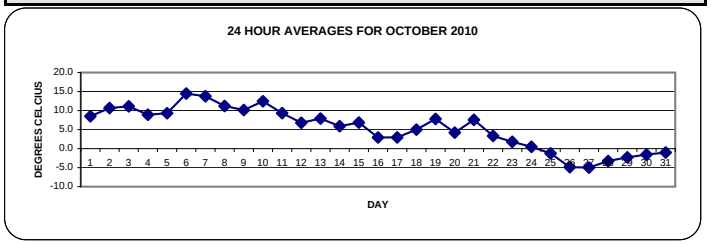
AMBIENT TEMPERATURE hourly averages (Degrees C)

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	0.4	-0.3	-0.9	-1.3	-2.1	-2.3	-2.3	1	7.5	12.2	13.9	16.2	17.4	17.4	17.3	17.4	16.3	14.3	12.3	11.5	10.5	9.6	9.2	9.1	17.4	8.5	24
2	8.6	8.5	8.5	8.5	7.8	7.4	6.7	8.4	10.1	11.9	13.7	14.9	15	16.3	17.8	18.4	17.7	14.4	10.7	8.3	6.8	5.8	5	4.6	18.4	10.7	24
3	4.4	4.1	4.7	4.7	5.1	5	3.9	6.1	12.5	15.3	16.7	18.6	19	18.3	18.2	18.6	16.8	14.4	12.2	10.4	9.7	9.6	9.3	9.1	19.0	11.1	24
4	8.7	8.9	9.3	9	9	8.9	9.2	9.7	10	10.6	10.5	9.9	10	10	9.6	9	8.6	8.2	7.8	7.6	7.5	7.2	7.3	7.2	10.6	8.9	24
5	7.2	7.3	7.3	7.1	7.5	7.7	7.4	7.2	8.1	9.9	11.3	12.2	13.1	13.6	13.7	13.4	12.5	10.3	8.5	8.2	7.9	7.6	6.8	7.6	13.7	9.3	24
6	7.4	7.5	7.5	7.9	10	9.5	8.5	9.1	12.4	16.2	18.5	21.4	22.7	23.3	22.2	21.3	19.3	16.7	16.5	16.4	15.1	14.1	13	10.9	23.3	**14.5**	24
7	8.7	8.8	9.6	10.4	9	7.3	5.6	7.7	13.3	17.1	19.5	21.6	23	**23.4**	23.3	22.9	21.3	17.5	13.2	11	9.6	9.8	9.1	7.8	**23.4**	13.8	24
8	6.7	6.2	5.9	6.1	4.9	5.2	4.9	5.8	9.6	13.7	16.2	16.3	15.7	17.6	21	20.9	19.5	16.2	13.2	11.9	10.8	9.1	7.1	4.5	21.0	11.2	24
9	3.4	2.2	0.8	0.2	-1.1	-2	-2.3	0.1	5.2	13.8	16.1	17.5	19	19.1	19.8	19.1	19.7	16.9	14.3	15.1	15	13.9	10.5	7.1	19.8	10.1	24
10	5.3	4.2	3.2	3.8	3.9	3.3	3.7	7.9	11.3	13.7	15.9	19.3	21.4	22	21.4	22	19.2	16.6	16.8	15	13	12.1	11.9	11.9	22.0	12.5	24
11	12	11.5	10.7	8.9	8.6	7.8	5.9	5.5	8.8	10.4	11.3	12.3	13	13.4	13.4	13.3	11.9	9.6	7.5	6.7	5.9	5.3	5	4.9	13.4	9.3	24
12	3.3	1.8	2.1	1.8	1.9	2.3	2.7	4	7.5	9.6	11	11.5	12.3	12.3	12.8	12.7	11.2	8.8	6.8	5.5	5.5	4.5	5.8	5.4	12.8	6.8	24
13	5.1	5	5	5	4.3	4.1	3.6	3.5	5.8	8.9	11	14.8	16.6	16.3	16.5	14.9	13.3	11.2	8.4	6.8	5.4	3.2	1.1	-0.3	16.6	7.9	24
14	-1.4	-1.5	-0.7	-0.2	-0.5	0	3.3	5.2	7.2	8.6	9.9	12.2	14.6	14.4	13.9	14.3	13.7	9.3	6	4.8	4	1.8	1.5	1.2	14.6	5.9	24
15	2.6	3.5	5.4	6.5	7	6.4	6	5.6	5.9	7.2	9.6	9.4	9.7	10.9	10.9	9.3	8.1	7.5	7.1	6.8	5.9	4.7	4	4.4	10.9	6.9	24
16	4.2	3.6	2.7	1.9	0.5	0	-0.6	-0.1	3	4.8	6.3	7.8	9.2	9.5	9.9	9.5	7.2	3.5	0.1	-1.8	-2.9	-3.3	-3.5	-1.1	9.9	2.9	24
17	-1	-0.8	-1.5	-1.7	-1.7	-1.9	-2.4	-2.1	0.6	3.5	4.3	5.7	7.5	9.4	10.6	11.2	9.2	6.5	4.8	3.7	2.4	2.7	1.7	0	11.2	2.9	24
18	-1.7	-0.5	-0.8	-0.8	-2.2	-3	-3.5	-1.8	2.3	3.7	4.8	7.3	9.3	12.3	13.9	13.3	10.9	9.5	8.2	7.7	7.9	8.1	7.8	7	13.9	5.0	24
19	6.9	6.2	5.9	5.8	5.5	5.4	4.7	5.7	9	11	12.3	12.7	12.2	12.2	11.8	11.7	9.5	7.8	7.3	6.4	5.8	5.1	3.6	2.5	12.7	7.8	24
20	2	1.1	0.1	-0.8	-2	-2.1	-2.5	-1	2.7	5.9	8.9	10.7	11.2	11.7	11	10.6	8.6	4.9	3.4	4.9	3.4	2.5	2.6	3.3	11.7	4.2	24
21	3.4	3.4	2.8	3.6	4.8	5	5.2	4.6	5.3	7.3	8.4	10.3	13.3	15.8	16.2	15.8	13	10.3	9.2	7.3	5.2	3.6	3.6	4.2	16.2	7.6	24
22	3.8	3.5	3.3	3.1	3	2.9	2.6	2.4	2.9	3.2	3.9	3.9	4	4.2	4.3	4.1	3.6	3.2	3.1	3.1	3	3	3.2	2.8	4.3	3.3	24
23	1.6	1.6	1.7	1.6	0.8	0.6	1	0.9	1.3	2.1	2.4	2.8	3.2	2.8	2.5	2.2	1.7	1.8	1.8	1.8	1.8	1.7	1.7	1.6	3.2	1.8	24
24	1.5	1.3	1.2	1.3	1.4	1.1	0.8	0.7	0.8	0.8	0.5	0.7	0.7	0.5	0.4	0.4	0.2	0	-0.1	-0.2	-0.3	-0.3	-0.7	-1.2	1.5	0.5	24
25	-1.4	-1.5	-1.4	-1.4	-1.4	-1.4	-1.5	-1.6	-1.4	-0.9	-0.4	-0.3	-0.4	-0.1	0	-0.3	-1.1	-1.6	-1.9	-1.7	-1.7	-2	-2.2	-2.6	0.0	-1.3	24
26	-3.1	-3.6	-4.2	-4.3	-4.4	-4.6	-4.9	-5.2	-5.4	-5.7	-5.3	-5	-4.3	-3.9	-4.4	-4.7	-5	-5.2	-5.2	-5.7	-5.9	-5.8	-5.6	-5.6	-3.1	-4.9	24
27	-5.6	-5.9	-5.9	-6.1	-6.2	-6.5	-6.8	-7	-6.8	-6.2	-4.8	-3.2	-1.3	-0.4	0	-0.1	-3	-4.3	-5.3	-6	-6.5	-7	-7.5	-7.2	0.0	-5.0	24
28	-7.6	**-8.5**	-7.9	-7	-6.3	-6	-5.9	-5.4	-4.7	-4	-3.1	-1.6	-1	-1.1	-0.7	-0.6	-0.7	-0.8	-0.9	-0.9	-0.7	-0.8	-0.9	-1.2	-0.6	-3.3	24
29	-1.4	-1.7	-1.9	-2.1	-2.3	-2.3	-2.5	-2.6	-2.7	-2.3	-2.1	-2.2	-2.2	-2.3	-2.4	-2.6	-2.6	-2.5	-2.4	-2.4	-2.3	-2.4	-2.5	-2.4	-1.4	-2.3	24
30	-2.4	-2.3	-2.4	-2.4	-2.5	-2.7	-2.9	-3.2	-3.1	-2.6	-1.6	-1.1	-0.4	2.1	3.5	3.4	0.8	0.1	-0.6	-2.2	-2.7	-3.4	-4.1	-4.6	3.5	-1.6	24
31	-4.4	-3.7	-3.9	-3.8	-5.4	-6.2	-6.3	-6.8	-4.3	-0.5	2.1	4.3	5.8	5.8	6.2	5.8	3.3	-0.2	0.5	-0.7	-2	-2.9	-3.4	-3.8	6.2	-1.0	24
HOURLY MAX	12.0	11.5	10.7	10.4	10.0	9.5	9.2	9.7	13.3	17.1	19.5	21.6	23.0	23.4	23.3	22.9	21.3	17.5	16.8	16.4	15.1	14.1	13.0	11.9			
HOURLY AVG	2.5	2.3	2.1	2.1	1.8	1.6	1.3	2.1	4.3	6.4	7.8	9.1	10.0	10.5	10.8	10.6	9.2	7.3	5.9	5.1	4.4	3.8	3.2	2.8			

STATUS FLAG CODES

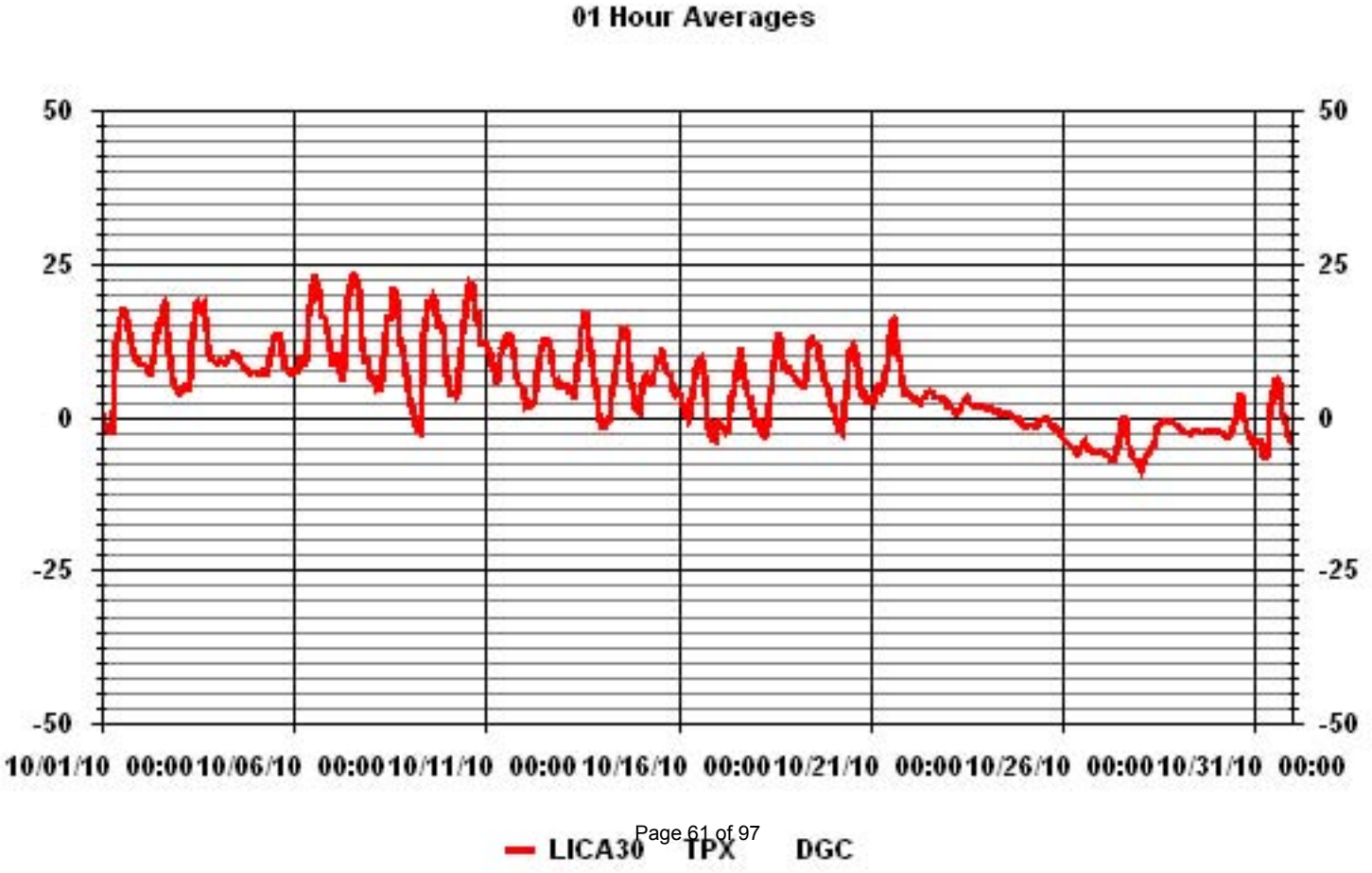
S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	- MAINTENANCE
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE



MONTHLY SUMMARY

MINIMUM 1-HR AVERAGE:	-8.5	^{O}C	@ HOUR(S)	1	ON DAY(S)	28
MAXIMUM 1-HR AVERAGE:	23.4	^{O}C	@ HOUR(S)	13	ON DAY(S)	7
MAXIMUM 24-HR AVERAGE:	14.5	^{O}C			ON DAY(S)	6

CALIBRATION TIME:	0	HRS	OPERATIONAL TIME:	744	HRS
			AMD OPERATION UPTIME:	100.0	%
STANDARD DEVIATION:	6.89		MONTHLY AVERAGE:	5.29	^{O}C


01 Hour Averages
50
25
0
-25
-50
10/01/10 00:00
10/06/10 00:00
10/11/10 00:00
10/16/10 00:00
10/21/10 00:00
10/26/10 00:00
10/31/10 00:00
LICA30
TPX
DGC

Precipitation

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - MASKWA

OCTOBER 2010

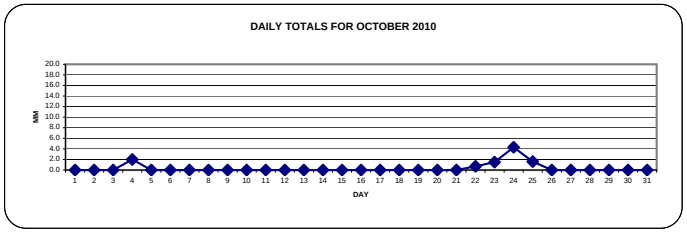
PRECIPITATION hourly averages (mm)

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	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.	TOTAL	RDGS.
DAY																											
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	24
2	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	24
3	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	24
4	0	0	0	0	0	0	0	0	0	0	0.3	0.6	0.7	0.1	0.3	0	0	0	0	0	0	0	0	0	0.7	2.0	24
5	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	24
6	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	24
7	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	24
8	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	24
9	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	24
10	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	24
11	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	24
12	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	24
13	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	24
14	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	24
15	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	24
16	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	24
17	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	24
18	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	24
19	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	24
20	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	24
21	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	24
22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.7	0.7	0.7	24
23	0	0	0	0.5	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1.0	1.5	24
24	0	0	0	0	0	0	0	0.1	0	0.3	**1.1**	0.6	0.9	0.5	0	0	0	0.1	0	0.1	0.2	0.1	0.1	0.2	**1.1**	**4.3**	24
25	0.1	0.1	0.2	0.4	0.3	0.1	0.1	0.1	0	0.1	0	0	0.1	0	0	0	0	0	0	0	0	0	0	0	0.4	1.6	24
26	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	24
27	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	24
28	0	0	0	0	0	0	0	0	0	0	**M**	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	23
29	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	24
30	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	24
31	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	24
HOURLY MAX	0.1	0.1	0.2	0.5	1.0	0.1	0.1	0.1	0.0	0.3	1.1	0.6	0.9	0.5	0.3	0.0	0.0	0.1	0.0	0.1	0.2	0.1	0.1	0.7			

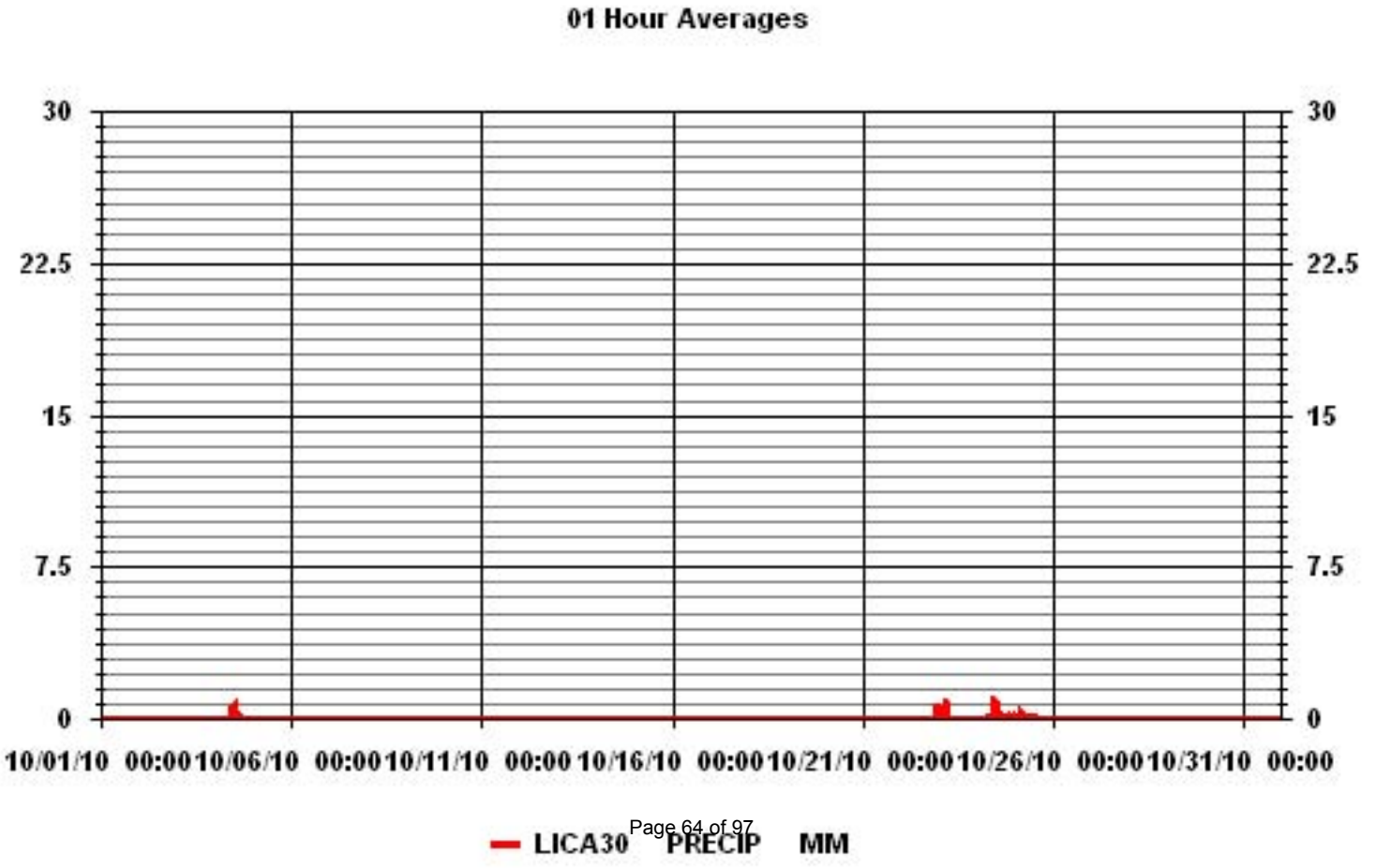
STATUS FLAG CODES

S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	- MAINTENANCE
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	MD	-MISSING DATA



MONTHLY SUMMARY

MAXIMUM 1-HR AVERAGE:	1.1	MM	HOUR(S)	10	ON DAY(S)	24
MAXIMUM DAILY TOTAL	4.3	MM			ON DAY(S)	24
MONTHLY TOTAL	10.1	MM				
CALIBRATION TIME:	0	HRS	OPERATIONAL TIME:		743	HRS
			AMD OPERATION UPTIME:		99.9	%
STANDARD DEVIATION:	0.09		MONTHLY AVERAGE:		0.01	MM


01 Hour Averages
30
22.5
15
7.5
0
10/01/10 00:00
10/06/10 00:00
10/11/10 00:00
10/16/10 00:00
10/21/10 00:00
10/26/10 00:00
10/31/10 00:00
LICA30 PRECIP MM

Relative Humidity

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - MASKWA

OCTOBER 2010

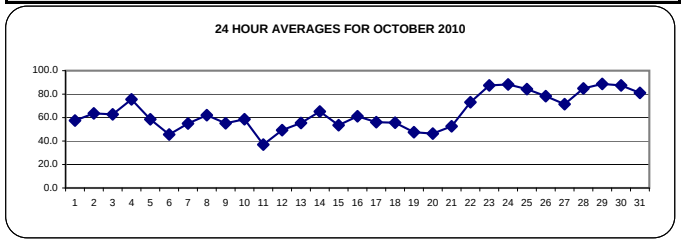
RELATIVE HUMIDITY hourly averages (%)

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	86	87	89	89	89	89	89	80	64	50	47	38	29	27	27	28	34	38	43	45	48	52	55	57	89	57.5	24
2	60	62	61	61	64	66	68	63	60	56	53	51	52	49	46	44	47	58	71	80	85	88	90	91	**91**	63.6	24
3	91	91	91	91	88	87	89	83	60	50	44	40	38	36	36	34	41	50	55	60	62	63	63	63	**91**	62.8	24
4	63	61	60	60	60	60	60	59	61	65	79	86	89	89	89	88	88	88	86	84	84	84	85	85	89	75.5	24
5	86	86	88	89	86	83	80	77	67	55	48	45	43	40	36	33	34	38	43	46	48	50	52	52	89	58.5	24
6	53	56	60	59	53	54	58	57	49	40	36	31	29	27	30	32	36	42	42	42	46	49	52	61	61	45.6	24
7	68	67	64	62	67	74	80	74	56	46	40	34	30	30	29	30	33	42	55	62	67	65	69	75	80	55.0	24
8	77	79	82	81	84	83	85	83	76	65	58	57	58	53	35	34	36	43	48	50	49	52	57	65	85	62.1	24
9	70	76	81	82	85	86	88	80	66	40	35	33	30	28	29	32	31	39	46	43	44	49	60	71	88	55.2	24
10	77	81	86	85	85	87	89	76	64	55	51	42	36	36	38	39	47	55	50	42	49	51	45	40	89	58.6	24
11	38	35	33	36	38	38	45	46	38	36	35	33	31	30	29	28	30	35	40	43	43	43	43	42	46	37.0	24
12	50	54	54	60	58	55	55	52	46	44	44	42	40	39	38	37	38	44	50	55	57	59	55	57	60	49.3	24
13	59	58	58	56	60	63	65	67	59	50	46	39	37	37	37	39	42	47	55	60	65	72	78	81	81	55.4	24
14	83	84	85	84	86	84	70	62	55	51	48	43	39	39	41	40	43	58	69	74	76	82	83	85	86	65.2	24
15	77	72	63	55	50	52	57	60	60	57	41	38	38	34	34	39	46	51	53	53	56	64	67	67	77	53.5	24
16	67	68	70	71	74	78	82	83	72	65	58	50	40	36	34	32	36	46	57	65	70	73	75	65	83	61.1	24
17	64	61	63	65	65	66	68	68	60	50	49	48	41	36	35	36	40	48	54	60	65	64	67	73	73	56.1	24
18	79	74	75	75	80	82	83	79	64	58	53	47	41	34	29	29	34	38	42	44	45	46	51	54	83	55.7	24
19	55	58	61	62	64	66	70	67	58	52	41	37	34	35	39	32	33	36	35	38	39	39	43	47	70	47.5	24
20	49	52	56	61	67	68	70	65	53	46	37	29	25	24	23	23	26	36	41	41	48	55	58	60	70	46.4	24
21	59	60	63	57	49	46	44	48	46	42	42	39	37	37	37	38	46	54	57	65	72	76	75	73	76	52.6	24
22	70	72	73	73	73	73	74	76	74	73	72	71	71	69	69	71	72	75	77	77	77	75	70	77	77	73.1	24
23	87	89	88	88	89	90	90	90	89	89	87	85	83	85	86	87	89	88	87	87	87	87	86	86	90	87.5	24
24	86	87	87	88	87	87	88	89	89	89	89	89	89	89	89	89	89	89	89	88	88	88	88	88	89	88.3	24
25	87	87	87	88	88	88	88	87	86	86	85	83	81	81	80	81	82	82	82	82	82	84	82	84	88	84.3	24
26	82	82	81	81	82	81	80	80	80	79	77	76	73	72	75	77	78	77	78	77	77	79	79	76	82	78.3	24
27	75	76	76	77	77	78	78	77	75	73	67	63	58	55	53	52	61	69	74	76	78	82	82	83	83	71.5	24
28	82	84	85	85	85	85	85	86	86	87	86	85	82	82	81	81	82	84	87	89	87	87	87	87	89	84.9	24
29	89	88	89	89	89	89	89	89	89	89	88	88	88	88	88	88	89	89	89	89	89	89	89	89	89	**88.7**	24
30	89	89	89	89	89	89	89	88	88	88	88	88	87	84	81	78	87	87	87	89	90	89	89	88	90	87.5	24
31	89	89	89	89	87	86	86	85	83	83	78	70	64	63	63	63	72	84	83	85	89	88	89	88	89	81.0	24
HOURLY MAX	91	91	91	91	89	90	90	90	89	89	89	89	89	89	89	89	89	89	89	89	90	89	90	91			
HOURLY AVG	72.5	73.1	73.8	73.8	74.1	74.6	75.5	73.4	66.9	61.6	58.1	54.8	52.0	50.5	49.5	49.5	53.0	58.4	62.1	64.2	66.5	68.5	69.8	71.3			

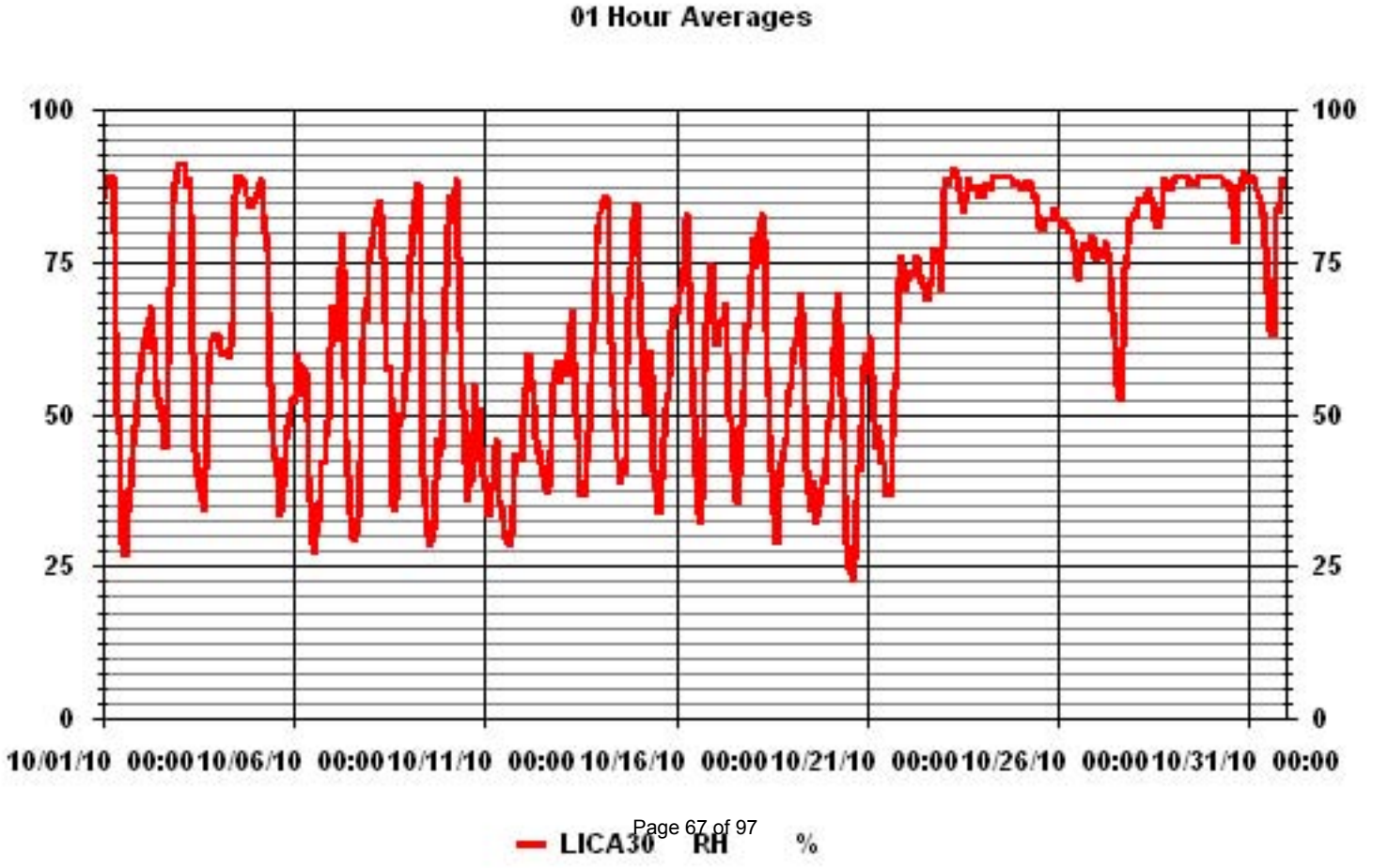
STATUS FLAG CODES

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



MONTHLY SUMMARY

MAXIMUM 1-HR AVERAGE:		91	%	@ HOUR(S)	VAR	ON DAY(S)	2, 3
MAXIMUM 24-HR AVERAGE:		88.7	%			ON DAY(S)	29
						VAR-VARIOUS	
CALIBRATION TIME:	0	HRS		OPERATIONAL TIME:		744	HRS
				AMD OPERATION UPTIME:		100.0	%
STANDARD DEVIATION:	19.53			MONTHLY AVERAGE:		64.48	%


01 Hour Averages
100
75
50
25
0
10/01/10 00:00
10/06/10 00:00
10/11/10 00:00
10/16/10 00:00
10/21/10 00:00
10/26/10 00:00
10/31/10 00:00
LICA30 RH %

Barometric Pressure

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *MASKWA*

OCTOBER 2010

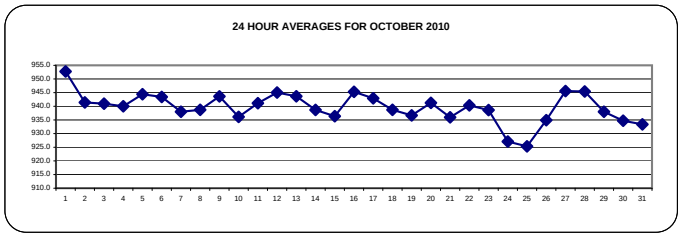
BAROMETRIC PRESSURE hourly averages (millibar)

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	953	953	953	953	954	954	954	955	956	956	956	956	955	955	954	953	952	951	950	950	949	949	948	947	**956**	**952.8**	24
2	946	946	945	944	943	943	942	942	942	942	942	942	941	941	941	941	940	940	939	939	939	938	938	938	946	941.4	24
3	938	939	939	939	940	940	940	941	942	942	943	943	943	942	942	942	941	941	941	941	941	941	941	941	943	941.0	24
4	941	941	941	941	941	941	940	941	941	942	940	941	940	939	939	939	939	939	939	939	939	939	939	939	942	940.0	24
5	940	940	940	941	942	942	943	944	944	945	946	946	947	947	947	947	947	946	946	946	946	945	945	944	947	944.4	24
6	944	944	944	944	944	945	945	945	945	946	946	946	946	945	944	944	943	942	941	941	940	940	939	939	946	943.4	24
7	938	938	938	937	937	937	937	938	939	940	940	939	939	939	939	939	938	938	937	937	937	937	937	937	940	938.0	24
8	936	936	936	935	935	935	935	935	936	937	937	938	939	939	940	941	941	941	942	942	943	943	944	943	944	938.7	24
9	943	944	944	944	944	944	944	944	945	946	946	946	945	945	944	943	944	943	943	942	941	941	941	941	946	943.6	24
10	940	939	939	938	937	936	936	936	936	935	936	935	935	934	933	933	934	934	935	936	937	937	938	938	940	936.1	24
11	939	939	939	939	940	940	940	940	941	942	942	942	942	942	942	942	942	942	942	942	942	942	942	942	942	941.1	24
12	942	941	942	942	942	943	943	944	945	946	946	946	947	947	947	947	947	947	947	946	946	946	946	946	947	945.0	24
13	945	945	944	943	943	943	943	943	943	943	943	943	944	943	944	944	944	944	944	944	944	944	944	944	945	943.7	24
14	943	943	943	943	943	942	942	942	941	941	940	940	939	938	937	937	937	936	935	934	934	933	933	932	943	938.7	24
15	932	932	932	933	934	934	934	934	934	935	935	935	935	936	936	937	938	939	940	940	941	942	942	943	943	936.4	24
16	943	944	944	945	945	945	945	946	947	947	947	947	947	947	946	946	946	945	945	944	944	944	944	944	947	945.3	24
17	944	944	944	944	943	943	943	943	943	944	943	943	943	943	943	943	943	942	942	942	942	942	942	942	944	942.9	24
18	942	942	942	942	941	941	940	940	940	940	940	940	939	939	938	938	937	936	936	936	935	935	935	935	942	938.7	24
19	935	935	935	935	936	936	936	936	937	938	938	938	937	937	937	937	937	936	937	937	937	937	938	938	938	936.7	24
20	939	939	940	940	940	941	941	941	942	943	944	944	944	943	943	942	942	941	941	941	941	940	939	939	944	941.3	24
21	939	938	938	937	936	936	935	935	934	934	934	935	935	935	935	935	935	935	935	936	937	937	938	939	939	936.0	24
22	939	940	940	940	941	941	941	941	941	942	942	942	941	941	941	940	940	940	939	939	939	939	939	940	942	940.3	24
23	939	939	938	938	938	938	938	939	939	939	939	939	939	939	939	939	939	939	939	939	939	938	938	937	939	938.6	24
24	937	936	935	934	933	932	931	931	930	929	928	927	926	925	924	923	923	922	922	921	921	920	920	920	937	927.1	24
25	920	920	920	919	921	922	922	923	923	924	925	925	926	926	927	927	928	929	929	930	930	930	931	931	931	925.3	24
26	931	931	932	932	932	932	932	933	933	934	934	934	935	935	935	936	937	937	938	938	939	939	939	940	940	934.9	24
27	940	941	941	942	942	943	944	944	945	946	946	947	948	948	948	948	948	948	948	947	947	948	948	947	948	945.6	24
28	947	947	947	947	946	946	946	946	947	947	946	946	946	946	946	946	945	945	944	944	943	943	942	942	947	945.4	24
29	941	940	940	940	939	939	938	938	938	938	938	938	938	937	937	937	937	937	937	937	937	937	937	937	941	938.0	24
30	937	937	937	937	937	937	936	936	936	936	936	936	935	935	934	934	933	932	933	932	932	932	932	931	937	934.7	24
31	931	930	930	930	930	929	929	930	930	932	932	933	933	934	935	935	936	935	936	937	938	938	939	939	939	933.4	24
HOURLY MAX	953	953	953	953	954	954	954	955	956	956	956	956	955	955	954	953	952	951	950	950	949	949	948	947			
HOURLY AVG	939	939	939	939	939	939	939	940	940	940	940	940	940	940	940	940	940	939	939	939	939	939	939	939			

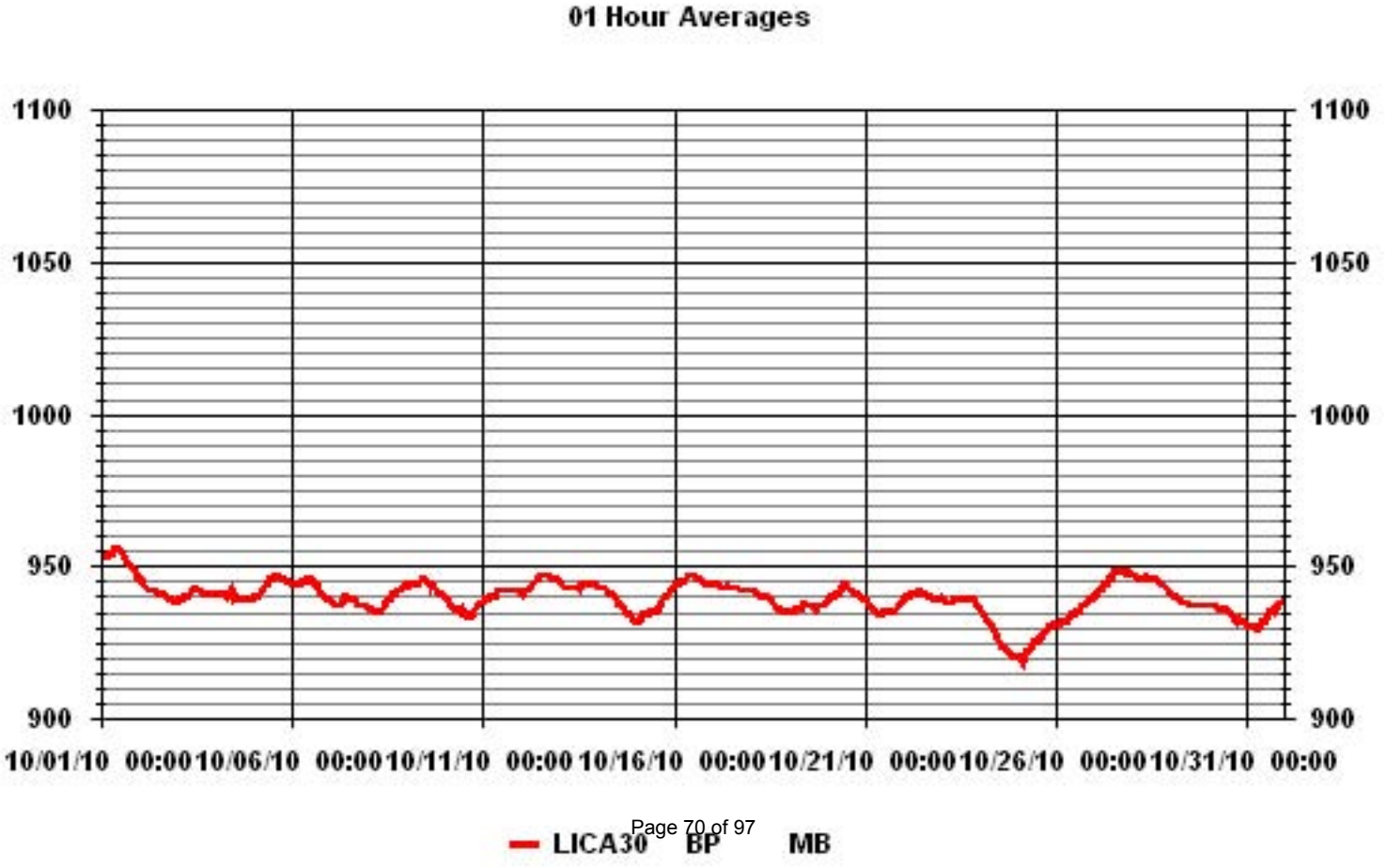
STATUS FLAG CODES

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



MONTHLY SUMMARY

MAXIMUM 1-HR AVERAGE:		956	MB	@ HOUR(S)	VAR	ON DAY(S)	1
MAXIMUM 24-HR AVERAGE:		952.8	MB			ON DAY(S)	1
						VAR-VARIOUS	
CALIBRATION TIME:	0	HRS		OPERATIONAL TIME:		744	HRS
				AMD OPERATION UPTIME:		100.0	%
STANDARD DEVIATION:	5.85			MONTHLY AVERAGE:		940	MB


01 Hour Averages
1100
1050
1000
950
900
10/01/10 00:00
10/06/10 00:00
10/11/10 00:00
10/16/10 00:00
10/21/10 00:00
10/26/10 00:00
10/31/10 00:00
LICA30 BP MB

Vector Wind Speed

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - MASKWA

OCTOBER 2010

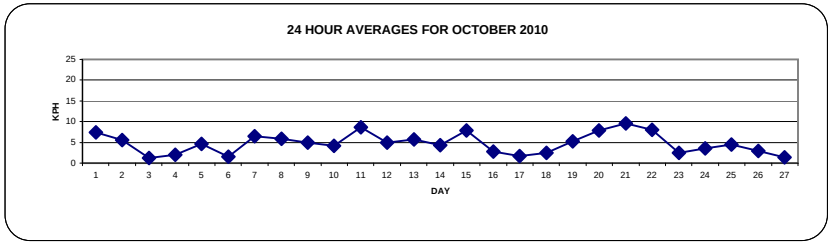
WIND SPEED hourly averages (km/hr)

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	0.3	0.2	0.4	0.2	1.2	0.1	1.1	2.3	2.4	8.4	9.7	11.7	14.3	14.9	14.1	12.6	10.8	8.4	6.3	7.7	6.7	7	7.7	8	14.9	6.1	24
2	6.5	4.6	6.5	8.1	7.3	6.8	4.3	6.1	8.2	9.5	8.9	9	7.6	7.6	4.8	5.4	5.2	2.3	1.3	0.6	1.4	0.9	1.1	1	9.5	4.8	24
3	1.1	1.7	1.7	2	2	1.6	0.7	1.9	1.1	2.8	5.4	3.6	6.3	6.7	6.1	6.5	3.9	3.5	3.3	2.9	3.3	3.6	4.7	4.6	6.7	2.4	24
4	4.6	5	5	5.2	5.9	4.7	6.2	6.1	5.3	5.5	6.2	5.9	5.9	10	9.5	8.6	7.9	7.5	6.5	5.6	5.2	3	2.4	3.3	10	5.4	24
5	0.3	2.5	3.8	4.7	7.3	8.9	8.9	7.7	11	13.8	14.4	14.3	12	11.3	13.5	14.1	9.9	5	4.2	6.2	6.2	6.3	5.5	8.1	14.4	7.4	24
6	7.8	7.6	8.7	5.3	6.3	4.4	6.2	6.6	6.1	5.8	6.2	7.4	8.4	7.5	8.6	8.8	5.2	3.4	6.9	6.3	6	4.1	4.5	1.9	8.8	5.6	24
7	2	2.4	5	4.9	4.2	3.4	1.8	1.4	1	2.7	5.3	4.7	2.7	3.3	4.7	4.8	4.5	2.6	2	2.4	3.3	3.4	3.7	3.4	5.3	1.2	24
8	3.8	4.1	3.8	4.5	3.1	4	4.1	4	3.4	3.4	2.8	4.7	4.5	4.2	8.3	7.6	6.8	4.2	3.1	3.7	3.7	2.7	2.5	1	8.3	2	24
9	1.6	1.5	1.4	1.5	0.7	0.8	2.6	1.6	2.6	8.8	9	9.3	10.5	9.7	10	6.1	7.4	4.7	5.5	9.8	10.2	6.4	2.2	1.3	10.5	4.6	24
10	1.5	1	1.3	2.1	2.9	1.5	1.6	4.2	5.1	7.3	8.7	7.4	7.1	5.5	7.2	9.9	2.8	4.7	10.1	12	5.9	7.4	4.9	5.8	12	1.5	24
11	10.6	9.2	8.2	5.1	5.2	5.2	4.5	5.4	6.6	10.7	11.3	10	9.3	10.2	9.2	10.1	7.4	3.9	4.5	3.9	3.7	3.6	3.7	4.5	11.3	6.5	24
12	5.7	5	7.2	6	4.6	4.9	5	4.6	5.5	8.6	12.5	14.3	13.3	12.4	11.3	10.1	9	4.8	3.4	4.2	5.2	4	6.7	5.1	14.3	5.9	24
13	6.4	6.5	7	8.4	6.5	5.5	5.9	5.1	5.3	5.4	7.3	6.2	11.1	16.8	15	11.7	9.3	5.4	3.1	2	1.6	0.6	1.1	1.2	16.8	5	24
14	1.6	3	3.9	3.8	2.8	3.8	6	9	9.7	9.5	9.6	10.3	10.8	9.4	8.1	5.7	0.4	1.2	1.4	2.8	2	1.5	1.4	0.1	10.8	4.1	24
15	2.3	2.4	3.2	4.7	6.2	5.8	8	5.7	5.5	6.7	14.4	12.5	13	14.8	15.7	15.9	13.5	11.2	12.2	11.1	10.8	9.7	8.9	9.1	15.9	8.6	24
16	10.8	11.7	12.4	9.3	5.3	4.9	5	5.2	3.8	5.1	5.3	6.6	8.3	7.5	6.8	6.8	5.9	2.1	1.6	1.9	3.7	2.5	3	4.8	12.4	5	24
17	4.9	5.9	4.5	6.8	8.3	8.8	8.3	9	8.6	6.6	7.8	8.2	7.5	7.5	7.7	7.6	6	3.8	3.4	2.9	2.9	3.3	2.5	2.5	9	5.7	24
18	2.4	3.1	3.4	2.7	0.9	0.6	1.7	2.7	4	4.9	6.6	6.6	7.4	6.3	7	6.7	4.9	4.9	4.2	6	5.7	4.5	4.7	4.6	7.4	4.3	24
19	5.9	6.4	6.3	5.9	5	4.1	4.5	4.4	5.3	9.5	14	**17.5**	14.1	13	11.7	12.4	8.3	7.8	6.7	6.1	9	8.8	6.9	7.1	**17.5**	7.8	24
20	5.5	3.7	3.7	3.1	3	3.1	2.9	3.6	3.8	4.8	6.3	6.1	6.6	5.3	4.9	3.7	2.9	1	2.1	5.4	1.7	1.8	1.1	0.9	6.6	2.8	24
21	2.4	1.3	2.5	3.1	3.5	5.1	6.1	1.8	5.1	8	6.6	6.3	5.7	7.6	8.3	6.7	6.7	3.8	6.1	8.7	4.9	2.5	3.2	5.4	8.7	1.7	24
22	3.9	4.6	4.5	3.2	3.3	2.8	3.6	1.4	4.4	4.7	4.4	4.4	4	3.8	3.2	4.7	5.2	4.6	6.1	5.9	4.8	4.8	3.9	4.7	6.1	2.5	24
23	4.1	4.8	6	5.2	3.4	4.2	4.1	3.9	4.2	3.9	6.3	6.3	6.3	7.5	7.7	9.4	9.5	6	5.6	4.6	6.2	5.8	5.2	6	9.5	5.3	24
24	6	7.4	7.4	6.2	7.5	8.5	7.7	7	8.6	8.5	8.9	9.3	7.8	7.5	7.1	7.8	7.8	9.3	9.6	10.2	9.6	9.5	11.1	12.4	12.4	7.9	24
25	12.1	11.7	9.9	10.9	10.4	9.2	8.7	9.1	9.8	8.3	8.8	10.5	10.8	9.9	10.5	9.6	10.1	10.5	10.1	9.5	9.7	7.1	7.7	7.3	12.1	**9.5**	24
26	8.7	8.6	9.2	9	7	9	8.3	9.9	9.7	13	9.1	7.3	8.8	7	6.4	7	7.2	6.3	6	9.4	8.7	6.2	6.4	7.9	13	8	24
27	7.1	7.8	7.5	6.9	5.7	6.5	6.9	6.2	7.1	5.1	3.5	3.1	3.9	3.9	3.4	2.8	2.7	3.6	4.2	6.2	4.5	4.1	3.5	4.2	7.8	2.4	24
28	4.5	3.9	5.2	3.6	5.1	4.7	3.1	4.3	3.4	5.3	3.6	2.2	3.6	4.8	3.3	2.4	2.9	2.6	3.5	2	3.9	5.1	5.5	4.6	5.5	3.6	24
29	4.7	5.4	4.5	3	2.9	3.4	2.9	4.3	5.6	4.3	3.9	5	5.1	4.9	4.1	4.5	5.3	5.2	5.8	5.9	4.9	4.5	7.3	5.8	7.3	4.4	24
30	6.4	5.4	6.3	4.3	5.1	5.4	4.4	4.1	4.7	4.3	3.4	4.4	5.5	4.6	4.2	4.3	3.3	4.6	3	3.1	3.3	4.2	3.3	2.8	6.4	3	24
31	3.2	4.7	3.4	4.4	3.6	1.8	0.9	1.7	0.9	2.9	3.2	2	4.6	6.4	6.2	5.1	2.4	1.3	5.3	1.4	1.6	0.8	1.1	1	6.4	1.4	24
HOURLY MAX	12.1	11.7	12.4	10.9	10.4	9.2	8.9	9.9	11.0	13.8	14.4	17.5	14.3	16.8	15.7	15.9	13.5	11.2	12.2	12.0	10.8	9.7	11.1	12.4			
HOURLY AVG	4.8	4.9	5.3	5.0	4.7	4.6	4.7	4.8	5.4	6.7	7.5	7.6	8.0	8.1	8.0	7.7	6.3	4.8	5.1	5.5	5.2	4.5	4.4	4.5			

STATUS FLAG CODES

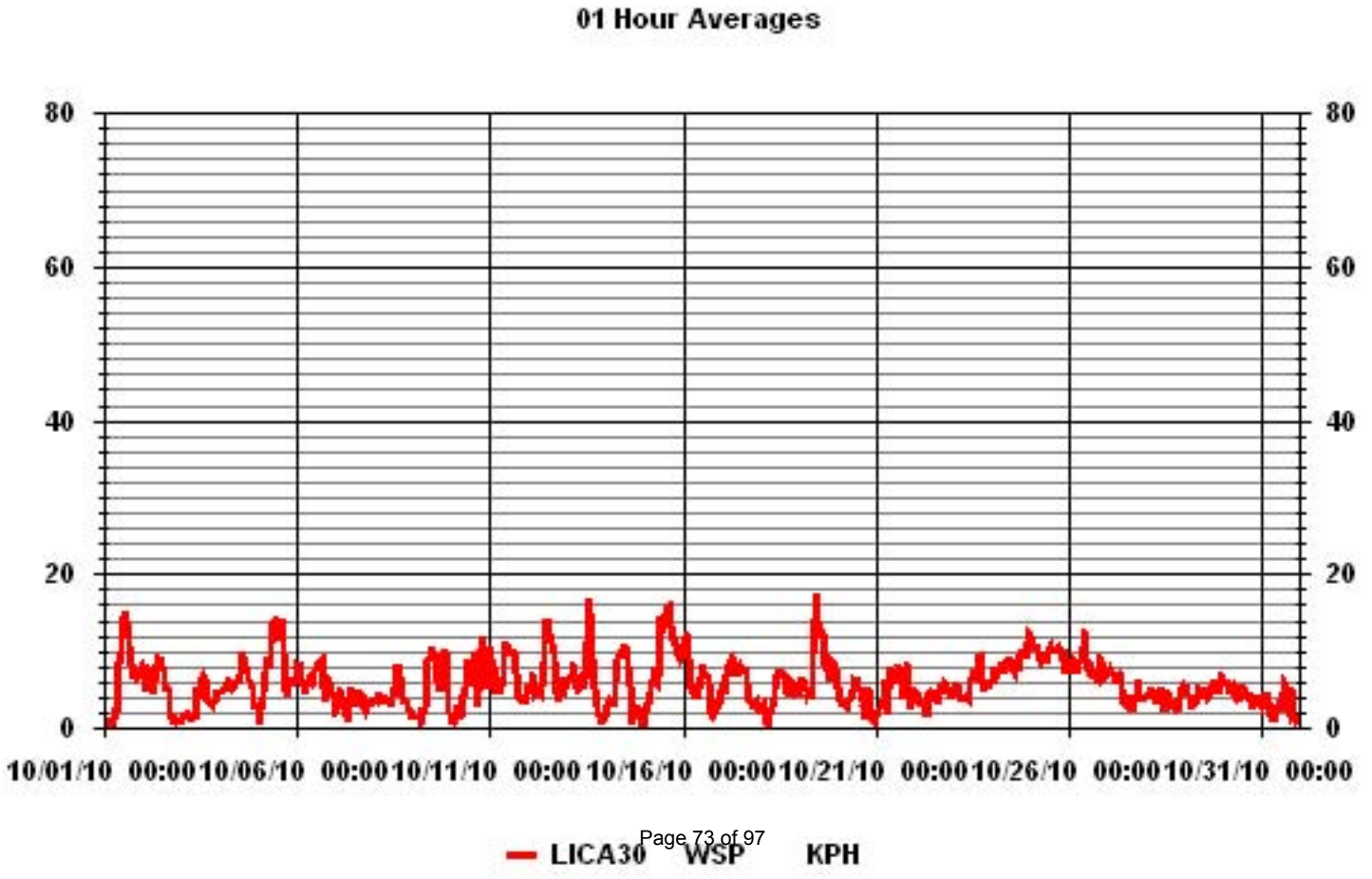
S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	- MAINTENANCE
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE



LAST CALIBRATION: February 4, 2009

MONTHLY SUMMARY

MAXIMUM 1-HR AVERAGE:		17.5	KPH	@ HOUR(S)	11	ON DAY(S)	19
MAXIMUM 24-HR AVERAGE:		9.5	KPH			ON DAY(S)	25
CALMS (≤ 1 KPH)	2.02	%		OPERATIONAL TIME:		744	HRS
MONTHLY CALIBRATION TIME:	0	HRS		AMD OPERATION UPTIME		100.0	%
STANDARD DEVIATION	3.13			MONTHLY AVERAGE		5.77	KPH


01 Hour Averages
80
60
40
20
0
10/01/10 00:00
10/06/10 00:00
10/11/10 00:00
10/16/10 00:00
10/21/10 00:00
10/26/10 00:00
10/31/10 00:00
LICA30 WSP KPH

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *MASKWA*

OCTOBER 2010

VECTOR WIND SPEED MAX instantaneous maximum in km/hr

MST

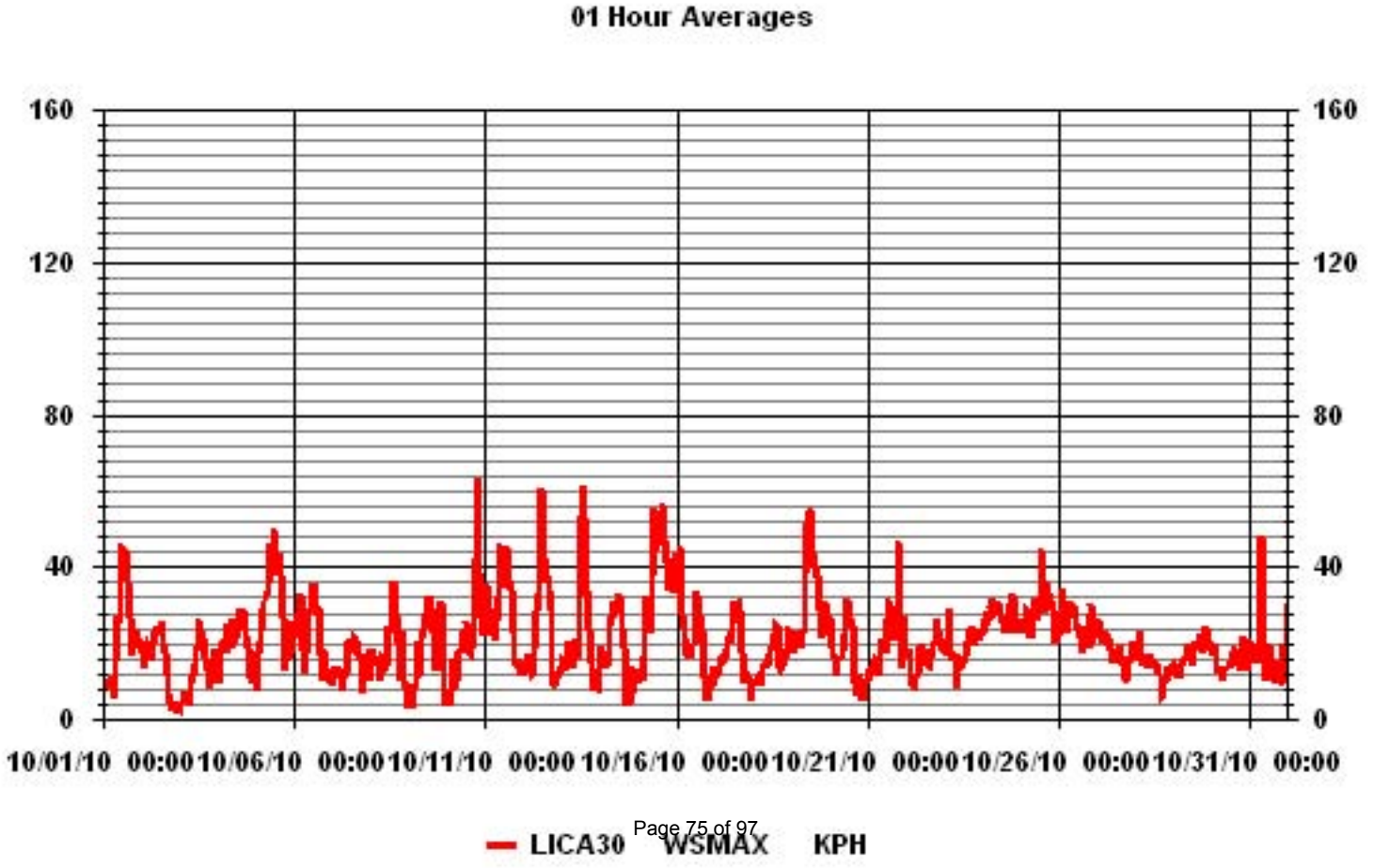
HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.
DAY																									
1	9.7	9.9	8.2	10.1	9.9	8.6	11.2	5.4	15.3	26	26	46.2	40.6	42.1	44.7	37.2	35.9	27.1	16.8	20.9	23.9	19.8	20.2	20.2	46.2
2	18.1	13.6	18.9	20	19.2	18.3	15.5	20.2	23.2	24.3	21.9	23.2	21.9	26	20.4	17.9	12.1	6.9	4.8	2.4	3.2	2.8	3.7	3.9	26
3	3	4.1	6.9	6.7	6.4	6.5	3.5	9.3	11.6	14.6	18.5	19.2	26.4	23.7	20.9	20.9	16.6	12.7	15.5	8.2	10.1	12.9	18.5	16.2	26.4
4	9.3	13.3	20.7	20	20.9	17.2	25.3	24	18.3	26.2	24.5	23.2	22.2	23.2	28	27.7	28.8	26	22.6	19	10.4	18.5	9.7	13.1	28.8
5	7.3	17	20.6	23.4	29	31	32.9	33.6	35.9	45.8	43.9	49.9	43	37.4	41.3	43.4	38.5	27.3	12.7	21.1	17.9	16.8	17.4	26	49.9
6	21.5	27.5	25.8	25.2	32.9	18.7	12.3	17.2	23.2	27.7	29.2	34.8	35	30.3	26.9	29.5	17.4	9.7	18.3	16.8	13.3	11.4	12.1	10.1	35
7	8.6	10.8	12.9	13.8	12.1	13.1	7.7	10.8	12.1	12.3	20.2	21.1	18.9	18.5	21.5	21	17.6	16.1	6.5	13.3	11	13.6	16.8	9.9	21.5
8	18.7	16.8	15.1	14.9	15.3	12.1	9.9	16.1	15.6	13.9	14.4	23.9	23.7	26.4	36.3	29.9	27.7	20.4	10.1	17.2	22.8	8.2	9.7	3	36.3
9	4.3	4.1	9.3	8.6	9.1	10.8	20.6	11.2	21.1	23.9	27.5	24.5	32.5	30.3	29.5	22.8	24.9	12.5	14.6	21.9	31	20.2	8.8	3.7	32.5
10	6.5	3.7	6.1	7.5	15.9	8	10.1	17.6	18.5	22.6	22.8	23.9	25.8	18.1	17.6	23.6	18.7	26.2	42.1	**63.2**	38.7	30.8	21.7	32.9	**63.2**
11	33.3	35.7	29.7	23.5	23.9	23.2	20.9	26	32.5	46	34.8	36.9	35.9	45.2	37.9	37	34.2	23.4	13.8	15.3	14.6	15.9	12.1	11.4	46
12	14.9	12.1	16.2	17.4	13.1	11.8	12.3	18.3	28.4	32.9	44.5	60.7	42.8	42.6	36.8	37	34.2	29	9.3	8.6	12.5	10.6	12.9	12.9	60.7
13	15.7	15.1	14.6	17.2	20.2	17.7	15.1	13.1	15.5	21.3	15.7	32.1	53.1	61.5	53.1	49.2	34	23.7	15.5	9.5	7.5	9.4	8.8	12.9	61.5
14	19.4	14.9	15.5	14.9	13.8	18.1	24.5	26.7	30.8	29.5	27.7	31.6	32.9	29	24.3	18.9	4.3	4.1	4.3	13.8	6.5	9.5	13.3	12.5	32.9
15	10.6	10.8	10.1	16.4	26.2	32.2	30.7	22.4	24.8	37.6	55.1	44.1	45.6	47.7	52.7	56.8	47.1	41.9	39.2	33.4	42	34.9	34	33.3	56.8
16	43.6	40.7	45.4	27.5	24.3	21.5	16.4	18.1	15.9	17.4	19.6	20	33.8	32.7	28.8	27.5	23.9	11.4	10.1	4.6	9.9	9.3	9.5	14	45.4
17	10.6	12.7	11.4	14.4	16.2	17	16.4	18.3	22	20.2	23	25	31.2	29.5	30.5	30.9	28.8	18.1	9.9	9.9	12.5	11.4	10.6	4.8	31.2
18	9	10.1	10.3	11.2	10.1	9.9	14.2	14.7	14.4	15.9	15.5	18.7	19.2	22.4	25.2	24.7	14	13.3	14.4	17.4	18	15.7	24.1	19.6	25.2
19	21.1	17	19.4	23.2	21.5	22	18.3	22.6	23.5	38.1	51.4	54.4	55.5	44.1	40.9	40.4	37.9	29	26.6	21.3	30.3	31	22.2	23	55.5
20	27.1	19.4	15.9	16.8	11.2	15.1	15.5	16.1	20.7	20.2	23.7	31.6	25	26	24.9	18.3	10.3	6.3	12.1	11.2	5.6	4.7	10.1	9.4	31.6
21	13.4	10.6	11.4	13.8	15.9	15.3	15.9	11	17.7	21.1	19.4	17	26.4	31.6	27.7	25.6	27.5	20.2	29.4	46.9	20.9	13.3	15.9	26.9	46.9
22	17.9	18.1	16.8	12.1	9.9	9.3	11.2	11.9	18.1	17.8	19.8	17.5	18.5	15.1	14.7	18.7	15.7	19.6	20.5	26.3	23.2	21.7	17.9	20.2	26.3
23	17.9	17.2	21.1	28.9	15.5	17.7	16.2	8.2	13.8	17.2	15.3	14.2	14.8	16.6	20.7	19.8	23.7	24.5	21.5	19.2	21.5	23.7	20.7	22.1	28.9
24	23	26.1	28.4	24.3	27.3	29.3	31.9	27.5	27.8	27.8	30.6	27.8	25.8	22.8	24.3	24.5	24.1	30.4	28.6	32.7	28.2	23	23.7	25.8	32.7
25	25.6	25.8	25.6	22.4	28.7	28.2	21.3	24.6	28.7	31.6	25.6	32.1	29.9	44.8	33.2	27.5	36	33.2	31.4	31.2	29.1	19.6	24.3	20.3	44.8
26	21.8	23.7	34.3	25.8	22.3	26.3	26.7	31.2	26.9	29.5	29.3	24.1	24.1	22.1	17.5	19.6	23.9	24.1	18.6	27.8	30.6	20.2	21.3	23.7	34.3
27	23	26.1	22.2	20.9	20.5	**22**	23.1	21.5	18.6	18.1	14.4	17.2	18.5	17.9	18.3	14.2	16.6	10.8	9.7	14.2	14.9	16.3	19.6	19.4	26.1
28	20.7	15.3	20.7	23.3	13.7	16.8	15.5	13.6	14.9	17	14.2	15.7	14.4	15.2	12.9	11.9	6.5	7.1	10.1	10.6	12.9	12.9	13.6	12.6	23.3
29	12.9	14	13.1	10.6	13.4	14.4	15.7	16.6	20	18.7	17.7	13.8	18.3	19.8	19.8	18.3	22.2	20.5	17.4	18.1	24.6	19.4	20.7	19.4	24.6
30	18.8	17	20	13.1	12.2	14	11.2	11	13.1	13.4	13.8	14.2	14.4	17.4	19.1	16.4	14.9	15.1	12.7	14.4	21.5	13.8	12.9	20.9	21.5
31	15.7	20.7	16.6	15.7	14.7	19	17.5	48.4	17.2	11.8	9.9	15.7	20	15.3	13.8	15.9	9.5	10.3	12.1	10.1	9	20	19.3	29.7	48.4
PEAK	43.6	40.7	45.4	28.9	32.9	32.2	32.9	48.4	35.9	46.0	55.1	60.7	55.5	61.5	53.1	56.8	47.1	41.9	42.1	63.2	42.0	34.9	34.0	33.3	

STATUS FLAG CODES

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

MONTHLY SUMMARY

MAXIMUM INSTANTANEOUS READING	63.2	KPH	@ HOUR(S)	19
			ON DAY(S)	10


01 Hour Averages
160
120
80
40
0
10/01/10 00:00
10/06/10 00:00
10/11/10 00:00
10/16/10 00:00
10/21/10 00:00
10/26/10 00:00
10/31/10 00:00
LICA30 WSMAX KPH

LICA30
WSP / WDR Joint Frequency Distribution (Percent)

October 2010

Distribution By % Of Samples

Logger Id : 30
Site Name : LICA30
Parameter : WSP
Units : KPH

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
<	6.0	.80	1.34	5.37	5.24	2.95	2.68	1.61	2.41	4.03	8.73	9.67	4.56	4.30	1.07	1.07	1.74	57.66
<	12.0	5.51	2.15	2.01	2.15	1.20	.40	2.28	2.41	1.34	5.10	2.55	.94	5.64	2.55	.40	1.07	37.76
<	20.0	.00	.40	.00	.00	.00	.00	.00	.53	.00	.00	.00	.00	.53	2.95	.00	.13	4.56
<	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	6.31	3.89	7.39	7.39	4.16	3.09	3.89	5.37	5.37	13.84	12.23	5.51	10.48	6.58	1.47	2.95	

Calm : .00 %

Total # Operational Hours : 744

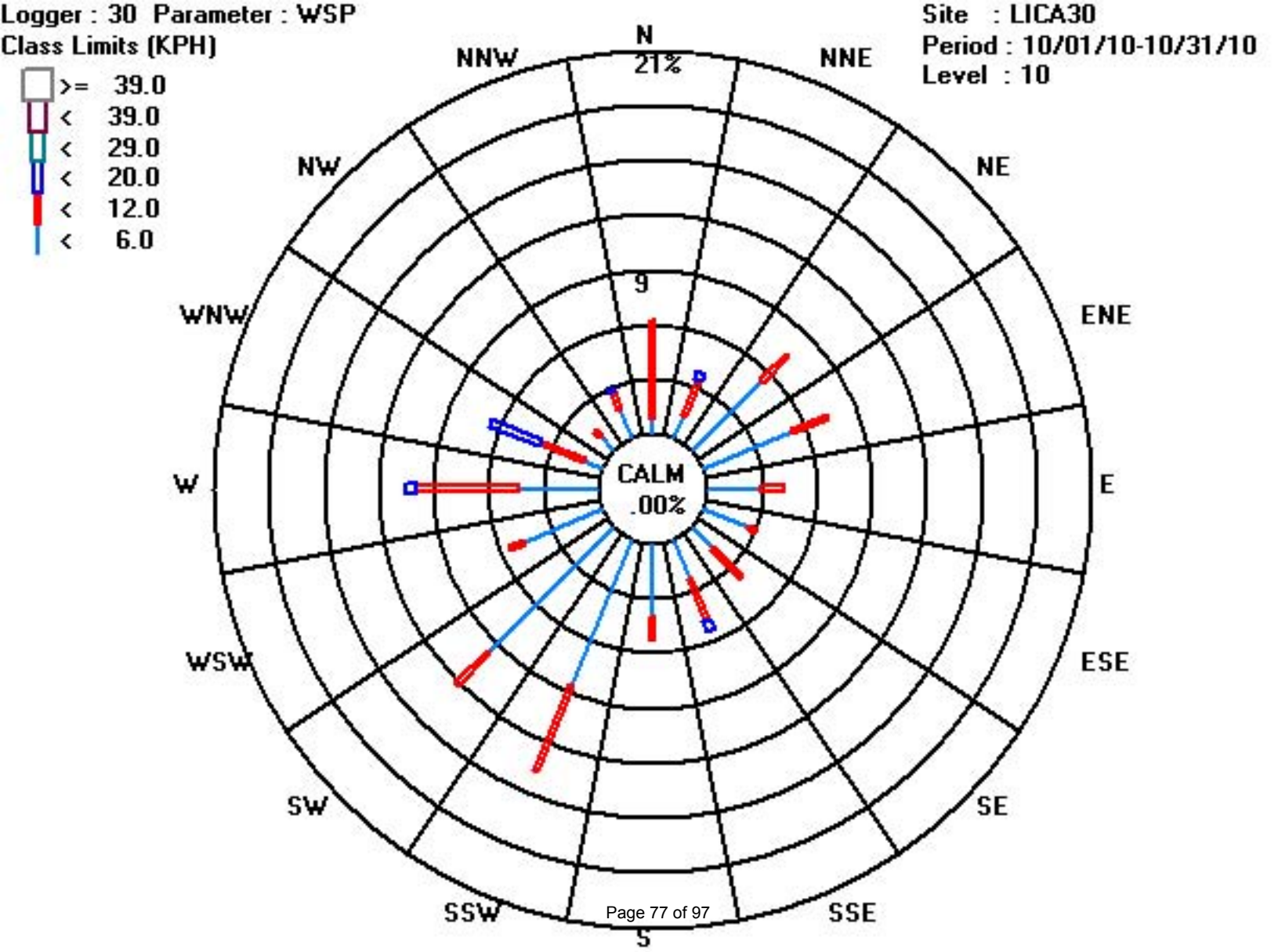
Distribution By Samples

Direction

	Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
<	6.0	6	10	40	39	22	20	12	18	30	65	72	34	32	8	8	13	429
<	12.0	41	16	15	16	9	3	17	18	10	38	19	7	42	19	3	8	281
<	20.0		3						4					4	22		1	34
<	29.0																	
<	39.0																	
>=	39.0																	
	Totals	47	29	55	55	31	23	29	40	40	103	91	41	78	49	11	22	

Calm : .00 %

Total # Operational Hours : 744


Logger : 30 Parameter : WSP
Class Limits (KPH)
>= 39.0
< 39.0
< 29.0
< 20.0
< 12.0
< 6.0
Site : LICA30
Period : 10/01/10-10/31/10
Level : 10
N
21%
NNE
NE
ENE
E
ESE
SE
SSE
S
SSW
SW
WSW
W
WNW
NW
NNW
9
CALM
.00%

Vector Wind Direction

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - MASKWA

OCTOBER 2010

WIND DIRECTION hourly averages in degrees

MST

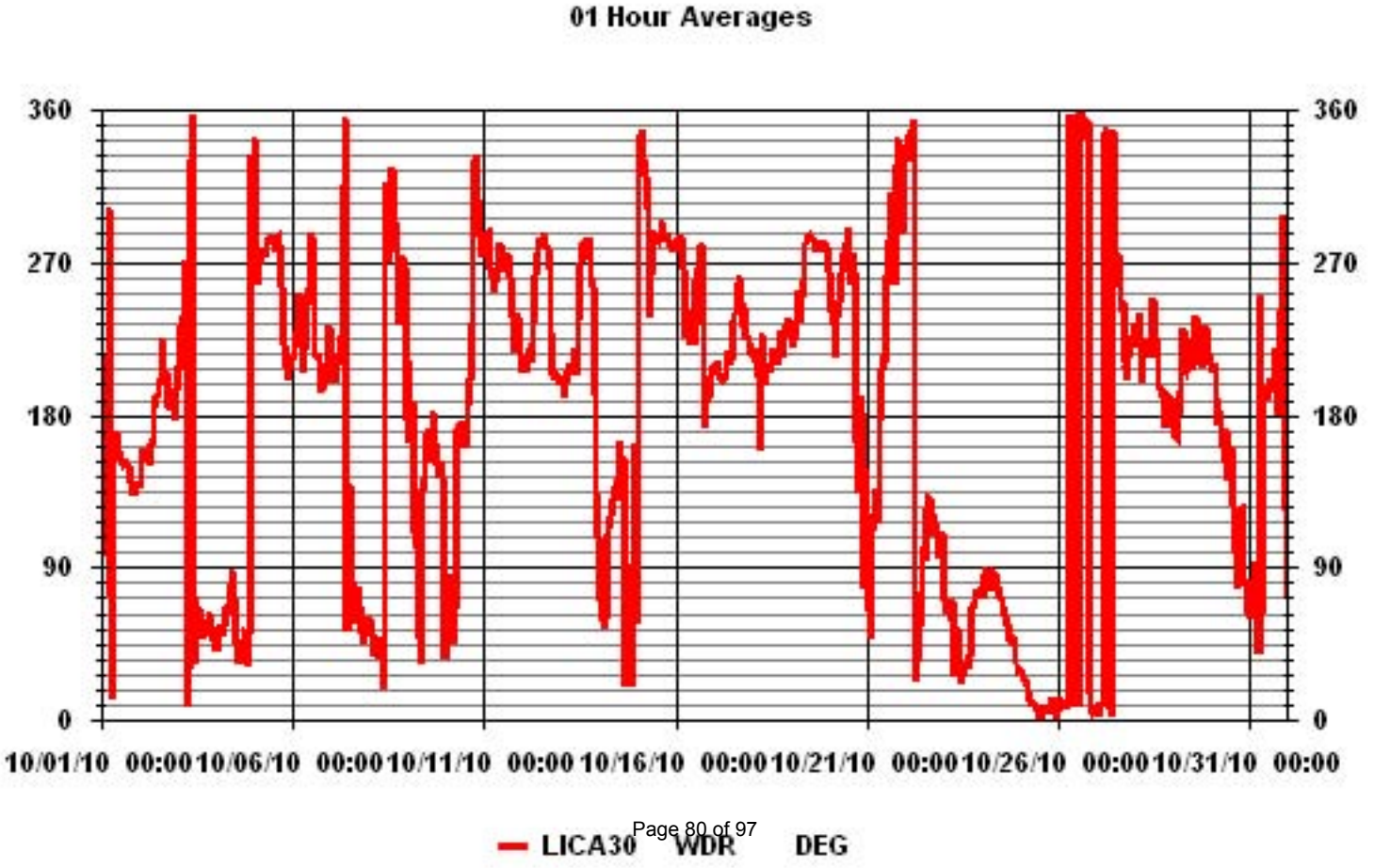
HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	24-HOUR	24-HOUR AVG	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	AVG.	QUANDRANT	RDGS.
DAY																											
1	194	216	202	121	97	302	74	12	168	169	167	160	154	151	152	153	151	150	141	138	133	136	141	139	149	SSE	24
2	137	151	158	158	152	156	150	163	166	184	190	192	202	199	225	205	197	206	186	183	187	188	177	195	176	S	24
3	209	206	233	239	272	249	7	30	330	357	33	73	51	66	55	48	53	50	57	56	64	51	52	44	47	NE	24
4	40	43	56	51	51	55	66	68	67	80	89	72	46	35	35	45	45	52	51	46	32	51	334	321	50	NE	24
5	344	257	259	268	277	277	277	274	283	283	286	282	282	276	285	286	281	257	223	222	210	201	207	215	268	W	24
6	213	229	219	243	252	236	205	218	228	245	255	288	286	254	215	213	217	193	195	207	199	210	201	233	227	SW	24
7	199	217	199	214	210	216	227	293	316	356	52	107	139	80	82	57	73	79	51	67	45	58	56	50	90	E	24
8	61	58	38	50	44	47	36	45	49	18	317	277	270	292	326	315	295	278	233	264	273	273	268	177	329	NNW	24
9	214	164	171	189	112	106	102	49	33	136	142	166	165	172	152	162	182	165	151	145	145	152	144	36	152	SSE	24
10	72	63	86	81	57	45	65	172	174	170	177	169	160	164	185	201	234	320	331	334	308	287	274	276	220	SW	24
11	284	286	287	267	267	263	253	258	262	280	282	278	265	267	272	276	262	239	217	235	237	238	234	217	265	W	24
12	205	207	207	214	219	211	222	234	263	276	280	284	281	288	281	280	278	267	230	205	201	206	202	203	252	WSW	24
13	202	199	190	199	206	210	207	209	213	219	203	236	270	281	282	279	278	272	285	262	257	193	135	108	241	WSW	24
14	92	71	60	53	60	109	113	120	131	137	131	131	143	164	154	156	19	89	77	79	92	19	102	163	123	ESE	24
15	56	336	345	348	332	322	303	283	237	262	289	283	285	283	285	295	284	284	284	287	284	281	278	276	288	WNW	24
16	282	282	284	286	268	266	228	228	242	222	228	221	259	251	267	278	281	234	172	187	195	194	203	208	254	WSW	24
17	210	205	212	203	203	201	202	202	210	218	209	212	235	240	243	258	262	247	231	244	226	226	224	217	220	SW	24
18	216	217	213	213	203	159	228	208	197	207	207	207	210	218	218	220	209	222	230	214	225	232	236	236	216	SW	24
19	228	220	224	228	244	253	235	249	260	281	284	284	286	284	284	278	276	281	280	279	281	281	281	280	271	W	24
20	266	242	233	248	214	238	244	246	264	276	281	272	290	270	256	275	265	165	134	192	173	183	77	149	252	WSW	24
21	116	65	47	121	111	134	134	116	177	207	215	211	262	283	278	311	280	257	328	344	341	309	287	322	269	W	24
22	334	329	345	348	353	353	23	39	35	55	75	103	94	124	133	108	130	123	117	112	96	100	109	111	79	ENE	24
23	71	63	70	68	58	71	52	25	42	55	32	21	25	32	31	31	38	66	70	65	71	77	72	78	51	NE	24
24	72	86	90	88	84	77	80	88	87	76	80	74	72	61	67	62	57	48	47	49	48	34	29	30	63	ENE	24
25	30	29	25	24	21	18	13	9	9	9	5	6	2	1	4	8	3	7	5	11	13	5	1	5	11	NNE	24
26	11	11	9	11	6	9	357	8	13	21	358	347	7	359	355	356	352	343	355	17	6	4	6	8	5	N	24
27	6	2	10	8	337	**346**	349	344	8	2	348	299	267	276	257	241	248	213	209	201	214	227	224	220	317	NW	24
28	234	225	232	240	199	218	225	215	225	214	227	249	226	213	226	195	197	191	195	172	181	191	190	179	210	SSW	24
29	171	168	167	179	194	209	231	208	206	209	225	206	215	214	238	212	214	221	208	210	232	223	210	217	208	SSW	24
30	207	207	210	191	173	182	173	162	151	172	141	154	162	128	106	100	78	123	124	82	81	81	62	68	147	SE	24
31	60	83	79	91	91	39	251	68	62	197	188	196	202	199	198	219	198	179	202	241	195	298	124	74	166	SSE	24
HOURLY AVG	344	336	345	348	353	353	357	344	330	357	358	347	290	359	355	356	352	343	355	344	341	309	334	322			

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

LAST CALIBRATION:	February 4, 2009
DECLINATION :	19 DEGREES FROM MAGNETIC NORTH

MONTHLY CALIBRATION TIME:	0	HRS	OPERATIONAL TIME:	744	HRS
STANDARD DEVIATION	94.80		AMD OPERATION UPTIME	100.0	%
			MONTHLY AVERAGE	251	DEG


01 Hour Averages
360
270
180
90
0
10/01/10 00:00
10/06/10 00:00
10/11/10 00:00
10/16/10 00:00
10/21/10 00:00
10/26/10 00:00
10/31/10 00:00
LICA30 WDR DEG

Standard Deviation Wind Direction

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *MASKWA*

OCTOBER 2010

STANDARD DEVIATION WIND DIRECTION (STDWDIR) hourly averages in degrees

MST

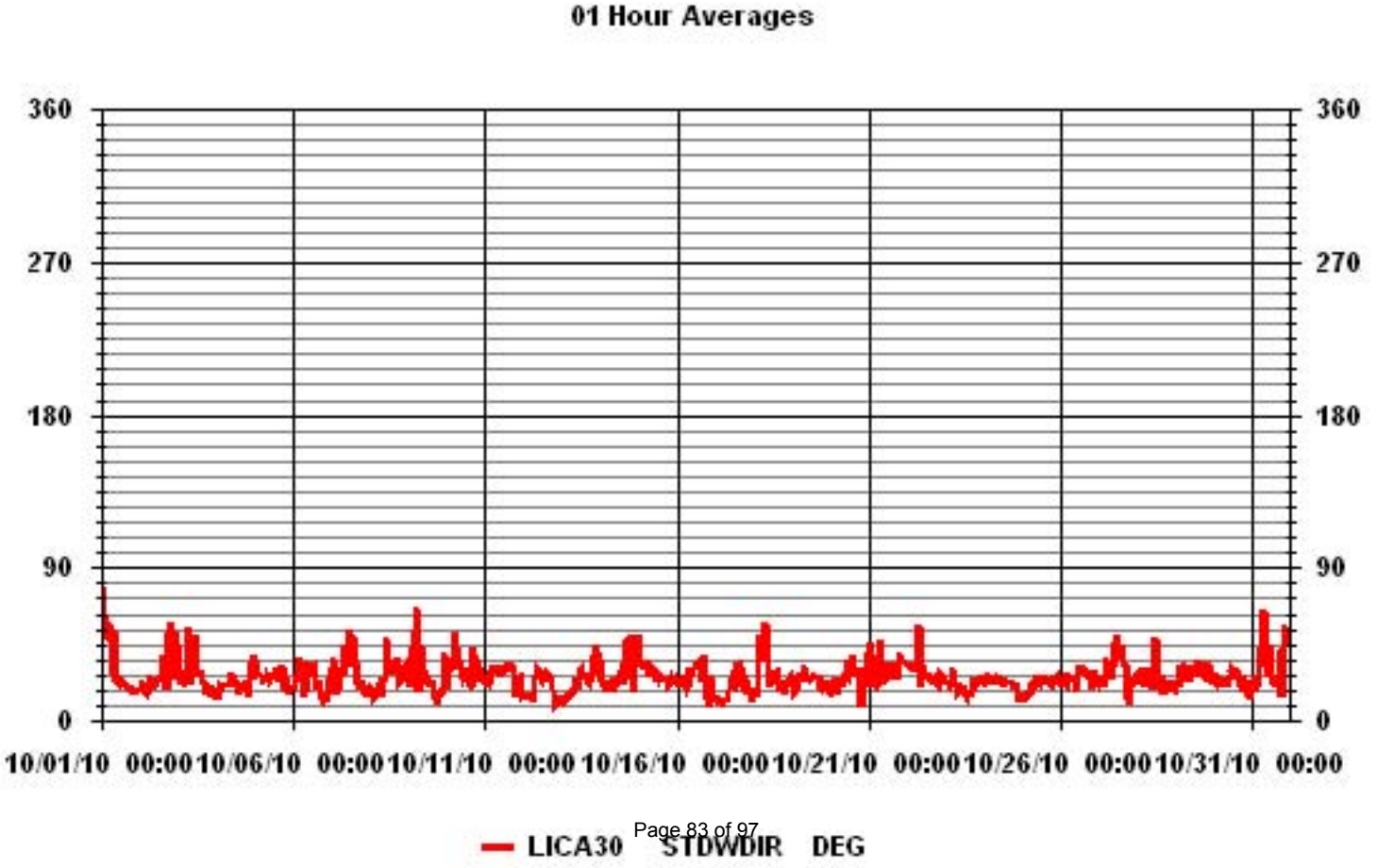
HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00
DAY																								
1	78	48	63	58	48	58	48	26	53	24	23	26	23	24	22	22	21	19	18	19	19	18	18	18
2	19	24	19	18	17	20	26	23	22	21	23	24	25	26	39	26	20	19	52	57	24	54	45	46
3	32	22	25	22	23	30	55	21	43	36	26	50	28	27	28	23	22	18	18	17	18	19	18	17
4	13	16	20	19	20	22	21	22	22	26	26	24	21	15	17	21	21	22	21	19	14	32	34	38
5	36	28	28	27	24	24	26	28	26	24	25	26	27	31	25	25	24	32	22	23	19	15	18	21
6	18	27	23	37	35	27	13	16	23	33	31	29	33	34	22	23	23	14	12	14	14	16	16	26
7	31	37	15	19	19	27	30	26	44	41	31	54	51	49	45	36	23	18	21	23	16	19	17	16
8	20	19	14	15	19	17	16	16	25	23	49	30	31	30	35	35	29	37	23	24	28	26	25	34
9	20	37	43	53	49	67	17	40	45	22	23	27	25	22	22	24	20	13	10	15	16	20	40	23
10	22	37	32	31	33	52	45	37	32	27	25	26	26	32	21	19	43	33	34	36	33	23	26	24
11	23	26	23	26	31	30	30	28	32	27	28	29	31	33	33	29	34	30	14	24	25	26	22	14
12	14	15	15	15	14	11	16	26	30	28	27	25	28	27	29	29	27	25	19	10	11	14	11	14
13	12	14	12	13	16	17	16	17	23	25	18	30	31	28	24	28	24	22	27	31	39	45	41	28
14	37	24	20	22	17	23	21	20	25	23	22	26	24	24	22	33	46	47	25	25	17	22	49	49
15	46	35	33	30	33	35	28	27	27	32	27	28	24	26	26	26	25	24	21	22	25	23	24	25
16	22	23	24	23	27	23	18	20	31	25	31	32	33	34	35	35	23	38	22	13	8	26	17	15
17	13	12	13	12	11	11	12	12	18	23	22	21	30	32	33	34	32	22	20	22	20	17	13	11
18	19	13	17	51	46	44	34	57	42	23	20	23	23	28	29	25	17	21	24	15	21	23	25	26
19	23	17	19	20	29	26	22	31	30	25	26	24	25	26	26	25	26	21	20	23	20	18	18	17
20	23	21	18	25	15	21	25	20	23	28	27	35	32	37	37	32	26	31	19	8	14	25	31	40
21	19	46	21	38	23	21	23	48	22	24	29	23	32	31	27	34	26	25	32	40	37	36	35	33
22	33	31	31	31	29	34	31	57	20	27	33	29	27	26	26	25	22	25	23	22	28	26	24	26
23	25	23	21	24	31	24	23	17	18	22	15	21	17	15	18	14	17	24	24	22	24	23	26	23
24	22	24	26	26	24	24	25	26	24	24	25	24	20	23	23	23	23	21	21	21	21	15	12	14
25	14	14	15	15	17	20	19	22	21	26	24	22	24	25	26	24	24	23	22	26	22	24	26	22
26	23	24	23	22	28	23	26	25	23	17	26	32	28	32	29	28	29	29	29	18	24	29	24	22
27	24	26	22	22	37	30	30	31	24	31	46	50	44	36	44	34	33	15	13	12	19	23	25	27
28	28	22	29	31	20	23	30	24	29	19	24	50	32	23	24	25	15	19	17	24	21	19	18	23
29	23	23	23	32	26	34	31	25	25	27	33	28	28	29	36	26	30	32	26	23	34	31	22	25
30	23	28	25	23	22	23	23	23	21	27	31	30	25	28	31	26	21	17	26	20	16	15	15	23
31	20	17	26	19	32	43	55	65	57	45	25	45	28	22	20	23	20	41	14	42	57	43	48	50

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: February 4, 2009

CALIBRATION TIME: 0 HRS OPERATIONAL TIME: 744 HRS


01 Hour Averages
360
270
180
90
0
10/01/10 00:00
10/06/10 00:00
10/11/10 00:00
10/16/10 00:00
10/21/10 00:00
10/26/10 00:00
10/31/10 00:00
LICA30 STDWDIR DEG

Calibration Reports

Sulphur Dioxide

SO_2 Calibration Report

Station Information

Calibration Date	October 12, 2010		Previous Calibration	September 16, 2010	
Company	**Lakeland Industry & Community Association**				
Plant / Location	**Cold Lake - Maskwa**				
Start Time (MST)	11:33		End Time (MST)	15:17	
Reason:	Monthly Calibration				
Barometric Pressure	947	mBar	Station Temperature	23	Deg C
Cal Gas	51.4	ppm	Cal Gas Expiry date	5-Aug-2012	
DAS Output Voltage	0 - 1	Volts	Chart Rec. Output	0 - 1	Volts

Equipment Information

Analyzer Make / Model:	API 100E	S/N :	508	Method:	Fluorescent
Converter Make / Model:	-	S/N :	-		
Calibrator Make / Model:	Environics 6000	`	4760	Method:	Dilution
DAS Make / Model:	ESC 8832	S/N :	AO 791		
Flow Meter:	Environics 6000	S/N :	4760		

Analyzer Settings

	Before Calibration				After Calibration			
Concentration Range			0 -1000	ppb				
Sample Flow / Box Temp	610	ccm	31	Deg C	609	ccm	31.7	Deg C
HVPS / Lamp Setting	494		3231		494		3230	
PMT / RxCell Temp	7.7	Deg C	50	Deg C	7.7	Deg C	50	Deg C
Converter / IZS Temp	NA	Deg C	45	Deg C	NA	Deg C	45	Deg C
Offset / Slope	36		0.979		36.8		0.98	

Calibration Data

Dilution Flow Rate	Source Gas Flow Rate	Calculated Concentration	Indicated Conc. (DAS)	Correction Factor
4995	0	0	1	N/A
4995	0	0	0	N/A
4926	72.7	748	749	0.9981
4956	38.8	399	398	1.0032
4979	16.5	170	168	1.0106
4996	0	0	0	N/A
			Sum of Least Squares	0.9996
			New Correction Factor	0.9981

	Before Calibration	After Calibration
Auto Zero	1.0	0.6
Auto Span	597	591
Sample Lines Connected		YES
Percent Change from Previous Calibration		-0.1%

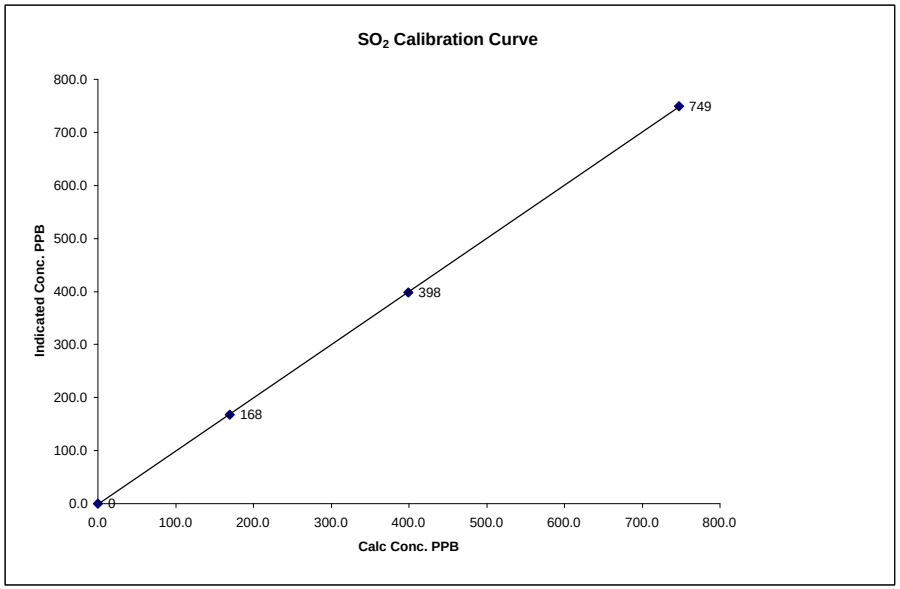
Calibration Performed by: Ting Xu

SO_2 Calibration Curve

Calibration Date	October 12, 2010				
Company	**Lakeland Industry & Community Association**				
Plant / Location	**Cold Lake - Maskwa**				
Start Time (MST)	11:33		End Time (MST)	15:17	

Calculated Conc. ppb	Indicated Response ppb	Correction Factor
0	0	n/a
170	168	1.0106
399	398	1.0032
748	749	0.9981

Correlation Coefficient	(≥ 0.995)	0.999987
Slope	(0.85 to 1.15)	1.002548
Intercept	(± 3% F.S.)	-1.239285



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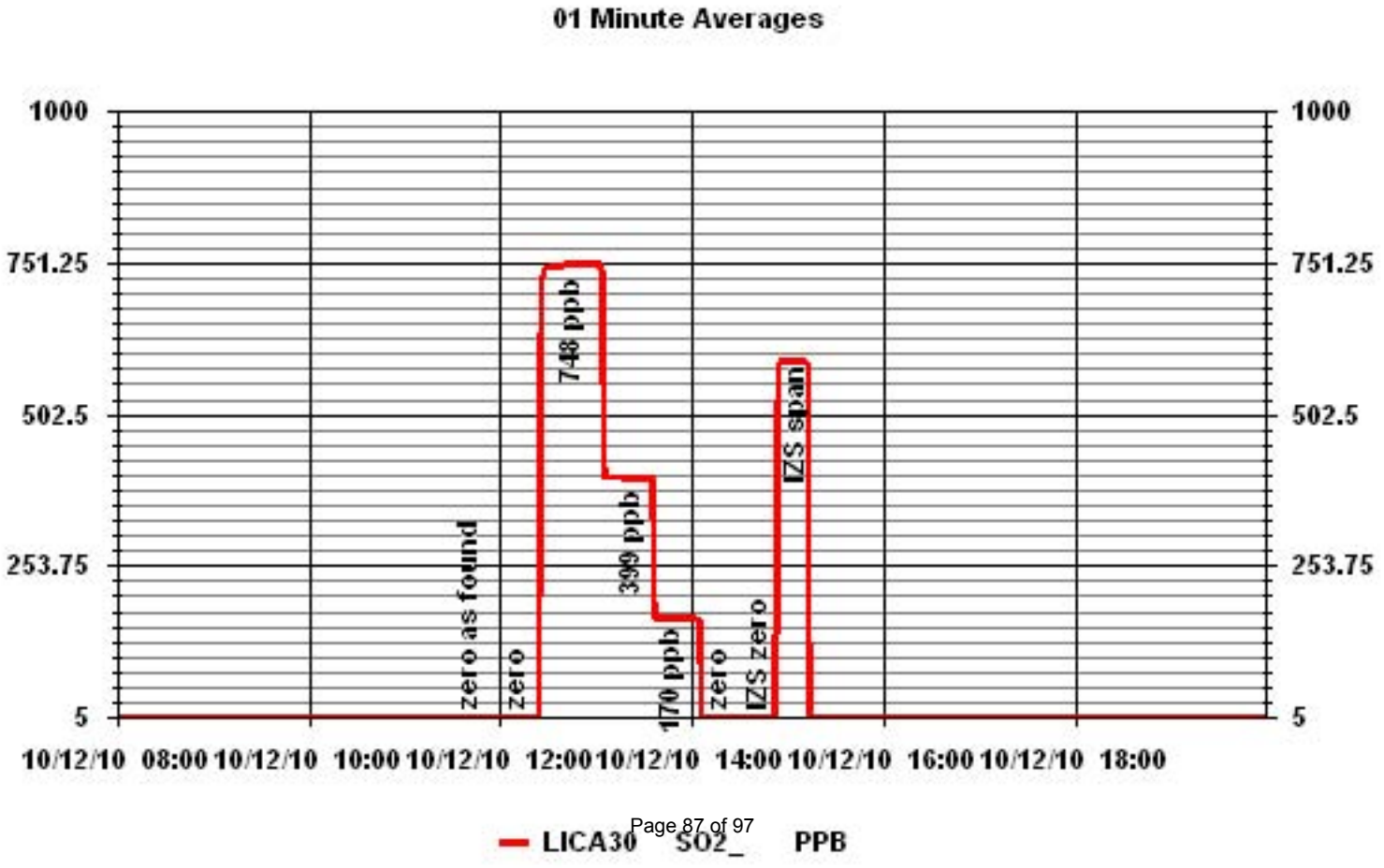

01 Minute Averages
1000
751.25
502.5
253.75
5
zero as found
zero
748 ppb
399 ppb
170 ppb
zero
IZS zero
IZS span
10/12/10 08:00
10/12/10 10:00
10/12/10 12:00
10/12/10 14:00
10/12/10 16:00
10/12/10 18:00
LICA30 SO2_ PPB

Hydrogen Sulphide

H_2S Calibration Report

Station Information

Calibration Date	October 12, 2010		Previous Calibration	September 15, 2010	
Company	**Lakelnad Industry & Community Association**				
Plant / Location	**Cold Lake - Maskwa**				
Start Time (MST)	11:33		End Time (MST)	14:52	
Reason:	Monthly Calibration				
Barometric Pressure	947	mBar	Station Temperature	23	Deg C
Cal Gas	10.6	ppm	Cal Gas Install date	05/12/2011	
DAS Output Voltage	0 - 1	Volts			

Equipment Information

Analyzer Make / Model:	API 101E	S/N :	511	Method:	Fluorescent
Converter Make / Model:	Internal	S/N :	N/A		
Calibrator Make / Model:	API 700	S/N :	831	Method:	Dilution
DAS Make / Model:	ESC 8832	S/N :	AO 791		
Flow Meter:	API 700	S/N :	831		

Analyzer Settings

	Before Calibration				After Calibration			
Concentration Range			0 - 100	ppb				
Sample Flow / Box Temp	540	ccm	31.4	Deg C	537	ccm	32.7	Deg C
HVPS / Lamp Setting	552		2185		552		2182	
PMT / RxCell Temp	7.9	Deg C	50	Deg C	7.9	Deg C	50	Deg C
Converter / IZS Temp	314.5	Deg C	45	Deg C	314.8	Deg C	45	Deg C
Offset / Slope	30		0.964		30		0.964	

Calibration Data

Dilution Flow Rate	Source Gas Flow Rate	Calculated Concentration	Indicated Conc. (DAS)	Correction Factor
4998	0	0	0	N/A
4962	37.7	80	80	0.9991
4982	18.8	40	40	0.9962
4987	10.9	23	23	1.0051
4998	0	0	0	N/A
			Sum of Least Squares	0.9989
			New Correction Factor	0.9991

	Before Calibration	After Calibration
Auto Zero	1.0	-0.1
Auto Span	55	54
Sample Lines Connected		YES
Percent Change from Previous Calibration		-1.8%

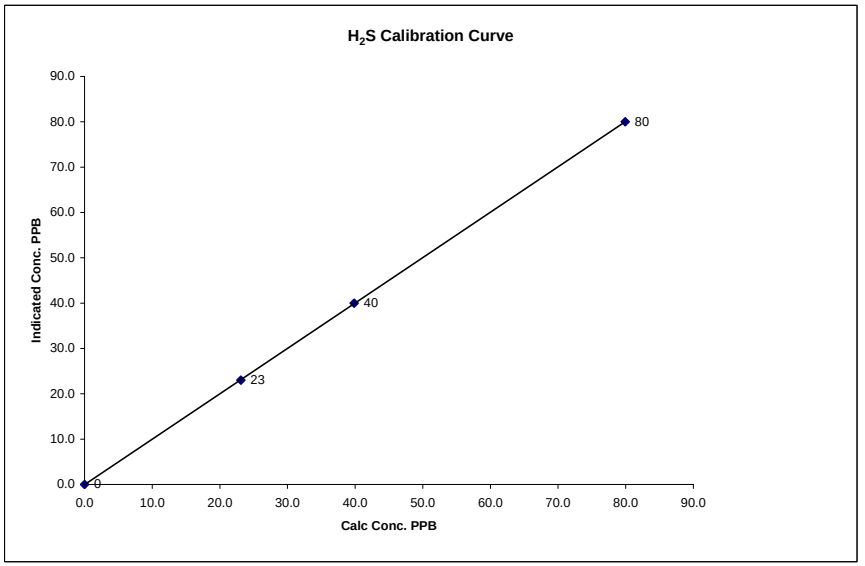
Calibration Performed by: Ting Xu

H_2S Calibration Curve

Calibration Date	October 12, 2010		
Company	**Lakelnad Industry & Community Association**		
Plant / Location	**Cold Lake - Maskwa**		
Start Time (MST)	11:33	End Time (MST)	14:52

Calculated Conc. ppb	Indicated Response ppb	Correction Factor
0	0	n/a
23	23	1.0051
40	40	0.9962
80	80	0.9991

Correlation Coefficient	(≥ 0.995)	0.999991
Slope	(0.85 to 1.15)	1.001542
Intercept	(± 3% F.S.)	-0.029113



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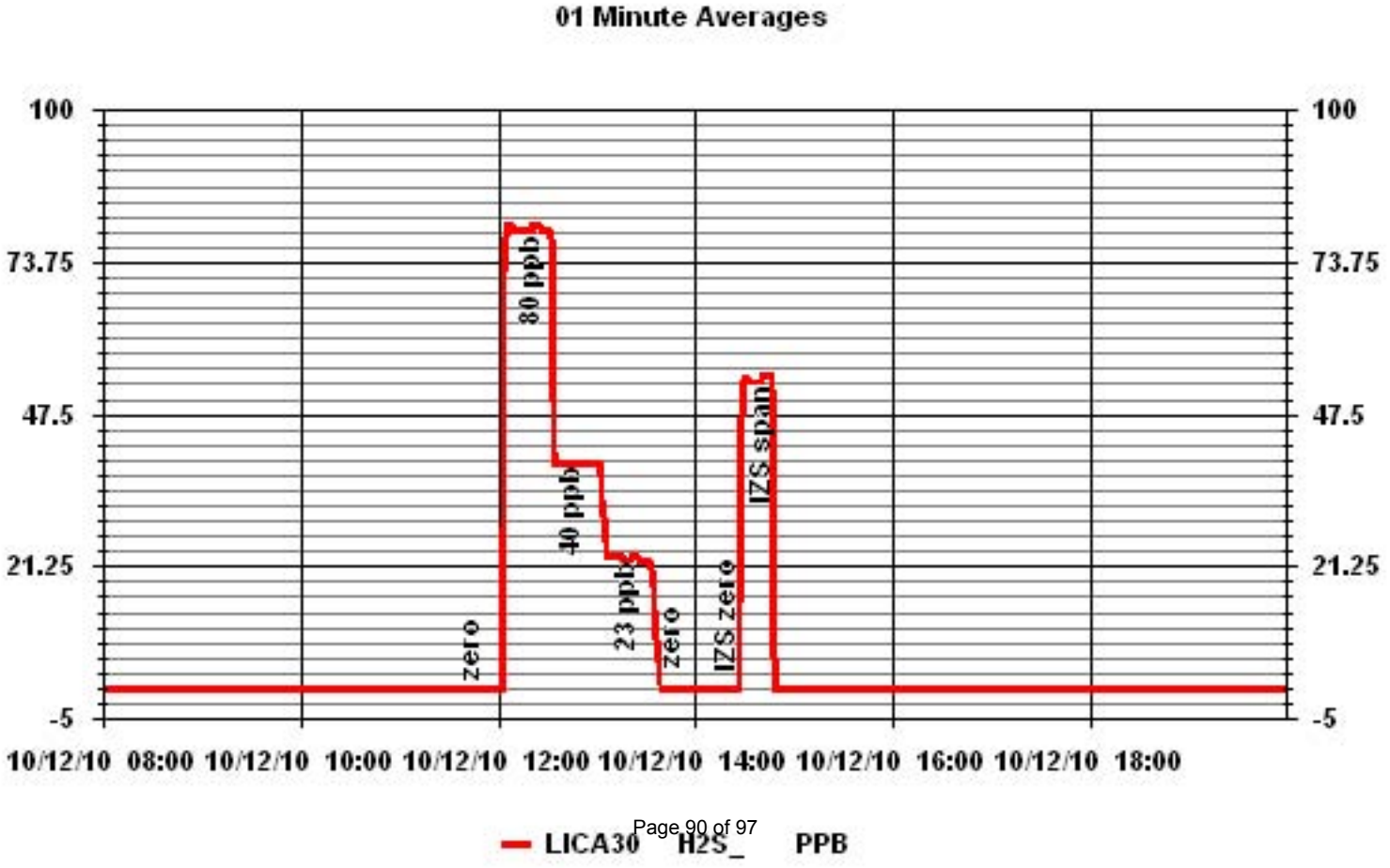

01 Minute Averages
100
73.75
47.5
21.25
-5
zero
80 ppb
40 ppb
23 ppb
zero
IZS zero
IZS span
10/12/10 08:00
10/12/10 10:00
10/12/10 12:00
10/12/10 14:00
10/12/10 16:00
10/12/10 18:00
LICA30_H2S_ PPB

Total Hydrocarbons

THC Calibration Report

Station Information

Calibration Date:	October 13, 2010	Previous Calibration	September 15, 2010
Company:	Lakeland Industry & Community Association		
Plant / Location:	Cold Lake - Maskwa		
: (MST)	8:41	End Time (MST)	12:24
Reason:	Monthly Calibration		
Barometric Pressure:	943 mBar	Station Temperature:	22 Deg C
Calibrator:	API 700	S/N:	831
Cal Gas Concentration:	207 Prop/ 602 Meth/1171.25THC ppm	Cal Gas Expiry Date:	August 21, 2011
DAS make & Model:	ESC 8832	S/N :	AO 791
Output Voltage Range:	0 - 10 VDC		

Analyzer Information

Make / Model	TECO 51C-LT	S/N :	436609738	Method	Flame Ionization

Analyzer Settings

	Before Calibration		After Calibration	
Concentration Range	0 -50	ppm	0 - 50	ppm
Sample Pressure	7.5	psi	7.5	psi
Hydrogen Pressure	8	psi	8	psi
Air Pressure	20	psi	20	psi

Calibration Data

Dilution Flow	Source Gas Flow	Calculated Concentration	Indicated Concentration	Correction Factor
1999	0.0	0.0	0.0	N/A
1999	70.0	39.6	40.4	0.9809
1999	70.0	39.6	39.9	0.9931
1998	35.0	20.2	20.3	0.9933
1998	20.0	11.6	11.6	1.0007
1998	0	0.0	0.0	N/A
			Correction Factor:	0.9931

Previous Calibration Correction Factor:	0.9931	
Current Correction Factor Before Span Adjust:	0.9931	
Percent Change:	0.00%	

IZS Calibration Data

	Before Calibration	After Calibration
Auto Zero	0.0	0.0
Auto Span	34.1	33.6
Sample Lines Connected		YES

Cylinder Pressures		
Span	900	psi
Hydrogen	900	psi
Zero Air	32	psi

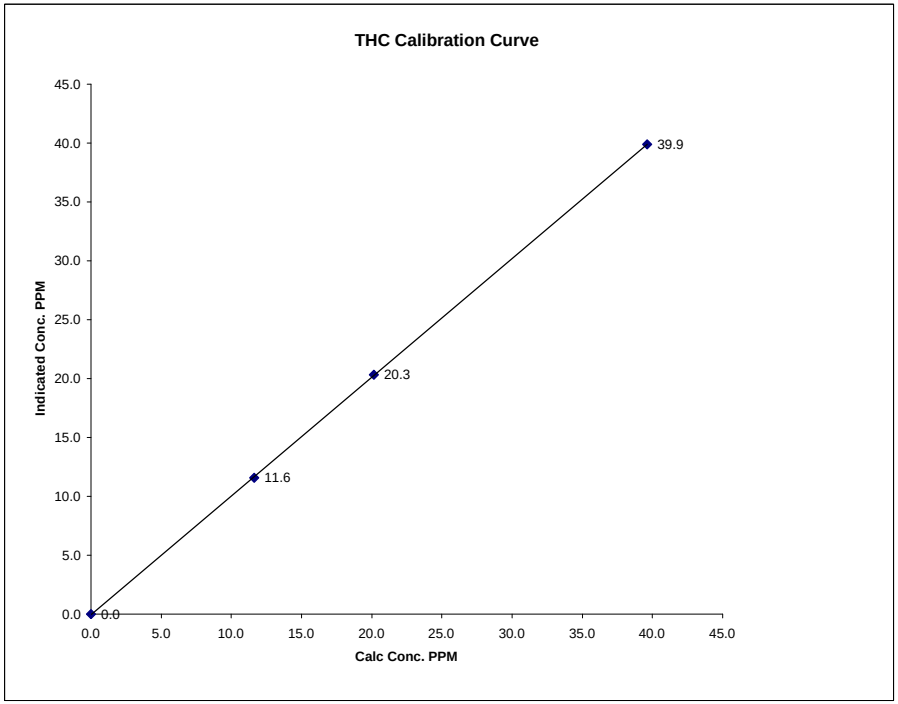
Calibration Performed by: Ting Xu

THC Calibration Curve

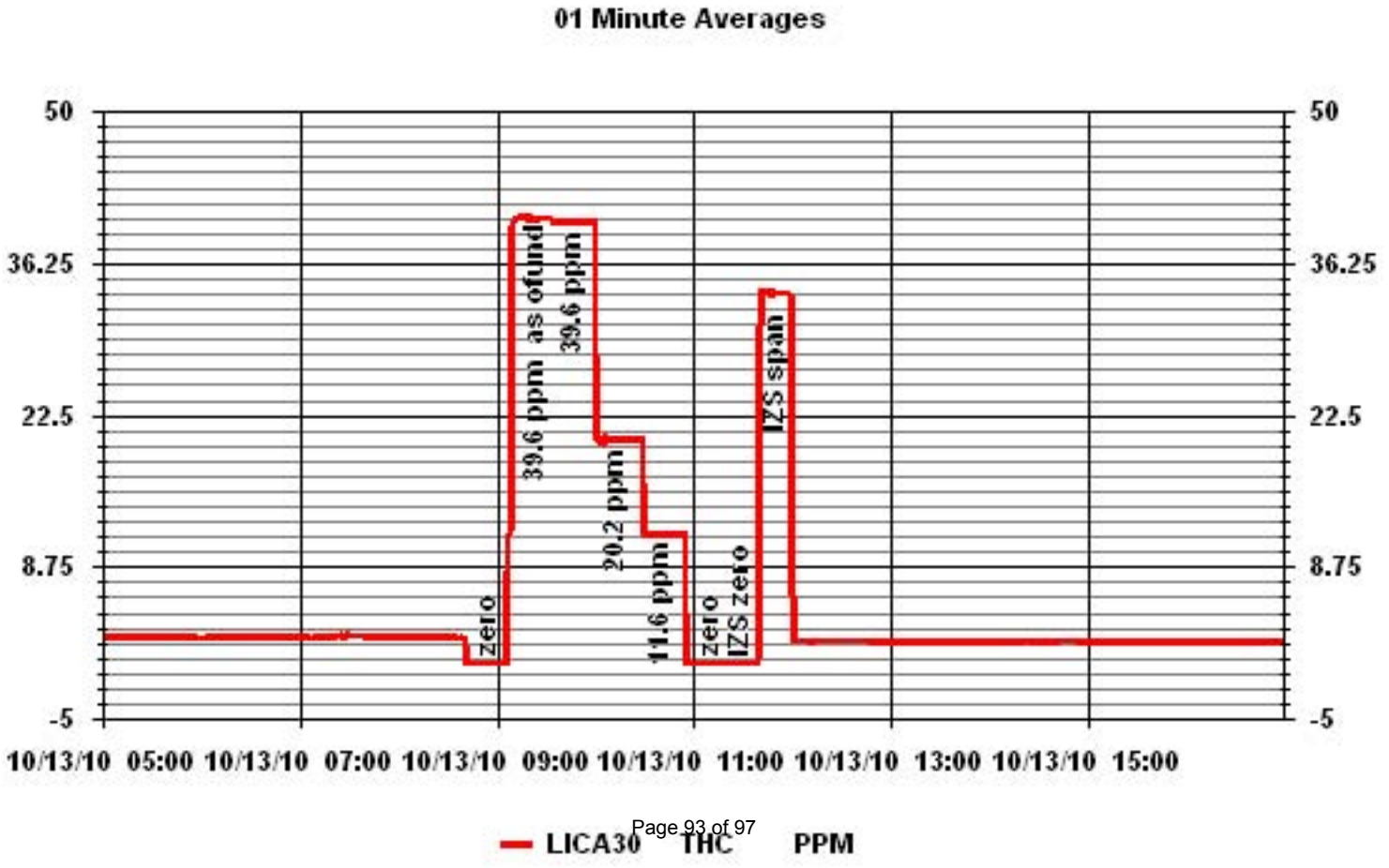
Calibration Date	October 13, 2010		
Company	Lakeland Industry & Community Association		
Plant / Location	Cold Lake - Maskwa		
Start Time (MST)	8:41	End Time (MST)	12:24

Calculated Conc. ppm	Indicated Response ppm	Correction Factor
0.0	0.0	
11.6	11.6	1.0007
20.2	20.3	0.9933
39.6	39.9	0.9931

Correlation Coefficient	(≥ 0.995)	0.999994
Slope	(0.85 to 1.15)	1.007546
Intercept	(± 3% F.S.)	-0.034409



Notes:


01 Minute Averages
50
36.25
22.5
8.75
-5
zero
39.6 ppm as ofund
39.6 ppm
20.2 ppm
11.6 ppm
zero
IZS zero
IZS span
10/13/10 05:00
10/13/10 07:00
10/13/10 09:00
10/13/10 11:00
10/13/10 13:00
10/13/10 15:00
LICA30 THC PPM

Nitrogen Dioxide

NOx - NO- NO_2 Calibration Report

Station Information

Calibration Date	October 13, 2010		Previous Calibration	September 15, 2010	
Company	LICA		Plant/Location	Maskwa	
Start Time (MST)	8:06		End Time (MST)	14:33	
Reason:	Monthly Calibration			Other	
Barometric Pressure	943 mmHg	Station Temperature	22 Deg C	MFCF	1
Cal Gas Concentration	NOx 50.8 ppm	NO 50.4 ppm	Cal Gas Expiry date	05-Aug-12	
DAS Output Voltage	0 - 1 Volts		Chart Rec. Output	NA Volts	

Equipment Information

Analyzer Make / Model:	API 200E	S/N :	594	Method:	Chemiluminescent
Calibrator Make / Model:	Environics 6100	S/N:	4760		
DAS Make / Model:	ESC 8832	S/N :	AO 791		
Chart Recorder Make / Model:	NA	S/N:	NA		
Flow Meter:	Environics 6100	S/N :	4760		

Analyzer Settings

	Before Calibration					After Calibration			
Concentration Range				0-1000			ppb		
Sample Flow/Conv. Temp	457	ccm	315.5	Deg C		456	ccm	314.7	Deg C
Ozone Flow / Vacuum	79	ccm	5.7	"Hg-A		79	ccm	5.6	"Hg-A
HVPS / A ZERO	767	Volts	16.8	MV		767	Volts	17.1	MV
Rx/ Temp / PMT Temp	50.0	Deg C	6.5	Deg C		50.0	Deg C	6.6	Deg C
Box Temp / IZS Temp	30.4	Deg C	45.3	Deg C		30.7	Deg C	45.2	Deg C
Offset	-0.2	NOx	-0.1	NO		0.4	NOx	0.3	NO
Slope	1.106	NOx	1.095	NO		1.089	NOx	1.079	NO
NO_2 COEF / Conv Efficency	NA	NO2	0.994			NA	NO2	0.994	

Dilution Calibration Data

Dilution Air Flow Rate	Source Flow Rate	O3 Set Point	Calculated Concentration			Indicated Concentration			Correction Factor	
			NOx	NO	NO2	NOx	NO	NO2	NOx	NO
4994	0.0		0	0	0	1	1	1	-----	-----
4994	0.0	-----	0	0	0	0	0	1	-----	-----
4920	74.2	-----	755	749	-----	765	757	8	0.9866	0.9892
4920	74.2	-----	755	749	-----	754	749	5	1.0010	0.9997
4960	34.6	-----	352	349	-----	354	351	3	0.9941	0.9947
4974	19.8	-----	201	200	-----	203	201	2	0.9922	0.9942
4996	0.0	-----	0	0	0	0	0	0	-----	-----

Gas Phase Titration Calibration Data

Dilution Air Flow Rate	Source Flow Rate	O3 Set Point	Calculated Concentration			Indicated Concentration			NO_2 Correction Factor	NO2 Conv Efficency
			NOx	NO	NO2	NOx	NO	NO2		
4919	74.2	-----	755	749	-----	755	749	6	-----	-----
4919	74.2	600	755	-----	558	755	197	558	1.0018	100.00%
4919	74.2	300	755	-----	285	757	470	287	0.9965	100.72%
4919	74.2	150	755	-----	147	756	608	148	1.0000	100.71%

Linearity			Sum of Least Squares	NOx=	0.999	NO=	0.999	NO2= 0.998
OK?	Yes	No	Correction Factors:	NOx=	1.0010	NO=	0.9997	NO2= 1.0018
						Average Converter Efficiency=		100.48%

	Before Calibration					After Calibration			
Auto Zero	0.6	NOx	1.0	NO2		1.1	NOx	0.6	NO2
Auto Span	728	NOx	716	NO2		718	NOx	706	NO2
				Sample Lines Connected		YES			

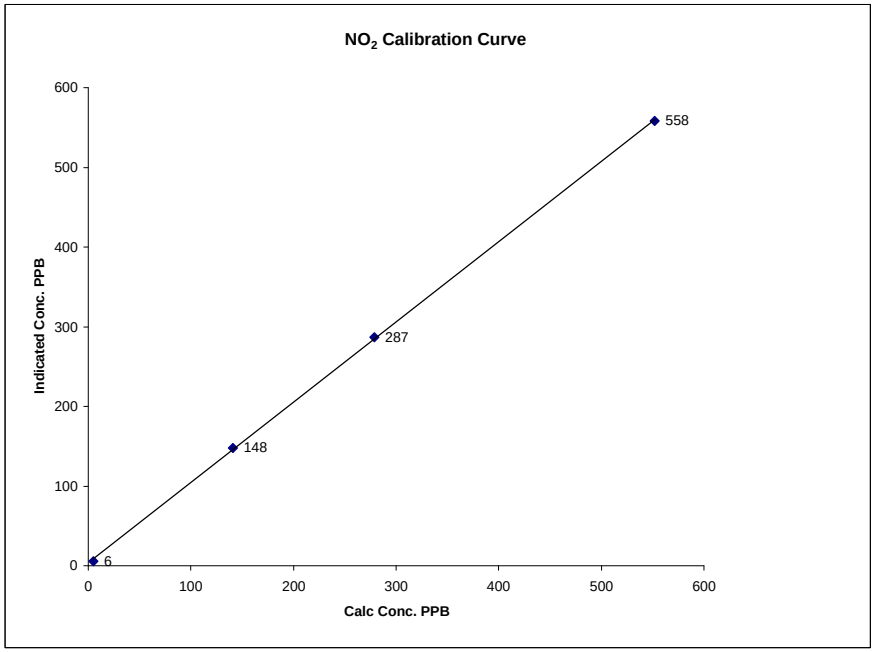
Notes

Calibration Performed by: Ting Xu

NO_2 Calibration Curve

Calibration Date	October 13, 2010		
Company	LICA		
Plant / Location	Maskwa		
Start Time (MST)	8:06	End Time (MST)	14:33

Calculated Conc. ppb	Indicated Response ppb	Correction Factor	Correlation Coefficient (≥ 0.995)	0.999875
			Slope (0.85 to 1.15)	1.007096
5	6	N/A	Intercept (± 3% F.S.)	3.76674
141	148	0.9527		
279	287	0.9721		
552	558	0.9892		

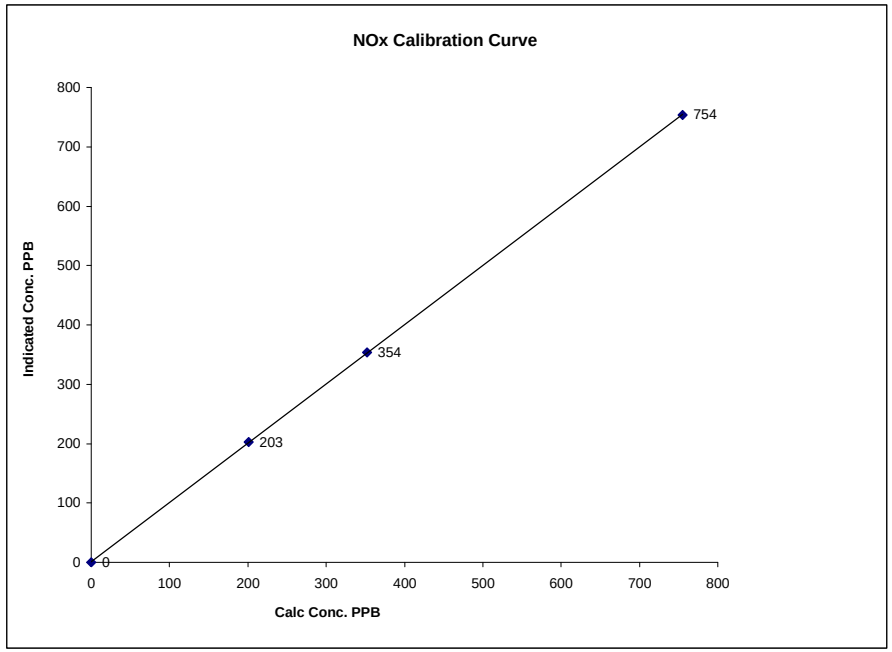


Notes: No CE gain adjustment.

NOx Calibration Curve

Calibration Date	October 13, 2010				
Company	LICA				
Plant / Location	Maskwa				
Start Time (MST)	8:06	End Time (MST)	14:33		

Calculated Conc. ppb	Indicated Response ppb	Correction Factor	Correlation Coefficient (≥ 0.995)	0.999985
			Slope (0.85 to 1.15)	0.998477
0	0	N/A	Intercept (± 3% F.S.)	1.22783
201	203	0.9922		
352	354	0.9941		
755	754	1.0010		

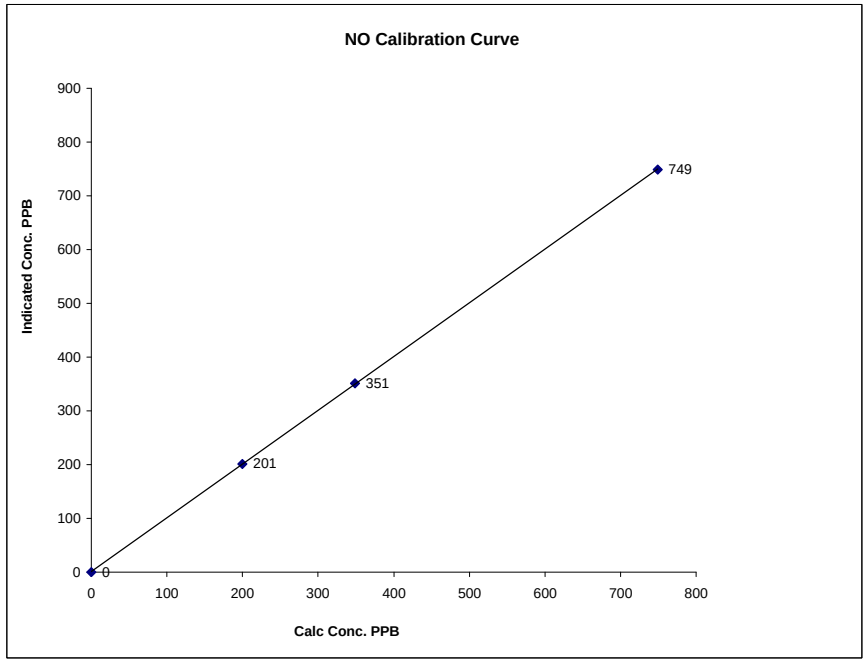


Notes:

NO Calibration Curve

Calibration Date	October 13, 2010				
Company	LICA				
Plant / Location	Maskwa				
Start Time (MST)	8:06	End Time (MST)	14:33		

Calculated Conc. ppb	Indicated Response ppb	Correction Factor	Correlation Coefficient (≥ 0.995)	0.999993
			Slope (0.85 to 1.15)	0.997735
0	0	N/A	Intercept (± 3% F.S.)	3.3047
200	201	0.9942		
349	351	0.9947		
749	749	0.9997		



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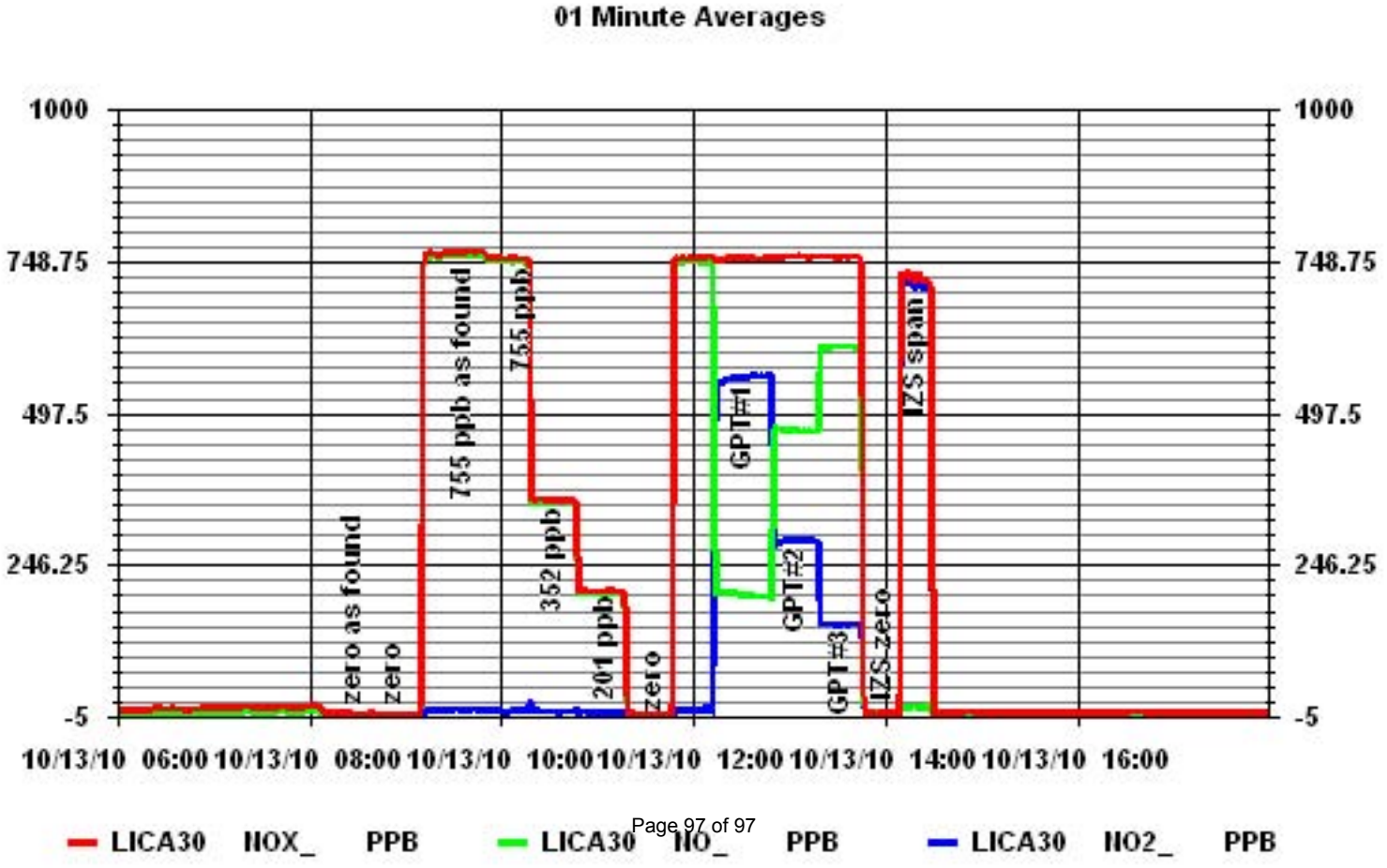

01 Minute Averages
1000
748.75
497.5
246.25
-5
zero as found
zero
755 ppb as found
755 ppb
352 ppb
201 ppb
zero
GPT#1
GPT#2
GPT#3
IZS-zero
IZS span
10/13/10 06:00
10/13/10 08:00
10/13/10 10:00
10/13/10 12:00
10/13/10 14:00
10/13/10 16:00
LICA30 NOX_ PPB
LICA30 NO_ PPB
LICA30 NO2_ PPB

Lakeland Industry & Community Association

St. Lina Monitoring Site
Ambient Air Monitoring
Data Report
For
October 2010

Prepared By:

November 9, 2010

Lakeland Industry & Community Association
St. Lina
Ambient Air Monitoring

Table of Contents

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: St. Lina
Data Period: October 2010

The monthly ambient data report:

- Prepared by Lily Lin
- Reviewed by Craig Snider

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.

The calibrations conducted at the LICA – St. Lina Air Monitoring Stations conform to the following Maxxam Standard Operation Procedures:

- CAL SOP-00211
- CAL SOP-00209
- CAL SOP-00213
- CAL SOP-00214
- CAL SOP-00208
- CAL SOP-00215

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. All calibration's and maintenance conforms to the procedures outlined in the *Air Monitoring Directive, Appendix A-10, Section 1.6.*

MONTHLY CONTINUOUS DATA SUMMARY
LAKELAND INDUSTRY & COMMUNITY ASSOCIATION – ST. LINA

Continuous Ambient Monitoring – October 2010

LICA ST. LINA 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									
SO2 (PPB)	172	57	0	0	0.24	6	18	21, 22	16, 16.3	321(NW), 322(NW)	1.5	18	98.8
H2S (PPB)	10	3	0	0	0.02	1	VAR	VAR	VAR	VAR	0.2	8, 14	100.0
THC (PPM)	-	-	-	-	2.06	2.9	30	17	6.9	43(NE)	2.4	30	100.0
OZONE (PPB)	82	-	0	-	24.96	43	VAR	VAR	VAR	VAR	39.3	9	75.4
NOx (PPB)	-	-	-	-	2.19	17	18	22	16.3	322(NW)	7.6	30	100.0
NO (PPB)	-	-	-	-	0.16	5	30, 31	VAR	VAR	VAR	1.4	30	100.0
NO_2 (PPB)	212	106	0	0	2.01	17	18	22	16.3	322(NW)	6.8	18	100.0
PM2.5 (ug/m3)	-	30	-	0	4.76	19.4	28	10	12.8	329(NNW)	12.8	28	100.0
TEMPERATURE (DEGREE C)	-	-	-	-	6.14	23.2	10	14	6.9	344(NNW)	15.3	7	100.0
BP (MILLIBAR)	-	-	-	-	928	944	1	VAR	VAR	VAR	941.1	1	100.0
RH (%)	-	-	-	-	60.76	90	VAR	VAR	VAR	VAR	89.8	24	100.0
PRECIPITATION (MM)	-	-	-	-	0.01	1.5	4	10	7	316(NW)	3.7	4	99.9
VECTOR WS (KPH)	-	-	-	-	10.21	24.2	17	12	-	283(W)	12.9	23	95.4
VECTOR WD (DEGREES)	-	-	-	-	291(WNW)	-	-	-	-	-	-	-	95.4

VAR-VARIOUS

General Monthly Summary

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 – St. Lina

Sulphur Dioxide (PPB)

- Analyzer make / model - API 100E, S/N: 468

No operational issue was observed during this month. The inlet filter was changed before the monthly calibration was started. Between October 15th and October 21st, the field tech was fixing the ozone analyzer, and since the ozone analyzer and the SO2 analyzer on the same relay, the SO2 analyzer was also put into the Maintenance mode. 9 hours of data were flagged as “Maintenance” mode. Data was corrected using daily zero information.

Hydrogen Sulphide (PPB)

- Analyzer make / model - API 101E, S/N: 510

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

Total HydroCarbon (PPM)

- Analyzer make / model –TECO 51C, S/N: 77021-384

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

General Monthly Summary

AQM STATION – LICA – St. Lina

Ozone (PPB)

- Analyzer make / model –Thermo 49i, S/N: 1002240371 replaced to Thermo 49C, S/N: 49C-54926-302

The analyzer span dropped on October 14th. The field tech performed troubleshooting by checking no loose wire and cleaning Cell A, Cell B and capaillary. Another daily calibration was run; the result was within the -10% of limited range. On October 19th, it was noticed the motherboard and interface showed status of alarm. Checked the inside cable connection, they were all OK. Then, the power was re-started. The alarms still could not be erased. It was determined that the interface board failed. The analyzer was replaced to Thermo 49C on October 20th. The analyzer was allowed to stabilize overnight. An installation calibration was performed on October 21st. Due to the failed interface board issue, the data was invalidated back to the last valid daily calibration date, which was October 13th. 183 hours of data were invalidated. The AMD operational time was 75.4%. Data was corrected using daily zero information.

Nitrogen Dioxide (PPB)

- Analyzer make / model - API 200E, S/N: 592

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

Particulate Matter 2.5 (UG/M3)

- Analyzer make / model – Thermo Scientific Series 1405F, S/N: 1405A208301003

No operational issue was observed during this month. Data was corrected using Alberta air quality guideline. If the data was between 0 to –3, the data was corrected to 0. If the data was below –3, the data was invalidated. No data was invalidated as all data were all above –3 ug/m3.

Temperature (Degree C)

- Analyzer make / model – Met One 060

No operational issue was observed during the month.

General Monthly Summary

AQM STATION – LICA – St. Lina

Barometric Pressure (Millibar)

- Analyzer make / model - Met One 092

No operational issue was observed during this month.

Relative Humidity (%)

- Analyzer make / model - Met One 083

No operational issue was observed during this month.

Precipitation (MM)

- Analyzer make / model - Met One 387

No operational issue was observed during this month. The tipping bucket was checked on October 26th, and the result was good.

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

- System make / model – Met 50.5, S/N: H12635

The wind system is reported as vector wind speed and vector wind direction.
Two hours of data on October 23rd were invalidated due to the system malfunction. Wind system failed on October 24th due to snow accumulation on the wind system. Performed troubleshooting by plugging the heater in on October 25th. 32 hours of data were invalidated.

Datalogger

- System make / model - ESC 8832, S/N: AO717
- Software make/version - ESC v 5.51a

The station is connected to a modem to allow for daily polling of the station.

General Monthly Summary

AQM STATION – LICA – St. Lina

Trailer
No issue was observed this month. The manifold was cleaned on October 21st. The throw-away filter in the Bard heating/cooling system were replaced on October 26th.

Air Quality Index (AQI)
The AQI data was adjusted to reflect regular monthly and daily calibrations, maintenance, and downtime. All AQI values recorded in October 2010 were within the Good range. The highest hourly concentration of PM2.5 was 19.4ug/m3 and an AQI value of 16, hour 10 on October 28th. The highest hourly concentration of Ozone was 43 ppb and an AQI value of 22 on various days and in various hours.

Continuous Monitoring

Monthly Summaries, Graphs & Wind Roses

Air Quality Index

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *ST. LINA*

OCTOBER 2010

AIR QUALITY INDEX (AQI)

MST

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

STATUS FLAG CODES	NA - NOT APPLICABLE

V - VARIOUS

AQI CLASS	OZONE (O_3)					PARTICULATE MATTER 2.5 (PM2)					NITROGEN DIOXIDE (NO_2)					SULPHUR DIOXIDE (SO_2)					FREQUENCY	
	HRS	%	MAX AQI	HR	DAY	HRS	%	MAX AQI	HR	DAY	HRS	%	MAX AQI	HR	DAY	HRS	%	MAX AQI	HR	DAY	HRS	%
VERY POOR (101-255)	0	0.0%	-	-	-	0	0.0%	-	-	-	0	0.0%	-	-	-	0	0.0%	-	-	-	0	0.0%
POOR (51-100)	0	0.0%	-	-	-	0	0.0%	-	-	-	0	0.0%	-	-	-	0	0.0%	-	-	-	0	0.0%
FAIR (26-50)	0	0.0%	-	-	-	0	0.0%	-	-	-	0	0.0%	-	-	-	0	0.0%	-	-	-	0	0.0%
GOOD (1-25)	474	63.7%	22	VAR	VAR	54	7.3%	16	7, 9, 10	28	0	0.0%	-	-	-	0	0.0%	-	-	-	528	71.0%
OVERALL	474	63.7%	-	-	-	54	7.3%	-	-	-	0	0.0%	-	-	-	0	0.0%	-	-	-	528	71.0%
UNAVAILABLE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	216	29.0%

Sulphur Dioxide

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - ST. LINA

OCTOBER 2010

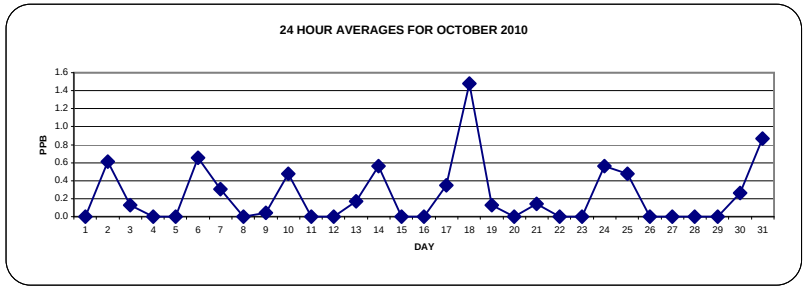
SULPHUR DIOXIDE (SO_2) hourly averages in ppb

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	**IZS**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
2	0	0	0	**IZS**	0	0	0	0	0	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	0.6	24
3	1	1	**IZS**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0.1	24
4	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
5	**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
6	0	0	1	1	0	0	1	1	0	0	0	0	0	2	2	1	1	1	0	0	1	2	**IZS**	1	2	0.7	24
7	1	1	0	1	0	0	0	1	1	1	0	0	0	0	0	0	1	0	0	0	0	**IZS**	0	0	1	0.3	24
8	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
9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	**IZS**	0	0	0	0	1	0.0	24
10	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	2	1	**IZS**	0	0	0	0	0	2	0.5	24
11	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
12	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
13	0	0	0	0	0	0	0	0	1	1	1	1	0	0	0	**IZS**	0	0	0	0	0	0	0	0	1	0.2	24
14	0	0	0	0	0	0	0	0	0	0	0	1	2	2	**IZS**	3	2	1	1	1	0	0	0	0	3	0.6	24
15	0	0	0	0	0	0	**M**	**M**	0	**M**	**M**	**M**	**M**	**M**	0	0	0	0	0	0	0	0	0	0	0	0.0	17
16	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
17	1	1	0	0	0	0	0	0	1	2	2	**IZS**	1	0	0	0	0	0	0	0	0	0	0	0	2	0.3	24
18	0	0	1	1	0	0	0	0	1	1	**IZS**	1	1	1	1	1	2	2	2	2	2	**6**	**6**	3	**6**	**1.5**	24
19	2	1	0	0	0	0	0	0	0	**IZS**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0.1	24
20	0	0	0	0	0	0	0	0	**C**	**C**	**C**	**C**	**C**	0	**M**	**M**	0	0	0	0	0	0	0	0	0	0.0	22
21	0	0	0	0	0	0	0	**IZS**	0	**C**	**C**	1	1	1	0	0	0	0	0	0	0	0	0	0	1	0.1	24
22	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
23	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
24	0	0	0	0	**IZS**	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.6	24
25	1	1	1	**IZS**	1	1	1	1	1	0	1	1	0	1	0	0	0	0	0	0	0	0	0	0	1	0.5	24
26	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
27	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
28	**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
29	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
30	0	0	0	0	0	0	0	0	0	0	0	0	0	2	3	1	0	0	0	0	0	**IZS**	0	0	3	0.3	24
31	0	0	0	0	0	0	0	0	0	1	1	3	3	3	1	1	1	2	1	2	**IZS**	0	1	0	3	0.9	24
HOURLY MAX	2	1	1	1	1	1	1	1	1	2	2	3	3	3	3	3	2	2	2	2	2	6	6	3			
HOURLY AVG	0.2	0.2	0.1	0.1	0.0	0.0	0.1	0.1	0.2	0.3	0.3	0.4	0.4	0.5	0.3	0.3	0.4	0.3	0.2	0.2	0.2	0.3	0.3	0.2			

STATUS FLAG CODES

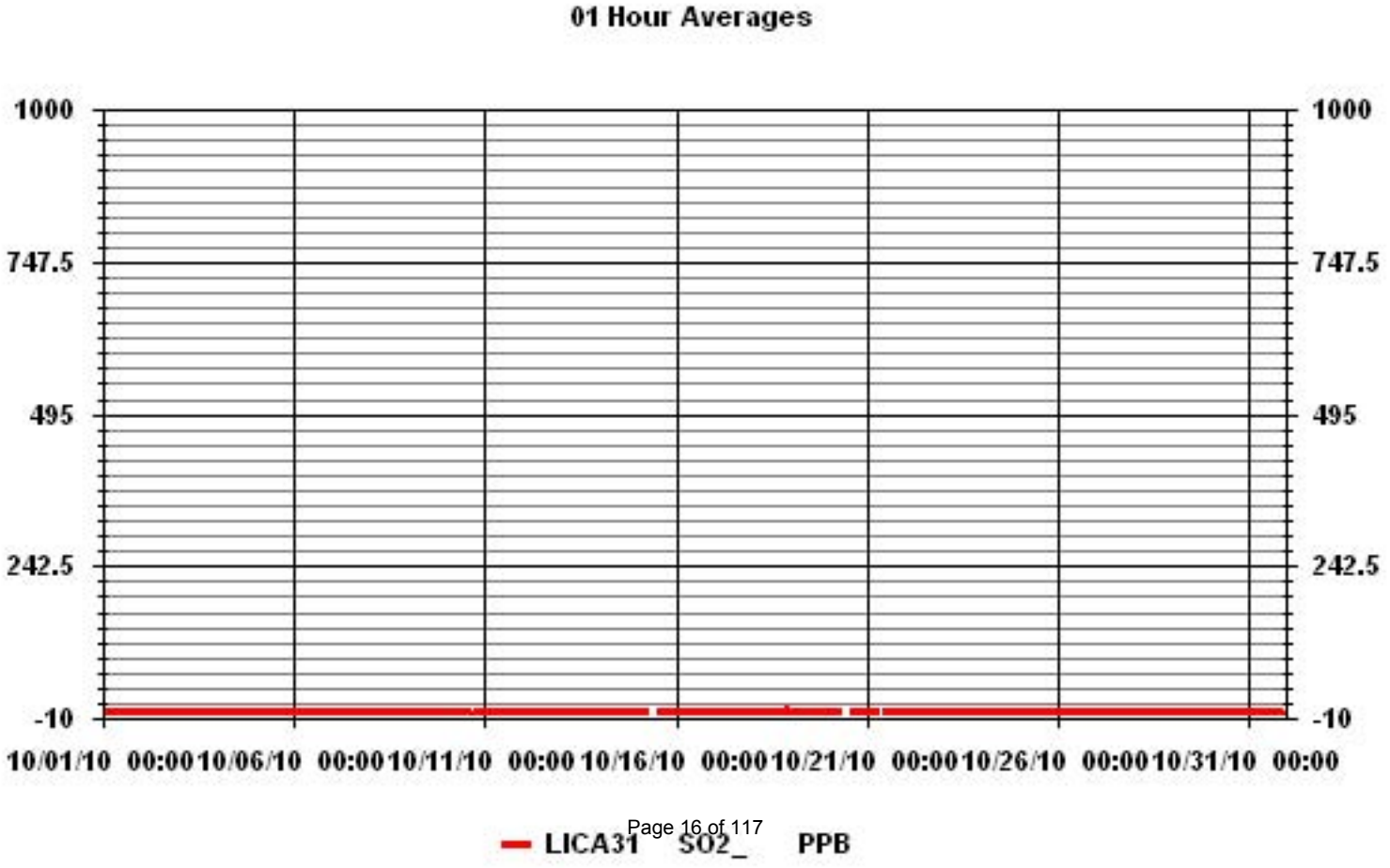
S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	- MAINTENANCE
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE



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:	126						
MAXIMUM 1-HR AVERAGE:	6	PPB	@ HOUR(S)	21, 22	ON DAY(S)	18	
MAXIMUM 24-HR AVERAGE:	1.5	PPB			ON DAY(S)	18	
IZS CALIBRATION TIME:	31	HRS	OPERATIONAL TIME:		735	HRS	
MONTHLY CALIBRATION TIME:	7	HRS	AMD OPERATION UPTIME:		98.8	%	
STANDARD DEVIATION:	0.61		MONTHLY AVERAGE:		0.24	PPB	


01 Hour Averages
1000
747.5
495
242.5
-10
10/01/10 00:00
10/06/10 00:00
10/11/10 00:00
10/16/10 00:00
10/21/10 00:00
10/26/10 00:00
10/31/10 00:00
LICA31 SO2_ PPB

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *ST. LINA*

OCTOBER 2010

SULPHUR DIOXIDE MAX instantaneous maximum in ppb

MST

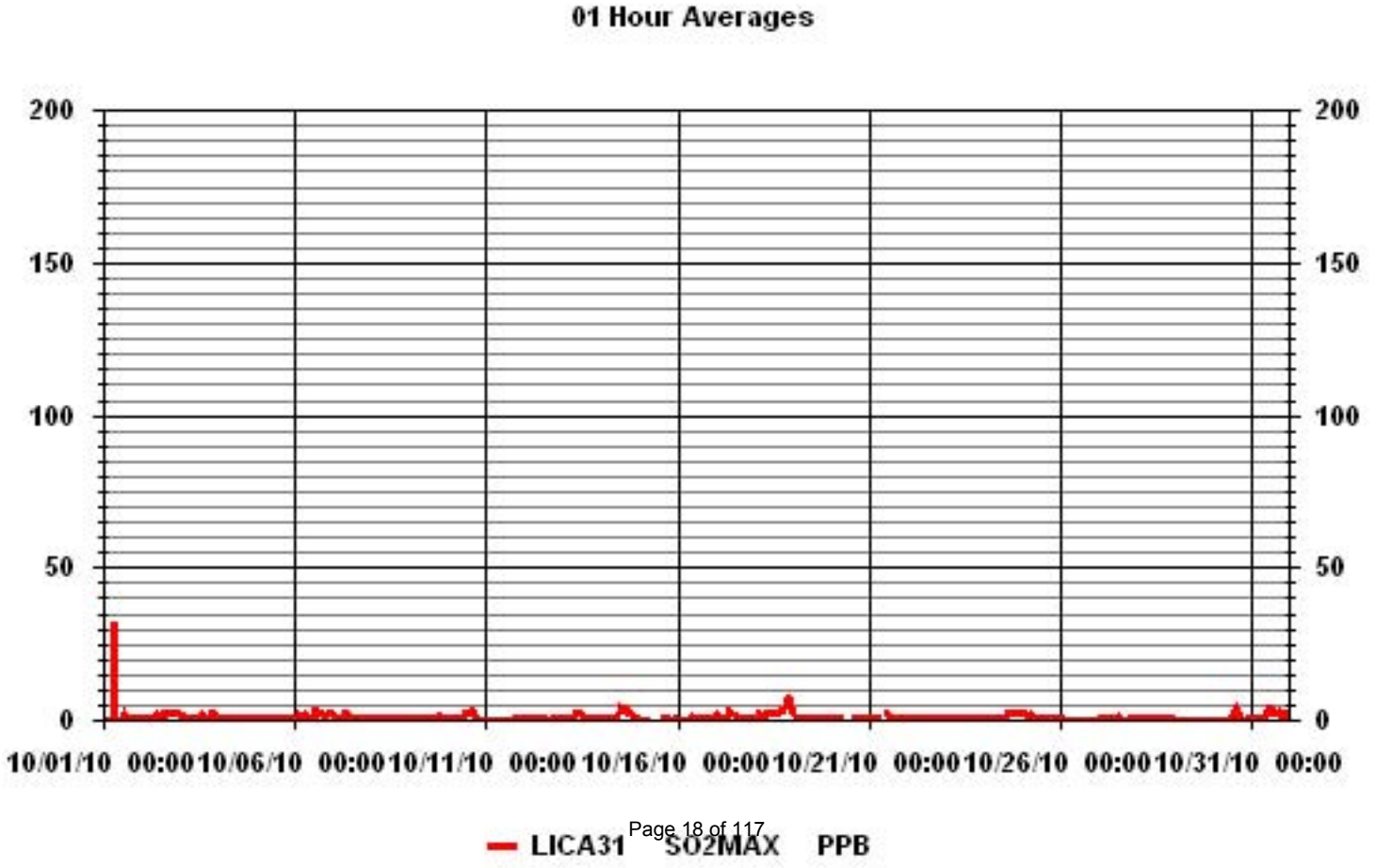
HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	0	0	0	0	**IZS**	0	0	**32**	0	0	0	0	0	2	1	1	1	1	1	1	1	1	1	1	**32**	1.9	24
2	1	1	1	**IZS**	1	1	1	1	1	2	1	1	2	1	1	2	2	2	2	2	2	2	2	2	2	1.5	24
3	1	2	**IZS**	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	2	2	1	2	1.2	24
4	1	**IZS**	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	24
5	**IZS**	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	**IZS**	1	1.0	24
6	1	1	2	1	1	1	2	1	1	1	1	1	1	3	3	2	2	2	1	1	2	3	**IZS**	2	3	1.6	24
7	2	1	1	1	1	1	1	2	2	2	1	1	1	1	1	1	1	1	1	1	1	**IZS**	1	1	2	1.2	24
8	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	**IZS**	1	1	1	1	1.0	24
9	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	**IZS**	1	1	1	1	2	1.0	24
10	1	1	1	1	1	1	1	1	1	1	2	2	2	2	2	3	3	1	**IZS**	0	0	0	0	0	3	1.2	24
11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**IZS**	1	1	1	1	1	1	1	0.3	24
12	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	**IZS**	0	1	1	1	1	1	1	1	0.9	24
13	1	1	1	1	1	1	1	2	2	2	2	2	2	1	1	**IZS**	1	1	1	1	1	1	1	1	2	1.3	24
14	1	1	1	1	1	1	1	1	1	1	1	2	4	3	**IZS**	4	4	2	2	2	1	1	1	1	4	1.7	24
15	1	0	0	0	0	0	**M**	**M**	0	**M**	**M**	**M**	**M**	**M**	**M**	1	1	1	1	1	0	0	1	1	1	0.5	16
16	0	0	0	0	0	0	0	0	1	0	1	1	**IZS**	0	1	1	1	1	1	1	1	1	1	1	1	0.6	24
17	2	1	1	1	1	1	1	0	3	3	2	**IZS**	2	1	1	1	1	1	1	1	1	1	1	1	3	1.3	24
18	1	1	2	2	1	1	1	1	2	2	**IZS**	2	2	2	2	2	3	3	3	4	5	7	8	5	8	2.7	24
19	3	2	1	1	1	1	1	1	1	**IZS**	1	1	1	1	1	1	1	1	1	1	1	1	1	1	3	1.1	24
20	1	1	1	1	1	1	1	1	**C**	**C**	**C**	**C**	**C**	1	**M**	**M**	1	1	1	1	1	1	1	1	1	1.0	22
21	1	1	1	1	1	1	1	**IZS**	1	**C**	**C**	2	2	1	1	1	1	1	1	1	1	1	1	1	2	1.1	24
22	1	1	1	1	1	1	**IZS**	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	24
23	1	1	1	1	1	**IZS**	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	24
24	1	1	1	1	**IZS**	1	1	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	2	2	1.4	24
25	2	2	2	**IZS**	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1.2	24
26	1	1	**IZS**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.1	24
27	0	**IZS**	1	1	1	1	1	1	1	1	0	0	1	0	0	0	0	0	0	0	1	1	0	1	1	0.5	24
28	**IZS**	0	0	0	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	**IZS**	1	0.8	24
29	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
30	0	0	0	0	0	0	0	0	0	0	0	1	1	3	4	3	1	1	0	0	0	**IZS**	1	1	4	0.7	24
31	1	1	1	1	1	1	1	1	1	2	2	5	4	4	3	2	2	3	2	3	**IZS**	1	3	1	5	2.0	24
HOURLY MAX	3	2	2	2	1	2	2	32	3	3	2	5	4	4	4	4	4	3	3	4	5	7	8	5			
HOURLY AVG	1.0	0.9	0.9	0.8	0.8	0.8	0.8	1.9	0.9	1.0	0.9	1.1	1.3	1.3	1.2	1.2	1.2	1.1	1.1	1.1	1.1	1.2	1.3	1.1			

STATUS FLAG CODES

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

MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:	568					
MAXIMUM INSTANTANEOUS VALUE:	32	PPB	@ HOUR(S)	7	ON DAY(S)	1
IZS CALIBRATION TIME:	31	HRS	OPERATIONAL TIME:		734	HRS
MONTHLY CALIBRATION TIME:	7	HRS				
STANDARD DEVIATION:	1.43					


01 Hour Averages
200
150
100
50
0
10/01/10 00:00
10/06/10 00:00
10/11/10 00:00
10/16/10 00:00
10/21/10 00:00
10/26/10 00:00
10/31/10 00:00
LICA31 SO2MAX PPB

LICA31
SO2_ / WDR Joint Frequency Distribution (Percent)

October 2010

Distribution By % Of Samples

Logger Id : 31
Site Name : LICA31
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	6.17	4.06	3.91	4.96	4.21	5.42	4.81	6.47	6.02	6.77	6.02	3.46	4.51	7.37	13.85	11.89	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	6.17	4.06	3.91	4.96	4.21	5.42	4.81	6.47	6.02	6.77	6.02	3.46	4.51	7.37	13.85	11.89	

Calm : .00 %

Total # Operational Hours : 664

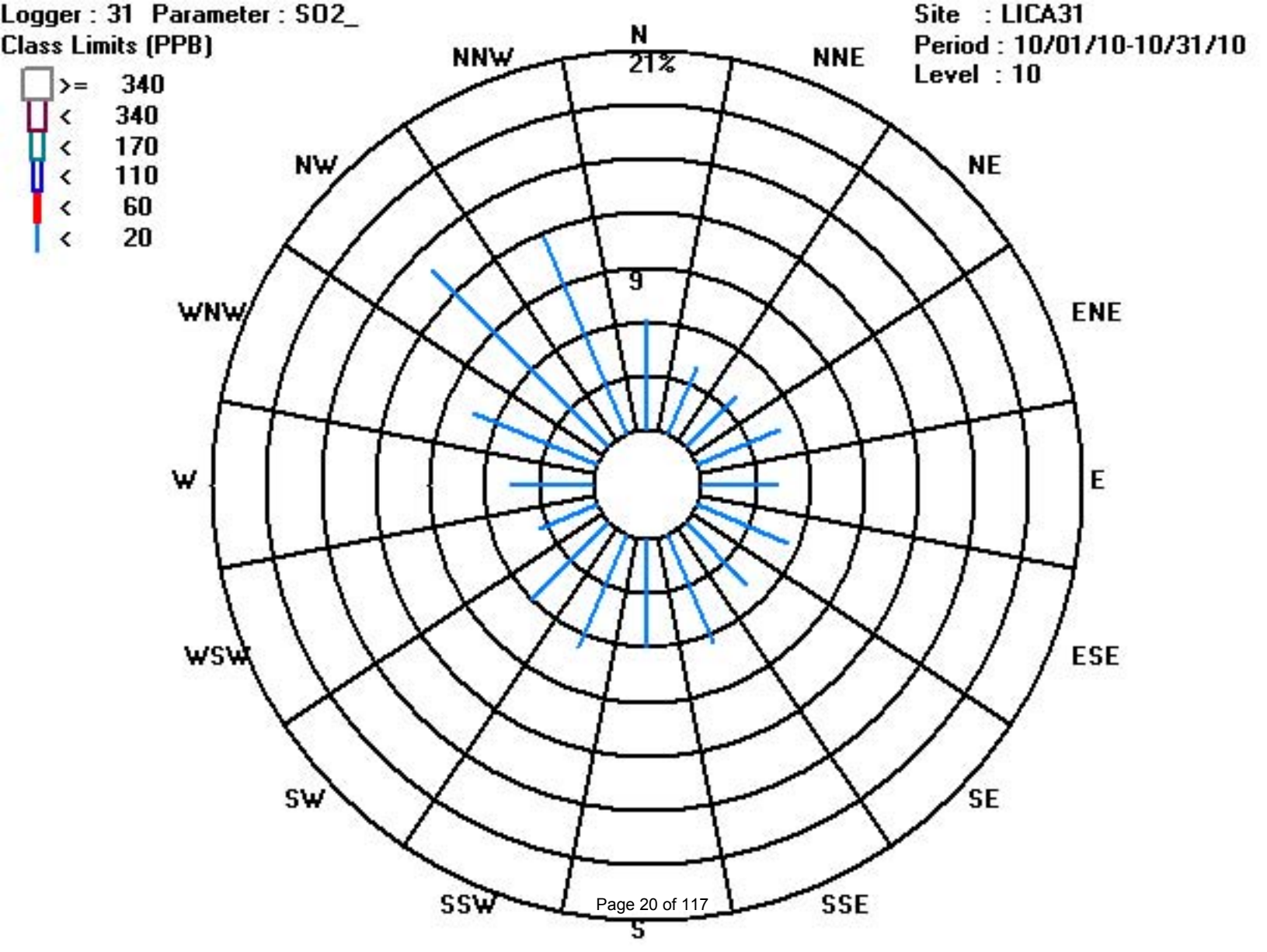
Distribution By Samples

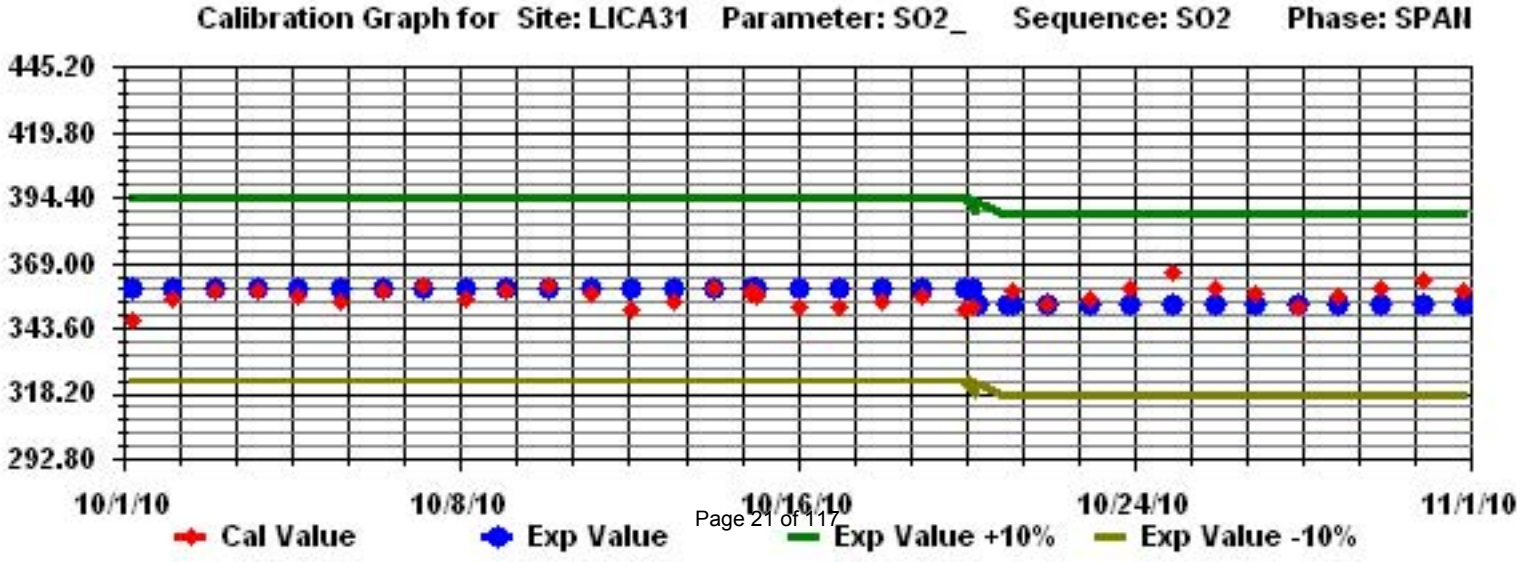
Direction

	Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
<	20	41	27	26	33	28	36	32	43	40	45	40	23	30	49	92	79	664
<	60																	
<	110																	
<	170																	
<	340																	
>=	340																	
	Totals	41	27	26	33	28	36	32	43	40	45	40	23	30	49	92	79	

Calm : .00 %

Total # Operational Hours : 664


Logger : 31 Parameter : SO2_
Class Limits (PPB)
>= 340
< 340
< 170
< 110
< 60
< 20
Site : LICA31
Period : 10/01/10-10/31/10
Level : 10
N
21%
NNE
NE
ENE
E
ESE
SE
SSE
S
SSW
SW
WSW
W
WNW
NW
NNW
9


Calibration Graph for Site: LICA31 Parameter: SO2_ Sequence: SO2 Phase: SPAN
445.20
419.80
394.40
369.00
343.60
318.20
292.80
10/1/10
10/8/10
10/16/10
10/24/10
11/1/10
Cal Value
Exp Value
Exp Value +10%
Exp Value -10%

Hydrogen Sulphide

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - ST. LINA

OCTOBER 2010

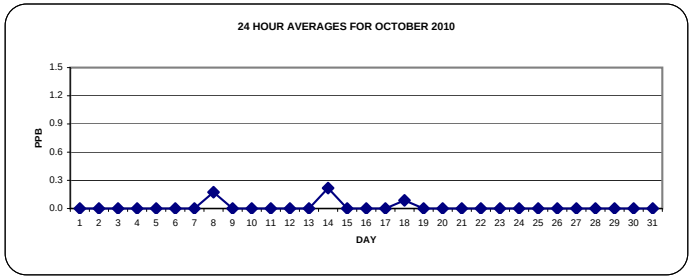
HYDROGEN SULPHIDE (H_2S) hourly averages in ppb

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

STATUS FLAG CODES

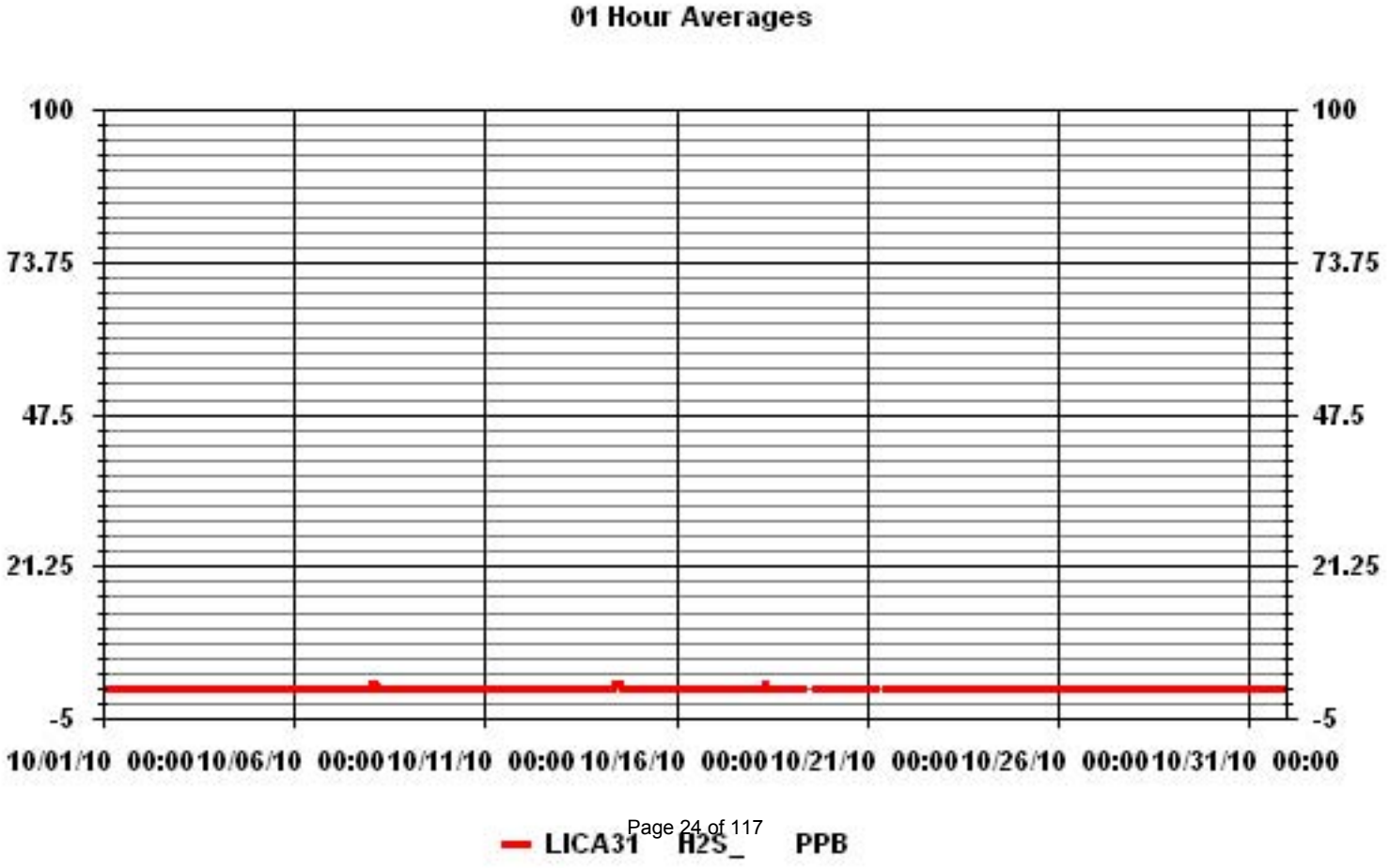
S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	- MAINTENANCE
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE



OBJECTIVE LIMIT: **ALBERTA ENVIRONMENT:** 1-HR 10 PPB | 24-HR 3 PPB

MONTHLY SUMMARY

NUMBER OF 1-HR EXCEEDENCES:	0					
NUMBER OF 24-HR EXCEEDENCES:	0					
NUMBER OF NON-ZERO READINGS:	11					
MAXIMUM 1-HR AVERAGE:	1	PPB	@ HOUR(S)	VAR	ON DAY(S)	VAR
MAXIMUM 24-HR AVERAGE:	0.2	PPB			ON DAY(S)	8, 14
				VAR-VARIOUS		
IZS CALIBRATION TIME:	32	HRS	OPERATIONAL TIME:		744	HRS
MONTHLY CALIBRATION TIME:	9	HRS	AMD OPERATION UPTIME:		100.0	%
STANDARD DEVIATION:	0.12		MONTHLY AVERAGE:		0.02	PPB


01 Hour Averages
100
73.75
47.5
21.25
-5
10/01/10 00:00
10/06/10 00:00
10/11/10 00:00
10/16/10 00:00
10/21/10 00:00
10/26/10 00:00
10/31/10 00:00
LICA31 H2S_ PPB

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *ST.LINA*

OCTOBER 2010

HYDROGEN SULPHIDE MAX instantaneous maximum in ppb

MST

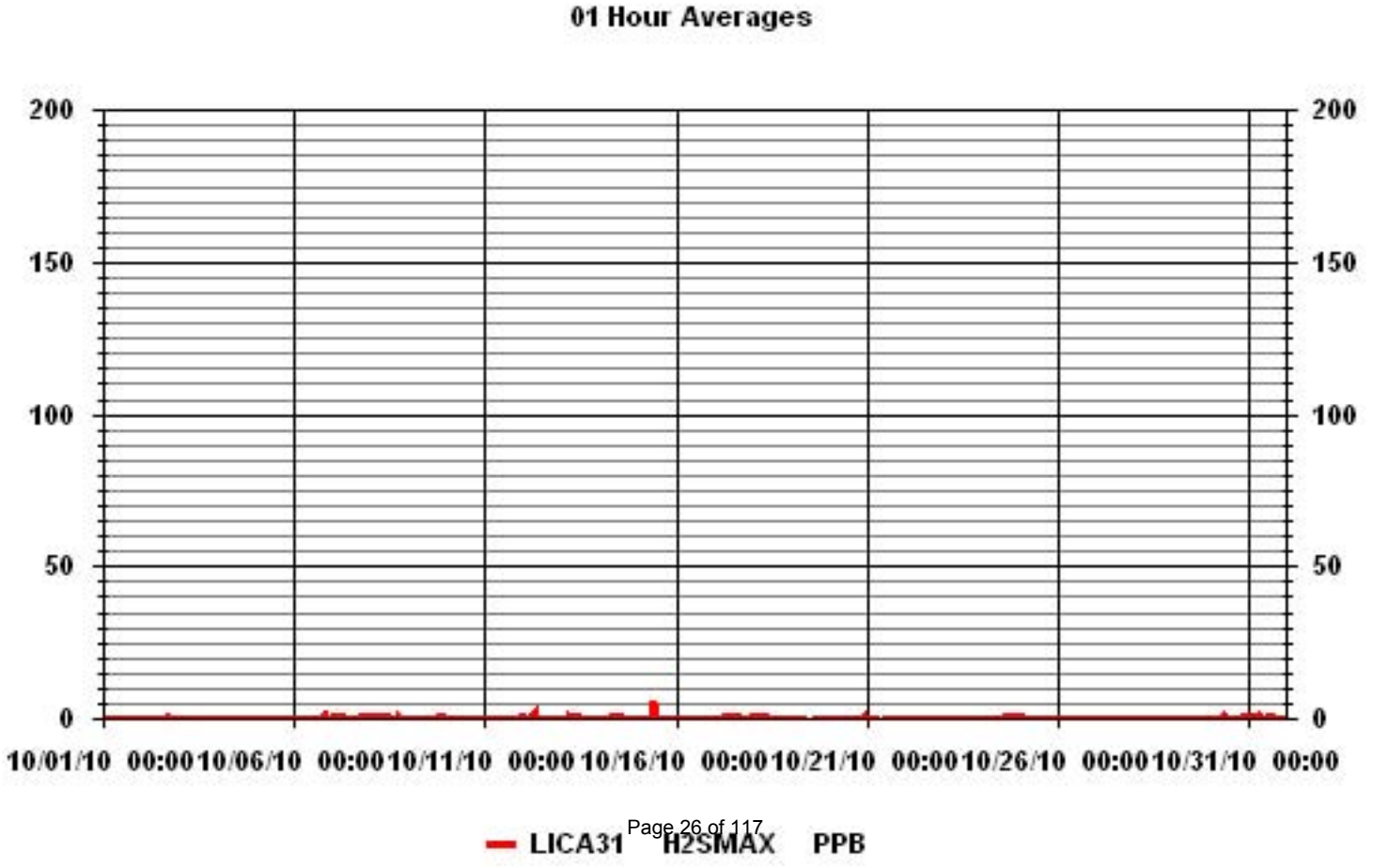
HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	0	0	0	0	**IZS**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
2	0	0	0	**IZS**	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	1	0.1	24
3	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
4	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
5	**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
6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	**IZS**	0	1	0.1	24
7	0	1	1	1	0	1	1	1	1	0	0	0	0	0	0	0	0	0	1	1	1	**IZS**	0	1	1	0.5	24
8	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	1	0	0	**IZS**	0	0	0	1	0.6	24
9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	**IZS**	0	0	1	1	1	0.1	24
10	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
11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**IZS**	0	0	0	0	0	1	1	0.0	24
12	1	1	0	0	0	0	1	2	0	0	0	0	0	0	0	0	**IZS**	0	0	0	0	0	0	0	2	0.2	24
13	0	0	0	0	1	0	1	1	1	1	1	1	1	0	0	**IZS**	0	0	0	0	0	0	0	0	1	0.3	24
14	0	0	0	0	0	0	0	1	1	1	1	1	1	1	**IZS**	0	0	0	0	0	0	0	0	0	1	0.3	24
15	0	0	0	0	0	0	0	0	0	0	**6**	0	0	**IZS**	0	0	0	0	0	0	0	0	0	0	**6**	0.3	24
16	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
17	0	0	0	0	0	0	1	1	1	0	0	**IZS**	1	1	0	1	1	0	0	0	0	0	0	1	1	0.3	24
18	1	0	1	1	1	1	1	1	1	1	**IZS**	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.4	24
19	0	0	0	0	0	0	0	0	0	**C**	**C**	**C**	**C**	**C**	**C**	**C**	0	0	0	0	0	0	0	0	0	0.0	24
20	0	0	0	0	0	0	0	0	**IZS**	0	**P**	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0.0	23
21	0	0	0	0	0	0	0	**IZS**	0	**C**	**C**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
22	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
23	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
24	0	0	0	0	**IZS**	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	0.4	24
25	1	1	1	**IZS**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.1	24
26	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
27	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
28	**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
29	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
30	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	**IZS**	0	1	1	0.1	24
31	1	1	1	1	1	0	1	0	0	0	0	1	1	0	1	1	0	0	0	0	**IZS**	0	0	0	1	0.4	24
HOURLY MAX	1	1	1	1	1	1	1	2	1	1	6	1	1	1	1	1	1	1	1	1	1	1	1	1			
HOURLY AVG	0.2	0.2	0.2	0.1	0.1	0.1	0.2	0.3	0.2	0.1	0.3	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.0	0.1	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:	97					
MAXIMUM INSTANTANEOUS VALUE:	6	PPB	@ HOUR(S)	10	ON DAY(S)	15
IZS CALIBRATION TIME:	32	HRS	OPERATIONAL TIME:		743	HRS
MONTHLY CALIBRATION TIME:	9	HRS				
STANDARD DEVIATION:	0.41					


01 Hour Averages
200
150
100
50
0
10/01/10 00:00
10/06/10 00:00
10/11/10 00:00
10/16/10 00:00
10/21/10 00:00
10/26/10 00:00
10/31/10 00:00
LICA31 H2SMAX PPB

LICA31
H2S_ / WDR Joint Frequency Distribution (Percent)

October 2010

Distribution By % Of Samples

Logger Id : 31
Site Name : LICA31
Parameter : H2S_
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
< 3	5.82	4.02	3.88	4.92	4.32	5.37	4.77	6.41	5.97	6.71	6.26	4.17	4.47	7.61	13.73	11.49	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	5.82	4.02	3.88	4.92	4.32	5.37	4.77	6.41	5.97	6.71	6.26	4.17	4.47	7.61	13.73	11.49	

Calm : .00 %

Total # Operational Hours : 670

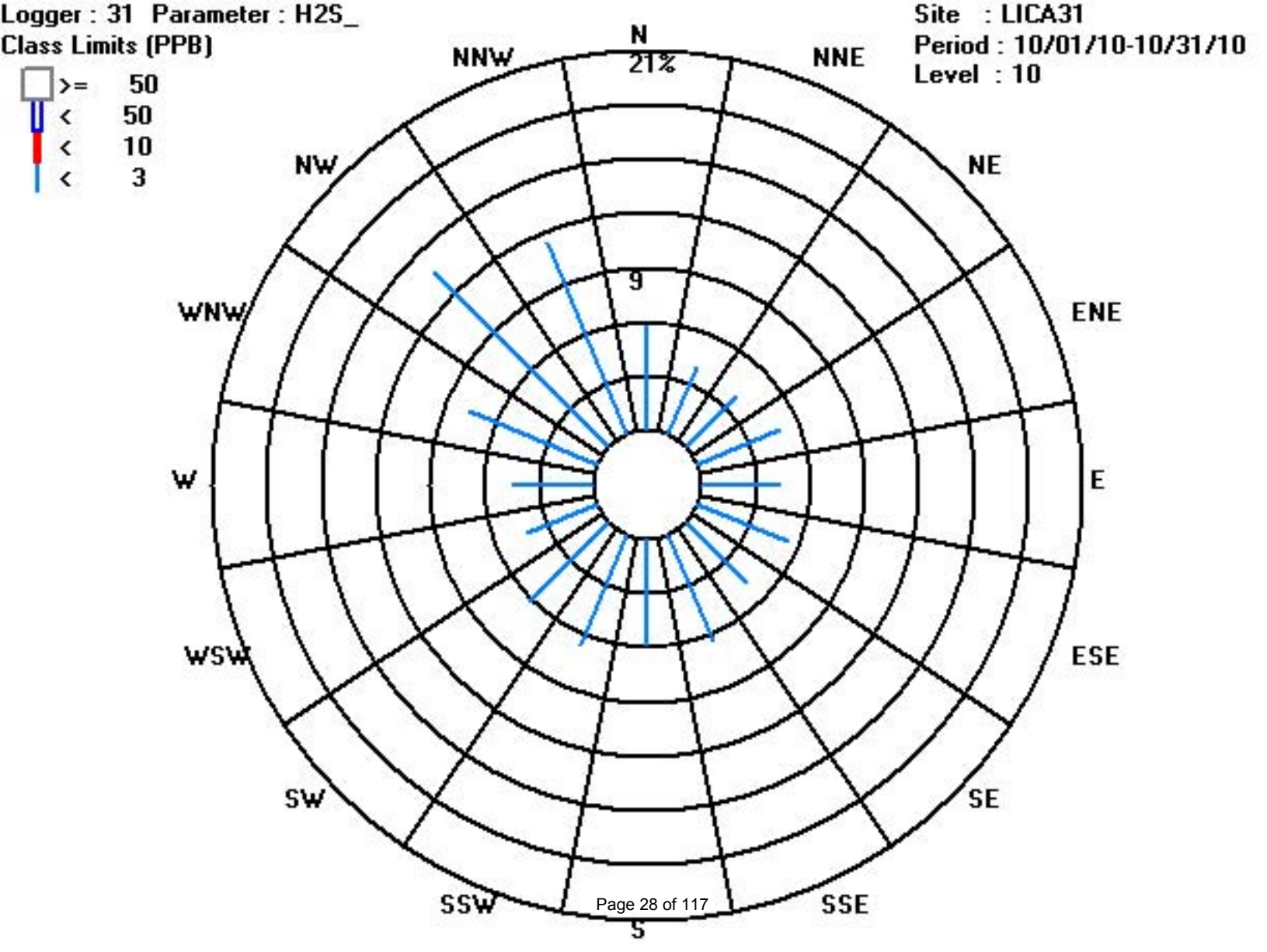
Distribution By Samples

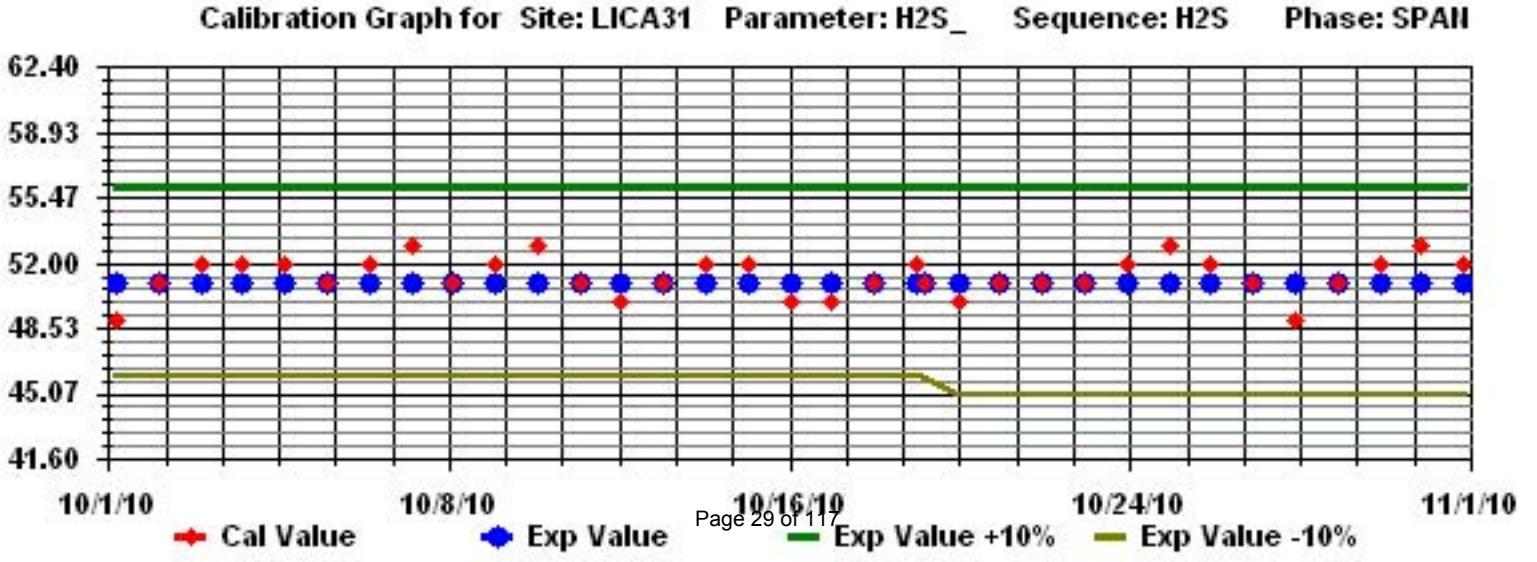
Direction

Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 3	39	27	26	33	29	36	32	43	40	45	42	28	30	51	92	77	670
< 10																	
< 50																	
>= 50																	
Totals	39	27	26	33	29	36	32	43	40	45	42	28	30	51	92	77	

Calm : .00 %

Total # Operational Hours : 670


Logger : 31 Parameter : H2S_
Class Limits (PPB)
>= 50
< 50
< 10
< 3
Site : LICA31
Period : 10/01/10-10/31/10
Level : 10
N
21%
NNE
NE
ENE
E
ESE
SE
SSE
S
SSW
SW
WSW
W
WNW
NW
NNW
9


Calibration Graph for Site: LICA31 Parameter: H2S_ Sequence: H2S Phase: SPAN
62.40
58.93
55.47
52.00
48.53
45.07
41.60
10/1/10
10/8/10
10/16/10
10/24/10
11/1/10
Cal Value
Exp Value
Exp Value +10%
Exp Value -10%

Total Hydrocarbons

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION -ST.LINA

OCTOBER 2010

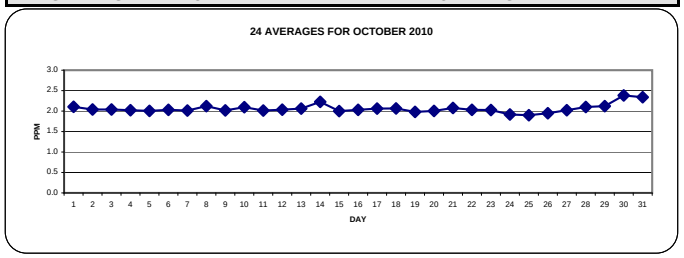
TOTAL HYDROCARBONS hourly averages in ppm

MST

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

STATUS FLAG CODES

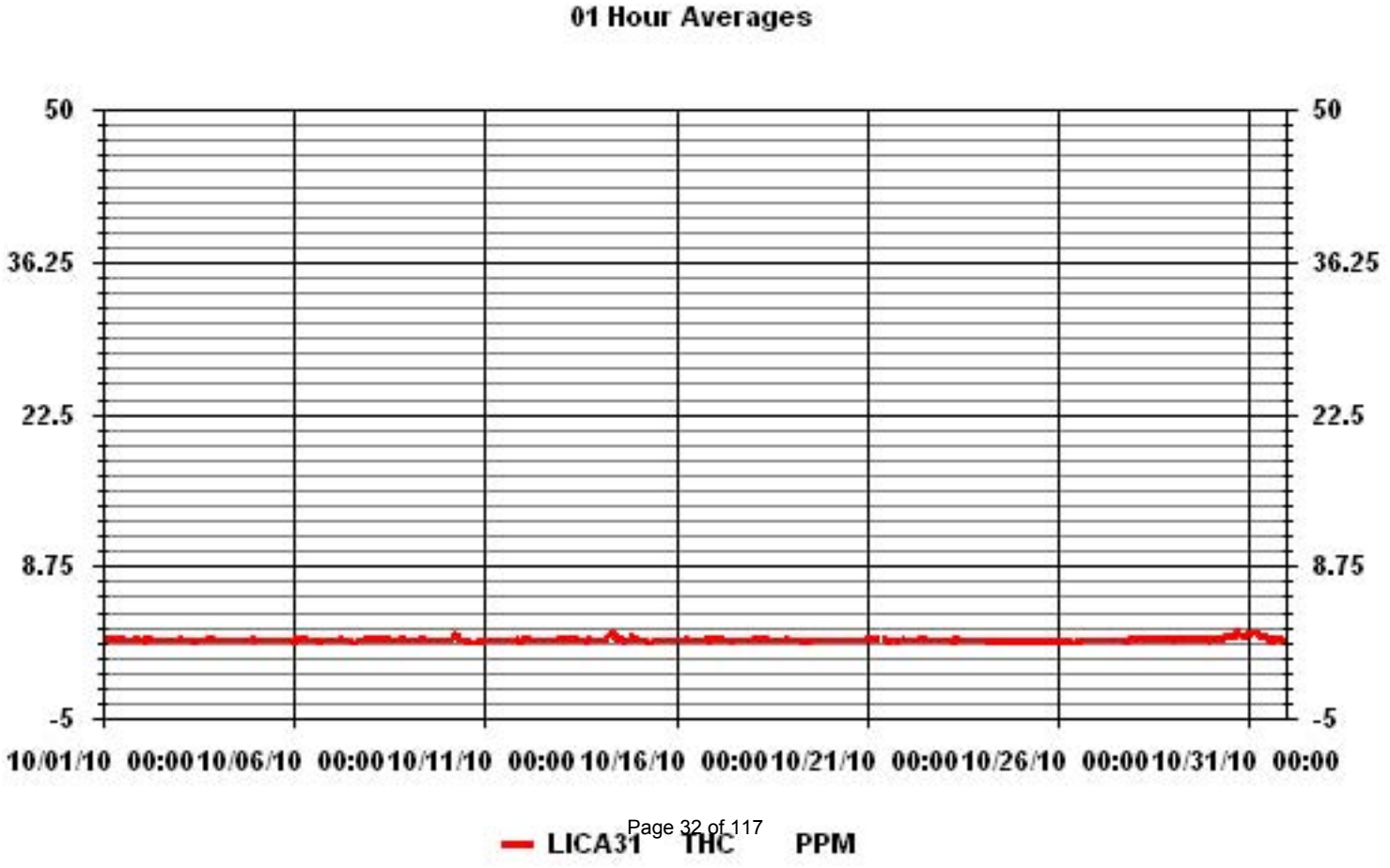
S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	- MAINTENANCE
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE



MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:	706					
MAXIMUM 1-HR AVERAGE:	2.9	PPM	@ HOUR(S)	17	ON DAY(S)	30
MAXIMUM 24-HR AVERAGE:	2.4	PPM			ON DAY(S)	30
					VAR- VARIOUS	

IZS CALIBRATION TIME:	33	HRS	OPERATIONAL TIME:	744	HRS
MONTHLY CALIBRATION TIME:	5	HRS	AMD OPERATION UPTIME:	100.0	%
STANDARD DEVIATION:	0.14		MONTHLY AVERAGE:	2.06	PPM


01 Hour Averages
50
36.25
22.5
8.75
-5
10/01/10 00:00
10/06/10 00:00
10/11/10 00:00
10/16/10 00:00
10/21/10 00:00
10/26/10 00:00
10/31/10 00:00
LICA31 THC PPM

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *ST. LINA*

OCTOBER 2010

TOTAL HYDROCARBONS MAX instantaneous maximum in ppm

MST

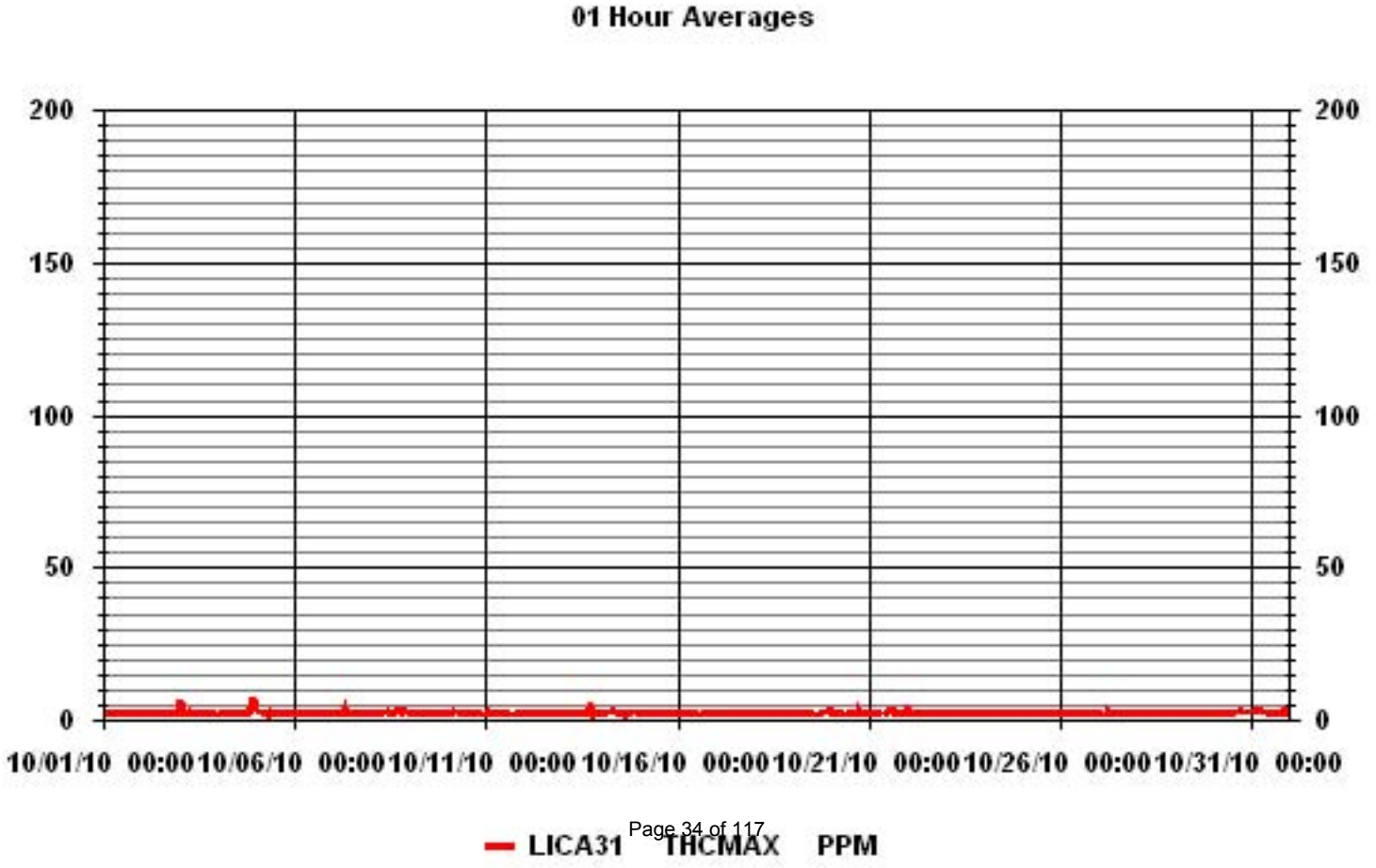
HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	2.1	2.1	2.1	2.1	**IZS**	2.1	2.2	2.3	2.3	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.3	2.3	2.3	2.2	24
2	2.1	2.3	2.3	**IZS**	2.2	2.2	2.1	2.1	2.1	2	2	2	2	2	2	2	2.1	2	2	2	2	2	2	4.5	4.5	2.2	24
3	6.5	3.5	**IZS**	2	2	2	3	2.4	2	2	2	2	2	2	2	2.2	2.1	2	2.1	2.1	2.2	2.2	2.1	2.1	6.5	2.4	24
4	2	**IZS**	2	2	2	2	2.1	2.1	2.1	2	2.1	2	2	2	2	2	2	2.1	2	3.3	2	4.9	**6.9**	3.4	**6.9**	2.5	24
5	**IZS**	2.6	2.7	3	2.2	2.4	2.6	2.1	3.1	2.3	2.4	2.3	2.3	2.3	2.2	2	2	2	2.1	2.1	2.1	2	2.1	**IZS**	3.1	2.3	24
6	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2	2	2	2	2	2	2	2	2	2	2	2	**IZS**	2	2.1	2.0	24
7	2	2	2	2.1	2.1	2.1	2.5	3.8	2.1	2	2	2	2	2	2	2	2.2	2.2	2	2.1	2.2	**IZS**	2.2	2.1	3.8	2.2	24
8	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.9	2.6	2.7	2.8	2.7	2	2.1	2.5	3.2	3	2.6	3.8	**IZS**	3.5	3.2	2.8	3.8	2.6	24
9	2	2	2.1	2	2.1	2	2	2.1	2.1	2.2	2.1	2	2	2	2	2	2	2	2	**IZS**	2	2	2.1	2.1	2.2	2.0	24
10	2.1	2.1	2.1	2.4	2.7	2.7	2.6	2.6	2.3	2.2	2.1	2	2	2	2	1.9	2.5	2.2	**IZS**	2.1	2.6	2.5	1.9	2.2	2.7	2.3	24
11	2.9	2.1	2	2.1	2	2	2	2	2	2.1	2.1	2.4	2.2	2.1	2.1	2.1	2	**IZS**	2	2.1	2.1	2.1	2.1	2.1	2.9	2.1	24
12	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.5	2.4	2.3	2.3	2.2	2.4	**IZS**	2	2.1	2	2	2.1	2.1	2.1	2.5	2.2	24
13	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.1	2.1	2.1	2.1	2.5	2.7	**IZS**	2.4	4.4	4	2.2	2.7	2	2.1	2.2	4.4	2.4	24
14	2.1	2	2.1	2.2	2.4	2.5	2.6	2.7	2.7	2.7	2.6	2.2	2.1	2.1	**IZS**	2	2.7	2.1	2.1	2.3	2.5	2.5	2.4	2.2	2.7	2.3	24
15	2.1	2.1	2.1	2.7	2.5	2.3	2.3	2	2.2	2.2	2.6	2.2	2.3	**IZS**	2.3	2.3	2.2	2.2	2.2	2.5	2.3	2.4	2.2	2.1	2.7	2.3	24
16	2.1	2.1	2	2	2	2.1	2.1	2.1	2.1	2.1	2.5	2.1	**IZS**	2.2	2.4	2.2	2	2	2	2.1	2.1	2.1	2.1	2.1	2.5	2.1	24
17	2.1	2.1	2.2	2.1	2.1	2.1	2.2	2.2	2.2	2.2	2.1	**IZS**	2.1	2.1	2	2	2	2	2	2.1	2.1	2.1	2.3	2.1	2.3	2.1	24
18	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.2	2.2	**IZS**	2.1	2.1	2	2	2.1	2.1	2.2	2	2	2.1	2.1	2.1	2.1	2.2	2.1	24
19	2.1	2	2	2	2	2	2	2	2	**IZS**	2.2	2.2	2.3	**C**	**C**	**C**	**C**	2.3	2.6	2.4	2.5	2.5	2.9	3.3	3.3	2.3	24
20	2.2	2	2	2.2	2.2	2	2	2.1	**IZS**	2.4	**P**	2.1	2	2	2	2	2	3.4	2	2.1	2.1	2.1	2.1	2.1	3.4	2.1	23
21	2.2	2.2	2.3	2.2	2.2	2.3	2.3	**IZS**	2.2	**C**	**C**	2.5	3.1	2.7	2.7	2.7	2.7	2.2	2.5	2.2	2.1	2.2	2.2	4	4	2.5	24
22	3.8	2.1	2.1	2.1	2.1	2.1	**IZS**	2.1	2.1	2.1	2.2	2.2	2.2	2.3	2.2	2.1	2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	3.8	2.2	24
23	2.1	2.2	2.1	2.1	2.1	**IZS**	2.1	2.1	2.1	2.1	2.1	2	2.1	2.2	2.3	2.1	2.1	2.1	2	2	2	2	2	2	2.3	2.1	24
24	2	2	2	2	**IZS**	2	2	2	2	2	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2	2	2	1.9	24
25	1.9	1.9	1.9	**IZS**	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2	2	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2	1.9	24
26	1.9	1.9	**IZS**	1.9	1.9	1.9	1.9	1.9	2	2	2	2.3	2.1	2.1	2	2	2.1	2.2	2	2	2.1	2.2	2	2	2.3	2.0	24
27	2	**IZS**	2	2	2.2	3.3	2.5	2	2.2	2.2	2.4	2.3	2.4	2.5	2	2	2.1	2.1	2.1	2.1	2.3	2.1	2.1	2.1	3.3	2.2	24
28	**IZS**	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	**IZS**	2.3	2.1	24
29	2.2	2.3	2.3	2.3	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.6	2.1	2.1	2.1	2.1	2.1	2.1	2.1	**IZS**	2.1	2.6	2.2	24
30	2.2	2.2	2.2	2.2	2.2	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.4	2.6	2.8	2.9	2.9	2.7	2.6	**IZS**	2.6	2.6	2.9	2.4	24
31	2.6	2.6	2.7	2.7	2.8	2.8	2.8	2.7	2.6	2.4	2.4	2.3	2.3	2.2	2.1	2.1	2.1	2.1	2.2	2.2	**IZS**	3.3	2.3	2.3	3.3	2.5	24
HOURLY MAX	7	4	3	3	3	3	3	4	3	3	3	3	3	3	3	3	3	4	4	4	3	5	7	5			
HOURLY AVG	2.3	2.2	2.1	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.1	2.2	2.1	2.2	2.3	2.2	2.2	2.2	2.3	2.4	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
BB	- BELOW BACKGROUND OF 1.5 PPM		

MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:		704					
MAXIMUM INSTANTANEOUS VALUE:		6.9	PPM	@ HOUR(S)	22	ON DAY(S)	4
IZS CALIBRATION TIME:	33	HRS		OPERATIONAL TIME:		743	HRS
MONTHLY CALIBRATION TIME:	6	HRS					
STANDARD DEVIATION:	0.41						


01 Hour Averages
200
150
100
50
0
10/01/10 00:00
10/06/10 00:00
10/11/10 00:00
10/16/10 00:00
10/21/10 00:00
10/26/10 00:00
10/31/10 00:00
LICA31 THCMAX PPM

LICA31
THC / WDR Joint Frequency Distribution (Percent)

October 2010

Distribution By % Of Samples

Logger Id : 31
Site Name : LICA31
Parameter : THC
Units : PPM

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
<	3.0	5.79	4.01	3.86	4.90	4.30	5.34	4.75	6.38	5.94	6.68	6.24	4.16	4.45	7.87	13.67	11.58	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	5.79	4.01	3.86	4.90	4.30	5.34	4.75	6.38	5.94	6.68	6.24	4.16	4.45	7.87	13.67	11.58	

Calm : .00 %

Total # Operational Hours : 673

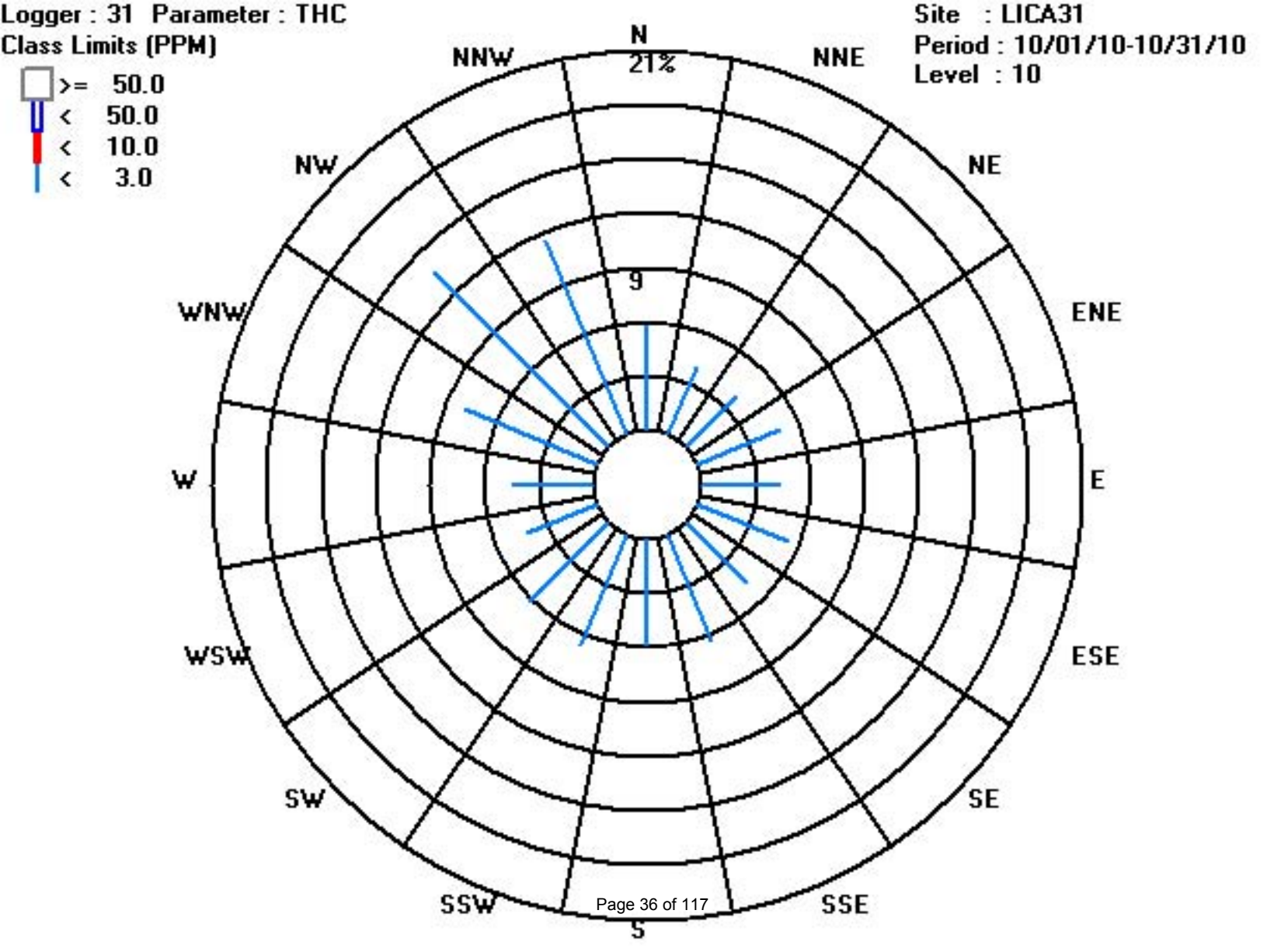
Distribution By Samples

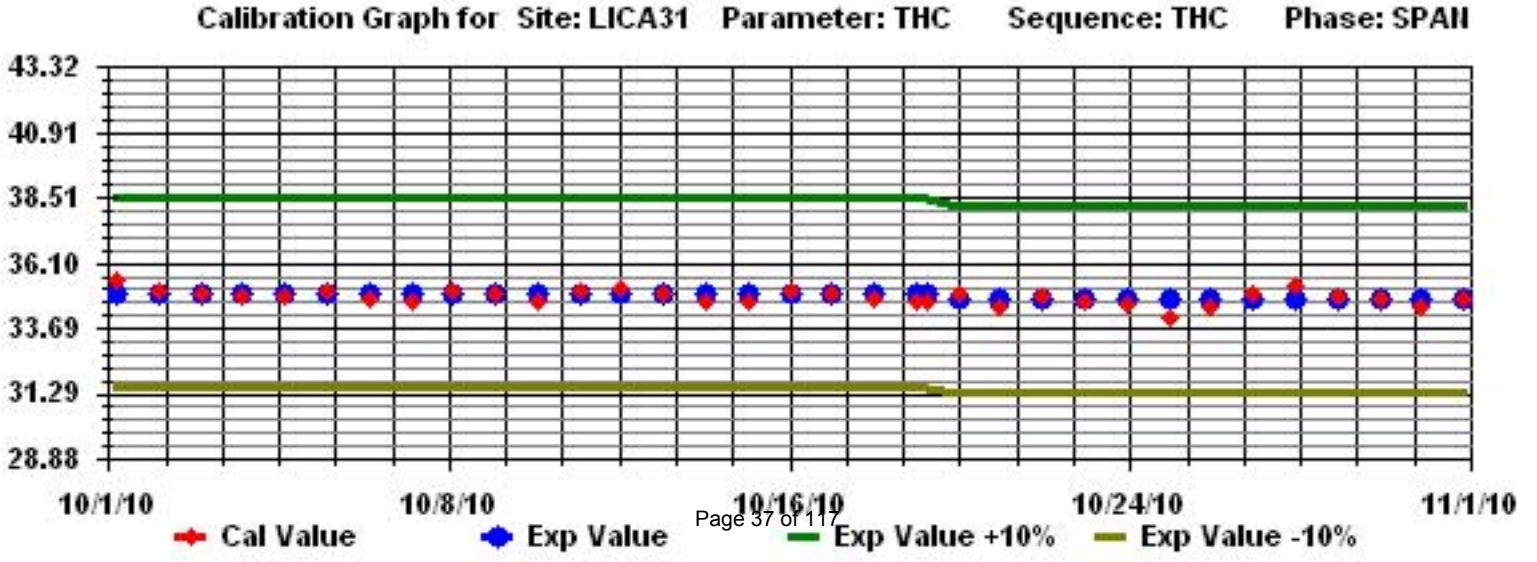
Direction

	Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
<	3.0	39	27	26	33	29	36	32	43	40	45	42	28	30	53	92	78	673
<	10.0																	
<	50.0																	
>=	50.0																	
	Totals	39	27	26	33	29	36	32	43	40	45	42	28	30	53	92	78	

Calm : .00 %

Total # Operational Hours : 673


Logger : 31 Parameter : THC
Class Limits (PPM)
>= 50.0
< 50.0
< 10.0
< 3.0
Site : LICA31
Period : 10/01/10-10/31/10
Level : 10
N
21%
NNE
NE
ENE
E
ESE
SE
SSE
S
SSW
SW
WSW
W
WNW
NW
NNW
9


Calibration Graph for Site: LICA31 Parameter: THC Sequence: THC Phase: SPAN
43.32
40.91
38.51
36.10
33.69
31.29
28.88
10/1/10
10/8/10
10/16/10
10/24/10
11/1/10
Cal Value
Exp Value
Exp Value +10%
Exp Value -10%

Ozone

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *ST. LINA*

OCTOBER 2010

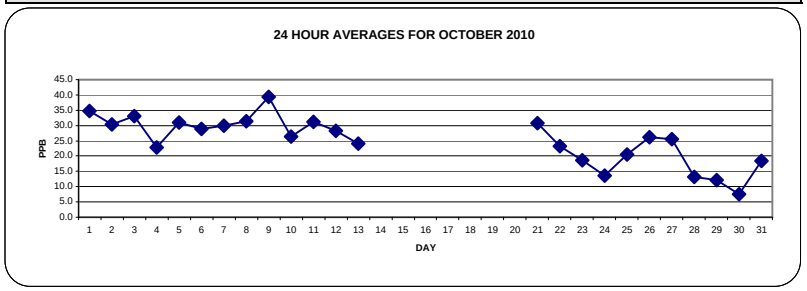
OZONE (O_3) hourly averages in ppb

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	36	32	30	29	**IZS**	32	31	29	27	29	35	36	40	40	42	43	41	40	38	36	36	33	32	31	43	34.7	24
2	31	28	27	**IZS**	26	22	22	21	21	24	25	27	27	28	32	34	35	38	38	38	41	39	39	37	41	30.4	24
3	39	37	**IZS**	31	31	30	29	28	29	34	36	35	37	35	36	39	39	38	35	34	29	27	26	27	39	33.1	24
4	27	**IZS**	29	30	29	28	28	29	28	24	21	20	21	23	23	21	21	19	20	18	16	17	16	15	30	22.7	24
5	**IZS**	18	23	23	25	24	25	26	31	34	34	34	35	36	35	36	37	37	36	35	34	31	31	**IZS**	37	30.9	24
6	30	26	23	25	23	23	23	25	27	29	33	32	34	33	30	33	32	34	33	32	30	27	**IZS**	25	34	28.8	24
7	25	24	22	20	18	18	19	23	25	28	30	31	34	36	40	40	38	39	39	37	35	**IZS**	32	33	40	29.8	24
8	32	28	26	25	25	23	22	21	21	21	21	25	33	36	36	36	39	41	42	43	**IZS**	42	42	42	43	31.4	24
9	43	42	40	42	42	41	40	36	37	38	39	40	41	41	41	42	42	41	39	**IZS**	35	35	34	34	43	**39.3**	24
10	32	30	28	24	20	18	17	16	16	18	20	22	24	26	27	26	24	29	**IZS**	39	38	38	38	36	39	26.3	24
11	35	32	32	30	31	30	29	28	28	30	33	34	35	35	34	35	35	**IZS**	34	32	30	27	26	23	35	31.2	24
12	22	20	21	21	24	21	24	24	29	29	32	33	33	33	34	34	**IZS**	34	31	32	31	30	28	29	34	28.2	24
13	25	24	24	21	19	18	15	15	17	20	26	30	33	36	37	**IZS**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	37	24.0	16
14	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**			0
15	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**			0
16	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**			0
17	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**			0
18	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**			0
19	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**			0
20	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**			0
21	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**C**	**C**	**C**	**C**	26	29	32	35	34	34	35	36	32	26	27	27	27	36	30.8	17
22	27	29	28	28	25	24	**IZS**	24	25	24	22	22	22	21	21	25	26	24	22	22	20	18	19	18	29	23.3	24
23	18	17	18	18	17	**IZS**	18	17	17	18	19	20	22	23	22	21	18	18	20	18	17	17	18	18	23	18.7	24
24	17	15	15	15	**IZS**	16	16	17	18	16	14	13	12	12	11	12	11	11	12	12	11	12	12	13	18	13.6	24
25	14	14	16	**IZS**	17	18	19	19	20	20	20	21	22	23	22	20	22	23	23	24	23	24	25	25	25	20.6	24
26	25	26	**IZS**	25	26	27	29	30	30	30	30	29	27	26	25	25	24	24	24	24	24	24	25	24	30	26.2	24
27	26	**IZS**	28	29	28	27	27	27	28	29	28	28	28	28	27	26	25	24	22	21	21	20	21	20	29	25.6	24
28	**IZS**	18	16	15	15	13	10	9	8	8	9	11	12	14	13	12	13	14	15	17	18	15	16	**IZS**	18	13.2	24
29	15	15	14	14	13	13	13	12	12	13	13	14	14	14	13	12	10	9	10	12	9	8	**IZS**	6	15	12.1	24
30	4	2	2	2	2	2	2	2	4	7	8	10	12	14	13	12	9	9	10	11	12	**IZS**	13	13	14	7.6	24
31	13	14	15	15	14	13	14	13	13	13	13	13	16	21	29	29	27	24	20	21	**IZS**	26	20	27	29	18.4	24
HOURLY MAX	43	42	40	42	42	41	40	36	37	38	39	40	41	41	42	43	42	41	42	43	41	42	42	42			
HOURLY AVG	25.5	23.4	22.7	23.0	22.4	21.9	21.5	21.3	22.2	23.3	24.4	25.3	26.8	27.8	28.3	28.1	27.4	27.5	27.2	26.8	25.5	25.6	25.7	24.9			

STATUS FLAG CODES

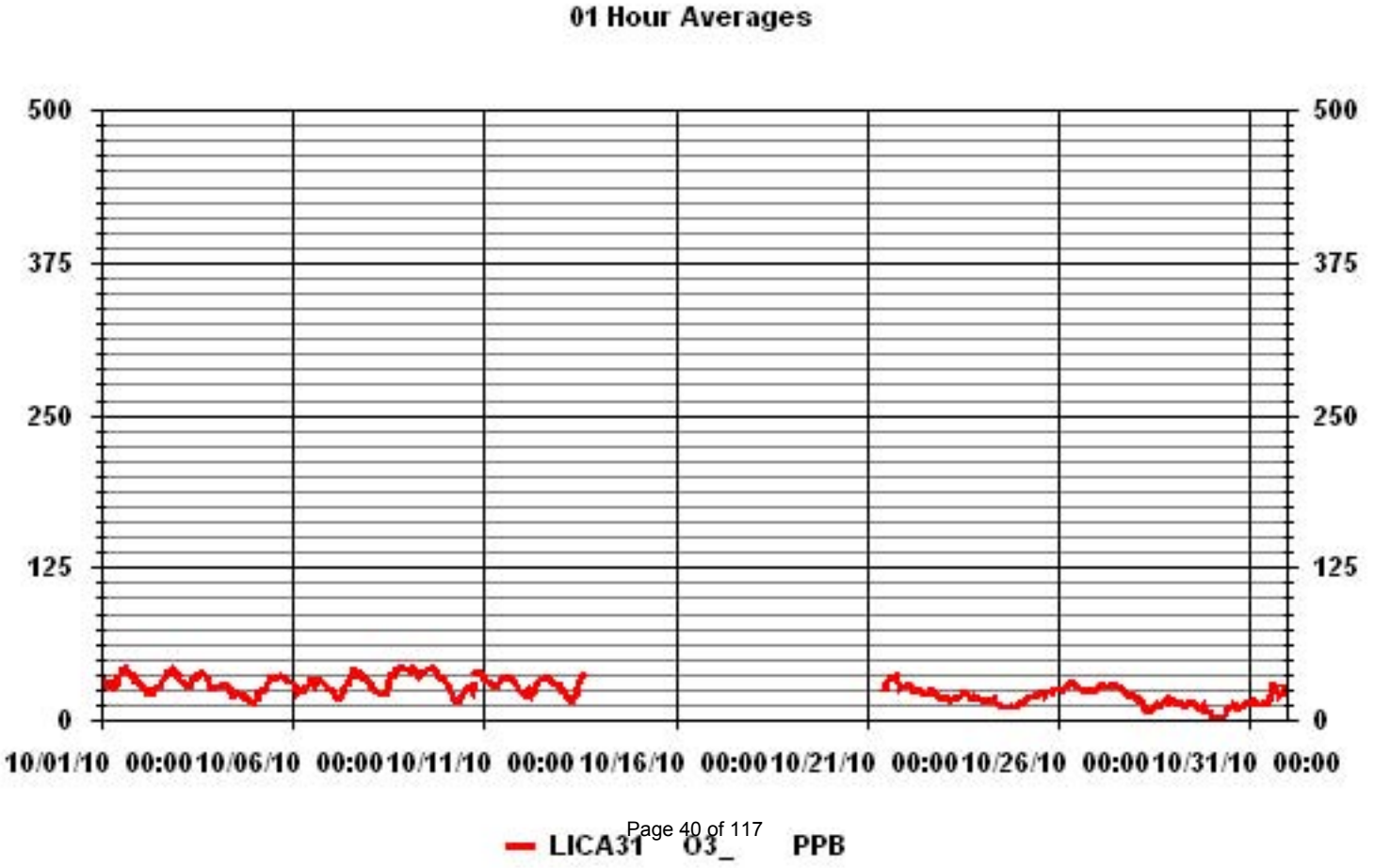
S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	- MISSING DATA
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE



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

MONTHLY SUMMARY

NUMBER OF 1-HR EXCEEDENCES:	0					
NUMBER OF NON-ZERO READINGS:	532					
MAXIMUM 1-HR AVERAGE:	43	PPB	@ HOUR(S)	VAR	ON DAY(S)	VAR
MAXIMUM 24-HR AVERAGE:	39.3	PPB			ON DAY(S)	9
					VAR-VARIOUS	
IZS CALIBRATION TIME:	25	HRS	OPERATIONAL TIME:		561	HRS
MONTHLY CALIBRATION TIME:	4	HRS	AMD OPERATION UPTIME		75.4	%
STANDARD DEVIATION	9.15		MONTHLY AVERAGE		24.96	PPB


01 Hour Averages
500
375
250
125
0
10/01/10 00:00
10/06/10 00:00
10/11/10 00:00
10/16/10 00:00
10/21/10 00:00
10/26/10 00:00
10/31/10 00:00
LICA31 O3_ PPB

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *ST. LINA*

OCTOBER 2010

OZONE MAX instantaneous maximum in ppb

MST

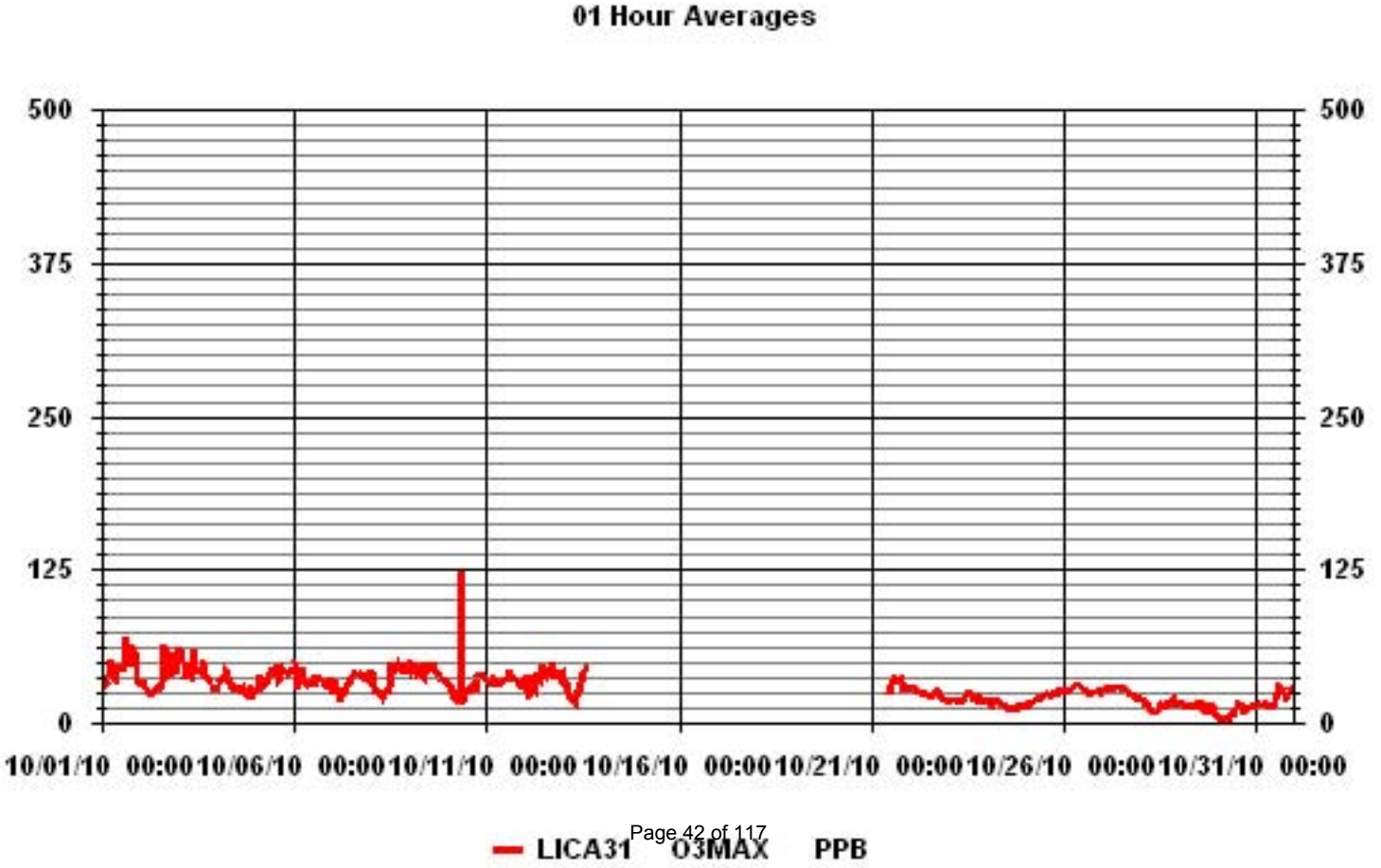
HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	38	35	32	33	**IZS**	50	41	38	37	47	43	48	41	48	65	69	48	48	57	63	58	55	35	34	69	46.2	24
2	33	32	32	**IZS**	28	26	24	24	25	26	27	28	29	32	36	63	39	40	40	50	57	51	40	47	63	36.0	24
3	62	52	**IZS**	39	41	49	38	37	41	60	46	43	44	43	45	51	41	39	38	36	33	28	28	28	62	41.8	24
4	28	**IZS**	35	36	36	42	40	38	34	29	29	28	28	29	29	27	29	26	27	28	20	24	23	28	42	30.1	24
5	**IZS**	27	39	32	33	31	32	37	39	39	43	43	42	47	37	39	44	42	43	42	39	40	44	**IZS**	47	38.8	24
6	49	41	27	33	33	46	35	33	31	32	34	33	37	37	35	38	37	36	34	33	31	33	**IZS**	35	49	35.3	24
7	26	26	29	25	20	20	23	25	28	31	34	34	38	41	41	41	40	40	40	39	36	**IZS**	34	39	41	32.6	24
8	44	31	27	26	26	24	25	22	25	25	25	29	50	46	41	44	48	45	45	48	**IZS**	43	48	49	50	36.3	24
9	49	43	45	49	43	45	46	40	38	43	44	41	47	47	42	49	42	42	41	**IZS**	36	35	35	34	49	42.4	24
10	33	32	29	27	22	20	18	18	**124**	19	21	24	25	27	29	30	26	33	**IZS**	40	39	39	39	37	**124**	32.7	24
11	36	34	33	34	39	32	31	31	31	34	35	35	36	37	42	37	38	**IZS**	36	34	33	32	30	29	42	34.3	24
12	36	39	24	25	31	29	39	35	40	37	41	46	43	40	43	45	**IZS**	47	37	41	42	40	37	39	47	38.1	24
13	30	34	27	24	22	20	19	17	22	26	33	35	40	42	46	**IZS**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	46	29.1	16
14	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**			0
15	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**			0
16	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**			0
17	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**			0
18	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**			0
19	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**			0
20	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**			0
21	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**C**	**C**	**C**	**C**	27	31	34	36	36	35	36	37	35	28	28	28	28	37	32.2	17
22	29	30	29	29	27	26	**IZS**	25	26	25	25	23	23	22	24	26	27	25	24	22	21	19	19	19	30	24.6	24
23	18	18	19	19	19	**IZS**	19	18	18	19	20	22	24	25	25	23	20	19	21	19	18	19	19	19	25	20.0	24
24	18	16	16	15	**IZS**	17	17	19	19	17	15	14	13	13	12	12	12	12	12	13	13	13	13	14	19	14.6	24
25	14	15	17	**IZS**	18	19	19	19	21	20	21	22	23	24	24	22	23	24	24	25	24	26	26	26	26	21.6	24
26	26	26	**IZS**	26	27	28	30	31	31	31	31	30	28	27	26	26	25	24	25	25	25	26	26	25	31	27.2	24
27	28	**IZS**	29	30	29	29	28	28	29	29	29	29	29	28	28	27	26	25	23	23	22	21	22	21	30	26.6	24
28	**IZS**	19	17	16	16	14	11	10	9	9	10	13	13	16	15	14	15	15	17	19	20	16	17	**IZS**	20	14.6	24
29	16	16	15	15	14	14	14	13	13	14	14	15	15	15	15	12	11	10	11	13	13	9	**IZS**	7	16	13.2	24
30	6	3	3	3	3	3	3	4	6	7	9	12	15	15	14	14	11	10	11	12	13	**IZS**	13	13	15	8.8	24
31	14	15	15	16	15	15	15	15	14	14	14	15	19	25	31	30	28	26	21	22	**IZS**	28	24	29	31	20.0	24
HOURLY MAX	62	52	45	49	43	50	46	40	124	60	46	48	50	48	65	69	48	48	57	63	58	55	48	49			
HOURLY AVG	30.1	27.8	25.7	26.3	25.8	27.2	25.8	25.1	30.5	27.5	28.0	28.7	30.5	31.7	32.5	33.7	30.2	30.2	30.2	31.0	29.6	29.8	28.6	28.6			

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:	532					
MAXIMUM INSTANTANEOUS VALUE:	124	PPB	@ HOUR(S)	8	ON DAY(S)	10
IZS CALIBRATION TIME:	25	HRS	OPERATIONAL TIME:		561	HRS
MONTHLY CALIBRATION TIME:	4	HRS				
STANDARD DEVIATION	12.36					


01 Hour Averages
500
375
250
125
0
10/01/10 00:00
10/06/10 00:00
10/11/10 00:00
10/16/10 00:00
10/21/10 00:00
10/26/10 00:00
10/31/10 00:00
LICA31 O3MAX PPB

LICA31
O3_ / WDR Joint Frequency Distribution (Percent)

October 2010

Distribution By % Of Samples

Logger Id : 31
Site Name : LICA31
Parameter : O3_
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
< 50	6.01	3.80	4.00	4.40	3.80	3.40	5.61	6.21	7.21	7.81	5.81	4.00	5.21	6.81	14.02	11.82	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	6.01	3.80	4.00	4.40	3.80	3.40	5.61	6.21	7.21	7.81	5.81	4.00	5.21	6.81	14.02	11.82	

Calm : .00 %

Total # Operational Hours : 499

Distribution By Samples

Direction

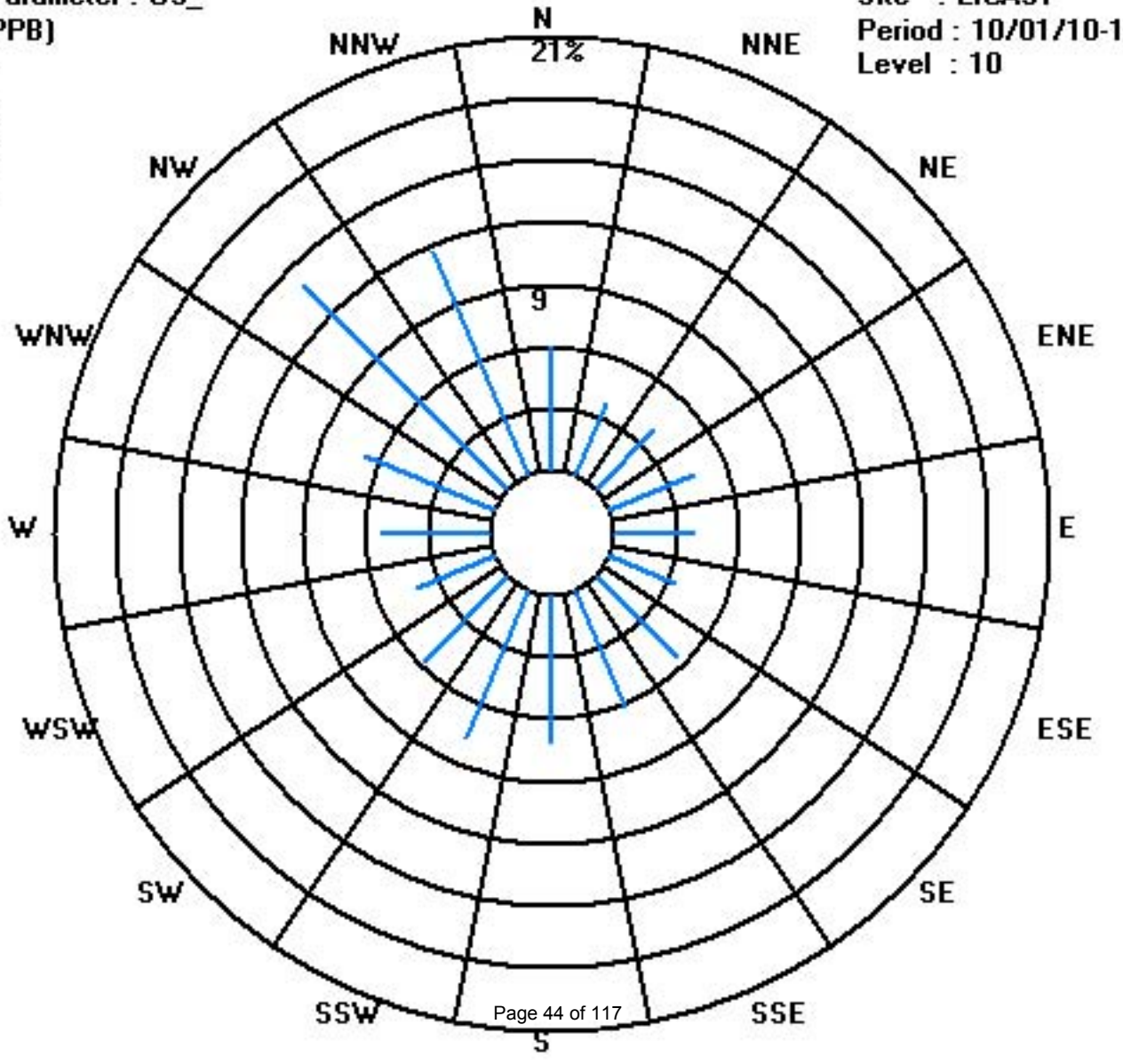
Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 50	30	19	20	22	19	17	28	31	36	39	29	20	26	34	70	59	499
< 110																	
< 210																	
>= 210																	
Totals	30	19	20	22	19	17	28	31	36	39	29	20	26	34	70	59	

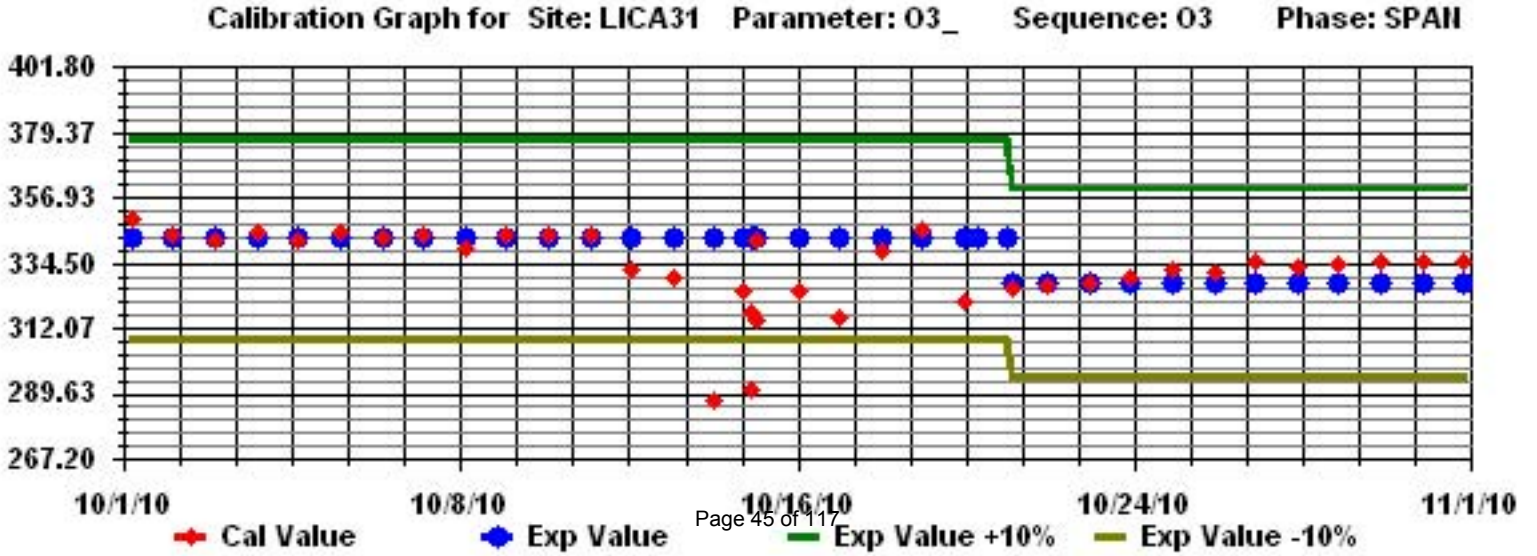
Calm : .00 %

Total # Operational Hours : 499

Logger : 31 Parameter : 03_
Class Limits (PPB)
>= 210
< 210
< 110
< 50

Site : LICA31
Period : 10/01/10-10/31/10
Level : 10




Calibration Graph for Site: LICA31 Parameter: O3_ Sequence: O3 Phase: SPAN
401.80
379.37
356.93
334.50
312.07
289.63
267.20
10/1/10
10/8/10
10/16/10
10/24/10
11/1/10
Cal Value
Exp Value
Exp Value +10%
Exp Value -10%

Nitrogen Dioxide

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - ST. LINA

OCTOBER 2010

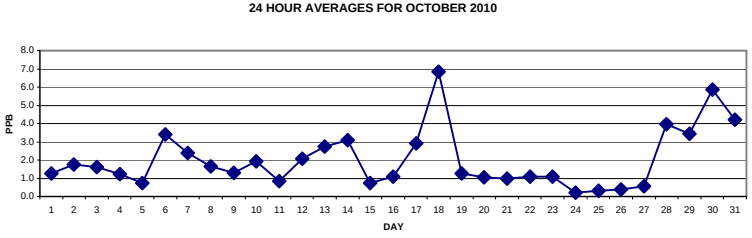
NITROGEN DIOXIDE hourly averages in ppb

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	1	2	2	2	**IZS**	1	1	2	1	1	1	1	0	1	1	1	1	1	1	2	1	1	2	2	2	1.3	24
2	1	2	2	**IZS**	1	1	1	1	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	1.7	24
3	2	2	**IZS**	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	3	3	3	3	2	2	3	1.6	24
4	1	**IZS**	1	1	1	1	2	1	1	2	3	1	1	1	1	1	1	2	1	1	1	1	1	1	3	1.2	24
5	**IZS**	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	1	1	1	2	2	2	2	**IZS**	2	0.7	24
6	2	2	4	5	4	4	5	5	4	3	2	3	2	4	6	2	2	2	3	3	4	4	**IZS**	3	6	3.4	24
7	3	3	3	3	3	3	4	5	4	2	1	1	1	1	1	1	1	2	1	2	3	**IZS**	4	3	5	2.4	24
8	2	3	4	3	2	2	3	3	2	2	2	2	1	1	1	1	0	1	0	1	**IZS**	0	1	1	4	1.7	24
9	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	2	2	**IZS**	2	2	3	3	3	1.3	24
10	3	2	2	3	3	3	3	3	2	2	2	2	2	2	2	2	3	2	**IZS**	0	0	0	0	1	3	1.9	24
11	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	**IZS**	0	1	1	2	3	3	3	0.8	24
12	4	4	4	4	3	3	2	2	1	1	1	1	0	0	1	0	**IZS**	1	1	2	2	3	4	4	4	2.1	24
13	4	4	4	4	5	4	5	6	5	5	5	4	2	1	0	**IZS**	0	0	0	1	1	1	1	1	6	2.7	24
14	2	1	1	1	2	2	2	3	2	2	2	2	3	3	**IZS**	4	5	5	5	5	7	5	4	3	7	3.1	24
15	2	2	2	1	1	1	1	1	1	1	2	0	0	**IZS**	0	0	0	0	0	0	0	0	1	1	2	0.7	24
16	1	0	0	1	1	1	1	2	2	1	1	1	**IZS**	0	0	1	1	1	1	1	1	2	2	3	3	1.1	24
17	5	6	5	5	5	4	4	5	4	4	4	**IZS**	2	2	1	1	1	1	1	1	1	1	2	2	6	2.9	24
18	3	3	4	4	4	4	4	5	6	5	**IZS**	4	3	4	5	7	11	10	8	10	9	14	**17**	13	**17**	**6.8**	24
19	8	4	2	1	1	1	1	1	1	**C**	**C**	**C**	**C**	**C**	**C**	**C**	**C**	0	0	0	0	0	0	0	8	1.3	24
20	0	0	0	0	0	1	1	1	**IZS**	1	1	0	0	0	1	1	1	2	2	2	3	3	2	2	3	1.0	24
21	2	2	1	1	1	2	1	**IZS**	2	**C**	**C**	3	2	1	0	0	0	0	0	1	1	0	0	1	3	1.0	24
22	0	0	1	0	0	0	**IZS**	0	1	1	2	3	3	3	2	1	0	1	1	1	1	2	1	1	3	1.1	24
23	1	1	1	1	1	**IZS**	1	1	1	1	1	1	1	1	2	2	2	2	1	1	1	1	0	0	2	1.1	24
24	0	0	0	0	**IZS**	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	1	1	1	0.2	24
25	0	0	0	**IZS**	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	0	0	1	1	0.3	24
26	1	0	**IZS**	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	0	1	1	0.4	24
27	0	**IZS**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	2	1	2	2	2	2	0.6	24
28	**IZS**	2	2	3	3	3	4	4	4	4	4	4	4	5	5	6	6	6	5	4	3	3	3	**IZS**	6	4.0	24
29	2	3	3	2	2	2	2	2	2	2	2	2	2	1	2	3	6	8	7	5	6	6	**IZS**	7	8	3.4	24
30	7	9	9	8	8	7	7	8	6	4	3	3	4	4	4	5	6	7	6	6	5	**IZS**	4	5	9	5.9	24
31	4	4	4	4	4	4	3	3	3	3	3	6	5	5	3	4	5	6	5	6	**IZS**	4	6	3	6	4.2	24
HOURLY MAX	8	9	9	8	8	7	7	8	6	5	5	6	5	5	6	7	11	10	8	10	9	14	17	13			
HOURLY AVG	2.2	2.2	2.2	2.1	2.0	1.9	2.0	2.2	2.0	1.8	1.6	1.7	1.4	1.5	1.4	1.7	2.1	2.3	2.0	2.2	2.2	2.3	2.4	2.5			

STATUS FLAG CODES

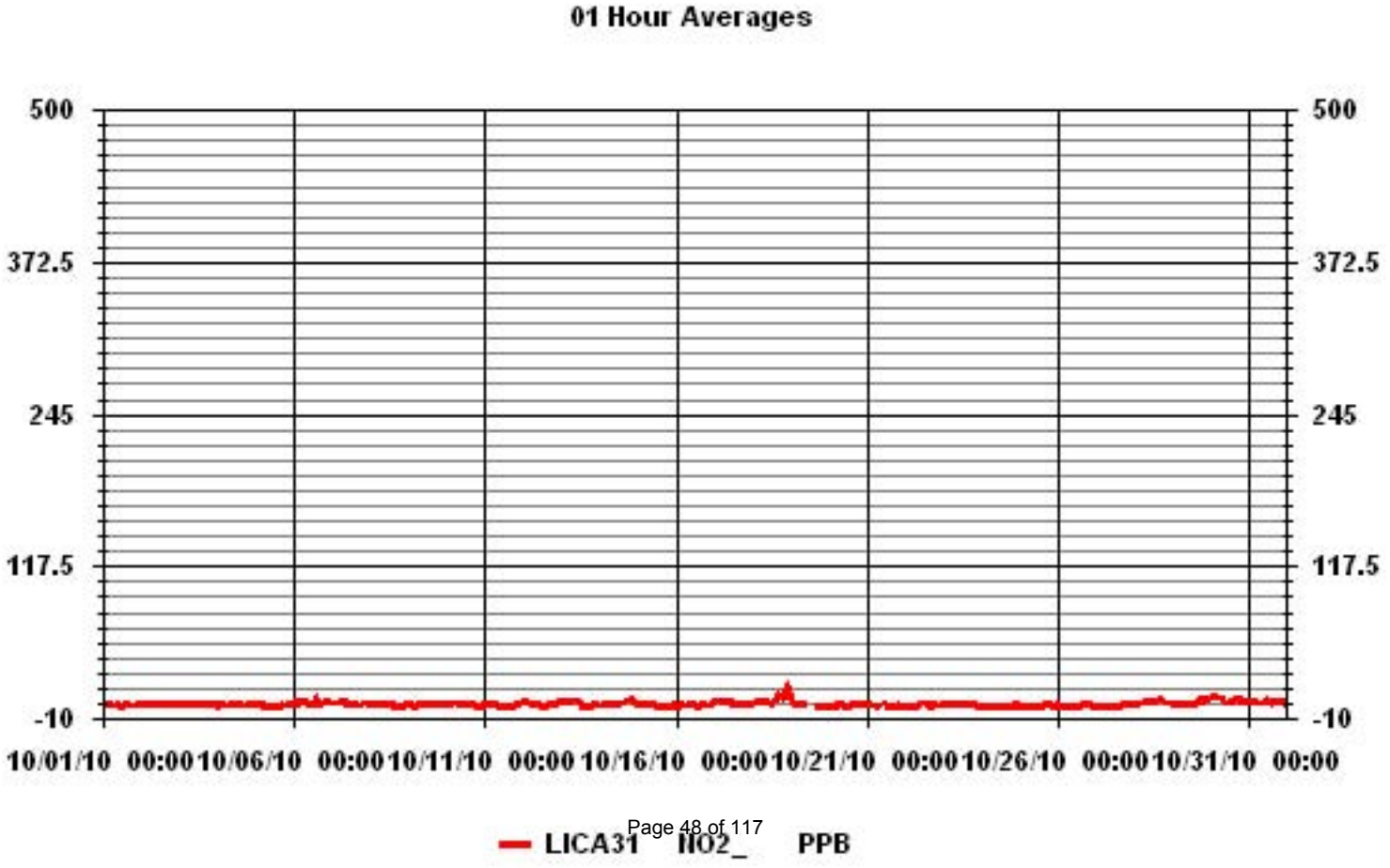
S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	- MAINTENANCE
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE



OBJECTIVE LIMIT: **ALBERTA ENVIRONMENT:** 1-HR 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:	559					
MAXIMUM 1-HR AVERAGE:	17	PPB	@ HOUR(S)	22	ON DAY(S)	18
MAXIMUM 24-HR AVERAGE:	6.8	PPB			ON DAY(S)	18
IZS CALIBRATION TIME:	32	HRS	OPERATIONAL TIME:		744	HRS
MONTHLY CALIBRATION TIME:	10	HRS	AMD OPERATION UPTIME:		100.0	%
STANDARD DEVIATION:	2.05		MONTHLY AVERAGE:		2.01	PPB


01 Hour Averages
500
372.5
245
117.5
-10
10/01/10 00:00
10/06/10 00:00
10/11/10 00:00
10/16/10 00:00
10/21/10 00:00
10/26/10 00:00
10/31/10 00:00
LICA31 NO2_ PPB

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *ST. LINA*

OCTOBER 2010

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	2	3	3	4	**IZS**	2	2	2	2	2	1	1	1	5	3	2	2	1	2	2	2	2	3	3	5	2.3	24
2	2	3	3	**IZS**	2	2	2	2	2	2	3	3	3	3	3	3	4	4	2	2	2	2	2	2	4	2.5	24
3	2	3	**IZS**	2	2	2	2	2	2	1	1	1	1	3	1	2	2	3	4	3	4	4	3	2	4	2.3	24
4	2	**IZS**	1	1	2	2	2	2	2	3	4	2	2	2	2	2	2	3	1	2	2	2	3	2	4	2.1	24
5	**IZS**	1	1	2	1	1	1	1	1	1	1	1	8	1	1	1	1	1	2	3	3	3	2	**IZS**	8	1.7	24
6	3	3	6	6	5	5	5	6	6	4	3	4	3	7	8	4	3	3	5	5	4	5	**IZS**	4	8	4.7	24
7	5	3	3	4	4	4	5	6	5	3	2	2	1	1	2	2	2	2	2	3	4	**IZS**	4	4	6	3.2	24
8	3	4	4	5	3	3	3	4	3	3	3	3	2	1	2	1	1	2	1	2	**IZS**	1	1	1	5	2.4	24
9	1	1	2	1	1	1	1	2	2	2	2	1	1	1	2	2	2	2	3	**IZS**	3	3	3	4	4	1.9	24
10	3	3	3	4	4	4	4	3	3	3	8	2	2	3	2	3	4	3	**IZS**	1	1	1	1	1	8	2.9	24
11	1	2	1	1	2	1	1	2	2	1	1	1	1	1	1	1	1	**IZS**	2	3	2	3	3	4	4	1.7	24
12	5	5	4	5	4	4	3	3	2	2	2	1	7	2	8	1	**IZS**	2	2	3	3	4	5	5	8	3.6	24
13	5	5	4	5	6	5	6	23	7	6	15	6	7	22	1	**IZS**	1	1	1	15	2	2	2	2	23	6.5	24
14	3	2	2	2	3	3	3	4	3	3	2	3	4	3	**IZS**	5	15	7	8	6	9	9	5	5	15	4.7	24
15	3	3	3	2	1	1	1	1	2	1	**80**	1	1	**IZS**	1	1	1	1	1	1	1	1	1	1	**80**	4.8	24
16	1	1	1	1	1	2	2	2	8	2	1	1	**IZS**	1	2	2	1	1	10	2	2	3	3	4	10	2.3	24
17	5	7	6	6	6	5	5	5	5	6	6	**IZS**	3	4	2	1	1	2	2	2	2	2	2	3	7	3.8	24
18	4	4	4	5	5	5	5	6	7	6	**IZS**	5	4	6	6	9	13	12	9	11	11	16	18	15	18	8.1	24
19	10	6	3	2	2	2	6	9	2	**C**	**C**	**C**	**C**	**C**	**C**	**C**	**C**	1	1	1	1	1	1	1	10	3.1	24
20	1	1	1	1	1	1	16	2	**IZS**	2	**P**	1	2	1	2	2	2	3	3	3	4	4	3	2	16	2.6	23
21	2	2	2	2	2	2	2	**IZS**	8	**C**	**C**	4	4	2	1	1	1	1	1	1	1	1	1	1	8	2.0	24
22	1	1	1	1	1	1	**IZS**	1	1	2	4	4	3	3	3	2	1	1	2	1	2	2	2	1	4	1.8	24
23	2	1	1	2	2	**IZS**	1	1	2	1	2	1	1	2	3	2	3	3	2	1	2	2	1	1	3	1.7	24
24	1	1	1	1	**IZS**	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	2	1	2	2	2	1.0	24
25	1	1	1	**IZS**	0	0	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2	1	1	1	2	1.2	24
26	1	1	**IZS**	0	1	1	0	0	1	1	1	1	1	0	2	2	2	2	1	2	2	2	1	1	2	1.1	24
27	1	**IZS**	0	0	0	0	1	1	1	1	1	1	1	1	5	10	2	2	20	3	2	2	3	3	20	2.7	24
28	**IZS**	3	4	4	3	4	5	5	5	5	5	5	6	6	8	7	7	6	6	5	4	4	4	**IZS**	8	5.0	24
29	3	3	4	3	3	3	3	3	3	3	2	2	2	2	3	5	8	9	9	7	8	7	**IZS**	8	9	4.5	24
30	8	10	10	9	9	8	9	9	7	5	4	4	4	5	5	6	7	8	7	6	6	**IZS**	5	5	10	6.8	24
31	5	5	5	4	4	4	4	4	5	3	5	8	6	6	5	5	6	7	6	7	**IZS**	6	7	5	8	5.3	24
HOURLY MAX	10	10	10	9	9	8	16	23	8	6	80	8	8	22	8	10	15	12	20	15	11	16	18	15			
HOURLY AVG	3.0	3.0	2.9	2.9	2.8	2.6	3.4	3.7	3.4	2.6	6.0	2.4	2.9	3.3	3.0	3.0	3.4	3.2	3.9	3.5	3.2	3.3	3.2	3.2			

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

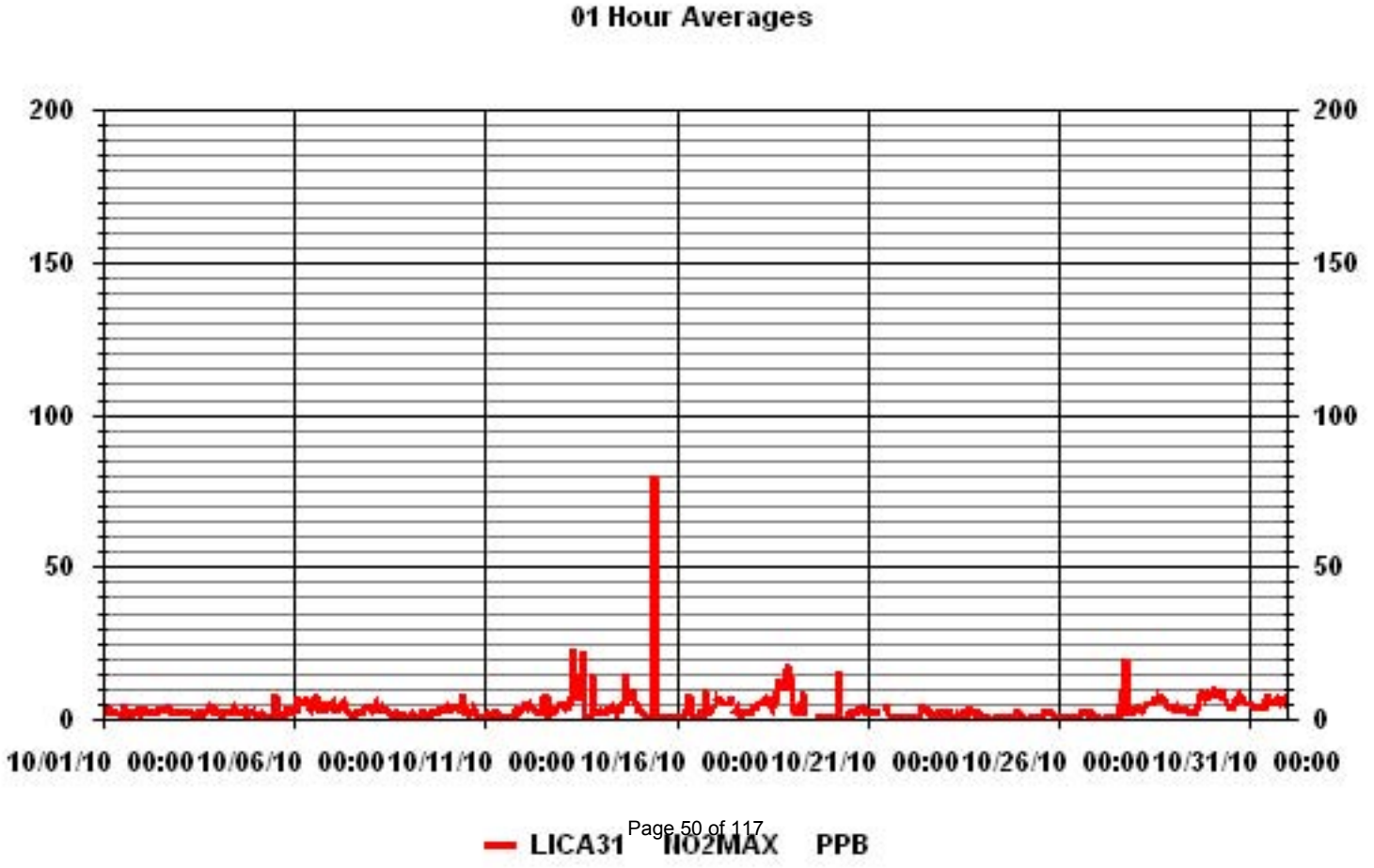
NUMBER OF NON-ZERO READINGS: 688

MAXIMUM INSTANTANEOUS VALUE: 80 PPB @ HOUR(S) 10 ON DAY(S) 15

IZS CALIBRATION TIME: 32 HRS OPERATIONAL TIME: 743 HRS

MONTHLY CALIBRATION TIME: 10 HRS

STANDARD DEVIATION 4.02


01 Hour Averages
200
150
100
50
0
10/01/10 00:00
10/06/10 00:00
10/11/10 00:00
10/16/10 00:00
10/21/10 00:00
10/26/10 00:00
10/31/10 00:00
LICA31 IIO2MAX PPB

LICA31
NO2_ / WDR Joint Frequency Distribution (Percent)

October 2010

Distribution By % Of Samples

Logger Id : 31
Site Name : LICA31
Parameter : NO2_
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
<	50	5.68	4.03	3.88	4.93	4.33	5.38	4.78	6.42	5.97	6.72	6.27	4.18	4.48	7.62	13.75	11.50	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	5.68	4.03	3.88	4.93	4.33	5.38	4.78	6.42	5.97	6.72	6.27	4.18	4.48	7.62	13.75	11.50	

Calm : .00 %

Total # Operational Hours : 669

Distribution By Samples

Direction

	Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
<	50	38	27	26	33	29	36	32	43	40	45	42	28	30	51	92	77	669
<	110																	
<	210																	
>=	210																	
	Totals	38	27	26	33	29	36	32	43	40	45	42	28	30	51	92	77	

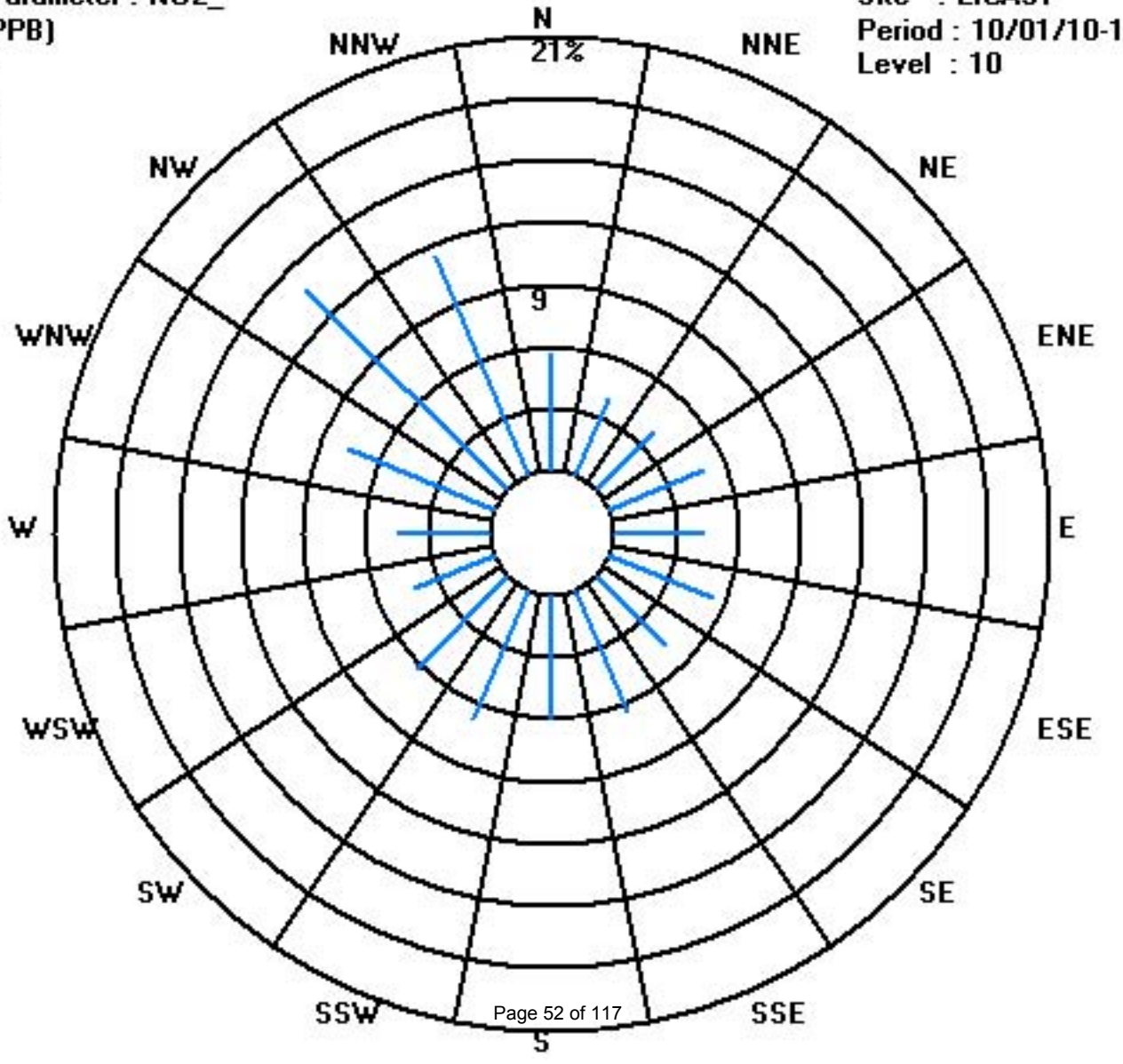
Calm : .00 %

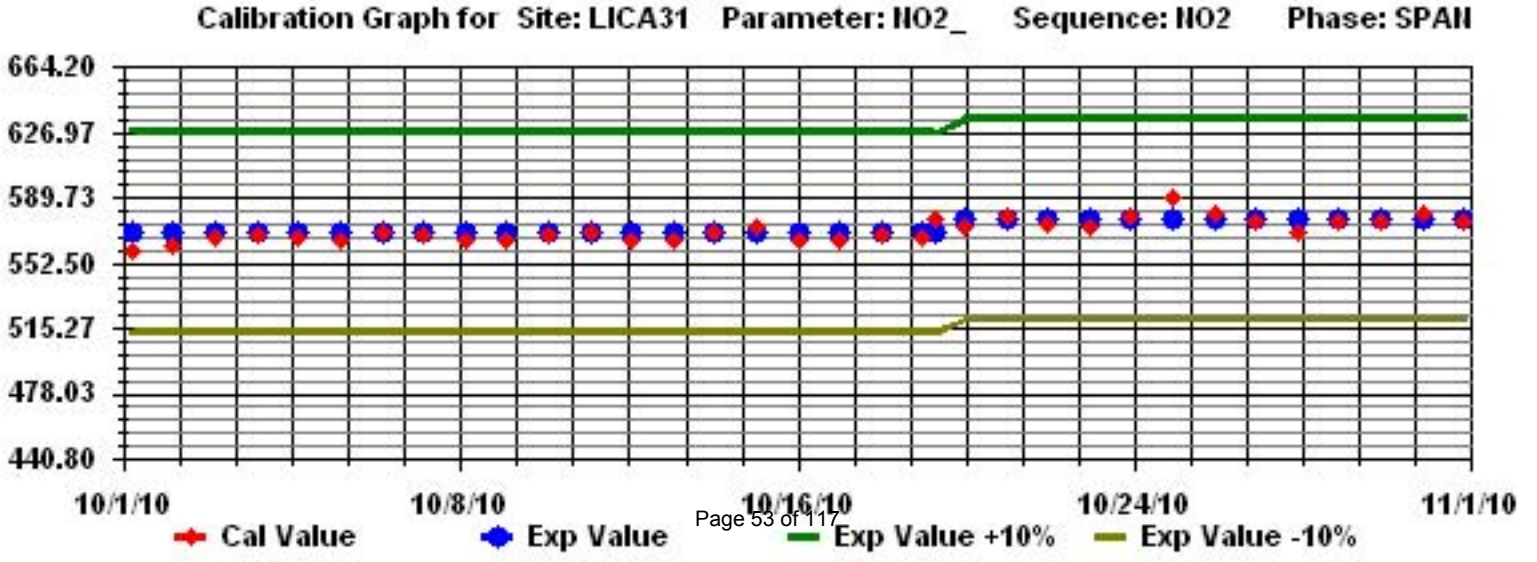
Total # Operational Hours : 669

Logger : 31 Parameter : NO2_
Class Limits (PPB)

>= 210
< 210
< 110
< 50

Site : LICA31
Period : 10/01/10-10/31/10
Level : 10




Calibration Graph for Site: LICA31 Parameter: NO2_ Sequence: NO2 Phase: SPAN
664.20
626.97
589.73
552.50
515.27
478.03
440.80
10/1/10
10/8/10
10/16/10
10/24/10
11/1/10
Cal Value
Exp Value
Exp Value +10%
Exp Value -10%

Nitric Oxide

LAKELAND INDUSTRY & COMMUNITY ASSCOICATION - ST. LINA

OCTOBER 2010

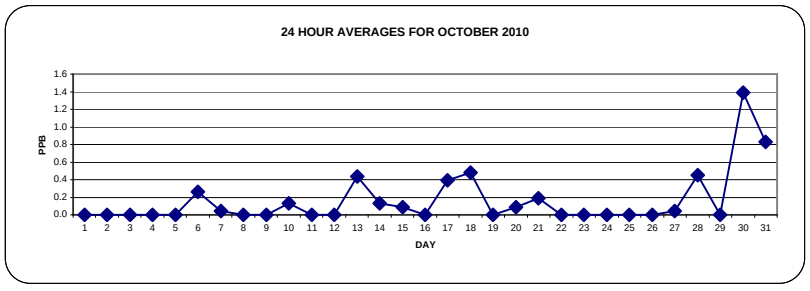
NITRIC OXIDE hourly averages in ppb

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	**IZS**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
2	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
3	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
4	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
5	**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
6	0	0	0	0	0	0	0	0	1	1	1	0	0	1	2	0	0	0	0	0	0	0	**IZS**	0	2	0.3	24
7	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	**IZS**	0	0	1	0.0	24
8	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
9	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
10	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	**IZS**	0	0	0	0	0	1	0.1	24
11	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
12	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
13	0	0	0	0	0	0	0	2	2	2	2	1	1	0	0	**IZS**	0	0	0	0	0	0	0	0	2	0.4	24
14	0	0	0	0	0	0	0	0	0	0	0	0	0	1	**IZS**	1	1	0	0	0	0	0	0	0	1	0.1	24
15	0	0	0	0	0	0	0	0	0	0	2	0	0	**IZS**	0	0	0	0	0	0	0	0	0	0	2	0.1	24
16	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
17	0	0	0	0	0	0	0	1	2	2	2	**IZS**	1	1	0	0	0	0	0	0	0	0	0	0	2	0.4	24
18	0	0	0	0	0	0	0	0	1	3	**IZS**	2	1	1	1	1	1	0	0	0	0	0	0	0	3	0.5	24
19	0	0	0	0	0	0	0	0	0	**C**	**C**	**C**	**C**	**C**	**C**	**C**	**C**	0	0	0	0	0	0	0	0	0.0	24
20	0	0	0	0	0	0	0	0	**IZS**	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.1	24
21	0	0	0	0	0	0	0	**IZS**	1	**C**	**C**	2	1	0	0	0	0	0	0	0	0	0	0	0	2	0.2	24
22	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
23	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
24	0	0	0	0	**IZS**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
25	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
26	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
27	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
28	**IZS**	0	0	0	0	0	0	0	0	2	2	2	1	1	1	1	0	0	0	0	0	0	0	**IZS**	2	0.5	24
29	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
30	0	0	0	0	0	0	0	1	5	5	4	4	4	3	3	2	1	0	0	0	0	**IZS**	0	0	**5**	**1.4**	24
31	0	0	0	0	0	0	0	0	1	2	3	5	4	3	1	0	0	0	0	0	**IZS**	0	0	0	**5**	0.8	24
HOURLY MAX	0	0	0	0	0	0	0	2	5	5	4	5	4	3	3	2	1	0	1	0	0	0	0	0			
HOURLY AVG	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.5	0.7	0.6	0.6	0.4	0.4	0.3	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0			

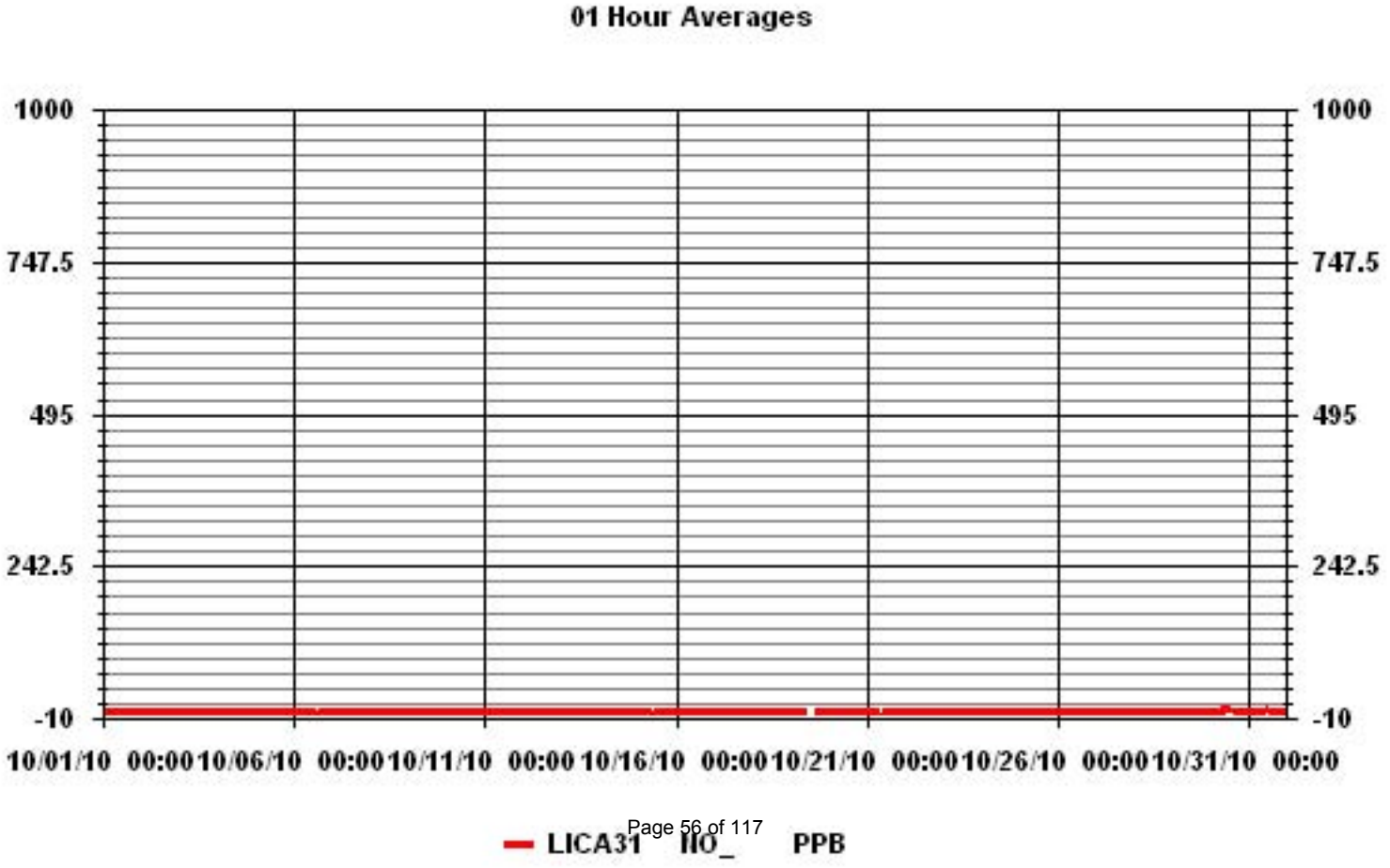
STATUS FLAG CODES

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



MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:			63				
MAXIMUM 1-HR AVERAGE:			5	PPB	@ HOUR(S)	VAR	ON DAY(S) 30, 31
MAXIMUM 24-HR AVERAGE:			1.4	PPB			ON DAY(S) 30
IZS CALIBRATION TIME:	32	HRS	OPERATIONAL TIME:			744	HRS
MONTHLY CALIBRATION TIME:	10	HRS	AMD OPERATION UPTIME:			100.0	%
STANDARD DEVIATION:	0.61		MONTHLY AVERAGE:			0.16	PPB


01 Hour Averages
1000
747.5
495
242.5
-10
10/01/10 00:00
10/06/10 00:00
10/11/10 00:00
10/16/10 00:00
10/21/10 00:00
10/26/10 00:00
10/31/10 00:00
LICA31 NO_ PPB

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *ST. LINA*

OCTOBER 2010

NITRIC OXIDE MAX instantaneous maximum in ppb

MST

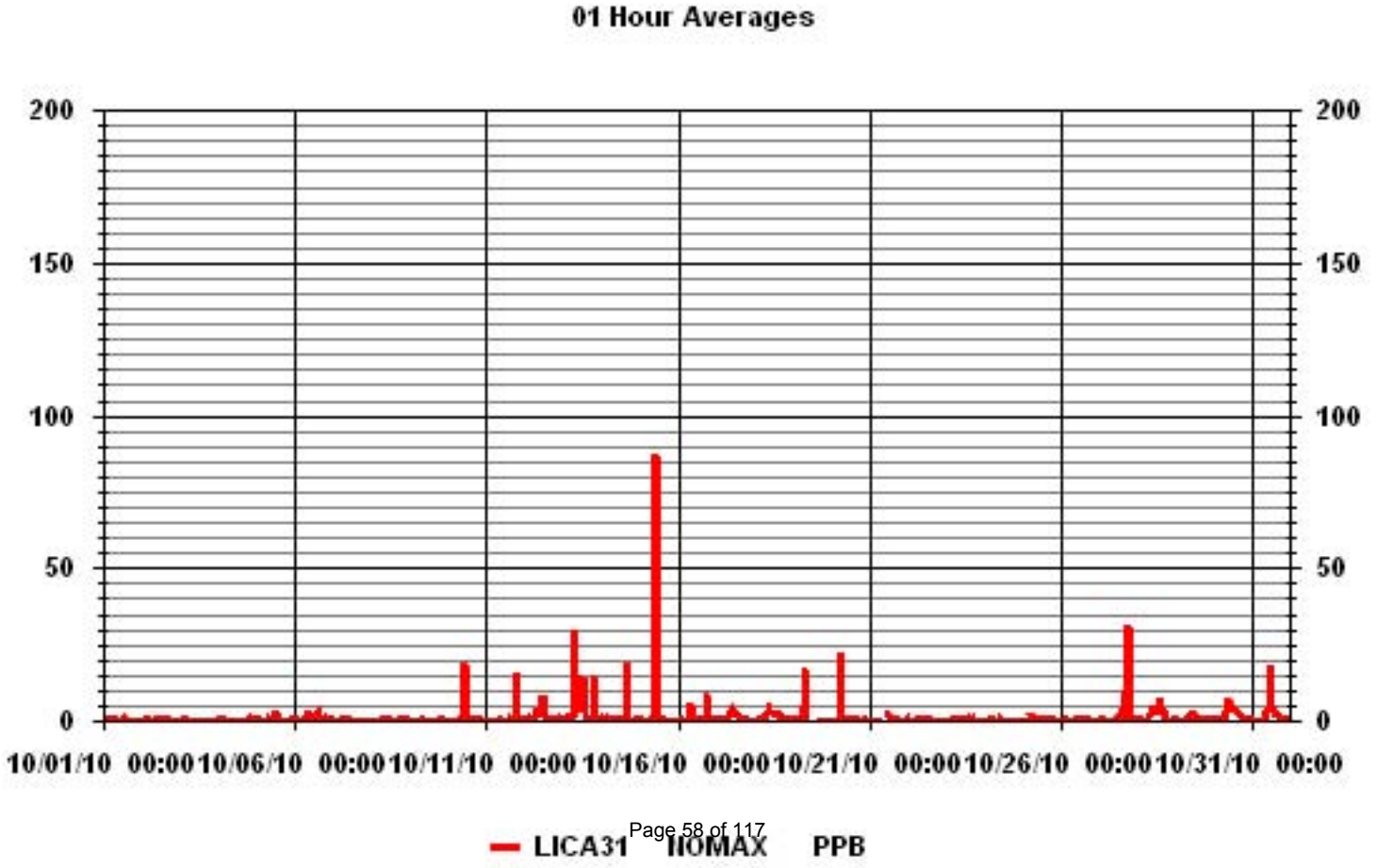
HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	0	0	0	0	**IZS**	1	0	0	1	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0.2	24
2	0	0	0	**IZS**	1	1	0	0	0	1	1	1	0	1	1	1	1	1	0	0	0	0	0	0	1	0.4	24
3	0	0	**IZS**	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.0	24
4	0	**IZS**	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0.1	24
5	**IZS**	1	0	0	0	0	0	1	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	**IZS**	3	0.2	24
6	1	0	0	0	0	0	1	1	2	2	1	1	1	2	3	1	1	0	0	1	0	0	**IZS**	1	3	0.8	24
7	0	0	0	0	0	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	**IZS**	0	0	1	0.2	24
8	0	0	0	0	0	0	0	1	1	1	0	1	1	0	0	0	0	1	1	0	**IZS**	1	0	0	1	0.3	24
9	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	**IZS**	1	0	0	0	1	0.1	24
10	0	0	0	0	0	0	0	1	1	1	19	1	1	1	1	1	1	0	**IZS**	1	0	0	0	0	19	1.3	24
11	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1	0	1	**IZS**	1	16	0	0	0	1	16	1.0	24
12	1	0	1	0	0	0	1	4	3	1	8	1	8	1	1	0	**IZS**	1	0	0	0	1	0	0	8	1.4	24
13	0	0	1	0	1	0	1	30	5	3	15	3	7	14	0	**IZS**	1	0	0	15	0	0	0	1	30	4.2	24
14	0	0	0	1	0	0	0	0	1	1	1	1	1	1	**IZS**	2	19	1	0	0	0	1	1	0	19	1.3	24
15	1	1	0	0	0	0	0	1	1	1	**87**	1	0	**IZS**	1	1	0	0	0	0	0	0	0	0	**87**	4.1	24
16	0	0	1	1	0	0	1	1	6	1	1	1	**IZS**	1	1	1	0	1	9	1	0	1	1	1	9	1.3	24
17	0	0	1	1	1	1	1	1	3	4	3	**IZS**	2	2	1	0	1	1	1	1	0	0	0	0	4	1.1	24
18	0	0	1	1	0	1	1	2	3	5	**IZS**	3	2	2	2	1	2	1	1	1	1	1	1	1	5	1.4	24
19	1	1	0	0	1	0	5	17	1	**C**	**C**	**C**	**C**	**C**	**C**	**C**	**C**	0	0	0	0	0	0	0	17	1.6	24
20	0	0	0	0	0	0	22	0	**IZS**	2	**P**	1	1	1	1	1	1	0	0	0	1	1	1	0	22	1.5	23
21	0	0	0	0	0	0	0	**IZS**	16	**C**	**C**	2	2	1	0	1	1	1	1	0	0	0	0	1	16	1.2	24
22	0	0	0	0	0	0	**IZS**	1	1	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	1	0.3	24
23	0	0	0	0	0	**IZS**	1	0	0	1	1	1	1	0	1	0	1	0	0	0	0	0	0	0	1	0.3	24
24	0	0	0	0	**IZS**	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.1	24
25	0	0	0	**IZS**	2	1	0	1	0	1	1	1	0	0	1	1	1	0	1	1	0	0	0	0	2	0.5	24
26	0	0	**IZS**	1	1	0	0	0	0	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	1	0.5	24
27	0	**IZS**	1	0	0	0	0	0	0	0	1	0	1	1	4	10	2	1	31	0	1	0	0	0	31	2.3	24
28	**IZS**	1	0	0	0	0	0	1	2	4	4	3	3	4	7	3	3	0	0	0	0	0	0	**IZS**	7	1.6	24
29	1	0	0	0	0	0	0	1	2	1	1	2	2	1	1	1	1	1	1	1	0	1	**IZS**	1	2	0.8	24
30	1	1	1	1	1	1	1	3	6	6	5	5	4	4	3	3	2	0	0	0	0	**IZS**	1	0	6	2.1	24
31	0	0	0	0	0	0	0	0	3	4	5	18	5	4	2	2	1	1	1	0	**IZS**	1	0	0	18	2.0	24
HOURLY MAX	1	1	1	1	2	1	22	30	16	6	87	18	8	14	7	10	19	1	31	16	1	1	1	1			
HOURLY AVG	0.2	0.2	0.3	0.2	0.3	0.2	1.2	2.3	2.0	1.6	5.8	1.7	1.6	1.5	1.2	1.1	1.4	0.4	1.6	1.3	0.1	0.3	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:	299					
MAXIMUM INSTANTANEOUS VALUE:	87	PPB	@ HOUR(S)	10	ON DAY(S)	15
IZS CALIBRATION TIME:	32	HRS	OPERATIONAL TIME:		743	HRS
MONTHLY CALIBRATION TIME:	10	HRS				
STANDARD DEVIATION	4.28					


01 Hour Averages
200
150
100
50
0
10/01/10 00:00
10/06/10 00:00
10/11/10 00:00
10/16/10 00:00
10/21/10 00:00
10/26/10 00:00
10/31/10 00:00
LICA31 HOMAX PPB

LICA31
NO_ / WDR Joint Frequency Distribution (Percent)

October 2010

Distribution By % Of Samples

Logger Id : 31
Site Name : LICA31
Parameter : NO_
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
< 50	5.68	4.03	3.88	4.93	4.33	5.38	4.78	6.42	5.97	6.72	6.27	4.18	4.48	7.62	13.75	11.50	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	5.68	4.03	3.88	4.93	4.33	5.38	4.78	6.42	5.97	6.72	6.27	4.18	4.48	7.62	13.75	11.50	

Calm : .00 %

Total # Operational Hours : 669

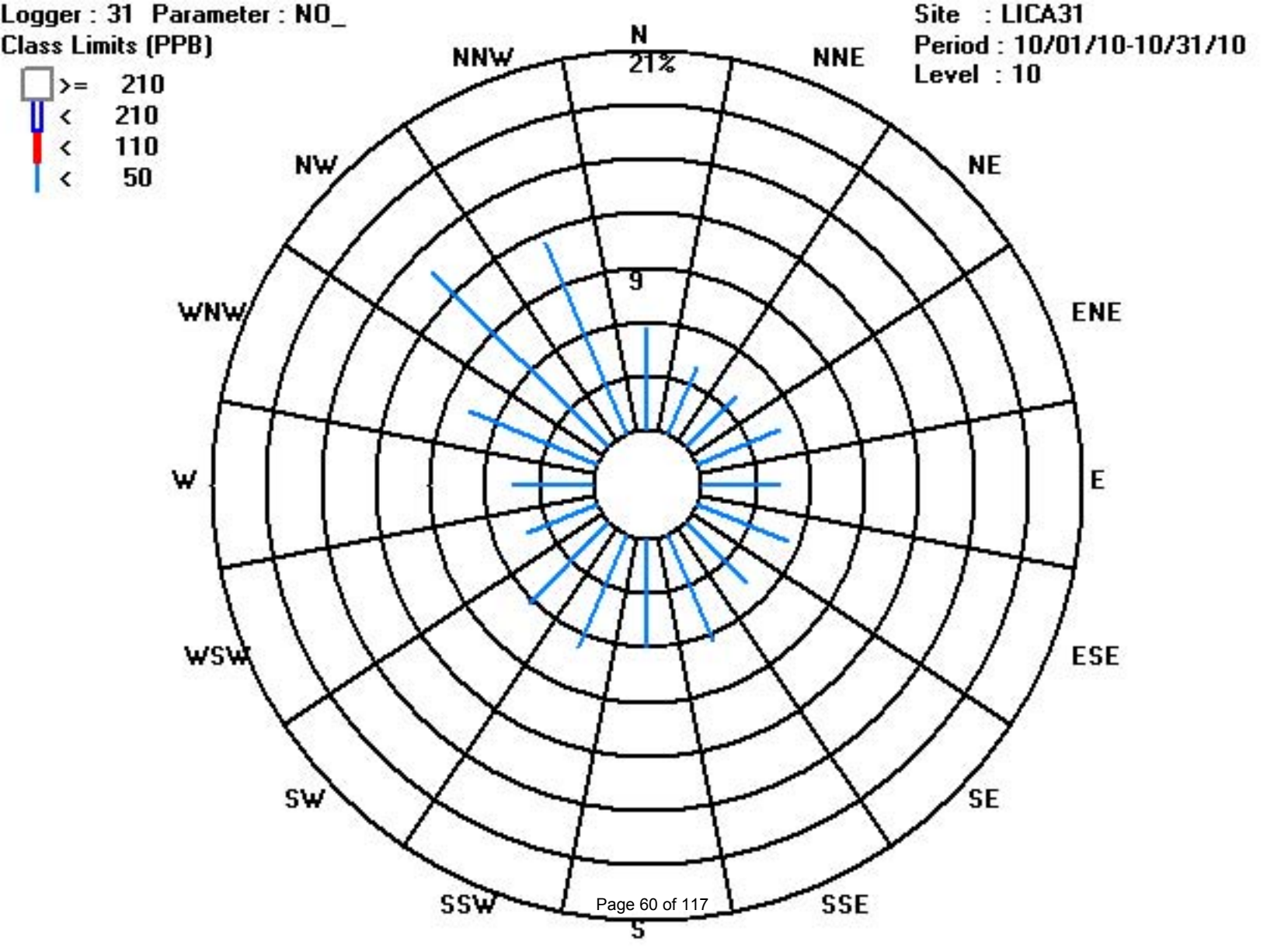
Distribution By Samples

Direction

Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 50	38	27	26	33	29	36	32	43	40	45	42	28	30	51	92	77	669
< 110																	
< 210																	
>= 210																	
Totals	38	27	26	33	29	36	32	43	40	45	42	28	30	51	92	77	

Calm : .00 %

Total # Operational Hours : 669


Logger : 31 Parameter : NO_
Class Limits (PPB)
>= 210
< 210
< 110
< 50
Site : LICA31
Period : 10/01/10-10/31/10
Level : 10
N
21%
NNE
NE
ENE
E
ESE
SE
SSE
S
SSW
SW
WSW
W
WNW
NW
NNW
9

Oxides of Nitrogen

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - ST. LINA

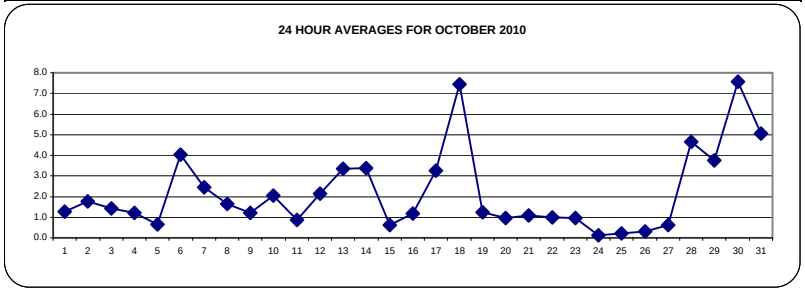
OCTOBER 2010

OXIDES OF NITROGEN hourly averages in ppb

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	1	2	2	2	**IZS**	1	1	2	2	1	1	1	0	1	1	1	1	1	1	2	1	1	2	1	2	1.3	24
2	1	2	2	**IZS**	2	1	1	1	2	2	2	2	2	3	2	2	2	2	2	2	1	1	2	2	3	1.8	24
3	2	2	**IZS**	1	1	1	1	1	1	1	0	1	0	1	1	1	2	2	3	2	3	3	2	1	3	1.4	24
4	1	**IZS**	1	1	1	2	1	1	1	2	3	1	1	1	1	1	1	2	1	1	1	1	1	1	3	1.2	24
5	**IZS**	1	1	1	1	0	0	1	0	0	0	0	0	0	0	0	0	1	1	1	2	2	2	**IZS**	2	0.6	24
6	2	3	4	5	4	4	5	6	6	5	3	4	3	5	8	3	3	2	3	3	4	4	**IZS**	4	8	4.0	24
7	3	3	3	3	3	3	4	5	5	3	2	1	1	1	1	1	1	1	1	1	3	**IZS**	4	3	5	2.4	24
8	2	3	3	3	2	2	3	3	3	2	2	2	2	1	1	0	0	1	0	0	**IZS**	1	1	1	3	1.7	24
9	1	1	1	0	0	1	1	1	1	2	1	1	1	1	1	1	1	1	2	**IZS**	2	2	3	2	3	1.2	24
10	3	2	2	3	3	3	3	3	3	3	3	2	2	2	2	2	4	2	**IZS**	0	0	0	0	0	4	2.0	24
11	1	1	1	0	1	1	1	1	1	1	0	0	0	0	0	0	0	**IZS**	1	1	1	2	3	3	3	0.9	24
12	4	4	4	4	3	3	2	2	1	1	1	1	1	0	1	0	**IZS**	1	1	2	2	3	4	4	4	2.1	24
13	4	4	4	4	5	4	5	8	8	7	7	6	3	2	0	**IZS**	1	0	0	1	1	1	1	1	8	3.3	24
14	2	1	1	1	2	2	2	3	3	3	2	2	3	4	**IZS**	5	6	5	6	5	7	5	4	4	7	3.4	24
15	2	2	1	1	1	0	0	1	1	1	1	1	0	**IZS**	1	0	0	0	0	0	0	0	0	1	2	0.6	24
16	0	0	0	1	1	1	1	2	2	1	1	1	**IZS**	1	1	1	1	1	1	1	1	2	3	3	3	1.2	24
17	5	6	5	5	5	4	4	5	6	6	6	**IZS**	4	3	1	1	1	1	1	1	1	1	1	2	6	3.3	24
18	3	3	4	4	4	4	5	5	7	8	**IZS**	6	4	6	6	8	12	10	8	10	9	15	**17**	13	**17**	7.4	24
19	8	3	2	1	1	1	1	2	1	**C**	**C**	**C**	**C**	**C**	**C**	**C**	**C**	0	0	0	0	0	0	0	8	1.3	24
20	0	0	0	0	0	0	1	1	**IZS**	2	1	0	0	0	1	1	1	1	2	2	3	3	2	1	3	1.0	24
21	1	2	1	1	1	1	1	**IZS**	3	**C**	**C**	5	3	2	0	0	0	0	0	0	1	0	0	1	5	1.1	24
22	0	0	1	0	0	0	**IZS**	1	1	1	2	3	3	3	2	1	0	0	1	0	1	1	1	1	3	1.0	24
23	1	0	0	0	1	**IZS**	1	1	1	1	1	1	1	1	2	2	2	2	1	1	1	1	0	0	2	1.0	24
24	0	0	0	0	**IZS**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0.1	24
25	0	0	0	**IZS**	0	0	0	0	0	0	0	0	0	0	0	1	1	0	1	1	1	0	0	0	1	0.2	24
26	0	0	**IZS**	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	1	1	1	0	1	1	0.3	24
27	0	**IZS**	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	2	2	1	2	2	2	2	0.6	24
28	**IZS**	2	3	3	3	3	4	5	5	6	6	6	6	6	7	7	6	6	5	4	3	3	3	**IZS**	7	4.6	24
29	3	3	3	2	2	2	2	3	3	2	2	2	2	2	2	3	7	8	8	6	6	6	**IZS**	7	8	3.7	24
30	7	9	10	9	8	8	8	9	11	9	8	8	8	7	7	7	7	7	6	6	5	**IZS**	5	5	11	**7.6**	24
31	4	4	4	4	4	4	3	3	4	4	7	11	9	8	4	4	5	6	5	6	**IZS**	4	6	3	11	5.0	24
HOURLY MAX	8	9	10	9	8	8	8	9	11	9	8	11	9	8	8	8	12	10	8	10	9	15	17	13			
HOURLY AVG	2.1	2.2	2.2	2.0	2.0	1.9	2.0	2.5	2.7	2.6	2.2	2.3	2.0	2.1	1.8	1.9	2.3	2.2	2.1	2.1	2.1	2.3	2.4	2.3			

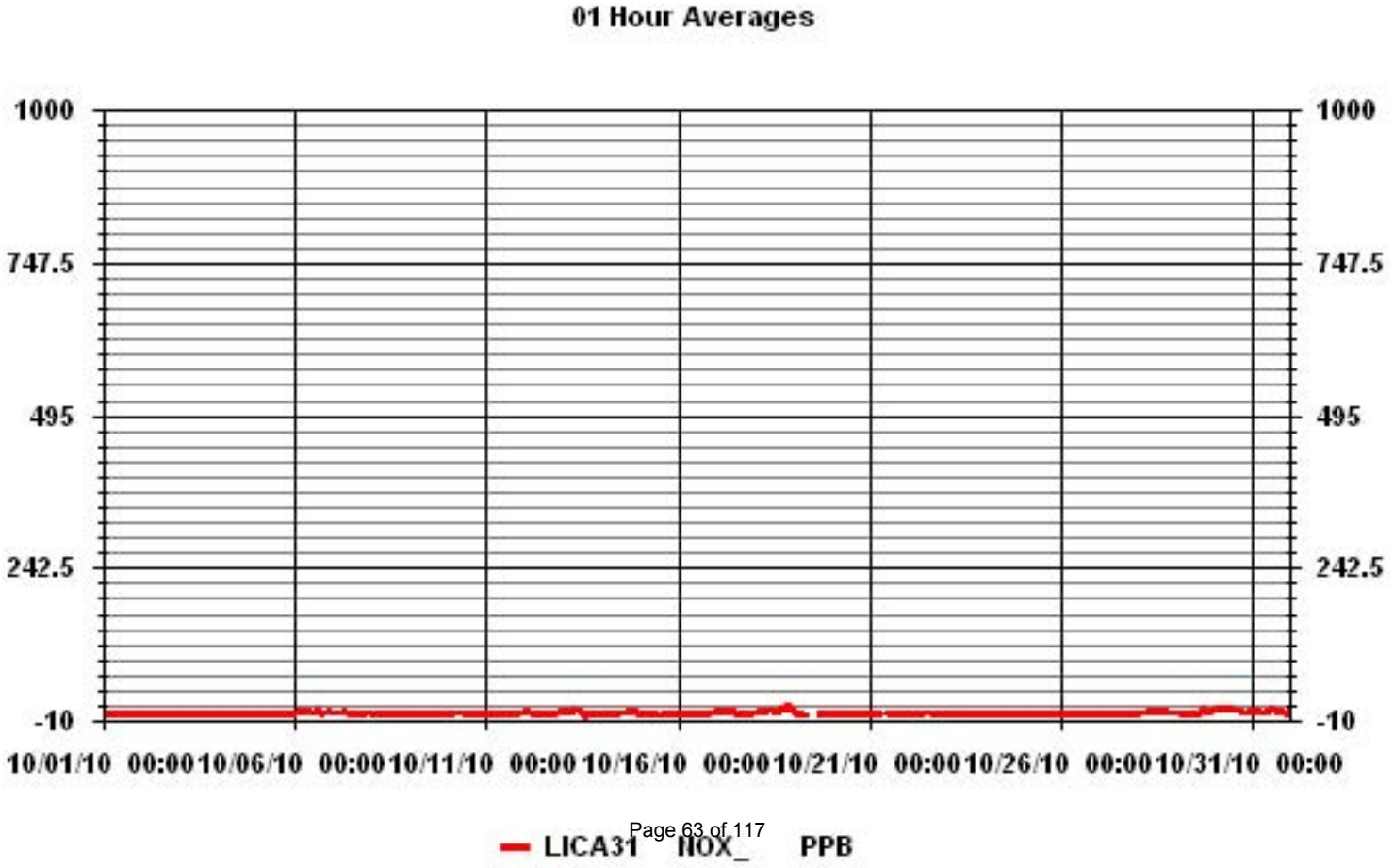
STATUS FLAG CODES

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



MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:	545						
MAXIMUM 1-HR AVERAGE:	17	PPB	@ HOUR(S)	22	ON DAY(S)	18	
MAXIMUM 24-HR AVERAGE:	7.6	PPB			ON DAY(S)	30	
IZS CALIBRATION TIME:	32	HRS	OPERATIONAL TIME:		744	HRS	
MONTHLY CALIBRATION TIME:	10	HRS	AMD OPERATION UPTIME:		100.0	%	
STANDARD DEVIATION:	2.38		MONTHLY AVERAGE:		2.19	PPB	


01 Hour Averages
1000
747.5
495
242.5
-10
10/01/10 00:00
10/06/10 00:00
10/11/10 00:00
10/16/10 00:00
10/21/10 00:00
10/26/10 00:00
10/31/10 00:00
LICA31 NOX_ PPB

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *ST. LINA*

OCTOBER 2010

OXIDES OF NITROGEN MAX instantaneous maximum in ppb

MST

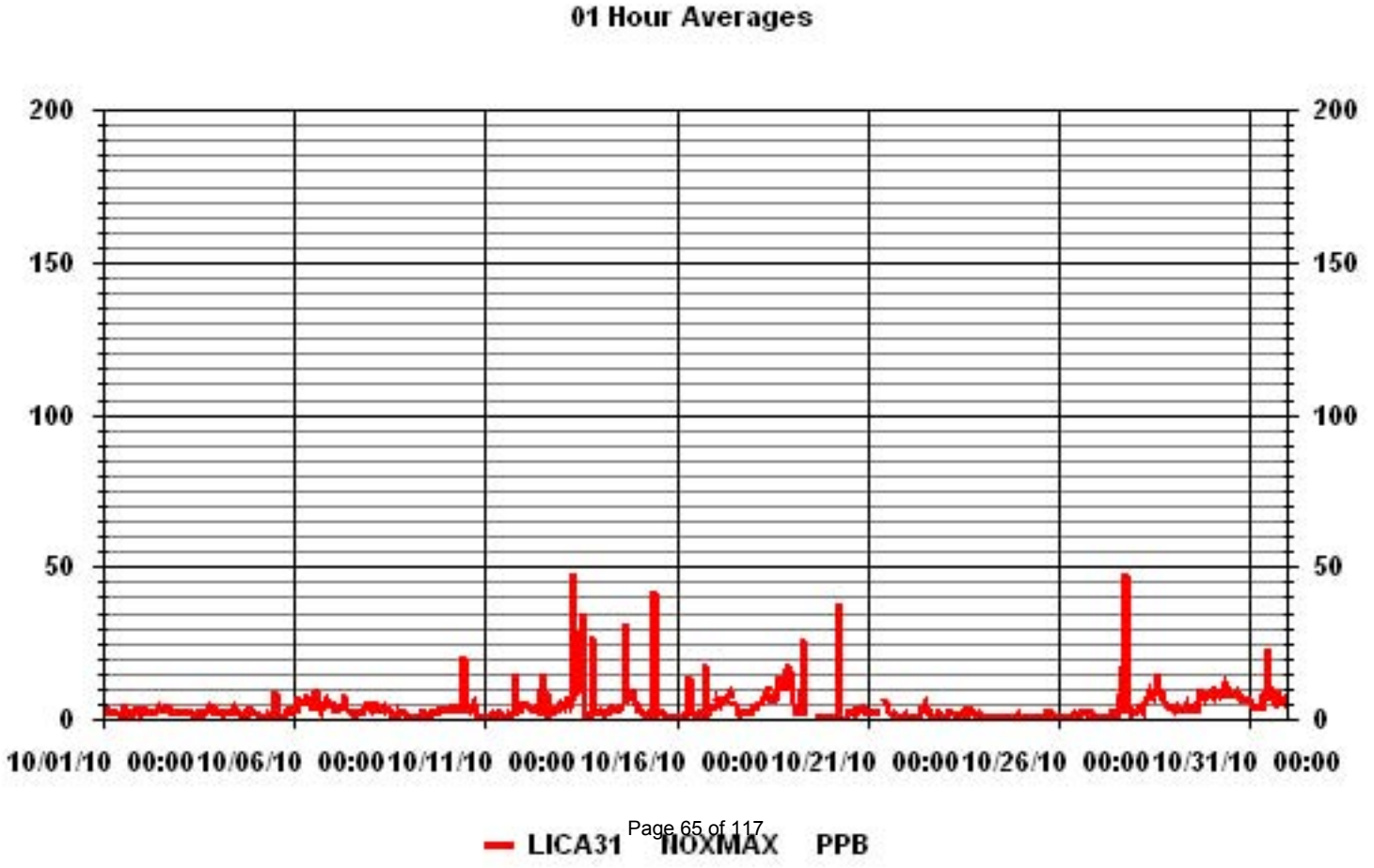
HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	2	3	3	3	**IZS**	2	2	2	2	2	1	1	1	5	3	2	2	1	2	3	2	2	3	3	5	2.3	24
2	2	3	3	**IZS**	2	2	2	2	2	3	4	3	3	3	3	4	4	5	2	2	2	2	2	2	5	2.7	24
3	2	2	**IZS**	2	2	2	2	2	2	1	1	1	1	3	1	2	2	3	4	3	4	4	3	2	4	2.2	24
4	2	**IZS**	2	1	2	2	2	2	2	3	4	2	2	2	1	1	2	3	2	3	2	3	3	2	4	2.2	24
5	**IZS**	2	1	1	1	1	1	2	1	1	1	0	9	1	1	1	1	1	2	2	3	3	2	**IZS**	9	1.7	24
6	3	3	6	6	5	5	6	7	7	5	4	4	4	9	10	5	4	3	5	6	4	6	**IZS**	5	10	5.3	24
7	6	3	3	4	4	4	5	8	5	4	3	2	2	1	1	2	2	2	2	3	4	**IZS**	5	4	8	3.4	24
8	3	4	5	5	3	3	4	4	3	4	3	3	3	1	1	1	1	3	2	2	**IZS**	2	2	1	5	2.7	24
9	1	1	1	1	1	1	1	2	2	2	2	1	1	1	2	2	2	2	2	**IZS**	3	3	3	3	3	1.7	24
10	3	3	3	4	4	4	3	3	4	4	21	3	3	4	3	4	5	3	**IZS**	1	1	1	1	1	21	3.7	24
11	1	1	1	1	2	1	1	1	2	2	1	1	1	1	2	1	1	**IZS**	2	15	2	3	3	5	15	2.2	24
12	5	5	5	5	4	3	3	3	4	3	10	1	15	2	9	1	**IZS**	2	2	3	3	4	5	4	15	4.4	24
13	5	5	4	5	7	5	6	**48**	11	8	29	9	13	35	1	**IZS**	2	1	1	27	2	2	2	2	**48**	10.0	24
14	3	2	1	2	2	3	3	4	4	3	3	3	4	4	**IZS**	6	31	8	8	6	9	9	5	5	31	5.6	24
15	3	3	3	2	1	1	1	2	2	1	42	1	1	**IZS**	2	2	1	1	1	1	1	1	1	1	42	3.3	24
16	1	1	1	1	1	1	2	3	14	2	2	1	**IZS**	1	2	2	1	1	18	3	2	3	4	4	18	3.1	24
17	5	7	6	5	6	6	6	6	8	9	8	**IZS**	5	5	2	1	2	2	2	2	2	2	2	3	9	4.4	24
18	4	4	4	5	5	5	6	7	9	10	**IZS**	7	5	7	7	9	14	13	9	12	11	16	18	16	18	8.8	24
19	10	6	2	2	2	2	10	26	2	**C**	**C**	**C**	**C**	**C**	**C**	**C**	**C**	1	1	1	0	1	1	1	26	4.3	24
20	1	1	1	1	1	1	38	2	**IZS**	4	**P**	1	2	2	2	3	2	3	3	3	4	4	3	2	38	3.8	23
21	2	2	2	2	2	2	2	**IZS**	24	**C**	**C**	6	5	3	2	1	2	1	1	1	1	1	1	2	24	3.1	24
22	1	1	1	1	1	1	**IZS**	1	1	2	4	5	3	3	3	2	1	1	1	1	2	2	1	1	5	1.7	24
23	1	1	1	2	2	**IZS**	2	1	1	1	2	1	1	1	3	3	3	3	2	1	1	2	1	1	3	1.6	24
24	1	1	1	1	**IZS**	1	0	0	1	1	1	1	1	1	1	1	1	1	1	0	1	1	2	1	2	0.9	24
25	1	1	0	**IZS**	1	0	1	1	0	1	1	1	0	0	1	2	2	1	2	2	1	1	1	1	2	1.0	24
26	1	1	**IZS**	1	1	1	0	0	1	2	1	1	1	1	2	2	2	2	1	2	2	2	1	1	2	1.3	24
27	1	**IZS**	1	0	0	0	1	1	1	2	2	1	1	2	8	17	3	2	48	3	3	2	3	2	48	4.5	24
28	**IZS**	3	4	4	3	5	5	6	7	9	8	7	8	9	15	9	10	7	6	5	4	4	4	**IZS**	15	6.5	24
29	4	3	4	3	3	3	3	4	5	3	3	4	4	3	3	6	9	9	9	7	8	8	**IZS**	9	9	5.1	24
30	8	10	10	9	9	8	9	10	12	11	8	8	8	8	8	9	8	8	7	6	6	**IZS**	6	6	12	8.3	24
31	5	5	4	4	4	4	4	4	7	7	9	23	10	10	7	6	7	8	6	7	**IZS**	6	7	5	23	6.9	24
HOURLY MAX	10	10	10	9	9	8	38	48	24	11	42	23	15	35	15	17	31	13	48	27	11	16	18	16			
HOURLY AVG	3.0	3.0	2.9	2.9	2.8	2.6	4.4	5.5	4.9	3.8	6.6	3.5	4.0	4.4	3.7	3.7	4.4	3.4	5.1	4.4	3.1	3.4	3.3	3.3			

STATUS FLAG CODES

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

MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:	686					
MAXIMUM INSTANTANEOUS VALUE:	48	PPB	@ HOUR(S)	7	ON DAY(S)	13
IZS CALIBRATION TIME:	32	HRS	OPERATIONAL TIME:		743	HRS
MONTHLY CALIBRATION TIME:	10	HRS				
STANDARD DEVIATION	4.92					


01 Hour Averages
200
150
100
50
0
10/01/10 00:00
10/06/10 00:00
10/11/10 00:00
10/16/10 00:00
10/21/10 00:00
10/26/10 00:00
10/31/10 00:00
LICA31 NOXMAX PPB

LICA31
NOX_ / WDR Joint Frequency Distribution (Percent)

October 2010

Distribution By % Of Samples

Logger Id : 31
Site Name : LICA31
Parameter : NOX_
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
< 50	5.68	4.03	3.88	4.93	4.33	5.38	4.78	6.42	5.97	6.72	6.27	4.18	4.48	7.62	13.75	11.50	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	5.68	4.03	3.88	4.93	4.33	5.38	4.78	6.42	5.97	6.72	6.27	4.18	4.48	7.62	13.75	11.50	

Calm : .00 %

Total # Operational Hours : 669

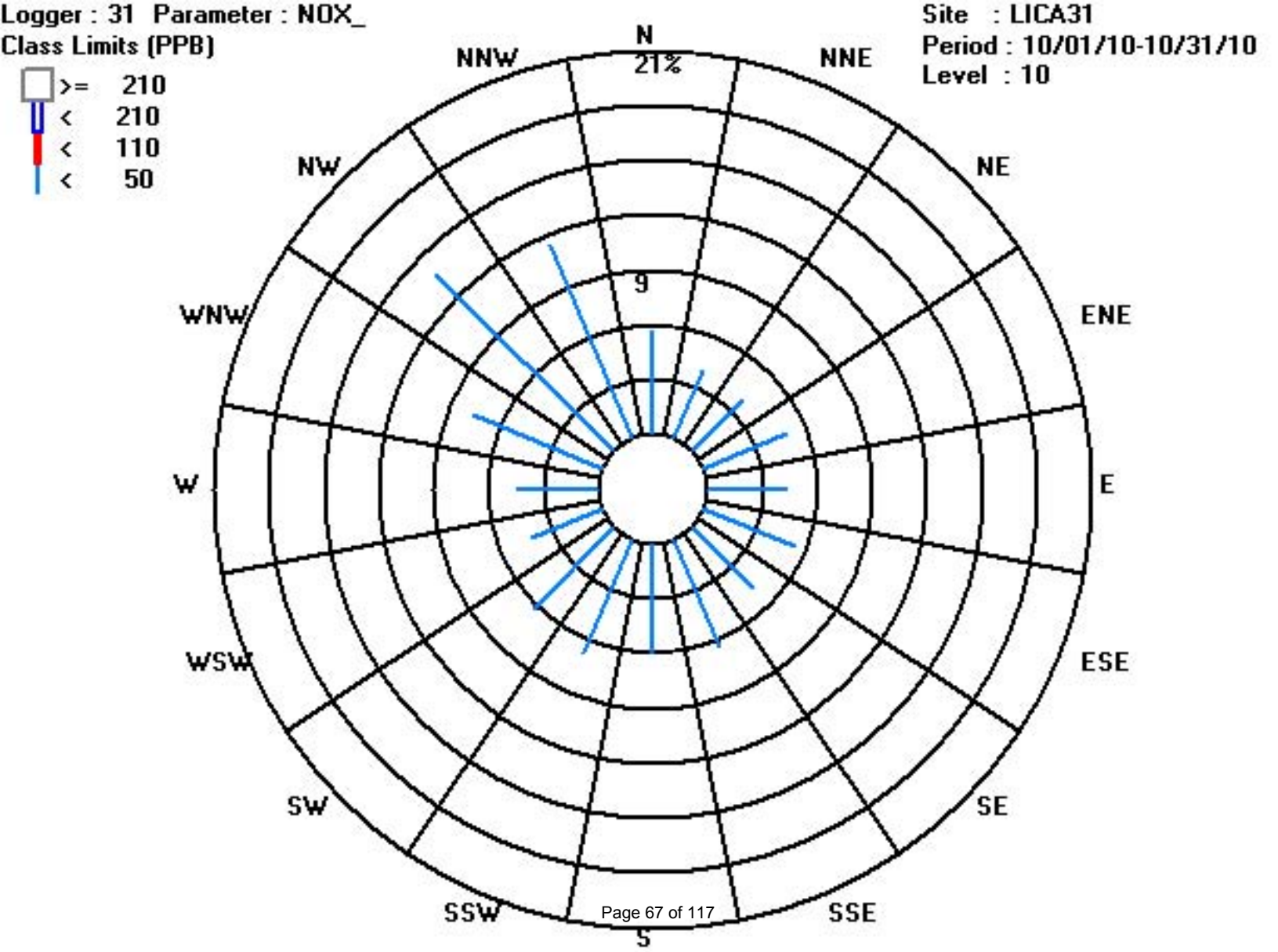
Distribution By Samples

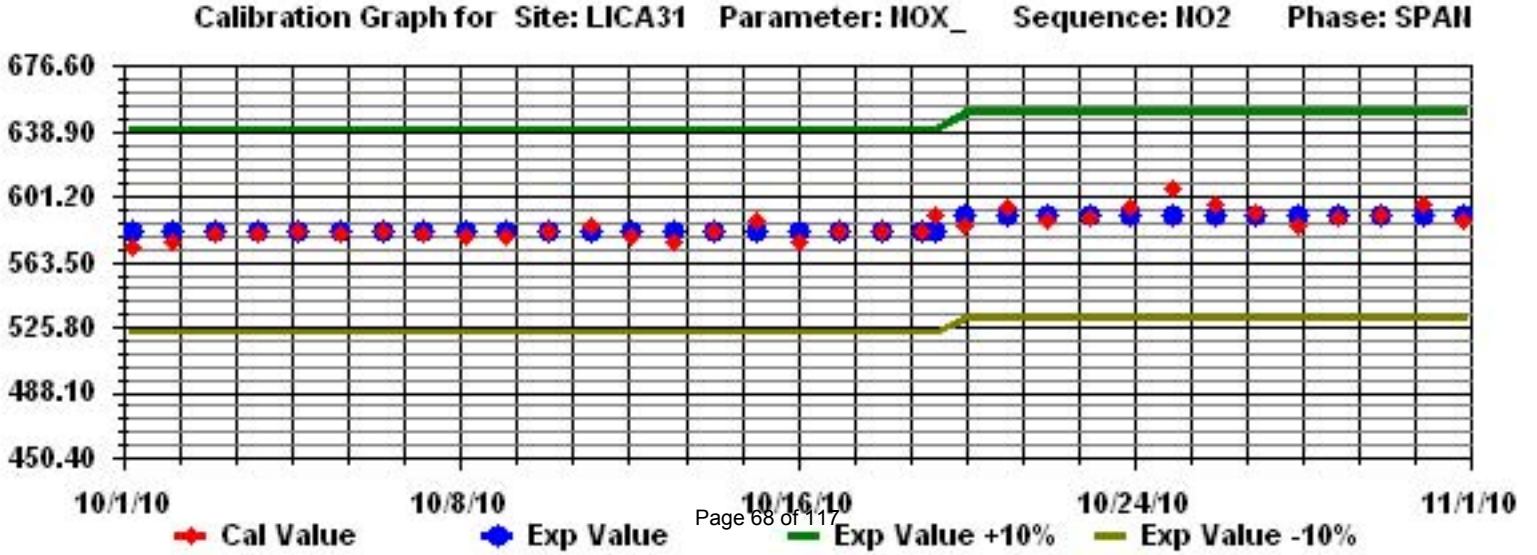
Direction

Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 50	38	27	26	33	29	36	32	43	40	45	42	28	30	51	92	77	669
< 110																	
< 210																	
>= 210																	
Totals	38	27	26	33	29	36	32	43	40	45	42	28	30	51	92	77	

Calm : .00 %

Total # Operational Hours : 669


Logger : 31 Parameter : NOX_
Class Limits (PPB)
>= 210
< 210
< 110
< 50
Site : LICA31
Period : 10/01/10-10/31/10
Level : 10
N
21%
NNE
NE
ENE
E
ESE
SE
SSE
S
SSW
SW
WSW
W
WNW
NW
NNW
9


Calibration Graph for Site: LICA31 Parameter: NOX_ Sequence: NO2 Phase: SPAN
676.60
638.90
601.20
563.50
525.80
488.10
450.40
10/1/10
10/8/10
10/16/10
10/24/10
11/1/10
Cal Value
Exp Value
Exp Value +10%
Exp Value -10%

Particulate Matter 2.5

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - ST. LINA

OCTOBER 2010

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

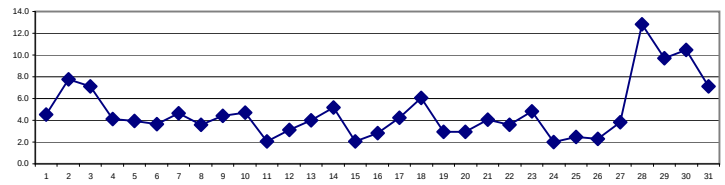
MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	2.1	1.4	3.3	4.3	0.8	3.1	1.1	2.6	4.8	3.5	5.4	3.1	4	5.3	7.5	9	8.8	4.6	4.7	6	5.2	4.1	4.4	10.1	10.1	4.6	24
2	6	9.9	18.7	10.9	5.7	9.9	2.7	1.9	1.9	6.2	5.3	5.4	5.3	7.7	9.1	8.5	9.1	8.7	8	7.4	7	11.4	9.7	9.3	18.7	7.7	24
3	8.4	10.9	8.7	11.6	8.6	6.6	6.5	6.4	4.9	4.4	1.5	6.2	6.8	3.9	5.1	7.2	8	8.2	9	8.7	7.2	7.1	6.4	8.5	11.6	7.1	24
4	6.2	4.3	2	3.5	1.5	4.2	2.7	5.9	5.2	3.1	3.2	4.4	3	6	4.6	4.8	3.8	6.2	4.8	1.9	4.2	4.5	4	4.3	6.2	4.1	24
5	5.2	4.5	4.6	5.4	5.3	4.4	3.9	3.6	3.5	4.5	4.9	2.8	2.4	1.4	1.4	2.9	5.6	4.8	5.9	4.4	4.6	3.6	1	3.6	5.9	3.9	24
6	4.7	0.7	0.6	4.2	3.1	3.8	4.7	4.1	3	5.2	3.8	5.7	3.7	2.8	4.9	3.9	2.3	1.8	2.9	4	7	4.2	3.1	3.5	7.0	3.7	24
7	3.5	4.5	5.9	5.3	5	4.7	6.2	5.9	5.5	6.5	6.1	3.7	3.7	3.1	1.5	2.3	5.2	5.9	5.4	4.4	4.8	4	5.5	3.3	6.5	4.7	24
8	4.7	3.9	5.2	5.6	4.6	5.6	4.3	3.6	3	0.2	8.3	10	6.6	3.7	2.3	1.8	3	2.2	3.2	0	0	0.7	2.6	1.1	10.0	3.6	24
9	4.4	2.7	1.6	0.8	1.8	1.5	0.7	1	1.5	2.7	2.4	3.4	2.2	7.2	6.4	2.5	5.6	5.9	8.7	8.3	6.7	7.5	10.5	9.5	10.5	4.4	24
10	10.4	9.1	9.6	9.4	7.8	7.4	5.3	6.1	3.8	4.1	1.3	2.1	4	2.2	4.1	3.7	4.2	5.1	1.2	0	5	2.2	3.1	2.1	10.4	4.7	24
11	0.5	6.6	4.6	0.4	0.5	1.8	0	1.5	1.9	0.8	0	2.3	3.2	2.6	0	1.8	5.7	3.7	0	1.3	2.2	2	2.9	2.8	6.6	2.0	24
12	2.1	7.9	7.1	6	1.5	0.9	2.7	3.3	2.7	3.7	2.2	3.8	3.7	1.6	0.8	0.4	0	1.1	3.5	2.7	4.4	5.9	2.2	4.4	7.9	3.1	24
13	2.1	1.7	2.6	4	5	4.7	8	4.5	7	8	7.1	3.4	3	3.3	2.4	4	3.4	2.9	4.3	1.9	2.8	3	3.4	3.8	8.0	4.0	24
14	4.1	2.8	0.4	1.8	1.8	3	3.2	1.3	1.1	1.1	3.7	7.5	7.1	5.5	5.6	6.1	7	9	7.5	6.4	8.4	14.8	12.1	3.5	14.8	5.2	24
15	1.6	4	2.9	2.2	0.9	0	0.3	0.5	0	1.5	0	2.8	2.7	3.5	4	2.2	0.2	2.1	2.2	2.5	3	2.5	2.7	4.8	4.8	2.0	24
16	3	3.2	2.2	0	3.3	4.4	2.9	3	4	3.8	3.3	1.3	3.2	2.4	3.9	4.6	1.1	0.6	3	3	1	3.3	4.3	2.4	4.6	2.8	24
17	3.9	4.9	6.1	5.6	3.9	2.9	3.9	4.9	5	5.5	6.4	4	3.5	4.1	5.7	3.9	5.5	4.8	5.9	3.8	0.9	2.8	2.4	1.9	6.4	4.3	24
18	6.1	6.7	4.5	5.8	4.8	5.8	4.8	5.6	5.5	5.9	7.5	8.1	3.9	3.8	3.8	5.9	4.6	8.1	7.8	7.5	6.9	5	9	8.7	9.0	6.1	24
19	5	4.5	3.6	4.9	5.3	4.6	5.1	1	2.7	2.3	2.4	3	3	0	2.1	2.4	2.3	0.3	0.6	2.9	2.3	2	4.4	3.5	5.3	2.9	24
20	1.1	0	1.2	1.8	1.2	1.4	0	0.7	4.1	3.1	0	0.1	0.9	4.5	2.1	2.3	2.2	2.9	6.2	8.3	7.2	8.4	5.3	6.2	8.4	3.0	24
21	3.8	3.7	3.9	1.7	1.5	5.4	6.1	3	3.3	6.4	6.1	8.3	4.4	3	1.5	5.2	3.8	4.6	5.7	2.8	1.6	3.3	3.3	4.6	8.3	4.0	24
22	1.2	0.8	3	0	0	4	0	7.7	6.1	0.8	8.6	5.6	5.3	2.7	1.9	3.6	4.5	7.3	4.9	3.8	4.6	4.7	4.5	0	8.6	3.6	24
23	7.5	6.5	0.7	2.9	2.6	0	1.9	2.3	4	3.7	8.8	6.5	5.8	6.7	5.7	6.3	7.4	8.1	9.1	2.8	0	1.3	5.2	9.9	9.9	4.8	24
24	6.9	3.7	6.3	3.3	5.4	0.9	3.6	1.4	1.8	1.6	1	2.3	0	1.2	0.3	1.1	0.7	0.1	0	0	0.2	1.8	1	2.7	6.9	2.0	24
25	2.7	1.9	0.4	2.2	3.2	2.6	3.5	0	0.1	3	1.3	0	0.4	0.7	3.2	3.9	4.7	3	5.2	3.9	4.4	4.1	4	0.8	5.2	2.5	24
26	1	1.4	0.9	0	2	3.2	1.4	0	3	1.7	0	**C**	**C**	**C**	**C**	2.7	3	6.9	5.2	1.7	3.7	3	2	3.2	6.9	2.3	24
27	5.5	2	1.6	2	2.6	2	1.5	1.8	3.5	3.3	0.9	3.3	3	0.5	2.7	4.6	4.5	3.8	5.6	7.2	7.2	7.9	7.7	7.3	7.9	3.8	24
28	9.2	11.2	11.4	11	12.1	12.7	16	19.2	17.6	18.7	**19.4**	15.7	14.7	14.4	12	13.8	12.6	11	11.4	8.6	8.9	8.1	8.1	9.9	**19.4**	**12.8**	24
29	8.7	14.7	6.8	5	6.9	6.7	6.2	5.8	4.2	5.4	4.7	5.3	8.1	8.4	7.1	8.9	13.4	14.7	16.8	15.8	14.6	14.7	15	15	16.8	9.7	24
30	10.5	9.8	7.7	6.5	6.2	8.2	6.5	7.4	7.9	10.3	11.5	11.9	15.8	11.4	11.6	10.8	12.5	13.5	15.1	14.1	11.6	12	9.4	9.1	15.8	10.5	24
31	8	6.7	5.9	5.8	8	8.3	6.6	6	6.2	5.9	7.1	8.9	9	10.8	8.4	5.8	4.1	4.3	6.7	8.8	6.6	9.3	6.3	7.3	10.8	7.1	24
HOURLY MAX	11	15	19	12	12	13	16	19	18	19	19	16	16	14	12	14	13	15	17	16	15	15	15	15			
HOURLY AVG	4.8	5.1	4.6	4.3	4.0	4.3	3.9	3.9	4.2	4.4	4.7	5.0	4.7	4.5	4.4	4.7	5.1	5.4	5.8	5.0	5.0	5.5	5.3	5.4			

STATUS FLAG CODES

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

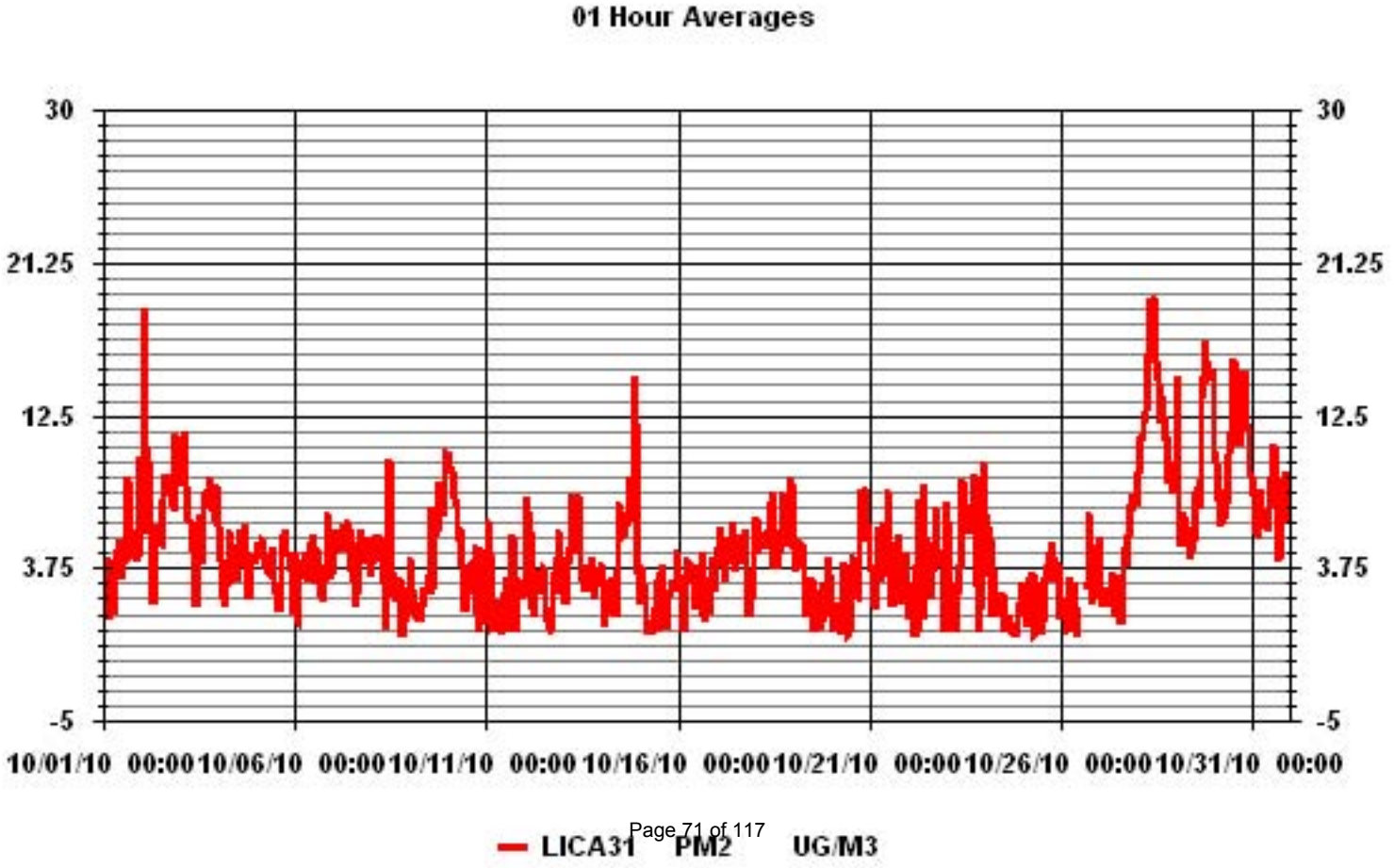
24 HOUR AVERAGES FOR OCTOBER 2010



OBJECTIVE LIMIT: **ALBERTA ENVIRONMENT:** 1-HR - ug/m3 | 24-HR 30 ug/m3

MONTHLY SUMMARY

NUMBER OF 1-HR EXCEEDENCES:	-					
NUMBER OF 24-HR EXCEEDENCES:	0	PROPOSED CANADA WIDE GUIDELINE				
NUMBER OF NON-ZERO READINGS:	710					
MAXIMUM 1-HR AVERAGE:	19.4	UG/M^3	@ HOUR(S)	10	ON DAY(S)	28
MAXIMUM 24-HR AVERAGE:	12.8	UG/M^3			ON DAY(S)	28
IZS CALIBRATION TIME:	0	HRS	OPERATIONAL TIME:		744	HRS
MONTHLY CALIBRATION TIME:	4	HRS	AMD OPERATION UPTIME:		100.0	%
STANDARD DEVIATION:	3.42		MONTHLY AVERAGE:		4.76	UG/M^3


01 Hour Averages
30
21.25
12.5
3.75
-5
10/01/10 00:00
10/06/10 00:00
10/11/10 00:00
10/16/10 00:00
10/21/10 00:00
10/26/10 00:00
10/31/10 00:00
LICA31 PM2 UG/M3

LICA31
PM2 / WDR Joint Frequency Distribution (Percent)

October 2010

Distribution By % Of Samples

Logger Id : 31
Site Name : LICA31
Parameter : PM2
Units : UG/M3

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
<	30.0	5.94	3.82	4.10	4.81	4.24	5.24	4.95	6.23	6.23	5.94	6.37	4.39	4.67	7.93	13.45	11.61	100.00
<	60.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
<	80.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
<	120.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
<	240.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
>=	240.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
	Totals	5.94	3.82	4.10	4.81	4.24	5.24	4.95	6.23	6.23	5.94	6.37	4.39	4.67	7.93	13.45	11.61	

Calm : .00 %

Total # Operational Hours : 706

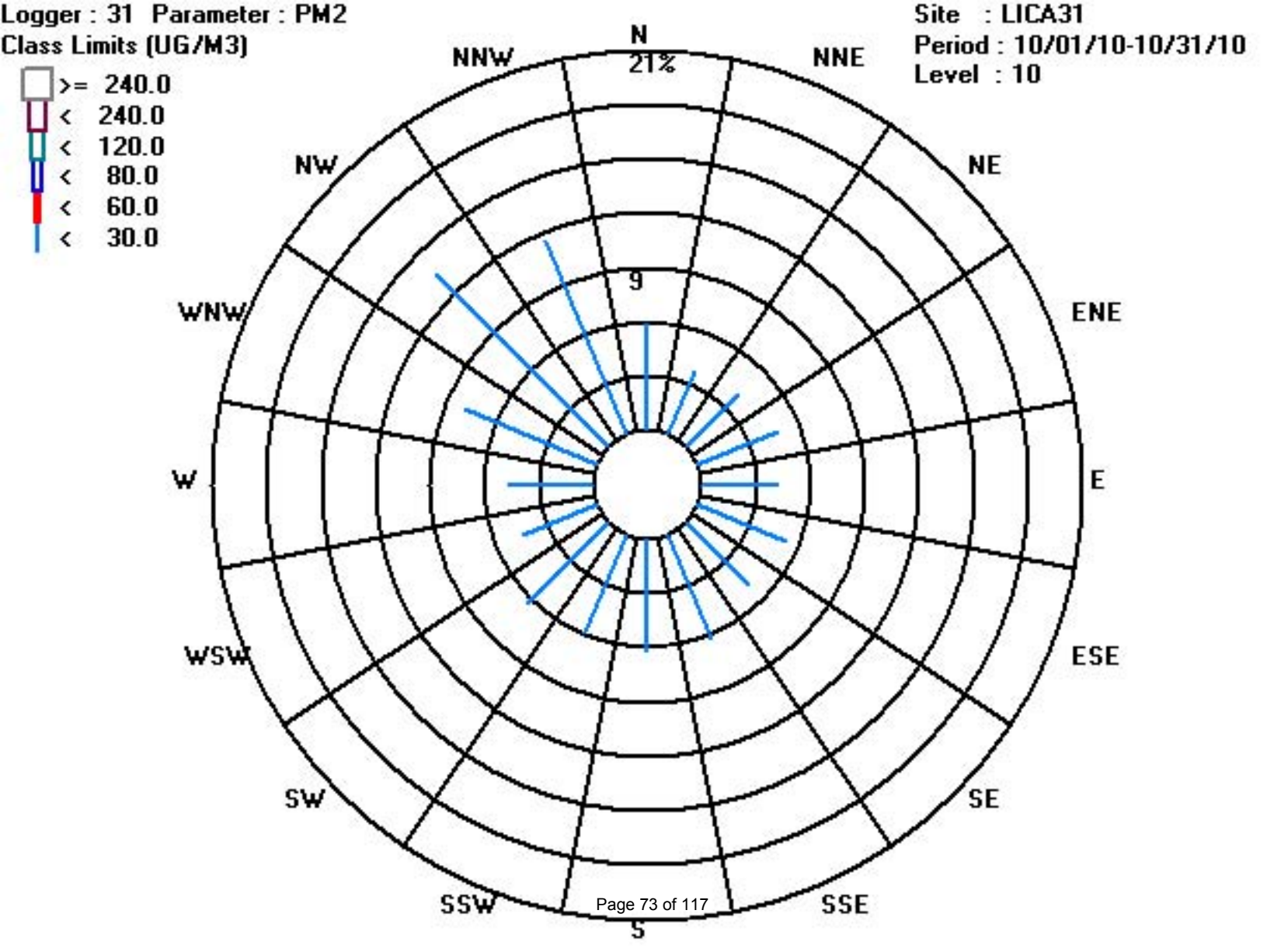
Distribution By Samples

Direction

	Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
<	30.0	42	27	29	34	30	37	35	44	44	42	45	31	33	56	95	82	706
<	60.0																	
<	80.0																	
<	120.0																	
<	240.0																	
>=	240.0																	
	Totals	42	27	29	34	30	37	35	44	44	42	45	31	33	56	95	82	

Calm : .00 %

Total # Operational Hours : 706


Logger : 31 Parameter : PM2
Class Limits (UG/M3)
>= 240.0
< 240.0
< 120.0
< 80.0
< 60.0
< 30.0
Site : LICA31
Period : 10/01/10-10/31/10
Level : 10
N
21%
NNE
NE
ENE
E
ESE
SE
SSE
S
SSW
SW
WSW
W
WNW
NW
NNW
9

Temperature

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - ST. LINA

OCTOBER 2010

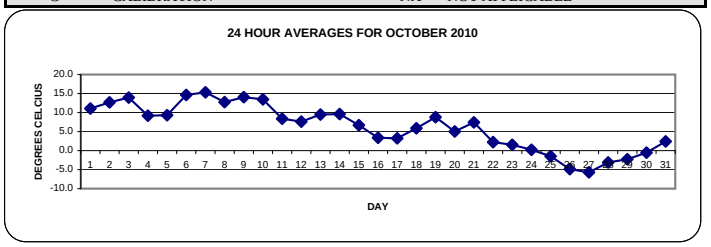
AMBIENT TEMPERATURE hourly averages (Degrees C)

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	9.3	8.2	7.1	7	6.8	5.9	5.7	6.8	8.7	11.2	13.3	14.5	15.3	15.8	16.1	16.3	16	14.7	12.9	11.7	11.1	10.7	10.2	10.1	16.3	11.1	24
2	9.5	8.7	8.2	7.9	7.2	6.5	6	7.2	9.1	11.1	12.6	14.2	14.6	17	19	19.8	19.8	17.6	15.6	15.3	15.1	14.5	14.2	14	19.8	12.7	24
3	13.7	12.5	11.5	10.9	11.2	10.3	9.5	11.1	13.5	15.3	17.1	17.9	18	18.2	18.8	18.3	17	15.9	14.3	13.4	12.8	11.9	11	10.4	18.8	13.9	24
4	10.1	10	9.8	9.7	9.6	9.5	9.4	9.5	9.6	8.5	8.1	8.9	9.2	9.5	9.5	9.6	9.6	9.4	8.9	8.7	8.4	8.3	8.4	8.3	10.1	9.2	24
5	8.8	8.3	7.5	7	6.9	6.8	6.6	6.4	8.2	9.9	10.7	11.6	12.5	13.2	13.4	13	12.6	10.8	8.9	8.1	7.8	7.7	8.4	8.4	13.4	9.3	24
6	8.4	7.7	8.6	9.5	8.6	8.6	9	10.4	12.9	15.1	18.2	18.6	19.6	20.8	21.9	22.6	21.7	19.4	17.8	16.4	15.3	14.3	13.4	12.6	22.6	14.6	24
7	11.9	11.1	9.6	8.5	7.8	7.5	8.8	13	16.1	18.2	19.2	20	21.1	22.2	22.5	21.9	21.2	19.1	17.5	16.3	14.7	14.2	13.2	12.3	22.5	**15.3**	24
8	11.6	10	9	8.2	7.7	6.9	6.7	7.5	9.4	11	10.7	12.8	17.2	18.8	19.2	20	19.5	17.3	15.1	14.6	14.2	13.3	13.2	12.2	20.0	12.8	24
9	10.7	11.2	9.2	9.7	10.2	10.7	10.2	9.9	11.6	13.7	16.3	17.6	19	19.1	19.2	20.3	20.1	18.2	16.4	15.4	13.6	12.7	11.5	10.8	20.3	14.1	24
10	10.3	10.2	10	9.4	8.2	7.4	6.8	7.7	9.8	12.7	15.5	18.1	20.5	22	**23.2**	22.5	20.3	16.6	15	12.5	11.7	11.5	11.1	10.5	**23.2**	13.5	24
11	10.1	9.2	8.3	7.8	6.5	5.3	4.3	5	6.9	9.1	10.2	11.2	11.8	12.5	12.5	12.7	12.2	10.4	8.2	7.1	6.4	5.5	4.5	3.6	12.7	8.4	24
12	2.6	2.4	2.8	3.8	4.8	4	3.9	5.1	8	9.5	10.3	11.1	12.1	12.5	12.9	13	12.6	9.6	8.5	8	7.1	6.6	6	5.6	13.0	7.6	24
13	5.1	4.5	4.1	3.9	3.3	2.8	2.7	3.6	6.3	9.6	12.7	14.8	16.4	17.3	16.8	15.9	14.1	12.7	11.1	10.7	10.9	10.1	9.4	8.9	17.3	9.5	24
14	7.8	7.6	7.4	7.3	6.3	4.6	4.6	5.2	6.9	8.4	10.8	12	12	13.5	16.1	16.1	16.4	13.3	11.8	9.8	9	8.5	7.8	7.6	16.4	9.6	24
15	7	7	7.3	6.7	5.8	5.8	5.3	4.8	6.1	8.1	7.7	8.8	9.6	9.2	8.8	8.1	7.6	6.9	6.2	5.9	5.5	5	4	3.2	9.6	6.7	24
16	2.4	1.8	1.1	0.5	-0.3	-1.4	-2	-1.3	0.8	4	6.4	7.6	8.8	9	9	8.9	7.4	5.3	4.1	3.2	3	2.2	0.5	0	9.0	3.4	24
17	-0.3	-0.9	-1.8	-2.7	-2.9	-3	-3.3	-3.3	-0.5	1.8	4.1	7.1	9	9.4	9.6	10.1	9.9	7.3	6	5.6	5.3	4.8	3.7	2.8	10.1	3.2	24
18	1.9	1.1	0.8	-0.1	-0.9	-1.4	-1.8	-1.3	0.5	3.7	7.9	10	11.4	13.1	13	11.9	10.9	9.3	9.1	9.1	9.4	8.6	7.6	7.2	13.1	5.9	24
19	6.9	6.8	7	6.8	6.4	5.7	5.5	6.3	9.5	10.3	11.2	12.8	12.6	12.4	13	13.3	12.2	10.2	8.8	8.4	8.1	7	5.4	4.3	13.3	8.8	24
20	3.6	2.6	1.9	1.8	1.7	0.3	-0.9	0.1	2.1	5.6	7.8	8.6	9.2	9.5	8.7	8.1	7.1	6.4	6.5	6.4	6.3	5.9	5.7	5.8	9.5	5.0	24
21	5.9	5.1	4.6	4.7	4	3.1	2.6	2	3.1	4.9	8	11.1	13.6	15.3	15.9	15.4	13.9	11.5	10.1	8.4	5.7	3.6	2.9	3	15.9	7.4	24
22	3.1	3	3	3.1	2.6	2.3	2.1	2.1	2.3	2.3	2.6	2.6	2.3	2.3	2.5	2.6	2.3	1.9	1.7	1.7	1.6	1.3	1.2	1.1	3.1	2.2	24
23	1.1	0.7	0.3	0.3	0.1	0.1	0.1	0.1	0.3	0.8	1.7	2.7	3.3	3.5	3.3	3	2.6	2.4	2.1	1.8	1.7	1.7	1.6	1.5	3.5	1.5	24
24	1.5	1.4	1.4	1.2	1	0.6	0.4	0.2	0	0	0	0	0	0.1	0.1	0	-0.2	-0.2	-0.2	-0.1	-0.1	-0.4	-0.6	-0.8	1.5	0.2	24
25	-1.2	-1.3	-1.6	-1.7	-1.7	-1.6	-1.7	-1.8	-1.4	-1	-0.8	-0.5	0	-0.6	-1.1	-1.7	-1.7	-1.6	-1.8	-1.7	-1.8	-2.1	-2.3	-2.5	0.0	-1.5	24
26	-3	-3.4	-3.6	-3.8	-4.1	-4.6	-4.9	-5	-4.9	-4.9	-4.5	-4	-3.7	-3.7	-4.2	-4.9	-5.6	-6	-6.2	-6.2	-6.3	-6.4	-6.6	-6.6	-3.0	-4.9	24
27	-6.5	-6.5	-6.3	-6.4	-6.5	-6.7	-6.9	-7	-6.9	-6.5	-5.5	-4.4	-2.2	-1.5	-2.3	-3	-3.8	-4.3	-5.1	-6.6	-7.5	-8	-8.1	**-8.5**	-1.5	-5.7	24
28	-8.2	-8.1	-8.2	-7.6	-7	-6	-5.4	-4.6	-3.5	-2.4	-1.6	-1.1	-0.6	-0.6	-0.4	-0.5	-0.6	-0.7	-0.9	-0.9	-1.1	-1.3	-1.6	-1.6	-0.4	-3.1	24
29	-1.8	-2	-2.2	-2.5	-3	-3.2	-3.2	-3.2	-3.1	-3	-2.7	-2.5	-2.2	-1.9	-1.8	-1.9	-2	-1.9	-1.9	-2	-1.9	-1.8	-1.4	-1.3	-1.3	-2.3	24
30	-1.4	-1.7	-2	-2.5	-3.2	-3.5	-4	-4.1	-3.5	-1.9	-0.8	0.3	2.1	3.8	4.5	4	2.1	0.4	0	-0.3	-0.1	-0.1	-0.3	-0.6	4.5	-0.5	24
31	-0.8	-1.1	-1.6	-1.9	-2.4	-2.9	-3.1	-3.4	-2.4	-0.6	1.5	3.4	6	7.9	9.6	9.9	7.8	6.3	5	4.9	4.4	4.8	3	3.9	9.9	2.4	24
HOURLY MAX	13.7	12.5	11.5	10.9	11.2	10.7	10.2	13.0	16.1	18.2	19.2	20.0	21.1	22.2	23.2	22.6	21.7	19.4	17.8	16.4	15.3	14.5	14.2	14.0			
HOURLY AVG	4.5	4.1	3.7	3.4	3.1	2.6	2.4	2.9	4.4	6.0	7.4	8.6	9.6	10.3	10.6	10.5	9.8	8.3	7.3	6.6	6.1	5.6	5.1	4.7			

STATUS FLAG CODES

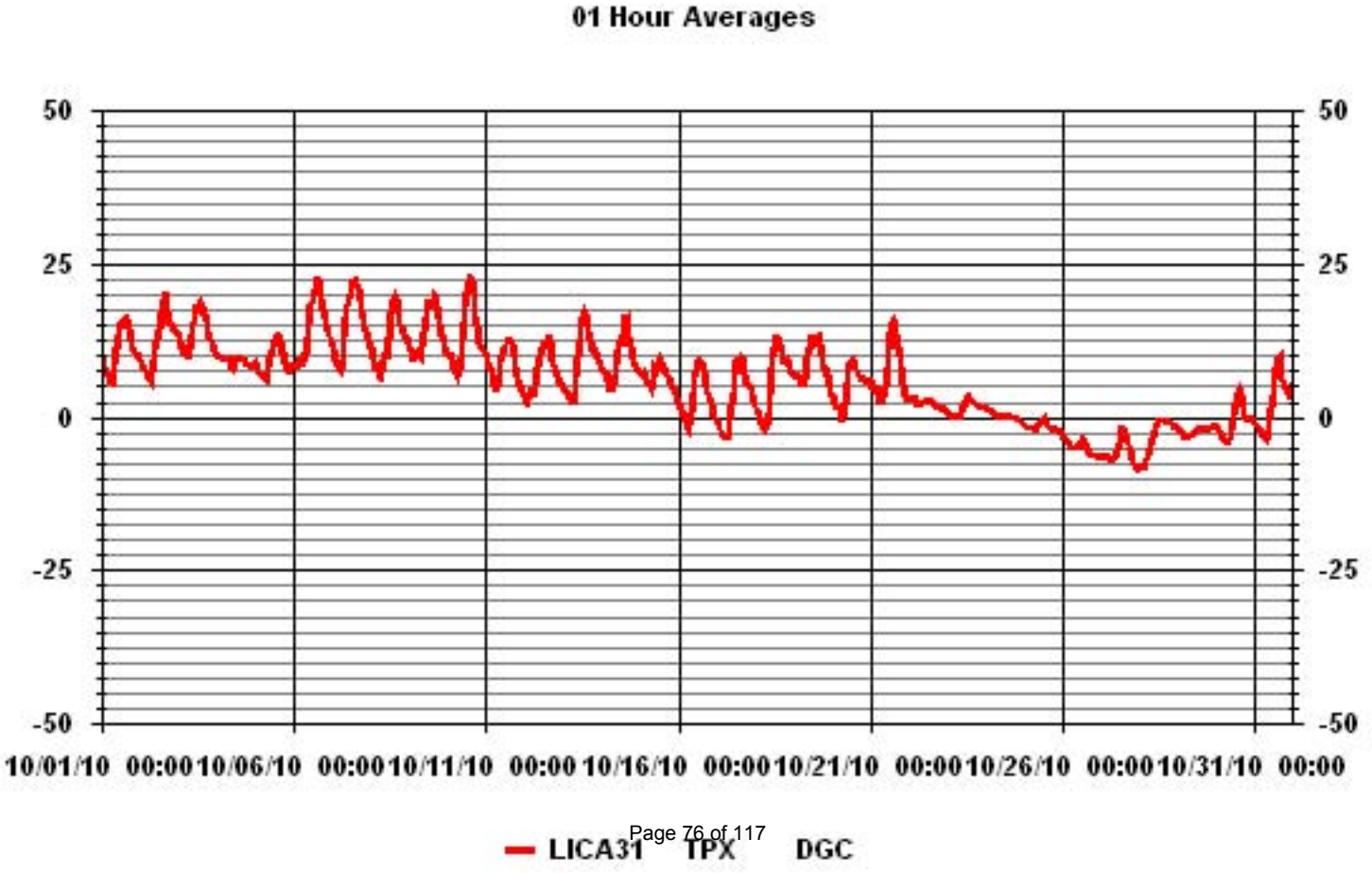
S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	- MAINTENANCE
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE



MONTHLY SUMMARY

MINIMUM 1-HR AVERAGE:	-8.5	^{O}C	@ HOUR(S)	23	ON DAY(S)	27
MAXIMUM 1-HR AVERAGE:	23.2	^{O}C	@ HOUR(S)	14	ON DAY(S)	10
MAXIMUM 24-HR AVERAGE:	15.3	^{O}C			ON DAY(S)	7

CALIBRATION TIME:	0	HRS	OPERATIONAL TIME:	744	HRS
			AMD OPERATION UPTIME:	100.0	%
STANDARD DEVIATION:	6.89		MONTHLY AVERAGE:	6.14	^{O}C


01 Hour Averages
50
25
0
-25
-50
10/01/10 00:00
10/06/10 00:00
10/11/10 00:00
10/16/10 00:00
10/21/10 00:00
10/26/10 00:00
10/31/10 00:00
LICA31 TPX DGC

Barometric Pressure

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - ST. LINA

OCTOBER 2010

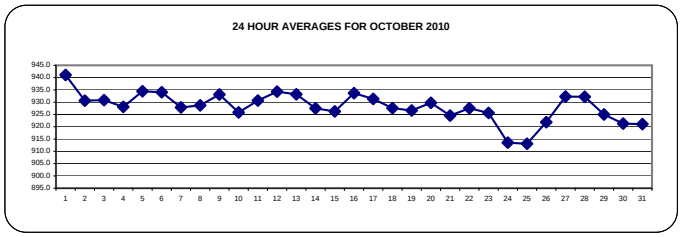
BAROMETRIC PRESSURE hourly averages (millibar)

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	943	943	943	942	942	942	942	942	943	944	944	944	944	943	942	942	941	940	939	938	937	936	935	935	**944**	**941.1**	24
2	934	933	932	932	931	930	930	929	929	930	931	931	931	931	932	932	931	931	930	929	929	929	929	929	934	930.6	24
3	929	930	930	930	930	930	930	931	932	932	933	933	933	933	932	932	931	931	930	930	930	930	929	929	933	930.8	24
4	929	929	928	928	928	928	928	929	929	929	929	928	928	927	927	927	927	927	927	928	928	928	929	929	929	928.1	24
5	929	930	931	931	932	932	933	934	934	935	936	937	937	937	938	938	937	937	936	936	935	934	934	934	938	934.5	24
6	934	934	935	935	935	935	935	935	936	936	937	937	937	936	936	935	934	933	932	931	931	930	929	929	937	934.0	24
7	928	928	927	926	926	926	927	927	928	929	930	930	930	930	930	930	929	928	928	927	927	926	926	926	930	927.9	24
8	925	925	924	924	923	923	923	924	925	926	927	928	929	931	932	932	933	933	933	933	934	934	934	934	934	928.7	24
9	934	934	934	934	934	934	934	934	934	934	934	934	934	934	934	934	934	933	932	931	931	931	930	929	934	933.1	24
10	929	928	928	927	926	924	924	924	923	924	924	924	925	925	925	925	925	926	926	927	927	928	928	928	929	925.8	24
11	929	929	929	929	929	929	930	930	931	931	932	932	932	932	932	932	932	932	931	931	931	931	930	930	932	930.7	24
12	930	930	931	931	932	932	932	933	934	935	936	936	937	937	937	938	937	937	936	935	935	934	934	934	938	934.3	24
13	933	933	932	932	932	932	931	931	932	932	933	934	934	934	935	935	935	934	934	934	934	934	934	933	935	933.2	24
14	933	932	932	932	931	930	929	928	928	928	928	928	927	927	927	927	927	926	925	924	923	923	923	922	933	927.5	24
15	922	922	922	923	923	924	923	924	924	924	925	924	925	926	927	928	928	929	930	930	931	932	932	932	932	926.3	24
16	932	933	933	933	933	933	933	933	934	935	935	936	936	935	935	935	934	934	933	933	933	933	932	932	936	933.7	24
17	932	931	931	931	931	930	930	930	930	931	932	932	932	932	932	932	932	932	931	932	932	932	931	931	932	931.3	24
18	930	930	930	929	929	928	928	927	927	928	929	929	929	928	928	927	927	926	926	926	926	925	925	925	930	927.6	24
19	925	925	925	926	926	926	926	926	926	927	927	927	927	927	927	927	927	927	927	927	927	928	928	928	928	926.6	24
20	928	929	929	929	929	929	929	930	930	931	932	932	932	932	931	931	930	930	930	929	929	928	928	927	932	929.8	24
21	927	926	925	924	923	922	922	921	922	922	923	924	924	925	925	926	926	925	925	925	926	927	927	927	927	924.5	24
22	928	927	928	928	928	928	929	929	929	929	929	929	929	928	928	927	926	926	926	926	926	926	926	926	929	927.5	24
23	925	925	925	925	925	925	925	926	926	926	926	927	927	927	927	926	926	926	926	926	925	925	924	924	927	925.6	24
24	923	922	922	921	920	919	918	917	916	915	914	913	912	911	910	909	909	908	908	908	908	908	907	907	923	913.5	24
25	907	907	908	908	908	909	910	911	911	912	913	913	914	914	915	915	916	917	917	917	918	918	918	918	918	913.1	24
26	918	918	919	919	919	919	919	920	920	921	921	921	922	922	923	923	924	924	924	925	925	926	926	927	927	921.9	24
27	927	928	928	929	929	930	930	931	932	932	933	934	934	934	935	935	935	935	934	934	934	934	934	934	935	932.3	24
28	933	933	933	933	933	933	933	933	933	934	934	934	934	933	933	933	932	932	931	930	930	929	929	928	934	932.2	24
29	927	927	927	926	926	925	925	925	925	925	925	925	925	925	925	924	925	924	924	924	924	924	924	924	927	925.0	24
30	924	924	924	924	923	923	922	922	922	922	922	922	922	922	921	921	920	919	919	919	919	919	918	918	924	921.3	24
31	917	917	917	916	916	917	916	917	917	917	918	920	921	922	923	924	925	925	925	926	927	927	928	928	928	921.1	24
HOURLY MAX	943	943	943	942	942	942	942	942	943	944	944	944	944	943	942	942	941	940	939	938	937	936	935	935			
HOURLY AVG	928	928	928	928	927	927	927	928	928	928	929	929	929	929	929	929	929	929	928	928	928	928	928	928			

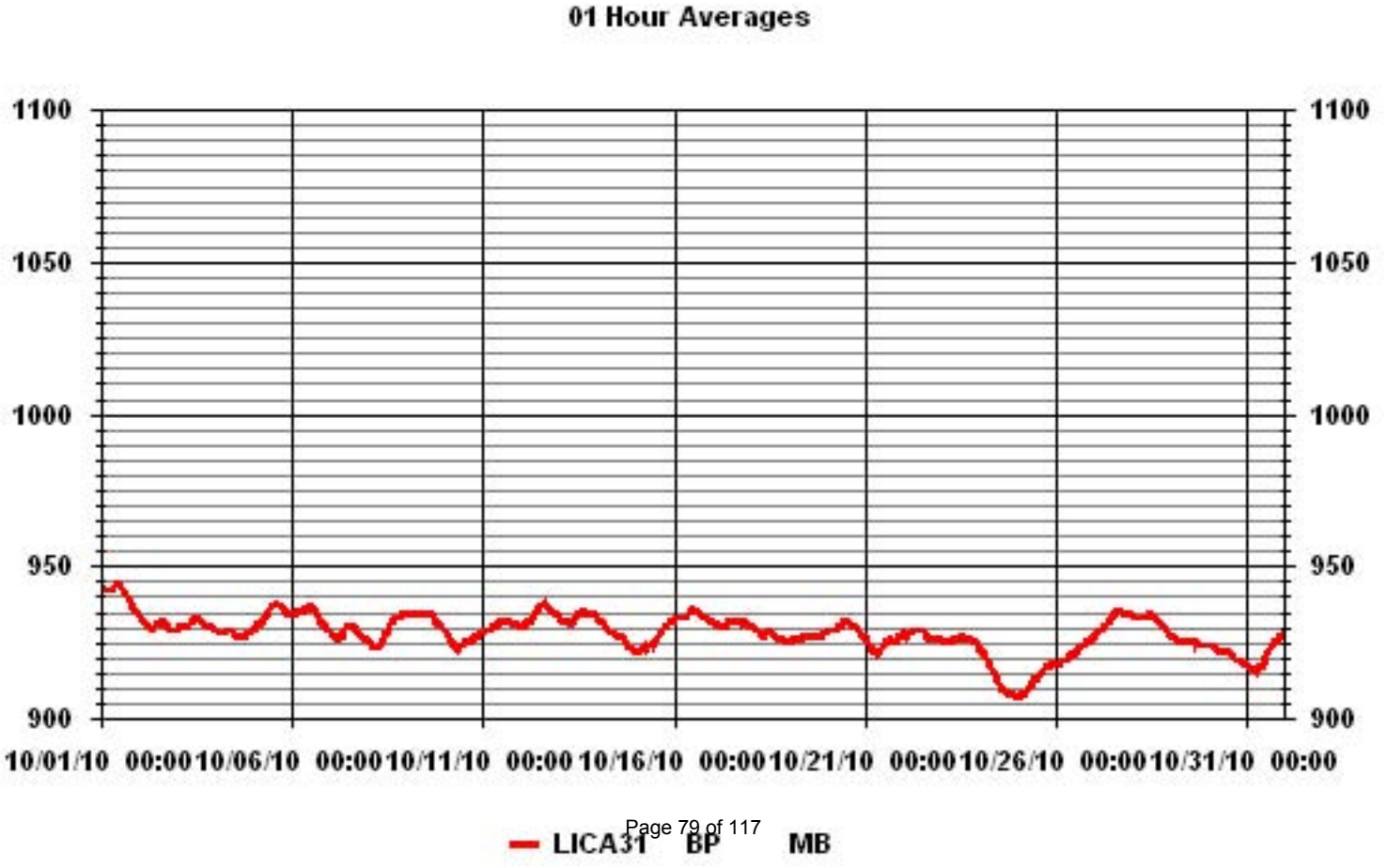
STATUS FLAG CODES

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



MONTHLY SUMMARY

MAXIMUM 1-HR AVERAGE:	944	MB	@ HOUR(S)	VAR	ON DAY(S)	1
MAXIMUM 24-HR AVERAGE:	941.1	MB			ON DAY(S)	1
				VAR-VARIOUS		
CALIBRATION TIME:	0	HRS	OPERATIONAL TIME:		744	HRS
			AMD OPERATION UPTIME:		100.0	%
STANDARD DEVIATION:	6.28		MONTHLY AVERAGE:		928	MB


01 Hour Averages
1100
1050
1000
950
900
10/01/10 00:00
10/06/10 00:00
10/11/10 00:00
10/16/10 00:00
10/21/10 00:00
10/26/10 00:00
10/31/10 00:00
LICA31 BP MB

Relative Humidity

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - ST. LINA

OCTOBER 2010

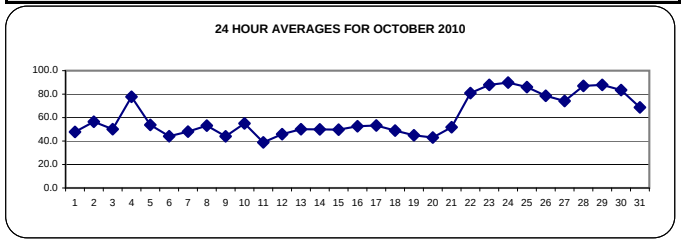
RELATIVE HUMIDITY hourly averages (%)

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	47	52	57	57	58	61	63	60	58	53	45	40	35	32	33	32	33	38	43	46	48	50	52	54	63	47.8	24
2	58	62	64	65	67	70	72	68	63	59	56	53	52	48	44	42	42	46	52	52	53	54	56	57	72	56.5	24
3	58	63	65	64	60	63	65	59	51	43	38	36	36	37	35	35	39	40	44	47	50	54	59	62	65	50.1	24
4	62	61	60	59	59	60	61	62	65	78	86	89	90	90	88	87	89	89	85	87	90	90	89	90	90	77.8	24
5	90	87	85	82	78	75	70	66	53	43	41	39	34	31	34	34	34	38	41	43	45	49	48	50	90	53.8	24
6	55	61	58	52	56	56	54	51	45	42	36	36	33	30	28	26	28	34	38	43	46	48	51	52	61	44.1	24
7	55	58	64	68	71	73	65	50	45	42	40	38	35	30	30	32	34	38	40	42	47	49	52	55	73	48.0	24
8	58	64	69	72	75	78	79	77	72	69	71	64	46	38	37	34	30	31	34	33	34	36	37	38	79	53.2	24
9	41	39	48	41	37	35	39	43	41	38	33	32	29	34	38	38	41	46	50	55	61	63	67	68	68	44.0	24
10	68	68	66	68	72	74	76	73	67	59	52	46	41	39	36	38	40	49	49	52	50	46	44	48	76	55.0	24
11	49	52	50	44	45	48	51	48	43	37	34	31	30	28	27	26	26	28	35	37	38	39	42	45	52	38.9	24
12	55	63	58	52	48	51	53	51	46	44	42	40	36	34	33	32	32	39	42	44	48	50	53	55	63	45.9	24
13	57	58	60	61	63	67	69	66	58	49	41	37	33	32	34	37	42	45	48	49	48	49	48	51	69	50.1	24
14	53	53	52	53	57	64	64	62	58	56	49	44	44	40	32	31	31	37	41	49	56	58	57	58	64	50.0	24
15	59	58	50	51	53	57	62	64	55	39	39	36	34	35	38	44	46	47	48	48	52	56	59	63	64	49.7	24
16	69	72	73	75	77	78	76	68	62	51	43	38	33	31	29	29	32	37	41	43	44	49	56	57	78	52.6	24
17	56	58	62	65	68	69	71	70	63	56	51	40	34	34	36	37	41	48	50	51	51	52	56	60	71	53.3	24
18	62	61	60	61	64	65	66	66	63	55	43	37	32	28	29	32	35	40	42	44	44	45	48	52	66	48.9	24
19	54	57	58	59	61	64	65	63	53	50	43	37	37	36	35	32	33	34	36	34	30	31	37	39	65	44.9	24
20	41	45	48	48	47	53	57	53	50	42	35	33	31	30	33	36	39	41	42	43	45	47	47	46	57	43.0	24
21	45	46	45	44	47	49	51	54	52	52	48	44	41	40	40	41	46	51	52	58	70	75	76	76	76	51.8	24
22	76	75	76	75	78	76	76	75	75	76	76	77	82	84	84	83	84	86	87	87	87	88	89	89	89	80.9	24
23	89	89	90	90	90	90	90	90	90	90	90	85	83	81	82	83	86	86	88	89	89	89	90	90	90	87.9	24
24	89	89	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	89	89	90	**89.8**	24
25	89	88	88	88	88	88	87	88	87	87	86	85	83	85	86	86	85	85	85	84	85	83	85	83	89	86.0	24
26	84	85	85	85	85	84	83	81	80	78	76	74	71	71	72	74	76	77	78	77	77	78	77	78	85	78.6	24
27	78	76	75	75	76	77	78	79	78	76	73	70	62	59	62	65	67	70	74	78	81	83	84	83	84	74.1	24
28	83	83	83	83	84	85	86	87	87	87	88	88	88	88	88	89	89	89	89	89	89	89	89	89	89	87.0	24
29	89	89	88	88	88	87	87	87	87	87	87	87	87	88	88	88	88	88	88	88	88	89	89	89	89	87.9	24
30	89	89	88	88	87	87	87	87	87	87	87	87	81	72	70	71	77	82	83	84	84	83	83	83	89	83.5	24
31	82	82	83	83	84	85	85	84	80	76	74	70	61	53	44	43	48	54	63	61	62	61	68	63	85	68.7	24
HOURLY MAX	90	89	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90			
HOURLY AVG	65.8	67.2	67.7	67.3	68.2	69.6	70.3	68.5	64.6	61.0	57.8	54.9	51.7	49.9	49.5	49.9	51.7	54.9	57.4	58.9	60.7	62.0	63.8	64.9			

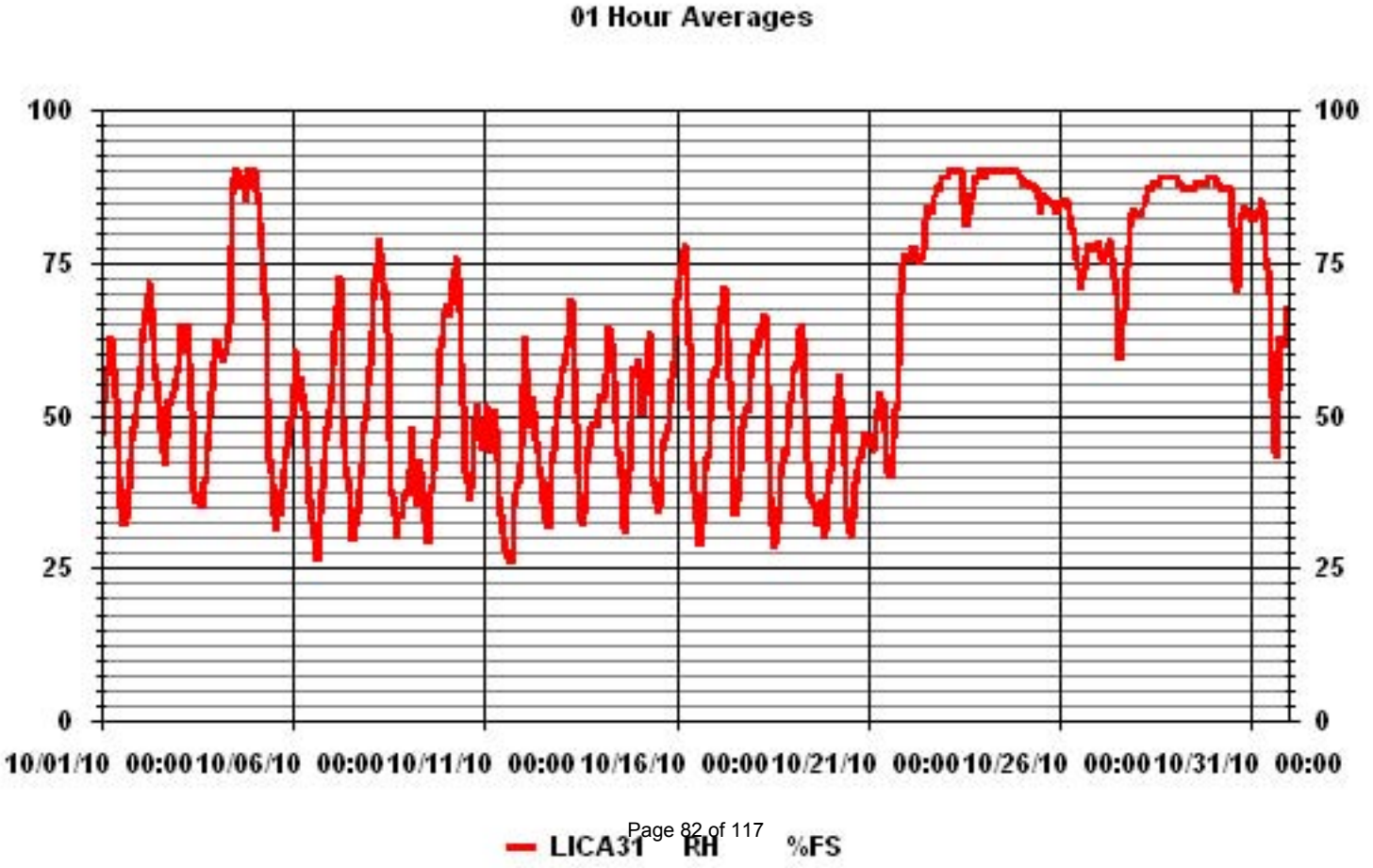
STATUS FLAG CODES

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



MONTHLY SUMMARY

MAXIMUM 1-HR AVERAGE:		90	%	@ HOUR(S)	VAR	ON DAY(S)	VAR
MAXIMUM 24-HR AVERAGE:		89.8	%			ON DAY(S)	24
						VAR-VARIOUS	
CALIBRATION TIME:	0	HRS		OPERATIONAL TIME:		744	HRS
				AMD OPERATION UPTIME:		100.0	%
STANDARD DEVIATION:	19.62			MONTHLY AVERAGE:		60.76	%


01 Hour Averages
100
75
50
25
0
10/01/10 00:00
10/06/10 00:00
10/11/10 00:00
10/16/10 00:00
10/21/10 00:00
10/26/10 00:00
10/31/10 00:00
LICA31 RH %FS

Precipitation

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - ST. LINA

OCTOBER 2010

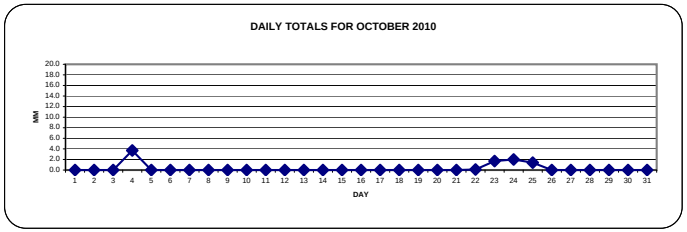
PRECIPITATION hourly averages (mm)

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	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.	TOTAL	RDGS.
DAY																											
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	24
2	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	24
3	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	24
4	0	0	0	0	0	0	0	0	0	1	**1.5**	0.6	0.4	0.1	0	0	0.1	0	0	0	0	0	0	0	**1.5**	**3.7**	24
5	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	24
6	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	24
7	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	24
8	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	24
9	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	24
10	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	24
11	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	24
12	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	24
13	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	24
14	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	24
15	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	24
16	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	24
17	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	24
18	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	24
19	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	24
20	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	24
21	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	24
22	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	0.1	0.1	24
23	0	1.4	0.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1.4	1.7	24
24	0	0	0	0	0	0	0	0.2	0.1	0.5	0.4	0	0.1	0	0	0	0	0	0	0	0.6	0.1	0	0	0.6	2.0	24
25	0.1	0	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.2	0.1	0	0	0	0	0	0	0	0	0	0	0	0	0.2	1.4	24
26	0	0	0	0	0	0	0	0	0	0	0	0	**M**	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	23
27	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	24
28	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	24
29	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	24
30	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	24
31	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	24
HOURLY MAX	0.1	1.4	0.3	0.1	0.1	0.1	0.2	0.2	0.1	1.0	1.5	0.6	0.4	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.6	0.1	0.0	0.0			

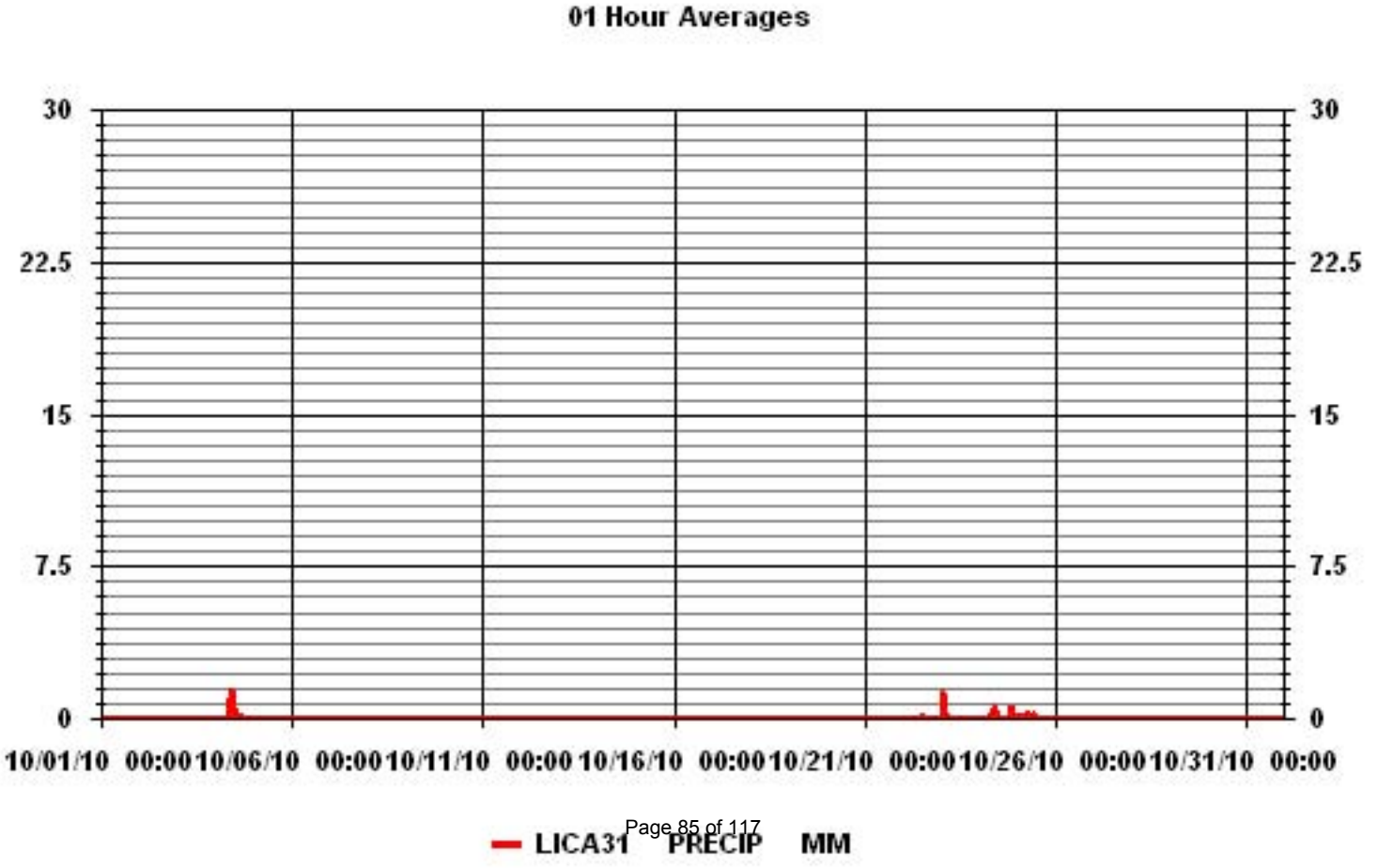
STATUS FLAG CODES

S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	- MAINTENANCE
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	MD	-MISSING DATA



MONTHLY SUMMARY

MAXIMUM 1-HR AVERAGE:	1.5	MM	HOUR(S)	10	ON DAY(S)	4
MAXIMUM DAILY TOTAL	3.7	MM			ON DAY(S)	4
MONTHLY TOTAL	8.9	MM				
CALIBRATION TIME:	0	HRS	OPERATIONAL TIME:		743	HRS
			AMD OPERATION UPTIME:		99.9	%
STANDARD DEVIATION:	0.10		MONTHLY AVERAGE:		0.01	MM


01 Hour Averages
30
22.5
15
7.5
0
10/01/10 00:00
10/06/10 00:00
10/11/10 00:00
10/16/10 00:00
10/21/10 00:00
10/26/10 00:00
10/31/10 00:00
LICA31 PRECIP MM

Vector Wind Speed

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - ST.LINA

OCTOBER 2010

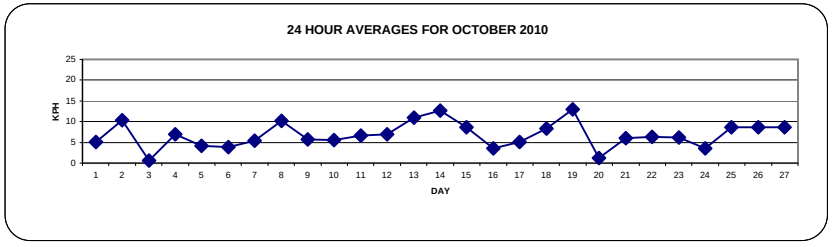
WIND SPEED hourly averages (km/hr)

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	8.9	11.4	10.5	11	12.5	11.7	12.1	12.5	13.8	16.7	18.4	10.5	14.8	14.1	13.3	11.7	11.5	11.6	12.1	13.6	12	11.1	9.3	6.6	18.4	9.4	24
2	5.8	6.9	5.3	3.9	5.1	4.9	5.6	5.3	3.8	7.4	10.5	9.5	10.9	14.1	4.8	3.1	4.1	2.2	4.8	3.8	3.1	4.2	1.5	3.2	14.1	3.2	24
3	6.8	9.4	9.1	7.8	8.2	9.7	10.5	11.3	9.8	10.3	12.2	12.5	13.1	11.8	6.3	11.4	12.3	12.9	11	8.9	9	7.6	8.3	8.5	13.1	4.9	24
4	9.5	8.6	9.4	7.9	8.1	6.6	6.1	4.1	4.6	6	7	10.7	14.4	12.4	10.8	7.7	7	8.5	10.3	6.1	4.7	4.3	3.6	8.4	14.4	7.2	24
5	15.5	16.2	14	14.9	15.4	15.9	15.9	17.1	17.6	20	13	5.4	8.8	5.3	5.9	8.1	7.4	7.3	11	14.7	16.5	16.2	17	17.8	20	5.1	24
6	15.4	13.8	7.7	6.4	14	9.8	7.8	7.1	6.1	7.7	7.3	8.1	5.1	6.5	9.4	10.4	9.4	13.3	14.6	17.1	17.7	18.7	19.4	17.3	19.4	10.4	24
7	17.2	15.3	13.8	14.8	12.4	15.1	11.1	14.5	9.2	13.7	9.4	3.6	8.4	8.8	7.4	8.4	7.2	7.7	6.4	4.8	4.4	4.7	4.6	5.2	17.2	0.6	24
8	4.6	6.1	7.6	8.6	9.2	11.1	11.6	12.4	5.1	3.6	8.4	14.2	21.1	9.3	7.8	10	12.3	14.2	14.8	13.7	13.7	13.4	12.2	11.6	21.1	7	24
9	2.7	7.8	6.6	11.6	12.7	12	11.2	7.2	5.7	5.4	4.1	6.7	4.3	4.2	1.9	3	8.2	11.1	8.4	7.7	6.9	7.8	8.6	6.7	12.7	4.2	24
10	6.6	6.6	8.1	7.3	4.8	4.7	2.1	3	0.9	1.9	5.9	4.8	7.1	7	6.9	11.6	19.4	13.5	9.8	9.4	11.3	11.7	11.1	10.9	19.4	3.8	24
11	13.4	10.5	9.5	11	14	14.8	13.5	13.5	16.5	18.7	14.1	3.5	3.8	1.2	5.4	4.4	6.7	3.8	6.6	9.6	11.1	14.1	14.6	16.4	18.7	5.4	24
12	9.9	10.6	9.9	11.3	11.8	11.5	17.2	16.2	14	16.3	18.7	19.4	19.7	19.2	15.5	14.7	10.9	13.8	13.8	11.4	9.6	9.4	7.9	7.9	19.7	10.2	24
13	6	7.3	7.6	9	8.5	8.1	9.3	10	10.9	11.2	11.8	14.4	16.6	13.4	15	15.4	11.2	12.6	14.7	7.9	3.8	5.5	7.7	9.9	16.6	5.7	24
14	12	14.1	13.8	14.3	13.6	13.1	16.7	17.6	18.2	18.3	12.3	1.5	2.9	8.7	9.5	12.2	6.8	6.7	8.1	8.8	7.9	10	5.3	5.5	18.3	5.5	24
15	7.3	6.9	8.3	11.9	12.8	12.5	5.4	10.8	13.6	18.8	19.5	21.1	16.7	11.1	10.1	10.9	7.4	4.5	2.6	8.4	10.6	6.8	5.1	5.2	21.1	6.6	24
16	5.7	5.9	7.1	8.1	8.5	8.8	8.4	5.6	8.2	6.2	6.7	4.5	1.3	1.9	1	2.5	4.1	8.7	10.5	12.5	11.9	13.4	15.7	14.9	15.7	7	24
17	9	9.5	9	10.1	6.1	8.7	8.3	7.3	10.7	10.9	13.5	13.9	**24.2**	20.5	20.9	22	20.2	17.4	17.3	17.2	15	16.1	15.2	12.5	**24.2**	11	24
18	10.1	9.6	9	9.8	9.9	7.4	7.5	8.9	10.8	11.4	11.4	11.4	15.5	18	18.7	16.6	15.5	14.6	15.7	17.2	18	16	16.3	16.3	18.7	12.7	24
19	17.7	18.3	17.8	14.7	10.6	10.5	16.2	17	13.2	13.9	16	21.4	7.4	4.8	4.9	10.5	11	10.1	6.8	4.4	11	10	7.5	8.2	21.4	8.6	24
20	8.1	8.3	7.6	7.8	8.4	9	10.1	9.9	10.1	10.1	5	10.3	11.1	14.2	13.4	10.9	8.8	5.1	6.7	6.6	6.4	9.2	10.5	9.2	14.2	3.5	24
21	12	11.2	12.5	14	15.8	13.7	14	17.6	14.6	13.9	12.1	11.5	13.4	13.8	16.1	15.6	12.1	12.5	13.8	13.8	12.3	8	9	6.7	17.6	5.1	24
22	8.9	10.8	9.1	10	10.7	10.2	6.9	3.5	6.6	6.2	10	10.8	7.6	9.1	10.5	13.7	14.1	13.6	12.6	12.4	10.4	12	12.8	13.7	14.1	8.4	24
23	12.3	**N**	**N**	14.9	13.4	14.1	13.3	13.6	14.3	11.4	11.6	12.7	11.8	13.4	12.8	12.5	14.5	15.3	15.9	16.1	16.1	14.8	12.3	12.8	16.1	**12.9**	22
24	11.7	13.1	2	5.2	3.6	2.1	2.1	6.7	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	13.1	1.2	8
25	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	5.1	6	6.3	4.2	5.4	7.6	10.4	8.2	10.4	6	8
26	5.1	5.8	8.4	8.8	7.4	5.5	5.7	6.3	7.1	4.2	5.8	6.5	6.3	7	6.6	6.1	6.5	7.9	7.5	7.5	8.2	9	4.9	6.3	9	6.4	24
27	6.9	9.1	10.1	9.6	10.1	9.9	11	10.1	10.7	11	12.2	9.6	11.1	6.5	9.4	9.7	7.6	7.7	5.4	11.2	11.7	10.4	8	10	12.2	6.2	24
28	11.2	12.6	12.6	13.9	11.3	11.4	11.5	10.7	11.9	12.4	12.8	6.8	4.4	7.6	4.9	7.3	5.8	7.1	7.1	8	7.9	7.7	10.1	8.1	13.9	3.6	24
29	8.4	6.9	7.3	3.8	12.5	13.5	14.7	12.6	12.9	11.8	13	13	11.9	13.3	11.3	10.7	13.2	11.3	10.2	9.4	12.5	11	9.5	9.1	14.7	8.7	24
30	8.1	9.4	10.8	8.7	8.9	8.9	9.3	10	7.4	8.2	8.2	8.2	10.3	8.8	10.5	13.2	11.7	6.9	7.1	10.9	11.3	11.3	9	8.2	13.2	8.7	24
31	8	8.8	8.3	8.7	10.3	8.3	8.6	9.3	9.2	9.8	11.8	13.2	12.6	11.6	11.7	11.8	10.4	11.2	13.8	16.1	8.6	8.5	11.2	4	16.1	8.7	24
HOURLY MAX	17.7	18.3	17.8	14.9	15.8	15.9	17.2	17.6	18.2	20.0	19.5	21.4	24.2	20.5	20.9	22.0	20.2	17.4	17.3	17.2	18.0	18.7	19.4	17.8			
HOURLY AVG	9.5	10.0	9.4	10.0	10.4	10.1	10.1	10.4	10.3	10.9	11.1	10.3	10.9	10.3	9.7	10.6	10.1	10.0	10.2	10.4	10.3	10.4	10.0	9.6			

STATUS FLAG CODES

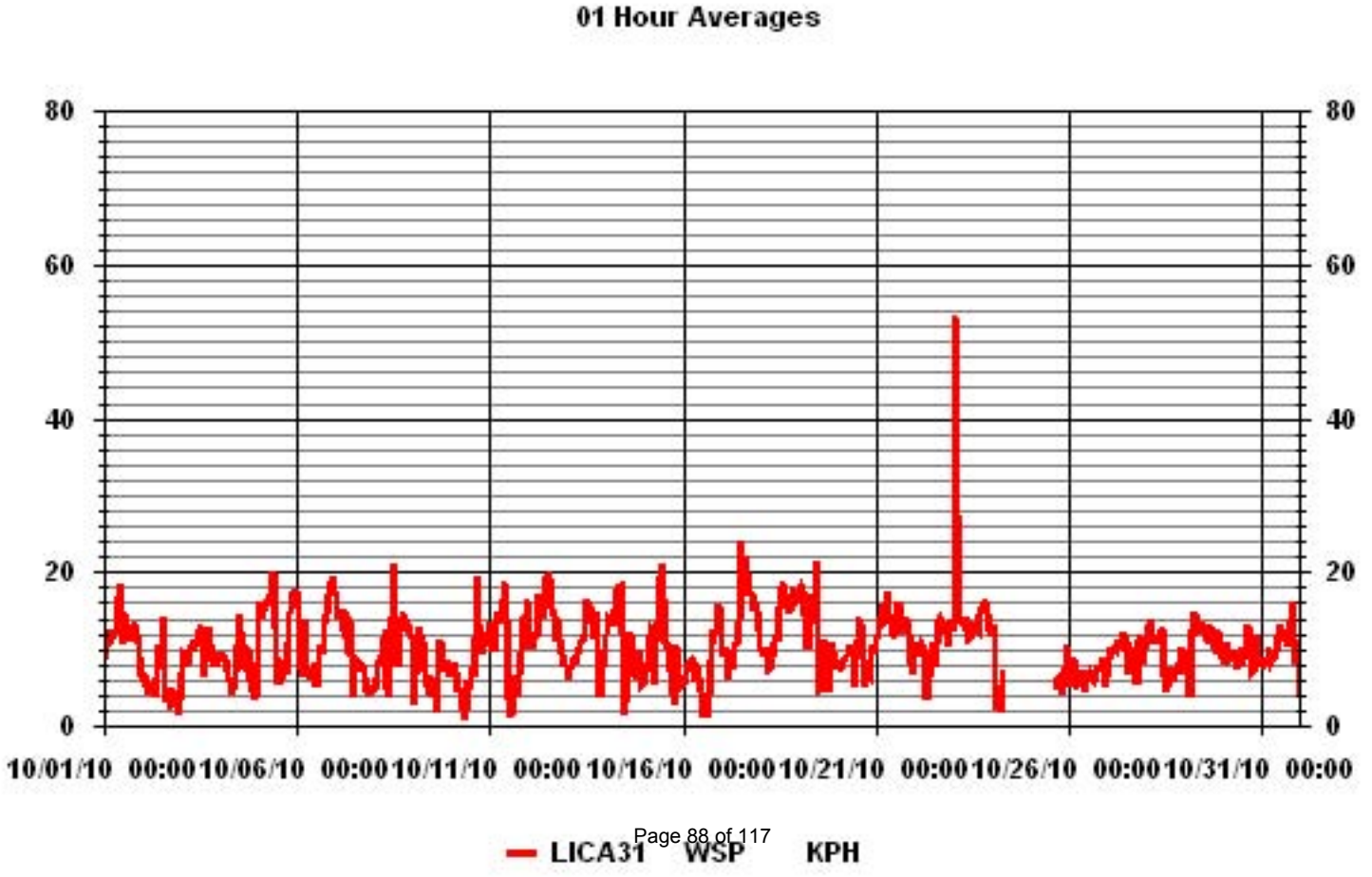
S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	- MAINTENANCE
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE



LAST CALIBRATION: February 3, 2009

MONTHLY SUMMARY

MAXIMUM 1-HR AVERAGE:		24.2	KPH	@ HOUR(S)	12	ON DAY(S)	17
MAXIMUM 24-HR AVERAGE:		12.9	KPH			ON DAY(S)	23
CALMS (≤ 0 KPH)	0.00	%		OPERATIONAL TIME:		710	HRS
MONTHLY CALIBRATION TIME:	0	HRS		AMD OPERATION UPTIME		95.4	%
STANDARD DEVIATION	4.06			MONTHLY AVERAGE		10.21	KPH


01 Hour Averages
80
60
40
20
0
10/01/10 00:00
10/06/10 00:00
10/11/10 00:00
10/16/10 00:00
10/21/10 00:00
10/26/10 00:00
10/31/10 00:00
LICA31 WSP KPH

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *ST. LINA*

OCTOBER 2010

VECTOR WIND SPEED MAX instantaneous maximum in km/hr

MST

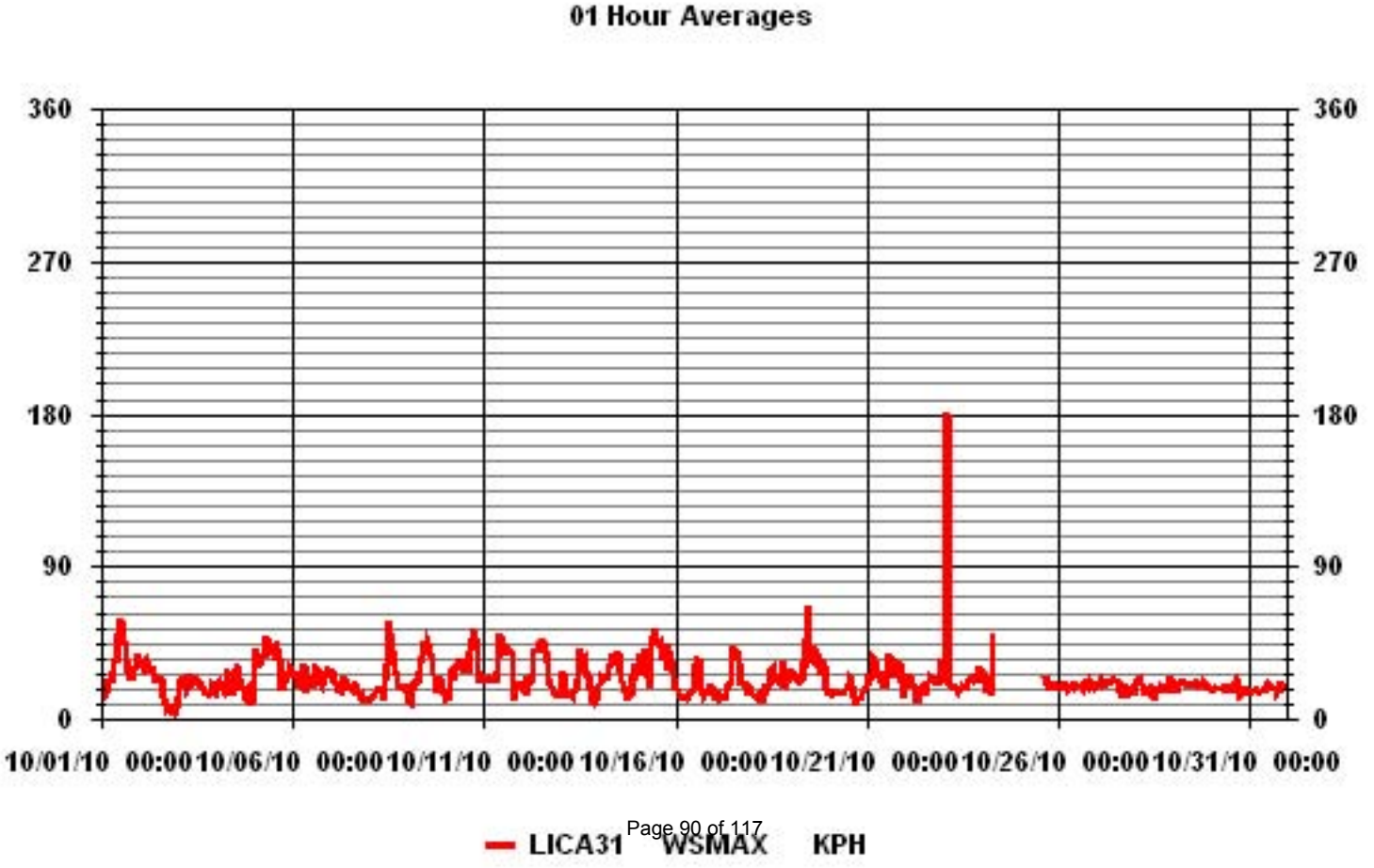
HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.
DAY																									
1	12.4	23.6	13.5	15.3	19.9	22.7	22.9	27.4	35.9	32.6	50.3	44	59.2	53.1	46	44.8	35.2	28.4	24.2	24	31.3	29.7	36.9	37.6	59.2
2	36.5	32.4	30.6	34.1	35.6	31.5	28.9	28.7	31.3	27.7	21.6	23.6	23.8	21.2	21.8	13.7	9.2	5.9	7.2	5.9	5.2	7	4.4	6.8	36.5
3	12.7	23	18.4	23.6	24.2	16.6	17.9	19.2	26.5	22.7	22.9	23.4	21.6	21.4	19.2	19.2	18.2	15.9	15.9	14.9	16.4	19.7	18.1	16.6	26.5
4	20.3	20.1	22.1	19.4	18.8	17.1	19.3	29.5	26.9	15.1	15.3	20.1	28.9	32.9	23.8	17.9	19.9	16.4	18.1	18.6	9.4	11.3	8.5	21.6	32.9
5	42.2	32.4	32.1	32.6	36.7	37.8	36.3	49	37	45.5	44.4	42.2	43.1	35	38.2	39.4	36.5	19	16.8	20.8	28.6	24.5	31.3	30.4	49
6	28.9	23.8	28.6	18.3	28.2	20.1	17.9	31.9	15.7	18.3	21.2	24.7	18.8	24.2	32.1	30.2	27.1	23.2	21	24.3	28	29.3	29.3	27.1	32.1
7	26.2	29.3	23	21	15.7	17.9	16.8	19.2	23.8	23.8	20.3	18.8	18.3	18.3	17.5	21.2	17.5	15.8	13.3	14.8	11.8	11.6	11.6	12.5	29.3
8	11.6	12.7	13.5	14	15.5	17	17.1	17.5	19.2	11.3	22.9	31.9	57.7	51.2	41.4	33	29.5	26.6	19.7	18.8	19.2	18.6	18.3	16.2	57.7
9	20.5	11.1	10.2	16.2	21.6	22.7	21	28	33.9	37.4	44.2	44	47.2	45	39.3	37.4	27.3	17	16.9	23.8	23.2	21.4	15.3	11.8	47.2
10	12	12.5	17.3	26.9	26.2	30.2	31.5	31.1	33.7	34.3	28.4	32.6	26.9	29.5	29.3	39.8	46.8	54	42.2	47.9	29.5	22.7	22.5	25.2	54
11	23.8	23.8	23.2	24.7	23.8	24.1	23.8	23.4	27.8	45.3	50.3	40.3	41.6	37.8	42.6	42	37.4	39.6	11.4	14	17.3	19.2	20.3	21.2	50.3
12	21	16.6	14.2	24.5	22.1	22.3	26	40	40.3	40.5	44.8	46.1	45.1	47.3	41.1	35	24	21.6	19.7	15.9	14.7	14.9	14	14.2	47.3
13	24.5	28	20.4	14.6	14	14.6	15.1	13.7	16.2	17.7	23.6	27.7	41.8	38	37.4	38.1	29.3	26.2	18.4	18.6	10.7	9.4	11.3	15.3	41.8
14	19.9	23.4	21.4	25.4	25.4	22.7	31.9	32.6	38.7	36.5	36.1	36.1	40	27.8	22.7	17.9	18.1	11.1	13.5	13.1	13.8	25.4	26	31.9	40
15	28.4	30.4	38.5	30.8	25.4	41.1	25.8	17.7	26.9	49.2	44.2	54	45.3	44.4	45.7	42	34.8	40.7	28.4	45.1	40.9	35.9	28.4	24.5	54
16	18.6	18	15.5	14.2	12.7	13.1	13.5	12.5	13.8	16.8	16.4	17.7	32.4	37	32.6	35	15.3	13.1	14.5	15.7	13.5	20.6	19	19.7	37
17	18.9	13.5	12.7	15.1	14.9	12.9	12.7	13.1	19.9	19.5	22.3	35.9	43.5	37	40.5	35.9	33.5	21.8	21	21.4	18.1	19.9	19.3	15.3	43.5
18	15.1	14	12.7	13.1	14.7	12.2	12	14.2	18.4	18.2	20.1	20.8	29.7	31.1	28.2	24.3	23.6	22.5	25.6	33.7	26.2	21.4	22.5	26	33.7
19	24	29.5	26	27.1	25.8	22.8	22.1	23.4	31.9	31.9	48.1	**66.3**	37.6	35.4	34.3	42.2	39.1	31.7	28.7	26	33.3	31.9	18.8	16.2	**66.3**
20	16.6	16.2	14.9	15.3	16.4	16.6	15.7	15.1	15.3	17.3	0	19	20.8	24.2	22.7	20.4	13.1	8.1	11.1	12.2	12.5	16	17.7	18.4	24.2
21	26	19.9	23.4	27.3	36.3	35.2	26.9	27.1	24.9	23.2	20.5	20.3	27.5	30.6	38.7	34.5	24.7	31.9	33.5	32.1	31.9	22.3	16.9	12.2	38.7
22	17.5	27.3	24.5	27.1	21.6	19.9	15.1	8.7	13.5	14.2	18.4	19.5	13.5	15.9	21	25.8	25.1	23.2	22.5	25.6	20.1	24.5	20.8	36.1	36.1
23	26.9	**N**	**N**	21.6	19.9	19.7	19	19.1	18.8	16.6	18.1	20.1	19.3	19.2	18.8	21	23.4	24.5	23.2	24.7	23.6	23.4	30.6	28.2	30.6
24	28.5	27.8	21.6	15.5	25.4	15.9	14	48.8	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	48.8
25	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	24	19	19.3	18.8	18.8	20.5	21.3	20.1	24
26	18.6	18.4	19.9	21.7	21.4	17.9	19.2	19.7	20.8	19	20.3	21	19.7	19.7	20.1	18.4	21.7	20.6	19.9	22.3	19.5	20.6	19	20.1	22.3
27	20.5	20.8	22.9	19.9	20.8	18.4	21.6	21.4	22.7	22.5	23.2	22.9	23.4	22.3	17.5	16.1	14.4	12.7	20.8	14.7	15.1	16.4	16.4	16.2	23.4
28	19.7	23.2	22.3	23.8	21.7	19.5	16.2	16.4	15.8	19.5	18.8	17.7	10.7	17.7	14.9	17.5	14.9	19.5	21.2	15.7	19	17	24.7	17.5	24.7
29	14.9	18.6	17.9	21.4	22.1	21.8	22.5	20.8	21.6	20.2	20.1	19.9	21.2	21	21.7	19.7	20.3	20.8	17.9	22.1	21	19.2	19	17.9	22.5
30	17.3	18.1	19.2	19.4	18.6	18.1	18.4	19.2	16.2	16.2	17.7	18.4	18.8	17.9	20.3	22.5	19.9	14	14.6	17.9	17.7	18	15.1	15.1	22.5
31	15.5	16.6	16.4	16.6	18.1	17	16.2	17.1	17.9	17.3	19.2	21.6	20.8	20.1	19.2	17.9	14.4	15.5	19.7	18.6	19.9	20.1	19.2	18.6	21.6
PEAK	42.2	32.4	38.5	34.1	36.7	41.1	36.3	49.0	40.3	49.2	50.3	66.3	59.2	53.1	46.0	44.8	46.8	54.0	42.2	47.9	40.9	35.9	36.9	37.6	

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	66.3	KPH	@ HOUR(S)	11
			ON DAY(S)	19


01 Hour Averages
360
270
180
90
0
10/01/10 00:00
10/06/10 00:00
10/11/10 00:00
10/16/10 00:00
10/21/10 00:00
10/26/10 00:00
10/31/10 00:00
LICA31 WSMAX KPH

LICA31
WSP / WDR Joint Frequency Distribution (Percent)

October 2010

Distribution By % Of Samples

Logger Id : 31
Site Name : LICA31
Parameter : WSP
Units : KPH

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
<	6.0	.98	.84	.42	1.83	.98	.56	.42	.42	.70	1.12	1.40	.70	.70	1.12	.84	1.69	14.78
<	12.0	3.94	2.95	3.52	1.54	2.53	1.83	.70	2.95	4.36	4.36	3.66	1.83	1.83	2.25	7.46	7.46	53.23
<	20.0	.98	.00	.14	1.40	.70	2.81	3.80	2.81	1.12	.98	1.26	1.83	2.11	3.38	5.07	2.25	30.70
<	29.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	1.12	.00	.14	1.26
<	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	5.91	3.80	4.08	4.78	4.22	5.21	4.92	6.19	6.19	6.47	6.33	4.36	4.64	7.88	13.38	11.54	

Calm : .00 %

Total # Operational Hours : 710

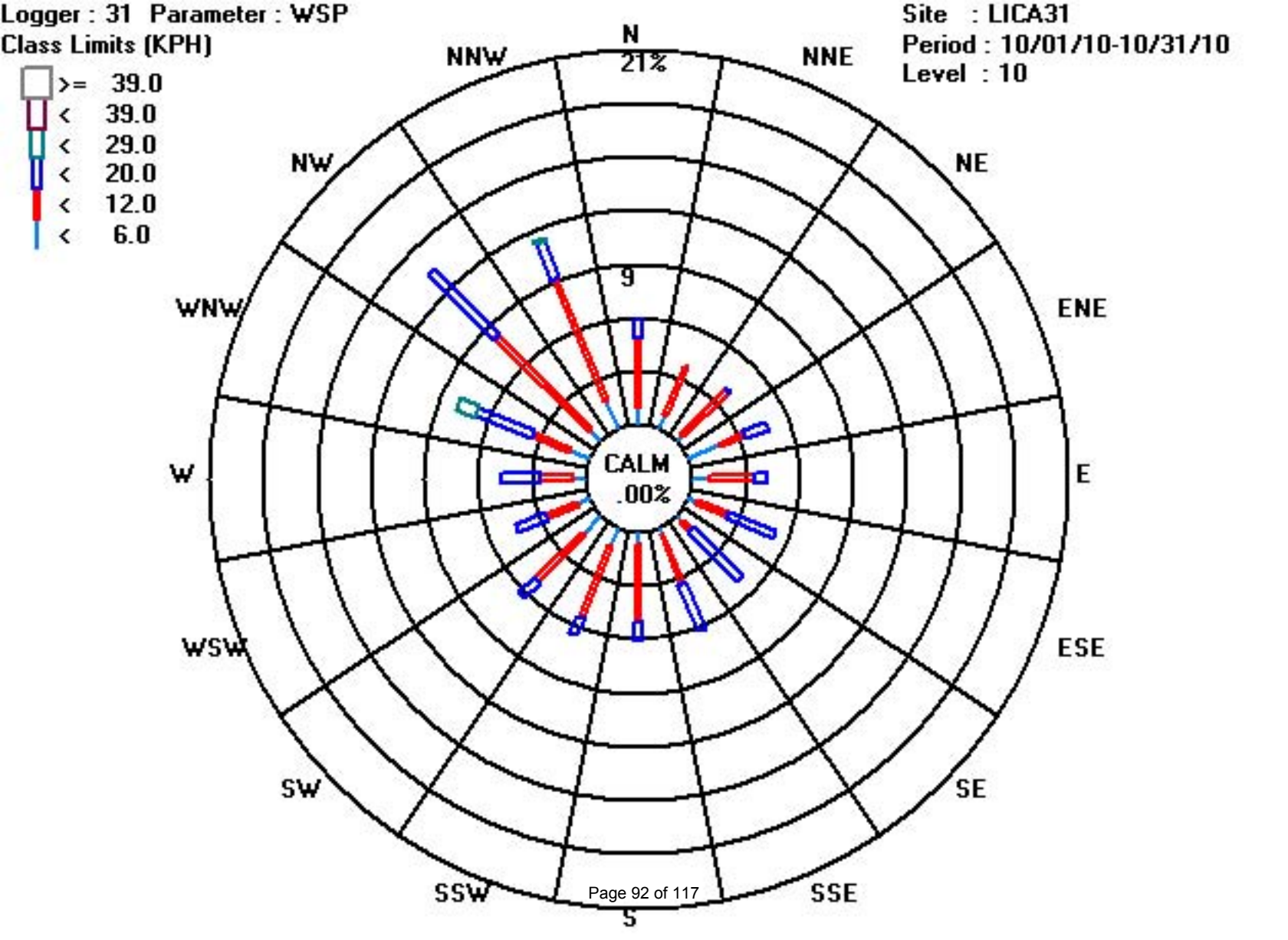
Distribution By Samples

Direction

	Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
<	6.0	7	6	3	13	7	4	3	3	5	8	10	5	5	8	6	12	105
<	12.0	28	21	25	11	18	13	5	21	31	31	26	13	13	16	53	53	378
<	20.0	7		1	10	5	20	27	20	8	7	9	13	15	24	36	16	218
<	29.0														8		1	9
<	39.0																	
>=	39.0																	
	Totals	42	27	29	34	30	37	35	44	44	46	45	31	33	56	95	82	

Calm : .00 %

Total # Operational Hours : 710


Logger : 31 Parameter : WSP
Class Limits (KPH)
>= 39.0
< 39.0
< 29.0
< 20.0
< 12.0
< 6.0
Site : LICA31
Period : 10/01/10-10/31/10
Level : 10
N
21%
NNE
NE
ENE
E
ESE
SE
SSE
S
SSW
SW
WSW
W
WNW
NW
NNW
9
CALM
.00%

Vector Wind Direction

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - ST. LINA

OCTOBER 2010

WIND DIRECTION hourly averages in degrees

MST

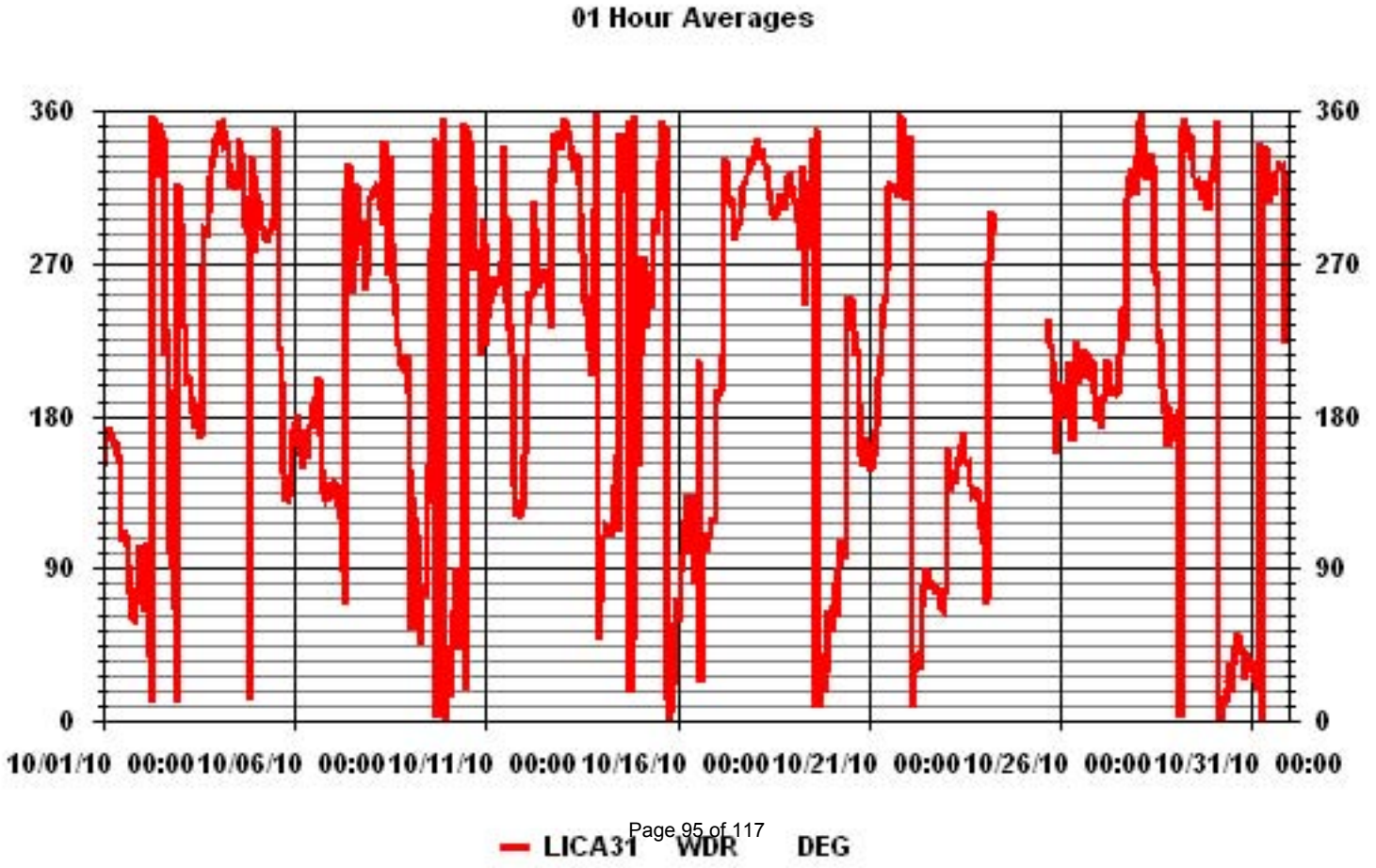
HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	24-HOUR	24-HOUR AVG	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	AVG.	QUANDRANT	RDGS.
DAY																											
1	152	171	173	166	166	169	167	164	164	158	153	105	113	111	106	107	93	76	62	61	69	78	88	103	126	SE	24
2	89	64	67	72	106	38	11	358	331	321	342	353	349	341	346	215	231	197	100	91	76	67	10	317	14	NNE	24
3	313	295	234	233	202	203	202	192	182	187	173	178	170	167	268	290	289	285	300	322	326	333	344	340	242	WSW	24
4	347	353	354	350	340	341	341	330	315	320	316	314	325	344	337	326	312	293	288	310	12	333	323	276	327	NW	24
5	307	308	302	293	291	287	285	282	288	290	297	341	350	346	222	219	202	147	132	131	134	135	166	172	265	W	24
6	176	162	181	170	157	149	154	172	155	175	172	187	191	186	198	203	169	149	135	132	134	137	141	133	156	SSE	24
7	134	141	140	126	129	120	89	68	314	311	329	259	252	271	294	317	293	281	295	293	254	262	270	308	204	SSW	24
8	309	312	315	317	316	311	303	293	343	335	262	311	333	283	260	240	226	223	211	209	208	210	217	194	265	W	24
9	150	54	132	109	120	111	55	45	78	80	73	128	151	189	279	299	344	1	39	51	12	356	0	20	62	ENE	24
10	23	14	45	56	65	89	89	41	83	338	353	18	341	348	344	317	266	278	277	268	215	225	296	283	310	NW	24
11	221	238	262	247	256	255	260	260	257	266	272	340	246	298	231	235	218	139	121	130	122	120	128	124	227	W	24
12	157	215	234	253	251	252	307	292	256	261	260	262	266	258	261	243	232	323	322	347	343	348	338	338	273	W	24
13	345	356	344	349	344	341	332	326	329	335	318	301	277	247	252	240	230	219	203	222	303	359	48	70	296	WNW	24
14	96	109	110	116	115	113	108	115	140	157	155	112	345	345	347	331	312	354	16	53	47	357	210	150	98	E	24
15	222	215	275	249	232	265	250	244	262	291	297	288	301	331	354	351	350	12	38	0	5	21	58	72	297	WNW	24
16	61	59	88	98	119	123	133	130	117	99	80	134	106	214	22	64	109	108	99	111	108	118	118	120	108	ESE	24
17	188	194	194	195	217	326	332	329	307	309	304	294	283	290	294	294	302	316	318	322	329	328	330	328	300	WNW	24
18	339	342	342	335	331	338	330	329	320	307	313	300	298	295	299	304	311	309	302	309	313	321	322	308	314	NW	24
19	316	310	307	295	277	301	327	320	245	279	286	283	344	335	7	350	8	21	40	32	16	29	66	60	322	NW	24
20	52	68	82	66	62	91	107	99	101	96	250	245	249	249	231	219	220	217	188	158	150	165	166	163	157	SSE	24
21	158	147	149	156	172	174	203	215	231	246	251	265	315	319	313	313	315	317	309	327	356	355	340	307	265	W	24
22	322	338	345	8	29	36	40	30	41	67	80	89	89	85	84	78	80	80	74	79	68	67	66	79	59	ENE	24
23	75	N	N	142	141	141	148	150	155	160	159	171	153	152	153	140	133	134	135	132	137	130	113	116	139	SE	22
24	106	68	72	272	288	301	290	290	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	40	NE	8
25	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	236	224	221	213	194	157	177	192	196	SSW	8
26	200	184	183	195	189	212	182	164	189	209	224	200	202	206	207	219	213	214	204	200	213	195	177	190	199	SSW	24
27	190	172	189	193	206	**213**	204	193	193	193	195	193	194	217	242	244	226	226	309	322	312	326	319	310	223	SW	24
28	334	352	352	359	347	322	320	327	324	335	329	266	258	232	223	226	197	181	188	162	185	173	176	181	299	WNW	24
29	165	172	184	2	350	356	353	344	336	347	333	322	318	319	315	315	307	311	319	311	301	311	324	318	324	NW	24
30	323	333	355	5	1	8	15	10	19	23	34	16	33	43	44	52	43	43	40	24	40	39	37	36	23	NNE	24
31	30	24	24	20	18	341	0	338	322	339	325	305	323	314	311	325	328	328	327	328	288	223	325	291	331	NNW	24
HOURLY AVG	347	356	355	359	350	356	353	358	343	347	353	353	350	348	354	351	350	354	327	347	356	359	344	340			

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

LAST CALIBRATION:	February 3, 2009
DECLINATION :	19 DEGREES FROM MAGNETIC NORTH

MONTHLY CALIBRATION TIME:	0	HRS	OPERATIONAL TIME:	710	HRS
STANDARD DEVIATION	104.58		AMD OPERATION UPTIME	95.4	%
			MONTHLY AVERAGE	291	DEG


01 Hour Averages
360
270
180
90
0
10/01/10 00:00
10/06/10 00:00
10/11/10 00:00
10/16/10 00:00
10/21/10 00:00
10/26/10 00:00
10/31/10 00:00
LICA31 WDR DEG

Standard Deviation Wind Direction

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - ST.LINA

OCTOBER 2010

STANDARD DEVIATION WIND DIRECTION (STDWDIR) hourly averages in degrees

MST

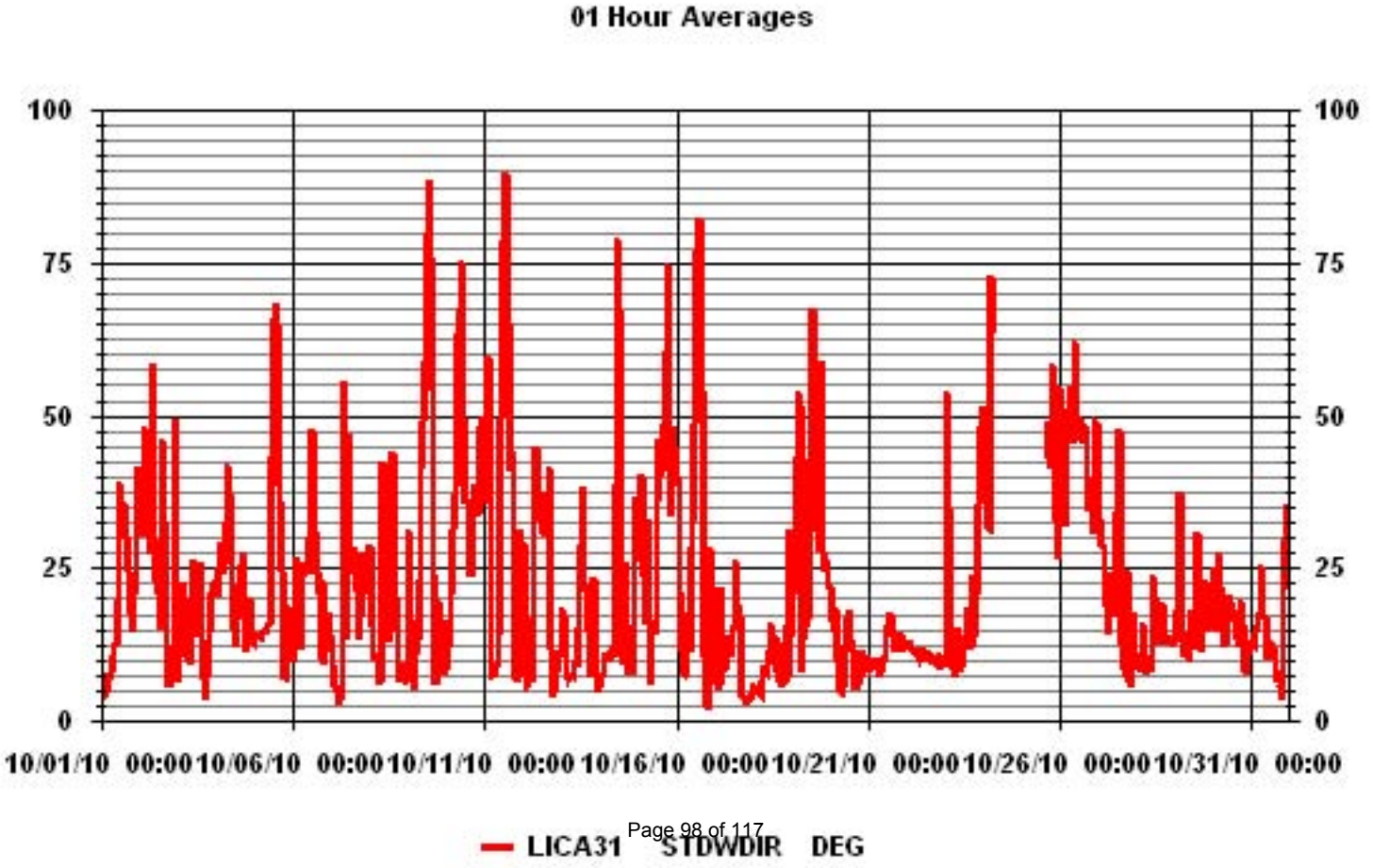
HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00
DAY																								
1	6	5	4	5	8	7	8	11	12	13	20	39	30	34	36	34	31	25	18	15	21	24	32	42
2	40	30	40	48	46	43	27	37	58	30	23	21	15	16	46	33	15	13	6	6	12	7	50	15
3	6	21	18	23	17	11	10	9	20	18	26	16	15	14	26	11	7	4	7	13	15	21	23	23
4	20	25	24	29	24	29	33	42	38	26	23	15	12	21	20	26	28	17	11	20	15	20	13	13
5	15	14	14	14	14	14	15	14	16	16	43	66	47	68	65	39	36	25	7	7	19	12	11	10
6	12	12	27	24	12	16	23	26	25	25	30	29	48	38	31	25	21	10	23	9	14	14	18	11
7	14	9	6	5	3	3	6	22	56	13	25	47	24	27	29	24	21	13	17	28	26	23	21	23
8	29	16	10	10	11	9	7	6	42	35	18	13	20	42	44	27	21	15	7	6	7	7	9	6
9	32	7	16	5	8	11	13	23	41	49	59	54	80	89	76	69	24	6	13	20	15	10	8	10
10	8	16	12	21	31	37	64	51	68	75	38	50	36	36	36	24	26	35	39	35	34	48	48	50
11	35	56	60	47	7	7	8	9	9	14	49	79	79	90	68	65	41	44	12	7	6	12	32	8
12	29	7	6	7	7	6	17	38	45	42	34	33	31	30	37	35	42	12	4	5	6	8	12	11
13	18	18	11	8	7	7	8	7	9	9	15	22	29	38	23	22	19	15	7	21	24	11	5	5
14	6	7	8	10	11	10	10	11	12	12	39	79	68	28	21	9	26	16	8	9	8	9	30	37
15	26	28	41	24	16	27	33	6	10	16	15	16	36	46	40	41	49	61	75	44	34	43	48	45
16	40	39	22	12	8	8	8	18	11	28	33	49	77	78	82	69	55	11	3	3	2	29	6	22
17	12	6	5	6	22	8	9	13	11	14	11	16	15	26	19	15	17	4	4	3	3	3	4	5
18	6	5	6	5	5	7	9	9	8	9	12	16	13	14	14	8	7	5	8	13	16	7	7	31
19	14	21	26	43	54	52	8	13	43	16	17	20	52	68	67	38	32	28	40	59	28	24	26	22
20	22	17	15	19	15	10	5	5	6	13	17	16	18	13	12	9	5	10	6	7	12	8	9	10
21	11	9	9	9	9	10	10	7	8	10	11	15	15	15	18	14	12	12	13	12	14	11	12	12
22	12	12	13	12	12	11	11	11	10	11	12	11	11	10	11	10	11	10	10	10	11	10	9	9
23	9	**N**	**N**	13	9	9	7	9	15	8	9	10	14	14	19	13	12	13	24	14	21	35	48	48
24	51	46	32	32	56	73	70	64	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**
25	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	49	44	41	58	52	33	26	35
26	55	47	34	32	45	51	55	48	45	62	51	48	50	46	46	48	47	34	39	40	31	31	49	49
27	47	33	29	28	19	19	14	24	22	22	17	34	44	48	13	13	9	7	25	7	6	9	18	11
28	8	10	11	8	16	11	7	9	9	8	24	18	20	12	15	17	20	15	14	12	14	13	14	13
29	13	18	19	38	16	12	10	11	11	14	18	15	15	12	31	17	11	15	18	23	15	15	16	20
30	25	17	15	28	22	20	13	12	18	17	21	20	16	18	16	14	12	20	16	8	8	9	11	12
31	13	13	15	16	17	18	26	17	17	18	10	12	13	12	11	9	7	7	6	3	30	22	36	22

STATUS FLAG CODES

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

LAST CALIBRATION: February 3, 2009

CALIBRATION TIME: 0 HRS OPERATIONAL TIME: 710 HRS


01 Hour Averages
100
75
50
25
0
10/01/10 00:00
10/06/10 00:00
10/11/10 00:00
10/16/10 00:00
10/21/10 00:00
10/26/10 00:00
10/31/10 00:00
LICA31 STDWDIR DEG

Calibration Reports

Sulphur Dioxide

SO_2 Calibration Report

Station Information

Calibration Date	October 20, 2010		Previous Calibration	09/22/200	
Company	LAKELAND INDUSTRY & COMMUNITY ASSOCIATION				
Plant / Location	ST. LINA				
Start Time (MST)	8:50		End Time (MST)	12:34	
Reason:	Monthly Calibration				
Barometric Pressure	931	mmHg	Station Temperature	19	Deg C
Cal Gas	51.4	ppm	Cal Gas Expiry date	August 5, 2012	
DAS Output Voltage	0 - 1	Volts			

Equipment Information

Analyzer Make / Model:	API 100E	S/N :	468	Method:	Fluorescent
Converter Make / Model:	-	S/N :	-		
Calibrator Make / Model:	API 700	`	831	Method:	Dilution
DAS Make / Model:	ESC 8832	S/N :	AO717		
Flow Meter:	API 700	S/N :	831		

Analyzer Settings

	Before Calibration				After Calibration			
Concentration Range			0 -1000	ppb				
Sample Flow / Box Temp	560	ccm	27.3	Deg C	557	ccm	28.8	Deg C
HVPS / Lamp Setting	529		2492.4		529		2590.7	
PMT / RxCell Temp	7.8	Deg C	50	Deg C	7.8	Deg C	50	Deg C
Converter / IZS Temp	NA	Deg C	40	Deg C	NA	Deg C	40	Deg C
Offset / Slope	62.7		1.127		62.7		1.127	

Calibration Data

Dilution Flow Rate	Source Gas Flow Rate	Calculated Concentration	Indicated Conc. (DAS)	Correction Factor
4998	0	0	0	N/A
4925	72.9	750	752	0.9970
4961	38.9	400	401	0.9973
4982	16.5	170	172	0.9865
4999	0	0	0	N/A
			Sum of Least Squares	0.9966
			New Correction Factor	0.9970

	Before Calibration	After Calibration
Auto Zero	0.5	0.9
Auto Span	352	353
Sample Lines Connected		YES
Percent Change from Previous Calibration		0.1%

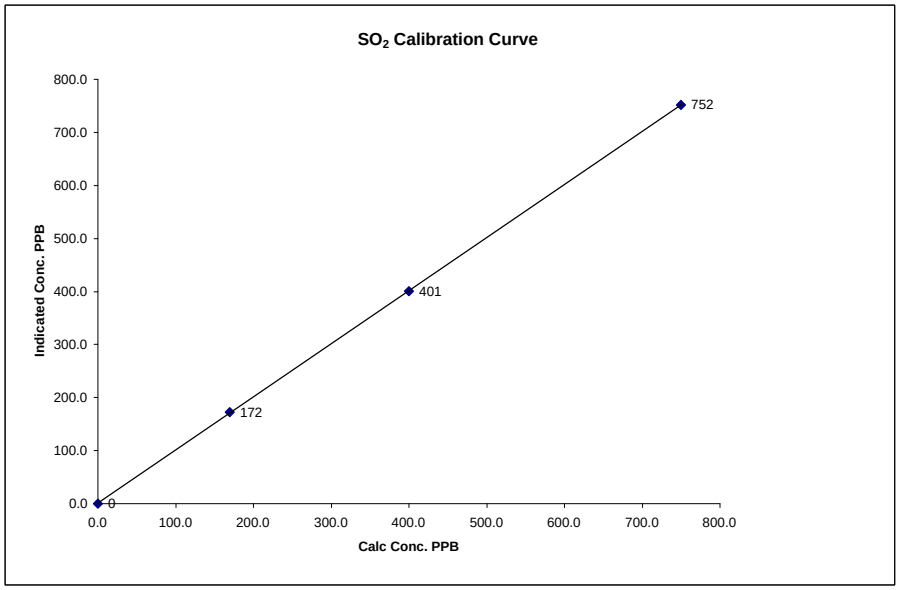
Calibration Performed by: Craig Snider / Ting Xu

SO_2 Calibration Curve

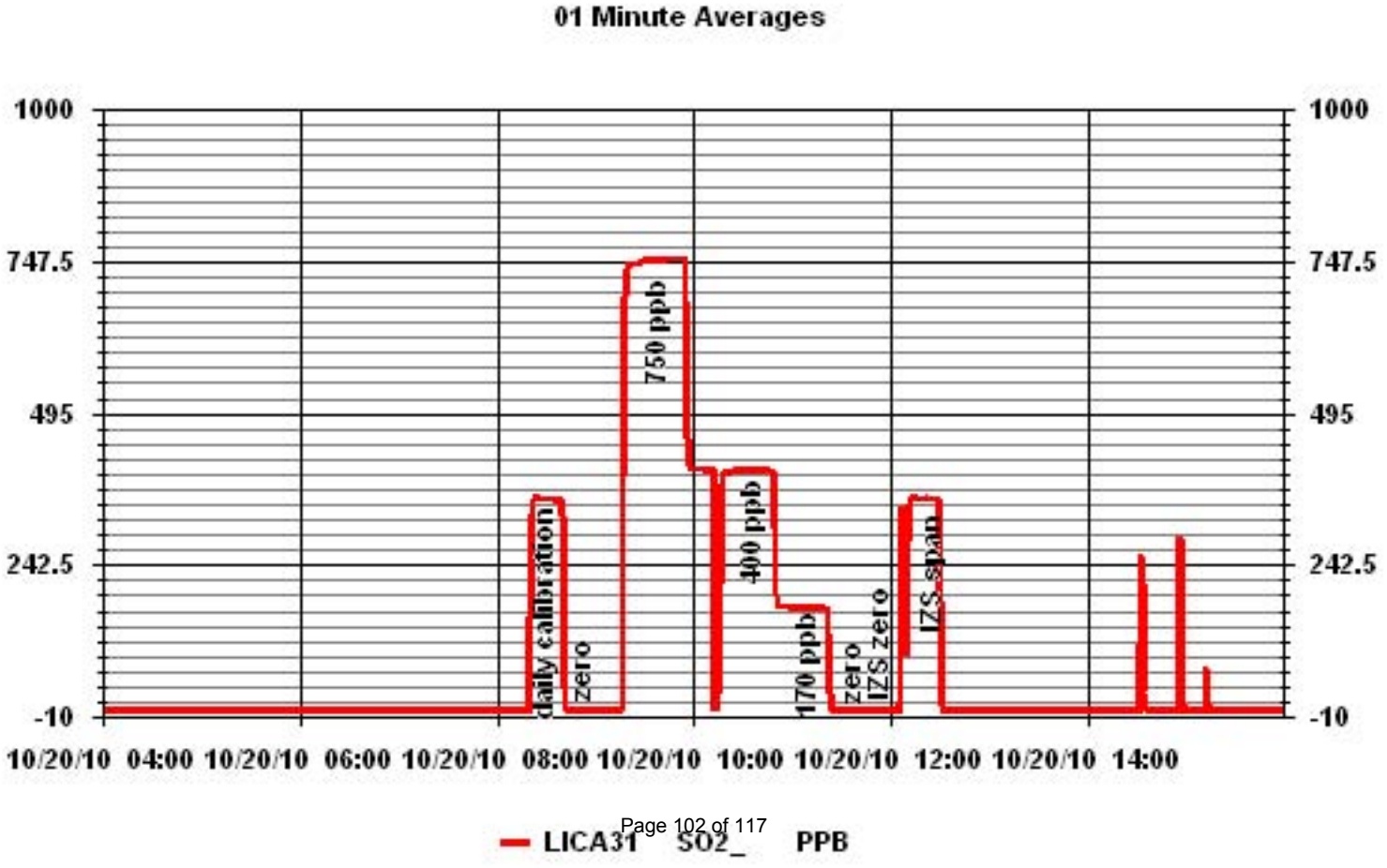
Calibration Date	October 20, 2010				
Company	LAKELAND INDUSTRY & COMMUNITY ASSOCIATION				
Plant / Location	ST. LINA				
Start Time (MST)	8:50		End Time (MST)	12:34	

Calculated Conc. ppb	Indicated Response ppb	Correction Factor
0	0	n/a
170	172	0.9865
400	401	0.9973
750	752	0.9970

Correlation Coefficient	(≥ 0.995)	0.999993
Slope	(0.85 to 1.15)	1.002086
Intercept	(± 3% F.S.)	0.737451



Notes: a power failure occurred during the second span point; re-do the point.


01 Minute Averages
1000
747.5
495
242.5
-10
daily calibration
zero
750 ppb
400 ppb
170 ppb
zero
IZS zero
IZS span
10/20/10 04:00
10/20/10 06:00
10/20/10 08:00
10/20/10 10:00
10/20/10 12:00
10/20/10 14:00
LICA31 SO2_ PPB

Hydrogen Sulphide

H_2S Calibration Report

Station Information

Calibration Date	October 19, 2010		Previous Calibration	September 21, 2010	
Company	LAKELAND INDUSTRY & COMMUNITY ASSOCIATION				
Plant / Location	ST.LINA				
Start Time (MST)	9:50		End Time (MST)	13:58	
Reason:	Monthly Calibration				
Barometric Pressure	928	mmHg	Station Temperature	21	Deg C
Cal Gas	10.6	ppm	Cal Gas Expiry date	05/12/2011	
DAS Output Voltage	0 - 1	Volts			

Equipment Information

Analyzer Make / Model:	API 101E	S/N :	510	Method:	Fluorescent
Converter Make / Model:	Internal	S/N :	N/A		
Calibrator Make / Model:	API 700	S/N :	831	Method:	Dilution
DAS Make / Model:	ESC 8832	S/N :	AO717		
Flow Meter:	API 700	S/N :	831		

Analyzer Settings

	Before Calibration				After Calibration			
Concentration Range			0 - 100	ppb				
Sample Flow / Box Temp	544	ccm	30.1	Deg C	541	ccm	30.8	Deg C
HVPS / Lamp Setting	534		2562		534		2564	
PMT / RxCell Temp	8.4	Deg C	50	Deg C	8.4	Deg C	50	Deg C
Converter / IZS Temp	315	Deg C	45	Deg C	314.6	Deg C	45	Deg C
Offset / Slope	62.9		0.865		64.8		0.864	

Calibration Data

Dilution Flow Rate	Source Gas Flow Rate	Calculated Concentration	Indicated Conc. (DAS)	Correction Factor
4998	0	0	1	N/A
4998	0	0	0	N/A
4962	37.8	80	81	0.9894
4962	37.8	80	80	1.0017
4982	18.8	40	40	0.9962
4987	10.9	23	23	1.0051
4998	0	0	0	N/A
			Sum of Least Squares	1.0009
			New Correction Factor	1.0017

	Before Calibration	After Calibration
Auto Zero	1.3	0.6
Auto Span	52	51
Sample Lines Connected		YES
Percent Change from Previous Calibration		1.3%

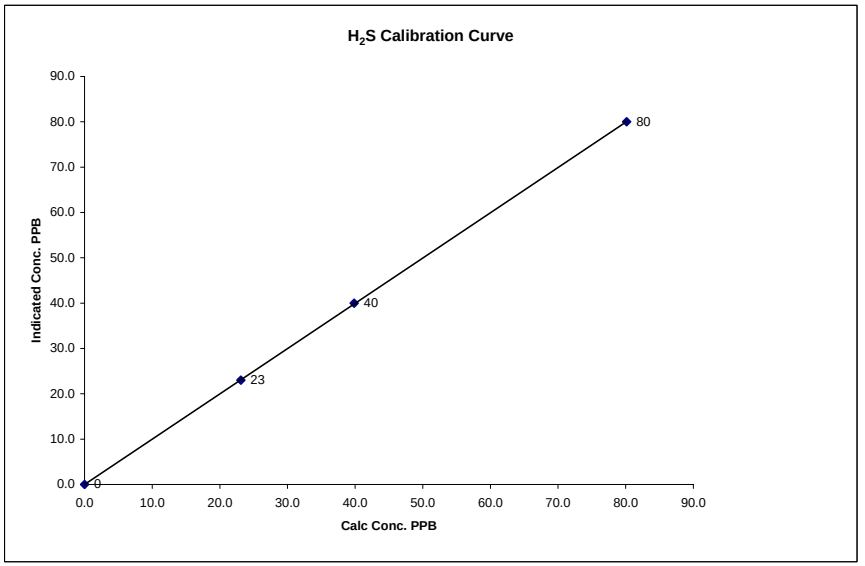
Calibration Performed by: Ting Xu

H_2S Calibration Curve

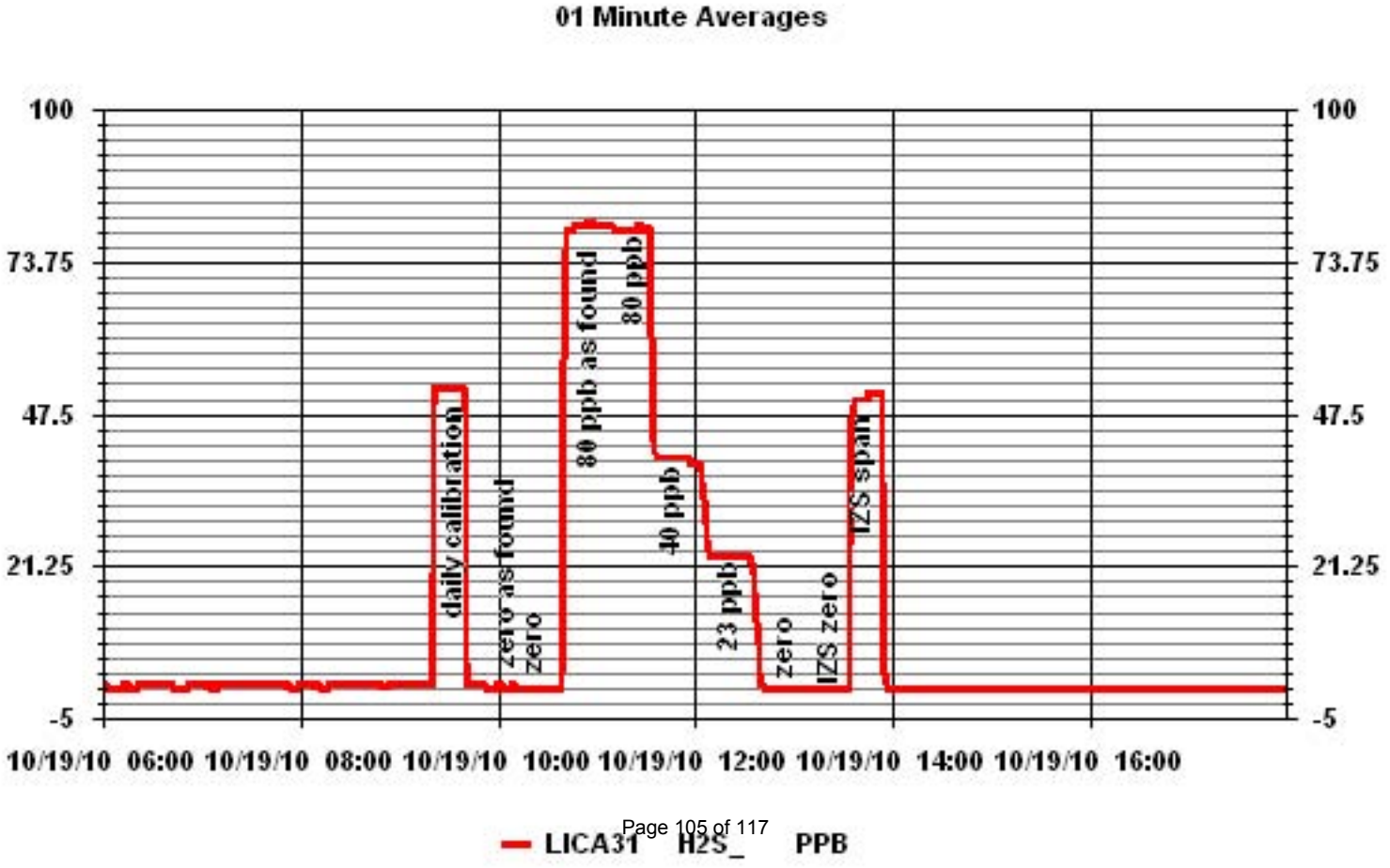
Calibration Date	October 19, 2010		
Company	LAKELAND INDUSTRY & COMMUNITY ASSOCIATION		
Plant / Location	ST.LINA		
Start Time (MST)	9:50	End Time (MST)	13:58

Calculated Conc. ppb	Indicated Response ppb	Correction Factor
0	0	n/a
23	23	1.0051
40	40	0.9962
80	80	1.0017

Correlation Coefficient	(≥ 0.995)	0.999986
Slope	(0.85 to 1.15)	0.998811
Intercept	(± 3% F.S.)	0.015912



Notes:


01 Minute Averages
100
73.75
47.5
21.25
-5
daily calibration
zero as found
zero
80 ppb as found
80 ppb
40 ppb
23 ppb
zero
IZS zero
IZS span
10/19/10 06:00
10/19/10 08:00
10/19/10 10:00
10/19/10 12:00
10/19/10 14:00
10/19/10 16:00
LICA31 H2S_ PPB

Total Hydrocarbons

THC Calibration Report

Station Information

Calibration Date:	October 19, 2010	Previous Calibration	September 21, 2010
Company:	LAKELAND INDUSTRY & COMMUNITY ASSOCIATION		
Plant / Location:	ST. LINA		
: (MST)	13:16	End Time (MST)	16:11
Reason:	Monthly Calibration		
Barometric Pressure:	928 mmHg	Station Temperature:	22 Deg C
Calibrator:	API 700	S/N:	831
Cal Gas Concentration:	207 Prop/ 602 Meth/1171.25 THC ppm	Cal Gas Expiry Date:	August 21, 2011
DAS make & Model:	ESC 8832	S/N :	AO717
Output Voltage Range:	0 - 10 VDC		

Analyzer Information

Make / Model	TECO 51C	S/N :	77021-384	Method	Flame Ionization

Analyzer Settings

	Before Calibration		After Calibration	
Concentration Range	0 -50	ppm	0 - 50	ppm
Sample Pressure	6.9	psi	6.9	psi
Hydrogen Pressure	8	psi	8	psi
Air Pressure	21	psi	21	psi

Calibration Data

Dilution Flow	Source Gas Flow	Calculated Concentration	Indicated Concentration	Correction Factor
1999	0.0	0.0	0.0	NA
1999	70.0	39.6	39.9	0.9931
1999	40.0	23.0	22.9	1.0034
1999	20.0	11.6	11.6	1.0002
1999	0	0.0	0.0	N/A
			Correction Factor:	0.9931

Previous Calibration Correction Factor:	0.9907	
Current Correction Factor Before Span Adjust:	0.9931	
Percent Change:	-0.25%	

IZS Calibration Data

	Before Calibration	After Calibration
Auto Zero	0.0	0.0
Auto Span	34.7	34.8
Sample Lines Connected		YES

Cylinder Pressures			
Span	1300	psi	
Hydrogen	1000	psi	
Zero Air	31	psi	Unlimited API 701

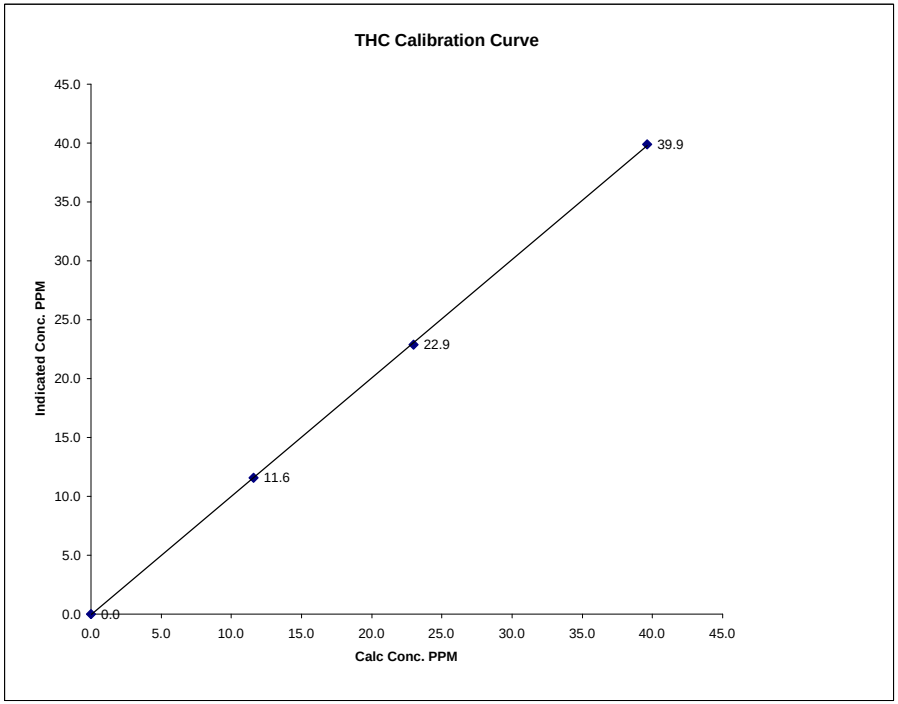
Calibration Performed by: Ting Xu

THC Calibration Curve

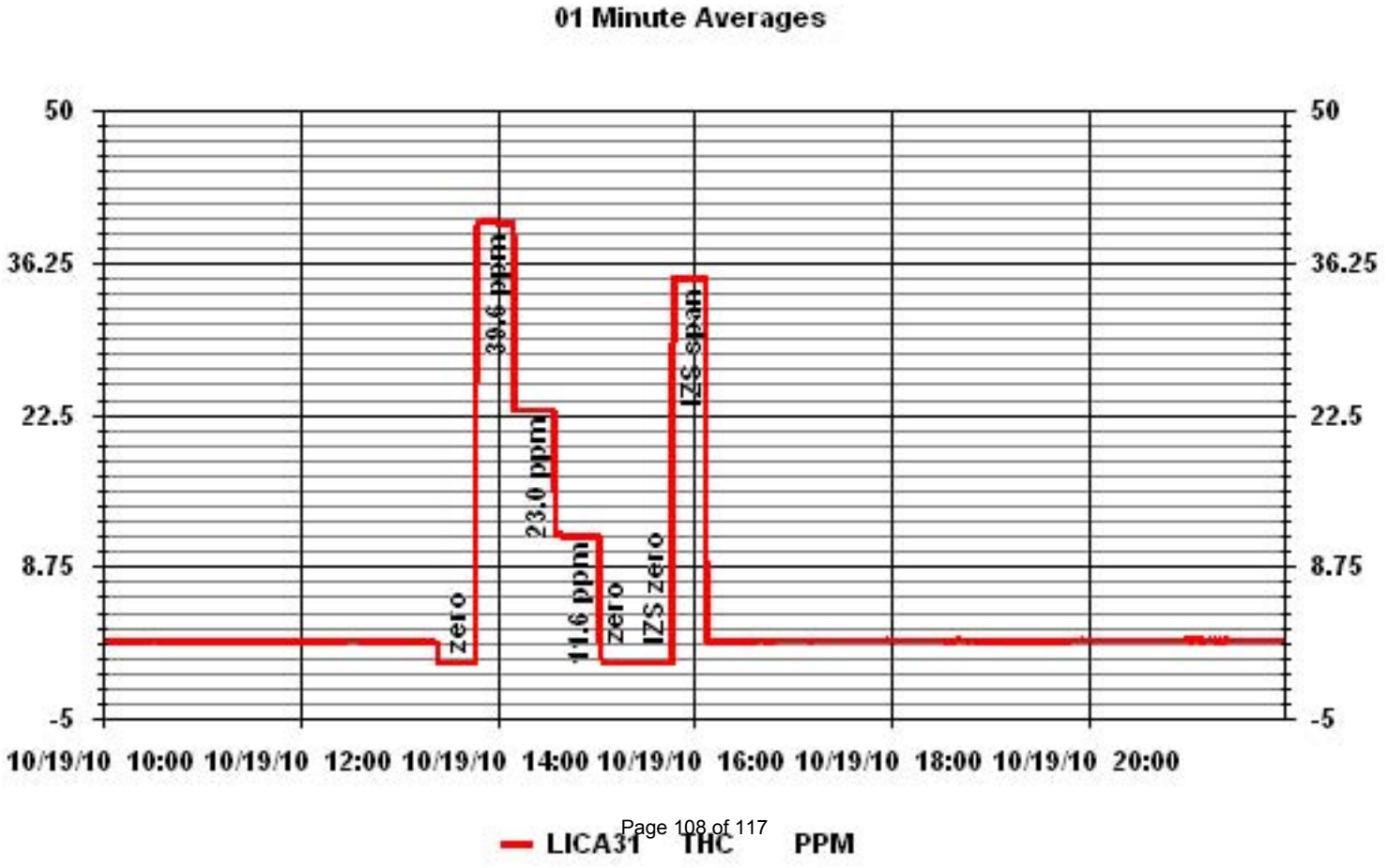
Calibration Date	October 19, 2010		
Company	LAKELAND INDUSTRY & COMMUNITY ASSOCIATION		
Plant / Location	ST. LINA		
Start Time (MST)	13:16	End Time (MST)	16:11

Calculated Conc. ppm	Indicated Response ppm	Correction Factor
0.0	0.0	
11.6	11.6	1.0002
23.0	22.9	1.0034
39.6	39.9	0.9931

Correlation Coefficient	(≥ 0.995)	0.999958
Slope	(0.85 to 1.15)	1.006350
Intercept	(± 3% F.S.)	-0.069261



Notes: Flame temp 175.


01 Minute Averages
50
36.25
22.5
8.75
-5
zero
30.6 ppm
23.0 ppm
11.6 ppm
zero
IZS zero
IZS span
10/19/10 10:00 10/19/10 12:00 10/19/10 14:00 10/19/10 16:00 10/19/10 18:00 10/19/10 20:00
LICA31 THC PPM

Nitrogen Dioxide

NOx - NO- NO_2 Calibration Report

Station Information

Calibration Date	October 19, 2010		Previous Calibration	September 21, 2010	
Company	LICA		Plant/Location	St. Lina	
Start Time (MST)	9:50		End Time (MST)	16:45	
Reason:	Monthly Calibration			Other	
Barometric Pressure	928 mmHg	Station Temperature	22 Deg C	MFCF	1
Cal Gas Concentration	NOx 50.8 ppm	NO 50.4 ppm	Cal Gas Expiry date	05-Aug-12	
DAS Output Voltage	0 - 1 Volts		Chart Rec. Output	NA Volts	

Equipment Information

Analyzer Make / Model:	API 100E	S/N :	593	Method:	Chemiluminescent
Calibrator Make / Model:	Environics 6100	S/N:	4760		
DAS Make / Model:	ESC 8832	S/N :	AO 717		
Chart Recorder Make / Model:	NA	S/N:	NA		
Flow Meter:	Environics 6100	S/N :	4760		

Analyzer Settings

	Before Calibration					After Calibration			
Concentration Range				0-1000			ppb		
Sample Flow/Conv. Temp	475	ccm	314.4	Deg C		474	ccm	314.5	Deg C
Ozone Flow / Vacuum	73	ccm	3.8	"Hg-A		73	ccm	3.8	"Hg-A
HVPS / A ZERO	646	Volts	16.9	MV		646	Volts	17.2	MV
Rx/ Temp / PMT Temp	50.0	Deg C	6.8	Deg C		50.0	Deg C	6.8	Deg C
Box Temp / IZS Temp	27.4	Deg C	45.3	Deg C		28.5	Deg C	45.2	Deg C
Offset	0.5	NOx	0.4	NO		1.1	NOx	0.6	NO
Slope	1.226	NOx	1.211	NO		1.244	NOx	1.228	NO
NO_2 COEF / Conv Efficency	NA	NO2	0.993			NA	NO2	0.993	

Dilution Calibration Data

Dilution Air Flow Rate	Source Flow Rate	O3 Set Point	Calculated Concentration			Indicated Concentration			Correction Factor	
			NOx	NO	NO2	NOx	NO	NO2	NOx	NO
4994	0.0	-----	0	0	0	1	1	1	-----	-----
4994	0.0	-----	0	0	0	0	0	0	-----	-----
4919	74.2	-----	755	749	-----	743	738	5	1.0160	1.0148
4919	74.2	-----	755	749	-----	755	749	6	0.9999	0.9999
4962	34.6	-----	352	349	-----	353	350	3	0.9965	0.9972
4977	16.8	-----	171	170	-----	173	171	2	0.9879	0.9915
4995	0.0	-----	0	0	0	0	0	0	-----	-----

Gas Phase Titration Calibration Data

Dilution Air Flow Rate	Source Flow Rate	O3 Set Point	Calculated Concentration			Indicated Concentration			NO_2 Correction Factor	NO2 Conv Efficency
			NOx	NO	NO2	NOx	NO	NO2		
4919	74.2	-----	755	749	-----	759	752	7	-----	-----
4919	74.2	550	755	-----	522	759	237	522	1.0000	100.00%
4919	74.2	300	755	-----	289	758	470	288	1.0035	99.65%
4919	74.2	100	755	-----	101	758	658	100	1.0100	98.94%

Linearity		Sum of Least Squares	NOx=	0.999	NO=	0.999	NO2=	1.001
OK?	**Yes** No	Correction Factors:	NOx=	0.9999	NO=	0.9999	NO2=	1.0000
					Average Converter Efficiency=		99.53%	

	Before Calibration					After Calibration			
Auto Zero	0.5	NOx	0.8	NO2		-0.1	NOx	-0.8	NO2
Auto Span	581	NOx	567	NO2		591	NOx	578	NO2
					Sample Lines Connected	YES			

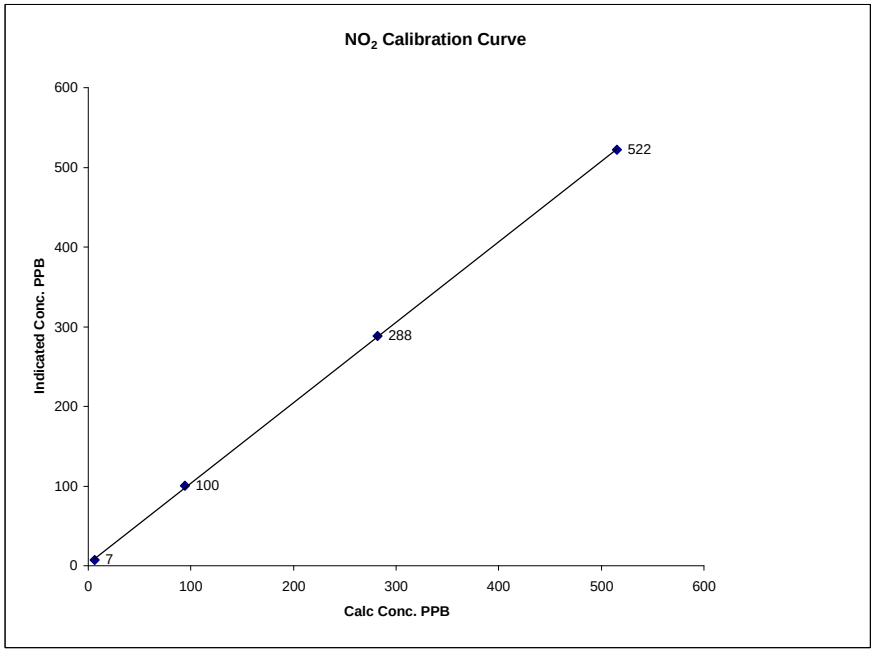
Notes: Additional GPT point done for ozone calibration. O3 set point 450, NO=327, NO2=430

Calibration Performed by: Ting Xu

NO_2 Calibration Curve

Calibration Date	October 19, 2010				
Company	LICA				
Plant / Location	St. Lina				
Start Time (MST)	9:50	End Time	(MST)	16:45	

Calculated Conc. ppb	Indicated Response ppb	Correction Factor	Correlation Coefficient (≥ 0.995)	0.999939
			Slope (0.85 to 1.15)	1.009064
6	7	N/A	Intercept (± 3% F.S.)	2.96736
94	100	0.9400		
282	288	0.9792		
515	522	0.9866		

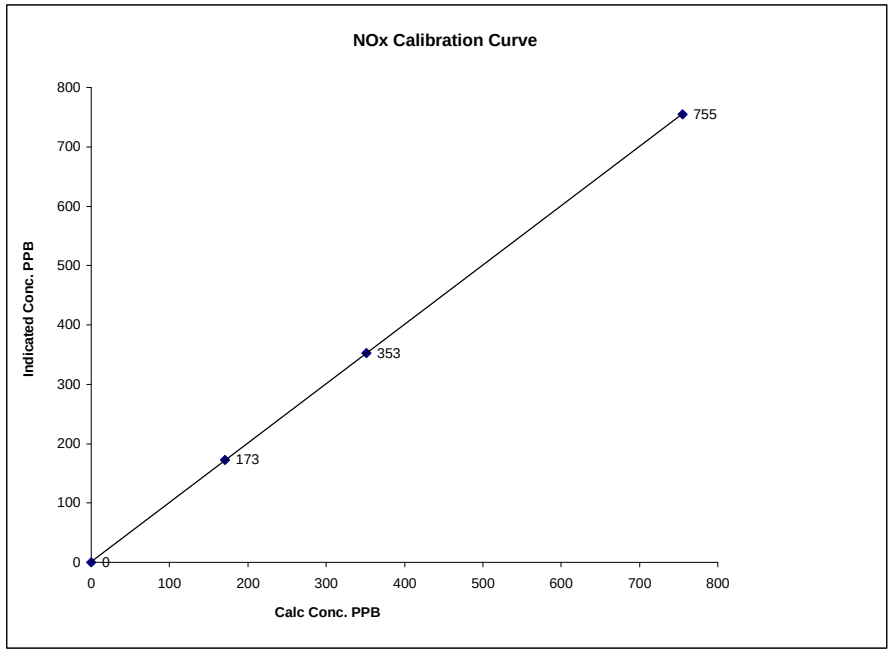


Notes:

NOx Calibration Curve

Calibration Date	October 19, 2010				
Company	LICA				
Plant / Location	St. Lina				
Start Time (MST)	9:50	End Time (MST)	16:45		

Calculated Conc. ppb	Indicated Response ppb	Correction Factor	Correlation Coefficient (≥ 0.995)	0.999991
			Slope (0.85 to 1.15)	0.999276
0	0	N/A	Intercept (± 3% F.S.)	1.08795
171	173	0.9879		
352	353	0.9965		
755	755	0.9999		

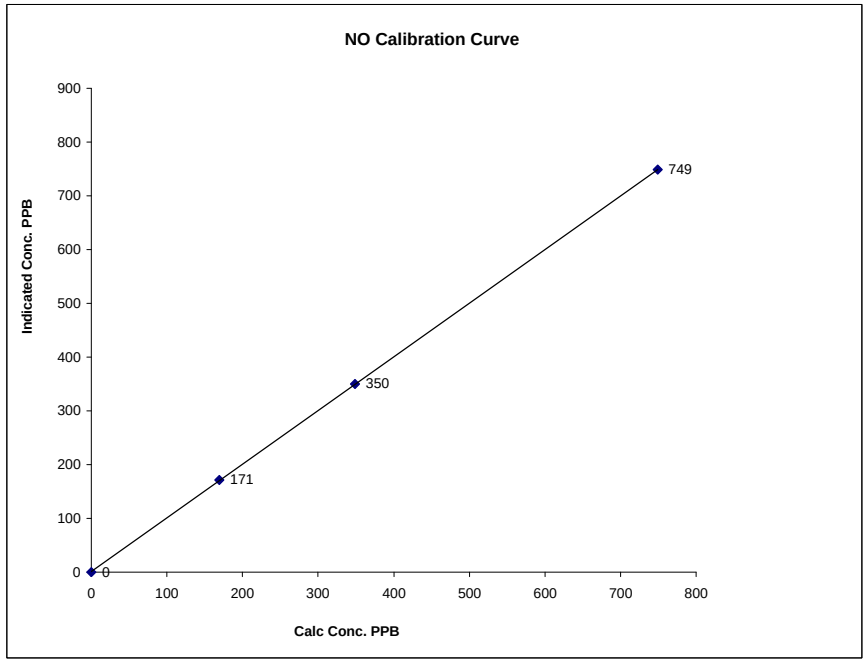


Notes:

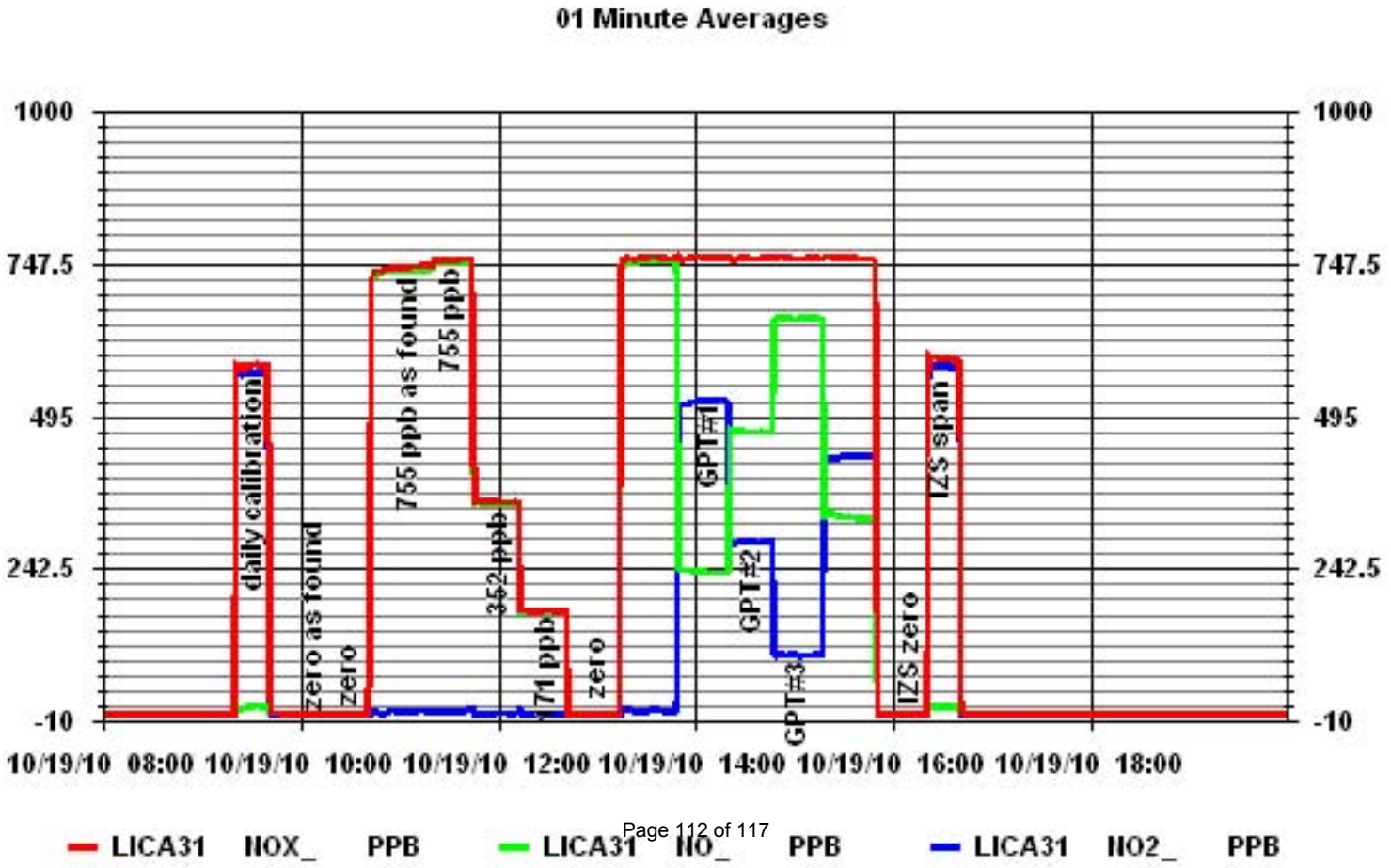
NO Calibration Curve

Calibration Date	October 19, 2010				
Company	LICA				
Plant / Location	St. Lina				
Start Time (MST)	9:50	End Time (MST)	16:45		

Calculated Conc. ppb	Indicated Response ppb	Correction Factor	Correlation Coefficient (≥ 0.995)	0.999995
			Slope (0.85 to 1.15)	0.997590
0	0	N/A	Intercept (± 3% F.S.)	1.8230
170	171	0.9915		
349	350	0.9972		
749	749	0.9999		



Notes:


01 Minute Averages
1000
747.5
495
242.5
-10
daily calibration
zero as found
zero
755 ppb as found
755 ppb
352 ppb
71 ppb
zero
GPT#1
GPT#2
GPT#3
IZS zero
IZS span
10/19/10 08:00
10/19/10 10:00
10/19/10 12:00
10/19/10 14:00
10/19/10 16:00
10/19/10 18:00
LICA31 NOX_ PPB
LICA31 NO_ PPB
LICA31 NO2_ PPB

Ozone

O_3 Calibration Report

Station Information

Calibration Date	October 21, 2010	Previous Calibration	September 22, 2010
Company	**Lakeland Industry & Community Association**		
Plant / Location	**St. Lina**		
Start Time (MST)	7:30	End Time (MST)	10:53
Reason:	Installation Calibration		
Barometric Pressure	931 mm Hg	Station Temperature	19 Deg C
DAS Output Voltage	0 - 10 Volts		

Equipment Information

Analyzer Make / Model:	Thermo 49i	S/N :	1002240371	Method:	Fluorescent
Calibrator Make / Model:	Environics 6100	S/N :	4760	Method:	GPT
DAS Make / Model:	ESC 8832	S/N :	AO 717		

Analyzer Settings

	Before Calibration		After Calibration	
Concentration Range	0 - 500 ppb			
CellA Flow / Cell B Flow	734 ccm	739 ccm	732 ccm	737 ccm
Pressure	695 mmHg		693 mmHg	
Bench Temp	56.0 Deg C		56.1 Deg C	
O3 Lamp / Box Temp	80 Deg C	27.1 Deg C	80 Deg C	28.1 Deg C
Offset / Slope	0.2	1.025	0.2	1.014

Calibration Data

Dilution Flow Rate	Ozone Set Point	Calculated Concentration	Indicated Conc. (DAS)	Correction Factor
4995	0	0	0	N/A
4995	450	425	427	0.9953
4995	300	282	287	0.9826
4995	100	94	96	0.9792
4995	0	0	0	N/A
			Sum of Least Squares	N/A
			New Correction Factor	0.9953

	Before Calibration	After Calibration
Auto Zero	-	0.4
Auto Span	-	327
Sample Lines Connected		YES
Percent Change from Previous Calibration		-

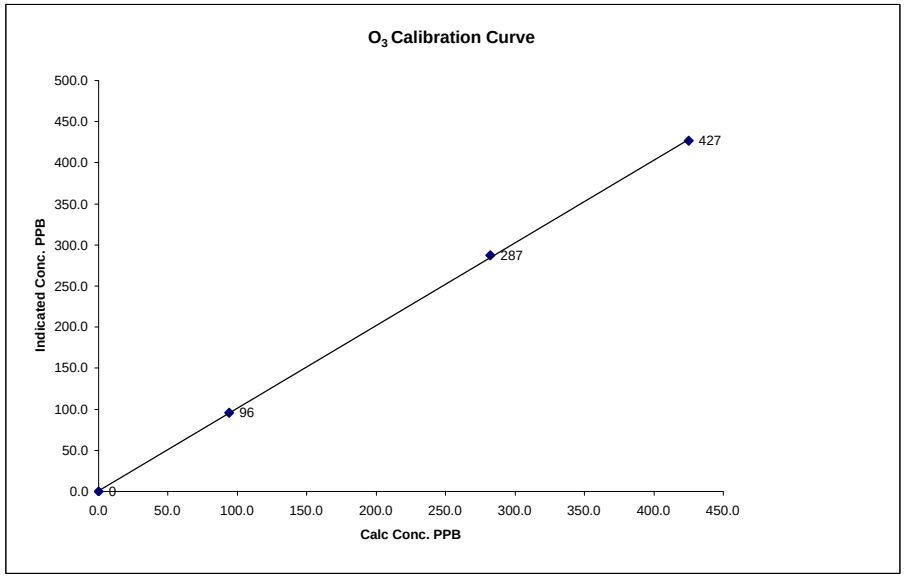
Calibration Performed by: Craig Snider / Ting Xu

O_3 Calibration Curve

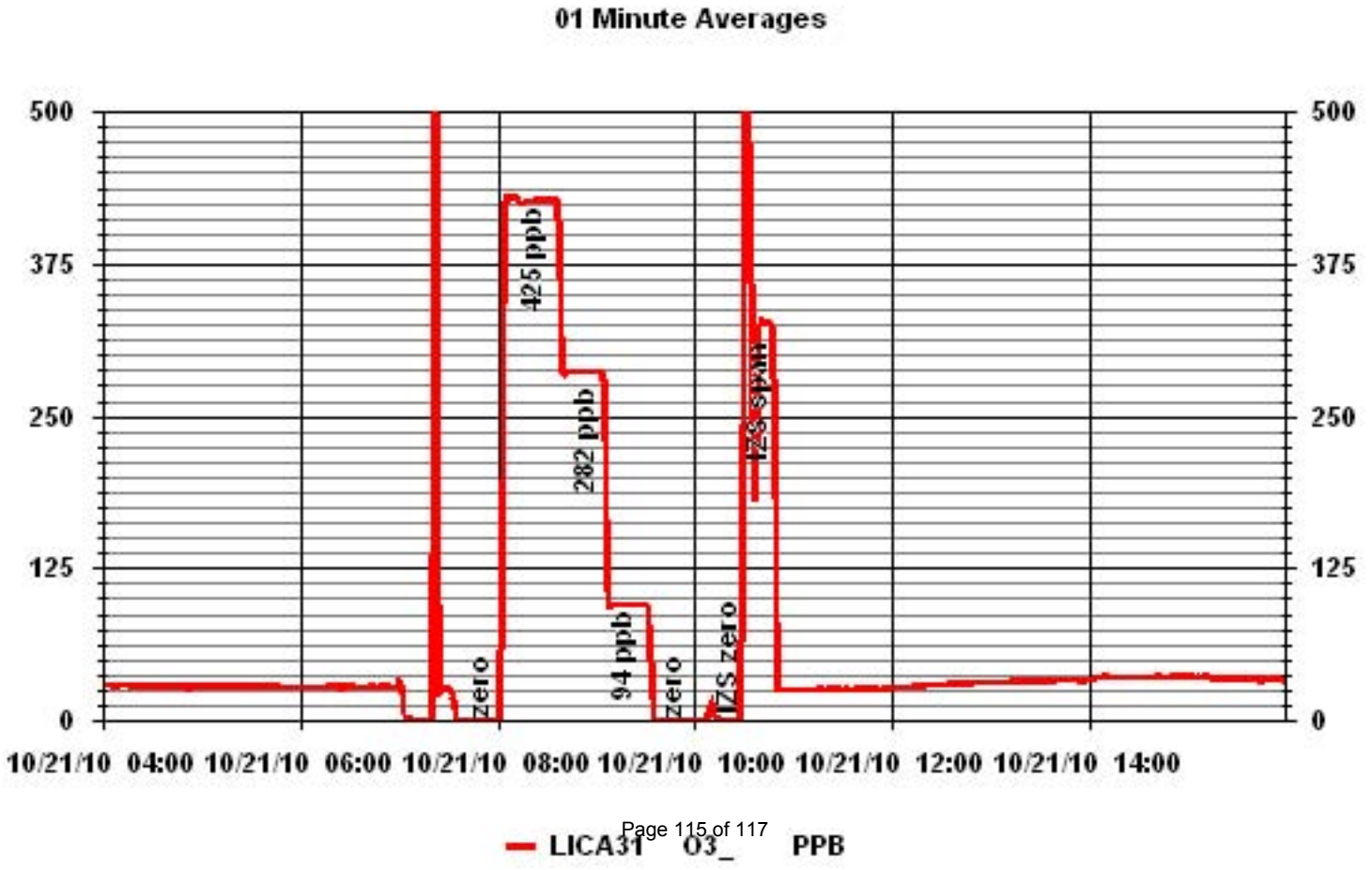
Calibration Date	October 21, 2010		
Company	**Lakeland Industry & Community Association**		
Plant / Location	**St. Lina**		
Start Time (MST)	7:30	End Time (MST)	10:53

Calculated Conc. ppb	Indicated Response ppb	Correction Factor
0	0	n/a
94	96	0.9792
282	287	0.9826
425	427	0.9953

Correlation Coefficient	(≥ 0.995)	0.999919
Slope	(0.85 to 1.15)	1.005947
Intercept	(± 3% F.S.)	1.059120



Notes:


01 Minute Averages
500
375
250
125
0
425 ppb
282 ppb
94 ppb
zero
zero
175 zero
175 span
10/21/10 04:00
10/21/10 06:00
10/21/10 08:00
10/21/10 10:00
10/21/10 12:00
10/21/10 14:00
LICA31 O3_ PPB

Particulate Matter 2.5

TEOM® 1405F Audit

Station

Date:	October 26, 2010
Station Name:	Lica St. Lina (CASA # 31)
Location:	St. Lina Station
Operator:	LICA

Audit Transfer Standard

Make/Model:	Streamline FTS
Serial Number:	LO 091099, Hi 091001
Cell s/n:	NA
Thermometer s/	VWR 90758398

Sampler

Make/Model	Thermo Scientific Series 1405F
Unit #	NA
Unit s/n	1405A208301003
Firmware Ver.	1.52
Parameter	PM 2.5 (with FDMS)

Set-up and current Sampler readings

F-Main Set Pt (l/min)	3.00
F-Aux Set Pt (l/min)	13.67
Filter Load (%)	30.8%
K_o Factor	13125.0
Temp (^oC)	-4.2
Press (ATM)	0.918

Conversion from mmHg or "Hg to ATM (Atmospheres)

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

Note: Tolerances are noted as BOLD in Brackets

Audit

Status

Noise **<0.10*u* g**	0.003	Warnings	None
Pump Vacuum **<0.40atm**	0.29	Pump Gauge (inHg)	-20

Temperature/Pressure

Measured Temp **(± 2 ^oC)**	-3.8	**Δ ^oC**	-0.4
Measured Press **(± 0.01atm)**	0.910	**ΔATM**	0.008

Flow Audit

Indicated Main Flow (l/min)	3.00	Main Flow Drift **(±10.0%)**	1.32%
Measured Main Flow (l/min)	3.03	Flow Adjusted to Measured?	Yes
Indicated Bypass Flow (l/min)	13.66	Bypass Flow Drift **(±10.0%)**	2.08%
Measured Bypass Flow (l/min)	13.89	Flow Adjusted to Measured?	Yes

Leak Check

Main **(< 0.15 l/min)**	NA
Aux **(< 0.6 l/min)**	NA

Instrument Setup

Flow Control = Active

Report Conditions = Standard (25.0 C and 1atm)

K_o Factor

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

Start Time: 11:33 **Finish Time:** 13:03

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

New Filter Loading %: 19.8%

Comments:

Auditor/s: Shea Beaton / Ting Xu

Lakeland Industry & Community Association

Portable / Devon Wellsite 13-16-62-5 W4M Monitoring Site
Ambient Air Monitoring Data Report
For
October 2010

Prepared By:

November 18, 2010

Lakeland Industry & Community Association
Portable / Devon Wellsite 13-16-62-5 W4M
Ambient Air Monitoring

Table of Contents

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: Portable / Devon Wellsite 13-16-62-5 W4M
Data Period: October 2010

The monthly ambient data report:

- Prepared by Lily Lin
- Reviewed by Craig Snider

The 6-days analytical report for VOCs and PAHs:
Authorized by Petro Oh

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 - PORTABLE

Continuous Ambient Monitoring – October 2010

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION PORTABEL / DEVON WELLSITE 13-16-62-5 W4M 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	0.08	2	VAR	VAR	VAR	VAR	0.5	VAR	100.0
H_2S (PPB)	10	3	-	-	0.01	1	1	VAR	VAR	VAR	0.2	1	100.0
THC (PPM)	-	-	-	-	2.30	7.4	7	3	2.7	113(ESE)	3.3	14	100.0
NO_2 (PPB)	212	106	0	0	3.05	17	13	7	2	249(WSW)	7.8	14	100.0
NO (PPB)	-	-	-	-	0.39	16	13	7	2	249(WSW)	1.6	3	100.0
NOx (PPB)	-	-	-	-	3.47	33	13	7	2	249(WSW)	8.3	14	100.0
O_3 (PPB)	82	-	0	-	21.54	43	19	12, 15	23.2, 20.9	295(WNW), 296(WNW)	34.2	19	100.0
PM 2.5 (UG/M^3)	-	30	-	0	4.67	27.1	28	10	5.7	260(WSW)	14.8	28	99.1
VECTOR WS (KPH)	-	-	-	-	10.06	30.5	15	13	-	283(W)	18.4	15	100.0
VECTOR WD (DEGREES)	-	-	-	-	262(W)	-	-	-	-	-	-	-	100.0

VAR-VARIOUS

Volatile Organics Data Summary
LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - PORTABLE

Xontech Model 910A – October 5, 2010

Maximum reading (ug/m3)	Volatile Organic
<32.0	Hexachlorobutadiene

Xontech Model 910A – October 11, 2010

Maximum reading (ug/m3)	Volatile Organic
<32.0	Hexachlorobutadiene

Xontech Model 910A – October 17, 2010

Maximum reading (ug/m3)	Volatile Organic
<32.0	Hexachlorobutadiene

Xontech Model 910A – October 23, 2010

Maximum reading (ug/m3)	Volatile Organic
<32.0	Hexachlorobutadiene

Xontech Model 910A – October 29, 2010

Maximum reading (ug/m3)	Volatile Organic
<32.0	Hexachlorobutadiene

Polycyclic Aromatic Hydrocarbons (PAHs) Data Summary
LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - PORTABLE SITE

PUF cartridge – October 5, 2010

Maximum reading (ng/m3)	Semi-Volatile Organic
<6.055	3-Methylcholanthrene

PUF cartridge – October 11, 2010

Maximum reading (ng/m3)	Semi-Volatile Organic
<6.055	3-Methylcholanthrene

PUF cartridge – October 17, 2010

Maximum reading (ng/m3)	Semi-Volatile Organic
<6.055	3-Methylcholanthrene

PUF cartridge – October 23, 2010

Maximum reading (ng/m3)	Semi-Volatile Organic
<6.054	3-Methylcholanthrene

PUF cartridge – October 29, 2010

Maximum reading (ng/m3)	Semi-Volatile Organic
<6.055	3-Methylcholanthrene

General Monthly Summary

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 – PORTABLE

Sulphur Dioxide (PPB)
- Analyzer make / model – API 100E, S/N: 467

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

Hydrogen Sulphide (PPB)
- Analyzer make / model –API 101E, S/N: 509
- Converter - Internal

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

Nitrogen Dioxide (PPB)
- Analyzer make / model – API 200E, S/N: 593

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

General Monthly Summary

AQM STATION – LICA – PORTABLE

Ozone (PPB)

- Analyzer make / model –Thermo 49i, S/N: 1002240372

The inlet filter was changed before the monthly calibration was started. 1 hour of the maximum concentration data was invalidated on October 22nd due to the data collection time of less than 75% in an hour, reason unknown. Data was corrected using daily zero information.

THC (PPM)

- Analyzer make / model – TECO 51C, S/N: 04366-09739

No operational issues observed during the month. The inlet filter was replaced before the monthly calibration was started. The Hydrogen gas cylinder was replaced on October 14th. Data was corrected using daily zero information.

Particulate Matter 2.5 (ug/m^3)

- Analyzer make / model –TEOM 1405F, S/N: 1405A207691003

The Teom unit was working well throughout the month. A routine Teom audit was performed on October 28th. Following the audit, a firmware upgrade was performed to version 1.55. Following the upgrade, the Teom temperature, pressure and flow were all checked' the results were good. The inlet was cleaned after that. Data was corrected using Alberta air quality guideline for PM2.5 analyzer. If the data was between 0 to –3, the data was corrected to 0. If the data was below –3, the data was invalidated. 7 hours of data were invalidated as they were below –3.0 ug/m^3. The new Teom 1405F unit output provides hourly average, but no instantaneous output. As a result, no hourly maximum value is recorded.

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

- System make / model – RM Young 5103VK, S/N: 41334

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

General Monthly Summary

AQM STATION – LICA – PORTABLE

Datalogger

- System make / model - ESC 8832, S/N: AO717
- Software make / version - ESC v 5.51a

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

Trailer

No issue was observed this month. The manifold was cleaned on October 18th. The Bard throw-away filter for the cooling/heating system was replaced on October 27th.

Air Quality Index (AQI)

The AQI data was adjusted to reflect regular monthly and daily calibrations, maintenance, and downtime. All AQI values recorded in October 2010 were within the Good range. The highest hourly concentration of PM2.5 was 27.1ug/m3 and an AQI value of 23, hour 10 on October 23rd. The highest hourly concentration of Ozone was 43 ppb and an AQI value of 22 on October 19th, hour of 12 and 15.

General Monthly Summary

AQM STATION – LICA – PORTABLE

Volatile Organics (VOCs)
The volatile organics were sampled from October 5th to October 29th. The sampler was programmed to run for 24 hours, and, every 6 days per sample cycle. The values for the VOCs in this report were reported as ug/m3 in 3 significant figures.
.

Polycyclic Aromatic Hydrocarbons (PAHs)
The PAHs were sampled from October 5th to October 29th. The sampler was programmed to run for 24 hours, and, every 6 days per sample cycle. The values for the PAHs in this report were reported as ng/m3.
A calibration on the Tish Hi Vol PUF was performed on October 27th. A flow calibration was also performed using the auto cal method on October 27th.

Continuous Monitoring

Monthly Summaries, Graphs & Wind Roses

Air Quality Index

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *PORTABLESITE*

OCTOBER 2010

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	3	6	5	7	1	2	2	4	10	15	16	18	18	19	19	19	19	17	-	14	13	13	15	15	19
	PM2	PM2	PM2	PM2	PM2	PM2	PM2	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	**NA**	O3_	O3_	O3_	O3_	O3_	O3_
2	15	14	14	13	13	12	11	11	12	13	13	14	15	16	17	18	18	-	12	11	11	12	11	11	18
	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	**NA**	O3_	O3_	PM2	PM2	PM2	PM2	O3_
3	6	8	7	5	5	6	8	6	7	10	12	14	17	18	20	19	-	15	15	13	14	13	13	13	20
	PM2	PM2	PM2	PM2	PM2	PM2	PM2	PM2	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	**NA**	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_
4	14	15	15	16	15	15	15	14	13	12	12	11	11	12	11	-	11	10	9	9	9	8	6	6	16
	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	**NA**	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_
5	5	4	6	9	10	10	11	12	13	14	16	16	16	17	-	17	17	15	14	15	14	15	15	15	17
	O3_	O3_	PM2	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	**NA**	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_
6	15	14	13	13	12	11	11	10	12	14	16	18	18	-	17	15	16	17	16	15	14	13	13	12	18
	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	**NA**	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_
7	12	10	9	7	6	6	3	4	7	7	9	14	-	18	20	20	18	16	14	12	13	13	10	10	20
	O3_	O3_	O3_	O3_	O3_	O3_	PM2	O3_	O3_	O3_	O3_	O3_	**NA**	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_
8	-	11	10	10	10	10	9	10	11	11	11	-	9	14	17	18	18	16	14	12	11	14	12	7	18
	NA	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	**NA**	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_
9	8	3	3	4	4	3	4	5	8	13	-	-	19	19	19	19	19	17	12	11	13	11	9	6	20
	O3_	O3_	O3_	O3_	O3_	O3_	PM2	O3_	O3_	O3_	**NA**	**NA**	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_
10	5	6	6	5	8	6	5	6	9	-	11	11	12	12	12	12	11	10	13	18	19	16	15	10	19
	O3_	O3_	O3_	O3_	PM2	O3_	PM2	O3_	O3_	**NA**	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_
11	17	16	11	13	11	13	13	13	-	15	17	17	17	17	17	17	14	14	13	12	12	12	13	11	17
	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	**NA**	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_
12	10	8	9	8	10	9	9	-	12	15	17	17	18	18	18	18	18	14	13	10	9	8	12	15	18
	O3_	O3_	O3_	O3_	O3_	O3_	O3_	**NA**	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	PM2	O3_	O3_	O3_	O3_	O3_
13	14	12	10	10	9	6	-	5	8	12	15	17	19	19	19	19	19	18	16	14	11	18	12	11	19
	O3_	O3_	O3_	O3_	O3_	O3_	**NA**	PM2	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	PM2	PM2	PM2	O3_
14	8	11	8	6	7	-	8	9	-	-	-	-	-	-	-	-	18	16	13	14	8	12	8	7	19
	PM2	PM2	PM2	O3_	O3_	**NA**	O3_	O3_	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	O3_	O3_	PM2	PM2	PM2	PM2	PM2	O3_	O3_
15	9	8	11	13	-	17	17	16	15	17	18	18	18	18	18	17	17	16	17	16	15	15	15	-	18
	PM2	PM2	O3_	O3_	**NA**	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	**NA**	O3_
16	14	14	14	-	10	9	8	7	9	11	13	15	16	17	17	18	17	15	11	10	11	18	11	11	18
	O3_	O3_	O3_	**NA**	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	PM2	PM2	PM2	PM2	O3_	O3_
17	9	7	-	5	6	6	6	9	10	12	13	14	15	17	17	17	17	16	14	12	11	11	10	9	17
	O3_	O3_	**NA**	PM2	PM2	PM2	PM2	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	PM2	O3_	O3_	O3_	O3_	O3_
18	12	-	8	5	5	11	19	20	6	11	13	14	-	-	-	-	-	11	11	10	12	14	13	7	20
	O3_	**NA**	O3_	O3_	O3_	PM2	PM2	PM2	O3_	O3_	O3_	O3_	**NA**	**NA**	**NA**	**NA**	**NA**	O3_	O3_	O3_	O3_	O3_	O3_	O3_	PM2
19	-	10	12	13	15	14	12	12	15	17	19	21	**22**	21	21	**22**	21	21	21	20	19	17	16	-	22
	NA	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	**O3_**	O3_	O3_	**O3_**	O3_	O3_	O3_	O3_	O3_	O3_	O3_	**NA**	O3_
20	15	15	12	13	13	12	12	13	13	14	15	16	17	18	18	18	17	15	15	10	15	11	-	12	18
	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	PM2	PM2	PM2	PM2	**NA**	O3_	O3_
21	9	9	8	7	9	8	8	10	11	13	13	12	13	14	18	17	17	16	16	14	12	-	11	11	18
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	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	**NA**	O3_	O3_	O3_	O3_
23	10	11	10	11	10	10	10	9	9	9	10	12	11	10	12	11	11	10	9	-	10	9	10	9	12
	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	**NA**	O3_	O3_	O3_	O3_	O3_
24	9	10	10	10	10	10	10	8	8	7	6	7	7	7	7	7	7	7	-	6	7	7	8	8	10
	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_
25	8	8	8	8	8	7	9	8	9	10	10	-	-	11	11	12	12	-	12	12	11	11	11	11	12
	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	**NA**	**NA**	O3_	O3_	O3_	O3_	**NA**	O3_	O3_	O3_	O3_	O3_	O3_	O3_
26	12	13	13	13	13	13	14	14	15	15	14	13	13	13	14	14	-	13	12	12	13	13	-	13	15
	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	**NA**	O3_	O3_	O3_	O3_	O3_	**NA**	O3_	O3_
27	13	13	13	14	14	13	14	13	14	14	14	13	13	13	13	-	12	-	9	12	8	10	10	8	14
	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	**NA**	O3_	**NA**	O3_	PM2	O3_	O3_	O3_	O3_	O3_
28	8	15	14	8	10	13	8	11	14	20	**23**	-	-	-	-	20	21	14	12	9	7	9	11	8	23
	O3_	PM2	PM2	O3_	PM2	PM2	PM2	PM2	PM2	PM2	**PM2**	**NA**	**NA**	**NA**	**NA**	PM2	PM2	PM2	PM2	PM2	PM2	PM2	PM2	O3_	PM2
29	9	11	9	12	6	7	6	7	7	9	7	9	7	-	7	7	7	8	8	11	11	14	10	14	14
	PM2	PM2	PM2	PM2	PM2	PM2	O3_	O3_	O3_	PM2	O3_	PM2	O3_	**NA**	O3_	PM2	O3_	PM2	PM2	PM2	PM2	PM2	PM2	PM2	PM2
30	10	7	11	6	11	7	3	6	6	5	8	13	-	10	10	11	15	12	11	10	9	8	11	11	15
	PM2	PM2	PM2	PM2	PM2	PM2	O3_	PM2	PM2	PM2	PM2	PM2	**NA**	PM2	PM2	PM2	PM2	PM2	PM2	PM2	PM2	PM2	PM2	PM2	PM2
31	10	6	8	6	2	5	14	2	5	6	7	-	7	8	8	6	8	9	9	5	7	7	9	12	14
	PM2	PM2	PM2	PM2	O3_	PM2	PM2	PM2	PM2	PM2	PM2	**NA**	O3_	O3_	O3_	PM2	PM2	PM2	PM2	PM2	PM2	PM2	PM2	PM2	PM2
PEAK	17	16	15	16	15	17	19	20	15	20	23	21	22	21	21	22	21	21	21	20	19	18	16	15	
	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	

STATUS FLAG CODES	NA - NOT APPLICABLE

V - VARIOUS

AQI CLASS	OZONE (O_3)					PARTICULATE MATTER 2.5 (PM2)					NITROGEN DIOXIDE (NO_2)					SULPHUR DIOXIDE (SO_2)					FREQUENCY	
	HRS	%	MAX AQI	HR	DAY	HRS	%	MAX AQI	HR	DAY	HRS	%	MAX AQI	HR	DAY	HRS	%	MAX AQI	HR	DAY	HRS	%
VERY POOR (101-255)	0	0.0%	-	-	-	0	0.0%	-	-	-	0	0.0%	-	-	-	0	0.0%	-	-	-	0	0.0%
POOR (51-100)	0	0.0%	-	-	-	0	0.0%	-	-	-	0	0.0%	-	-	-	0	0.0%	-	-	-	0	0.0%
FAIR (26-50)	0	0.0%	-	-	-	0	0.0%	-	-	-	0	0.0%	-	-	-	0	0.0%	-	-	-	0	0.0%
GOOD (1-25)	558	75.0%	22	12, 15	19	131	17.6%	23	10	28	0	0.0%	-	-	-	0	0.0%	-	-	-	689	92.6%
OVERALL	558	75.0%	-	-	-	131	17.6%	-	-	-	0	0.0%	-	-	-	0	0.0%	-	-	-	689	92.6%
UNAVAILABLE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	55	7.4%

Sulphur Dioxide

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *PORTABLE SITE*

OCTOBER 2010

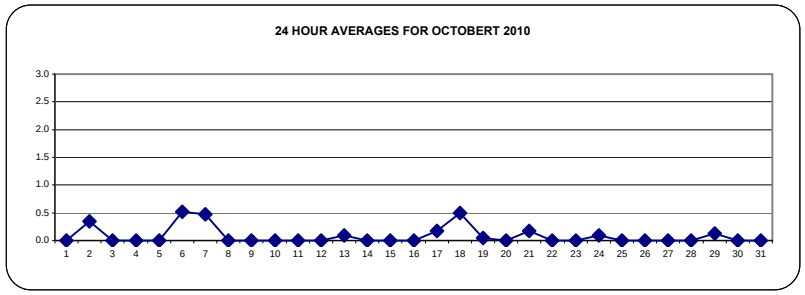
SULPHUR DIOXIDE (SO_2) hourly averages in ppb

MST

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

STATUS FLAG CODES

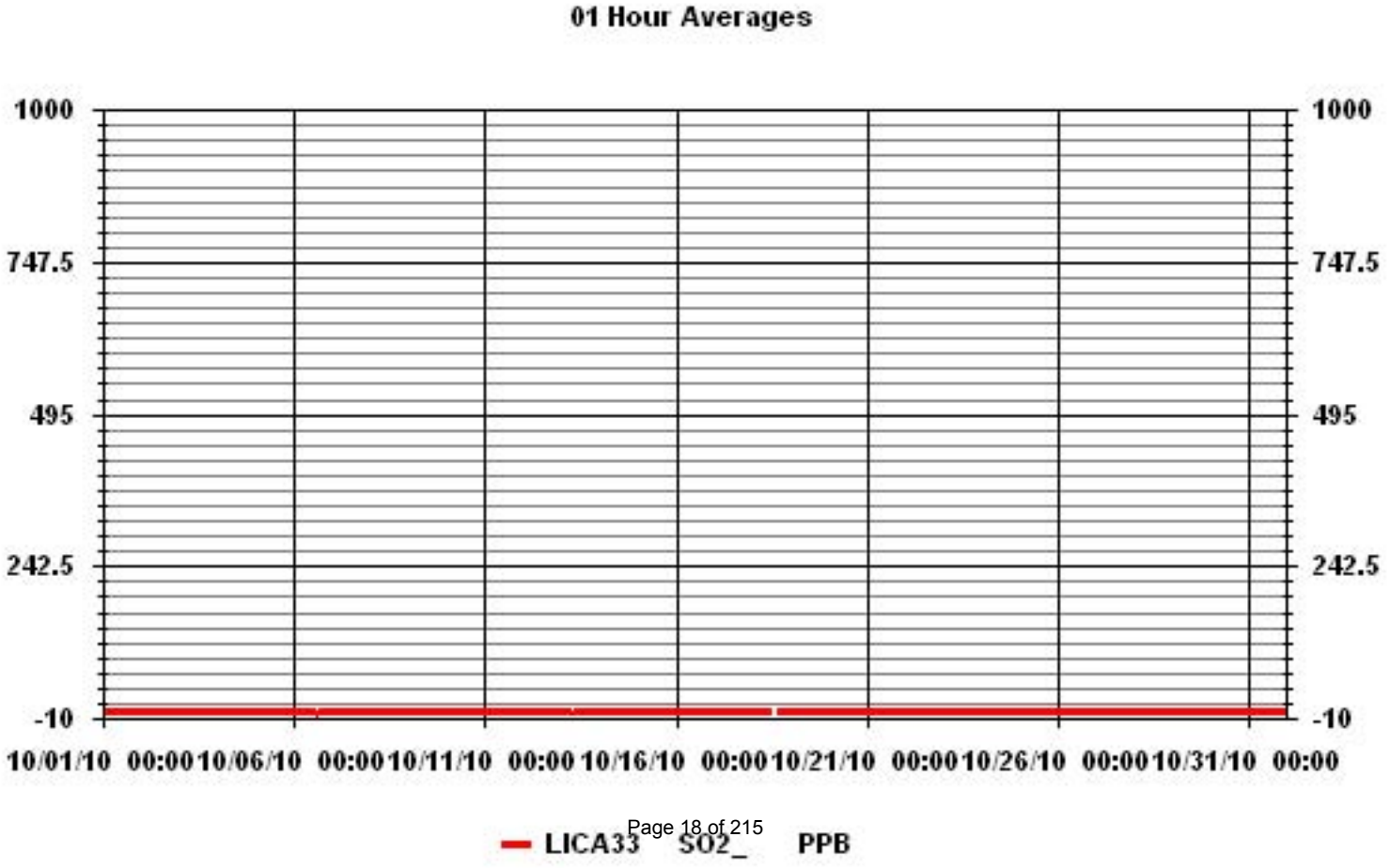
S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	- MAINTENANCE
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE



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:	53					
MAXIMUM 1-HR AVERAGE:	2	PPB	@ HOUR(S)	VAR	ON DAY(S)	VAR
MAXIMUM 24-HR AVERAGE:	0.5	PPB			ON DAY(S)	VAR
IZS CALIBRATION TIME:	32	HRS	OPERATIONAL TIME:		744	HRS
MONTHLY CALIBRATION TIME:	5	HRS	AMD OPERATION UPTIME:		100.0	%
STANDARD DEVIATION:	0.29		MONTHLY AVERAGE:		0.08	PPB


01 Hour Averages
1000
747.5
495
242.5
-10
10/01/10 00:00
10/06/10 00:00
10/11/10 00:00
10/16/10 00:00
10/21/10 00:00
10/26/10 00:00
10/31/10 00:00
LICA33 SO2_ PPB

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *PORTABLE SITE*

OCTOBER 2010

SULPHUR DIOXIDE MAX instantaneous maximum in ppb

MST

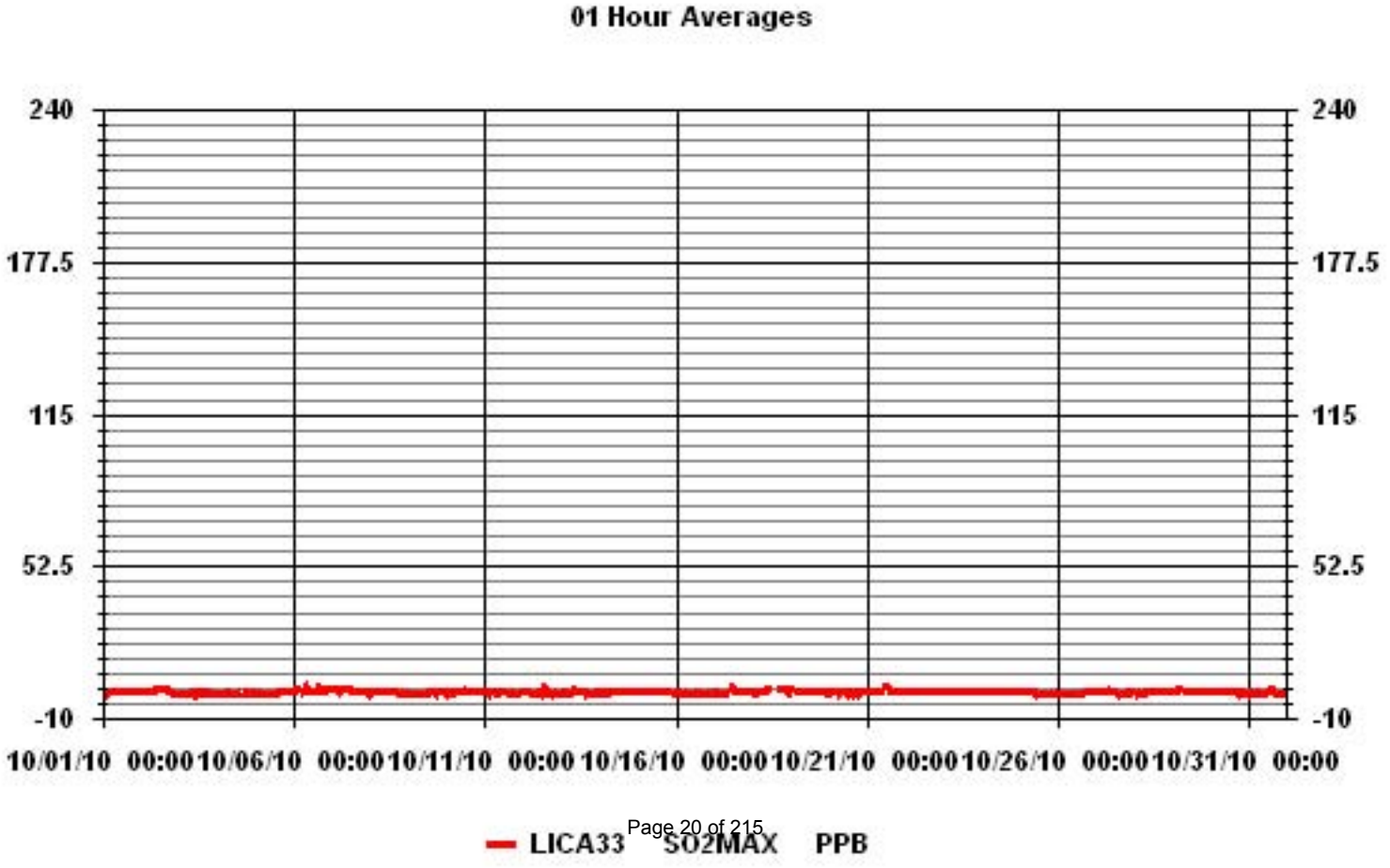
HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	**IZS**	1	1	1	1	1	1	1.0	24
2	1	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	**IZS**	1	1	0	0	0	0	2	1.2	24
3	0	0	0	0	0	0	0	1	0	1	0	1	1	1	1	1	**IZS**	0	1	1	0	0	0	0	1	0.4	24
4	0	0	0	0	0	0	1	1	0	0	0	0	0	1	0	**IZS**	0	1	1	0	0	0	1	1	1	0.3	24
5	0	0	1	0	0	0	0	0	0	0	0	0	0	0	**IZS**	1	1	1	1	1	1	1	1	1	1	0.4	24
6	1	2	2	2	2	1	2	3	1	1	1	1	1	**IZS**	1	3	3	2	1	1	2	2	2	2	3	1.7	24
7	2	2	2	2	1	2	2	2	2	2	2	2	**IZS**	1	1	1	1	1	1	1	1	1	1	0	2	1.4	24
8	1	1	1	1	1	1	1	1	1	1	1	**IZS**	1	1	1	1	1	0	0	1	0	0	0	1	1	0.8	24
9	0	0	0	0	0	0	0	0	0	0	**IZS**	0	0	1	1	1	1	0	1	1	1	1	1	0	1	0.4	24
10	1	1	0	0	1	1	1	1	1	**IZS**	1	2	1	1	1	1	1	1	1	1	1	1	1	1	2	1.0	24
11	1	1	0	1	1	1	1	0	**IZS**	1	1	1	1	1	0	0	1	1	0	0	0	0	1	1	1	0.7	24
12	1	1	1	1	1	0	0	**IZS**	0	1	1	0	1	**4**	0	0	0	1	0	1	0	0	0	0	**4**	0.6	24
13	0	0	1	1	1	0	**IZS**	1	2	2	1	1	1	1	1	0	1	1	0	0	0	1	1	0	2	0.7	24
14	0	1	1	1	0	**IZS**	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	24
15	1	1	1	1	**IZS**	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	1	0.9	24
16	1	1	1	**IZS**	0	0	1	0	0	0	0	0	1	0	0	1	0	0	0	0	1	0	0	0	1	0.3	24
17	1	1	**IZS**	0	0	0	0	0	1	2	3	3	1	1	1	1	1	1	1	1	1	1	1	1	3	1.0	24
18	1	**IZS**	0	1	1	1	1	1	1	2	2	2	**C**	**C**	**C**	**C**	**C**	2	2	2	2	2	1	3	3	1.5	24
19	**IZS**	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	**IZS**	2	1.1	24
20	0	1	1	1	1	1	0	1	1	1	1	0	1	1	1	0	1	1	0	1	1	1	**IZS**	1	1	0.8	24
21	1	1	1	1	1	1	1	1	1	1	2	3	3	3	1	1	1	1	1	1	1	**IZS**	1	1	3	1.3	24
22	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	**IZS**	1	1	1	1	1.0	24
23	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	**IZS**	1	1	1	1	1	1.0	24
24	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	**IZS**	1	1	1	1	1	2	1.0	24
25	1	1	1	1	1	1	1	1	1	0	1	0	0	0	0	0	0	**IZS**	0	0	0	0	0	1	1	0.5	24
26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**IZS**	1	1	1	1	1	1	1	1	0.3	24
27	1	1	1	1	1	1	1	2	1	1	1	1	1	0	1	**IZS**	0	0	1	0	0	1	1	1	2	0.8	24
28	1	0	1	0	0	0	1	1	1	1	1	1	1	1	**IZS**	1	1	1	1	1	1	1	1	1	1	0.8	24
29	1	1	1	2	2	2	2	1	1	1	1	1	1	**IZS**	1	1	1	1	1	1	1	1	1	1	2	1.2	24
30	1	1	1	1	1	1	1	1	1	1	1	2	**IZS**	2	1	1	1	0	1	1	1	0	0	1	2	1.0	24
31	0	1	1	0	0	1	1	0	0	0	1	**IZS**	1	1	3	1	1	0	0	0	0	0	0	0	3	0.5	24
HOURLY MAX	2	2	2	2	2	2	2	3	2	2	3	3	3	4	3	3	3	2	2	2	2	2	2	3			
HOURLY AVG	0.7	0.9	0.8	0.8	0.7	0.7	0.9	0.9	0.8	0.9	1.0	1.0	0.9	1.1	0.9	0.9	0.9	0.9	0.8	0.8	0.7	0.7	0.7	0.8			

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

MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:	525					
MAXIMUM INSTANTANEOUS VALUE:	4	PPB	@ HOUR(S)	13	ON DAY(S)	12
IZS CALIBRATION TIME:	32	HRS	OPERATIONAL TIME:		744	HRS
MONTHLY CALIBRATION TIME:	5	HRS				
STANDARD DEVIATION:	0.61					


01 Hour Averages
240
177.5
115
52.5
-10
10/01/10 00:00
10/06/10 00:00
10/11/10 00:00
10/16/10 00:00
10/21/10 00:00
10/26/10 00:00
10/31/10 00:00
LICA33 SO2MAX PPB

LICA33
SO2_ / WDR Joint Frequency Distribution (Percent)

October 2010

Distribution By % Of Samples

Logger Id : 33
Site Name : LICA33
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	3.11	2.12	3.67	6.36	10.18	3.81	3.25	7.77	4.38	4.24	12.44	10.60	10.04	9.19	2.40	6.36	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	3.11	2.12	3.67	6.36	10.18	3.81	3.25	7.77	4.38	4.24	12.44	10.60	10.04	9.19	2.40	6.36	

Calm : .00 %

Total # Operational Hours : 707

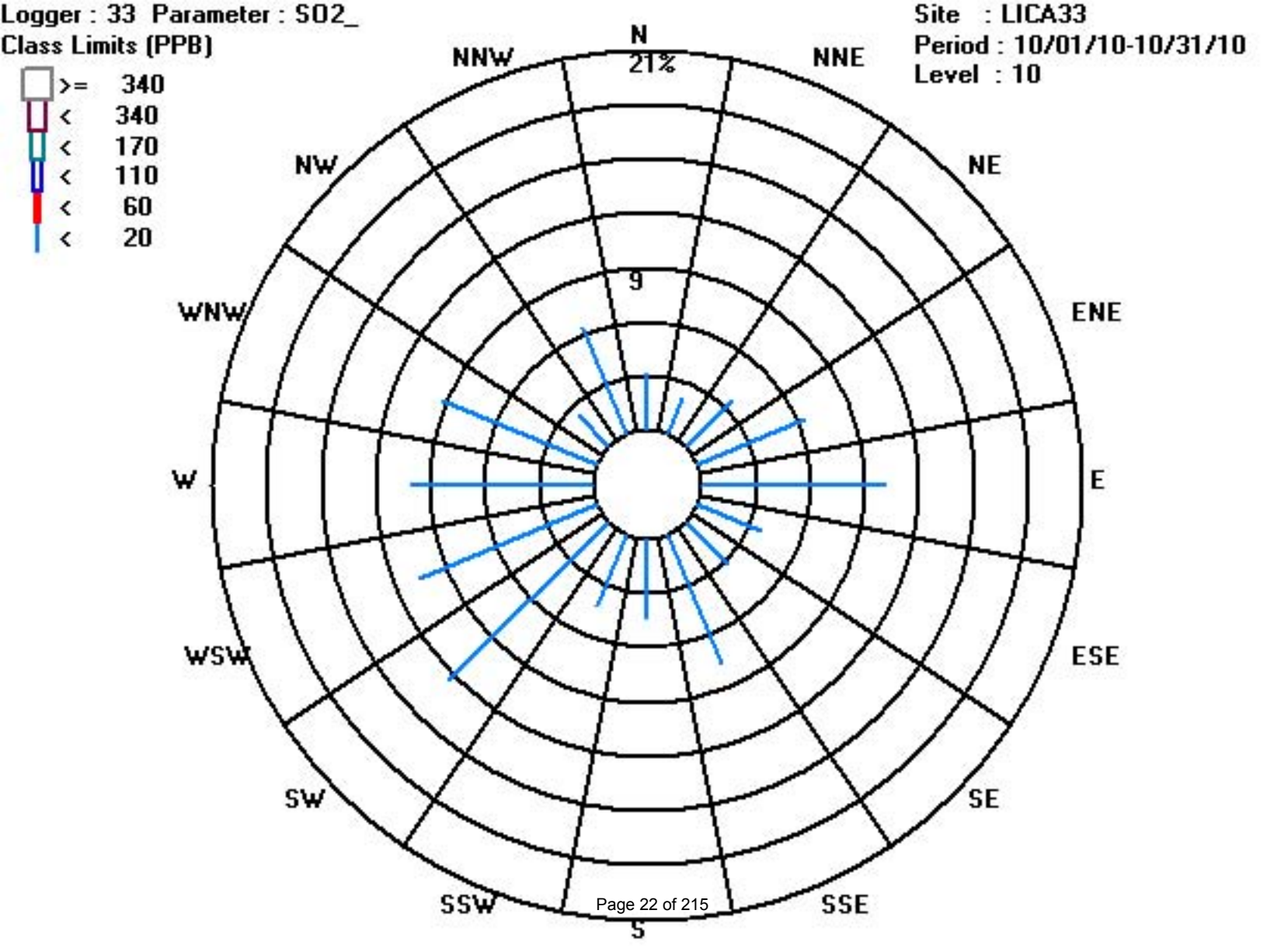
Distribution By Samples

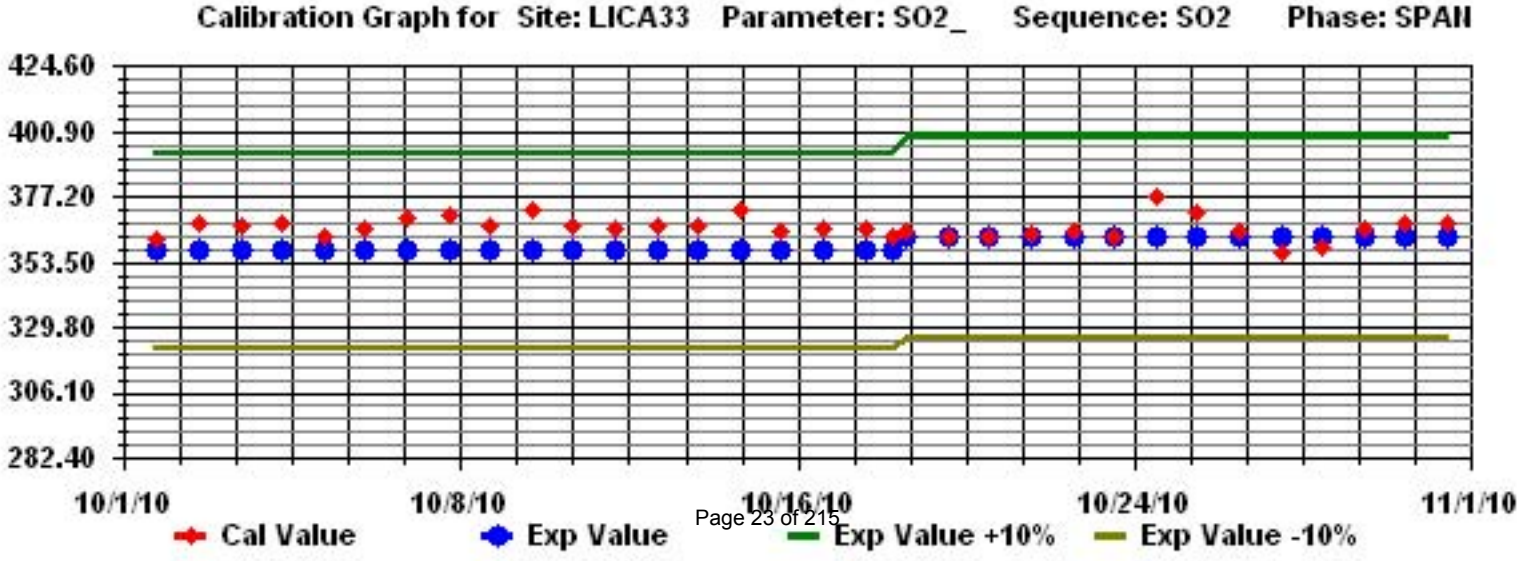
Direction

Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 20	22	15	26	45	72	27	23	55	31	30	88	75	71	65	17	45	707
< 60																	
< 110																	
< 170																	
< 340																	
>= 340																	
Totals	22	15	26	45	72	27	23	55	31	30	88	75	71	65	17	45	

Calm : .00 %

Total # Operational Hours : 707


Logger : 33 Parameter : SO2_
Class Limits (PPB)
>= 340
< 340
< 170
< 110
< 60
< 20
Site : LICA33
Period : 10/01/10-10/31/10
Level : 10
N
21%
NNE
NE
ENE
E
ESE
SE
SSE
S
SSW
SW
WSW
W
WNW
NW
NNW
9


Calibration Graph for Site: LICA33 Parameter: SO2_ Sequence: SO2 Phase: SPAN
424.60
400.90
377.20
353.50
329.80
306.10
282.40
10/1/10
10/8/10
10/16/10
10/24/10
11/1/10
Cal Value
Exp Value
Exp Value +10%
Exp Value -10%

Hydrogen Sulphide

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *PORTABLE SITE*

OCTOBER 2010

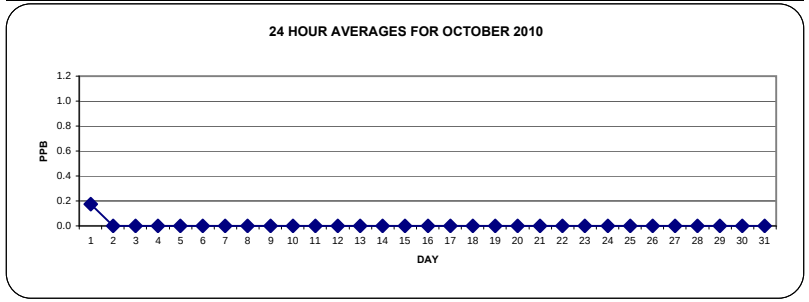
HYDROGEN SULPHIDE (H2S) hourly averages in ppb

MST

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

STATUS FLAG CODES

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

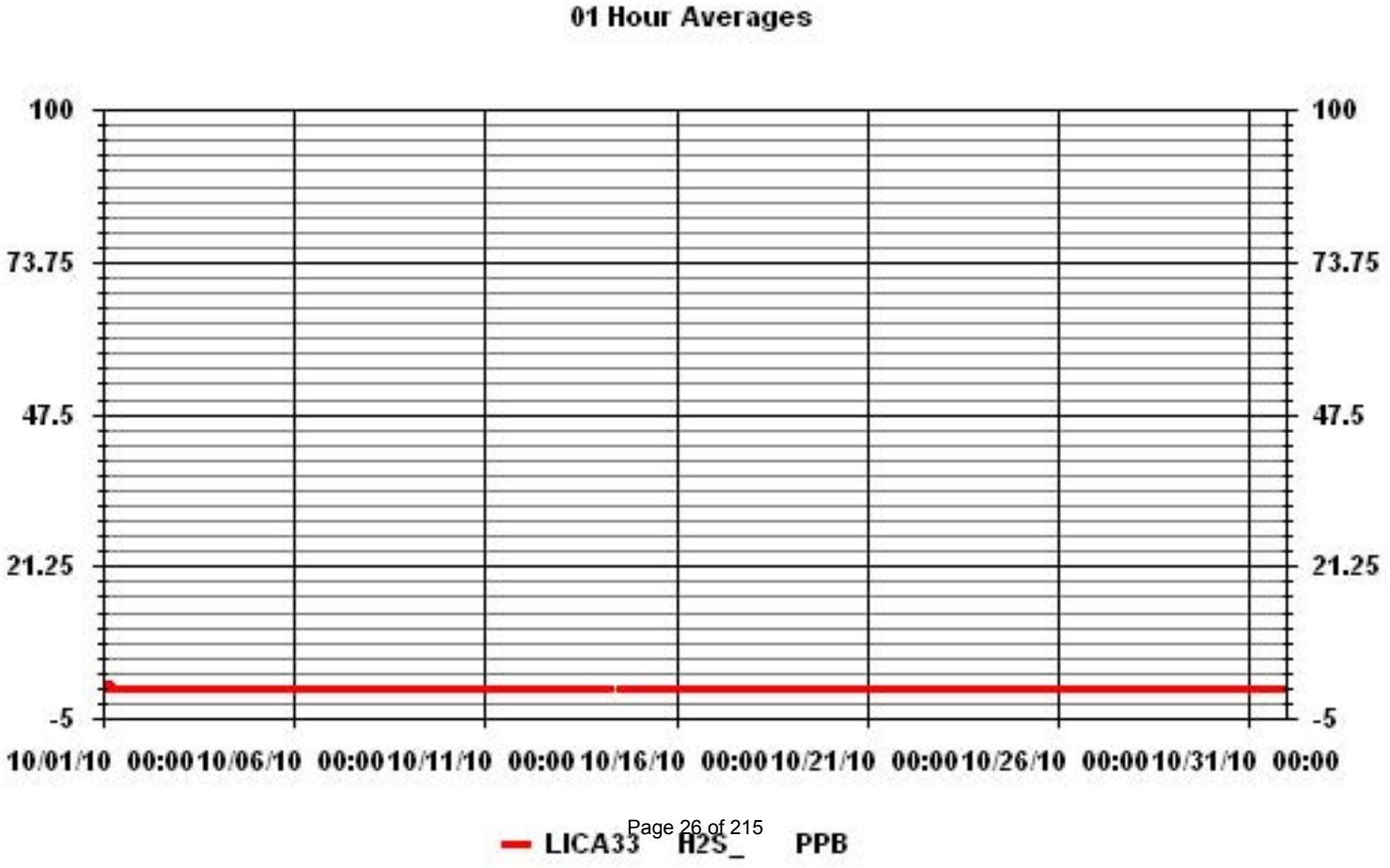


OBJECTIVE LIMIT: **ALBERTA ENVIRONMENT:** 1-HR 172 PPB | 24-HR 57 PPB

MONTHLY SUMMARY

NUMBER OF 1-HR EXCEEDENCES:	0					
NUMBER OF 24-HR EXCEEDENCES:	0					
NUMBER OF NON-ZERO READINGS:	4					
MAXIMUM 1-HR AVERAGE:	1	PPB	@ HOUR(S)	VAR	ON DAY(S)	1
MAXIMUM 24-HR AVERAGE:	0.2	PPB			ON DAY(S)	1
				VAR-VARIOUS		

IZS CALIBRATION TIME:	32	HRS	OPERATIONAL TIME:	744	HRS
MONTHLY CALIBRATION TIME:	6	HRS	AMD OPERATION UPTIME:	100.0	%
STANDARD DEVIATION:	0.08		MONTHLY AVERAGE:	0.01	PPB


01 Hour Averages
100
73.75
47.5
21.25
-5
10/01/10 00:00
10/06/10 00:00
10/11/10 00:00
10/16/10 00:00
10/21/10 00:00
10/26/10 00:00
10/31/10 00:00
LICA33 H2S_ PPB

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *PORTABLE SITE*

OCTOBER 2010

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

MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS: 50

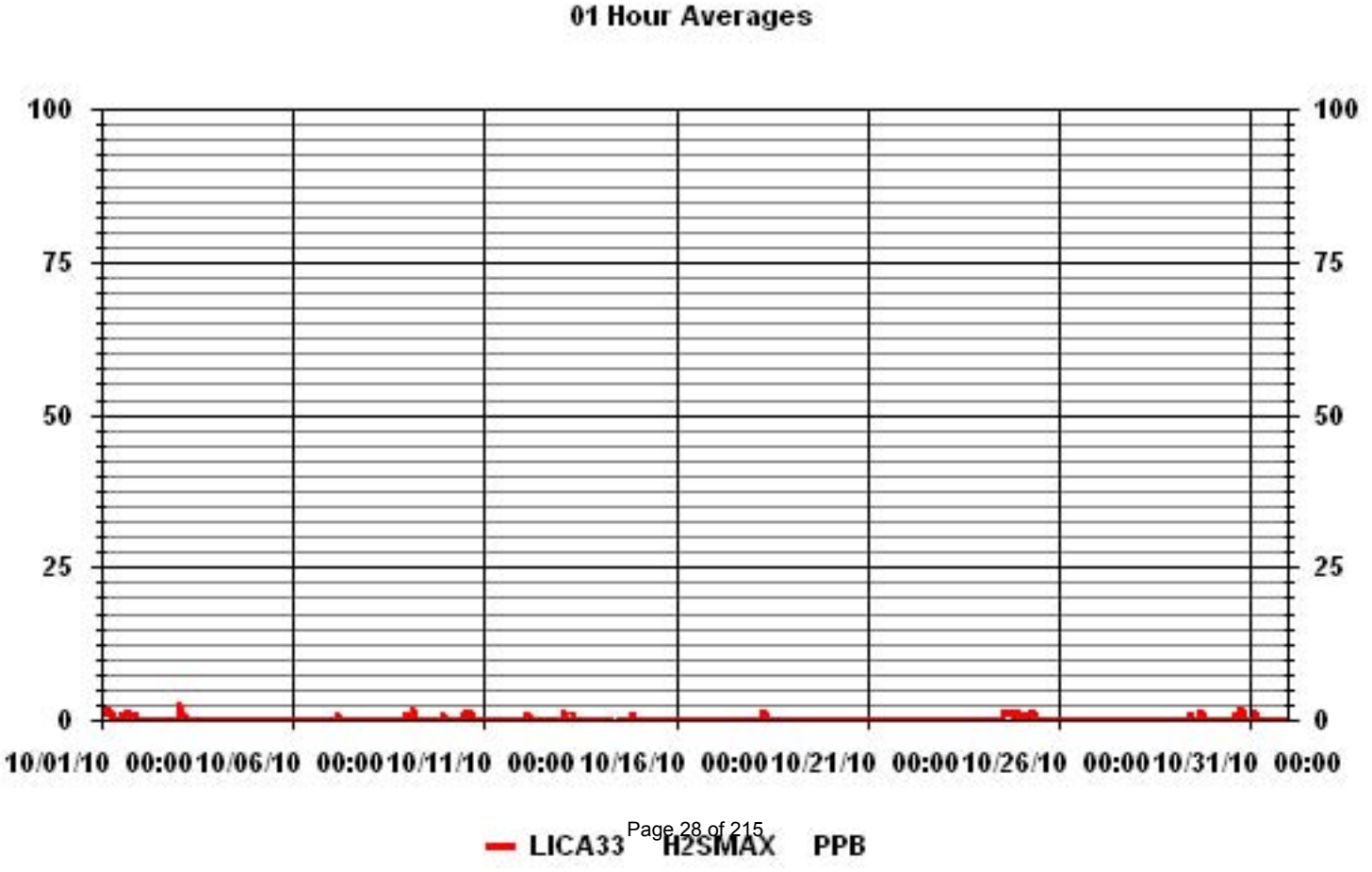
MAXIMUM INSTANTANEOUS VALUE: 3 PPB @ HOUR(S) 1 ON DAY(S) 3

VAR - VARIOUS

IZS CALIBRATION TIME: 32 HRS OPERATIONAL TIME: 744 HRS

MONTHLY CALIBRATION TIME: 7 HRS

STANDARD DEVIATION: 0.30


01 Hour Averages
100
75
50
25
0
10/01/10 00:00
10/06/10 00:00
10/11/10 00:00
10/16/10 00:00
10/21/10 00:00
10/26/10 00:00
10/31/10 00:00
LICA33 H2SMAX PPB

LICA33
H2S_ / WDR Joint Frequency Distribution (Percent)

October 2010

Distribution By % Of Samples

Logger Id : 33
Site Name : LICA33
Parameter : H2S_
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
< 3	3.11	2.12	3.68	6.37	10.05	3.68	2.97	7.64	4.39	4.24	13.03	10.62	10.05	9.20	2.40	6.37	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	3.11	2.12	3.68	6.37	10.05	3.68	2.97	7.64	4.39	4.24	13.03	10.62	10.05	9.20	2.40	6.37	

Calm : .00 %

Total # Operational Hours : 706

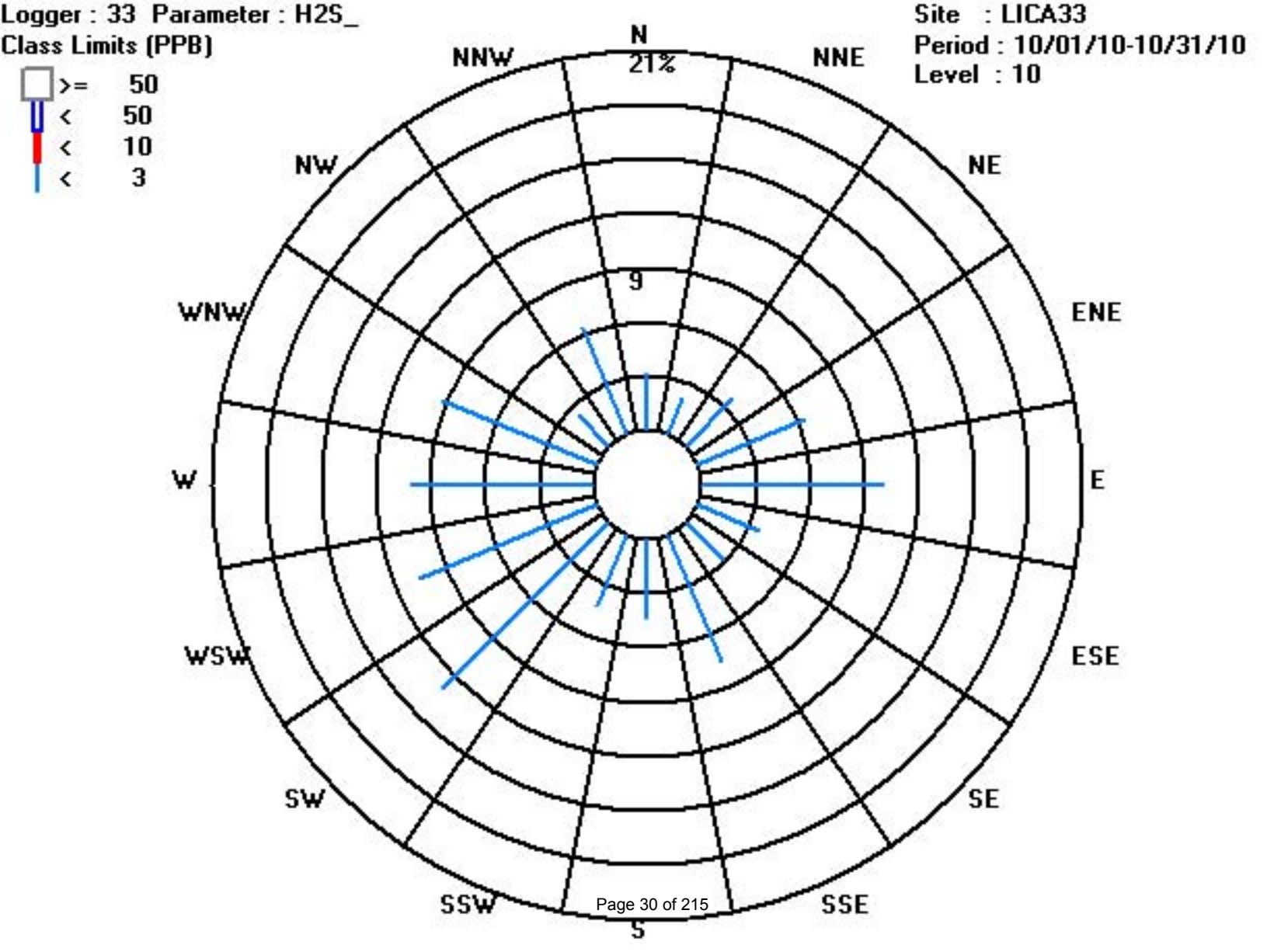
Distribution By Samples

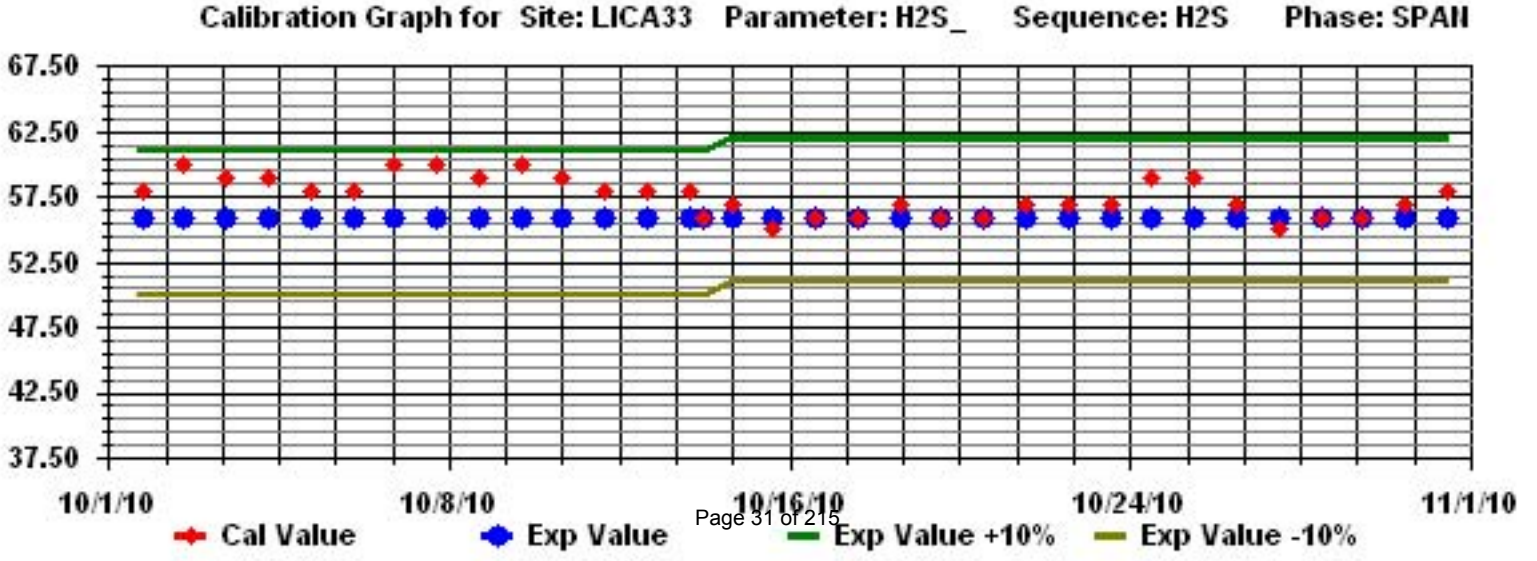
Direction

Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 3	22	15	26	45	71	26	21	54	31	30	92	75	71	65	17	45	706
< 10																	
< 50																	
>= 50																	
Totals	22	15	26	45	71	26	21	54	31	30	92	75	71	65	17	45	

Calm : .00 %

Total # Operational Hours : 706


Logger : 33 Parameter : H2S_
Class Limits (PPB)
>= 50
< 50
< 10
< 3
Site : LICA33
Period : 10/01/10-10/31/10
Level : 10
N
21%
NNE
NE
ENE
E
ESE
SE
SSE
S
SSW
SW
WSW
W
WNW
NW
NNW
9


Calibration Graph for Site: LICA33 Parameter: H2S_ Sequence: H2S Phase: SPAN
67.50
62.50
57.50
52.50
47.50
42.50
37.50
10/1/10
10/8/10
10/16/10
10/24/10
11/1/10
Cal Value
Exp Value
Exp Value +10%
Exp Value -10%

Particulate Matter 2.5

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *PORTABLE SITE*

OCTOBER 2010

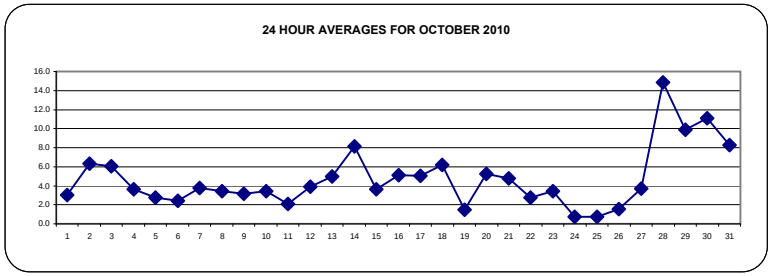
PARTICULATE MATTER 2.5 (PM2.5) hourly averages in ug/m^3

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	3.6	7.3	5.8	8	1.4	2.2	2	2.1	3.8	3.4	1	3.2	4.6	3	0	0	1	3.7	0	3.8	3.7	0	6	2.9	8.0	3.0	24
2	1.9	5.3	2.6	4.9	2	7.2	0.3	2.9	3.1	5.7	5.5	0.2	5	4.6	10.4	2.6	9.3	2.8	10.8	10.5	13.2	14.6	13.2	13.1	14.6	6.3	24
3	7.6	10	8.5	6.2	6	6.6	9.2	6.6	6.2	6.1	5.6	6.7	7.1	0	9.6	4.1	0.7	9.6	10.1	4.7	3.1	1.1	3.1	7.1	10.1	6.1	24
4	8.1	3.1	3.1	3.1	0.6	0	3.1	2.6	1.6	1.6	6.6	5.1	5.1	3.6	2.1	5.1	4.1	2.1	5.1	7.7	1.6	2.2	4.6	5.1	8.1	3.6	24
5	1.1	0.1	7.1	5.1	4.1	4.6	6.1	8.1	0	5.1	3.1	4.7	0	1.6	0.7	1.1	1.6	1.6	0	4.6	0	0	3.1	3.1	8.1	2.8	24
6	0	1.6	0	1.1	3.6	0	3.6	0.6	6.6	4.1	0.7	1.6	0.1	1.6	6.1	2.6	0	0	0.1	4.6	3.6	7.2	4.1	4.6	7.2	2.4	24
7	0	0	7.6	5.6	7.2	0	3.6	4.1	6.6	6.6	5.1	2.6	1.1	2.2	2.1	3.6	5.6	4.1	6.1	5.6	1.1	2.6	1.1	5.6	7.6	3.7	24
8	**N**	4.1	0	1.1	5.1	6.1	5.6	4.1	2.6	2.1	6.1	3.1	3.6	2.1	5.1	0.1	1.1	1.1	0.7	3.6	7.1	4.6	6.1	4.1	7.1	3.4	23
9	1.6	2.1	2.6	2.6	4.1	2.1	4.6	3.6	0	1.1	1.1	**N**	4.6	10.6	4.6	0.6	5.6	5.1	4.6	3.1	1.1	3.1	0.6	3.1	10.6	3.1	23
10	0	2.2	5.6	4.1	9.6	3.6	6.1	0.6	7.1	6.6	5.1	0.6	7.6	5.6	0	3.6	6.6	0.1	7.7	0.1	0	0	0	0	9.6	3.4	24
11	3.6	0.1	3.6	4.1	2.6	6.1	0	0.6	2.6	0.6	0	0.1	0	0	6.1	2.1	3.1	0.1	5.6	0.6	2.6	4.1	1.1	0.1	6.1	2.1	24
12	5.1	1.1	4.1	3.6	4.1	6.1	0.1	2.6	8.1	0	0	1.1	6.6	0.6	1.6	0	0	4.6	13.1	12.1	6.6	5.1	0.6	6.6	13.1	3.9	24
13	0	3.1	0	5.1	2.1	7.1	7.7	6.1	8.1	3.6	5.6	3.1	1.1	0.1	0.1	0	0	1.1	6.1	8.1	2.6	21.1	14.6	12.6	21.1	5.0	24
14	10.1	13.1	9.1	3.1	2.6	5.6	4.1	6.6	0	4.1	0	1.6	8.6	11.1	6.1	11.1	10.6	14.6	16.1	17.1	9.6	14.6	10.1	6.1	17.1	8.2	24
15	10.6	10.1	2.6	1.6	4.1	13.1	0.1	4.6	1.6	0	7.6	4.1	0.1	0	4.1	4.1	0.7	1.6	0.6	5.1	6.1	0.1	1.1	**N**	13.1	3.6	23
16	1.1	0.6	0	2.2	1.1	2.1	1.1	4.1	3.1	7.7	0	3.6	3.1	0	0	5.6	0	8.6	13.1	12.1	13.6	21.6	13.6	5.1	21.6	5.1	24
17	2.6	6.1	2.2	6.1	6.6	7.7	7.7	9.6	7.1	4.1	3.6	0.1	2.6	0	0	5.1	0	3.1	16.6	7.7	10.1	5.6	3.6	3.1	16.6	5.0	24
18	0.7	1.6	4.7	0	1.6	12.6	23.1	23.6	7.1	2.1	3.6	0	4.6	4.1	7.1	0.6	9.1	9.1	8.1	10.6	2.6	3.6	2.6	5.1	23.6	6.2	24
19	1.1	2.6	3.6	1.1	1.1	0	1.6	0	4.1	2.6	1.6	3.6	1.6	0	0.1	2.1	0.1	0	0	0	0	1.6	2.6	4.1	4.1	1.5	24
20	3.6	0	0.1	0	2.1	7.6	2.1	0	3.1	1.6	0.1	3.1	2.1	3.1	0	3.6	0.6	14.1	17.6	11.6	18.1	12.6	13.6	5.1	18.1	5.2	24
21	1.6	6.6	5.1	6.6	3.6	5.1	6.1	11.6	9.6	0	4.6	5.6	6.1	2.6	4.1	4.1	5.1	2.6	5.1	0.6	2.6	4.1	4.1	7.1	11.6	4.8	24
22	2.1	4.6	1.1	4.1	4.6	4.6	0	0.6	4.6	3.6	0	7.6	1.6	6.1	1.1	1.6	0	2.1	2.1	1.1	3.1	4.1	1.6	3.6	7.6	2.7	24
23	0.1	0.6	1.1	1.6	6.1	1.1	3.1	1.1	4.1	4.1	3.6	3.6	10.1	10.6	10.6	2.6	6.1	0	0	3.6	4.1	2.1	2.6	0.1	10.6	3.4	24
24	0.6	1.6	1.1	0	0	0	1.6	1.1	0.6	1.6	3.6	0.6	0	0	0.6	2.6	1.1	0.1	0	0	0	1.6	0	0	3.6	0.8	24
25	0	0.6	0	3.1	1.1	0.7	0	0	0.1	4.1	1.6	**N**	**N**	0	2.1	0	0.1	0	0	0	1.1	0.1	1.1	0.1	4.1	0.7	22
26	1.1	0	2.6	0	3.1	0.1	2.1	3.1	1.1	7.1	3.1	0	0	3.1	1.6	1.1	1.1	0	0	0	0.1	0	**N**	5.6	7.1	1.6	23
27	1.1	7.1	0	4.1	3.1	4.6	5.1	4.6	0.6	6.1	0	3.1	2.6	5.1	1.1	3.1	0	**N**	7.6	14.1	9.1	2.1	0	0	14.1	3.7	23
28	6.6	17.6	17.1	0.1	12.1	15.1	9.6	13.6	17.1	23.6	**27.1**	**C**	**C**	**C**	19.3	24.3	25.7	17.2	14.2	10.2	8.7	10.2	13.2	8.7	**27.1**	**14.8**	24
29	10.7	13.7	11.2	14.7	7.3	8.3	5.7	5.7	7.3	10.7	6.8	10.7	6.2	6.8	5.2	8.7	7.3	9.2	9.7	12.7	13.3	17.2	12.2	16.2	17.2	9.9	24
30	11.7	8.7	13.2	7.7	12.7	8.7	2.3	7.7	6.7	5.7	9.7	15.2	15.2	12.2	11.7	13.7	18.2	13.8	12.7	12.2	11.2	9.7	12.7	13.3	18.2	11.1	24
31	11.7	6.8	9.2	7.3	0	6.2	16.8	2.7	5.7	7.7	8.3	7.3	6.3	8.7	8.3	7.3	9.2	10.2	10.7	6.2	8.3	8.7	10.2	14.7	16.8	8.3	24
HOURLY MAX	12	18	17	15	13	15	23	24	17	24	27	15	15	12	19	24	26	17	18	17	18	22	15	16			
HOURLY AVG	3.7	4.6	4.3	3.8	4.0	5.0	4.7	4.7	4.5	4.6	4.2	3.6	4.0	3.6	4.2	4.1	4.3	4.7	6.6	6.3	5.4	6.0	5.4	5.5			

STATUS FLAG CODES

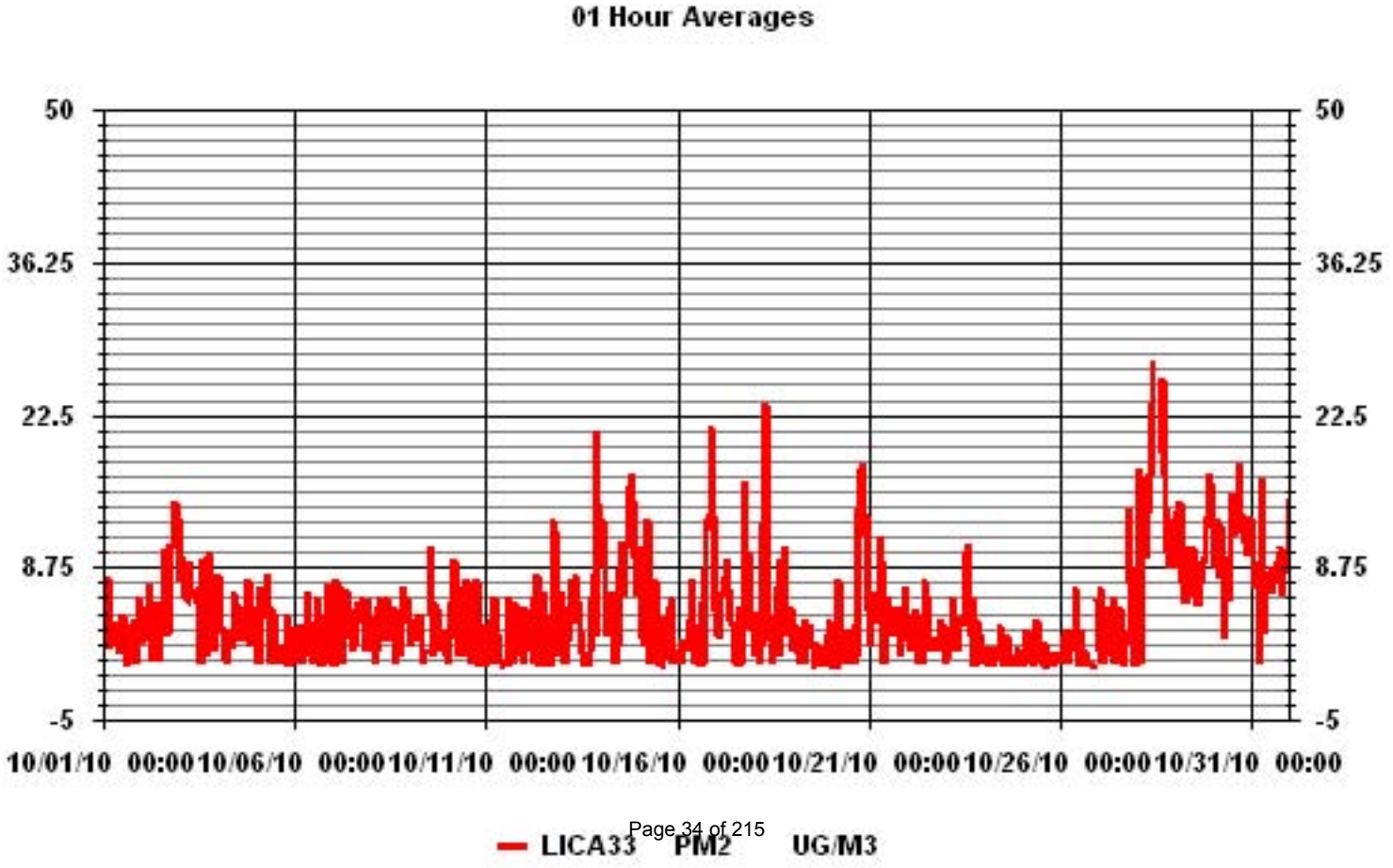
S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	-MAINTENANCE
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE



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

MONTHLY SUMMARY

NUMBER OF 1-HR EXCEEDENCES:	-						
NUMBER OF 24-HR EXCEEDENCES:	0	PROPOSED CANADA WIDE GUIDELINE					
NUMBER OF NON-ZERO READINGS:	631						
MAXIMUM 1-HR AVERAGE:	27.1	UG/M^3	@ HOUR(S)	10	ON DAY(S)	28	
MAXIMUM 24-HR AVERAGE:	14.8	UG/M^3			ON DAY(S)	28	
IZS CALIBRATION TIME:	0	HRS	OPERATIONAL TIME:			737	HRS
MONTHLY CALIBRATION TIME:	3	HRS	AMD OPERATION UPTIME:			99.1	%
STANDARD DEVIATION:	4.63		MONTHLY AVERAGE:			4.67	UG/M^3


01 Hour Averages
50
36.25
22.5
8.75
-5
10/01/10 00:00
10/06/10 00:00
10/11/10 00:00
10/16/10 00:00
10/21/10 00:00
10/26/10 00:00
10/31/10 00:00
LICA33 PM2 UG/M3

LICA33
PM2 / WDR Joint Frequency Distribution (Percent)

October 2010

Distribution By % Of Samples

Logger Id : 33
Site Name : LICA33
Parameter : PM2
Units : UG/M3

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
<	30.0	3.13	2.04	3.68	6.41	9.95	3.81	3.81	7.63	4.36	4.22	13.09	10.36	9.95	9.14	2.45	5.86	100.00
<	60.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
<	80.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
<	120.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
<	240.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
>=	240.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
	Totals	3.13	2.04	3.68	6.41	9.95	3.81	3.81	7.63	4.36	4.22	13.09	10.36	9.95	9.14	2.45	5.86	

Calm : .00 %

Total # Operational Hours : 733

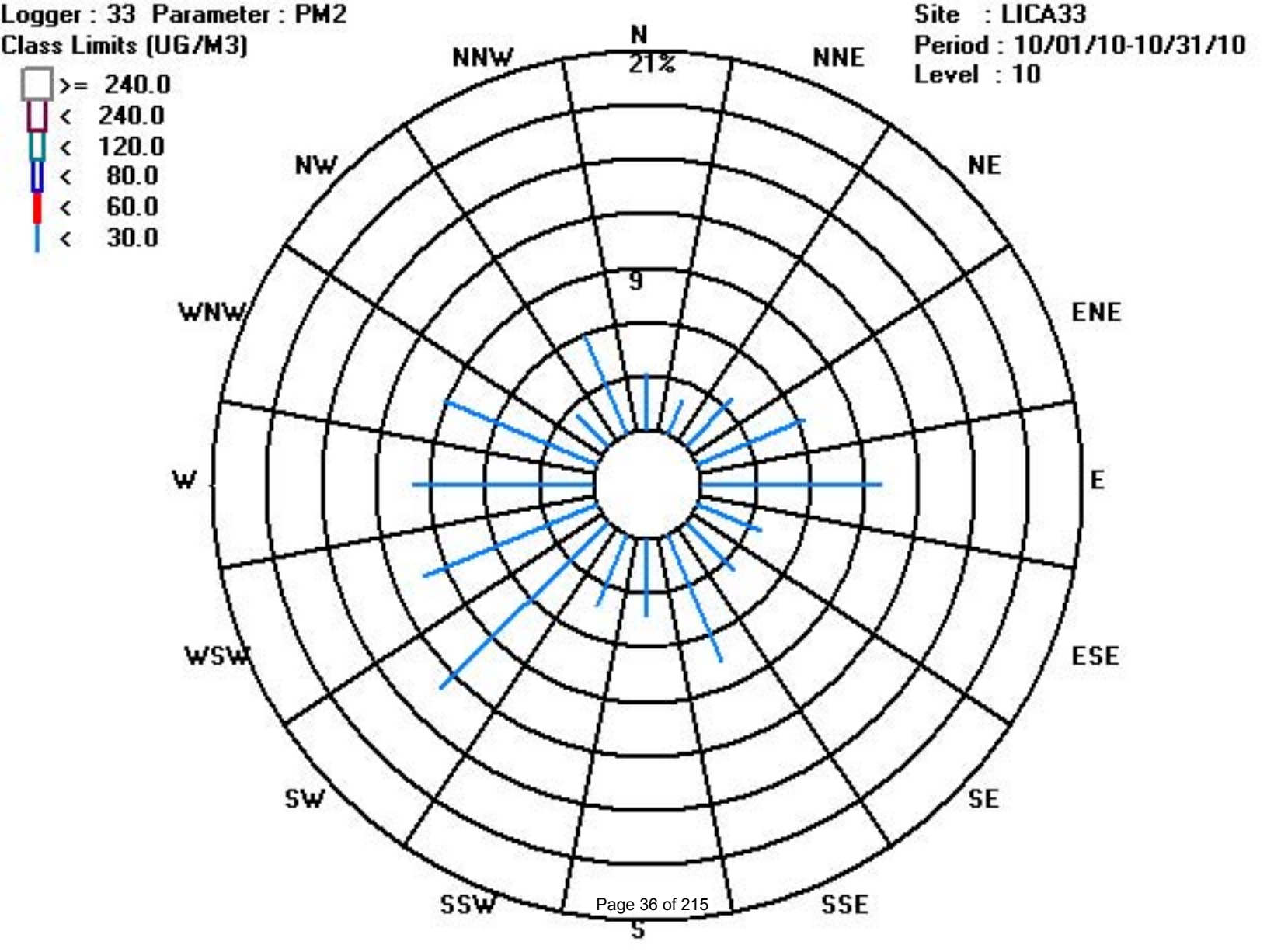
Distribution By Samples

Direction

	Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
<	30.0	23	15	27	47	73	28	28	56	32	31	96	76	73	67	18	43	733
<	60.0																	
<	80.0																	
<	120.0																	
<	240.0																	
>=	240.0																	
	Totals	23	15	27	47	73	28	28	56	32	31	96	76	73	67	18	43	

Calm : .00 %

Total # Operational Hours : 733


Logger : 33 Parameter : PM2
Class Limits (UG/M3)
>= 240.0
< 240.0
< 120.0
< 80.0
< 60.0
< 30.0
Site : LICA33
Period : 10/01/10-10/31/10
Level : 10
N
21%
NNE
NE
ENE
E
ESE
SE
SSE
S
SSW
SW
WSW
W
WNW
NW
NNW
9

Nitrogen Dioxide

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *PORTABLE SITE*

OCTOBER 2010

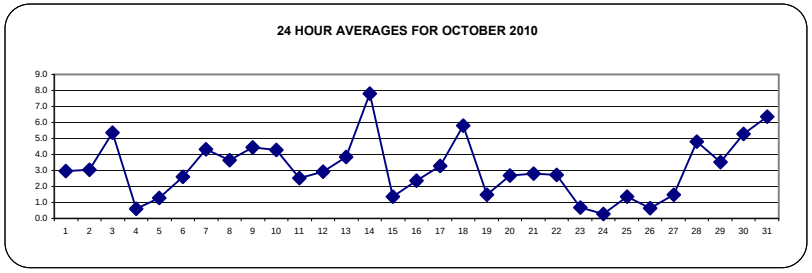
NITROGEN DIOXIDE hourly averages in ppb

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	7	7	6	6	6	7	8	6	4	2	1	0	1	0	0	0	0	2	**IZS**	1	1	1	1	1	8	3.0	24
2	1	1	1	1	1	1	1	1	1	1	1	2	1	2	2	2	2	**IZS**	4	4	7	10	12	11	12	3.0	24
3	13	12	13	12	12	11	12	7	5	5	4	3	3	2	1	0	**IZS**	1	1	3	0	1	1	1	13	5.3	24
4	1	0	0	0	0	0	0	1	1	1	1	1	0	0	0	**IZS**	0	0	0	0	1	1	2	4	4	0.6	24
5	5	4	3	1	1	1	1	1	0	1	1	0	0	0	**IZS**	0	0	1	1	1	2	2	2	1	5	1.3	24
6	1	2	3	3	3	5	4	4	3	3	2	1	0	**IZS**	1	4	3	2	2	2	3	4	3	2	5	2.6	24
7	2	2	2	5	3	7	12	7	5	5	7	3	**IZS**	1	1	1	1	1	4	10	5	4	6	5	12	4.3	24
8	4	4	4	3	1	1	2	1	2	2	3	**IZS**	5	2	1	1	1	2	5	8	8	5	6	13	13	3.7	24
9	8	6	6	2	3	7	9	7	7	4	**IZS**	1	3	1	3	1	1	2	3	4	2	4	10	8	10	4.4	24
10	13	5	7	5	7	3	5	3	3	**IZS**	2	3	1	4	5	4	3	7	2	0	0	1	2	13	13	4.3	24
11	1	1	11	2	6	2	1	1	**IZS**	1	0	0	0	1	1	2	7	3	4	4	3	3	2	2	11	2.5	24
12	2	2	2	7	3	4	5	**IZS**	5	1	0	0	0	0	0	0	0	5	3	7	8	7	4	2	8	2.9	24
13	2	3	4	3	5	5	**IZS**	**17**	8	5	4	2	1	0	0	0	0	1	4	4	6	5	5	4	**17**	3.8	24
14	4	10	11	9	7	**IZS**	3	3	**C**	**C**	**C**	**C**	**C**	**C**	**C**	**C**	2	4	8	15	14	9	9	9	15	**7.8**	24
15	8	6	4	3	**IZS**	1	1	2	5	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	1.3	24
16	1	0	0	**IZS**	2	2	4	5	3	2	1	0	1	0	0	0	1	3	8	5	5	5	3	3	8	2.3	24
17	2	3	**IZS**	3	3	5	7	3	8	4	3	3	2	1	2	1	1	2	5	4	3	3	3	4	8	3.3	24
18	4	**IZS**	2	1	1	3	11	9	9	7	3	3	2	2	2	4	**C**	13	11	11	9	4	4	13	13	5.8	24
19	**IZS**	7	4	3	2	2	4	5	3	1	0	0	0	0	0	0	0	0	0	0	0	1	1	**IZS**	7	1.5	24
20	2	2	4	1	1	3	3	4	4	3	2	1	0	0	0	0	2	3	4	7	7	5	**IZS**	4	7	2.7	24
21	3	3	5	5	5	5	4	4	3	2	2	3	3	3	1	1	1	1	2	2	2	**IZS**	1	3	5	2.8	24
22	5	6	7	5	2	4	3	5	9	5	2	1	0	0	1	1	2	0	1	1	**IZS**	1	1	1	9	2.7	24
23	1	0	1	0	0	1	1	1	1	1	1	1	1	2	1	1	0	0	0	**IZS**	1	0	0	1	2	0.7	24
24	1	0	0	0	0	0	1	1	1	1	1	0	0	0	0	0	0	0	**IZS**	0	0	0	0	0	1	0.3	24
25	0	0	1	1	2	4	1	2	2	1	1	1	1	0	1	1	1	**IZS**	1	1	2	2	3	2	4	1.3	24
26	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	**IZS**	1	1	0	1	1	2	2	2	0.7	24
27	2	2	1	0	0	1	1	1	1	1	0	0	0	1	1	**IZS**	1	3	4	6	4	1	1	2	6	1.5	24
28	2	2	3	3	3	5	7	6	4	4	4	5	5	5	**IZS**	6	7	9	6	5	5	5	5	4	9	4.8	24
29	3	3	4	6	5	5	5	3	3	3	2	2	2	**IZS**	2	2	3	3	3	4	5	5	4	4	6	3.5	24
30	4	4	5	6	6	7	6	6	5	4	4	3	**IZS**	4	4	5	6	6	6	6	7	5	5	7	7	5.3	24
31	7	6	7	4	6	8	8	5	**3**	3	3	**IZS**	4	4	5	7	8	8	8	9	7	10	9	7	10	6.3	24
HOURLY MAX	13	12	13	12	12	11	12	17	9	7	7	5	5	5	5	7	8	13	11	15	14	10	12	13			
HOURLY AVG	3.7	3.5	4.1	3.4	3.2	3.7	4.4	4.0	3.7	2.6	1.9	1.4	1.3	1.3	1.3	1.6	1.9	2.9	3.5	4.1	3.9	3.5	3.6	4.4			

STATUS FLAG CODES

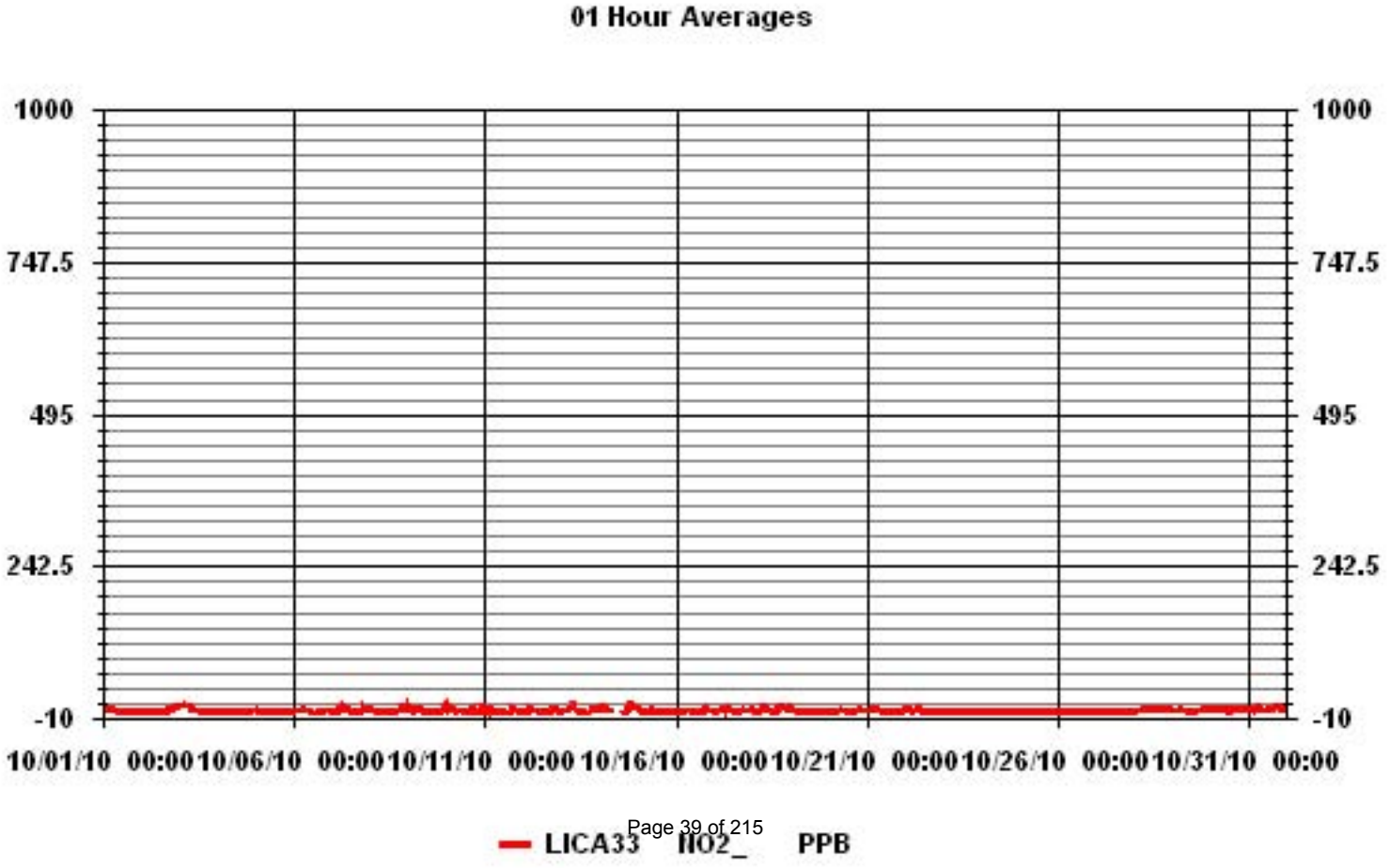
S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	-MAINTENANCE
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE



OBJECTIVE LIMIT: **ALBERTA ENVIRONMENT:** 1-HR 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:	579					
MAXIMUM 1-HR AVERAGE:	17	PPB	@ HOUR(S)	7	ON DAY(S)	13
MAXIMUM 24-HR AVERAGE:	7.8	PPB			ON DAY(S)	14
IZS CALIBRATION TIME:	32	HRS	OPERATIONAL TIME:		744	HRS
MONTHLY CALIBRATION TIME:	9	HRS	AMD OPERATION UPTIME:		100.0	%
STANDARD DEVIATION:	2.95		MONTHLY AVERAGE:		3.05	PPB


01 Hour Averages
1000
747.5
495
242.5
-10
10/01/10 00:00
10/06/10 00:00
10/11/10 00:00
10/16/10 00:00
10/21/10 00:00
10/26/10 00:00
10/31/10 00:00
LICA33 NO2_ PPB

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *PORTABLE SITE*

OCTOBER 2010

NITROGEN DIOXIDE MAX instantaneous maximum in ppb

MST

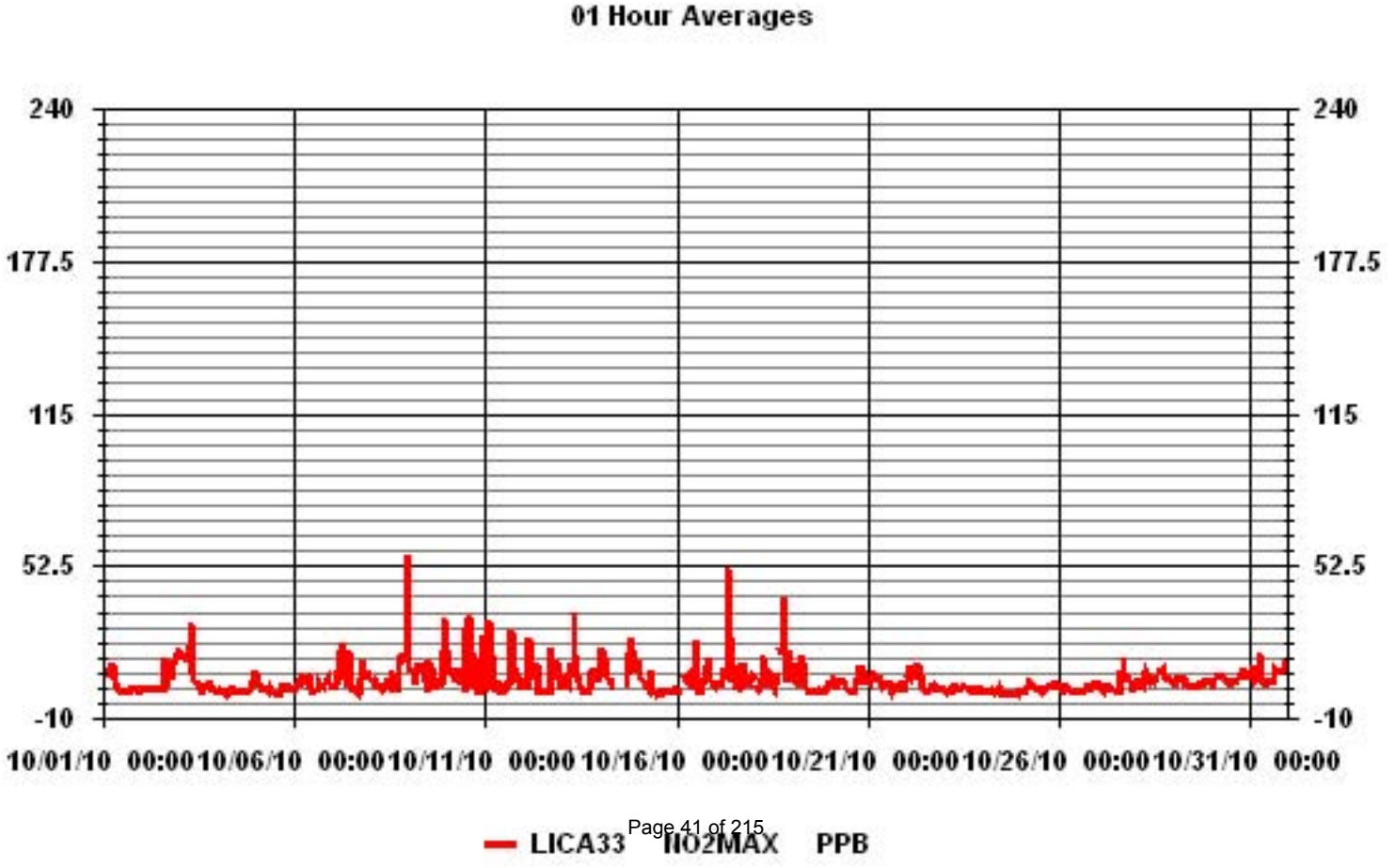
HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	10	10	9	9	7	11	11	7	5	3	2	1	1	1	1	1	1	3	**IZS**	3	2	2	1	1	11	4.4	24
2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	15	4	**IZS**	9	6	12	13	16	18	18	5.3	24
3	16	15	15	15	15	13	20	29	9	6	5	4	4	3	1	1	**IZS**	4	3	5	2	2	1	1	29	8.2	24
4	2	1	1	1	1	0	1	1	2	2	2	1	1	1	1	**IZS**	1	1	1	1	2	5	3	8	8	1.7	24
5	8	6	5	2	2	2	2	2	1	3	2	1	0	0	**IZS**	0	1	4	2	2	3	3	2	2	8	2.4	24
6	2	4	5	3	7	7	6	5	5	8	3	1	1	**IZS**	2	6	5	4	3	4	6	7	5	3	8	4.4	24
7	3	3	4	9	7	18	21	10	6	7	18	4	**IZS**	2	2	1	4	3	6	14	9	6	9	7	21	7.5	24
8	6	5	6	5	3	3	3	2	3	3	6	**IZS**	7	9	2	2	2	3	12	15	17	13	16	**57**	**57**	8.7	24
9	11	9	11	4	7	9	13	10	10	6	**IZS**	2	14	5	12	4	2	4	4	5	3	18	31	18	31	9.2	24
10	18	8	9	7	11	5	7	11	5	**IZS**	2	27	2	31	32	18	13	16	3	1	1	2	5	24	32	11.2	24
11	8	1	30	4	17	6	2	2	**IZS**	4	0	2	2	3	5	4	26	11	6	10	5	7	3	3	30	7.0	24
12	3	3	3	23	7	8	7	**IZS**	11	1	1	1	1	1	1	1	1	19	6	13	12	14	8	3	23	6.4	24
13	3	4	5	4	8	12	**IZS**	32	17	8	6	4	3	1	1	1	1	2	9	5	9	9	8	5	32	6.8	24
14	7	19	15	16	8	**IZS**	6	3	**C**	**C**	**C**	**C**	**C**	**C**	**C**	**C**	4	8	17	23	19	11	10	10	23	11.7	24
15	14	7	6	5	**IZS**	3	2	6	10	2	1	0	1	0	0	1	1	1	1	1	1	1	1	2	14	2.9	24
16	2	1	1	**IZS**	7	5	7	8	5	4	2	4	22	0	1	1	4	6	12	10	15	6	5	4	22	5.7	24
17	3	5	**IZS**	4	4	9	9	6	52	24	5	12	9	2	3	3	1	13	11	6	3	6	6	8	52	8.9	24
18	7	**IZS**	3	2	3	6	16	12	11	10	4	4	3	2	7	**C**	**C**	18	17	39	12	6	6	17	39	9.8	24
19	**IZS**	12	6	5	3	6	16	13	9	3	1	1	1	1	1	1	1	2	1	1	1	2	2	**IZS**	16	4.0	24
20	4	4	7	4	2	4	5	5	5	5	3	2	1	1	1	1	5	5	5	12	10	7	**IZS**	5	12	4.5	24
21	6	5	7	8	8	7	5	7	5	3	4	4	4	4	4	1	2	2	3	3	5	**IZS**	2	4	8	4.5	24
22	5	7	12	9	7	8	6	11	11	8	3	2	1	1	2	3	3	1	3	2	**IZS**	2	2	2	12	4.8	24
23	2	1	2	1	1	2	4	2	3	2	2	3	3	3	2	2	1	1	1	**IZS**	3	1	1	2	4	2.0	24
24	2	1	1	1	1	1	2	1	2	1	3	2	1	0	0	0	0	0	**IZS**	0	0	1	0	1	3	0.9	24
25	1	1	1	2	3	6	4	4	3	2	2	2	2	1	2	2	3	**IZS**	3	3	3	4	4	4	6	2.7	24
26	3	2	3	2	3	3	2	1	1	1	1	1	1	1	1	1	**IZS**	3	3	1	3	3	4	4	4	2.1	24
27	3	5	3	2	1	3	3	3	2	2	2	1	1	1	8	**IZS**	14	5	6	7	6	2	2	3	14	3.7	24
28	3	5	5	5	4	6	10	9	6	5	6	5	6	6	**IZS**	9	9	10	7	6	6	6	6	5	10	6.3	24
29	4	4	6	6	6	6	6	4	4	3	3	3	3	**IZS**	3	3	4	4	4	5	5	5	5	5	6	4.4	24
30	4	5	6	7	7	7	7	6	6	5	5	4	**IZS**	5	5	6	7	7	7	9	9	7	7	8	9	6.3	24
31	9	8	11	6	7	9	17	7	5	4	4	**IZS**	5	5	5	10	9	9	9	10	8	12	12	10	17	8.3	24
HOURLY MAX	18	19	30	23	17	18	21	32	52	24	18	27	22	31	32	18	26	19	17	39	19	18	31	57			
HOURLY AVG	5.7	5.4	6.7	5.8	5.6	6.2	7.4	7.4	7.4	4.7	3.4	3.6	3.6	3.3	3.8	3.6	4.6	5.8	6.0	7.4	6.4	6.1	6.1	8.1			

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

MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:	685					
MAXIMUM INSTANTANEOUS VALUE:	57	PPB	@ HOUR(S)	23	ON DAY(S)	8
IZS CALIBRATION TIME:	32	HRS	OPERATIONAL TIME:		744	HRS
MONTHLY CALIBRATION TIME:	10	HRS				
STANDARD DEVIATION	5.91					


01 Hour Averages
240
177.5
115
52.5
-10
10/01/10 00:00
10/06/10 00:00
10/11/10 00:00
10/16/10 00:00
10/21/10 00:00
10/26/10 00:00
10/31/10 00:00
LICA33 IIO2MAX PPB

LICA33
NO2_ / WDR Joint Frequency Distribution (Percent)

October 2010

Distribution By % Of Samples

Logger Id : 33
Site Name : LICA33
Parameter : NO2_
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
<	50	3.12	2.13	3.69	6.40	10.09	3.69	2.84	7.39	4.40	4.26	13.08	10.66	10.09	9.24	2.41	6.40	100.00
<	110	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
<	210	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
>=	210	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
	Totals	3.12	2.13	3.69	6.40	10.09	3.69	2.84	7.39	4.40	4.26	13.08	10.66	10.09	9.24	2.41	6.40	

Calm : .00 %

Total # Operational Hours : 703

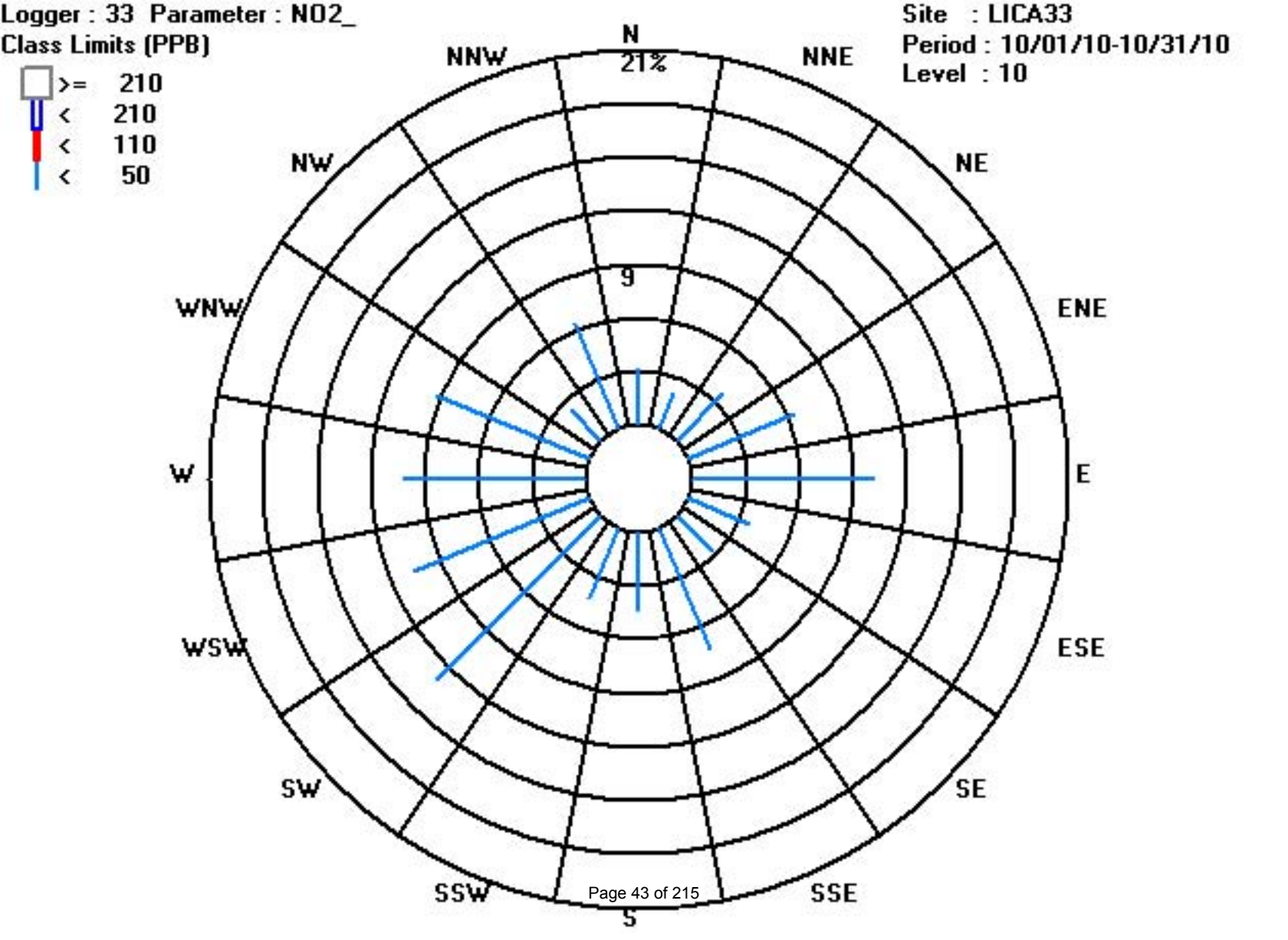
Distribution By Samples

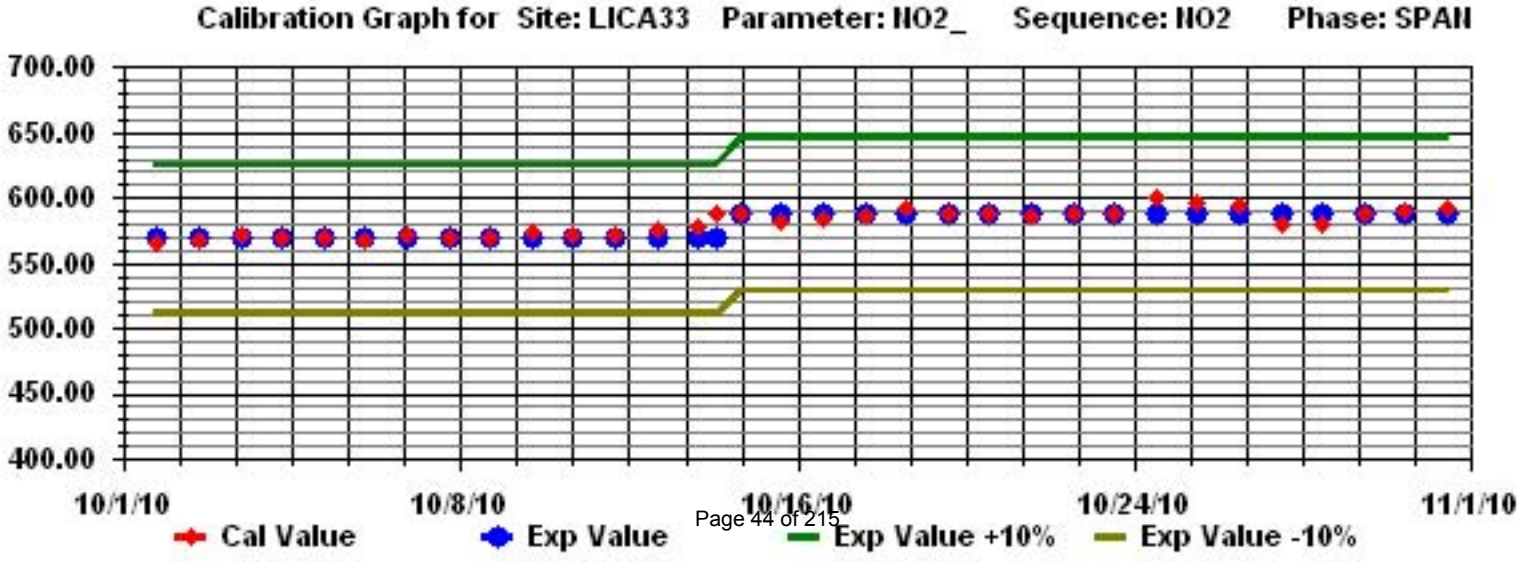
Direction

	Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
<	50	22	15	26	45	71	26	20	52	31	30	92	75	71	65	17	45	703
<	110																	
<	210																	
>=	210																	
	Totals	22	15	26	45	71	26	20	52	31	30	92	75	71	65	17	45	

Calm : .00 %

Total # Operational Hours : 703


Logger : 33 Parameter : NO2_
Class Limits (PPB)
>= 210
< 210
< 110
< 50
Site : LICA33
Period : 10/01/10-10/31/10
Level : 10
N
21%
NNE
NE
ENE
E
ESE
SE
SSE
S
SSW
SW
WSW
W
WNW
NW
NNW
9


Calibration Graph for Site: LICA33 Parameter: NO2_ Sequence: NO2 Phase: SPAN
700.00
650.00
600.00
550.00
500.00
450.00
400.00
10/1/10
10/8/10
10/16/10
10/24/10
11/1/10
Cal Value
Exp Value
Exp Value +10%
Exp Value -10%

Nitric Oxide

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *PORTABLE SITE*

OCTOBER 2010

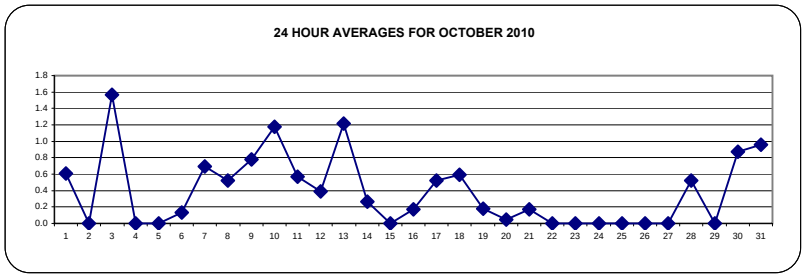
NITRIC OXIDE hourly averages in ppb

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	2	3	4	4	1	0	0	0	0	0	0	0	0	0	**IZS**	0	0	0	0	0	4	0.6	24
2	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
3	0	0	5	4	3	1	6	8	3	2	2	1	1	0	0	0	**IZS**	0	0	0	0	0	0	0	8	**1.6**	24
4	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
5	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
6	0	0	0	0	0	0	0	0	1	1	0	0	0	**IZS**	0	1	0	0	0	0	0	0	0	0	1	0.1	24
7	0	0	0	0	0	0	1	2	3	4	5	1	**IZS**	0	0	0	0	0	0	0	0	0	0	0	5	0.7	24
8	0	0	0	0	0	0	0	0	0	0	1	**IZS**	1	1	0	0	0	0	0	0	1	0	0	8	8	0.5	24
9	0	0	1	0	0	0	0	2	4	1	**IZS**	0	3	0	3	0	0	0	0	0	0	0	4	0	4	0.8	24
10	0	0	0	0	0	0	0	0	1	**IZS**	1	4	0	4	9	3	0	0	0	0	0	0	0	5	9	1.2	24
11	0	0	5	0	1	0	0	0	**IZS**	1	0	0	0	0	1	1	4	0	0	0	0	0	0	0	5	0.6	24
12	0	0	0	6	0	0	0	**IZS**	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0.4	24
13	0	0	0	0	0	0	**IZS**	**16**	6	3	2	1	0	0	0	0	0	0	0	0	0	0	0	0	**16**	1.2	24
14	0	2	1	0	0	**IZS**	0	0	**C**	**C**	**C**	**C**	**C**	**C**	**C**	**C**	0	0	0	1	0	0	0	0	2	0.3	24
15	0	0	0	0	**IZS**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
16	0	0	0	**IZS**	0	0	0	1	1	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0.2	24
17	0	0	**IZS**	0	0	0	0	0	8	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	8	0.5	24
18	0	**IZS**	0	0	0	0	2	2	3	2	1	1	0	0	0	1	**C**	0	0	1	0	0	0	0	3	0.6	24
19	**IZS**	0	0	0	0	0	1	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**IZS**	2	0.2	24
20	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	**IZS**	0	1	0.0	24
21	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0	0	0	0	0	0	0	**IZS**	0	0	1	0.2	24
22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**IZS**	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	0	0	**IZS**	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	0	0	**IZS**	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	0	0	**IZS**	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	0	0	**IZS**	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	0	0	**IZS**	0	0	0	0	0	0	0	0	0	0.0	24
28	0	0	0	0	0	0	0	0	0	1	2	3	3	2	**IZS**	1	0	0	0	0	0	0	0	0	3	0.5	24
29	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
30	0	0	0	0	0	0	0	0	2	3	4	5	**IZS**	3	2	1	0	0	0	0	0	0	0	0	5	0.9	24
31	0	0	3	0	0	1	1	1	2	2	2	**IZS**	3	2	2	2	1	0	0	0	0	0	0	0	3	1.0	24
HOURLY MAX	0	2	5	6	3	3	6	16	8	4	5	5	3	4	9	3	4	0	0	1	1	0	4	8			
HOURLY AVG	0.0	0.1	0.5	0.3	0.2	0.2	0.5	1.3	1.3	0.8	0.8	0.6	0.5	0.5	0.6	0.4	0.2	0.0	0.0	0.1	0.0	0.0	0.1	0.4			

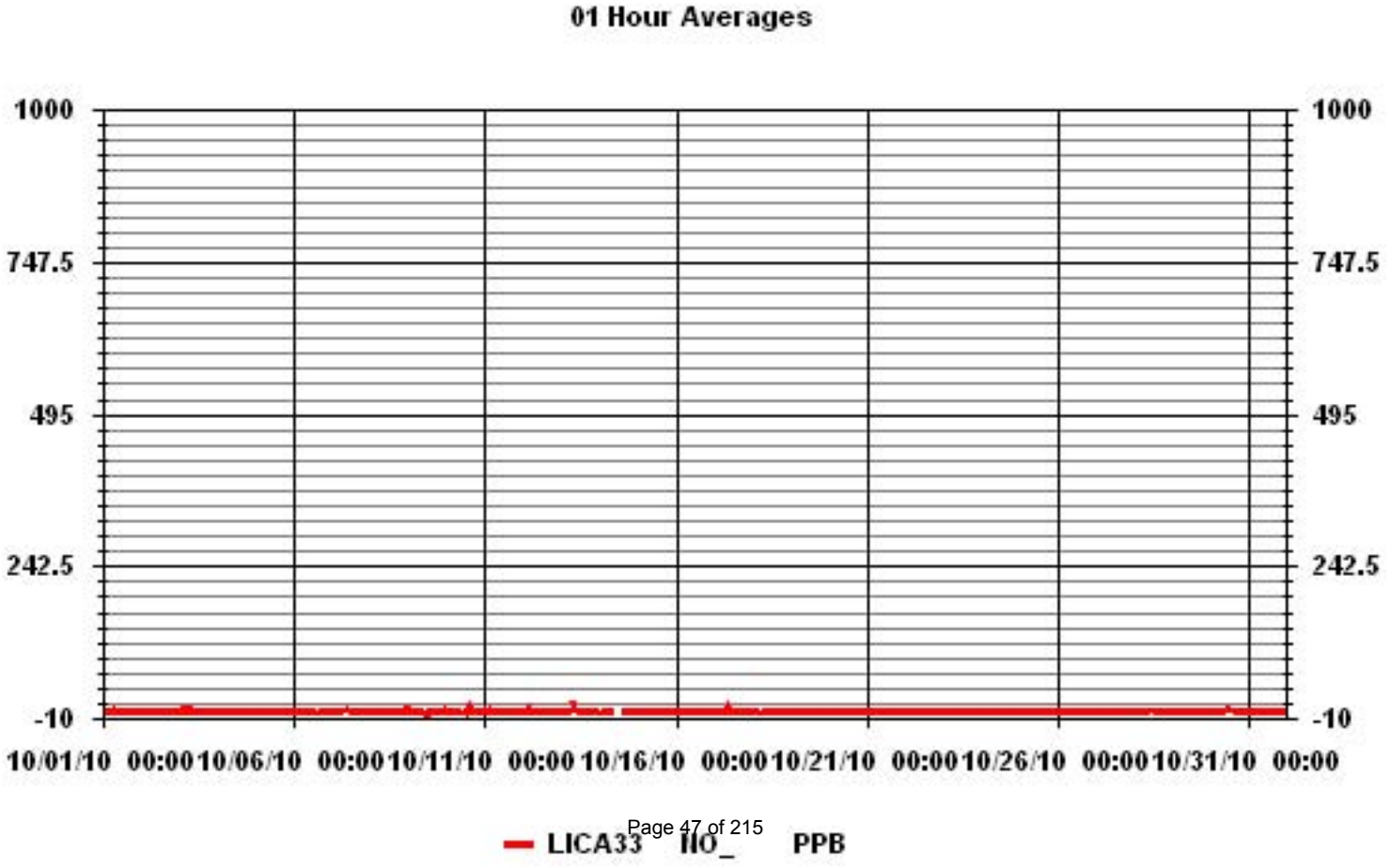
STATUS FLAG CODES

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



MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:			109				
MAXIMUM 1-HR AVERAGE:			16	PPB	@ HOUR(S)	7	ON DAY(S) 13
MAXIMUM 24-HR AVERAGE:			1.6	PPB			ON DAY(S) 3
IZS CALIBRATION TIME:	32	HRS	OPERATIONAL TIME:			744	HRS
MONTHLY CALIBRATION TIME:	9	HRS	AMD OPERATION UPTIME:			100.0	%
STANDARD DEVIATION:	1.25		MONTHLY AVERAGE:			0.39	PPB


01 Hour Averages
1000
747.5
495
242.5
-10
10/01/10 00:00
10/06/10 00:00
10/11/10 00:00
10/16/10 00:00
10/21/10 00:00
10/26/10 00:00
10/31/10 00:00
LICA33 NO_ PPB

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *PORTABLE SITE*

OCTOBER 2010

NITRIC OXIDE MAX instantaneous maximum in ppb

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	1	1	1	1	8	5	12	6	3	1	1	0	0	0	0	0	0	0	**IZS**	1	0	0	0	0	12	1.8	24
2	0	0	0	0	0	0	0	0	0	1	1	1	0	1	0	1	1	**IZS**	1	0	0	1	1	1	1	0.4	24
3	1	1	7	7	5	2	45	96	15	3	3	2	1	1	0	0	**IZS**	0	0	0	0	0	0	0	96	8.2	24
4	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
5	0	0	0	0	0	0	0	0	0	4	2	0	0	0	**IZS**	0	0	0	0	0	0	0	0	0	4	0.3	24
6	0	0	0	0	0	0	1	1	1	21	1	0	0	**IZS**	1	2	1	0	0	0	0	0	0	0	21	1.3	24
7	0	0	0	0	0	4	4	4	6	7	10	2	**IZS**	1	0	0	0	0	0	0	0	0	0	0	10	1.7	24
8	0	0	0	0	0	0	0	0	1	1	2	**IZS**	3	8	1	1	0	1	1	1	8	2	1	80	80	4.8	24
9	0	2	3	12	0	0	2	5	5	3	**IZS**	1	18	5	17	0	0	0	0	0	0	2	92	2	92	7.3	24
10	1	0	0	0	0	0	1	7	5	**IZS**	2	45	1	42	44	23	3	3	0	0	0	0	1	14	45	8.3	24
11	2	0	18	0	7	3	0	0	**IZS**	2	0	1	1	1	3	3	21	1	0	0	0	0	0	0	21	2.7	24
12	0	0	0	38	0	0	1	**IZS**	10	1	0	0	0	0	0	0	0	4	0	3	2	9	2	1	38	3.1	24
13	0	0	0	0	0	2	**IZS**	**124**	23	7	4	2	7	0	0	0	0	0	1	0	0	0	0	0	**124**	7.4	24
14	0	27	4	3	0	**IZS**	0	1	**C**	**C**	**C**	**C**	**C**	**C**	**C**	**C**	1	2	2	5	0	0	0	0	27	3.0	24
15	1	0	0	0	**IZS**	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0.2	24
16	0	0	0	**IZS**	0	0	2	5	4	2	1	1	80	0	0	0	5	1	1	0	18	1	1	0	80	5.3	24
17	0	3	**IZS**	0	0	1	2	0	49	19	2	2	2	0	0	0	0	5	2	1	0	0	0	0	49	3.8	24
18	0	**IZS**	0	0	0	0	6	4	5	4	2	2	3	1	8	**C**	**C**	1	1	25	3	0	0	3	25	3.2	24
19	**IZS**	0	0	0	0	4	20	21	12	2	0	0	1	0	4	0	1	0	0	0	0	0	0	**IZS**	21	3.0	24
20	0	0	0	0	0	1	2	1	2	2	1	0	0	0	0	0	0	0	0	0	0	0	**IZS**	0	2	0.4	24
21	0	0	0	0	0	0	0	0	1	1	20	2	2	2	3	0	0	0	0	0	0	**IZS**	0	0	20	1.3	24
22	0	0	0	0	0	0	0	0	1	2	0	0	0	0	0	0	0	0	0	0	**IZS**	0	0	0	2	0.1	24
23	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	**IZS**	0	0	0	0	1	0.1	24
24	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
25	0	0	0	0	0	1	0	0	0	1	1	1	1	0	1	0	0	**IZS**	0	0	0	0	0	0	1	0.3	24
26	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
27	0	0	0	0	0	0	0	0	0	0	1	0	1	1	8	**IZS**	14	1	0	0	0	0	0	0	14	1.1	24
28	0	0	0	0	0	0	1	1	1	2	3	5	3	3	**IZS**	1	1	0	0	0	0	0	0	0	5	0.9	24
29	0	0	0	0	0	0	1	0	1	1	1	1	1	**IZS**	1	1	0	0	0	0	0	0	0	0	1	0.3	24
30	0	0	0	0	0	0	0	1	3	4	5	6	**IZS**	4	3	2	1	0	0	1	1	0	0	1	6	1.4	24
31	1	1	14	0	0	3	36	3	3	3	3	**IZS**	4	3	2	4	2	0	0	0	2	0	2	2	36	3.8	24
HOURLY MAX	2	27	18	38	8	5	45	124	49	21	20	45	80	42	44	23	21	5	2	25	18	9	92	80			
HOURLY AVG	0.2	1.2	1.6	2.0	0.7	0.9	4.5	9.3	5.2	3.3	2.3	2.7	4.6	2.6	3.4	1.4	1.8	0.7	0.3	1.2	1.2	0.5	3.3	3.5			

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

MONTHLY SUMMARY

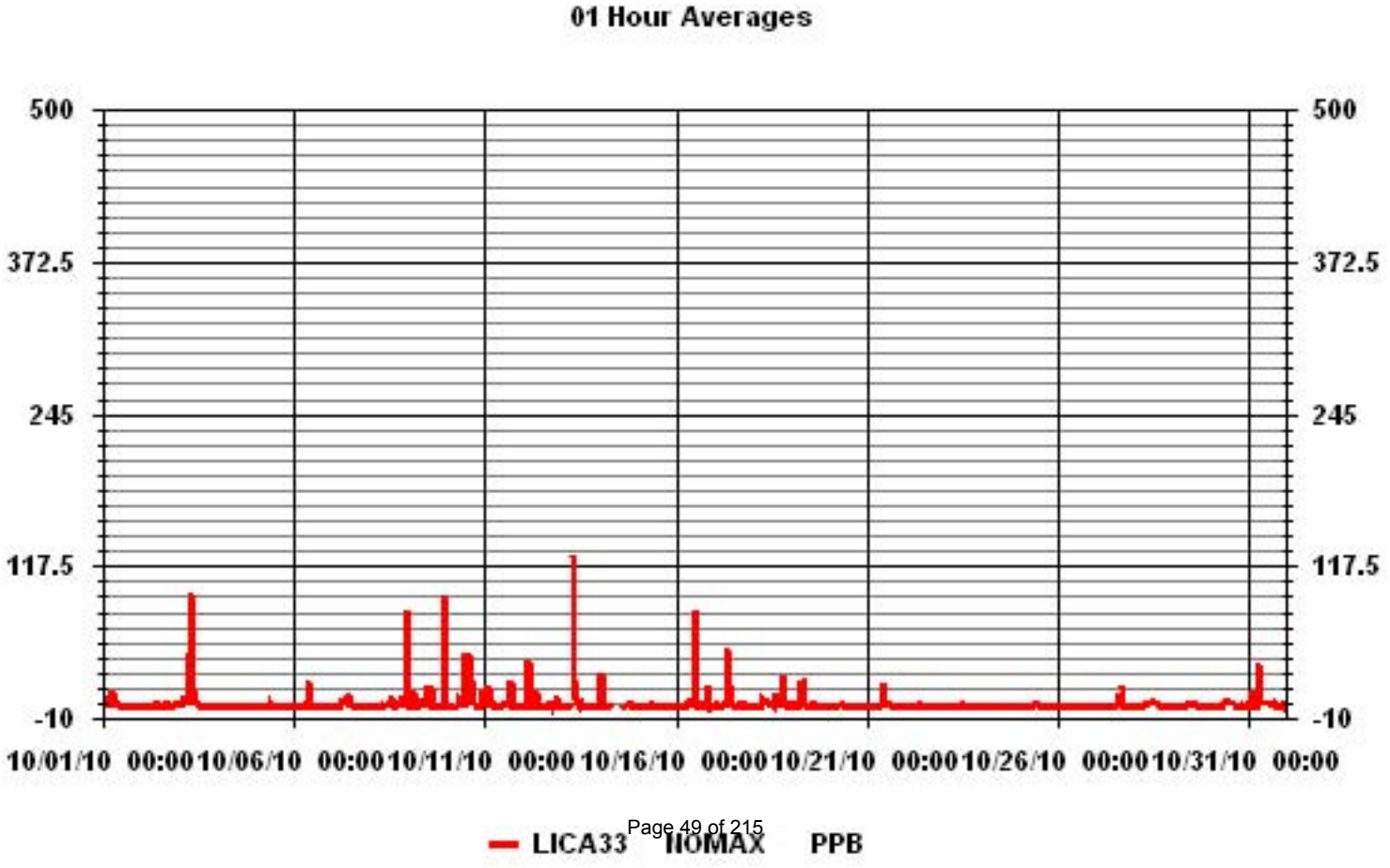
NUMBER OF NON-ZERO READINGS: 261

MAXIMUM INSTANTANEOUS VALUE: 124 PPB @ HOUR(S) 7 ON DAY(S) 13

IZS CALIBRATION TIME: 32 HRS OPERATIONAL TIME: 744 HRS

MONTHLY CALIBRATION TIME: 10 HRS

STANDARD DEVIATION 9.56


01 Hour Averages
500
372.5
245
117.5
-10
10/01/10 00:00
10/06/10 00:00
10/11/10 00:00
10/16/10 00:00
10/21/10 00:00
10/26/10 00:00
10/31/10 00:00
LICA33 HOMAX PPB

LICA33
NO_ / WDR Joint Frequency Distribution (Percent)

October 2010

Distribution By % Of Samples

Logger Id : 33
Site Name : LICA33
Parameter : NO_
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
< 50	3.12	2.13	3.69	6.40	10.09	3.69	2.84	7.39	4.40	4.26	13.08	10.66	10.09	9.24	2.41	6.40	100.00
< 110	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
< 210	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
>= 210	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
Totals	3.12	2.13	3.69	6.40	10.09	3.69	2.84	7.39	4.40	4.26	13.08	10.66	10.09	9.24	2.41	6.40	

Calm : .00 %

Total # Operational Hours : 703

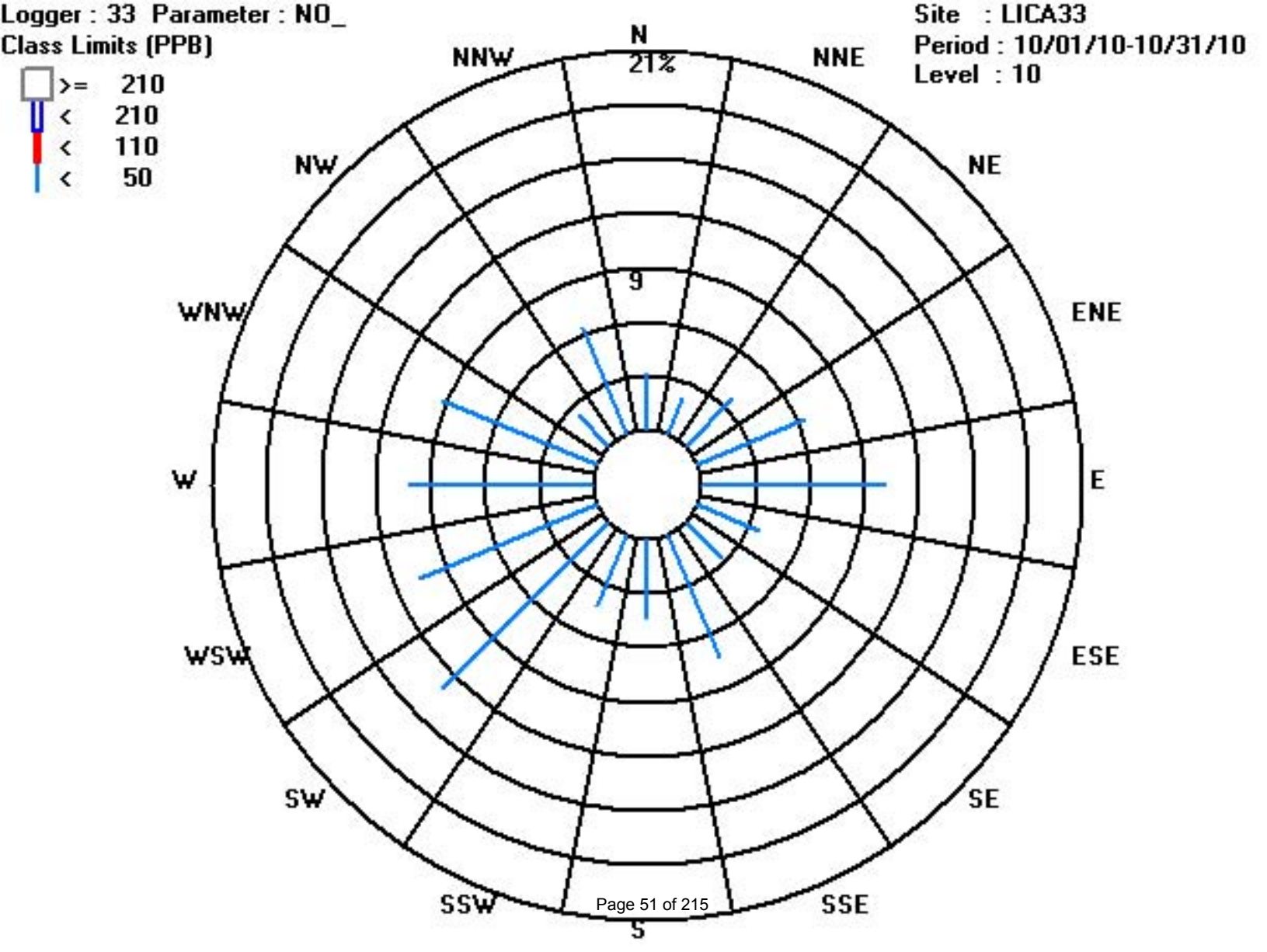
Distribution By Samples

Direction

Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 50	22	15	26	45	71	26	20	52	31	30	92	75	71	65	17	45	703
< 110																	
< 210																	
>= 210																	
Totals	22	15	26	45	71	26	20	52	31	30	92	75	71	65	17	45	

Calm : .00 %

Total # Operational Hours : 703


Logger : 33 Parameter : NO_
Class Limits (PPB)
>= 210
< 210
< 110
< 50
Site : LICA33
Period : 10/01/10-10/31/10
Level : 10
N
21%
NNE
NE
ENE
E
ESE
SE
SSE
S
SSW
SW
WSW
W
WNW
NW
NNW
9

Oxides of Nitrogen

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - PORTABLE SITE

OCTOBER 2010

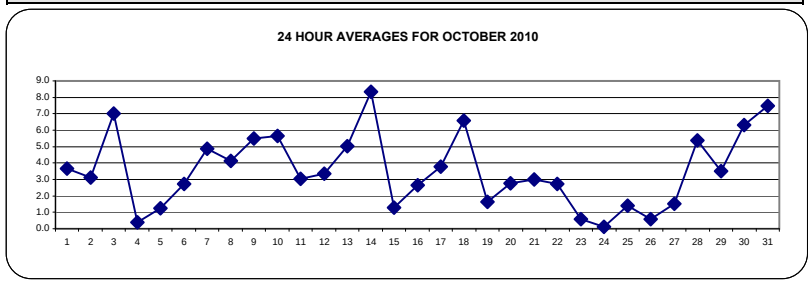
OXIDES OF NITROGEN hourly averages in ppb

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	7	7	7	7	8	10	13	10	5	2	1	0	1	0	0	0	0	1	**IZS**	2	1	1	0	1	13	3.7	24
2	1	1	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2	**IZS**	4	4	7	10	12	11	12	3.1	24
3	14	12	18	17	15	13	18	16	7	7	7	5	4	2	0	0	**IZS**	1	1	3	0	1	0	0	18	7.0	24
4	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	**IZS**	0	0	0	0	0	1	2	3	3	0.4	24
5	5	4	3	1	1	1	1	1	0	2	1	0	0	0	**IZS**	0	0	1	1	1	2	2	1	1	5	1.3	24
6	1	2	3	3	3	5	4	4	4	4	2	1	0	**IZS**	2	5	3	2	1	2	3	4	3	2	5	2.7	24
7	2	1	2	5	3	8	13	9	8	10	12	4	**IZS**	1	1	1	1	1	3	10	4	3	6	4	13	4.9	24
8	4	3	4	2	1	1	1	1	2	3	5	**IZS**	6	3	1	1	1	2	5	8	9	5	6	21	21	4.1	24
9	8	7	7	3	3	7	10	9	11	5	**IZS**	2	6	2	7	1	1	2	3	4	2	4	14	8	14	5.5	24
10	13	5	7	5	7	3	5	4	4	**IZS**	3	8	2	8	15	7	3	7	2	0	0	1	2	19	19	5.7	24
11	1	1	17	1	8	2	1	1	**IZS**	2	0	0	1	1	2	3	11	3	3	4	3	3	1	1	17	3.0	24
12	2	1	2	13	2	4	5	**IZS**	8	1	0	0	0	0	0	0	0	5	3	8	9	7	5	2	13	3.3	24
13	2	3	4	3	5	5	**IZS**	**33**	14	8	6	3	1	0	0	0	0	1	4	4	6	5	5	4	**33**	5.0	24
14	4	12	13	9	7	**IZS**	4	3	**C**	**C**	**C**	**C**	**C**	**C**	**C**	**C**	2	5	8	17	14	9	9	9	17	**8.3**	24
15	8	5	4	3	**IZS**	1	1	2	5	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	1.3	24
16	1	0	0	**IZS**	2	2	4	7	5	3	1	1	2	0	0	0	1	3	8	5	5	5	3	3	8	2.7	24
17	2	3	**IZS**	3	3	5	8	4	17	6	4	4	2	1	2	1	0	2	5	4	2	3	3	3	17	3.8	24
18	4	**IZS**	1	1	1	3	13	11	12	10	5	5	3	2	2	5	**C**	13	11	12	9	4	4	14	14	6.6	24
19	**IZS**	7	4	3	1	2	5	8	3	1	0	0	0	0	0	0	0	0	0	0	0	1	1	**IZS**	8	1.6	24
20	2	2	4	1	1	3	3	4	5	4	2	1	0	0	0	0	2	3	4	7	7	5	**IZS**	4	7	2.8	24
21	3	3	5	6	4	5	4	4	4	3	3	4	5	4	1	1	1	1	1	2	2	**IZS**	1	2	6	3.0	24
22	4	6	7	5	2	4	3	5	9	6	2	1	0	0	1	1	2	0	1	1	**IZS**	1	1	1	9	2.7	24
23	1	0	0	0	0	0	1	1	1	1	1	1	1	2	1	1	0	0	0	**IZS**	1	0	0	0	2	0.6	24
24	1	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	**IZS**	0	0	0	0	0	1	0.1	24
25	0	0	0	1	2	4	1	2	2	2	2	2	1	0	1	1	1	**IZS**	1	1	2	2	2	2	4	1.4	24
26	1	0	1	1	1	1	0	0	0	0	0	0	0	1	0	0	**IZS**	1	1	0	1	1	2	1	2	0.6	24
27	2	1	1	0	0	1	0	1	1	1	0	0	1	1	2	**IZS**	2	3	4	6	4	1	1	2	6	1.5	24
28	2	2	3	3	2	5	8	6	5	5	7	8	8	7	**IZS**	7	8	9	6	5	5	5	4	4	9	5.4	24
29	3	3	4	5	5	5	5	3	3	3	3	3	3	**IZS**	3	2	3	2	2	4	5	4	4	4	5	3.5	24
30	4	4	4	5	6	7	6	6	7	8	8	9	**IZS**	7	6	7	7	6	6	6	8	5	5	8	9	6.3	24
31	7	6	10	4	6	8	9	6	6	5	6	**IZS**	7	7	7	10	9	8	8	9	7	10	10	7	10	7.5	24
HOURLY MAX	14	12	18	17	15	13	18	33	17	10	12	9	8	8	15	10	11	13	11	17	14	10	14	21			
HOURLY AVG	3.6	3.4	4.5	3.7	3.3	3.9	4.9	5.4	5.2	3.6	2.9	2.3	2.0	1.8	2.0	2.0	2.1	2.8	3.3	4.3	3.9	3.4	3.6	4.7			

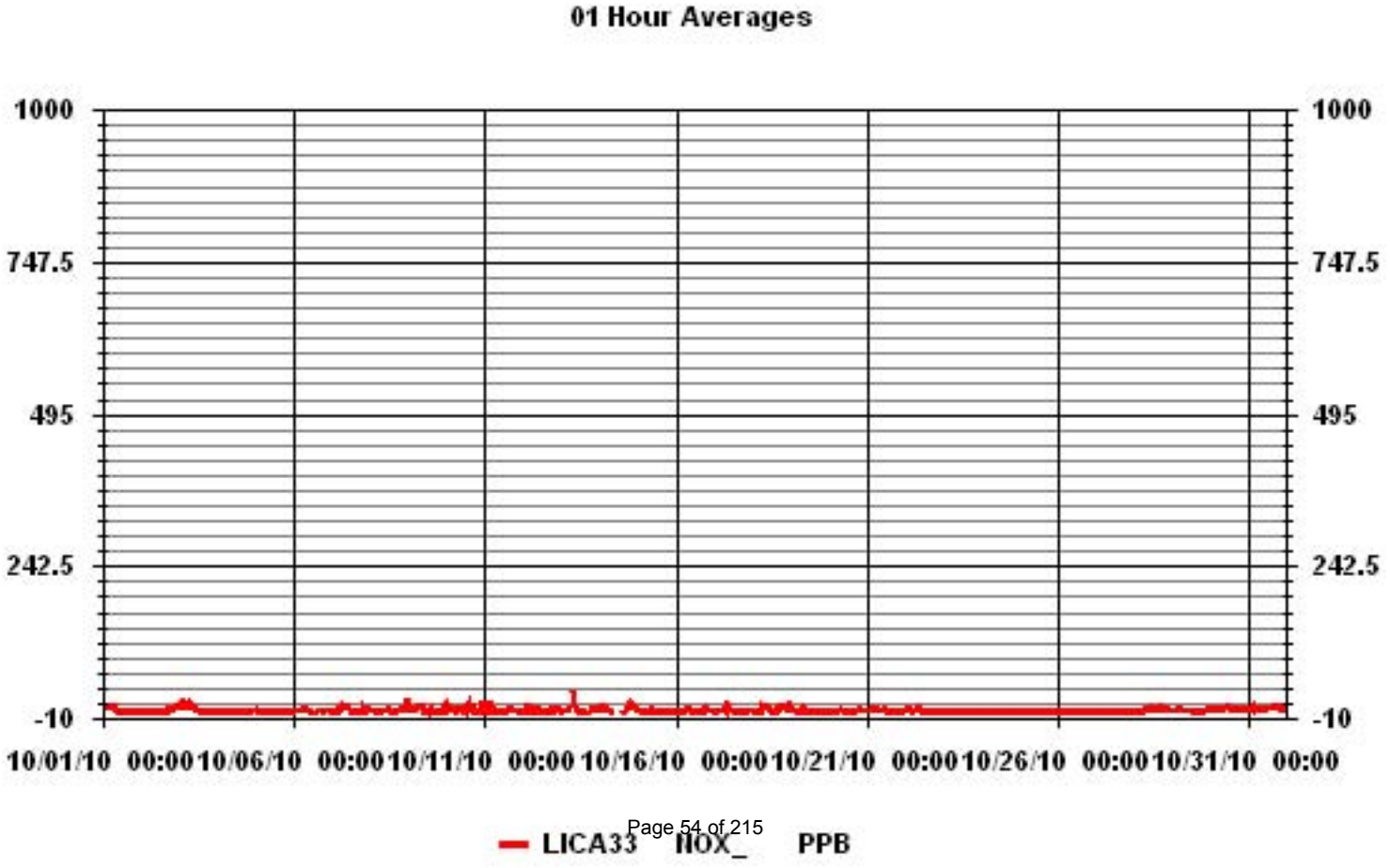
STATUS FLAG CODES

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



MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:	564					
MAXIMUM 1-HR AVERAGE:	33	PPB	@ HOUR(S)	7	ON DAY(S)	13
MAXIMUM 24-HR AVERAGE:	8.3	PPB			ON DAY(S)	14
IZS CALIBRATION TIME:	32	HRS	OPERATIONAL TIME:		744	HRS
MONTHLY CALIBRATION TIME:	9	HRS	AMD OPERATION UPTIME:		100.0	%
STANDARD DEVIATION:	3.77		MONTHLY AVERAGE:		3.47	PPB


01 Hour Averages
1000
747.5
495
242.5
-10
10/01/10 00:00
10/06/10 00:00
10/11/10 00:00
10/16/10 00:00
10/21/10 00:00
10/26/10 00:00
10/31/10 00:00
LICA33 NOX_ PPB

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *PORTABLE SITE*

OCTOBER 2010

OXIDES OF NITROGEN MAX instantaneous maximum in ppb

MST

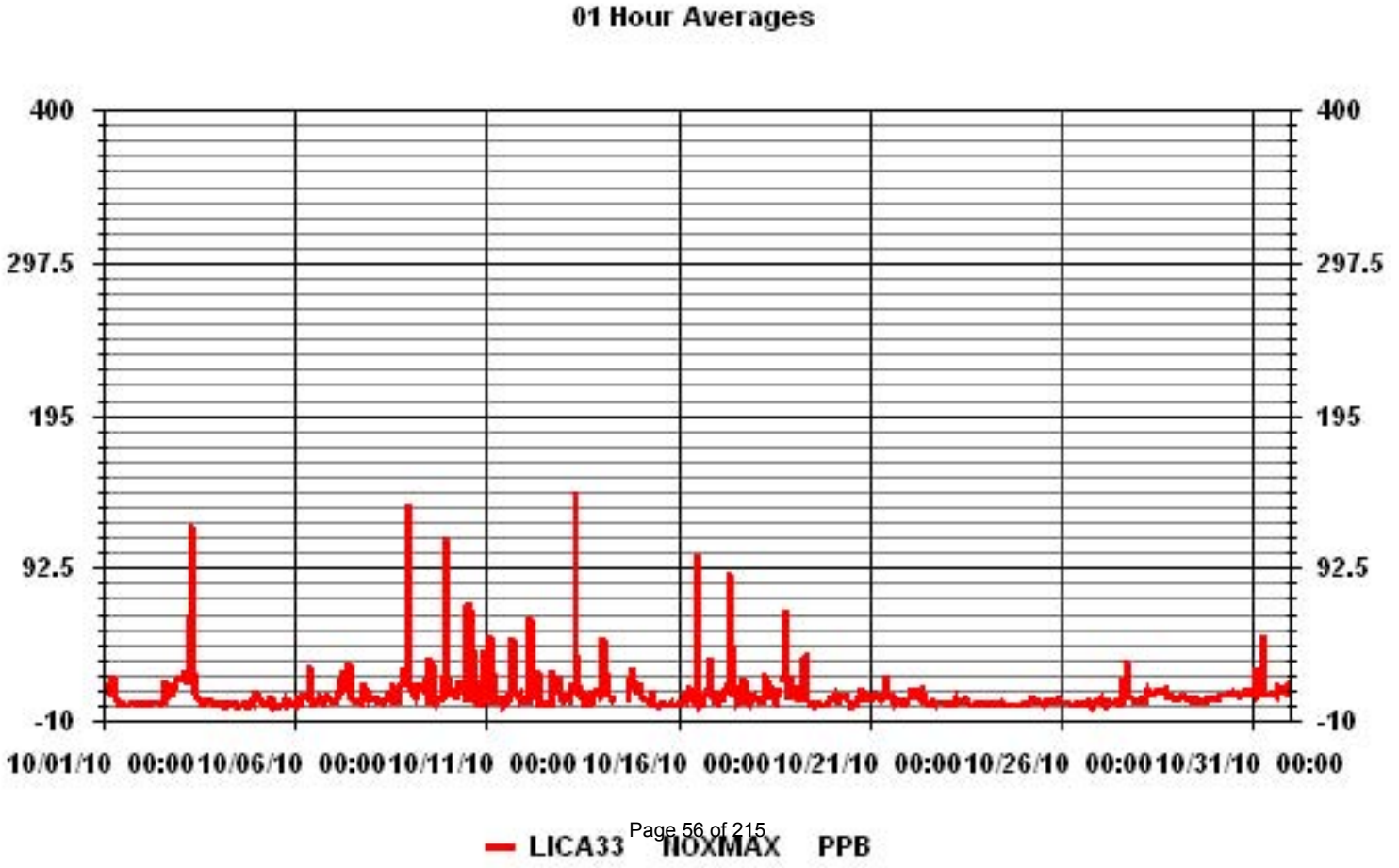
HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	11	10	10	9	15	13	21	13	7	4	2	1	1	1	0	0	1	3	**IZS**	3	1	1	1	1	21	5.6	24
2	1	1	1	1	1	1	2	2	2	2	2	3	2	3	3	17	6	**IZS**	9	6	12	14	17	18	18	5.5	24
3	18	16	22	22	20	15	61	121	24	10	8	6	5	4	1	1	**IZS**	4	3	4	2	2	1	1	121	16.1	24
4	1	1	1	1	1	0	1	1	2	2	2	1	1	0	1	**IZS**	1	1	1	0	1	5	3	8	8	1.6	24
5	8	5	5	2	2	2	1	2	1	7	4	0	1	0	**IZS**	0	1	4	2	1	3	3	2	2	8	2.5	24
6	1	4	4	3	7	7	6	6	6	27	4	1	1	**IZS**	3	7	6	3	2	3	6	6	5	3	27	5.3	24
7	3	3	4	9	7	19	23	13	12	14	28	6	**IZS**	3	2	2	4	3	6	15	9	6	9	7	28	9.0	24
8	6	5	6	5	3	3	3	2	3	4	9	**IZS**	11	16	3	2	2	4	12	16	25	16	17	136	136	13.4	24
9	11	9	13	12	7	9	15	13	15	10	**IZS**	3	33	10	29	4	2	4	4	5	3	20	114	20	114	15.9	24
10	19	8	8	7	11	5	8	16	9	**IZS**	4	67	2	70	65	39	15	19	3	1	1	1	6	37	70	18.3	24
11	9	1	47	3	24	8	2	2	**IZS**	6	1	3	3	4	7	7	46	12	6	10	5	7	3	3	47	9.5	24
12	3	2	2	60	6	8	7	**IZS**	21	2	1	1	1	1	1	1	1	24	7	16	14	20	10	4	60	9.3	24
13	3	4	5	4	8	13	**IZS**	**141**	36	15	8	5	10	1	1	1	1	2	10	6	9	9	8	6	**141**	13.3	24
14	7	46	18	19	8	**IZS**	6	4	**C**	**C**	**C**	**C**	**C**	**C**	**C**	**C**	4	11	19	26	19	12	10	10	46	14.6	24
15	15	7	6	5	**IZS**	3	2	6	10	3	1	0	1	1	1	1	1	0	0	0	2	0	0	1	15	2.9	24
16	1	1	1	**IZS**	7	5	9	13	9	5	3	4	102	0	1	1	9	6	12	9	32	6	6	4	102	10.7	24
17	3	9	**IZS**	4	4	10	12	7	90	42	6	14	11	2	3	3	1	19	13	6	3	6	6	8	90	12.3	24
18	6	**IZS**	3	2	2	7	22	16	16	14	5	7	4	3	10	**C**	**C**	18	18	64	12	6	6	19	64	12.4	24
19	**IZS**	12	6	5	3	10	32	33	22	4	1	1	2	0	1	1	2	2	0	0	1	1	2	**IZS**	33	6.4	24
20	4	4	7	4	1	5	6	6	6	7	4	2	1	0	1	1	5	5	5	12	9	7	**IZS**	5	12	4.7	24
21	5	5	7	8	8	7	5	7	7	4	21	6	6	6	6	1	2	2	2	3	4	**IZS**	2	4	21	5.6	24
22	5	7	12	9	7	7	6	11	12	10	3	3	1	1	1	3	3	1	2	2	**IZS**	2	2	2	12	4.9	24
23	2	1	1	1	1	2	5	2	3	3	3	4	4	4	2	2	1	1	1	**IZS**	3	1	1	1	5	2.1	24
24	1	1	1	1	1	1	1	1	1	1	3	2	1	0	0	0	0	0	**IZS**	1	0	0	0	1	3	0.8	24
25	1	1	1	2	3	7	4	4	3	3	3	3	2	1	3	2	3	**IZS**	3	3	3	4	4	4	7	2.9	24
26	3	2	2	2	2	2	2	1	1	1	1	1	2	2	1	1	**IZS**	3	3	0	2	3	4	3	4	1.9	24
27	3	5	3	2	1	3	3	3	2	2	3	1	1	2	16	**IZS**	28	4	6	7	6	2	2	2	28	4.7	24
28	2	5	4	5	4	6	11	9	7	7	9	10	9	9	**IZS**	10	10	11	7	6	6	6	6	4	11	7.1	24
29	4	4	5	6	6	6	5	4	4	4	3	4	4	**IZS**	4	3	4	3	3	5	5	5	5	4	6	4.3	24
30	4	5	5	7	7	7	7	7	7	8	9	10	**IZS**	8	8	7	8	7	7	10	10	7	7	9	10	7.4	24
31	9	9	26	7	8	12	48	9	7	7	7	**IZS**	9	8	7	15	10	9	9	10	9	12	14	10	48	11.8	24
HOURLY MAX	19	46	47	60	24	19	61	141	90	42	28	67	102	70	65	39	46	24	19	64	32	20	114	136			
HOURLY AVG	5.6	6.4	7.9	7.6	6.2	6.8	11.2	15.8	11.9	7.9	5.4	6.0	8.3	5.7	6.5	4.9	6.3	6.4	6.0	8.3	7.2	6.3	9.1	11.2			

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

MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:	674					
MAXIMUM INSTANTANEOUS VALUE:	141	PPB	@ HOUR(S)	7	ON DAY(S)	13
IZS CALIBRATION TIME:	32	HRS	OPERATIONAL TIME:		744	HRS
MONTHLY CALIBRATION TIME:	10	HRS				
STANDARD DEVIATION	13.50					


01 Hour Averages
400
297.5
195
92.5
-10
10/01/10 00:00
10/06/10 00:00
10/11/10 00:00
10/16/10 00:00
10/21/10 00:00
10/26/10 00:00
10/31/10 00:00
LICA33 NOXMAX PPB

LICA33
NOX_ / WDR Joint Frequency Distribution (Percent)

October 2010

Distribution By % Of Samples

Logger Id : 33
Site Name : LICA33
Parameter : NOX_
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
< 50	3.12	2.13	3.69	6.40	10.09	3.69	2.84	7.39	4.40	4.26	13.08	10.66	10.09	9.24	2.41	6.40	100.00
< 110	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
< 210	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
>= 210	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
Totals	3.12	2.13	3.69	6.40	10.09	3.69	2.84	7.39	4.40	4.26	13.08	10.66	10.09	9.24	2.41	6.40	

Calm : .00 %

Total # Operational Hours : 703

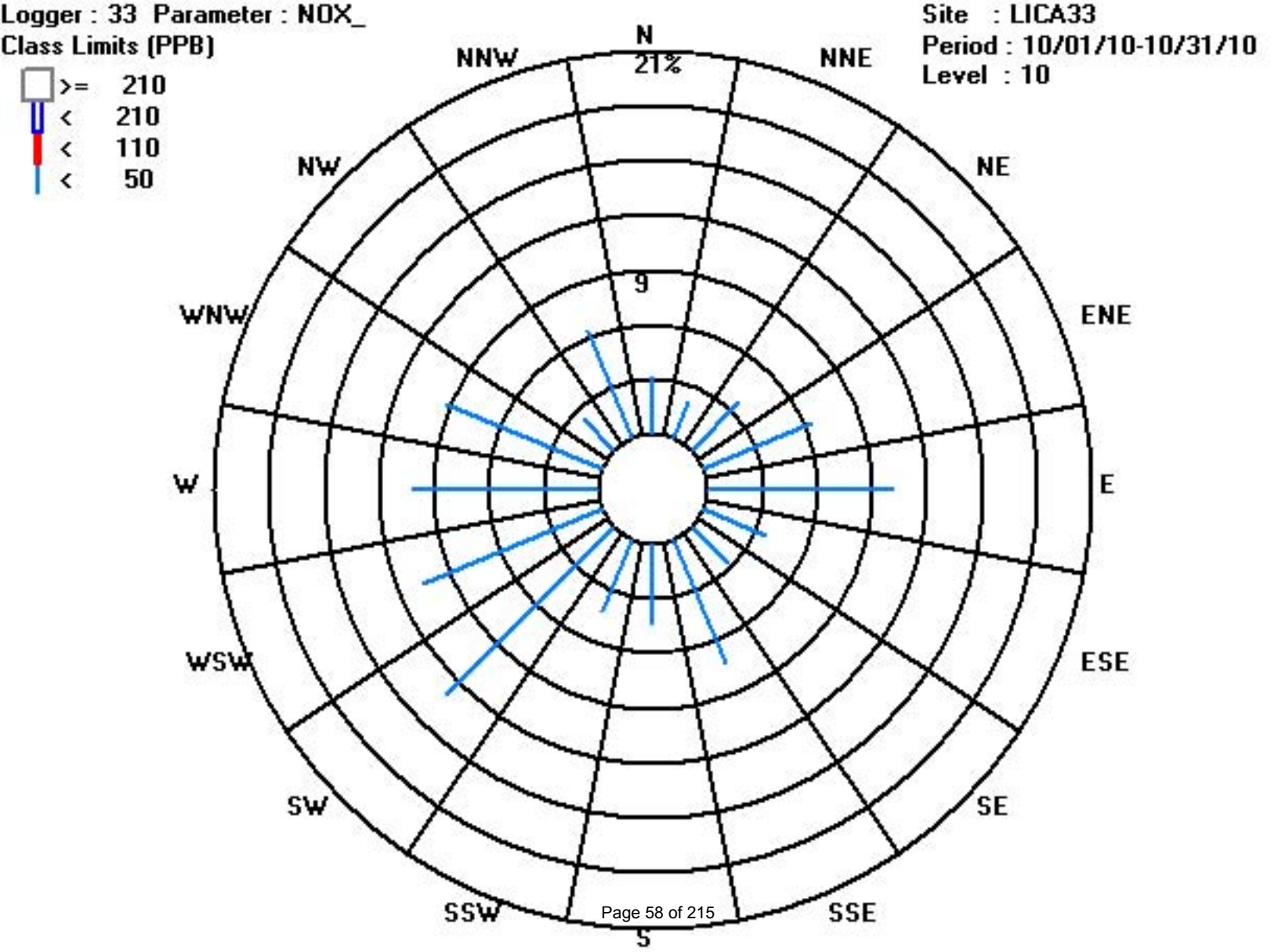
Distribution By Samples

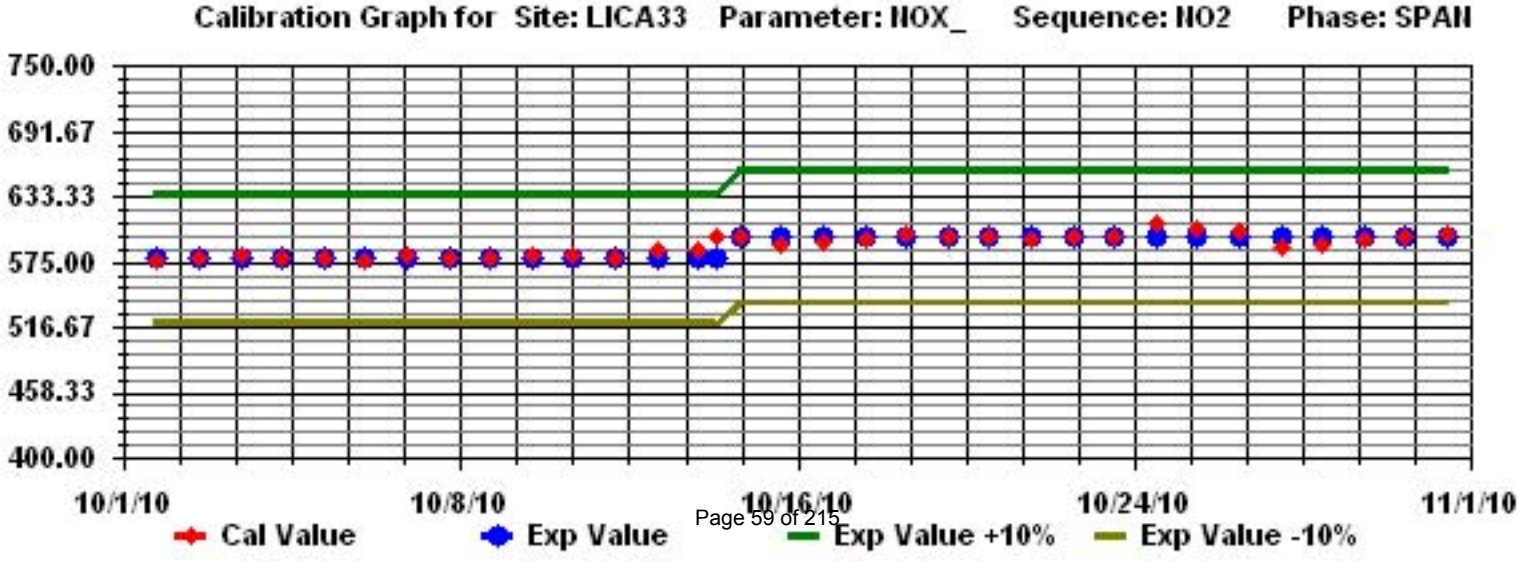
Direction

Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 50	22	15	26	45	71	26	20	52	31	30	92	75	71	65	17	45	703
< 110																	
< 210																	
>= 210																	
Totals	22	15	26	45	71	26	20	52	31	30	92	75	71	65	17	45	

Calm : .00 %

Total # Operational Hours : 703


Logger : 33 Parameter : NOX_
Class Limits (PPB)
>= 210
< 210
< 110
< 50
Site : LICA33
Period : 10/01/10-10/31/10
Level : 10
N
21%
NNE
NE
ENE
E
ESE
SE
SSE
S
SSW
SW
WSW
W
WNW
NW
NNW
9


Calibration Graph for Site: LICA33 Parameter: NOX_ Sequence: NO2 Phase: SPAN
750.00
691.67
633.33
575.00
516.67
458.33
400.00
10/1/10
10/8/10
10/16/10
10/24/10
11/1/10
Cal Value
Exp Value
Exp Value +10%
Exp Value -10%

Ozone

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *PORTABLE SITE*

OCTOBER 2010

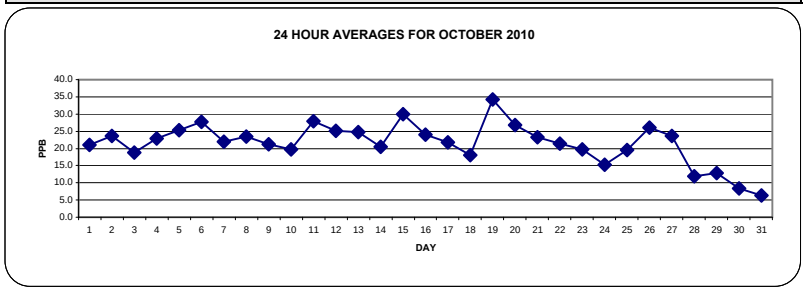
OZONE (O_3) hourly averages in ppb

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	5	2	1	0	0	0	1	7	19	29	32	35	36	37	37	37	37	33	**IZS**	27	26	26	29	29	37	21.1	24
2	29	28	27	26	26	24	22	21	24	25	26	27	29	31	33	35	35	**IZS**	23	21	16	5	6	5	35	23.7	24
3	4	2	0	0	0	2	1	3	14	19	23	28	33	36	39	38	**IZS**	30	29	26	28	26	26	25	39	18.8	24
4	28	29	30	31	29	30	29	27	26	24	23	22	22	23	21	**IZS**	21	19	18	18	18	16	12	11	31	22.9	24
5	10	8	10	18	19	20	22	23	26	28	31	32	32	33	**IZS**	34	34	30	28	29	28	29	29	29	34	25.3	24
6	30	27	25	25	24	22	21	20	24	27	31	35	36	**IZS**	33	30	31	33	32	29	27	26	25	23	36	27.7	24
7	23	19	18	14	12	12	3	8	14	14	18	28	**IZS**	36	39	40	35	32	28	23	26	25	20	20	40	22.0	24
8	21	21	19	19	20	19	17	20	21	22	21	**IZS**	17	28	34	36	35	31	27	24	22	27	24	14	36	23.4	24
9	15	6	6	7	8	6	6	10	15	25	**IZS**	39	38	38	38	38	38	33	23	22	26	21	18	11	39	21.2	24
10	9	12	11	10	9	11	8	12	17	**IZS**	22	22	23	23	23	24	22	19	25	35	37	32	29	20	37	19.8	24
11	33	31	21	26	22	26	26	26	**IZS**	30	33	33	33	34	33	33	27	28	26	24	24	24	25	22	34	27.8	24
12	20	15	17	16	19	18	17	**IZS**	23	30	34	34	35	35	35	35	35	28	26	20	18	16	24	29	35	25.2	24
13	28	24	19	20	18	12	**IZS**	5	16	23	29	34	38	38	38	38	38	36	31	28	22	15	11	8	38	24.7	24
14	11	6	5	11	13	**IZS**	15	18	22	25	32	33	33	32	32	37	36	31	22	12	8	11	12	14	37	20.5	24
15	14	15	21	25	**IZS**	33	34	31	29	33	35	36	35	36	35	33	33	32	33	32	29	29	29	28	36	30.0	24
16	27	28	27	**IZS**	20	18	15	13	17	21	26	29	31	33	34	35	33	29	22	17	18	17	20	21	35	24.0	24
17	18	14	**IZS**	8	10	7	11	18	20	24	25	27	30	33	33	33	34	31	25	23	21	21	19	17	34	21.8	24
18	24	**IZS**	15	10	9	9	10	7	12	22	26	28	**C**	**C**	**C**	**C**	**C**	22	22	20	23	27	25	14	28	18.1	24
19	**IZS**	20	24	25	29	28	24	23	29	33	38	42	**43**	42	42	43	42	42	41	40	37	33	32	**IZS**	**43**	**34.2**	24
20	30	29	24	26	26	23	24	26	25	27	29	31	33	35	36	36	33	29	25	18	14	16	**IZS**	23	36	26.9	24
21	17	18	15	14	17	16	16	13	22	26	25	24	26	28	35	34	33	32	31	28	24	**IZS**	22	21	35	23.3	24
22	18	16	17	20	22	21	21	18	14	18	24	27	28	28	26	24	23	22	22	22	**IZS**	21	21	20	28	21.4	24
23	20	21	20	21	20	20	19	18	17	18	20	23	21	20	23	21	21	19	18	**IZS**	19	18	19	18	23	19.7	24
24	17	20	19	19	19	20	19	16	15	14	12	13	14	13	14	13	13	13	**IZS**	12	13	13	15	16	20	15.3	24
25	16	16	16	16	15	14	18	16	18	19	20	20	22	22	22	23	23	**IZS**	23	23	22	22	22	22	23	19.6	24
26	24	26	25	26	25	26	27	28	30	30	28	26	25	26	27	27	**IZS**	26	24	24	25	25	25	25	30	26.1	24
27	26	26	26	28	28	26	27	26	27	27	27	26	26	26	26	**IZS**	23	20	18	13	16	20	19	15	28	23.6	24
28	15	13	15	16	16	13	10	10	10	10	10	10	9	11	**IZS**	11	7	8	12	14	14	13	13	15	16	12.0	24
29	16	16	14	12	12	12	12	14	13	14	14	14	14	**IZS**	13	14	14	13	12	11	10	11	11	11	16	12.9	24
30	12	10	9	7	7	5	6	5	6	6	7	9	**IZS**	12	15	14	12	10	10	7	6	8	6	3	15	8.3	24
31	3	4	4	6	4	3	2	2	5	8	11	**IZS**	14	16	15	11	8	7	6	4	4	5	3	2	16	6.4	24
HOURLY MAX	33	31	30	31	29	33	34	31	30	33	38	42	43	42	42	43	42	42	41	40	37	33	32	29			
HOURLY AVG	18.8	17.4	16.7	16.7	16.6	16.5	16.1	16.1	19.0	22.4	24.4	27.1	27.7	28.8	29.7	29.5	27.7	25.4	23.5	21.5	20.7	19.9	19.7	17.7			

STATUS FLAG CODES

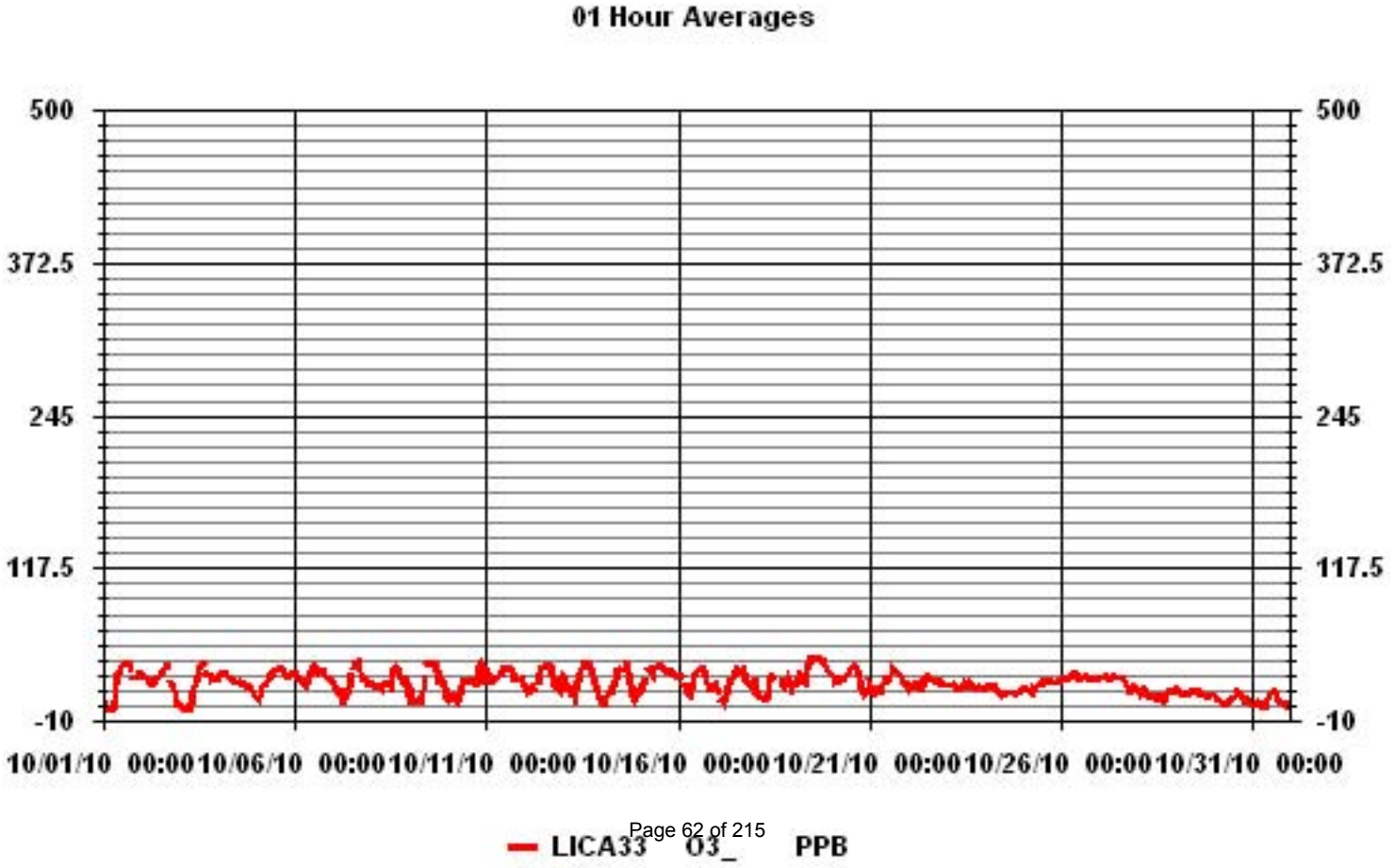
S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	-MAINTENANCE
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE



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

MONTHLY SUMMARY

NUMBER OF 1-HR EXCEEDENCES:	0					
NUMBER OF NON-ZERO READINGS:	701					
MAXIMUM 1-HR AVERAGE:	43	PPB	@ HOUR(S)	12, 15	ON DAY(S)	19
MAXIMUM 24-HR AVERAGE:	34.2	PPB			ON DAY(S) VAR-VARIOUS	19
IZS CALIBRATION TIME:	32	HRS	OPERATIONAL TIME:		744	HRS
MONTHLY CALIBRATION TIME:	5	HRS	AMD OPERATION UPTIME		100.0	%
STANDARD DEVIATION	9.33		MONTHLY AVERAGE		21.54	PPB


01 Hour Averages
500
372.5
245
117.5
-10
10/01/10 00:00
10/06/10 00:00
10/11/10 00:00
10/16/10 00:00
10/21/10 00:00
10/26/10 00:00
10/31/10 00:00
LICA33 O3_ PPB

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - PORTABLE SITE

OCTOBER 2010

OZONE MAX instantaneous maximum in ppb

MST

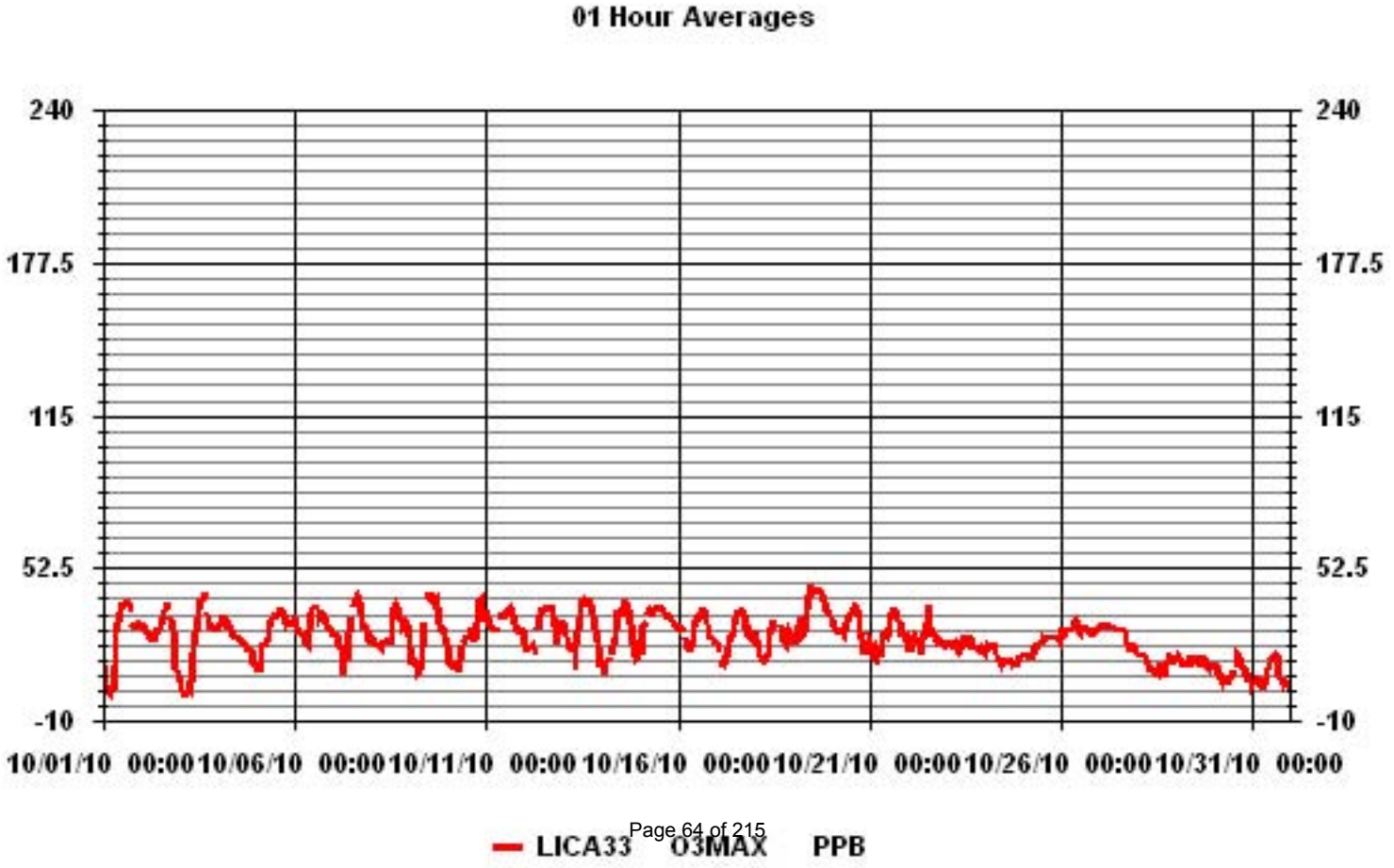
HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	12	5	2	2	1	2	3	13	26	30	34	37	37	38	38	38	38	36	**IZS**	29	28	28	30	30	38	23.3	24
2	29	29	28	27	26	25	24	22	25	26	27	28	30	32	35	37	37	**IZS**	31	29	27	12	11	9	37	26.3	24
3	7	3	1	1	2	4	3	6	18	21	26	32	36	39	40	42	**IZS**	33	30	28	30	28	27	27	42	21.0	24
4	29	30	32	32	30	31	30	29	28	26	24	24	24	24	23	**IZS**	22	21	19	19	19	19	14	13	32	24.4	24
5	12	10	14	21	21	21	23	24	28	31	32	33	33	34	**IZS**	35	35	34	30	31	30	30	31	32	35	27.2	24
6	32	28	27	26	26	25	23	22	27	28	34	36	37	**IZS**	35	32	33	34	33	31	29	28	28	26	37	29.6	24
7	26	25	25	21	19	21	9	14	16	15	26	31	**IZS**	38	40	41	39	35	31	28	30	28	23	21	41	26.2	24
8	24	24	22	22	21	21	20	22	22	23	23	**IZS**	22	33	36	38	37	33	32	29	30	31	30	25	38	27.0	24
9	21	13	14	14	13	10	11	13	20	29	**IZS**	41	41	40	42	39	40	37	30	27	29	27	25	22	42	26.0	24
10	13	14	13	12	12	15	10	15	20	**IZS**	23	24	24	24	27	27	24	23	30	39	40	34	32	32	40	22.9	24
11	35	33	30	28	28	27	27	27	**IZS**	33	33	34	34	35	35	36	34	31	30	28	27	25	27	27	36	30.6	24
12	22	18	20	20	20	21	19	**IZS**	29	33	35	35	36	36	36	36	36	36	33	29	21	25	30	30	36	28.5	24
13	30	27	25	23	21	20	**IZS**	12	21	27	32	37	39	40	39	39	39	38	35	33	28	23	21	12	40	28.7	24
14	15	10	10	14	15	**IZS**	18	21	24	27	35	34	35	33	36	39	37	36	30	22	16	23	17	18	39	24.6	24
15	18	18	29	30	**IZS**	35	36	35	33	35	36	36	36	36	36	35	33	33	33	33	32	30	30	29	36	32.0	24
16	28	29	28	**IZS**	23	20	20	18	20	23	28	31	33	34	35	35	35	33	30	24	24	24	24	23	35	27.0	24
17	22	20	**IZS**	13	15	14	16	20	22	25	26	29	32	34	34	35	35	34	29	29	25	25	24	23	35	25.3	24
18	26	**IZS**	22	17	17	16	15	16	18	25	28	30	**C**	**C**	**C**	**C**	**C**	28	23	22	26	28	27	23	30	22.6	24
19	**IZS**	23	27	26	31	31	26	27	33	36	41	**44**	**44**	43	43	43	43	43	42	40	39	36	34	**IZS**	**44**	36.1	24
20	32	30	28	27	27	26	26	27	26	30	31	33	34	36	37	37	36	33	27	24	17	20	**IZS**	25	37	29.1	24
21	21	21	17	16	20	19	18	16	26	27	26	25	27	34	35	35	35	33	32	31	26	**IZS**	25	23	35	25.6	24
22	21	18	23	25	24	23	**N**	21	17	23	26	29	29	37	29	26	25	23	24	23	**IZS**	22	22	21	37	24.1	23
23	22	22	22	22	21	22	20	21	19	20	21	25	23	22	25	23	23	20	20	**IZS**	20	19	20	19	25	21.3	24
24	18	21	20	20	20	21	21	18	15	15	13	14	14	14	14	14	14	13	**IZS**	13	13	14	16	17	21	16.2	24
25	17	17	17	17	16	16	19	18	19	21	22	22	24	23	24	24	24	**IZS**	24	24	24	24	24	23	24	21.0	24
26	27	27	26	27	27	27	28	30	30	31	29	27	26	27	28	28	**IZS**	27	25	25	26	27	27	27	31	27.3	24
27	28	29	28	28	29	29	29	28	28	28	28	27	27	27	27	**IZS**	26	22	21	18	20	21	20	18	29	25.5	24
28	17	17	17	17	17	15	14	11	11	11	10	11	10	13	**IZS**	13	8	12	14	16	16	14	14	15	17	13.6	24
29	16	17	16	13	13	13	14	15	15	15	14	15	15	**IZS**	14	15	15	15	13	12	11	12	12	12	17	14.0	24
30	12	12	10	8	8	6	7	6	6	7	8	10	**IZS**	13	17	16	14	13	12	9	10	8	7	4	17	9.7	24
31	5	6	7	7	5	5	3	5	7	11	13	**IZS**	16	17	16	16	9	8	7	5	6	6	5	4	17	8.2	24
HOURLY MAX	35	33	32	32	31	35	36	35	33	36	41	44	44	43	43	43	43	43	42	40	40	36	34	32			
HOURLY AVG	21.2	19.9	20.0	19.2	18.9	19.4	18.3	19.1	21.6	24.4	26.1	28.8	29.2	30.6	31.3	31.2	29.5	28.2	26.6	25.0	24.0	23.0	22.6	21.0			

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

MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:	706					
MAXIMUM INSTANTANEOUS VALUE:	44	PPB	@ HOUR(S)	11, 12	ON DAY(S)	19
IZS CALIBRATION TIME:	32	HRS	OPERATIONAL TIME:		743	HRS
MONTHLY CALIBRATION TIME:	5	HRS				
STANDARD DEVIATION	9.11					


01 Hour Averages
240
177.5
115
52.5
-10
10/01/10 00:00
10/06/10 00:00
10/11/10 00:00
10/16/10 00:00
10/21/10 00:00
10/26/10 00:00
10/31/10 00:00
LICA33 O3MAX PPB

LICA33
O3_ / WDR Joint Frequency Distribution (Percent)

October 2010

Distribution By % Of Samples

Logger Id : 33
Site Name : LICA33
Parameter : O3_
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
< 50	3.11	2.12	3.67	6.36	10.18	3.81	3.25	7.77	4.38	4.24	12.44	10.60	10.04	9.19	2.40	6.36	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	3.11	2.12	3.67	6.36	10.18	3.81	3.25	7.77	4.38	4.24	12.44	10.60	10.04	9.19	2.40	6.36	

Calm : .00 %

Total # Operational Hours : 707

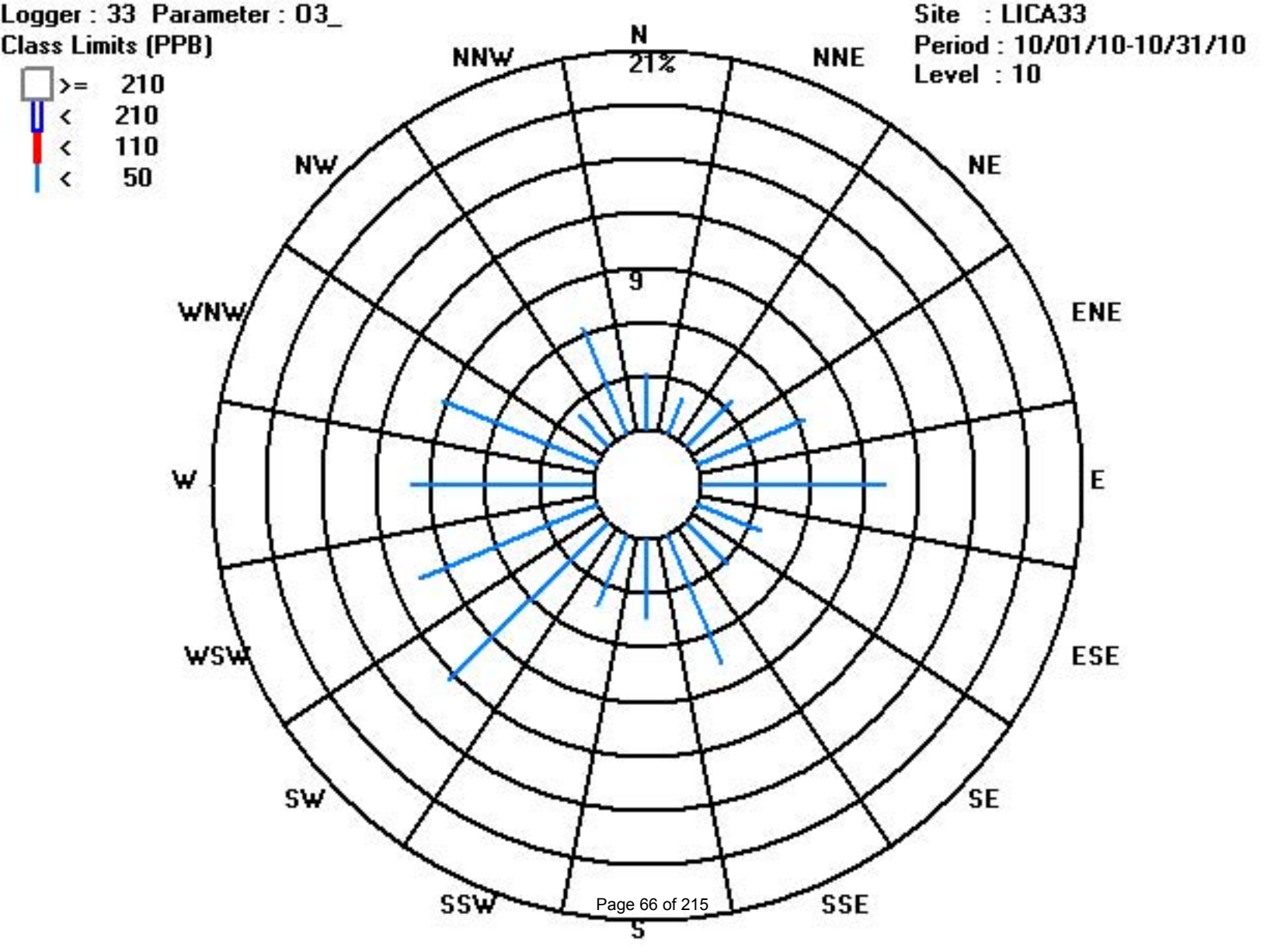
Distribution By Samples

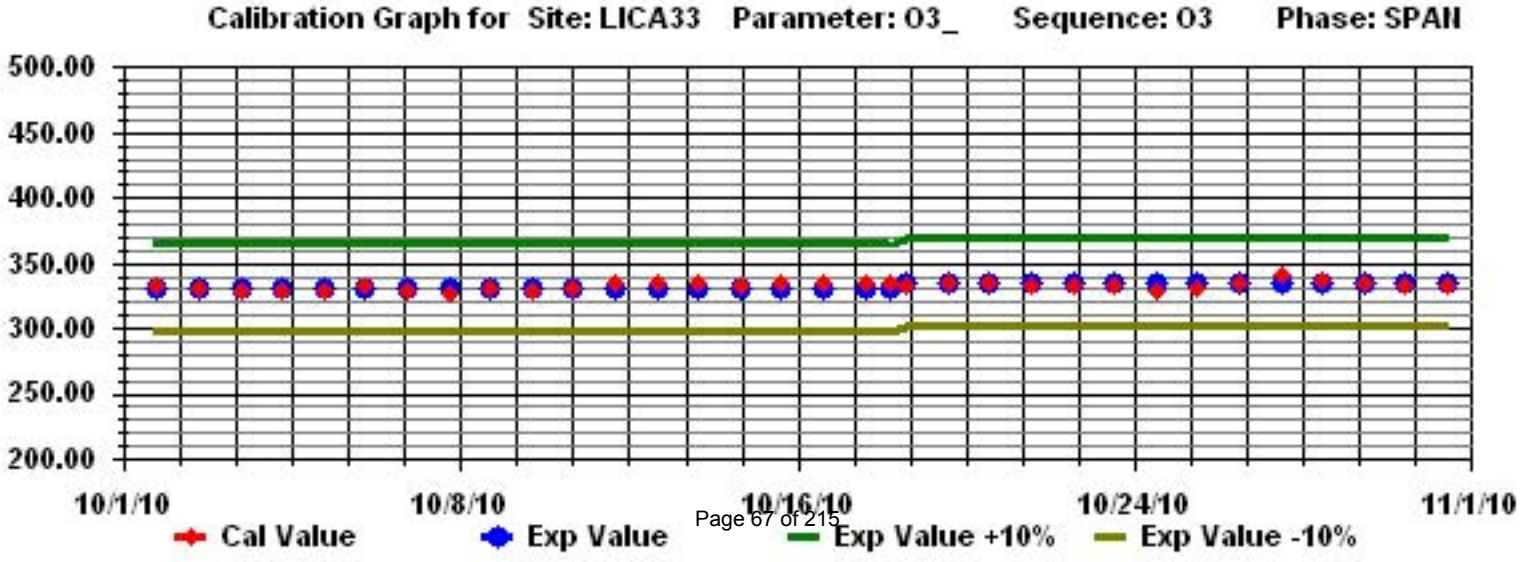
Direction

Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 50	22	15	26	45	72	27	23	55	31	30	88	75	71	65	17	45	707
< 110																	
< 210																	
>= 210																	
Totals	22	15	26	45	72	27	23	55	31	30	88	75	71	65	17	45	

Calm : .00 %

Total # Operational Hours : 707


Logger : 33 Parameter : 03_
Class Limits (PPB)
>= 210
< 210
< 110
< 50
Site : LICA33
Period : 10/01/10-10/31/10
Level : 10
N
21%
NNE
NE
ENE
E
ESE
SE
SSE
S
SSW
SW
WSW
W
WNW
NW
NNW
9


Calibration Graph for Site: LICA33 Parameter: O3_ Sequence: O3 Phase: SPAN
500.00
450.00
400.00
350.00
300.00
250.00
200.00
10/1/10
10/8/10
10/16/10
10/24/10
11/1/10
Cal Value
Exp Value
Exp Value +10%
Exp Value -10%

Total Hydrocarbons

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *PORTABLE SITE*

OCTOBER 2010

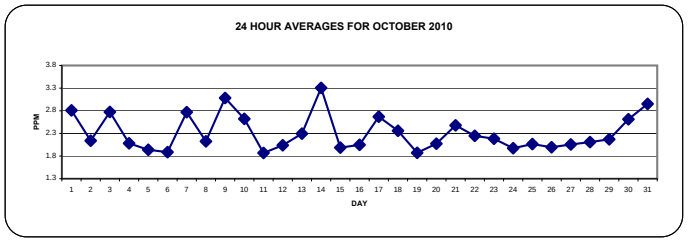
TOTAL HYDROCARBONS (THC) hourly averages in ppm

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	3	3.1	3.7	4.3	4.2	4.9	4.6	4.8	3.2	2.4	2.2	2.1	2.2	2.1	2	2	1.9	1.9	**IZS**	2	2	2	2	2	4.9	2.8	24
2	2	2	2	2	2.1	2.1	2.1	2.1	2.2	2.1	2	2	2	2	2	1.9	1.9	**IZS**	2.2	2.1	2.5	2.6	2.7	2.6	2.7	2.1	24
3	3.2	3.1	4.5	4.3	4.1	3.3	3.4	3.2	2.4	2.5	2.6	2.5	2.2	2.3	2.2	2.2	**IZS**	2.3	2.1	1.9	2.2	2.4	2.2	2.7	4.5	2.8	24
4	3.3	2.5	2	1.9	1.9	1.9	1.8	1.9	2	2.1	2	2.3	2	1.9	2	**IZS**	2.1	2.3	1.9	1.8	2	2	2	2.3	3.3	2.1	24
5	2.4	2.2	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	1.9	1.9	1.9	1.9	1.9	2	1.9	1.9	2.4	1.9	24
6	1.9	1.9	1.9	1.9	1.9	1.9	2	2	1.9	1.9	1.9	1.9	1.8	**IZS**	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	2	2	2.0	1.9	24
7	2	3.7	3.6	**7.4**	2.6	2.2	2.5	3.1	2.3	2.7	2.8	2.2	**IZS**	2	2.1	2.1	2.3	2	2.4	3.2	3.1	2.1	2.8	2.5	**7.4**	2.8	24
8	2.1	2.1	2.3	2.5	2	2.4	2.3	2.2	2.3	2.2	2.1	**IZS**	2.4	2	1.8	1.8	1.9	1.9	1.9	2	2.1	2	2.3	2.3	2.5	2.1	24
9	2.7	4.2	2.5	3.1	4	4.8	4.2	3.9	4.2	2.7	**IZS**	2.1	2.1	2.1	1.9	1.9	1.9	2.1	2.2	2.4	2.3	4.9	5.2	3.5	5.2	3.1	24
10	4.4	3.4	3.5	3.5	3.2	3	3.6	3.1	2.6	**IZS**	2.1	2.1	2.1	2.2	2.1	2	3.3	3.1	1.8	1.8	1.8	1.8	1.9	1.9	4.4	2.6	24
11	1.8	1.9	1.9	1.9	1.9	1.9	1.9	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	1.9	2	1.9	2	2.0	1.9	24
12	2.4	2.6	2.3	1.9	1.9	2	2	**IZS**	1.9	1.9	1.9	1.9	1.8	1.9	1.9	1.9	1.9	1.9	2.1	2	2.2	2.7	2	1.9	2.7	2.0	24
13	2.1	2.2	3.2	2.6	2.5	3.2	**IZS**	2.4	2.1	2	1.9	1.9	1.8	1.9	1.8	1.8	1.8	1.8	2	2.1	2.3	2.3	3.5	3.6	3.6	2.3	24
14	2.9	4.6	4.2	3.3	3.1	**IZS**	2.6	2.8	2.4	2.3	2.1	2.1	**C**	**C**	**C**	**C**	**C**	2.3	3.3	4.9	6.1	4.1	3.5	2.9	6.1	**3.3**	24
15	3.2	2.7	2.4	2.2	**IZS**	1.9	1.8	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.9	1.9	1.9	1.9	1.9	3.2	2.0	24
16	1.9	1.9	2	**IZS**	2	2	2	2	2	2	2	2	1.9	1.9	1.9	1.9	1.9	2	2.1	2.4	2.4	2.3	2.4	2.2	2.4	2.0	24
17	3.3	2.9	**IZS**	5	2.9	5.3	3.5	2	2	2	2	2	1.9	1.9	1.9	1.9	1.9	2	3	2.6	2.7	2.7	3.2	2.8	5.3	2.7	24
18	2	**IZS**	3.1	3.2	3.7	4	2.5	3.3	2.8	2	2	2	1.9	1.9	1.9	1.9	**C**	2	2	1.9	1.9	1.9	1.9	2.1	4.0	2.4	24
19	**IZS**	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.9	1.9	1.9	2	**IZS**	2.0	1.9	24
20	1.9	2	2	2	2	2	2	2	2	2	2	2	1.9	1.9	1.9	1.9	2	1.9	1.9	2.2	2.9	2.7	**IZS**	2.6	2.9	2.1	24
21	3	3.3	3.2	3.9	3.5	2.9	2.9	3.3	2.5	2.3	2.2	2.1	2	2	1.8	1.8	1.8	1.9	1.9	2.1	2.4	**IZS**	2	2.2	3.9	2.5	24
22	2.3	2.3	2.5	2.8	2.4	2.2	2	2.1	2.6	2.6	2.1	1.9	2	2.1	2	2.3	2.3	2.4	2.1	2	**IZS**	2	2.1	2.6	2.8	2.2	24
23	2	2	1.9	2.1	1.9	2.7	2.5	1.9	2.5	2.2	1.9	1.9	2	1.9	2.1	3.5	2.2	2.5	2.5	**IZS**	2	2	2	2	3.5	2.2	24
24	1.9	2.1	2.2	2.1	2	2.1	2.1	2	1.9	2	2.1	2	1.8	1.9	1.8	1.9	1.9	2.1	**IZS**	2.2	1.9	1.8	1.8	1.8	2.2	2.0	24
25	1.8	1.8	1.9	1.9	1.9	1.9	1.9	2.2	2.4	2.3	2.3	2.2	2.1	2	2	2	2.1	**IZS**	2.1	2	2.2	2.1	2.3	2.1	2.4	2.1	24
26	1.9	1.9	2	2	2	2	1.9	1.8	1.8	1.9	1.9	1.9	2.4	2.3	1.9	1.9	**IZS**	1.9	2	1.9	2.1	2.1	2.2	2.2	2.4	2.0	24
27	1.9	2.1	2.2	2	2	2.2	2.1	2.1	1.9	2	2	2.1	2	2	2	**IZS**	2	2	2	2.2	2	2	2	2.5	2.5	2.1	24
28	2	2	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	**IZS**	2	2.1	2.1	2.1	2.2	2.2	2.2	2.2	2.1	2.2	2.1	24
29	2.1	2.2	2.4	2.4	2.4	2.4	2.5	2.5	2.4	2.4	2.3	2.1	2	**IZS**	2	2	2	2	2	2	2	1.9	1.9	2	2.5	2.2	24
30	2	2	2	2	2.2	2.3	2.3	2.3	2.4	2.5	2.7	2.7	**IZS**	2.5	2.5	2.5	2.6	3	2.7	3.5	3.7	3.2	3.2	3.3	3.7	2.6	24
31	3.2	2.8	3.1	2.8	2.8	3	3.1	3.1	3	2.8	3	**IZS**	2.7	2.4	2.3	2.8	3	3	3.5	3.5	3	2.6	3.6	2.8	3.6	3.0	24
HOURLY MAX	4.4	4.6	4.5	7.4	4.2	5.3	4.6	4.8	4.2	2.8	3.0	2.7	2.7	2.5	2.5	3.5	3.3	3.1	3.5	4.9	6.1	4.9	5.2	3.6			
HOURLY AVG	2.4	2.5	2.6	2.8	2.5	2.6	2.5	2.5	2.3	2.2	2.1	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.2	2.3	2.4	2.3	2.4	2.4			

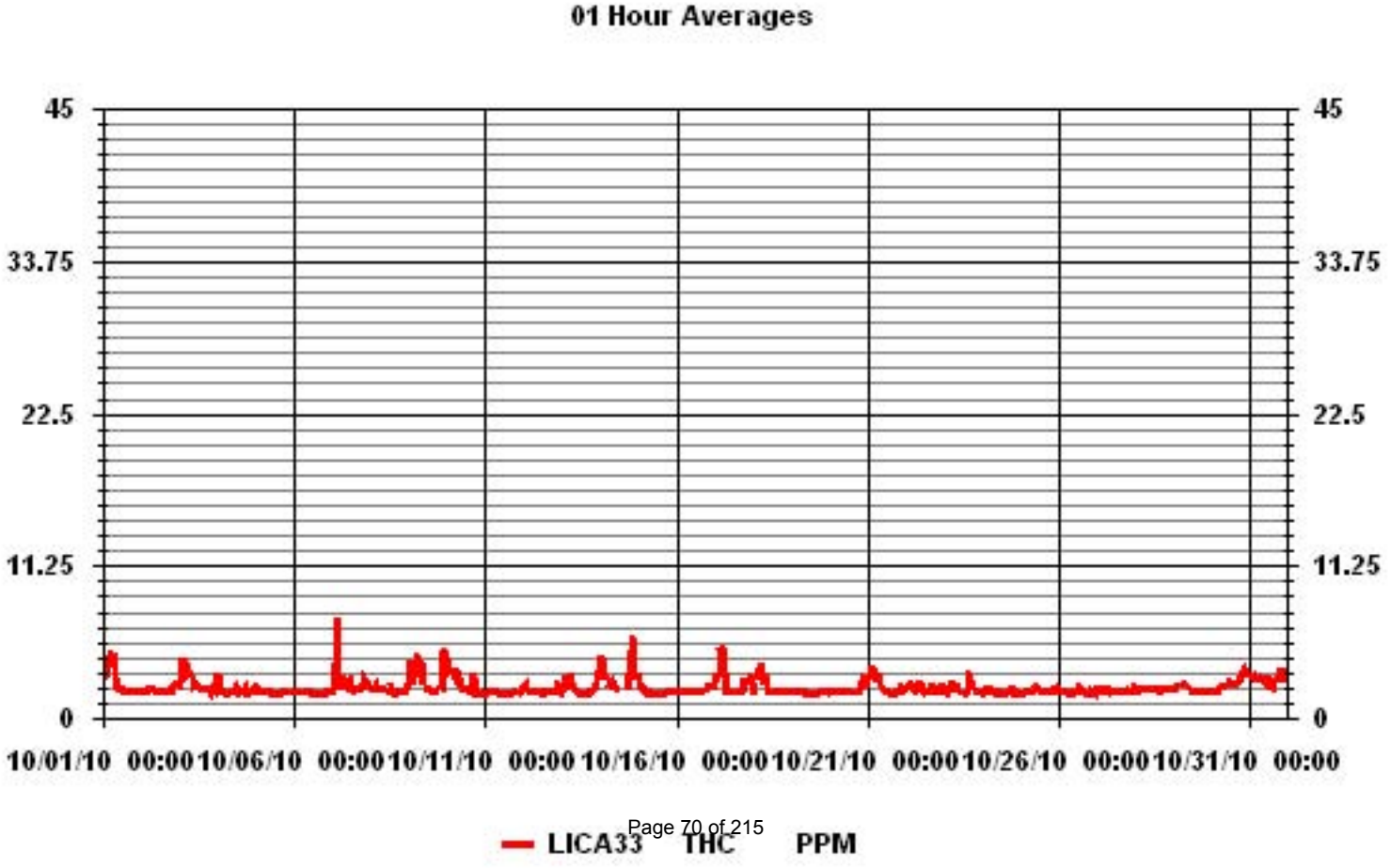
STATUS FLAG CODES

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
BB	- BELOW BACKGROUND OF 1.5 PPM		



MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:	706					
MAXIMUM 1-HR AVERAGE:	7.4	PPM	@ HOUR(S)	3	ON DAY(S)	7
MAXIMUM 24-HR AVERAGE:	3.3	PPM			ON DAY(S)	14
IZS CALIBRATION TIME:	32	HRS	OPERATIONAL TIME:		744	HRS
MONTHLY CALIBRATION TIME:	6	HRS	AMD OPERATION UPTIME:		100.0	%
STANDARD DEVIATION:	0.65		MONTHLY AVERAGE:		2.30	PPM


01 Hour Averages
45
33.75
22.5
11.25
0
10/01/10 00:00
10/06/10 00:00
10/11/10 00:00
10/16/10 00:00
10/21/10 00:00
10/26/10 00:00
10/31/10 00:00
LICA33 THC PPM

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *PORTABLE SITE*

OCTOBER 2010

TOTAL HYDROCARBONS MAX instantaneous maximum in ppm

MST

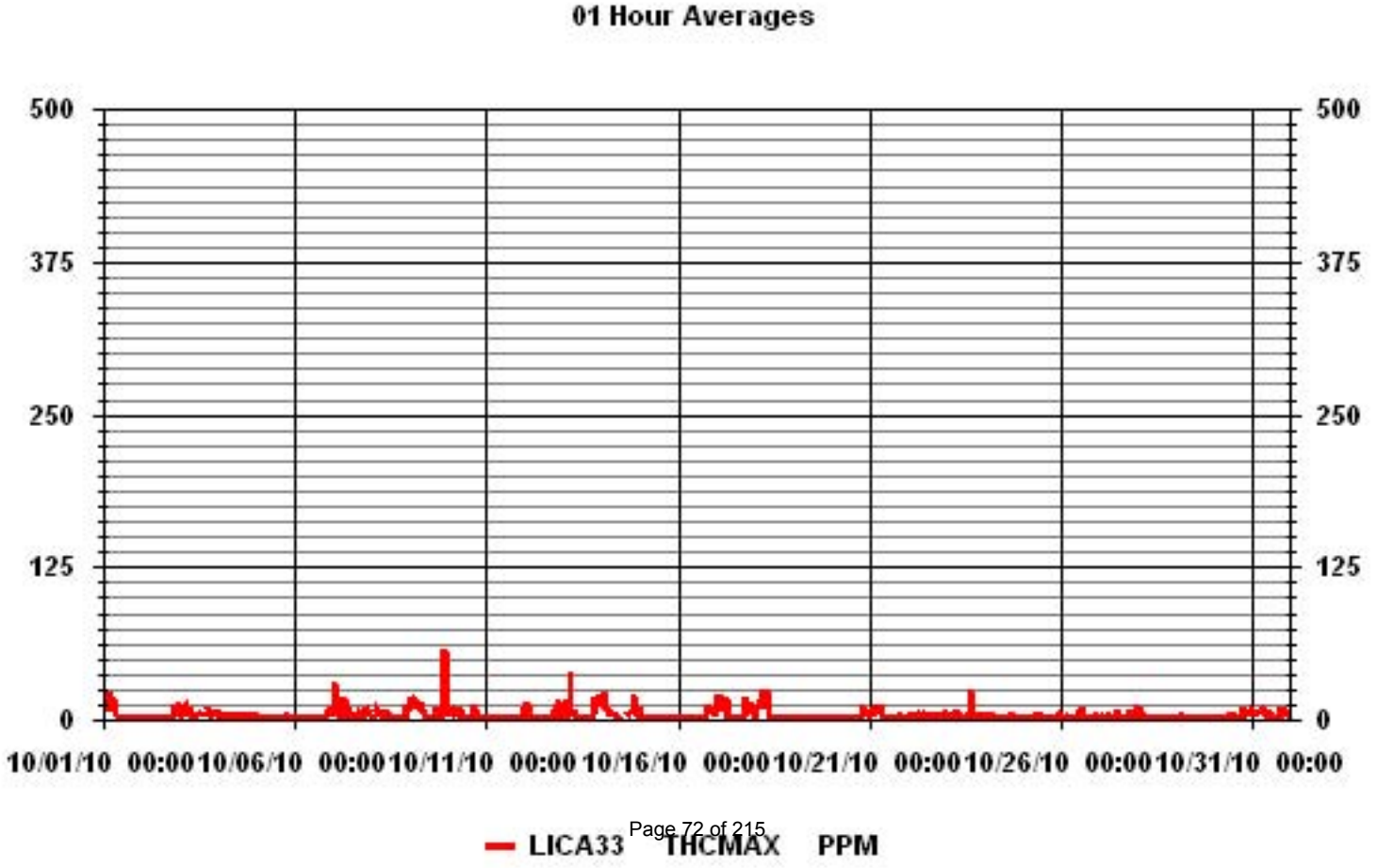
HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	22.7	14.6	16.9	18.3	11.4	10.9	18.5	14.6	5.6	2.6	2.3	2.2	2.3	2.3	2	2	2	2	**IZS**	2.1	2.1	2.1	2	2	22.7	7.1	24
2	2	2	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.1	2	2	2	2	2	2	1.9	**IZS**	3.3	2.6	9.3	8.5	10.6	6.7	10.6	3.3	24
3	3.8	6.4	11.4	12.8	6.7	6.4	10.7	3.8	2.9	2.8	3.9	4	5.4	4.9	4.2	4.2	**IZS**	9	4.8	2.3	3.8	4.8	4.7	4.6	12.8	5.6	24
4	6.4	4.4	3.4	2.8	2.6	2.6	2.6	2.7	3.3	3.4	3.4	3.5	3.4	2.5	3.6	**IZS**	3.4	3.8	3.7	2.1	5.3	4.7	2.1	4	6.4	3.5	24
5	3.3	2.4	2.2	2.2	2	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	**IZS**	1.9	1.9	1.9	1.9	4	2	2	2	1.9	4	2.1	24
6	1.9	1.9	1.9	1.9	2	2	2	2	2	2	1.9	1.9	1.9	**IZS**	1.8	1.9	1.8	1.8	1.8	2.2	8.1	1.9	8	7.3	8.1	2.7	24
7	4	31.1	12.2	17.5	4.5	3.3	8.2	19.4	2.6	3.2	6.1	3.3	**IZS**	4.1	4.6	3.7	6.9	4.7	2.9	8.6	8	3.8	7.4	4.9	31.1	7.6	24
8	2.4	3.3	4.3	8.9	6.2	5.1	6.2	5.4	4.5	5.8	4.1	**IZS**	3.5	2.2	1.9	1.8	1.9	1.9	2.2	2.1	2.2	2.2	12	7.4	12	4.2	24
9	11.2	18.9	8.1	15.6	13.5	13	13.6	8.6	7.7	4.4	**IZS**	2.3	2.1	2.2	2	2	1.9	10.7	5.5	2.6	3.8	**N**	**N**	8.4	18.9	7.5	22
10	10.4	7.3	8.8	6	8	5.7	8.9	8.7	2.9	**IZS**	2.3	2.2	2.2	2.4	2.2	2	12.4	9.3	1.9	2.1	1.8	1.9	2	1.9	12.4	4.9	24
11	1.9	2	2	1.9	1.9	1.9	1.9	1.9	**IZS**	1.9	1.9	1.9	1.8	1.8	1.9	1.9	1.9	2.1	2	2.1	2	2.1	2.4	5	5	2.1	24
12	8.5	11.1	11.1	2	2	2.1	2	**IZS**	2	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	3.9	7	2.3	12.2	16.3	3.4	2	16.3	4.5	24
13	2.2	2.5	15.3	5.7	2.5	**36.7**	**IZS**	6.4	2.2	2	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.9	2	4.4	19.1	11.8	15.5	21.2	**36.7**	7.2	24
14	12.6	10.3	23.1	10	8.9	**IZS**	5.5	5	3.6	3.2	2.9	2.1	**C**	**C**	**C**	**C**	**C**	4.9	5.8	7.1	20.9	10.8	5.1	3	23.1	8.0	24
15	10.9	3	3.1	2.4	**IZS**	2.1	1.9	2	2.1	1.9	1.9	1.9	1.8	1.8	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2	1.9	2	10.9	2.4	24
16	2	2	2	**IZS**	2.1	2.1	2	2.1	2.1	2	2	2	2	1.9	1.9	1.9	2	2.2	4.8	12.7	8.2	7.2	5.3	5.5	12.7	3.4	24
17	20.7	11.9	**IZS**	18.6	6.5	14.3	17.8	2.1	2.1	2	2	2	2	1.9	1.9	1.9	1.9	3.8	18.5	8.1	7.2	8.7	11.8	10.8	20.7	7.8	24
18	2.1	**IZS**	11.4	15.9	21.7	20.8	9.4	25	12.8	2.1	2.1	2	2	1.9	1.9	**C**	**C**	2.2	2.1	2	2	1.9	2	2.2	25	6.9	24
19	**IZS**	2	2	2	1.9	1.9	2	2	2	1.9	1.9	1.8	1.8	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2	2.1	2	**IZS**	2.1	1.9	24
20	2	2	2.1	2.1	2	2.1	2.1	2.1	2.1	2.1	2	2	1.9	1.9	1.9	1.9	2.8	1.9	1.9	10.5	10.5	8.3	**IZS**	4.9	10.5	3.2	24
21	7.2	8.5	7	11.2	7.8	4.8	12.8	10.1	2.7	2.4	2.2	2.2	2	2	1.8	1.8	1.9	1.9	2	2.8	3.2	**IZS**	2.1	2.3	12.8	4.5	24
22	2.4	2.4	3.8	4.9	3.7	3.2	4.7	2.2	3.5	5.4	3.9	3	3.4	4	3.2	3.6	3.3	3.5	3.2	3.4	**IZS**	3.1	3.9	5.5	5.5	3.6	24
23	3.4	3.3	3.1	3.4	2.1	6.3	5.5	2.1	5.3	4.4	2.1	2	2.2	3.1	3.8	24.4	3.9	4.3	4.8	**IZS**	3.4	4	3.2	2.9	24.4	4.5	24
24	3.1	3.2	3	3.1	2.8	3.1	2.9	2.8	2.4	2.6	2.9	2.3	2.3	2.7	2.4	2.9	3	3.2	**IZS**	3.4	2.1	1.9	1.9	2.2	3.4	2.7	24
25	1.9	1.9	1.9	1.9	1.9	1.9	2.5	2.6	2.8	2.6	2.7	2.9	2.7	2.3	2.4	2.5	2.8	**IZS**	2.6	2.4	2.7	3.4	5.5	2.9	5.5	2.6	24
26	2.5	2.4	2.4	2.8	2.8	2.5	2.3	1.9	1.9	2.1	2.2	2.1	7.3	10.9	2.2	2.2	**IZS**	2.3	2.4	1.9	2.5	2.6	2.7	2.9	10.9	2.9	24
27	2.4	2.7	2.9	2.6	2.4	2.8	2.6	2.6	2.2	2.3	2.7	8.8	2	2.1	2.5	**IZS**	2.4	2	2.1	8.1	2.1	2.1	2.1	12.8	12.8	3.4	24
28	2.7	2.2	5.1	2.1	2.2	2.1	2.1	2.2	2.1	2.1	2.1	2.2	2.1	2.1	**IZS**	2.1	2.2	2.1	2.2	2.2	2.3	2.3	2.2	2.2	5.1	2.3	24
29	2.2	2.3	2.9	2.8	2.9	2.5	2.5	2.5	2.5	2.4	2.3	2.2	2.1	**IZS**	2	2	2	2	2	2	2	2	2	2	2.9	2.3	24
30	2	2	2	2.1	2.3	2.4	2.4	2.4	2.4	3.8	4	3.6	**IZS**	3.5	3.5	2.6	2.7	6.7	4.8	7.2	7.7	5.8	6.4	9.1	9.1	4.0	24
31	7.3	6.1	7.2	6.2	6.7	6.5	9.5	8.1	6.5	4.7	6	**IZS**	2.9	2.5	2.4	3.1	3.1	3.1	10.6	5.5	9.5	2.9	8.4	3.7	10.6	5.8	24
HOURLY MAX	23	31	23	19	22	37	19	25	13	6	6	9	7	11	5	24	12	11	19	13	21	16	16	21			
HOURLY AVG	5.6	5.9	6.2	6.4	4.9	5.8	5.6	5.2	3.4	2.8	2.7	2.6	2.5	2.7	2.4	3.1	2.9	3.5	3.9	4.1	5.7	4.6	4.8	5.1			

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

MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:	703					
MAXIMUM INSTANTANEOUS VALUE:	36.7	PPB	@ HOUR(S)	5	ON DAY(S)	13
IZS CALIBRATION TIME:	32	HRS	OPERATIONAL TIME:		742	HRS
MONTHLY CALIBRATION TIME:	7	HRS				
STANDARD DEVIATION	4.24					


01 Hour Averages
500
375
250
125
0
10/01/10 00:00
10/06/10 00:00
10/11/10 00:00
10/16/10 00:00
10/21/10 00:00
10/26/10 00:00
10/31/10 00:00
LICA33 THCMAX PPM

LICA33
THC / WDR Joint Frequency Distribution (Percent)

October 2010

Distribution By % Of Samples

Logger Id : 33
Site Name : LICA33
Parameter : THC
Units : PPM

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
<	3.0	2.83	1.84	3.11	4.10	7.22	2.40	2.40	6.65	3.25	3.96	11.61	10.05	9.77	9.06	1.98	6.23	86.54
<	10.0	.28	.28	.56	2.26	2.97	1.41	.70	.56	1.13	.28	1.41	.56	.28	.14	.42	.14	13.45
<	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	3.11	2.12	3.68	6.37	10.19	3.82	3.11	7.22	4.39	4.24	13.03	10.62	10.05	9.20	2.40	6.37	

Calm : .00 %

Total # Operational Hours : 706

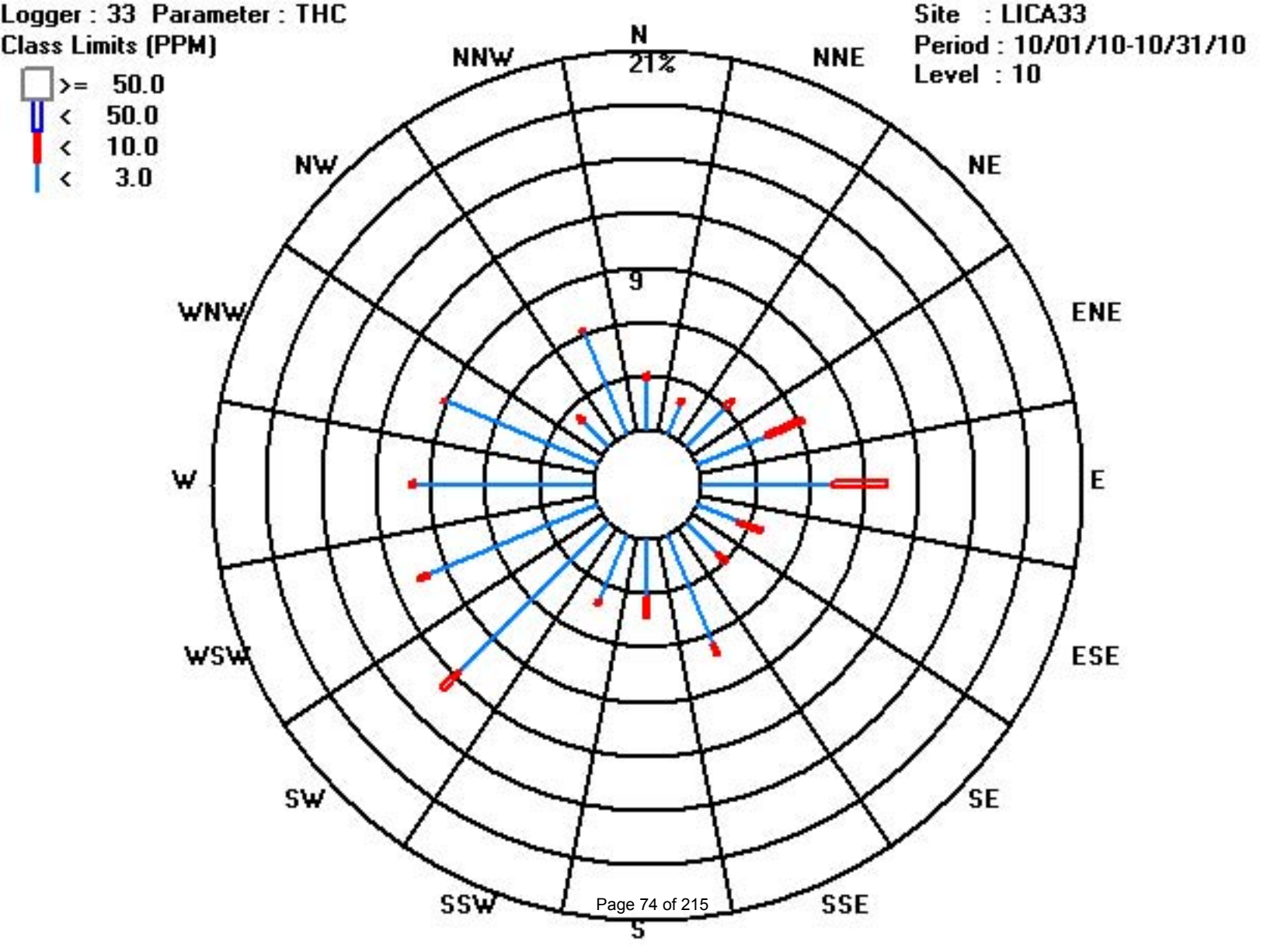
Distribution By Samples

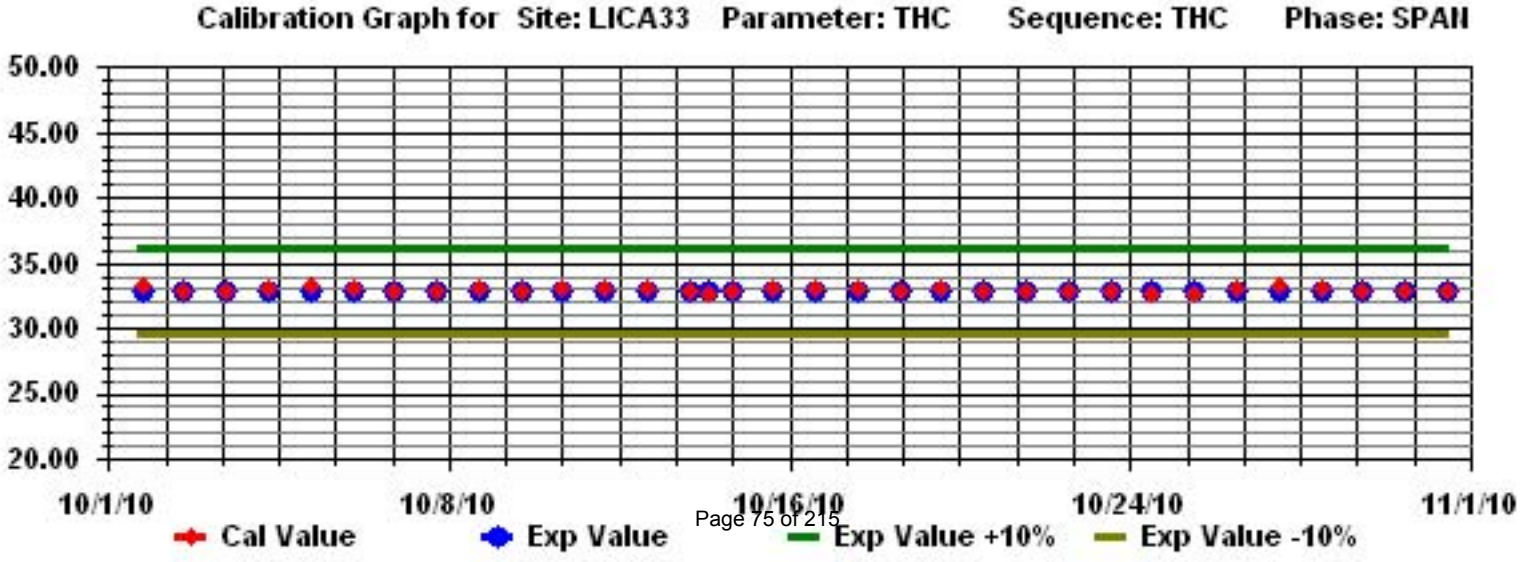
Direction

	Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
<	3.0	20	13	22	29	51	17	17	47	23	28	82	71	69	64	14	44	611
<	10.0	2	2	4	16	21	10	5	4	8	2	10	4	2	1	3	1	95
<	50.0																	
>=	50.0																	
	Totals	22	15	26	45	72	27	22	51	31	30	92	75	71	65	17	45	

Calm : .00 %

Total # Operational Hours : 706


Logger : 33 Parameter : THC
Class Limits (PPM)
>= 50.0
< 50.0
< 10.0
< 3.0
Site : LICA33
Period : 10/01/10-10/31/10
Level : 10
N
21%
NNE
NE
ENE
E
ESE
SE
SSE
S
SSW
SW
WSW
W
WNW
NW
NNW
9


Calibration Graph for Site: LICA33 Parameter: THC Sequence: THC Phase: SPAN
50.00
45.00
40.00
35.00
30.00
25.00
20.00
10/1/10
10/8/10
10/16/10
10/24/10
11/1/10
Cal Value
Exp Value
Exp Value +10%
Exp Value -10%

Vector Wind Speed

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *PORTABLE SITE*

OCTOBER 2010

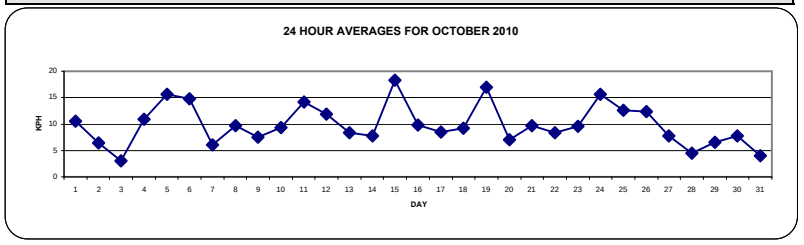
VECTOR WIND SPEED (WS) hourly averages (km/hr)

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	2.1	1.8	1.1	2	1.9	3	2.1	2.7	7.1	13.2	16	19.5	21	23.7	22.6	20.2	15.4	12.7	11	13.8	13.7	11.7	14.5	15.3	23.7	10.5	24
2	12.9	14.2	16.3	17	13.8	11.7	6.8	7.3	13	11.9	8.1	8	7.4	6.3	6	6.1	2.8	3.6	1.1	0	3	1.2	2.4	5.2	17	6.4	24
3	6.2	4.4	2.6	3	5.4	5.8	5.8	4.4	6	5.4	4.1	3.8	5.5	6.1	7	8.6	9.3	8	9.5	10	12	9.8	10.6	10.5	12	3	24
4	10.2	11.9	15.1	17.9	15.7	17.8	15.5	15.3	15.3	14.1	14.9	15	14.3	13.8	12.9	13.7	13.4	11.5	10	6.3	6	3	8.4	6.4	17.9	10.9	24
5	2.5	6.4	8.9	13.6	15.6	17.2	17.5	16.1	20.8	23.6	26.2	26	27.5	25.3	25.8	23.3	17.8	9.8	11.5	7.2	5.6	6.1	7.7	12.2	27.5	15.6	24
6	21.4	20.6	21.2	23.7	17.3	15.2	17	17.8	15.2	15.7	15.4	17.8	17.9	17.3	17.2	12.1	12.7	11.8	16.9	11.2	6	6.1	3.7	3.6	23.7	14.8	24
7	3.4	2.8	1.5	2.7	2.9	4.5	4.3	2.4	4.5	2.6	4.2	10.3	7.5	5.1	7	11.5	10.6	7.6	7.9	7.3	8.8	6.8	10.4	9.9	11.5	6.1	24
8	12.9	13	10.4	8.9	10.6	9.2	8.4	8.8	9.4	5.6	5.2	11.4	7.3	13	15.2	14.4	14.6	10.8	6.7	9.2	10.1	9.5	5.8	3.7	15.2	9.8	24
9	5	2.8	2.7	2.6	3.6	2.2	3.5	4.8	6.4	8.6	11.6	16.5	15.9	14.4	16.1	11.1	9.5	6.3	6.5	11.8	8.2	1.8	2.9	4.4	16.5	7.5	24
10	5.2	7.1	6.5	8	7.5	8.5	8.1	4.4	8.7	12.7	7.9	9.6	8.8	8.4	9.5	8.2	2.2	12	19.2	18.3	15.5	10.2	7.6	10.1	19.2	9.3	24
11	16.5	10.4	9.1	9.6	10.2	13.2	12.6	12.2	14	18	22.7	20.7	19.1	22.3	20	21.1	16.3	9.9	10.8	11.3	12.1	11.4	9.4	6.2	22.7	14.1	24
12	4.7	2	6.7	10.9	10.3	10.4	10.8	11.2	11.4	20.3	24.2	24.1	25	22.2	22.1	19.7	16.2	8.7	3.7	3.9	3	2.8	4.6	5.3	25.0	11.8	24
13	4.3	3.9	3.1	5.2	2.1	0.9	3.4	2	9.6	12	11.7	12.3	18.1	17.2	23.5	23.1	19.7	11.3	8.3	3.9	2.4	1	2.2	0.7	23.5	8.4	24
14	3.2	2.8	4.6	6.4	6.3	7.7	10	11.1	11.8	12.6	15.9	19.1	14.1	11.3	9	10	4.6	0.5	4.6	3.5	2.4	2.1	8	5.9	19.1	7.8	24
15	4.9	8	6.5	7.9	13.1	13.5	16	8.8	10.9	16.4	26.8	27.8	25.8	**30.5**	29.7	27.5	26.7	24	23	22.3	21.4	18.3	16.9	13.9	**30.5**	**18.4**	24
16	17.3	18.2	15.8	10.9	8.7	9.8	8.3	8.1	11.1	10.5	9.9	11.2	12.9	17.2	13.8	12.6	7.5	3.3	5.2	3.2	5	5.4	4.7	4.3	18.2	9.8	24
17	0.6	1.1	1.4	1.5	1.5	1.6	3.4	7	6.8	13.5	18.2	19.4	19.3	20.4	20.1	17.8	13.8	7.2	4.3	5.2	6	4.5	3.2	4.9	20.4	8.4	24
18	6.4	1.8	2.8	3.3	2.7	3.1	4	1.9	3	8.1	8.9	9.5	12.8	16.4	15.1	12.2	13.3	11.5	11.5	12.5	16.6	17.3	13.7	13.4	17.3	9.2	24
19	11.2	14.1	13.5	11.9	12.7	11.8	10	12.9	14.5	16.9	24.8	26.7	23.2	20.4	22.5	20.9	21.5	25.4	23.5	20	10.9	10.3	11.7	14.8	26.7	16.9	24
20	10.4	8.9	10.4	11.4	10.5	8.5	11	12.8	8.6	7	6.7	7.7	7.3	8.4	7.9	7	1.7	5.7	3.5	3.5	2.1	4.3	2.6	2	12.8	7.1	24
21	5.1	5.6	8.4	6.6	8.1	9.9	6.8	0.8	6.6	11.3	10.5	8	8.5	11	22.9	19.9	14	12	10.9	12.8	12.5	7	6.5	6.3	22.9	9.7	24
22	6.1	4.3	5.7	5.5	4.6	5.5	4.3	4.3	3.1	5.6	10.2	11.9	10	7.7	9.2	10.8	12.7	13.7	12.4	11.9	12.1	9.8	9.1	9.8	13.7	8.3	24
23	12.8	13	12.1	9.2	8.4	8.5	7.3	5.8	6.8	6.2	7.1	9.3	4.9	8.4	7.9	10.5	11.7	11.2	9.5	11.1	10.4	10.8	13.5	12.7	13.5	9.5	24
24	12	15.4	14.5	13.8	14.5	16.7	17.2	15.6	17.7	16.3	15.1	16.5	17.4	16.7	18.7	18.7	18.8	16.5	13.6	12.5	12.4	13.4	14.7	15.4	18.8	15.6	24
25	13.6	14.6	13.3	12.3	11.7	11.7	11.5	11.1	12.2	11.8	12.1	13.1	14	15.8	14.7	14.5	13.2	14.6	15.5	13.3	9.9	9.8	10.2	9.1	15.8	12.7	24
26	12.1	12.5	12.6	12.5	10.9	12.2	12.1	11.7	13.8	15	13.8	14.3	13.8	11.9	11.7	11.8	12.2	13.7	12.1	11.9	12.5	12.5	8.8	9.7	15.0	12.3	24
27	11.4	9.5	10.2	11.3	11.2	9.5	11.5	9.6	10.7	8.9	6.6	6.8	4.8	5.2	2.9	4.1	5	7.8	6.2	3.6	10.1	11	6.9	1	11.5	7.7	24
28	2.5	3.1	0.5	4.1	4.4	2.6	3.6	2.9	3.6	5.4	5.7	4.3	6.7	4	3.4	2.6	5.7	4.9	4.5	5.1	6.2	7.9	7.8	4.9	7.9	4.4	24
29	6.6	4.8	4.9	5.1	4.4	3.4	5.2	4.9	4.8	5.5	5.1	7.3	7.5	7.6	7.3	8.6	9.9	10.4	6.9	7.6	8.4	8.2	7.6	5.8	10.4	6.6	24
30	6.3	6.4	5.3	6.8	7.9	8.9	7.3	6.7	7.1	7.1	6.4	10.5	12.8	11.8	10.7	8.8	9.5	7.4	5.9	6.6	6.4	8.2	6.2	5.9	12.8	7.8	24
31	6.1	6.3	5.4	6.4	4.5	4.2	1.3	3.1	1.6	3.6	1.9	0.6	3	6.5	8.5	4.5	5.5	5.6	1.4	3.2	3.9	6.5	0.7	2.1	8.5	4.0	24
HOURLY MAX	21.4	20.6	21.2	23.7	17.3	17.8	17.5	17.8	20.8	23.6	26.8	27.8	27.5	30.5	29.7	27.5	26.7	25.4	23.5	22.3	21.4	18.3	16.9	15.4			
HOURLY AVG	8.3	8.1	8.2	8.8	8.5	8.7	8.6	8.0	9.6	11.1	12.2	13.5	13.4	13.8	14.2	13.4	11.9	10.3	9.6	9.2	8.9	8.0	7.8	7.6			

STATUS FLAG CODES

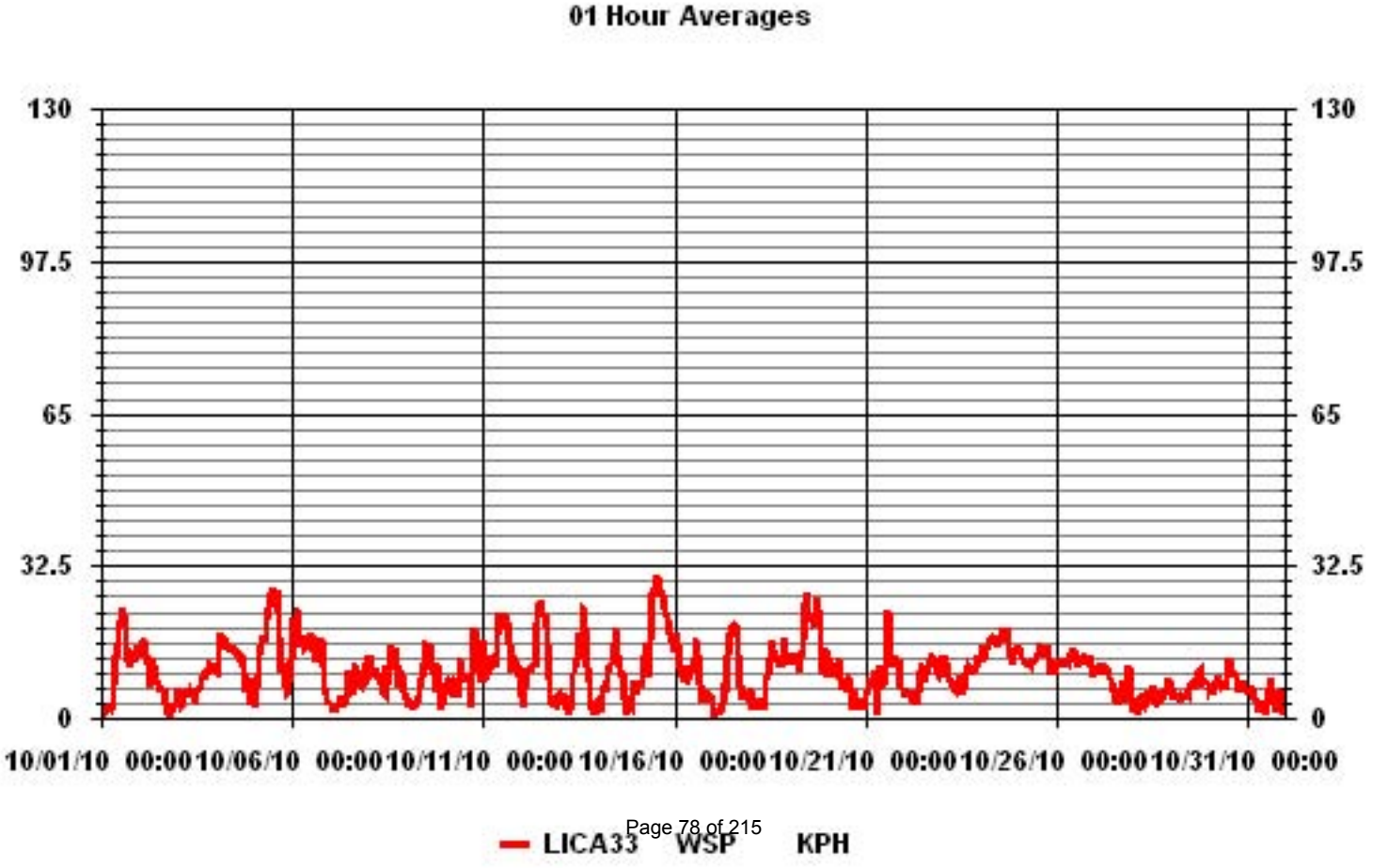
S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	-MAINTENANCE
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE



LAST CALIBRATION: September 24, 2009

MONTHLY SUMMARY

MAXIMUM 1-HR AVERAGE:	30.5	KPH	@ HOUR(S)	13	ON DAY(S)	15	
MAXIMUM 24-HR AVERAGE:	18.4	KPH			ON DAY(S)	15	
CALMS (≤ 1 KPH)	0.13	%	OPERATIONAL TIME:		744	HRS	
MONTHLY CALIBRATION TIME:	0	HRS	AMD OPERATION UPTIME		100.0	%	
STANDARD DEVIATION:	5.84		MONTHLY AVERAGE:		10.06	KPH	


01 Hour Averages
130
97.5
65
32.5
0
10/01/10 00:00
10/06/10 00:00
10/11/10 00:00
10/16/10 00:00
10/21/10 00:00
10/26/10 00:00
10/31/10 00:00
LICA33 WSP KPH

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *PORTABLE SITE*

OCTOBER 2010

VECTOR WIND SPEED MAX instantaneous maximum in km/hr

MST

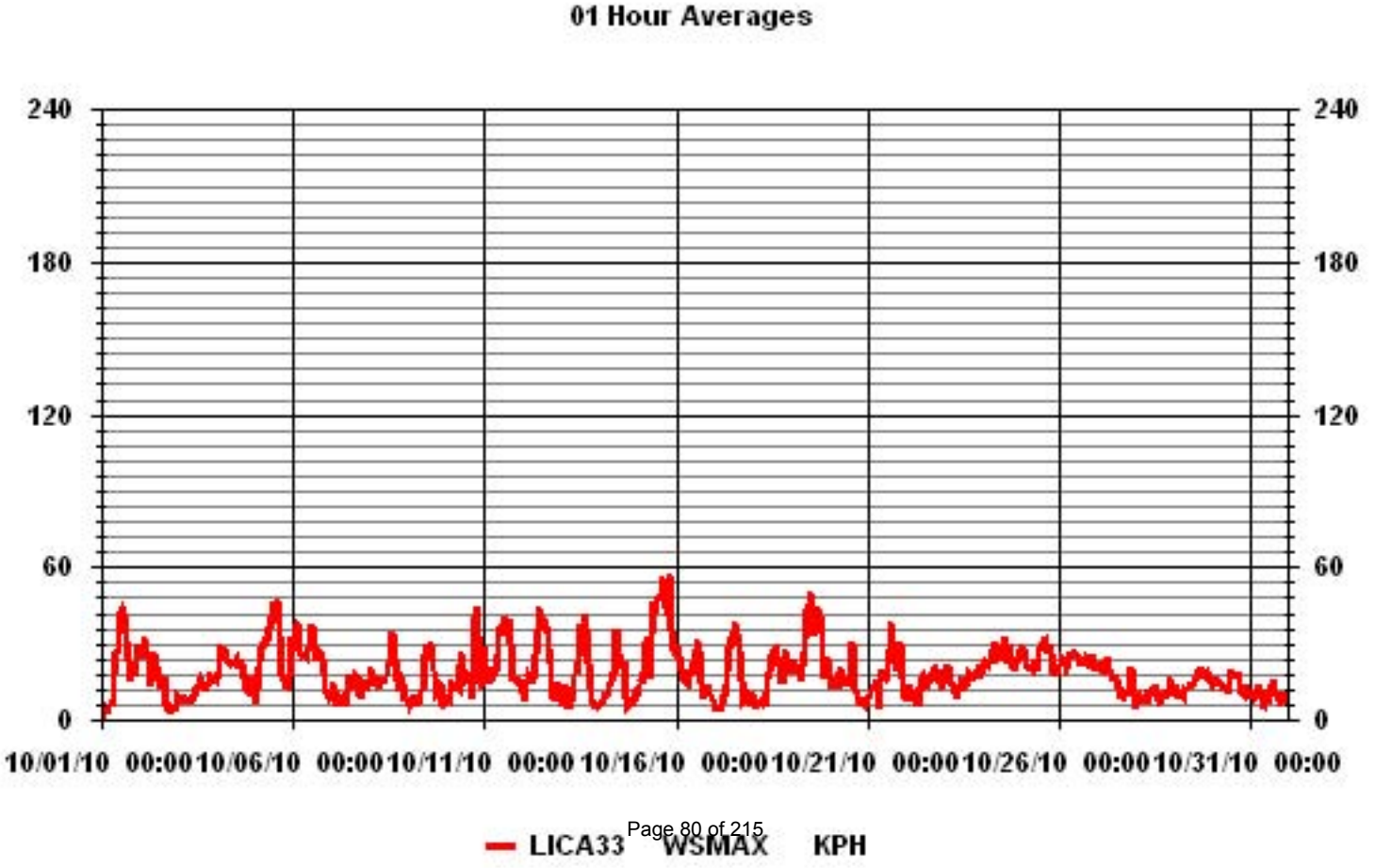
HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.
DAY																									
1	6.7	6.1	3.6	4.5	4.1	5.5	6.4	6.5	17.8	26.1	27.9	34.6	42.3	43.8	42.4	35.2	31.5	24	15.1	16.9	19.1	17.8	28.8	29	43.8
2	27.6	24	28.2	32.9	25.8	25.6	13.3	14.9	25.4	26.7	18.1	21	18.9	13.5	13.7	14.5	6.8	5.8	4.3	2.5	5.6	5.1	4.9	9.8	32.9
3	9	8.9	8.5	5.9	9.9	8.3	8.2	6.4	9.5	9.2	11.5	11.1	12.4	13.2	15.7	14.5	14.2	10.9	13	14.8	18.2	14	16.2	16.8	18.2
4	16.1	19.1	29.2	26	25.2	28.7	23.8	23.6	22.2	23.1	22.7	22.6	24.1	22.1	19.7	23.8	22.4	17.6	17.7	12.7	11.6	8.9	15.4	16.2	29.2
5	6.4	11.8	20.9	23.4	28.2	30.6	29.6	29.7	31.4	36.3	40	46.6	44.5	41.2	47.5	38.9	33.4	18	16.1	14	13.5	16.9	17.6	32.7	47.5
6	31.7	37.5	38.4	37.8	27.9	25.2	25.8	25.7	24.9	27.8	28.4	37.6	36.7	36.1	30	23	24.3	27.4	25	18.8	11.7	11.3	8.9	9.8	38.4
7	11.3	14.8	12.1	6.1	6.1	7.3	8.2	5.7	9.2	5	10.9	17.6	15	14.5	15.9	18	17.4	10.8	9.6	9.6	13.8	11.4	15.8	14.1	18
8	19.2	19.2	18.5	13	15.6	14.1	11.8	14.3	16.6	14.8	16.9	21.9	21.9	23.6	34.5	30.9	24.9	16.4	11	14.7	16.2	14.6	8.4	8.4	34.5
9	7.8	5.5	6.9	7.4	9.4	7.2	6.9	7.5	11.4	12.2	25.8	29.3	27	25.4	30.4	24.1	19.6	10.6	11.4	14.5	14.2	6.7	6.1	6.8	30.4
10	8.1	9.2	8.5	14.6	14.1	13.1	13.5	12.7	22.1	26.2	19.2	16.6	17.8	16.7	17.8	17.1	7.7	37.5	40.6	44.6	33.8	15	12.6	20.4	44.6
11	28.9	16.6	13.7	17	20.9	19.8	18.1	19.1	26	36.3	37	36.6	32.7	40.5	35.9	36.8	31	16.7	16.6	16.1	14.9	15.5	14	13.4	40.5
12	10.8	7.6	15.8	18.1	16.7	18	14.8	16.4	26	35.2	44	41.1	40.7	37.6	38.2	34.5	28.9	22.5	8	12.4	8.8	8.5	14	14	44
13	12.9	7.2	7	14	5.5	5.6	9.1	7.9	17.7	21.3	20.7	25.1	37.9	35.7	39.3	41.8	36.4	23.1	13.5	8.2	7.2	4.2	6.9	5.4	41.8
14	6.4	6.7	7.9	9.8	9.6	10.5	12.9	15	18.2	18.8	34.4	34.6	26.5	21.9	21.4	21.8	9.2	5.8	6.8	8.8	5.5	6.9	11.6	10.3	34.6
15	12.4	14	16.2	14.8	24.9	30	32.8	16.2	18.2	33.4	46.2	45.1	47	48.3	49.7	55.9	50.5	44.6	40.7	44.6	**57.3**	35.3	28.5	27.3	**57.3**
16	29.6	28.1	25.8	20.1	16.7	15.1	14.9	14.4	18.7	18.5	19	22.7	27.7	31.1	27	24.2	14.8	8.2	9.4	12.7	13	10.9	8.7	8.4	31.1
17	3.9	5.7	5.2	4.3	4.5	6.2	9.5	13.4	18.6	28.2	31.3	30.9	34.5	38	32.1	33.1	27.2	15.7	7.3	8.1	9.4	7	5.1	8.7	38
18	10.3	5.4	5.5	6.5	7.5	6.7	8	5.8	7.8	18.4	16.6	18.9	25.5	27.3	27.9	21.5	24.6	18.6	14.3	21.1	27.8	25.2	21.1	19.1	27.9
19	18.1	24	21.1	17.8	20.7	20.7	15.5	20.6	26.6	32.2	43.7	45.8	50.4	32.7	38.7	37.1	42	43.9	41.8	35.1	24.4	15.8	20	24.4	50.4
20	18	12.4	15.6	16.3	14.8	12.4	18.3	20.6	16.6	14.6	14.4	15.6	15.6	18.9	30.5	13.5	11.8	11.4	9.2	7.5	5.4	7	8	6.6	30.5
21	8.4	9.1	11.3	13.1	12.9	15.5	11.6	4.2	19	19.4	18.1	16.9	17.8	27.5	37.1	36.6	28.9	22.8	19.3	28.3	30.6	16.9	10.2	9.8	37.1
22	13	6.7	13.3	12.1	9.9	10.7	8.2	7	6	11.5	16.7	17.8	15.8	11.9	13.9	15.6	18.4	19.8	18.2	19.4	18	15.4	13.7	14.7	19.8
23	19.3	19.5	21.4	19.7	13.2	14.7	11.2	8.2	10.2	11.7	12.1	16.9	12	13.6	14.5	19.2	18.6	16.6	16.8	18.2	16.2	18.1	21.3	19.7	21.4
24	21.1	23.1	22.5	21.5	22.7	25.7	24.8	23.1	30.3	24.1	24.4	25.9	25.7	24.9	32.5	27.3	27.8	29.6	21.6	21.6	18.9	21.7	24.6	28	32.5
25	22.9	28.4	28.1	22.2	21.8	20.6	21	20.2	23.5	21.6	21.3	27.9	28.5	31	30.1	31.1	27.8	26.3	29.5	26.6	19.5	17	20.2	18.9	31.1
26	22	24.6	23.5	23.5	21.1	22.4	26.6	24.5	26.4	27.9	24.2	26.6	22.8	23.1	21.8	21.9	24.5	23.4	25.4	23.5	24.9	25.1	18.6	22.4	27.9
27	22	20.8	21.8	20.7	23.3	19.6	25	19.4	18.8	16.3	16.6	16.4	12.1	13.2	9.7	9.2	11.2	10.6	10.8	9.3	19.2	21.2	12.8	4.2	25
28	8.4	9.5	6	10.1	8.6	7	9	6.4	11	11.6	10.7	10.3	13.4	8.5	6.8	7.2	9.9	10	10.8	10.4	12	16.8	13.7	11.2	16.8
29	11.8	12.5	9.7	10	10.7	9.7	12.2	11.6	12.3	13.7	13.4	14.2	14.7	16.4	16.8	18.7	19.3	21.1	16	18.1	19	16.2	15.7	14.4	21.1
30	16.9	14.4	14.4	16.3	15.9	15.3	13	12.2	12.2	12.3	12	18.4	18.3	17.2	16.8	16.9	18.3	14.4	11.3	10.3	12.5	13	11.5	8.2	18.4
31	9.4	11.3	9.1	10.3	12.4	13.7	9.3	5.4	5	10.3	10.3	6.2	10.6	13.3	15.3	10.7	10.4	8.5	6.6	6.7	8.4	10.5	6.4	7.7	15.3
PEAK	31.7	37.5	38.4	37.8	28.2	30.6	32.8	29.7	31.4	36.3	46.2	46.6	50.4	48.3	49.7	55.9	50.5	44.6	41.8	44.6	57.3	35.3	28.8	32.7	

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

MONTHLY SUMMARY

MAXIMUM INSTANTANEOUS READING	57.3	KPH	@ HOUR(S)	20
			ON DAY(S)	15


01 Hour Averages
240
180
120
60
0
10/01/10 00:00
10/06/10 00:00
10/11/10 00:00
10/16/10 00:00
10/21/10 00:00
10/26/10 00:00
10/31/10 00:00
LICA33 WSMAX KPH

LICA33
WSP / WDR Joint Frequency Distribution (Percent)

October 2010

Distribution By % Of Samples

Logger Id : 33
Site Name : LICA33
Parameter : WSP
Units : KPH

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
<	6.0	1.07	.26	1.20	1.20	1.74	1.47	1.47	1.61	3.49	2.95	4.97	1.74	1.07	1.47	.53	.67	27.01
<	12.0	1.20	.94	1.74	3.62	4.03	2.15	1.47	3.22	.53	1.20	5.91	4.70	3.22	2.41	.80	2.28	39.51
<	20.0	.80	.80	.67	1.47	4.30	.13	.67	2.28	.26	.00	2.01	3.36	3.49	1.61	1.07	3.22	26.20
<	29.0	.00	.00	.00	.00	.00	.00	.13	.40	.00	.00	.13	.67	2.28	3.22	.00	.00	6.85
<	39.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.26	.00	.00	.26
>=	39.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
	Totals	3.09	2.01	3.62	6.31	10.08	3.76	3.76	7.52	4.30	4.16	13.03	10.48	10.08	9.00	2.41	6.18	

Calm : .13 %

Total # Operational Hours : 744

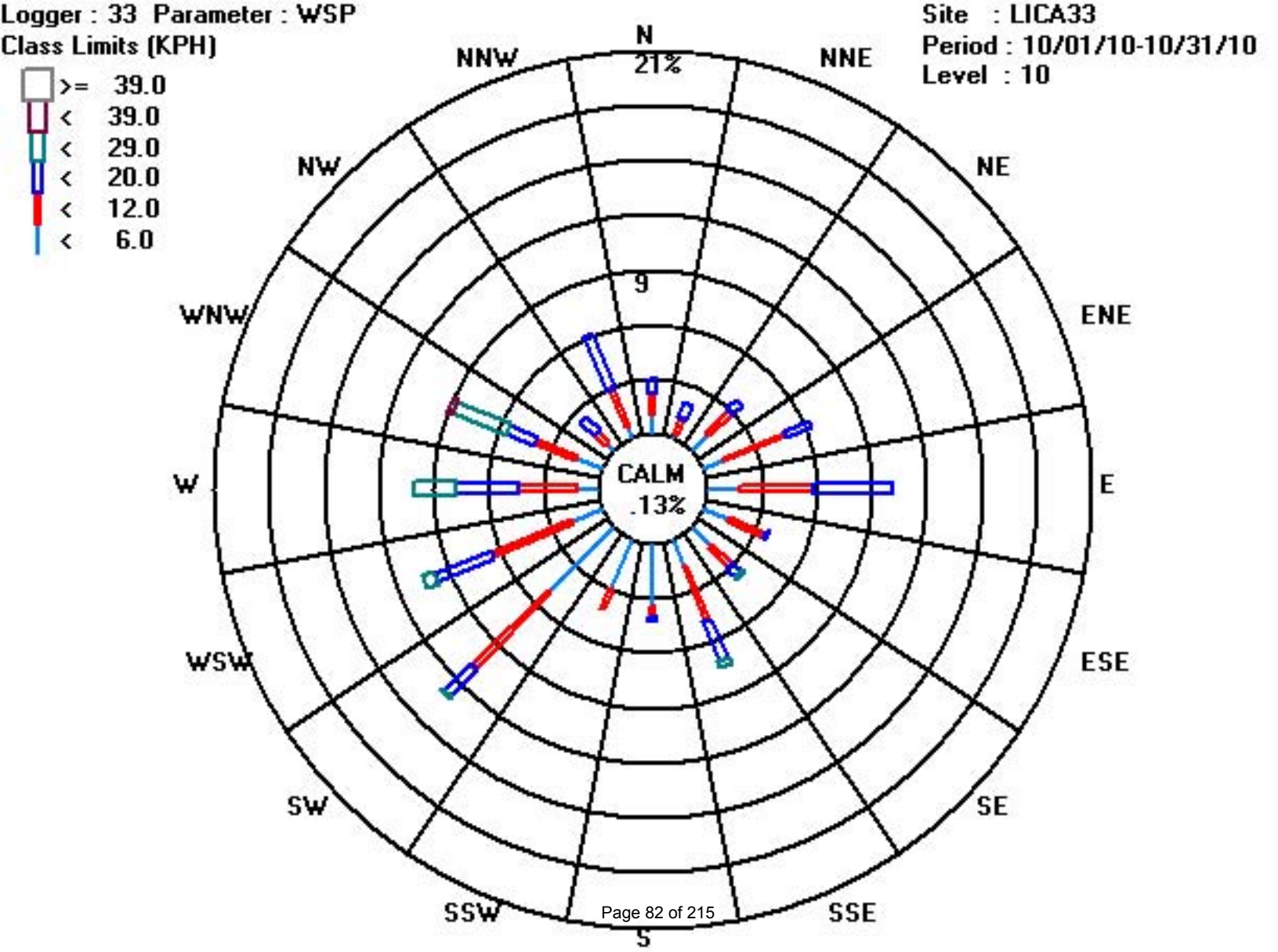
Distribution By Samples

Direction

	Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
<	6.0	8	2	9	9	13	11	11	12	26	22	37	13	8	11	4	5	201
<	12.0	9	7	13	27	30	16	11	24	4	9	44	35	24	18	6	17	294
<	20.0	6	6	5	11	32	1	5	17	2		15	25	26	12	8	24	195
<	29.0							1	3			1	5	17	24			51
<	39.0														2			2
>=	39.0																	
	Totals	23	15	27	47	75	28	28	56	32	31	97	78	75	67	18	46	

Calm : .13 %

Total # Operational Hours : 744


Logger : 33 Parameter : WSP
Class Limits (KPH)
>= 39.0
< 39.0
< 29.0
< 20.0
< 12.0
< 6.0
Site : LICA33
Period : 10/01/10-10/31/10
Level : 10
N
21%
NNE
NE
ENE
E
ESE
SE
SSE
S
SSW
SW
WSW
W
WNW
NW
NNW
9
CALM
.13%

Vector Wind Direction

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *PORTABLE SITE*

OCTOBER 2010

VECTOR WIND DIRECTION (WD) hourly averages in degrees

MST

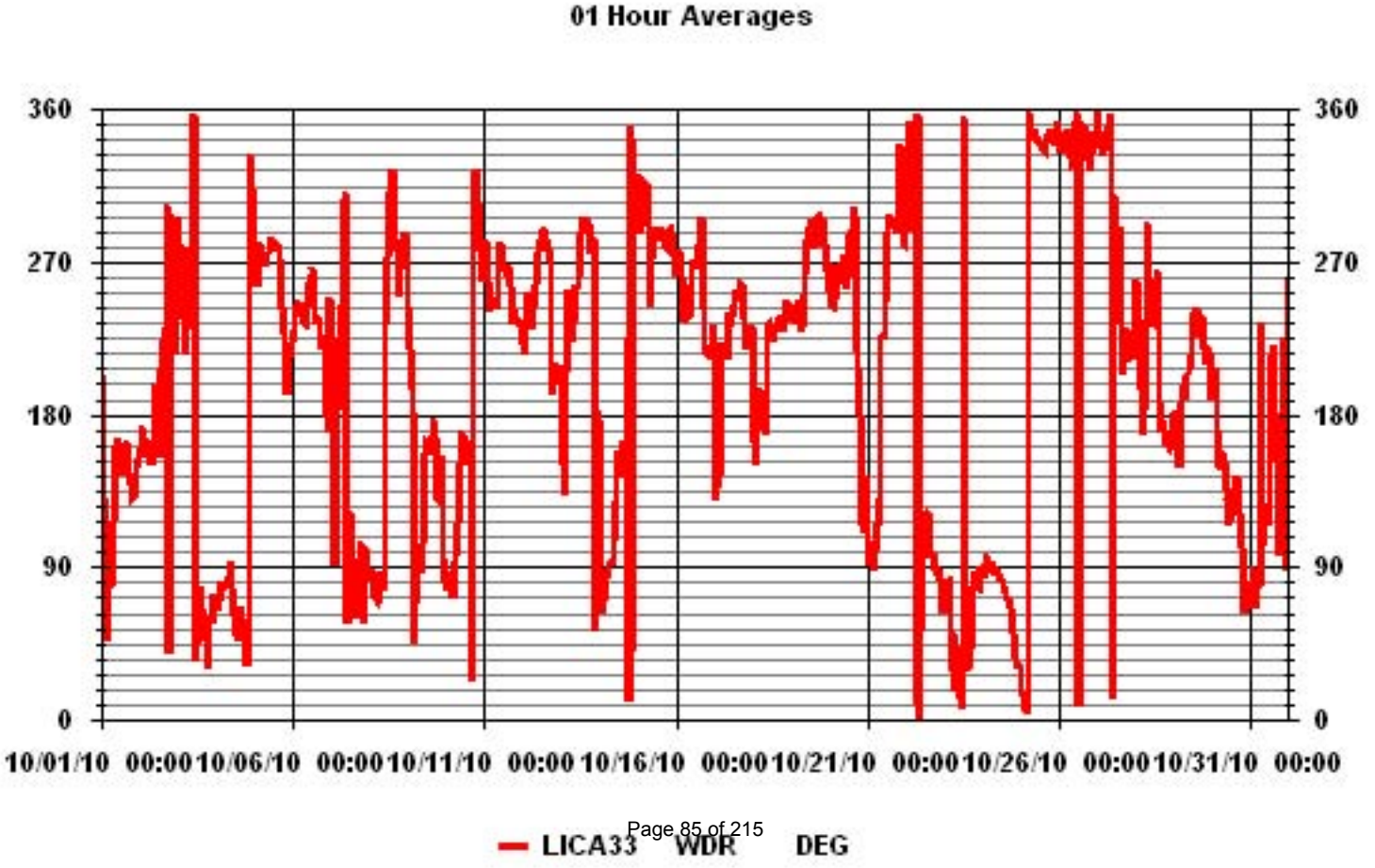
HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	24-HOUR	24-HOUR AVG	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	AVG.	QUANDRANT	RDGS.
DAY																											
1	203	102	131	119	46	77	82	79	117	162	166	164	154	144	147	149	165	147	140	131	132	135	148	154	146	SE	24
2	160	174	163	164	166	156	156	151	154	171	195	194	154	207	212	224	232	304	38	156	298	215	231	293	175	S	24
3	296	272	280	237	215	235	234	253	279	289	357	34	45	54	78	67	52	47	37	30	59	59	74	69	39	NE	24
4	65	69	70	81	79	77	81	84	85	93	79	63	51	47	50	67	57	57	47	32	34	334	298	313	65	ENE	24
5	276	256	262	281	269	270	270	267	275	282	282	278	278	282	281	277	272	244	228	223	191	206	214	222	268	W	24
6	229	238	244	247	239	241	235	234	246	250	258	262	267	245	233	239	234	219	226	224	217	180	169	249	239	WSW	24
7	215	174	90	113	182	225	245	250	306	311	56	104	123	90	77	59	66	95	105	76	56	103	83	86	89	E	24
8	84	84	89	73	72	70	72	79	87	76	233	273	311	309	324	308	285	278	249	272	274	278	287	267	335	NNW	24
9	245	220	196	183	44	69	98	91	90	104	157	165	164	157	159	167	178	167	131	130	138	155	97	82	148	SE	24
10	76	87	85	85	72	93	97	116	151	170	168	150	156	152	159	165	22	314	322	324	306	278	264	258	151	SSE	24
11	280	283	260	240	249	244	243	243	249	270	281	271	266	264	266	266	256	235	235	242	234	237	233	226	257	WSW	24
12	223	216	234	252	245	238	230	244	257	275	281	280	288	290	286	284	278	271	191	202	201	210	207	209	265	W	24
13	191	152	132	204	253	232	222	249	235	257	254	261	287	296	287	289	296	293	274	280	285	52	183	178	272	W	24
14	90	78	63	70	83	89	92	93	93	105	129	146	158	156	142	164	162	226	11	350	40	343	305	299	115	ESE	24
15	321	286	320	291	296	317	301	261	244	271	290	284	286	283	287	291	285	280	279	289	290	287	275	262	285	WNW	24
16	267	276	276	263	235	238	243	237	238	257	271	268	268	278	278	287	296	243	222	217	216	219	219	233	260	WSW	24
17	214	130	137	144	223	220	218	216	212	240	231	237	245	253	247	252	259	257	237	227	218	232	229	231	238	SW	24
18	233	165	150	171	195	188	186	191	168	233	234	225	225	229	232	235	236	239	231	229	242	246	246	237	229	SW	24
19	235	244	241	233	244	247	229	232	251	263	283	290	295	286	277	296	297	279	282	285	297	281	264	272	272	W	24
20	253	245	244	248	253	269	264	270	256	274	254	261	286	288	284	302	298	218	209	181	116	110	134	144	256	WSW	24
21	106	91	101	101	87	99	115	130	225	227	225	246	287	291	298	295	293	291	287	335	340	300	281	280	290	WNW	24
22	293	292	353	337	332	339	9	357	0	52	114	121	121	123	122	96	98	98	89	87	90	85	78	63	81	E	24
23	83	80	81	70	29	52	48	17	43	39	14	7	356	28	41	30	41	60	78	88	80	79	90	88	58	ENE	24
24	84	91	97	93	89	90	93	89	85	88	87	84	82	74	79	73	72	68	66	52	37	31	33	32	75	ENE	24
25	17	16	12	6	4	359	349	344	344	342	344	341	340	337	336	335	343	345	347	347	341	338	349	352	349	NNW	24
26	348	334	338	347	344	349	332	328	329	334	352	359	7	348	331	331	349	348	344	323	334	343	346	343	341	NNW	24
27	358	348	339	332	336	343	344	350	357	12	310	299	286	287	234	203	214	231	220	211	226	228	227	212	309	NW	24
28	259	219	203	196	168	182	236	293	232	252	260	253	240	266	232	188	169	177	172	163	161	164	163	181	202	SSW	24
29	165	183	157	149	187	197	188	202	204	212	211	240	227	233	243	225	231	239	219	210	217	220	217	189	212	SSW	24
30	196	205	205	172	150	147	158	153	137	131	115	118	136	120	128	144	138	123	102	78	63	74	82	74	130	SE	24
31	76	90	66	89	82	78	234	103	120	126	115	128	205	215	221	183	152	164	96	146	185	226	87	258	145	SE	24
HOURLY AVG	358	348	353	347	344	359	349	357	357	342	357	359	356	348	336	335	349	348	347	350	341	343	349	352			

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

LAST CALIBRATION:	September 24, 2009
DECLINATION :	19 DEGREES FROM MAGNETIC NORTH

MONTHLY CALIBRATION TIME:	0	HRS	OPERATIONAL TIME:	744	HRS
STANDARD DEVIATION	91.63		AMD OPERATION UPTIME	100.0	%
			MONTHLY AVERAGE	262	DEG


01 Hour Averages
360
270
180
90
0
10/01/10 00:00
10/06/10 00:00
10/11/10 00:00
10/16/10 00:00
10/21/10 00:00
10/26/10 00:00
10/31/10 00:00
LICA33 WDR DEG

Standard Deviation Wind Direction

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *PORTABLE SITE*

OCTOBER 2010

STANDARD DEVIATION WIND DIRECTION (STDWDIR) hourly averages in degrees

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00
DAY																								
1	31	40	28	10	18	11	25	17	13	13	15	15	15	13	13	14	14	10	5	3	3	6	12	14
2	14	11	13	13	14	14	14	14	14	17	24	22	23	22	27	23	21	8	13	52	13	38	24	13
3	4	13	16	10	15	8	6	8	9	15	36	38	26	26	23	19	6	5	5	6	6	6	6	5
4	6	6	8	7	6	6	7	7	7	7	7	8	8	8	7	8	7	7	7	12	12	16	8	15
5	19	9	10	8	10	9	10	11	9	10	11	12	10	12	12	11	11	8	5	17	22	25	20	10
6	7	9	9	9	7	8	7	7	10	12	13	15	15	13	8	11	13	17	6	8	20	16	17	39
7	21	40	26	20	14	10	9	27	11	23	25	16	21	32	27	9	7	8	4	5	4	12	5	5
8	6	5	6	5	4	5	5	7	9	19	45	12	16	14	15	13	9	6	7	6	7	6	9	38
9	15	22	20	26	21	24	15	9	12	11	17	14	13	14	14	13	13	9	6	3	8	35	27	13
10	5	5	4	4	7	9	10	50	16	18	20	16	18	16	16	13	14	10	13	14	13	8	8	10
11	8	8	9	6	8	6	6	8	11	13	11	13	15	14	14	12	11	5	5	5	4	5	5	18
12	27	34	26	8	6	7	5	7	12	9	11	12	11	12	12	10	9	6	21	19	19	21	23	24
13	22	14	13	20	18	26	16	31	11	12	14	15	14	15	13	11	11	8	15	19	23	17	27	24
14	12	19	10	5	7	4	4	5	7	8	12	13	15	14	19	15	14	41	12	13	12	43	8	18
15	23	6	12	10	11	12	10	9	9	12	11	10	12	11	10	10	10	9	9	12	10	9	9	10
16	9	8	8	9	6	5	6	7	9	14	18	19	18	13	15	10	9	13	10	26	13	14	26	16
17	33	41	18	20	23	21	18	16	21	12	9	11	12	13	11	11	10	6	10	16	11	7	9	8
18	6	15	15	9	22	16	12	32	28	19	13	16	17	12	11	9	8	7	3	5	8	6	5	5
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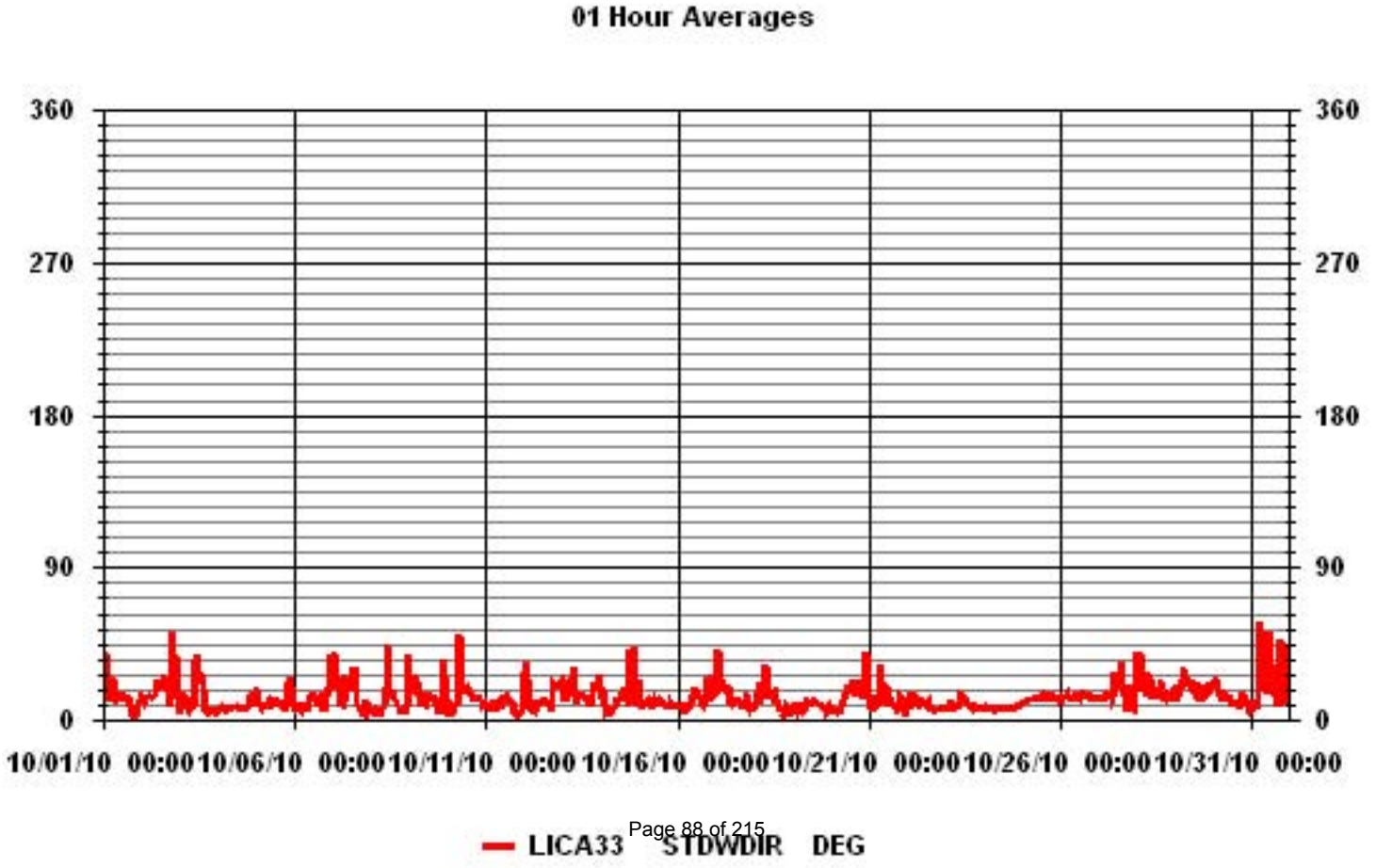
22	9	9	16	13	15	14	10	9	11	11	11	9	10	11	7	7	7	6	7	7	6	7	7	8
23	7	6	7	11	8	8	7	9	9	14	13	15	15	10	10	9	9	7	10	6	7	7	6	7
24	7	8	8	7	8	7	6	7	6	6	7	7	7	7	7	7	7	7	7	7	8	8	9	9
25	10	11	12	12	12	12	12	13	13	13	13	13	15	13	14	14	14	13	14	14	14	13	14	12
26	14	13	14	14	16	14	13	13	14	13	15	16	14	17	16	14	14	15	13	13	14	14	14	14
27	13	13	14	13	15	14	15	15	12	15	28	24	22	25	34	18	16	4	17	21	7	6	12	40
28	16	22	40	21	17	21	14	28	25	13	17	20	14	17	12	23	12	12	17	14	15	13	13	18
29	14	20	16	18	24	32	21	21	24	21	23	18	16	19	22	17	15	12	19	20	19	17	19	21
30	23	25	19	16	13	13	15	15	13	13	15	10	9	9	10	10	7	12	17	9	13	8	9	5
31	6	8	11	6	42	58	45	16	52	15	32	52	34	19	14	18	10	10	48	21	16	10	44	35

STATUS FLAG CODES

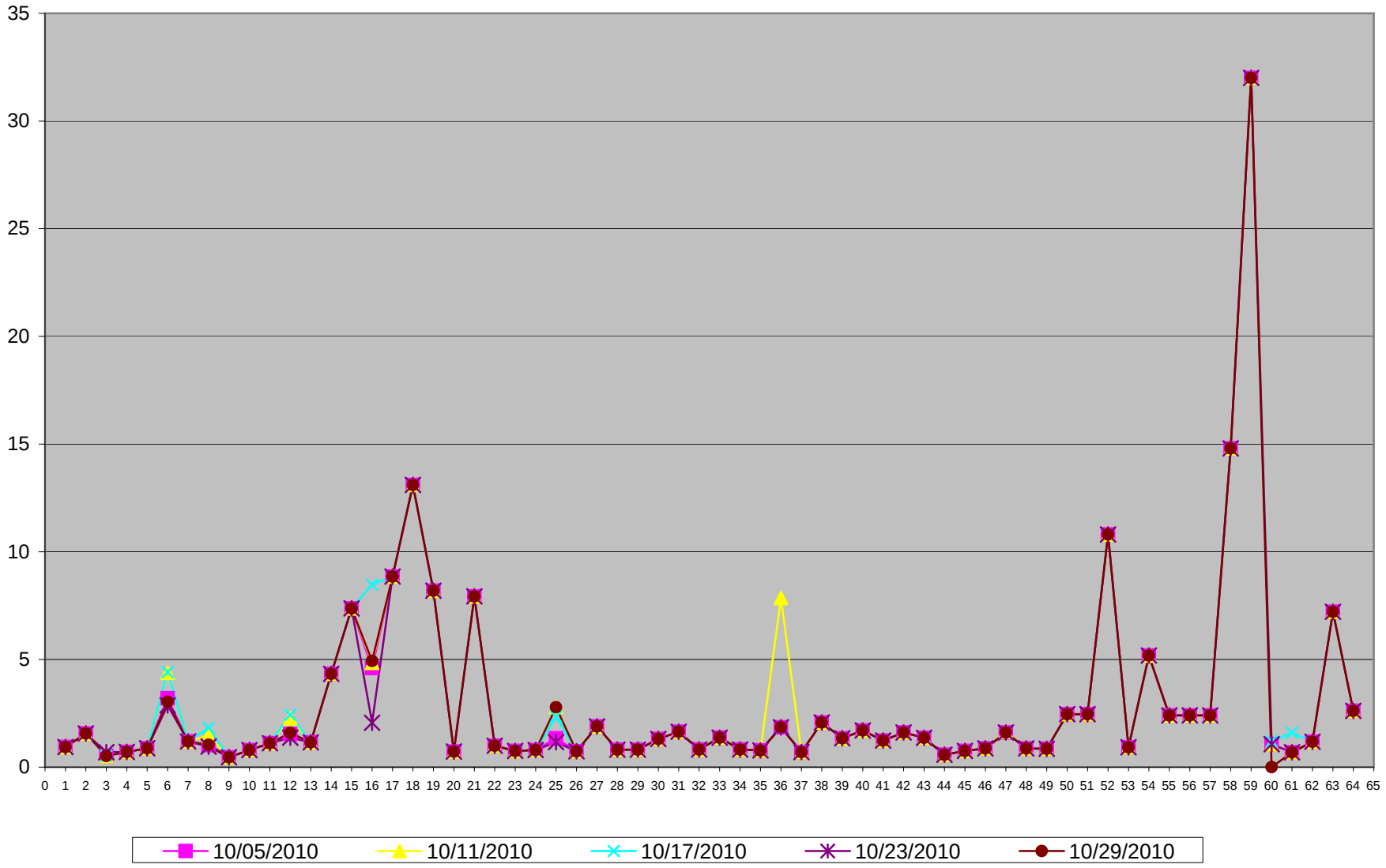
S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	-MAINTENANCE
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE

LAST CALIBRATION: September 24, 2009

CALIBRATION TIME: 0 HRS OPERATIONAL TIME: 744 HRS


01 Hour Averages
360
270
180
90
0
10/01/10 00:00
10/06/10 00:00
10/11/10 00:00
10/16/10 00:00
10/21/10 00:00
10/26/10 00:00
10/31/10 00:00
LICA33 STDWDIR DEG

Volatile Organics


Volatile Organics in ug/m3 Site: LICA - Portable Site
35
30
25
20
15
10
5
0
0 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 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65
10/05/2010
10/11/2010
10/17/2010
10/23/2010
10/29/2010

1	2,2,4-Trimethylpentane	33	1,1,2,2-Tetrachloroethane
2	Carbon Disulfide	34	cis-1,3-Dichloropropene
3	Propene	35	trans-1,3-Dichloropropene
4	Vinyl Acetate	36	1,2-Dichloropropane
5	Vinyl Bromide	37	Bromomethane
6	Dichlorodifluoromethane (FREON 12)	38	Bromoform
7	1,2-Dichlorotetrafluoroethane	39	Bromodichloromethane
8	Chloromethane	40	Dibromochloromethane
9	Vinyl Chloride	41	Heptane
10	Chloroethane	42	Trichloroethylene
11	1,3-Butadiene	43	Tetrachloroethylene
12	Trichlorofluoromethane (FREON 11)	44	Benzne
13	Trichlorotrifluoroethane	45	Toluene
14	Ethanol	46	Ethylbenzeze
15	2-Propanol	47	p+m-Xylene
16	2-Propanone	48	o-Xylene
17	Wethyl Ethyl Ketone (2-Butanone)	49	Styrene
18	Methyl Isobutyl Ketone	50	1,3,5-Trimethylbenzene
19	Methyl Butyl Ketone (2-Hexanone)	51	1,2,4-Trimethylbenzene
20	Methyl t-butyl ether (MTBE)	52	4-ethyltoluene
21	Ethyl Acetate	53	Chlorobenzene
22	1,1-Dichloroethylene	54	Benzyl chloride
23	cis-1,2-Dichloroethylene	55	1,3-Dichlorobenzene
24	trans-1,2-Dichloroethylene	56	1,4-Dichlorobenzene
25	Methylene Chloride (Dichloromethane)	57	1,2-Dichlorobenzene
26	Chloroform	58	1,2,4-Trichlorobenzene
27	Carbon Tetrachloride	59	Hexachlorobutadiene
28	1,1-Dichloroethane	60	Hexane
29	1,2-Dichloroethane	61	Cyclohexane
30	Ethylene Dibromide	62	Tetrahydrofuran
31	1,1,1-Trichloroethane	63	1,4-Dioxane
32	1,1,2-Trichloroethane	64	Xylene (Total)

Polycyclic Aromatic Hydrocarbons

Polycyclic Aromatic Hydrocarbons (PAHs) Results for October 2010

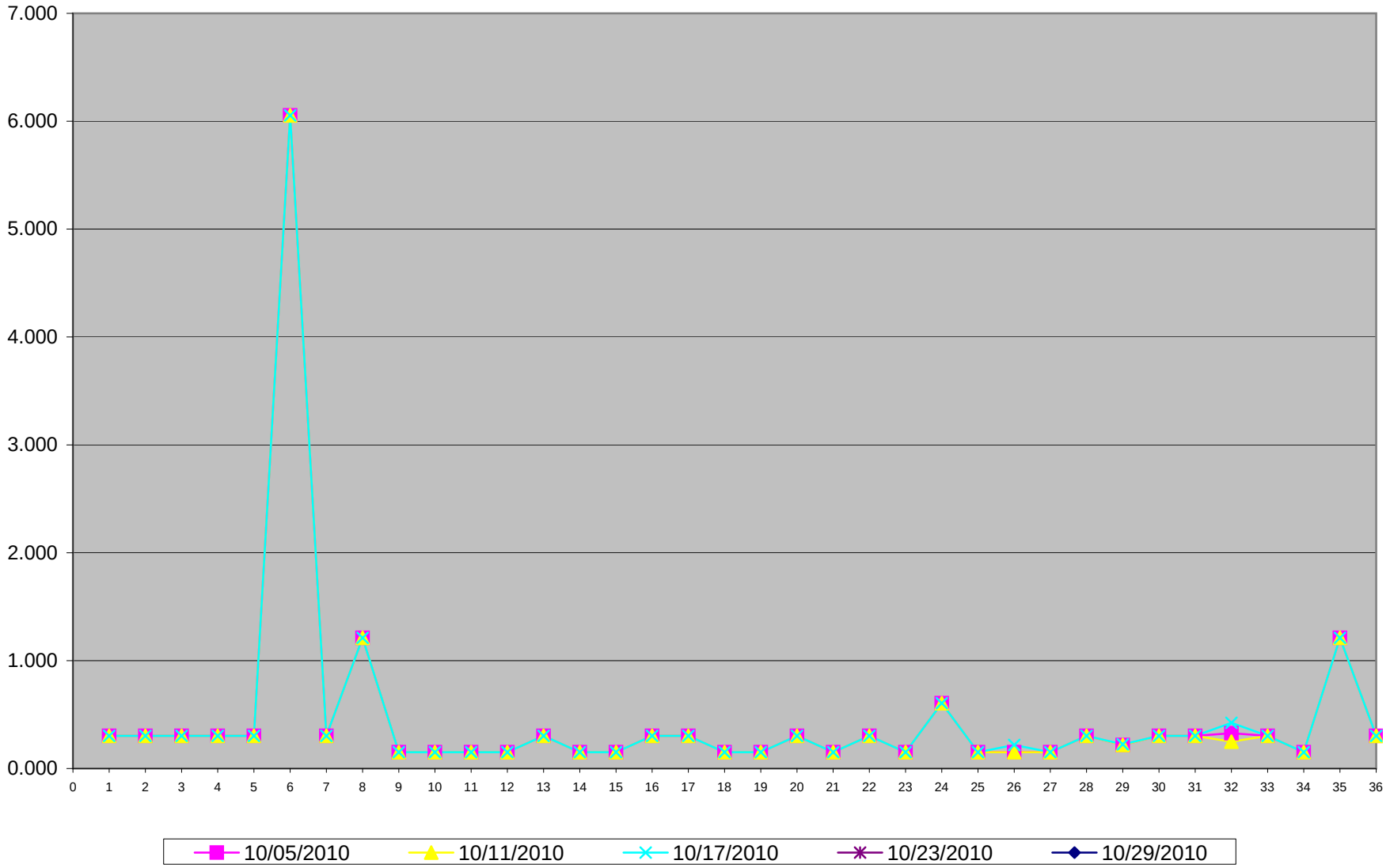
LICA- Portable Site

Unit: ng/m3

	PAHs	10/05/2010	10/11/2010	10/17/2010	10/23/2010	10/29/2010
	Sample Volume (unit: m3)	330.33	330.33	330.33	330.34	330.32
1	1-Methylnaphthalene	0.303	0.303	0.303	0.303	0.303
2	1-Methylphenanthrene	0.303	0.303	0.303	0.303	0.303
3	2-Chloronaphthalene	0.303	0.303	0.303	0.303	0.303
4	2-Methlyanthracene	0.303	0.303	0.303	0.303	0.303
5	2-Methylnaphthalene	0.303	0.303	0.303	0.303	0.333
6	3-Methylcholanthrene	6.055	6.055	6.055	6.054	6.055
7	7,12-Dimethylbenzo(a)anthracene	0.303	0.303	0.303	0.303	0.303
8	9,10-Dimethylanthracene	1.211	1.211	1.211	1.211	1.211
9	Acenaphthene	0.151	0.151	0.151	0.151	0.151
10	Acenaphthylene	0.151	0.151	0.151	0.151	0.151
11	Anthracene	0.151	0.151	0.151	0.151	0.151
12	Benzo(a)anthracene	0.151	0.151	0.151	0.151	0.151
13	Benzo(a)fluorene	0.303	0.303	0.303	0.303	0.303
14	Benzo(a)pyrene	0.151	0.151	0.151	0.151	0.151
15	Benzo(b)fluoranthene	0.151	0.151	0.151	0.151	0.151
16	Benzo(b)fluorene	0.303	0.303	0.303	0.303	0.303
17	Benzo(e)pyrene	0.303	0.303	0.303	0.303	0.303
18	Benzo(g,h,I)perylene	0.151	0.151	0.151	0.151	0.206
19	Benzo(k)fluoranthene	0.151	0.151	0.151	0.151	0.151
20	Biphenyl	0.303	0.303	0.303	0.303	0.484
21	Chrysene	0.151	0.151	0.151	0.151	0.151
22	Coronene	0.303	0.303	0.303	0.303	0.303
23	Dibenz(a,h)anthracene	0.151	0.151	0.151	0.151	0.170
24	Dibenzo(a,e)pyrene	0.605	0.605	0.605	0.605	0.605
25	Fluoranthene	0.151	0.151	0.151	0.151	0.218
26	Fluorene	0.151	0.151	0.218	0.224	0.503
27	Indeno(1,2,3-cd)pyrene	0.151	0.151	0.151	0.151	0.170
28	m-Terphenyl	0.303	0.303	0.303	0.303	0.303
29	Naphthalene	0.218	0.218	0.224	0.218	0.394
30	o-Terphenyl	0.303	0.303	0.303	0.303	0.303
31	Perylene	0.303	0.303	0.303	0.303	0.303
32	Phenanthrene	0.327	0.248	0.424	0.454	0.951
33	p-Terphenyl	0.303	0.303	0.303	0.303	0.303
34	Pyrene	0.151	0.151	0.151	0.151	0.151
35	Quinoline	1.211	1.211	1.211	1.211	1.211
36	Tetralin	0.303	0.303	0.303	0.303	0.303

Note: - values were calculated by the formula of [reading (ug) x 1000 / sample volume (m3)].
- Where the analytical results are less than the minimum detection limit (MDL), the MDL has been used in calculations.
- See analytical for details.

PAHs in ng/m3 Site: LICA - Portable Site



1	1-Methylnaphthalene
2	1-Methylphenanthrene
3	2-Chloronaphthalene
4	2-Methlyanthracene
5	2-Methylnaphthalene
6	3-Methylcholanthrene
7	7,12-Dimethylbenzo(a)anthracene
8	9,10-Dimethylanthracene
9	Acenaphthene
10	Acenaphthylene
11	Anthracene
12	Benzo(a)anthracene
13	Benzo(a)fluorene
14	Benzo(a)pyrene
15	Benzo(b)fluoranthene
16	Benzo(b)fluorene
17	Benzo(e)pyrene
18	Benzo(g,h,I)perylene
19	Benzo(k)fluoranthene
20	Biphenyl
21	Chrysene
22	Coronene
23	Dibenz(a,h)anthracene
24	Dibenzo(a,e)pyrene
25	Fluoranthene
26	Fluorene
27	Indeno(1,2,3-cd)pyrene
28	m-Terphenyl
29	Naphthalene
30	o-Terphenyl
31	Perylene
32	Phenanthrene
33	p-Terphenyl
34	Pyrene
35	Quinoline
36	Tetralin

Calibration Reports

Sulphur Dioxide

SO_2 Calibration Report

Station Information

Calibration Date	November 5, 2010		Previous Calibration	October 18, 2010	
Company	**Lakeland Community and Industry Association**				
Plant / Location	**Portable / Devon Wellsite 13-16-62-5 W4M**				
Start Time (MST)	9:28		End Time (MST)	13:22	
Reason:	Monthly Calibration				
Barometric Pressure	NA	mmHg	Station Temperature	24	Deg C
Cal Gas	51.4	ppm	Cal Gas Expiry date	5/8/2010	
DAS Output Voltage	0 - 10	Volts			

Equipment Information

Analyzer Make / Model:	API 100E	S/N :	467	Method:	UV absorbtion
Converter Make / Model:	-	S/N :	-		
Calibrator Make / Model:	API 700	S/N :	831	Method:	Dilution
DAS Make / Model:	ESC 8832	S/N :	AO 717		
Flow Meter:	API 700	S/N :	831		

Analyzer Settings

	Before Calibration				After Calibration			
Concentration Range			0 - 1000	ppb				
Sample Flow / Box Temp	586	ccm	32.5	Deg C	589	ccm	30.5	Deg C
HVPS / Lamp Setting	604		2387		604		2383	
PMT / RxCell Temp	8.1	Deg C	50.0	Deg C	8.1	Deg C	50.0	Deg C
Converter / IZS Temp	NA	Deg C	45.0	Deg C	NA	Deg C	45.0	Deg C
Offset / Slope	68.2		0.954		69.5		0.955	

Calibration Data

Dilution Flow Rate	Source Gas Flow Rate	Calculated Concentration	Indicated Conc. (DAS)	Correction Factor
4998	0	0	1	N/A
4998	0	0	0	N/A
4926	73	751	757	0.9915
4962	38.9	400	403	0.9921
4982	16.6	171	172	0.9924
4998	0	0	0	N/A
			Sum of Least Squares	0.2491
			New Correction Factor	0.9915

	Before Calibration	After Calibration
Auto Zero	1.1	1.0
Auto Span	374	369
Sample Lines Connected		**YES**
Percent Change from Previous Calibration		0.7%

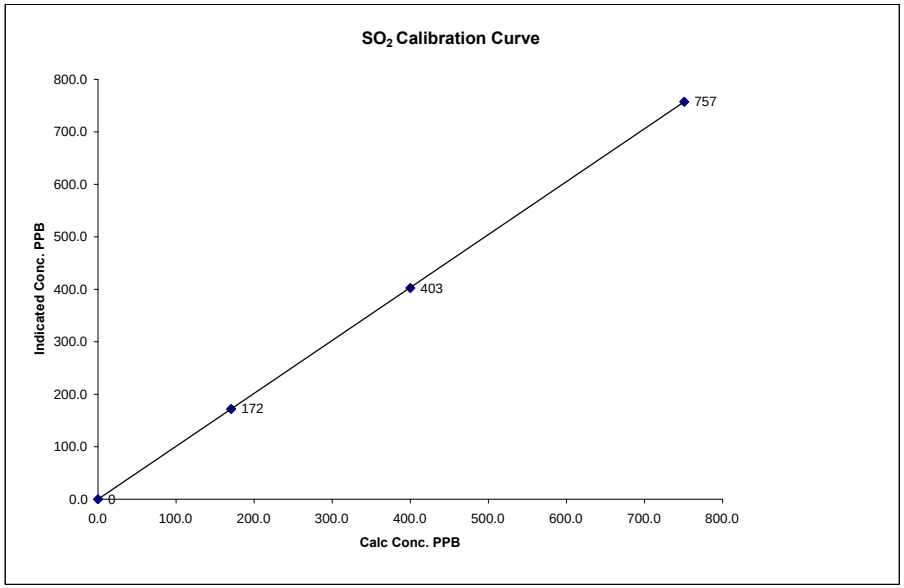
Calibration Performed by: Ting Xu

SO_2 Calibration Curve

Calibration Date	November 5, 2010				
Company	**Lakeland Community and Industry Association**				
Plant / Location	**Portable / Devon Wellsite 13-16-62-5 W4M**				
Start Time (MST)	9:28		End Time (MST)	13:22	

Calculated Conc. ppb	Indicated Response ppb	Correction Factor
0	0	n/a
171	172	0.9924
400	403	0.9921
751	757	0.9915

Correlation Coefficient	(≥ 0.995)	1.000000
Slope	(0.85 to 1.15)	1.008566
Intercept	(± 3% F.S.)	-0.105541



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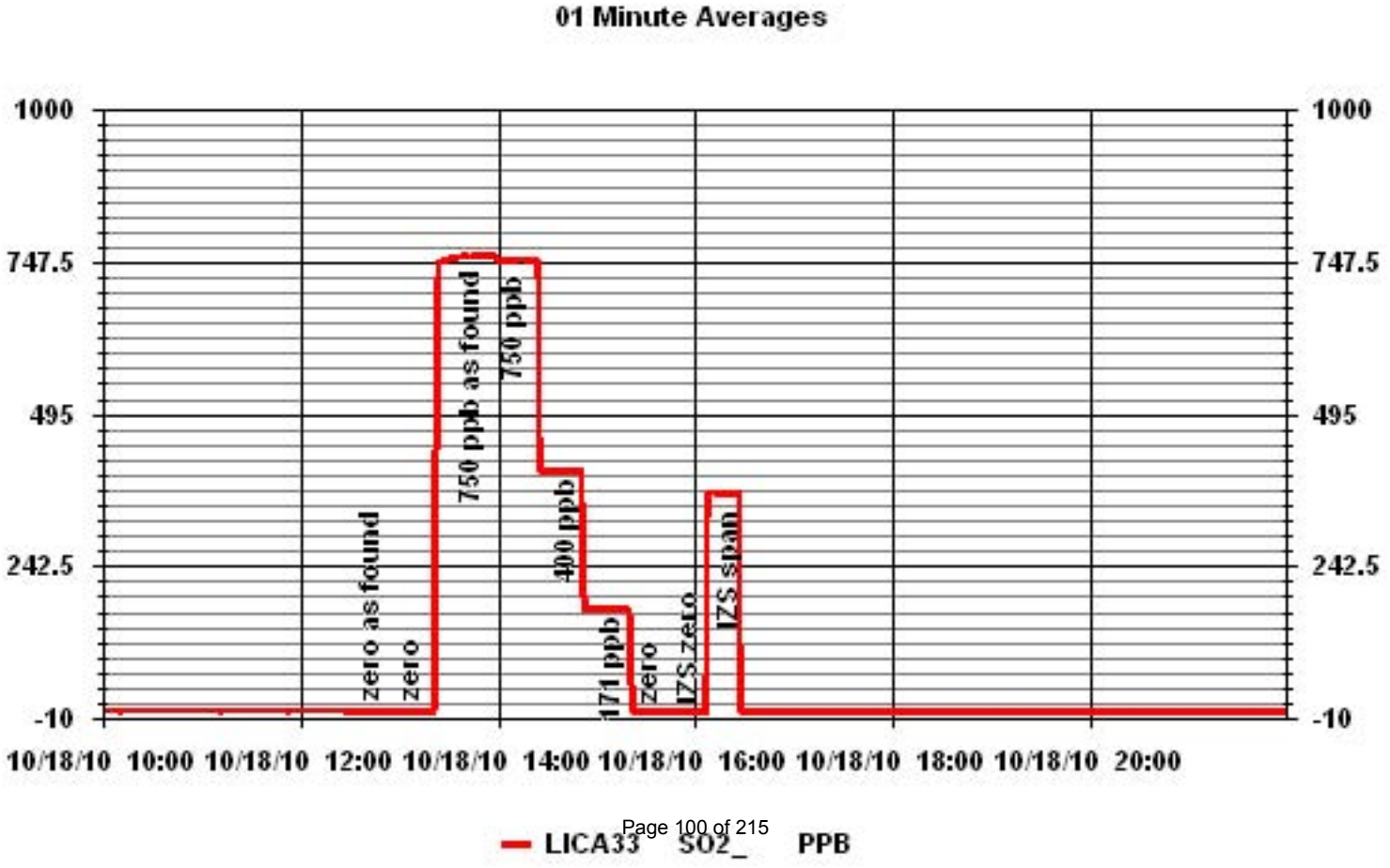

01 Minute Averages
1000
747.5
495
242.5
-10
zero as found
zero
750 ppb as found
750 ppb
400 ppb
171 ppb
zero
IZS zero
IZS span
10/18/10 10:00 10/18/10 12:00 10/18/10 14:00 10/18/10 16:00 10/18/10 18:00 10/18/10 20:00
LICA33 SO2_ PPB

Hydrogen Sulphide

H_2S Calibration Report

Station Information

Calibration Date	November 4, 2010		Previous Calibration	October 14, 2010	
Company	LAKELAND INDUSTRY & COMMUNITY ASSOCIATION				
Plant / Location	Portable/ Devon Wellsite 13-16-62-5-W4M				
Start Time (MST)	10:15		End Time (MST)	13:53	
Reason:			Monthly Calibration		
Barometric Pressure	NA	mmHg	Station Temperature	23	Deg C
Cal Gas	10.6	ppm	Cal Gas Expiry date	05/12/2011	
DAS Output Voltage	0 - 1	Volts			

Equipment Information

Analyzer Make / Model:	API 101E	S/N :	509	Method:	Fluorescent
Converter Make / Model:	Internal	S/N :	N/A		
Calibrator Make / Model:	API 700	S/N :	831	Method:	Dilution
DAS Make / Model:	ESC 8832	S/N :	AO717		
Flow Meter:	API 700	S/N :	831		

Analyzer Settings

	Before Calibration				After Calibration			
Concentration Range			0 - 100	ppb				
Sample Flow / Box Temp	543	ccm	32	Deg C	538	ccm	32.5	Deg C
HVPS / Lamp Setting	528		2331		528		2328	
PMT / RxCell Temp	7.9	Deg C	50	Deg C	7.9	Deg C	50	Deg C
Converter / IZS Temp	314.1	Deg C	45	Deg C	314.2	Deg C	45	Deg C
Offset / Slope	52		0.987		52		0.974	

Calibration Data

Dilution Flow Rate	Source Gas Flow Rate	Calculated Concentration	Indicated Conc. (DAS)	Correction Factor
4998	0	0	0	N/A
4962	37.7	80	81	0.9868
4962	37.7	80	80	1.0000
4981	18.9	40	40	1.0017
4988	10.9	23	23	1.0049
4998	0	0	1	N/A
			Sum of Least Squares	1.0000
			New Correction Factor	1.0000

	Before Calibration	After Calibration
Auto Zero	0.2	1.1
Auto Span	56	57
Sample Lines Connected		YES
Percent Change from Previous Calibration		1.3%

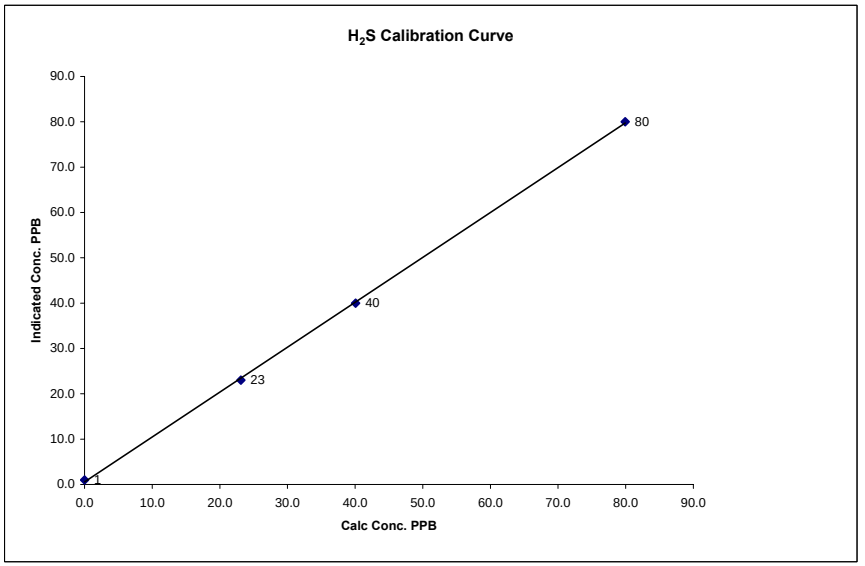
Calibration Performed by: Ting Xu

H_2S Calibration Curve

Calibration Date	November 4, 2010			
Company	LAKELAND INDUSTRY & COMMUNITY ASSOCIATION			
Plant / Location	Portable/ Devon Wellsite 13-16-62-5-W4M			
Start Time (MST)	10:15	End Time (MST)	13:53	

Calculated Conc. ppb	Indicated Response ppb	Correction Factor
0	1	n/a
23	23	1.0049
40	40	1.0017
80	80	0.9991

Correlation Coefficient	(≥ 0.995)	0.999840
Slope	(0.85 to 1.15)	0.990758
Intercept	(± 3% F.S.)	0.552973



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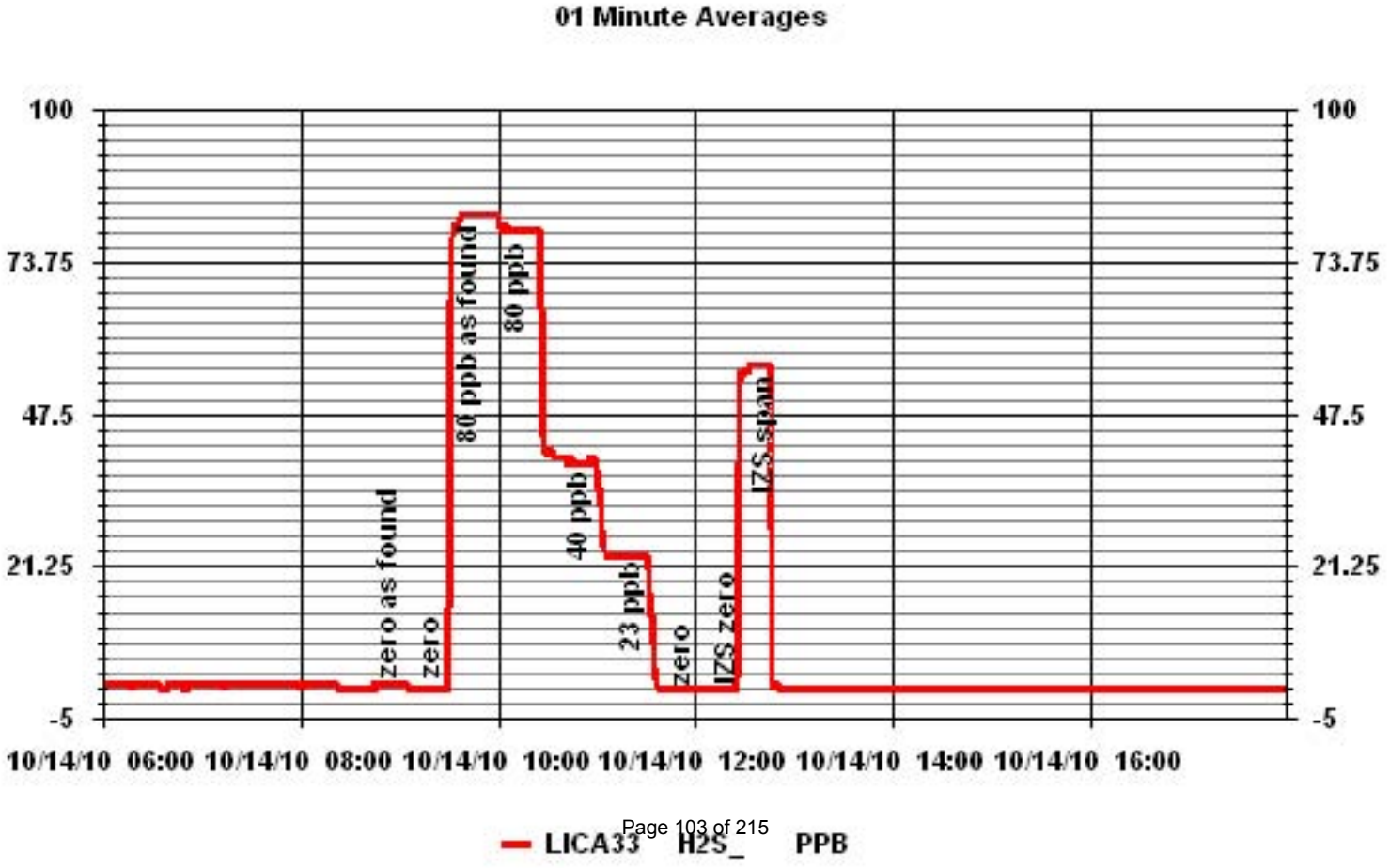

01 Minute Averages
100
73.75
47.5
21.25
-5
zero as found
zero
80 ppb as found
80 ppb
40 ppb
23 ppb
zero
IZS zero
IZS span
10/14/10 06:00
10/14/10 08:00
10/14/10 10:00
10/14/10 12:00
10/14/10 14:00
10/14/10 16:00
LICA33 H2S_ PPB

Particulate Matter 2.5

TEOM 1405F Audit

Station		Audit Transfer Standard	
Date:	November 9, 2010	Make/Model:	Streamline FTS
Station Name:	Lica Portable (CASA # 33)	Serial Number:	Hi 091001
Location:	Devon Wellsite 13-16-62-5 W4M	Cell s/n:	Lo 091099
Operator:	LICA	Thermometer s/n:	VWR 90758398

Sampler		Set-up and current Sampler readings	
Make/Model	Thermo Scientific Series 1405F	F-Main Set Pt (l/min)	3.00
Unit #	NA	F-Aux Set Pt (l/min)	13.67
Unit s/n	1405A207691003	Filter Load (%)	25.9%
Firmware Ver.	1.51	K_o Factor	15634.0
Parameter	PM 2.5 (with FDMS)	Temp (^oC)	-2.8
		Press (ATM)	0.936

Conversion from mmHg or "Hg to ATM (Atmospheres)

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

Note: Tolerances are noted as BOLD in Brackets

Audit

Status

Noise **<0.10*u* g**	0.003	Warnings	None
Pump Vacuum **<0.40atm**	0.34	Pump Gauge (inHg)	-20

Temperature/Pressure

Measured Temp **(± 2 °C)**	-2.4	**D °C**	-0.4
Measured Press **(± 0.01atm)**	0.936	**DATM**	0.000

Flow Audit

Indicated Main Flow (l/min)	3.00	Main Flow Drift **(±10.0%)**	1.21%
Measured Main Flow (l/min)	3.04	Flow Adjusted to Measured?	Yes
Indicated Bypass Flow (l/min)	13.67	Bypass Flow Drift **(±10.0%)**	1.17%
Measured Bypass Flow (l/min)	13.70	Flow Adjusted to Measured?	Yes

Leak Check

Main **(< 0.15 l/min)**	Base=0.00, Ref=0.00
Aux **(< 0.6 l/min)**	Base=0.00, Ref=0.00

Instrument Setup

Flow Control = Active

Report Conditions = Standard (25.0 C and 1atm)

K_o Factor

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

Start Time: 12:00 **Finish Time:** 14:30

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

New Filter Loading %: NA

Comments: An audit was attempted yesterday, main flow 30% low, bypass flow OK; performed a leak check, found major leak in main and bypass flow streams. Isolated leak to the main flow stream; repaired leak (see log book). Performed audit and leak check- teom fine now.

Auditor/s: Shea Beaton

Nitrogen Dioxide

NOx - NO- NO_2 Calibration Report

Station Information

Calibration Date	November 4, 2010		Previous Calibration	October 14, 2010	
Company	LICA		Plant/Location	**Portable/ 13-16-62-5W4M**	
Start Time (MST)	10:15		End Time (MST)	16:30	
Reason:	Monthly Calibration			Other	
Barometric Pressure	NA mmHg	Station Temperature	22 Deg C	MFCF	#VALUE!
Cal Gas Concentration	NOx 50.8 ppm	NO 50.4 ppm	Cal Gas Expiry date	05-Aug-12	
DAS Output Voltage	0 - 1 Volts		Chart Rec. Output	NA Volts	

Equipment Information

Analyzer Make / Model:	API 200E	S/N :	593	Method:	Chemiluminescent
Calibrator Make / Model:	Environics 5100	S/N:	4760		
DAS Make / Model:	ESC 8832	S/N :	AO 717		
Chart Recorder Make / Model:	NA	S/N:	NA		
Flow Meter:	Environics 5100	S/N :	4760		

Analyzer Settings

	Before Calibration					After Calibration			
Concentration Range					0-1000		ppb		
Sample Flow/Conv. Temp	480	ccm	314.5	Deg C		477	ccm	314.8	Deg C
Ozone Flow / Vacuum	79	ccm	5.4	"Hg-A		78	ccm	5.3	"Hg-A
HVPS / A ZERO	634	Volts	5.3	MV		634	Volts	5.6	MV
Rx/ Temp / PMT Temp	50.0	Deg C	6.7	Deg C		50.0	Deg C	6.7	Deg C
Box Temp / IZS Temp	31.9	Deg C	45.1	Deg C		33.2	Deg C	45.2	Deg C
Offset	0.2	NOx	0.1	NO		0.2	NOx	0.1	NO
Slope	1.119	NOx	1.105	NO		1.137	NOx	1.120	NO
NO_2 COEF / Conv Efficency	NA	NO2	0.996			NA	NO2	0.996	

Dilution Calibration Data

Dilution Air Flow Rate	Source Flow Rate	O3 Set Point	Calculated Concentration			Indicated Concentration			Correction Factor	
			NOx	NO	NO2	NOx	NO	NO2	NOx	NO
4994	0.0	-----	0	0	0	0	0	0	-----	-----
4919	74.2	-----	755	749	-----	742	740	2	1.0174	1.0121
4919	74.2	-----	755	749	-----	756	750	6	0.9985	0.9986
4960	34.6	-----	352	349	-----	354	351	3	0.9941	0.9947
4975	19.8	-----	201	200	-----	202	201	1	0.9969	0.9940
4995	0.0	-----	0	0	0	0	0	0	-----	-----

Gas Phase Titration Calibration Data

Dilution Air Flow Rate	Source Flow Rate	O3 Set Point	Calculated Concentration			Indicated Concentration			NO_2 Correction Factor	NO2 Conv Efficency
			NOx	NO	NO2	NOx	NO	NO2		
4919	74.2	-----	755	749	-----	758	751	7	-----	-----
4919	74.2	600	755	-----	567	757	191	566	1.0018	99.82%
4919	74.2	250	755	-----	243	758	515	243	1.0000	100.00%
4919	74.2	140	755	-----	140	758	618	140	1.0000	100.00%

Linearity		Sum of Least Squares	NOx=	0.998	NO=	0.998	NO2=	1.001
OK? Yes	No	Correction Factors:	NOx=	0.9985	NO=	0.9986	NO2=	1.0018
					Average Converter Efficiency=		99.94%	

	Before Calibration					After Calibration			
Auto Zero	0.2	NOx	0.5	NO2		0.2	NOx	-0.2	NO2
Auto Span	596	NOx	587	NO2		610	NOx	600	NO2
					Sample Lines Connected	YES			

Notes: Additional point done for ozone cal (O3 set point= 420), NOx=757, NO=353, NO2=404.

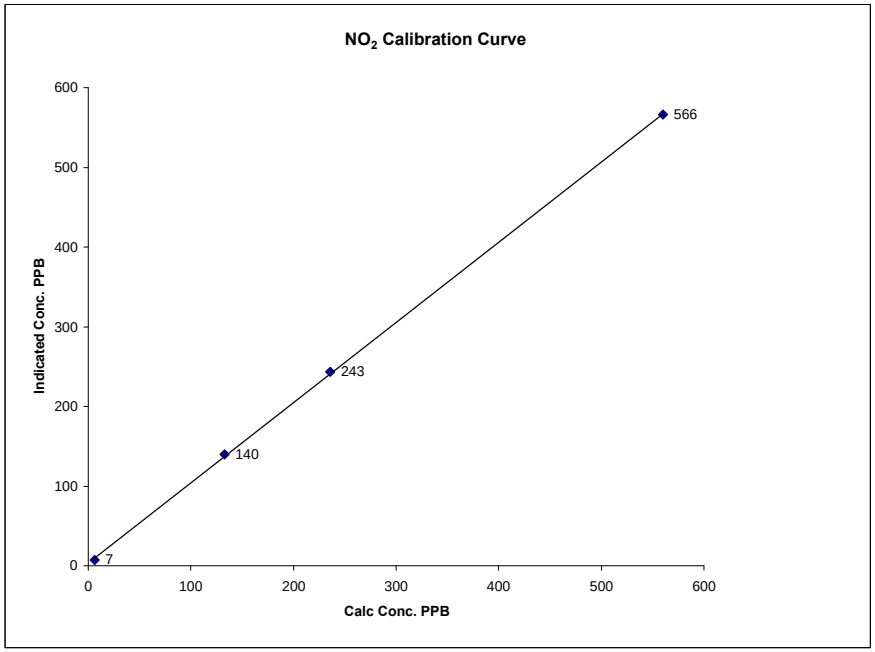
Calibration Performed by: Ting Xu

NO_2 Calibration Curve

Calibration Date	November 4, 2010		
Company	**LICA**		
Plant / Location	**Portable/ 13-16-62-5W4M**		
Start Time (MST)	10:15	End Time (MST)	16:30

Calculated Conc. ppb	Indicated Response ppb	Correction Factor
6	7	N/A
133	140	0.9500
236	243	0.9712
560	566	0.9894

Correlation Coefficient	(≥ 0.995)	0.999893
Slope	(0.85 to 1.15)	1.006175
Intercept	(± 3% F.S.)	3.80662

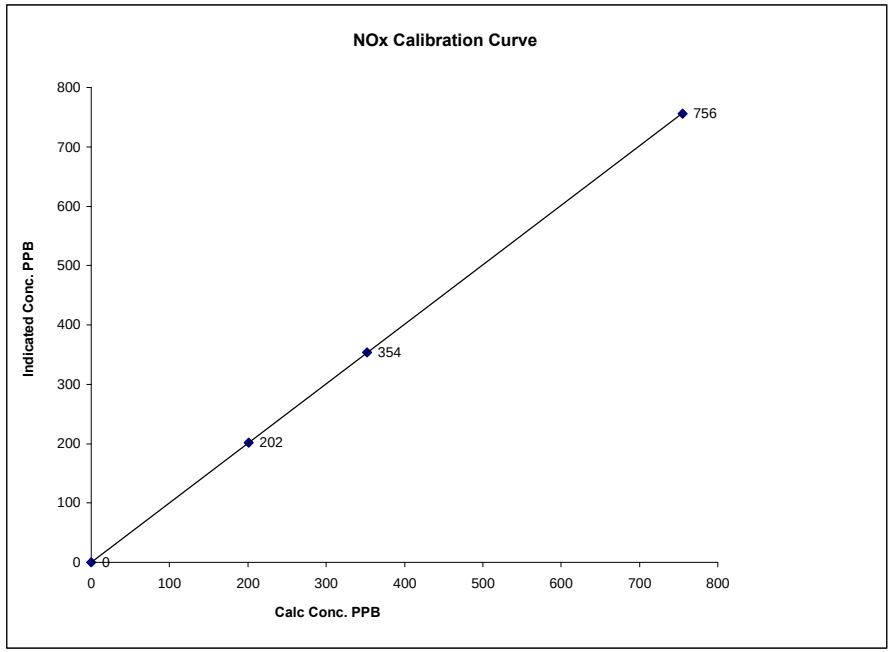


Notes:

NOx Calibration Curve

Calibration Date	November 4, 2010				
Company	LICA				
Plant / Location	Portable/ 13-16-62-5W4M				
Start Time (MST)	10:15	End Time (MST)	16:30		

Calculated Conc. ppb	Indicated Response ppb	Correction Factor	Correlation Coefficient (≥ 0.995)	0.999995
			Slope (0.85 to 1.15)	1.001452
0	0	N/A	Intercept (± 3% F.S.)	0.47724
201	202	0.9969		
352	354	0.9941		
755	756	0.9985		

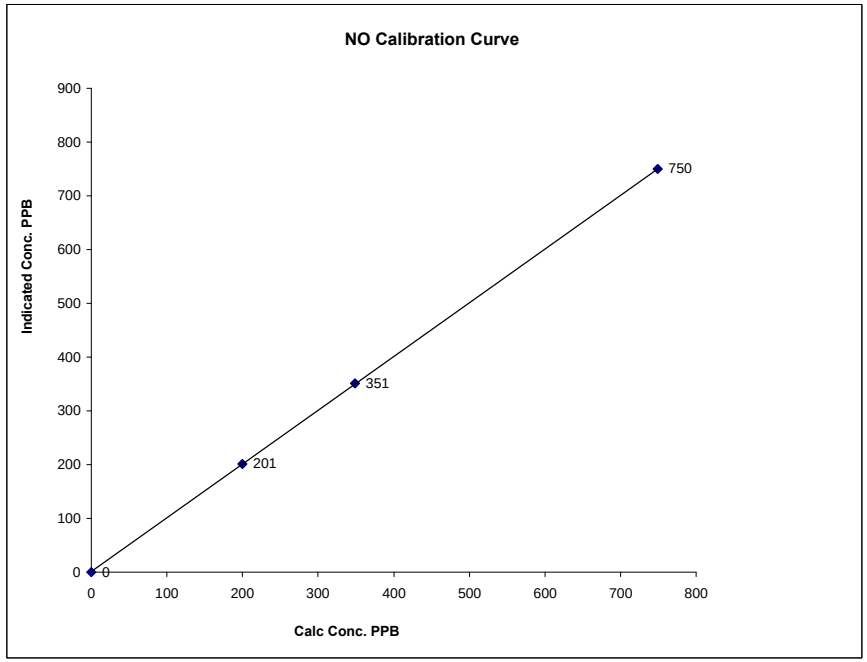


Notes:

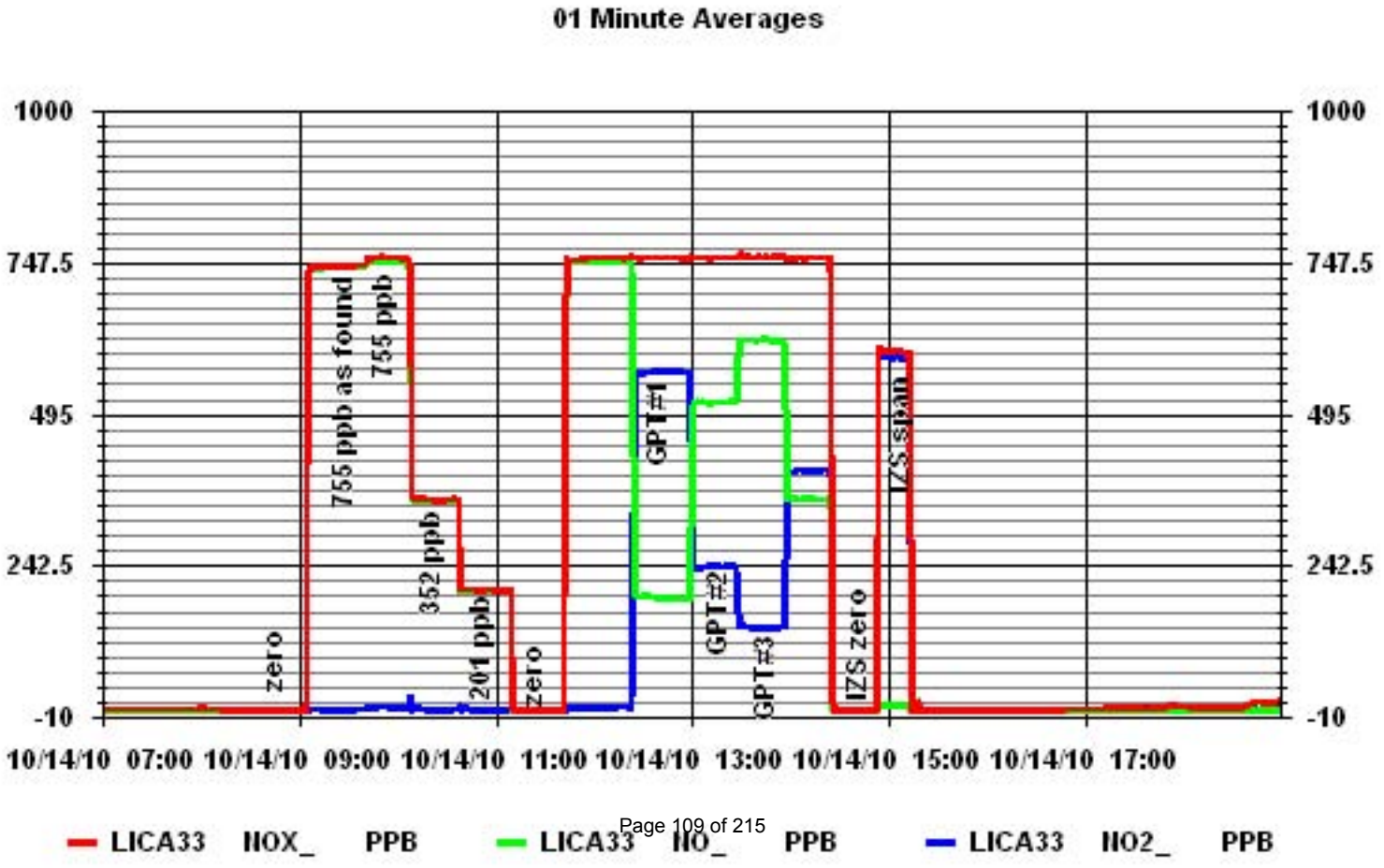
NO Calibration Curve

Calibration Date	November 4, 2010				
Company	LICA				
Plant / Location	Portable/ 13-16-62-5W4M				
Start Time (MST)	10:15	End Time (MST)	16:30		

Calculated Conc. ppb	Indicated Response ppb	Correction Factor	Correlation Coefficient (≥ 0.995)	0.999995
			Slope (0.85 to 1.15)	0.999346
0	0	N/A	Intercept (± 3% F.S.)	2.5618
200	201	0.9940		
349	351	0.9947		
749	750	0.9986		



Notes:


01 Minute Averages
1000
747.5
495
242.5
-10
zero
755 ppb as found
755 ppb
352 ppb
201 ppb
zero
GPT#1
GPT#2
GPT#3
IZS zero
IZS span
10/14/10 07:00
10/14/10 09:00
10/14/10 11:00
10/14/10 13:00
10/14/10 15:00
10/14/10 17:00
LICA33 NOX_ PPB
LICA33 NO_ PPB
LICA33 NO2_ PPB

Ozone

O_3 Calibration Report

Station Information

Calibration Date	November 5, 2010	Previous Calibration	October 18, 2010
Company	**Lakeland Industry & Community Association**		
Plant / Location	**Portable / Devon Wellsite 13-16-62-5 W4M**		
Start Time (MST)	9:29	End Time (MST)	12:48
Reason:		Monthly Calibration	
Barometric Pressure	NA mm Hg	Station Temperature	24 Deg C
DAS Output Voltage	0 - 10 Volts		

Equipment Information

Analyzer Make / Model:	Thermo 49i	S/N :	1002240372	Method:	Photometric
Calibrator Make / Model:	Environics 6100	S/N :	4760	Method:	GPT
DAS Make / Model:	ESC 8832	S/N :	AO717		

Analyzer Settings

	Before Calibration		After Calibration	
Concentration Range	0 - 500 ppb			
Cell A Flow / Cell B Flow	750 ccm	751 ccm	754 ccm	760 Deg C
Pressure	687 mmHg		692 mmHg	
Bench Lamp Temp	54.1 Deg C		54.1 Deg C	
O3 Lamp / Box Temp	68.2 Deg C	31.9 Deg C	68.2 Deg C	30.1 Deg C
Offset/Slop	0	0.99	0	0.99

Calibration Data

Dilution Flow Rate	Ozone Set Point	Calculated Concentration	Indicated Conc. (DAS)	Correction Factor
4995	0	0	0	N/A
4995	420	398	396	1.0051
4995	250	236	237	0.9958
4995	140	133	133	1.0000
4995	0	0	0	N/A
			Sum of Least Squares	N/A
			New Correction Factor	1.0051

	Before Calibration	After Calibration
Auto Zero	0.0	0.0
Auto Span	335	332
Sample Lines Connected		YES
Percent Change from Previous Calibration		-0.2%

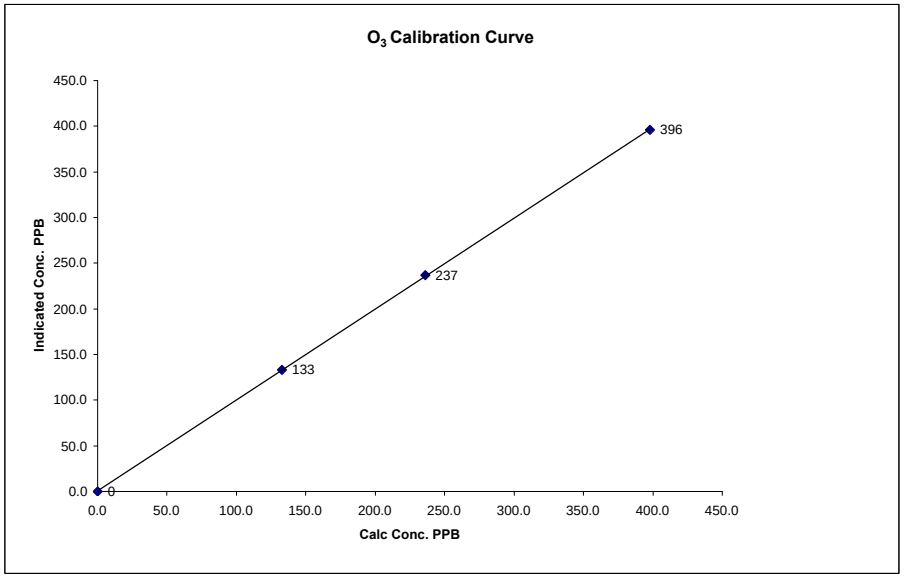
Calibration Performed by: Ting Xu

O_3 Calibration Curve

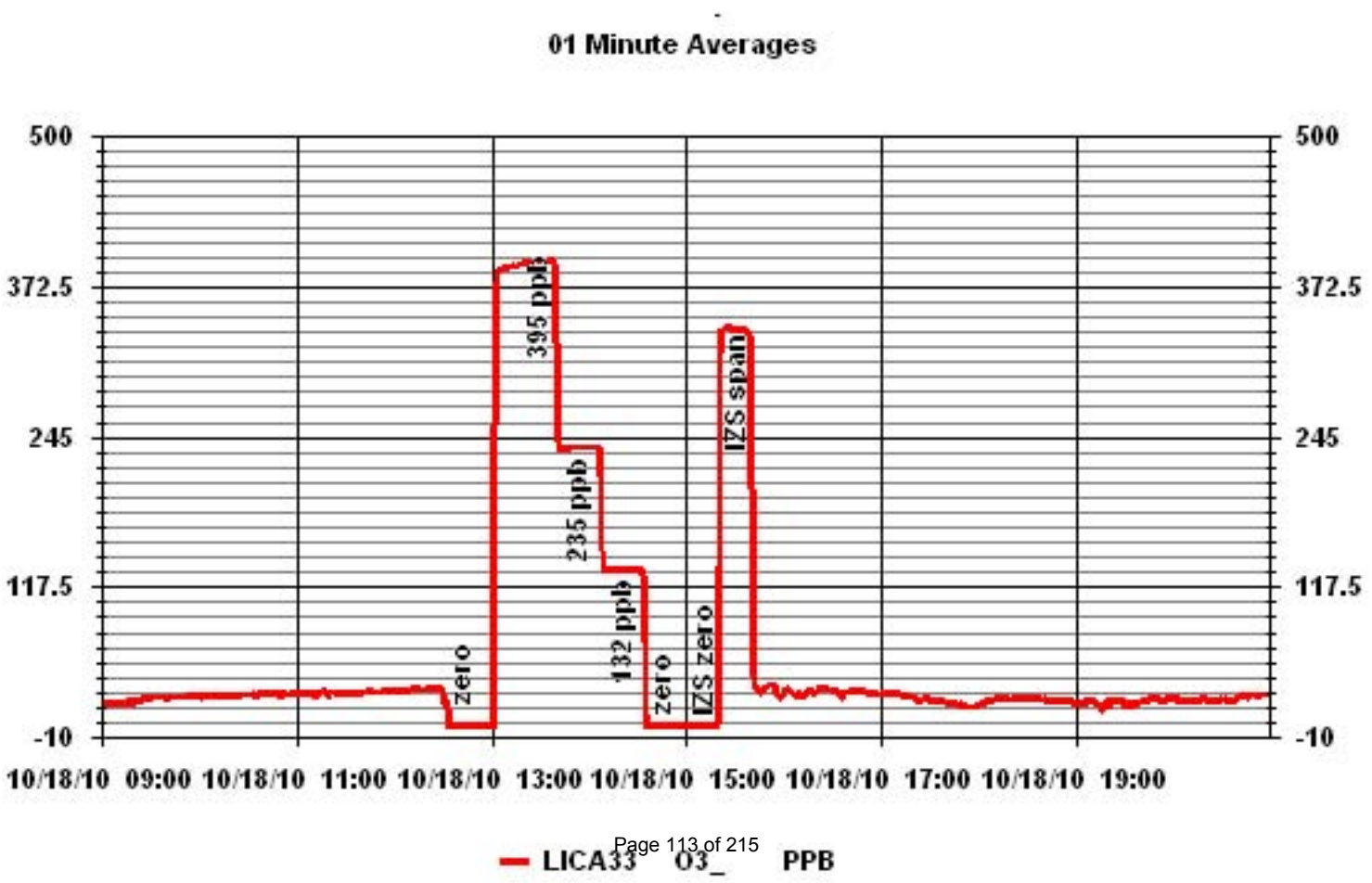
Calibration Date	November 5, 2010		
Company	**Lakeland Industry & Community Association**		
Plant / Location	**Portable / Devon Wellsite 13-16-62-5 W4M**		
Start Time (MST)	9:29	End Time (MST)	12:48

Calculated Conc. ppb	Indicated Response ppb	Correction Factor
0	0	n/a
133	133	1.0000
236	237	0.9958
398	396	1.0051

Correlation Coefficient	(≥ 0.995)	0.999963
Slope	(0.85 to 1.15)	0.995653
Intercept	(± 3% F.S.)	0.583506



Notes:


01 Minute Averages
500
372.5
245
117.5
-10
zero
395 ppb
235 ppb
132 ppb
zero
IZS zero
IZS span
10/18/10 09:00
10/18/10 11:00
10/18/10 13:00
10/18/10 15:00
10/18/10 17:00
10/18/10 19:00
LICA33 O3_ PPB

Total Hydrocarbons

THC Calibration Report

Station Information

Calibration Date:	November 4, 2010		Previous Calibration	October 14, 2010	
Company:	**Lakeland Industry and Community Association**				
Plant / Location:	**Portable Station Devon Wellsite 13-16-62-5W4M**				
Start Time (MST)	13:22		End Time (MST)	16:28	
Reason:	Monthly Calibration				
Barometric Pressure:	NA	mmHg	Station Temperature:	23	Deg C
Calibrator:	API 700		S/N:	831	
Cal Gas Concentration:	207Prop/602Meth/1171.25THC	ppm	Cal Gas Expiry Date:	9/21/2011	
DAS make & Model:	ESC 8832		S/N :	AO717	
Output Voltage Range:	0 - 10	VDC			

Analyzer Information

Make / Model	TECO 51C	S/N :	04366-09739	Method	Flame Ionization

Analyzer Settings

	Before Calibration		After Calibration	
Concentration Range	0 - 50	ppm	0 - 50	ppm
Sample Pressure	6.8	psi	6.8	psi
Hydrogen Pressure	8	psi	8	psi
Air Pressure	21	psi	21	psi

Calibration Data

Dilution Flow	Source Gas Flow	Calculated Concentration	Indicated Concentration	Correction Factor
1999	0.0	0.0	0.0	N/A
1999	70.0	39.6	40.0	0.9907
1999	35.0	20.2	20.1	1.0027
1999	20.0	11.6	11.5	1.0089
2000	0	0.0	0.0	N/A
			Correction Factor:	0.9907

Percent Change

Previous Calibration Correction Factor:	0.9931
Current Correction Factor Before Span Adjust:	0.9907
Percent Change:	0.3%

IZS Calibration Data

	Before Calibration	After Calibration
Auto Zero	0.1	0.0
Auto Span	33.3	33.0
Sample Lines Connected		**YES**

Cylinder Pressures		
Span	1400 psi	
Hydrogen	1500 psi	
Zero Air	30 psi	Using API 700

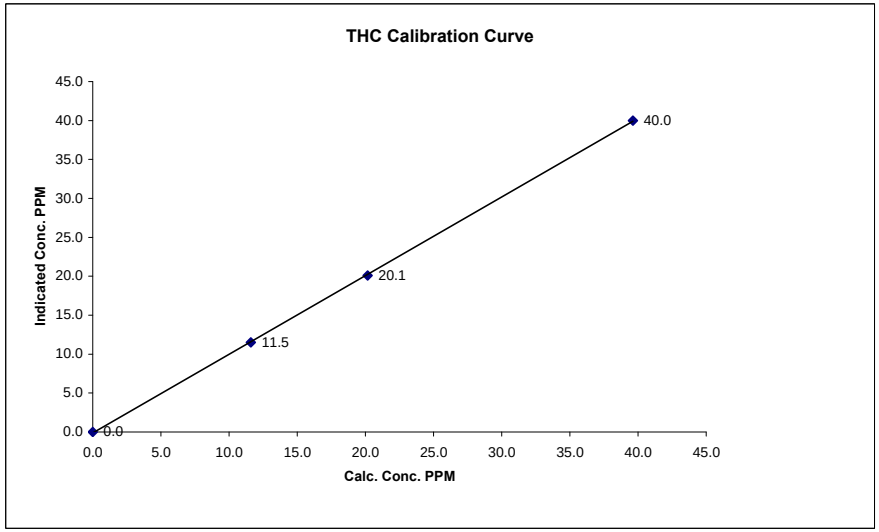
Calibration Performed by: Ting Xu

THC Calibration Curve

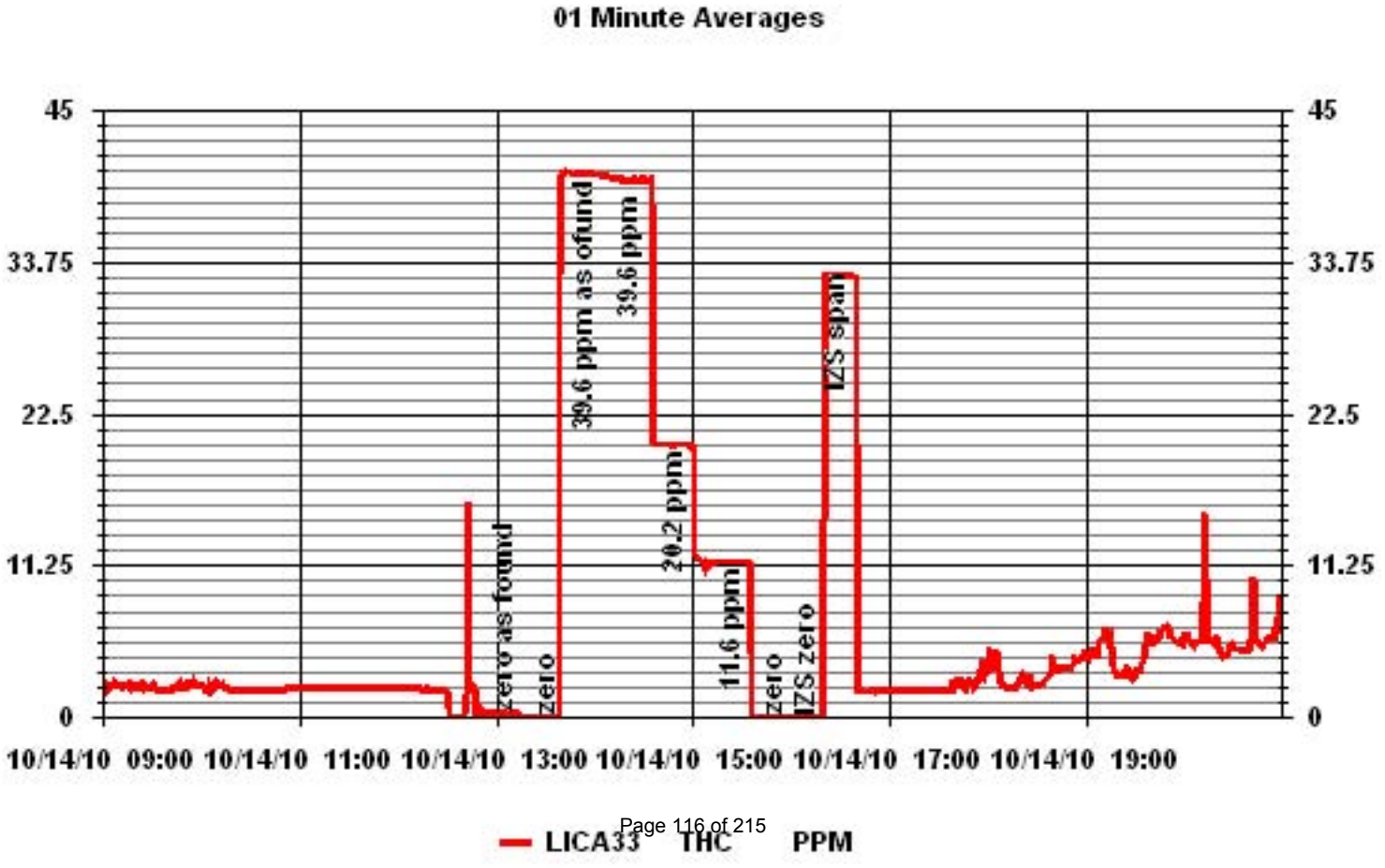
Calibration Date	November 4, 2010				
Company	**Lakeland Industry and Community Association**				
Plant / Location	**Portable Station Devon Wellsite 13-16-62-5W4M**				
Start Time (MST)	13:22	End Time	(MST)	16:28	

Calculated Conc. ppm	Indicated Response ppm	Correction Factor
0.0	0.0	
11.6	11.5	1.0089
20.2	20.1	1.0027
39.6	40.0	0.9907

Correlation Coefficient	(≥ 0.995)	0.999939
Slope	(0.85 to 1.15)	1.010327
Intercept	(± 3% F.S.)	-0.130084



Notes:


01 Minute Averages
45
33.75
22.5
11.25
0
zero as found
zero
39.6 ppm as ofund
39.6 ppm
20.2 ppm
11.6 ppm
zero
IZS zero
IZS span
10/14/10 09:00 10/14/10 11:00 10/14/10 13:00 10/14/10 15:00 10/14/10 17:00 10/14/10 19:00
LICA33 THC PPM

Volatile Organics Laboratory Analysis

Maxxam Analytics

Xontech Model 910A VOC Sample Collection Data Sheet

Client: LICA
Location: 13-16-62-5 W4M
Station ID: Lica 33 (Portable)
Field Sample ID: LICA VOC/PORT/ Oct 05,10

Sampler s/n: 6200
Canister ID: 7782
Canister Installation Date/Time: Oct 04, 10 @ 15:23 mst
Canister Removal Date/Time: Oct 06, 10 @9 :02 mst

Date and Time Information			
Sample Date	Start Time (MST)	End Time (MST)	Elapsed Time (Hours)
05-Oct-10	05/10/2010 0:00	06/10/2010 0:00	24.00

Flow Settings		
Meter Reading (sccm)	Pot Set Pt.	Pump Pressure Setting (psig)
10.0	1482	25

Canister Information	
Initial Canister Vacuum (inHg)	Final Canister Pressure (psig)
-28	21

Canister valve open prior to sampling?: YES / NO
Timer set to 0.00 minutes prior to sampling? YES / NO
Canister valve closed prior to disconnection?: YES / NO

Comments: System leak check prior to sampling. COC # 3476

Technician Signiture: Ting Xu

Your C.O.C. #: 3476

Attention: Michael Bisaga
Maxxam Analytics
2608 6A Ave.
Cold Lake, AB
CANADA T9M 2C7

Report Date: 2010/10/27

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B0E2421
Received: 2010/10/08, 10:41

Sample Matrix: AIR
Samples Received: 2

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Method Reference
Canister Pressure (TO-15)	2	N/A	2010/10/24	BRL SOP-00304	EPA TO-15
Volatile Organics in Air (TO-15) (1)	2	N/A	2010/10/24	BRL SOP-00304	EPA TO-15

(1) Air sampling canisters have been cleaned in accordance with U.S. EPA Method TO14A. At the end of the cleaning, evacuation, and pressurization cycles, one canister was selected and was pressurized with Zero Air. This canister was then analyzed via TO14A on a GC/MS. The canister must have been found to contain <0.2 ppbv concentration of all target analytes in order for the batch to have been considered clean. Each canister also underwent a leak check prior to shipment.

Please Note: SUMMA® canister samples will be retained by Maxxam for a period of 5 calendar days from the date of this report, after which time they will be cleaned for reuse. If you require a longer sample storage period, please contact your service representative.

Encryption Key

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

THERESA STEPHENSON, Project Manager
Email: TStephenson@maxxam.ca
Phone# (905) 817-5763

==========

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. For Service Group specific validation please refer to the Validation Signature Page.

Total cover pages: 1

Maxxam Analytics

Maxxam Job #: B0E2421
Report Date: 2010/10/27

RESULTS OF ANALYSES OF AIR

Maxxam ID		HL2133	HL2134	
Sampling Date		2010/10/05	2010/10/05	
COC Number		3476	3476	
	Units	**LICA VOC \ CLS \ OCT05,10 - 7818**	**LICA VOC \ PORT \ OCT05,10 - 7782**	**QC Batch**
Volatile Organics				
Pressure on Receipt	psig	20	21	2307729

QC Batch = Quality Control Batch

Maxxam Job #: B0E2421
Report Date: 2010/10/27

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		HL2133			HL2134				
Sampling Date		2010/10/05			2010/10/05				
COC Number		3476			3476				
	Units	**LICA VOC \ CLS \ OCT05,10 - 7818**	**ug/m3**	**DL (ug/m3)**	**LICA VOC \ PORT \ OCT05,10 - 7782**	**RDL**	**ug/m3**	**DL (ug/m3)**	**QC Batch**
Volatile Organics									
2,2,4-Trimethylpentane	ppbv	<0.20	<0.934	0.934	<0.20	0.20	<0.934	0.934	2307805
Carbon Disulfide	ppbv	<0.50	<1.56	1.56	<0.50	0.50	<1.56	1.56	2307805
Propene	ppbv	<0.30	<0.516	0.516	<0.30	0.30	<0.516	0.516	2307805
Vinyl Acetate	ppbv	<0.20	<0.704	0.704	<0.20	0.20	<0.704	0.704	2307805
Vinyl Bromide	ppbv	<0.20	<0.875	0.875	<0.20	0.20	<0.875	0.875	2307805
Dichlorodifluoromethane (FREON 12)	ppbv	0.65	3.20	0.989	0.65	0.20	3.20	0.989	2307805
1,2-Dichlorotetrafluoroethane	ppbv	<0.17	<1.19	1.19	<0.17	0.17	<1.19	1.19	2307805
Chloromethane	ppbv	0.51	1.05	0.620	0.49	0.30	1.02	0.620	2307805
Vinyl Chloride	ppbv	<0.18	<0.460	0.460	<0.18	0.18	<0.460	0.460	2307805
Chloroethane	ppbv	<0.30	<0.792	0.792	<0.30	0.30	<0.792	0.792	2307805
1,3-Butadiene	ppbv	<0.50	<1.11	1.11	<0.50	0.50	<1.11	1.11	2307805
Trichlorofluoromethane (FREON 11)	ppbv	0.27	1.51	1.12	0.27	0.20	1.54	1.12	2307805
Trichlorotrifluoroethane	ppbv	<0.15	<1.15	1.15	<0.15	0.15	<1.15	1.15	2307805
Ethanol	ppbv	<2.3	<4.33	4.33	<2.3	2.3	<4.33	4.33	2307805
2-propanol	ppbv	<3.0	<7.37	7.37	<3.0	3.0	<7.37	7.37	2307805
2-Propanone	ppbv	1.76	4.18	1.90	1.94	0.80	4.60	1.90	2307805
Methyl Ethyl Ketone (2-Butanone)	ppbv	<3.0	<8.85	8.85	<3.0	3.0	<8.85	8.85	2307805
Methyl Isobutyl Ketone	ppbv	<3.2	<13.1	13.1	<3.2	3.2	<13.1	13.1	2307805
Methyl Butyl Ketone (2-Hexanone)	ppbv	<2.0	<8.19	8.19	<2.0	2.0	<8.19	8.19	2307805
Methyl t-butyl ether (MTBE)	ppbv	<0.20	<0.721	0.721	<0.20	0.20	<0.721	0.721	2307805
Ethyl Acetate	ppbv	<2.2	<7.93	7.93	<2.2	2.2	<7.93	7.93	2307805
1,1-Dichloroethylene	ppbv	<0.25	<0.991	0.991	<0.25	0.25	<0.991	0.991	2307805
cis-1,2-Dichloroethylene	ppbv	<0.19	<0.753	0.753	<0.19	0.19	<0.753	0.753	2307805
trans-1,2-Dichloroethylene	ppbv	<0.20	<0.793	0.793	<0.20	0.20	<0.793	0.793	2307805
Methylene Chloride(Dichloromethane)	ppbv	0.39	1.36	1.04	0.38	0.30	1.34	1.04	2307805
Chloroform	ppbv	<0.15	<0.732	0.732	<0.15	0.15	<0.732	0.732	2307805
Carbon Tetrachloride	ppbv	<0.30	<1.89	1.89	<0.30	0.30	<1.89	1.89	2307805
1,1-Dichloroethane	ppbv	<0.20	<0.809	0.809	<0.20	0.20	<0.809	0.809	2307805
1,2-Dichloroethane	ppbv	<0.20	<0.809	0.809	<0.20	0.20	<0.809	0.809	2307805
Ethylene Dibromide	ppbv	<0.17	<1.31	1.31	<0.17	0.17	<1.31	1.31	2307805

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		HL2133			HL2134				
Sampling Date		2010/10/05			2010/10/05				
COC Number		3476			3476				
	Units	**LICA VOC \ CLS \ OCT05,10 - 7818**	**ug/m3**	**DL (ug/m3)**	**LICA VOC \ PORT \ OCT05,10 - 7782**	**RDL**	**ug/m3**	**DL (ug/m3)**	**QC Batch**
1,1,1-Trichloroethane	ppbv	<0.30	<1.64	1.64	<0.30	0.30	<1.64	1.64	2307805
1,1,2-Trichloroethane	ppbv	<0.15	<0.818	0.818	<0.15	0.15	<0.818	0.818	2307805
1,1,2,2-Tetrachloroethane	ppbv	<0.20	<1.37	1.37	<0.20	0.20	<1.37	1.37	2307805
cis-1,3-Dichloropropene	ppbv	<0.18	<0.817	0.817	<0.18	0.18	<0.817	0.817	2307805
trans-1,3-Dichloropropene	ppbv	<0.17	<0.772	0.772	<0.17	0.17	<0.772	0.772	2307805
1,2-Dichloropropane	ppbv	<0.40	<1.85	1.85	<0.40	0.40	<1.85	1.85	2307805
Bromomethane	ppbv	<0.18	<0.699	0.699	<0.18	0.18	<0.699	0.699	2307805
Bromoform	ppbv	<0.20	<2.07	2.07	<0.20	0.20	<2.07	2.07	2307805
Bromodichloromethane	ppbv	<0.20	<1.34	1.34	<0.20	0.20	<1.34	1.34	2307805
Dibromochloromethane	ppbv	<0.20	<1.70	1.70	<0.20	0.20	<1.70	1.70	2307805
Heptane	ppbv	<0.30	<1.23	1.23	<0.30	0.30	<1.23	1.23	2307805
Trichloroethylene	ppbv	<0.30	<1.61	1.61	<0.30	0.30	<1.61	1.61	2307805
Tetrachloroethylene	ppbv	<0.20	<1.36	1.36	<0.20	0.20	<1.36	1.36	2307805
Benzene	ppbv	<0.18	<0.575	0.575	<0.18	0.18	<0.575	0.575	2307805
Toluene	ppbv	<0.20	<0.753	0.753	<0.20	0.20	<0.753	0.753	2307805
Ethylbenzene	ppbv	<0.20	<0.868	0.868	<0.20	0.20	<0.868	0.868	2307805
p+m-Xylene	ppbv	<0.37	<1.61	1.61	<0.37	0.37	<1.61	1.61	2307805
o-Xylene	ppbv	<0.20	<0.868	0.868	<0.20	0.20	<0.868	0.868	2307805
Styrene	ppbv	<0.20	<0.852	0.852	<0.20	0.20	<0.852	0.852	2307805
1,3,5-Trimethylbenzene	ppbv	<0.50	<2.46	2.46	<0.50	0.50	<2.46	2.46	2307805
1,2,4-Trimethylbenzene	ppbv	<0.50	<2.46	2.46	<0.50	0.50	<2.46	2.46	2307805
4-ethyltoluene	ppbv	<2.2	<10.8	10.8	<2.2	2.2	<10.8	10.8	2307805
Chlorobenzene	ppbv	<0.20	<0.921	0.921	<0.20	0.20	<0.921	0.921	2307805
Benzyl chloride	ppbv	<1.0	<5.18	5.18	<1.0	1.0	<5.18	5.18	2307805
1,3-Dichlorobenzene	ppbv	<0.40	<2.40	2.40	<0.40	0.40	<2.40	2.40	2307805
1,4-Dichlorobenzene	ppbv	<0.40	<2.40	2.40	<0.40	0.40	<2.40	2.40	2307805
1,2-Dichlorobenzene	ppbv	<0.40	<2.40	2.40	<0.40	0.40	<2.40	2.40	2307805
1,2,4-Trichlorobenzene	ppbv	<2.0	<14.8	14.8	<2.0	2.0	<14.8	14.8	2307805
Hexachlorobutadiene	ppbv	<3.0	<32.0	32.0	<3.0	3.0	<32.0	32.0	2307805
Hexane	ppbv	<0.30	<1.06	1.06	<0.30	0.30	<1.06	1.06	2307805
Cyclohexane	ppbv	<0.20	<0.688	0.688	<0.20	0.20	<0.688	0.688	2307805
Tetrahydrofuran	ppbv	<0.40	<1.18	1.18	<0.40	0.40	<1.18	1.18	2307805

QC Batch = Quality Control Batch

Maxxam Analytics

Maxxam Job #: B0E2421
Report Date: 2010/10/27

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		HL2133			HL2134				
Sampling Date		2010/10/05			2010/10/05				
COC Number		3476			3476				
	Units	**LICA VOC \ CLS \ OCT05,10 - 7818**	**ug/m3**	**DL (ug/m3)**	**LICA VOC \ PORT \ OCT05,10 - 7782**	**RDL**	**ug/m3**	**DL (ug/m3)**	**QC Batch**
1,4-Dioxane	ppbv	<2.0	<7.21	7.21	<2.0	2.0	<7.21	7.21	2307805
Xylene (Total)	ppbv	<0.60	<2.61	2.61	<0.60	0.60	<2.61	2.61	2307805
Surrogate Recovery (%)									
Bromochloromethane	%	68	N/A	N/A	66		N/A	N/A	2307805
D5-Chlorobenzene	%	63	N/A	N/A	61		N/A	N/A	2307805
Difluorobenzene	%	69	N/A	N/A	67		N/A	N/A	2307805

N/A = Not Applicable
QC Batch = Quality Control Batch

Maxxam Analytics

Maxxam Job #: B0E2421
Report Date: 2010/10/27

Test Summary

Maxxam ID	HL2133	**Collected**	2010/10/05
Sample ID	LICA VOC \ CLS \ OCT05,10 - 7818	**Shipped**	
Matrix	AIR	**Received**	2010/10/08

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Canister Pressure (TO-15)	PRES	2307729	N/A	2010/10/24	LSY
Volatile Organics in Air (TO-15)	GC/MS	2307805	N/A	2010/10/24	LSY

Maxxam ID	HL2134	**Collected**	2010/10/05
Sample ID	LICA VOC \ PORT \ OCT05,10 - 7782	**Shipped**	
Matrix	AIR	**Received**	2010/10/08

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Canister Pressure (TO-15)	PRES	2307729	N/A	2010/10/24	LSY
Volatile Organics in Air (TO-15)	GC/MS	2307805	N/A	2010/10/24	LSY

GENERAL COMMENTS

Results relate only to the items tested.

Maxxam Analytics
Attention: Michael Bisaga
Client Project #:
P.O. #:
Project name:

Quality Assurance Report

Maxxam Job Number: GB0E2421

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2307805	LSY	Spiked Blank	Bromochloromethane	2010/10/24		106	%	60 - 140
			D5-Chlorobenzene	2010/10/24		107	%	60 - 140
			Difluorobenzene	2010/10/24		109	%	60 - 140
			2,2,4-Trimethylpentane	2010/10/24		103	%	70 - 130
			Carbon Disulfide	2010/10/24		97	%	70 - 130
			Propene	2010/10/24		101	%	70 - 130
			Vinyl Acetate	2010/10/24		122	%	70 - 130
			Vinyl Bromide	2010/10/24		102	%	70 - 130
			Dichlorodifluoromethane (FREON 12)	2010/10/24		95	%	70 - 130
			1,2-Dichlorotetrafluoroethane	2010/10/24		116	%	70 - 130
			Chloromethane	2010/10/24		101	%	70 - 130
			Vinyl Chloride	2010/10/24		100	%	70 - 130
			Chloroethane	2010/10/24		94	%	70 - 130
			1,3-Butadiene	2010/10/24		103	%	70 - 130
			Trichlorofluoromethane (FREON 11)	2010/10/24		92	%	70 - 130
			Trichlorotrifluoroethane	2010/10/24		89	%	70 - 130
			Ethanol	2010/10/24		105	%	70 - 130
			2-propanol	2010/10/24		110	%	70 - 130
			2-Propanone	2010/10/24		106	%	70 - 130
			Methyl Ethyl Ketone (2-Butanone)	2010/10/24		117	%	70 - 130
			Methyl Isobutyl Ketone	2010/10/24		108	%	70 - 130
			Methyl Butyl Ketone (2-Hexanone)	2010/10/24		109	%	70 - 130
			Methyl t-butyl ether (MTBE)	2010/10/24		111	%	70 - 130
			Ethyl Acetate	2010/10/24		109	%	70 - 130
			1,1-Dichloroethylene	2010/10/24		98	%	70 - 130
			cis-1,2-Dichloroethylene	2010/10/24		100	%	70 - 130
			trans-1,2-Dichloroethylene	2010/10/24		101	%	70 - 130
			Methylene Chloride(Dichloromethane)	2010/10/24		97	%	70 - 130
			Chloroform	2010/10/24		93	%	70 - 130
			Carbon Tetrachloride	2010/10/24		98	%	70 - 130
			1,1-Dichloroethane	2010/10/24		97	%	70 - 130
			1,2-Dichloroethane	2010/10/24		96	%	70 - 130
			Ethylene Dibromide	2010/10/24		101	%	70 - 130
			1,1,1-Trichloroethane	2010/10/24		98	%	70 - 130
			1,1,2-Trichloroethane	2010/10/24		99	%	70 - 130
			1,1,2,2-Tetrachloroethane	2010/10/24		88	%	70 - 130
			cis-1,3-Dichloropropene	2010/10/24		111	%	70 - 130
			trans-1,3-Dichloropropene	2010/10/24		122	%	70 - 130
			1,2-Dichloropropane	2010/10/24		98	%	70 - 130
			Bromomethane	2010/10/24		91	%	70 - 130
			Bromoform	2010/10/24		120	%	70 - 130
			Bromodichloromethane	2010/10/24		105	%	70 - 130
			Dibromochloromethane	2010/10/24		120	%	70 - 130
			Heptane	2010/10/24		105	%	70 - 130
			Trichloroethylene	2010/10/24		93	%	70 - 130
			Tetrachloroethylene	2010/10/24		96	%	70 - 130
			Benzene	2010/10/24		98	%	70 - 130
			Toluene	2010/10/24		106	%	70 - 130
			Ethylbenzene	2010/10/24		96	%	70 - 130
			p+m-Xylene	2010/10/24		94	%	70 - 130
			o-Xylene	2010/10/24		93	%	70 - 130
			Styrene	2010/10/24		100	%	70 - 130
			1,3,5-Trimethylbenzene	2010/10/24		92	%	70 - 130
			1,2,4-Trimethylbenzene	2010/10/24		91	%	70 - 130
			4-ethyltoluene	2010/10/24		101	%	70 - 130

Maxxam Analytics
Attention: Michael Bisaga
Client Project #:
P.O. #:
Project name:

Quality Assurance Report (Continued)

Maxxam Job Number: GB0E2421

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2307805	LSY	Spiked Blank	Chlorobenzene	2010/10/24		84	%	70 - 130
			Benzyl chloride	2010/10/24		114	%	70 - 130
			1,3-Dichlorobenzene	2010/10/24		85	%	70 - 130
			1,4-Dichlorobenzene	2010/10/24		85	%	70 - 130
			1,2-Dichlorobenzene	2010/10/24		85	%	70 - 130
			1,2,4-Trichlorobenzene	2010/10/24		75	%	70 - 130
			Hexachlorobutadiene	2010/10/24		76	%	70 - 130
			Hexane	2010/10/24		98	%	70 - 130
			Cyclohexane	2010/10/24		103	%	70 - 130
			Tetrahydrofuran	2010/10/24		111	%	70 - 130
			1,4-Dioxane	2010/10/24		102	%	70 - 130
		Method Blank	Bromochloromethane	2010/10/24		83	%	60 - 140
			D5-Chlorobenzene	2010/10/24		76	%	60 - 140
			Difluorobenzene	2010/10/24		87	%	60 - 140
			2,2,4-Trimethylpentane	2010/10/24	<0.20		ppbv	
			Carbon Disulfide	2010/10/24	<0.50		ppbv	
			Propene	2010/10/24	<0.30		ppbv	
			Vinyl Acetate	2010/10/24	<0.20		ppbv	
			Vinyl Bromide	2010/10/24	<0.20		ppbv	
			Dichlorodifluoromethane (FREON 12)	2010/10/24	<0.20		ppbv	
			1,2-Dichlorotetrafluoroethane	2010/10/24	<0.17		ppbv	
			Chloromethane	2010/10/24	<0.30		ppbv	
			Vinyl Chloride	2010/10/24	<0.18		ppbv	
			Chloroethane	2010/10/24	<0.30		ppbv	
			1,3-Butadiene	2010/10/24	<0.50		ppbv	
			Trichlorofluoromethane (FREON 11)	2010/10/24	<0.20		ppbv	
			Trichlorotrifluoroethane	2010/10/24	<0.15		ppbv	
			Ethanol	2010/10/24	<2.3		ppbv	
			2-propanol	2010/10/24	<3.0		ppbv	
			2-Propanone	2010/10/24	<0.80		ppbv	
			Methyl Ethyl Ketone (2-Butanone)	2010/10/24	<3.0		ppbv	
			Methyl Isobutyl Ketone	2010/10/24	<3.2		ppbv	
			Methyl Butyl Ketone (2-Hexanone)	2010/10/24	<2.0		ppbv	
			Methyl t-butyl ether (MTBE)	2010/10/24	<0.20		ppbv	
			Ethyl Acetate	2010/10/24	<2.2		ppbv	
			1,1-Dichloroethylene	2010/10/24	<0.25		ppbv	
			cis-1,2-Dichloroethylene	2010/10/24	<0.19		ppbv	
			trans-1,2-Dichloroethylene	2010/10/24	<0.20		ppbv	
			Methylene Chloride(Dichloromethane)	2010/10/24	0.31, RDL=0.30		ppbv	
			Chloroform	2010/10/24	<0.15		ppbv	
			Carbon Tetrachloride	2010/10/24	<0.30		ppbv	
			1,1-Dichloroethane	2010/10/24	<0.20		ppbv	
			1,2-Dichloroethane	2010/10/24	<0.20		ppbv	
			Ethylene Dibromide	2010/10/24	<0.17		ppbv	
			1,1,1-Trichloroethane	2010/10/24	<0.30		ppbv	
			1,1,2-Trichloroethane	2010/10/24	<0.15		ppbv	
			1,1,2,2-Tetrachloroethane	2010/10/24	<0.20		ppbv	
			cis-1,3-Dichloropropene	2010/10/24	<0.18		ppbv	
			trans-1,3-Dichloropropene	2010/10/24	<0.17		ppbv	
			1,2-Dichloropropane	2010/10/24	<0.40		ppbv	
			Bromomethane	2010/10/24	<0.18		ppbv	
			Bromoform	2010/10/24	<0.20		ppbv	
			Bromodichloromethane	2010/10/24	<0.20		ppbv	
			Dibromochloromethane	2010/10/24	<0.20		ppbv	
			Heptane	2010/10/24	<0.30		ppbv	

Maxxam Analytics
Attention: Michael Bisaga
Client Project #:
P.O. #:
Project name:

Quality Assurance Report (Continued)

Maxxam Job Number: GB0E2421

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2307805	LSY	Method Blank	Trichloroethylene	2010/10/24	<0.30		ppbv	
			Tetrachloroethylene	2010/10/24	<0.20		ppbv	
			Benzene	2010/10/24	<0.18		ppbv	
			Toluene	2010/10/24	<0.20		ppbv	
			Ethylbenzene	2010/10/24	<0.20		ppbv	
			p+m-Xylene	2010/10/24	<0.37		ppbv	
			o-Xylene	2010/10/24	<0.20		ppbv	
			Styrene	2010/10/24	<0.20		ppbv	
			1,3,5-Trimethylbenzene	2010/10/24	<0.50		ppbv	
			1,2,4-Trimethylbenzene	2010/10/24	<0.50		ppbv	
			4-ethyltoluene	2010/10/24	<2.2		ppbv	
			Chlorobenzene	2010/10/24	<0.20		ppbv	
			Benzyl chloride	2010/10/24	<1.0		ppbv	
			1,3-Dichlorobenzene	2010/10/24	<0.40		ppbv	
			1,4-Dichlorobenzene	2010/10/24	<0.40		ppbv	
			1,2-Dichlorobenzene	2010/10/24	<0.40		ppbv	
			1,2,4-Trichlorobenzene	2010/10/24	<2.0		ppbv	
			Hexachlorobutadiene	2010/10/24	<3.0		ppbv	
			Hexane	2010/10/24	<0.30		ppbv	
			Cyclohexane	2010/10/24	<0.20		ppbv	
			Tetrahydrofuran	2010/10/24	<0.40		ppbv	
			1,4-Dioxane	2010/10/24	<2.0		ppbv	
			Xylene (Total)	2010/10/24	<0.60		ppbv	

Spiked Blank: A blank matrix to which a known amount of the analyte has been added. Used to evaluate analyte recovery.
Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.
Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.

Maxxam Analytics

Xontech Model 910A VOC Sample Collection Data Sheet

Client: LICA
Location: 13-16-62-5 W4M
Station ID: Lica 33 (Portable)
Field Sample ID: LICA VOC/PORT/ Oct 11 ,10

Sampler s/n: 6200
Canister ID: 7857
Canister Installation Date/Time: Oct 08, 10 @ 8:31 mst
Canister Removal Date/Time: Oct 12, 10 @ 8:35 mst

Date and Time Information			
Sample Date	Start Time (MST)	End Time (MST)	Elapsed Time (Hours)
11-Oct-10	11/10/2010 0:00	12/10/2010 0:00	24.00

Flow Settings		
Meter Reading (sccm)	Pot Set Pt.	Pump Pressure Setting (psig)
10.0	1482	25

Canister Information	
Initial Canister Vacuum (inHg)	Final Canister Pressure (psig)
-28	21

Canister valve open prior to sampling?: YES / NO
Timer set to 0.00 minutes prior to sampling? YES / NO
Canister valve closed prior to disconnection?: YES / NO

Comments: System leak check prior to sampling. COC # 2323

Technician Signiture: Ting Xu

Success Through Science®

Your C.O.C. #: 2323

Attention: Michael Bisaga
Maxxam Analytics
2608 6A Ave.
Cold Lake, AB
CANADA T9M 2C7

Report Date: 2010/10/28

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B0E4926
Received: 2010/10/14, 10:15

Sample Matrix: AIR
Samples Received: 2

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Method Reference
Canister Pressure (TO-15)	2	N/A	2010/10/26	BRL SOP-00304	EPA TO-15
Volatile Organics in Air (TO-15) (1)	2	N/A	2010/10/26	BRL SOP-00304	EPA TO-15

(1) Air sampling canisters have been cleaned in accordance with U.S. EPA Method TO14A. At the end of the cleaning, evacuation, and pressurization cycles, one canister was selected and was pressurized with Zero Air. This canister was then analyzed via TO14A on a GC/MS. The canister must have been found to contain <0.2 ppbv concentration of all target analytes in order for the batch to have been considered clean. Each canister also underwent a leak check prior to shipment.

Please Note: SUMMA® canister samples will be retained by Maxxam for a period of 5 calendar days from the date of this report, after which time they will be cleaned for reuse. If you require a longer sample storage period, please contact your service representative.

Encryption Key

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

THERESA STEPHENSON, Project Manager
Email: TStephenson@maxxam.ca
Phone# (905) 817-5763

==========

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. For Service Group specific validation please refer to the Validation Signature Page.

Total cover pages: 1

Maxxam Analytics International Corporation o/a Maxxam Analytics 6740 Campobello Road, Mississauga, Ontario, L5N 2L8 Tel: (905) 817-5700 Toll-Free: 800-563-6266 Fax: (905) 817-5777 www.maxxam.ca

Maxxam Analytics

Maxxam Job #: B0E4926
Report Date: 2010/10/28

RESULTS OF ANALYSES OF AIR

Maxxam ID		HM4633	HM4634	
Sampling Date		2010/10/11	2010/10/11	
COC Number		2323	2323	
	Units	**LICA VOC/CLS/OCT 11, 2010 - 7831**	**LICA VOC/PORT/OCT 11, 2010 - 7857**	**QC Batch**
Volatile Organics				
Pressure on Receipt	psig	20	21	2309731

QC Batch = Quality Control Batch

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Maxxam Analytics

Maxxam Job #: B0E4926
Report Date: 2010/10/28

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		HM4633			HM4634				
Sampling Date		2010/10/11			2010/10/11				
COC Number		2323			2323				
	Units	**LICA VOC/CLS/OCT 11, 2010 - 7831**	**ug/m3**	**DL (ug/m3)**	**LICA VOC/PORT/OCT 11, 2010 - 7857**	**RDL**	**ug/m3**	**DL (ug/m3)**	**QC Batch**
Volatile Organics									
2,2,4-Trimethylpentane	ppbv	<0.20	<0.934	0.934	<0.20	0.20	<0.934	0.934	2309736
Carbon Disulfide	ppbv	<0.50	<1.56	1.56	<0.50	0.50	<1.56	1.56	2309736
Propene	ppbv	<0.30	<0.516	0.516	<0.30	0.30	<0.516	0.516	2309736
Vinyl Acetate	ppbv	<0.20	<0.704	0.704	<0.20	0.20	<0.704	0.704	2309736
Vinyl Bromide	ppbv	<0.20	<0.875	0.875	<0.20	0.20	<0.875	0.875	2309736
Dichlorodifluoromethane (FREON 12)	ppbv	0.65	3.20	0.989	0.89	0.20	4.38	0.989	2309736
1,2-Dichlorotetrafluoroethane	ppbv	<0.17	<1.19	1.19	<0.17	0.17	<1.19	1.19	2309736
Chloromethane	ppbv	0.53	1.10	0.620	0.71	0.30	1.47	0.620	2309736
Vinyl Chloride	ppbv	<0.18	<0.460	0.460	<0.18	0.18	<0.460	0.460	2309736
Chloroethane	ppbv	<0.30	<0.792	0.792	<0.30	0.30	<0.792	0.792	2309736
1,3-Butadiene	ppbv	<0.50	<1.11	1.11	<0.50	0.50	<1.11	1.11	2309736
Trichlorofluoromethane (FREON 11)	ppbv	0.29	1.63	1.12	0.40	0.20	2.27	1.12	2309736
Trichlorotrifluoroethane	ppbv	<0.15	<1.15	1.15	0.15	0.15	1.15	1.15	2309736
Ethanol	ppbv	<2.3	<4.33	4.33	<2.3	2.3	<4.33	4.33	2309736
2-propanol	ppbv	<3.0	<7.37	7.37	<3.0	3.0	<7.37	7.37	2309736
2-Propanone	ppbv	1.58	3.74	1.90	2.04	0.80	4.84	1.90	2309736
Methyl Ethyl Ketone (2-Butanone)	ppbv	<3.0	<8.85	8.85	<3.0	3.0	<8.85	8.85	2309736
Methyl Isobutyl Ketone	ppbv	<3.2	<13.1	13.1	<3.2	3.2	<13.1	13.1	2309736
Methyl Butyl Ketone (2-Hexanone)	ppbv	<2.0	<8.19	8.19	<2.0	2.0	<8.19	8.19	2309736
Methyl t-butyl ether (MTBE)	ppbv	<0.20	<0.721	0.721	<0.20	0.20	<0.721	0.721	2309736
Ethyl Acetate	ppbv	<2.2	<7.93	7.93	<2.2	2.2	<7.93	7.93	2309736
1,1-Dichloroethylene	ppbv	<0.25	<0.991	0.991	<0.25	0.25	<0.991	0.991	2309736
cis-1,2-Dichloroethylene	ppbv	<0.19	<0.753	0.753	<0.19	0.19	<0.753	0.753	2309736
trans-1,2-Dichloroethylene	ppbv	<0.20	<0.793	0.793	<0.20	0.20	<0.793	0.793	2309736
Methylene Chloride(Dichloromethane)	ppbv	0.75	2.60	1.04	0.81	0.30	2.80	1.04	2309736
Chloroform	ppbv	<0.15	<0.732	0.732	<0.15	0.15	<0.732	0.732	2309736
Carbon Tetrachloride	ppbv	<0.30	<1.89	1.89	<0.30	0.30	<1.89	1.89	2309736
1,1-Dichloroethane	ppbv	<0.20	<0.809	0.809	<0.20	0.20	<0.809	0.809	2309736
1,2-Dichloroethane	ppbv	<0.20	<0.809	0.809	<0.20	0.20	<0.809	0.809	2309736
Ethylene Dibromide	ppbv	<0.17	<1.31	1.31	<0.17	0.17	<1.31	1.31	2309736

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Maxxam Job #: B0E4926
Report Date: 2010/10/28

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		HM4633			HM4634				
Sampling Date		2010/10/11			2010/10/11				
COC Number		2323			2323				
	Units	**LICA VOC/CLS/OCT 11, 2010 - 7831**	**ug/m3**	**DL (ug/m3)**	**LICA VOC/PORT/OCT 11, 2010 - 7857**	**RDL**	**ug/m3**	**DL (ug/m3)**	**QC Batch**
1,1,1-Trichloroethane	ppbv	<0.30	<1.64	1.64	<0.30	0.30	<1.64	1.64	2309736
1,1,2-Trichloroethane	ppbv	<0.15	<0.818	0.818	<0.15	0.15	<0.818	0.818	2309736
1,1,2,2-Tetrachloroethane	ppbv	<0.20	<1.37	1.37	<0.20	0.20	<1.37	1.37	2309736
cis-1,3-Dichloropropene	ppbv	<0.18	<0.817	0.817	<0.18	0.18	<0.817	0.817	2309736
trans-1,3-Dichloropropene	ppbv	<0.17	<0.772	0.772	<0.17	0.17	<0.772	0.772	2309736
1,2-Dichloropropane	ppbv	<0.40	<1.85	1.85	<0.40	0.40	<1.85	1.85	2309736
Bromomethane	ppbv	<0.18	<0.699	0.699	<0.18	0.18	<0.699	0.699	2309736
Bromoform	ppbv	<0.20	<2.07	2.07	<0.20	0.20	<2.07	2.07	2309736
Bromodichloromethane	ppbv	<0.20	<1.34	1.34	<0.20	0.20	<1.34	1.34	2309736
Dibromochloromethane	ppbv	<0.20	<1.70	1.70	<0.20	0.20	<1.70	1.70	2309736
Heptane	ppbv	<0.30	<1.23	1.23	<0.30	0.30	<1.23	1.23	2309736
Trichloroethylene	ppbv	<0.30	<1.61	1.61	<0.30	0.30	<1.61	1.61	2309736
Tetrachloroethylene	ppbv	<0.20	<1.36	1.36	<0.20	0.20	<1.36	1.36	2309736
Benzene	ppbv	<0.18	<0.575	0.575	<0.18	0.18	<0.575	0.575	2309736
Toluene	ppbv	<0.20	<0.753	0.753	<0.20	0.20	<0.753	0.753	2309736
Ethylbenzene	ppbv	<0.20	<0.868	0.868	<0.20	0.20	<0.868	0.868	2309736
p+m-Xylene	ppbv	<0.37	<1.61	1.61	<0.37	0.37	<1.61	1.61	2309736
o-Xylene	ppbv	<0.20	<0.868	0.868	<0.20	0.20	<0.868	0.868	2309736
Styrene	ppbv	<0.20	<0.852	0.852	<0.20	0.20	<0.852	0.852	2309736
1,3,5-Trimethylbenzene	ppbv	<0.50	<2.46	2.46	<0.50	0.50	<2.46	2.46	2309736
1,2,4-Trimethylbenzene	ppbv	<0.50	<2.46	2.46	<0.50	0.50	<2.46	2.46	2309736
4-ethyltoluene	ppbv	<2.2	<10.8	10.8	<2.2	2.2	<10.8	10.8	2309736
Chlorobenzene	ppbv	<0.20	<0.921	0.921	<0.20	0.20	<0.921	0.921	2309736
Benzyl chloride	ppbv	<1.0	<5.18	5.18	<1.0	1.0	<5.18	5.18	2309736
1,3-Dichlorobenzene	ppbv	<0.40	<2.40	2.40	<0.40	0.40	<2.40	2.40	2309736
1,4-Dichlorobenzene	ppbv	<0.40	<2.40	2.40	<0.40	0.40	<2.40	2.40	2309736
1,2-Dichlorobenzene	ppbv	<0.40	<2.40	2.40	<0.40	0.40	<2.40	2.40	2309736
1,2,4-Trichlorobenzene	ppbv	<2.0	<14.8	14.8	<2.0	2.0	<14.8	14.8	2309736
Hexachlorobutadiene	ppbv	<3.0	<32.0	32.0	<3.0	3.0	<32.0	32.0	2309736
Hexane	ppbv	<0.30	<1.06	1.06	<0.30	0.30	<1.06	1.06	2309736
Cyclohexane	ppbv	<0.20	<0.688	0.688	<0.20	0.20	<0.688	0.688	2309736
Tetrahydrofuran	ppbv	<0.40	<1.18	1.18	<0.40	0.40	<1.18	1.18	2309736

QC Batch = Quality Control Batch

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Maxxam Analytics

Maxxam Job #: B0E4926
Report Date: 2010/10/28

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		HM4633			HM4634				
Sampling Date		2010/10/11			2010/10/11				
COC Number		2323			2323				
	Units	**LICA VOC/CLS/OCT 11, 2010 - 7831**	**ug/m3**	**DL (ug/m3)**	**LICA VOC/PORT/OCT 11, 2010 - 7857**	**RDL**	**ug/m3**	**DL (ug/m3)**	**QC Batch**
1,4-Dioxane	ppbv	<2.0	<7.21	7.21	<2.0	2.0	<7.21	7.21	2309736
Xylene (Total)	ppbv	<0.60	<2.61	2.61	<0.60	0.60	<2.61	2.61	2309736
Surrogate Recovery (%)									
Bromochloromethane	%	88	N/A	N/A	90		N/A	N/A	2309736
D5-Chlorobenzene	%	88	N/A	N/A	95		N/A	N/A	2309736
Difluorobenzene	%	91	N/A	N/A	93		N/A	N/A	2309736

N/A = Not Applicable
QC Batch = Quality Control Batch

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Maxxam Job #: B0E4926
Report Date: 2010/10/28

Test Summary

Maxxam ID	HM4633	**Collected**	2010/10/11
Sample ID	LICA VOC/CLS/OCT 11, 2010 - 7831	**Shipped**	
Matrix	AIR	**Received**	2010/10/14

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Canister Pressure (TO-15)	PRES	2309731	N/A	2010/10/26	MMU
Volatile Organics in Air (TO-15)	GC/MS	2309736	N/A	2010/10/26	MMU

Maxxam ID	HM4634	**Collected**	2010/10/11
Sample ID	LICA VOC/PORT/OCT 11, 2010 - 7857	**Shipped**	
Matrix	AIR	**Received**	2010/10/14

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Canister Pressure (TO-15)	PRES	2309731	N/A	2010/10/26	MMU
Volatile Organics in Air (TO-15)	GC/MS	2309736	N/A	2010/10/26	MMU

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Maxxam Analytics

Maxxam Job #: B0E4926
Report Date: 2010/10/28

GENERAL COMMENTS

Results relate only to the items tested.

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Maxxam Analytics
Attention: Michael Bisaga
Client Project #:
P.O. #:
Project name:

Quality Assurance Report

Maxxam Job Number: GB0E4926

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2309736	MMU	Spiked Blank	Bromochloromethane	2010/10/26		95	%	60 - 140
			D5-Chlorobenzene	2010/10/26		94	%	60 - 140
			Difluorobenzene	2010/10/26		96	%	60 - 140
			2,2,4-Trimethylpentane	2010/10/26		98	%	70 - 130
			Carbon Disulfide	2010/10/26		95	%	70 - 130
			Propene	2010/10/26		101	%	70 - 130
			Vinyl Acetate	2010/10/26		99	%	70 - 130
			Vinyl Bromide	2010/10/26		100	%	70 - 130
			Dichlorodifluoromethane (FREON 12)	2010/10/26		99	%	70 - 130
			1,2-Dichlorotetrafluoroethane	2010/10/26		113	%	70 - 130
			Chloromethane	2010/10/26		103	%	70 - 130
			Vinyl Chloride	2010/10/26		104	%	70 - 130
			Chloroethane	2010/10/26		104	%	70 - 130
			1,3-Butadiene	2010/10/26		104	%	70 - 130
			Trichlorofluoromethane (FREON 11)	2010/10/26		99	%	70 - 130
			Trichlorotrifluoroethane	2010/10/26		99	%	70 - 130
			Ethanol	2010/10/26		83	%	70 - 130
			2-propanol	2010/10/26		95	%	70 - 130
			2-Propanone	2010/10/26		106	%	70 - 130
			Methyl Ethyl Ketone (2-Butanone)	2010/10/26		87	%	70 - 130
			Methyl Isobutyl Ketone	2010/10/26		92	%	70 - 130
			Methyl Butyl Ketone (2-Hexanone)	2010/10/26		96	%	70 - 130
			Methyl t-butyl ether (MTBE)	2010/10/26		97	%	70 - 130
			Ethyl Acetate	2010/10/26		99	%	70 - 130
			1,1-Dichloroethylene	2010/10/26		104	%	70 - 130
			cis-1,2-Dichloroethylene	2010/10/26		104	%	70 - 130
			trans-1,2-Dichloroethylene	2010/10/26		99	%	70 - 130
			Methylene Chloride(Dichloromethane)	2010/10/26		93	%	70 - 130
			Chloroform	2010/10/26		103	%	70 - 130
			Carbon Tetrachloride	2010/10/26		99	%	70 - 130
			1,1-Dichloroethane	2010/10/26		101	%	70 - 130
			1,2-Dichloroethane	2010/10/26		100	%	70 - 130
			Ethylene Dibromide	2010/10/26		92	%	70 - 130
			1,1,1-Trichloroethane	2010/10/26		98	%	70 - 130
			1,1,2-Trichloroethane	2010/10/26		93	%	70 - 130
			1,1,2,2-Tetrachloroethane	2010/10/26		82	%	70 - 130
			cis-1,3-Dichloropropene	2010/10/26		100	%	70 - 130
			trans-1,3-Dichloropropene	2010/10/26		100	%	70 - 130
			1,2-Dichloropropane	2010/10/26		99	%	70 - 130
			Bromomethane	2010/10/26		103	%	70 - 130
			Bromoform	2010/10/26		91	%	70 - 130
			Bromodichloromethane	2010/10/26		95	%	70 - 130
			Dibromochloromethane	2010/10/26		94	%	70 - 130
			Heptane	2010/10/26		87	%	70 - 130
			Trichloroethylene	2010/10/26		94	%	70 - 130
			Tetrachloroethylene	2010/10/26		87	%	70 - 130
			Benzene	2010/10/26		99	%	70 - 130
			Toluene	2010/10/26		94	%	70 - 130
			Ethylbenzene	2010/10/26		92	%	70 - 130
			p+m-Xylene	2010/10/26		89	%	70 - 130
			o-Xylene	2010/10/26		87	%	70 - 130
			Styrene	2010/10/26		89	%	70 - 130
			1,3,5-Trimethylbenzene	2010/10/26		78	%	70 - 130
			1,2,4-Trimethylbenzene	2010/10/26		75	%	70 - 130
			4-ethyltoluene	2010/10/26		74	%	70 - 130

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Maxxam Analytics
Attention: Michael Bisaga
Client Project #:
P.O. #:
Project name:

Quality Assurance Report (Continued)

Maxxam Job Number: GB0E4926

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2309736	MMU	Spiked Blank	Chlorobenzene	2010/10/26		91	%	70 - 130
			Benzyl chloride	2010/10/26		80	%	70 - 130
			1,3-Dichlorobenzene	2010/10/26		73	%	70 - 130
			1,4-Dichlorobenzene	2010/10/26		73	%	70 - 130
			1,2-Dichlorobenzene	2010/10/26		71	%	70 - 130
			1,2,4-Trichlorobenzene	2010/10/26		81	%	70 - 130
			Hexachlorobutadiene	2010/10/26		82	%	70 - 130
			Hexane	2010/10/26		89	%	70 - 130
			Cyclohexane	2010/10/26		94	%	70 - 130
			Tetrahydrofuran	2010/10/26		100	%	70 - 130
			1,4-Dioxane	2010/10/26		72	%	70 - 130
		Method Blank	Bromochloromethane	2010/10/26		91	%	60 - 140
			D5-Chlorobenzene	2010/10/26		93	%	60 - 140
			Difluorobenzene	2010/10/26		93	%	60 - 140
			2,2,4-Trimethylpentane	2010/10/26	<0.20		ppbv	
			Carbon Disulfide	2010/10/26	<0.50		ppbv	
			Propene	2010/10/26	<0.30		ppbv	
			Vinyl Acetate	2010/10/26	<0.20		ppbv	
			Vinyl Bromide	2010/10/26	<0.20		ppbv	
			Dichlorodifluoromethane (FREON 12)	2010/10/26	<0.20		ppbv	
			1,2-Dichlorotetrafluoroethane	2010/10/26	<0.17		ppbv	
			Chloromethane	2010/10/26	<0.30		ppbv	
			Vinyl Chloride	2010/10/26	<0.18		ppbv	
			Chloroethane	2010/10/26	<0.30		ppbv	
			1,3-Butadiene	2010/10/26	<0.50		ppbv	
			Trichlorofluoromethane (FREON 11)	2010/10/26	<0.20		ppbv	
			Trichlorotrifluoroethane	2010/10/26	<0.15		ppbv	
			Ethanol	2010/10/26	<2.3		ppbv	
			2-propanol	2010/10/26	<3.0		ppbv	
			2-Propanone	2010/10/26	<0.80		ppbv	
			Methyl Ethyl Ketone (2-Butanone)	2010/10/26	<3.0		ppbv	
			Methyl Isobutyl Ketone	2010/10/26	<3.2		ppbv	
			Methyl Butyl Ketone (2-Hexanone)	2010/10/26	<2.0		ppbv	
			Methyl t-butyl ether (MTBE)	2010/10/26	<0.20		ppbv	
			Ethyl Acetate	2010/10/26	<2.2		ppbv	
			1,1-Dichloroethylene	2010/10/26	<0.25		ppbv	
			cis-1,2-Dichloroethylene	2010/10/26	<0.19		ppbv	
			trans-1,2-Dichloroethylene	2010/10/26	<0.20		ppbv	
			Methylene Chloride(Dichloromethane)	2010/10/26	0.69, RDL=0.30		ppbv	
			Chloroform	2010/10/26	<0.15		ppbv	
			Carbon Tetrachloride	2010/10/26	<0.30		ppbv	
			1,1-Dichloroethane	2010/10/26	<0.20		ppbv	
			1,2-Dichloroethane	2010/10/26	<0.20		ppbv	
			Ethylene Dibromide	2010/10/26	<0.17		ppbv	
			1,1,1-Trichloroethane	2010/10/26	<0.30		ppbv	
			1,1,2-Trichloroethane	2010/10/26	<0.15		ppbv	
			1,1,2,2-Tetrachloroethane	2010/10/26	<0.20		ppbv	
			cis-1,3-Dichloropropene	2010/10/26	<0.18		ppbv	
			trans-1,3-Dichloropropene	2010/10/26	<0.17		ppbv	
			1,2-Dichloropropane	2010/10/26	<0.40		ppbv	
			Bromomethane	2010/10/26	<0.18		ppbv	
			Bromoform	2010/10/26	<0.20		ppbv	
			Bromodichloromethane	2010/10/26	<0.20		ppbv	
			Dibromochloromethane	2010/10/26	<0.20		ppbv	
			Heptane	2010/10/26	<0.30		ppbv	

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Maxxam Analytics
Attention: Michael Bisaga
Client Project #:
P.O. #:
Project name:

Quality Assurance Report (Continued)

Maxxam Job Number: GB0E4926

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2309736	MMU	Method Blank	Trichloroethylene	2010/10/26	<0.30		ppbv	
			Tetrachloroethylene	2010/10/26	<0.20		ppbv	
			Benzene	2010/10/26	<0.18		ppbv	
			Toluene	2010/10/26	<0.20		ppbv	
			Ethylbenzene	2010/10/26	<0.20		ppbv	
			p+m-Xylene	2010/10/26	<0.37		ppbv	
			o-Xylene	2010/10/26	<0.20		ppbv	
			Styrene	2010/10/26	<0.20		ppbv	
			1,3,5-Trimethylbenzene	2010/10/26	<0.50		ppbv	
			1,2,4-Trimethylbenzene	2010/10/26	<0.50		ppbv	
			4-ethyltoluene	2010/10/26	<2.2		ppbv	
			Chlorobenzene	2010/10/26	<0.20		ppbv	
			Benzyl chloride	2010/10/26	<1.0		ppbv	
			1,3-Dichlorobenzene	2010/10/26	<0.40		ppbv	
			1,4-Dichlorobenzene	2010/10/26	<0.40		ppbv	
			1,2-Dichlorobenzene	2010/10/26	<0.40		ppbv	
			1,2,4-Trichlorobenzene	2010/10/26	<2.0		ppbv	
			Hexachlorobutadiene	2010/10/26	<3.0		ppbv	
			Hexane	2010/10/26	<0.30		ppbv	
			Cyclohexane	2010/10/26	<0.20		ppbv	
			Tetrahydrofuran	2010/10/26	<0.40		ppbv	
			1,4-Dioxane	2010/10/26	<2.0		ppbv	
			Xylene (Total)	2010/10/26	<0.60		ppbv	
		RPD - Sample/Sample Dup	2,2,4-Trimethylpentane	2010/10/26	NC		%	25
			Carbon Disulfide	2010/10/26	12.3		%	25
			Propene	2010/10/26	NC		%	25
			Vinyl Acetate	2010/10/26	NC		%	25
			Vinyl Bromide	2010/10/26	NC		%	25
			Dichlorodifluoromethane (FREON 12)	2010/10/26	NC		%	25
			1,2-Dichlorotetrafluoroethane	2010/10/26	NC		%	25
			Chloromethane	2010/10/26	NC		%	25
			Vinyl Chloride	2010/10/26	NC		%	25
			Chloroethane	2010/10/26	NC		%	25
			1,3-Butadiene	2010/10/26	NC		%	25
			Trichlorofluoromethane (FREON 11)	2010/10/26	NC		%	25
			Trichlorotrifluoroethane	2010/10/26	NC		%	25
			Ethanol	2010/10/26	NC		%	25
			2-propanol	2010/10/26	NC		%	25
			2-Propanone	2010/10/26	8.0		%	25
			Methyl Ethyl Ketone (2-Butanone)	2010/10/26	NC		%	25
			Methyl Isobutyl Ketone	2010/10/26	NC		%	25
			Methyl Butyl Ketone (2-Hexanone)	2010/10/26	NC		%	25
			Methyl t-butyl ether (MTBE)	2010/10/26	NC		%	25
			Ethyl Acetate	2010/10/26	NC		%	25
			1,1-Dichloroethylene	2010/10/26	NC		%	25
			cis-1,2-Dichloroethylene	2010/10/26	NC		%	25
			trans-1,2-Dichloroethylene	2010/10/26	NC		%	25
			Methylene Chloride(Dichloromethane)	2010/10/26	17.4		%	25
			Chloroform	2010/10/26	NC		%	25
			Carbon Tetrachloride	2010/10/26	NC		%	25
			1,1-Dichloroethane	2010/10/26	NC		%	25
			1,2-Dichloroethane	2010/10/26	NC		%	25
			Ethylene Dibromide	2010/10/26	NC		%	25

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Attention: Michael Bisaga
Client Project #:
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Project name:

Quality Assurance Report (Continued)

Maxxam Job Number: GB0E4926

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2309736	MMU	RPD - Sample/Sample Dup	1,1,1-Trichloroethane	2010/10/26	NC		%	25
			1,1,2-Trichloroethane	2010/10/26	NC		%	25
			1,1,2,2-Tetrachloroethane	2010/10/26	NC		%	25
			cis-1,3-Dichloropropene	2010/10/26	NC		%	25
			trans-1,3-Dichloropropene	2010/10/26	NC		%	25
			1,2-Dichloropropane	2010/10/26	NC		%	25
			Bromomethane	2010/10/26	NC		%	25
			Bromoform	2010/10/26	NC		%	25
			Bromodichloromethane	2010/10/26	NC		%	25
			Dibromochloromethane	2010/10/26	NC		%	25
			Heptane	2010/10/26	NC		%	25
			Trichloroethylene	2010/10/26	NC		%	25
			Tetrachloroethylene	2010/10/26	NC		%	25
			Benzene	2010/10/26	NC		%	25
			Toluene	2010/10/26	NC		%	25
			Ethylbenzene	2010/10/26	NC		%	25
			p+m-Xylene	2010/10/26	NC		%	25
			o-Xylene	2010/10/26	NC		%	25
			Styrene	2010/10/26	NC		%	25
			1,3,5-Trimethylbenzene	2010/10/26	NC		%	25
			1,2,4-Trimethylbenzene	2010/10/26	NC		%	25
			4-ethyltoluene	2010/10/26	NC		%	25
			Chlorobenzene	2010/10/26	NC		%	25
			Benzyl chloride	2010/10/26	NC		%	25
			1,3-Dichlorobenzene	2010/10/26	NC		%	25
			1,4-Dichlorobenzene	2010/10/26	NC		%	25
			1,2-Dichlorobenzene	2010/10/26	NC		%	25
			1,2,4-Trichlorobenzene	2010/10/26	NC		%	25
			Hexachlorobutadiene	2010/10/26	NC		%	25
			Hexane	2010/10/26	NC		%	25
			Cyclohexane	2010/10/26	NC		%	25
			Tetrahydrofuran	2010/10/26	NC		%	25
			1,4-Dioxane	2010/10/26	NC		%	25
			Xylene (Total)	2010/10/26	NC		%	25

Spiked Blank: A blank matrix to which a known amount of the analyte has been added. Used to evaluate analyte recovery.
Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.
Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.
NC (RPD): The RPD was not calculated. The level of analyte detected in the parent sample and its duplicate was not sufficiently significant to permit a reliable calculation.

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Maxxam Analytics

Xontech Model 910A VOC Sample Collection Data Sheet

Client: LICA
Location: 13-16-62-5 W4M
Station ID: Lica 33 (Portable)
Field Sample ID: LICA VOC/PORT/ Oct 17 ,10

Sampler s/n: 6200
Canister ID: 7790
Canister Installation Date/Time: Oct 15, 10 @ 14:50 mst
Canister Removal Date/Time: Oct 18, 10 @ 11: 05 mst

Date and Time Information			
Sample Date	Start Time (MST)	End Time (MST)	Elapsed Time (Hours)
17-Oct-10	17/10/2010 0:00	18/10/2010 0:00	24.00

Flow Settings		
Meter Reading (sccm)	Pot Set Pt.	Pump Pressure Setting (psig)
10.0	1482	25

Canister Information	
Initial Canister Vacuum (inHg)	Final Canister Pressure (psig)
-28	21

Canister valve open prior to sampling?: YES / NO
Timer set to 0.00 minutes prior to sampling? YES / NO
Canister valve closed prior to disconnection?: YES / NO

Comments: System leak check prior to sampling. COC # 2325

Technician Signiture: Ting Xu

Success Through Science®

Your C.O.C. #: 2325

Attention: Michael Bisaga
Maxxam Analytics
2608 6A Ave.
Cold Lake, AB
CANADA T9M 2C7

Report Date: 2010/11/03

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B0F0576
Received: 2010/10/22, 09:35

Sample Matrix: AIR
Samples Received: 2

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Method Reference
Canister Pressure (TO-15)	2	N/A	2010/10/29	BRL SOP-00304	EPA TO-15
Volatile Organics in Air (TO-15) (1)	2	N/A	2010/10/29	BRL SOP-00304	EPA TO-15

(1) Air sampling canisters have been cleaned in accordance with U.S. EPA Method TO14A. At the end of the cleaning, evacuation, and pressurization cycles, one canister was selected and was pressurized with Zero Air. This canister was then analyzed via TO14A on a GC/MS. The canister must have been found to contain <0.2 ppbv concentration of all target analytes in order for the batch to have been considered clean. Each canister also underwent a leak check prior to shipment.

Please Note: SUMMA® canister samples will be retained by Maxxam for a period of 5 calendar days from the date of this report, after which time they will be cleaned for reuse. If you require a longer sample storage period, please contact your service representative.

Encryption Key

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

THERESA STEPHENSON, Project Manager
Email: TStephenson@maxxam.ca
Phone# (905) 817-5763

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Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Total cover pages: 1

Maxxam Analytics

Maxxam Job #: B0F0576
Report Date: 2010/11/03

RESULTS OF ANALYSES OF AIR

Maxxam ID		HP1553	HP1554	
Sampling Date		2010/10/17	2010/10/17	
COC Number		2325	2325	
	Units	**LICA VOC/CLS/OCT 17,2010 - T854**	**LICA VOC/PORT/OCT 17,2010 - T790**	**QC Batch**
Volatile Organics				
Pressure on Receipt	psig	20	22	2314917

QC Batch = Quality Control Batch

Maxxam Job #: B0F0576
Report Date: 2010/11/03

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		HP1553			HP1554				
Sampling Date		2010/10/17			2010/10/17				
COC Number		2325			2325				
	Units	**LICA VOC/CLS/OCT 17,2010 - T854**	**ug/m3**	**DL (ug/m3)**	**LICA VOC/PORT/OCT 17,2010 - T790**	**RDL**	**ug/m3**	**DL (ug/m3)**	**QC Batch**
Volatile Organics									
2,2,4-Trimethylpentane	ppbv	<0.20	<0.934	0.934	<0.20	0.20	<0.934	0.934	2314914
Carbon Disulfide	ppbv	1.29	4.02	1.56	<0.50	0.50	<1.56	1.56	2314914
Propene	ppbv	<0.30	<0.516	0.516	<0.30	0.30	<0.516	0.516	2314914
Vinyl Acetate	ppbv	<0.20	<0.704	0.704	<0.20	0.20	<0.704	0.704	2314914
Vinyl Bromide	ppbv	<0.20	<0.875	0.875	<0.20	0.20	<0.875	0.875	2314914
Dichlorodifluoromethane (FREON 12)	ppbv	0.87	4.33	0.989	0.89	0.20	4.41	0.989	2314914
1,2-Dichlorotetrafluoroethane	ppbv	<0.17	<1.19	1.19	<0.17	0.17	<1.19	1.19	2314914
Chloromethane	ppbv	0.90	1.87	0.620	0.88	0.30	1.82	0.620	2314914
Vinyl Chloride	ppbv	<0.18	<0.460	0.460	<0.18	0.18	<0.460	0.460	2314914
Chloroethane	ppbv	<0.30	<0.792	0.792	<0.30	0.30	<0.792	0.792	2314914
1,3-Butadiene	ppbv	<0.50	<1.11	1.11	<0.50	0.50	<1.11	1.11	2314914
Trichlorofluoromethane (FREON 11)	ppbv	0.40	2.23	1.12	0.43	0.20	2.43	1.12	2314914
Trichlorotrifluoroethane	ppbv	<0.15	<1.15	1.15	<0.15	0.15	<1.15	1.15	2314914
Ethanol	ppbv	6.1	11.5	4.33	<2.3	2.3	<4.33	4.33	2314914
2-propanol	ppbv	<3.0	<7.37	7.37	<3.0	3.0	<7.37	7.37	2314914
2-Propanone	ppbv	4.15	9.85	1.90	3.56	0.80	8.47	1.90	2314914
Methyl Ethyl Ketone (2-Butanone)	ppbv	<3.0	<8.85	8.85	<3.0	3.0	<8.85	8.85	2314914
Methyl Isobutyl Ketone	ppbv	<3.2	<13.1	13.1	<3.2	3.2	<13.1	13.1	2314914
Methyl Butyl Ketone (2-Hexanone)	ppbv	<2.0	<8.19	8.19	<2.0	2.0	<8.19	8.19	2314914
Methyl t-butyl ether (MTBE)	ppbv	<0.20	<0.721	0.721	<0.20	0.20	<0.721	0.721	2314914
Ethyl Acetate	ppbv	<2.2	<7.93	7.93	<2.2	2.2	<7.93	7.93	2314914
1,1-Dichloroethylene	ppbv	<0.25	<0.991	0.991	<0.25	0.25	<0.991	0.991	2314914
cis-1,2-Dichloroethylene	ppbv	<0.19	<0.753	0.753	<0.19	0.19	<0.753	0.753	2314914
trans-1,2-Dichloroethylene	ppbv	<0.20	<0.793	0.793	<0.20	0.20	<0.793	0.793	2314914
Methylene Chloride(Dichloromethane)	ppbv	0.68	2.38	1.04	0.67	0.30	2.34	1.04	2314914
Chloroform	ppbv	<0.15	<0.732	0.732	<0.15	0.15	<0.732	0.732	2314914
Carbon Tetrachloride	ppbv	<0.30	<1.89	1.89	<0.30	0.30	<1.89	1.89	2314914
1,1-Dichloroethane	ppbv	<0.20	<0.809	0.809	<0.20	0.20	<0.809	0.809	2314914
1,2-Dichloroethane	ppbv	<0.20	<0.809	0.809	<0.20	0.20	<0.809	0.809	2314914
Ethylene Dibromide	ppbv	<0.17	<1.31	1.31	<0.17	0.17	<1.31	1.31	2314914
1,1,1-Trichloroethane	ppbv	<0.30	<1.64	1.64	<0.30	0.30	<1.64	1.64	2314914

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam Job #: B0F0576
Report Date: 2010/11/03

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		HP1553			HP1554				
Sampling Date		2010/10/17			2010/10/17				
COC Number		2325			2325				
	Units	**LICA VOC/CLS/OCT 17,2010 - T854**	**ug/m3**	**DL (ug/m3)**	**LICA VOC/PORT/OCT 17,2010 - T790**	**RDL**	**ug/m3**	**DL (ug/m3)**	**QC Batch**
1,1,2-Trichloroethane	ppbv	<0.15	<0.818	0.818	<0.15	0.15	<0.818	0.818	2314914
1,1,2,2-Tetrachloroethane	ppbv	<0.20	<1.37	1.37	<0.20	0.20	<1.37	1.37	2314914
cis-1,3-Dichloropropene	ppbv	<0.18	<0.817	0.817	<0.18	0.18	<0.817	0.817	2314914
trans-1,3-Dichloropropene	ppbv	<0.17	<0.772	0.772	<0.17	0.17	<0.772	0.772	2314914
1,2-Dichloropropane	ppbv	<0.40	<1.85	1.85	<0.40	0.40	<1.85	1.85	2314914
Bromomethane	ppbv	<0.18	<0.699	0.699	<0.18	0.18	<0.699	0.699	2314914
Bromoform	ppbv	<0.20	<2.07	2.07	<0.20	0.20	<2.07	2.07	2314914
Bromodichloromethane	ppbv	<0.20	<1.34	1.34	<0.20	0.20	<1.34	1.34	2314914
Dibromochloromethane	ppbv	<0.20	<1.70	1.70	<0.20	0.20	<1.70	1.70	2314914
Heptane	ppbv	0.39	1.60	1.23	<0.30	0.30	<1.23	1.23	2314914
Trichloroethylene	ppbv	<0.30	<1.61	1.61	<0.30	0.30	<1.61	1.61	2314914
Tetrachloroethylene	ppbv	<0.20	<1.36	1.36	<0.20	0.20	<1.36	1.36	2314914
Benzene	ppbv	0.28	0.889	0.575	<0.18	0.18	<0.575	0.575	2314914
Toluene	ppbv	0.74	2.80	0.753	<0.20	0.20	<0.753	0.753	2314914
Ethylbenzene	ppbv	<0.20	<0.868	0.868	<0.20	0.20	<0.868	0.868	2314914
p+m-Xylene	ppbv	0.47	2.02	1.61	<0.37	0.37	<1.61	1.61	2314914
o-Xylene	ppbv	<0.20	<0.868	0.868	<0.20	0.20	<0.868	0.868	2314914
Styrene	ppbv	<0.20	<0.852	0.852	<0.20	0.20	<0.852	0.852	2314914
1,3,5-Trimethylbenzene	ppbv	<0.50	<2.46	2.46	<0.50	0.50	<2.46	2.46	2314914
1,2,4-Trimethylbenzene	ppbv	<0.50	<2.46	2.46	<0.50	0.50	<2.46	2.46	2314914
4-ethyltoluene	ppbv	<2.2	<10.8	10.8	<2.2	2.2	<10.8	10.8	2314914
Chlorobenzene	ppbv	<0.20	<0.921	0.921	<0.20	0.20	<0.921	0.921	2314914
Benzyl chloride	ppbv	<1.0	<5.18	5.18	<1.0	1.0	<5.18	5.18	2314914
1,3-Dichlorobenzene	ppbv	<0.40	<2.40	2.40	<0.40	0.40	<2.40	2.40	2314914
1,4-Dichlorobenzene	ppbv	<0.40	<2.40	2.40	<0.40	0.40	<2.40	2.40	2314914
1,2-Dichlorobenzene	ppbv	<0.40	<2.40	2.40	<0.40	0.40	<2.40	2.40	2314914
1,2,4-Trichlorobenzene	ppbv	<2.0	<14.8	14.8	<2.0	2.0	<14.8	14.8	2314914
Hexachlorobutadiene	ppbv	<3.0	<32.0	32.0	<3.0	3.0	<32.0	32.0	2314914
Hexane	ppbv	0.59	2.08	1.06	0.34	0.30	1.20	1.06	2314914
Cyclohexane	ppbv	0.27	0.923	0.688	0.46	0.20	1.60	0.688	2314914
Tetrahydrofuran	ppbv	<0.40	<1.18	1.18	<0.40	0.40	<1.18	1.18	2314914
1,4-Dioxane	ppbv	<2.0	<7.21	7.21	<2.0	2.0	<7.21	7.21	2314914
Xylene (Total)	ppbv	<0.60	<2.61	2.61	<0.60	0.60	<2.61	2.61	2314914

QC Batch = Quality Control Batch

Maxxam Analytics

Maxxam Job #: B0F0576
Report Date: 2010/11/03

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		HP1553			HP1554				
Sampling Date		2010/10/17			2010/10/17				
COC Number		2325			2325				
	Units	**LICA VOC/CLS/OCT 17,2010 - T854**	**ug/m3**	**DL (ug/m3)**	**LICA VOC/PORT/OCT 17,2010 - T790**	**RDL**	**ug/m3**	**DL (ug/m3)**	**QC Batch**
Surrogate Recovery (%)									
Bromochloromethane	%	82	N/A	N/A	80		N/A	N/A	2314914
D5-Chlorobenzene	%	87	N/A	N/A	81		N/A	N/A	2314914
Difluorobenzene	%	91	N/A	N/A	89		N/A	N/A	2314914

N/A = Not Applicable
QC Batch = Quality Control Batch

Test Summary

Maxxam ID	HP1553	**Collected**	2010/10/17
Sample ID	LICA VOC/CLS/OCT 17,2010 - T854	**Shipped**	
Matrix	AIR	**Received**	2010/10/22

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Canister Pressure (TO-15)	PRES	2314917	N/A	2010/10/29	MMU
Volatile Organics in Air (TO-15)	GC/MS	2314914	N/A	2010/10/29	MMU

Maxxam ID	HP1554	**Collected**	2010/10/17
Sample ID	LICA VOC/PORT/OCT 17,2010 - T790	**Shipped**	
Matrix	AIR	**Received**	2010/10/22

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Canister Pressure (TO-15)	PRES	2314917	N/A	2010/10/29	MMU
Volatile Organics in Air (TO-15)	GC/MS	2314914	N/A	2010/10/29	MMU

GENERAL COMMENTS

Results relate only to the items tested.

Maxxam Analytics
Attention: Michael Bisaga
Client Project #:
P.O. #:
Project name:

Quality Assurance Report

Maxxam Job Number: GB0F0576

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2314914	MMU	Spiked Blank	Bromochloromethane	2010/10/29		100	%	60 - 140
			D5-Chlorobenzene	2010/10/29		104	%	60 - 140
			Difluorobenzene	2010/10/29		106	%	60 - 140
			2,2,4-Trimethylpentane	2010/10/29		106	%	70 - 130
			Carbon Disulfide	2010/10/29		105	%	70 - 130
			Propene	2010/10/29		112	%	70 - 130
			Vinyl Acetate	2010/10/29		109	%	70 - 130
			Vinyl Bromide	2010/10/29		101	%	70 - 130
			Dichlorodifluoromethane (FREON 12)	2010/10/29		106	%	70 - 130
			1,2-Dichlorotetrafluoroethane	2010/10/29		119	%	70 - 130
			Chloromethane	2010/10/29		113	%	70 - 130
			Vinyl Chloride	2010/10/29		112	%	70 - 130
			Chloroethane	2010/10/29		113	%	70 - 130
			1,3-Butadiene	2010/10/29		111	%	70 - 130
			Trichlorofluoromethane (FREON 11)	2010/10/29		104	%	70 - 130
			Trichlorotrifluoroethane	2010/10/29		104	%	70 - 130
			Ethanol	2010/10/29		103	%	70 - 130
			2-propanol	2010/10/29		103	%	70 - 130
			2-Propanone	2010/10/29		115	%	70 - 130
			Methyl Ethyl Ketone (2-Butanone)	2010/10/29		97	%	70 - 130
			Methyl Isobutyl Ketone	2010/10/29		102	%	70 - 130
			Methyl Butyl Ketone (2-Hexanone)	2010/10/29		106	%	70 - 130
			Methyl t-butyl ether (MTBE)	2010/10/29		102	%	70 - 130
			Ethyl Acetate	2010/10/29		110	%	70 - 130
			1,1-Dichloroethylene	2010/10/29		105	%	70 - 130
			cis-1,2-Dichloroethylene	2010/10/29		116	%	70 - 130
			trans-1,2-Dichloroethylene	2010/10/29		105	%	70 - 130
			Methylene Chloride(Dichloromethane)	2010/10/29		100	%	70 - 130
			Chloroform	2010/10/29		109	%	70 - 130
			Carbon Tetrachloride	2010/10/29		97	%	70 - 130
			1,1-Dichloroethane	2010/10/29		110	%	70 - 130
			1,2-Dichloroethane	2010/10/29		105	%	70 - 130
			Ethylene Dibromide	2010/10/29		97	%	70 - 130
			1,1,1-Trichloroethane	2010/10/29		98	%	70 - 130
			1,1,2-Trichloroethane	2010/10/29		99	%	70 - 130
			1,1,2,2-Tetrachloroethane	2010/10/29		87	%	70 - 130
			cis-1,3-Dichloropropene	2010/10/29		106	%	70 - 130
			trans-1,3-Dichloropropene	2010/10/29		106	%	70 - 130
			1,2-Dichloropropane	2010/10/29		114	%	70 - 130
			Bromomethane	2010/10/29		107	%	70 - 130
			Bromoform	2010/10/29		92	%	70 - 130
			Bromodichloromethane	2010/10/29		101	%	70 - 130
			Dibromochloromethane	2010/10/29		100	%	70 - 130
			Heptane	2010/10/29		94	%	70 - 130
			Trichloroethylene	2010/10/29		92	%	70 - 130
			Tetrachloroethylene	2010/10/29		88	%	70 - 130
			Benzene	2010/10/29		103	%	70 - 130
			Toluene	2010/10/29		100	%	70 - 130
			Ethylbenzene	2010/10/29		95	%	70 - 130
			p+m-Xylene	2010/10/29		92	%	70 - 130
			o-Xylene	2010/10/29		91	%	70 - 130
			Styrene	2010/10/29		87	%	70 - 130
			1,3,5-Trimethylbenzene	2010/10/29		77	%	70 - 130
			1,2,4-Trimethylbenzene	2010/10/29		73	%	70 - 130
			4-ethyltoluene	2010/10/29		77	%	70 - 130

Maxxam Analytics
Attention: Michael Bisaga
Client Project #:
P.O. #:
Project name:

Quality Assurance Report (Continued)

Maxxam Job Number: GB0F0576

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2314914	MMU	Spiked Blank	Chlorobenzene	2010/10/29		91	%	70 - 130
			Benzyl chloride	2010/10/29		76	%	70 - 130
			1,3-Dichlorobenzene	2010/10/29		71	%	70 - 130
			1,4-Dichlorobenzene	2010/10/29		69 (1)	%	70 - 130
			1,2-Dichlorobenzene	2010/10/29		67 (1)	%	70 - 130
			1,2,4-Trichlorobenzene	2010/10/29		72	%	70 - 130
			Hexachlorobutadiene	2010/10/29		77	%	70 - 130
			Hexane	2010/10/29		96	%	70 - 130
			Cyclohexane	2010/10/29		96	%	70 - 130
			Tetrahydrofuran	2010/10/29		113	%	70 - 130
			1,4-Dioxane	2010/10/29		91	%	70 - 130
		Method Blank	Bromochloromethane	2010/10/29		92	%	60 - 140
			D5-Chlorobenzene	2010/10/29		95	%	60 - 140
			Difluorobenzene	2010/10/29		101	%	60 - 140
			2,2,4-Trimethylpentane	2010/10/29	<0.20		ppbv	
			Carbon Disulfide	2010/10/29	<0.50		ppbv	
			Propene	2010/10/29	<0.30		ppbv	
			Vinyl Acetate	2010/10/29	<0.20		ppbv	
			Vinyl Bromide	2010/10/29	<0.20		ppbv	
			Dichlorodifluoromethane (FREON 12)	2010/10/29	<0.20		ppbv	
			1,2-Dichlorotetrafluoroethane	2010/10/29	<0.17		ppbv	
			Chloromethane	2010/10/29	<0.30		ppbv	
			Vinyl Chloride	2010/10/29	<0.18		ppbv	
			Chloroethane	2010/10/29	<0.30		ppbv	
			1,3-Butadiene	2010/10/29	<0.50		ppbv	
			Trichlorofluoromethane (FREON 11)	2010/10/29	<0.20		ppbv	
			Trichlorotrifluoroethane	2010/10/29	<0.15		ppbv	
			Ethanol	2010/10/29	<2.3		ppbv	
			2-propanol	2010/10/29	<3.0		ppbv	
			2-Propanone	2010/10/29	<0.80		ppbv	
			Methyl Ethyl Ketone (2-Butanone)	2010/10/29	<3.0		ppbv	
			Methyl Isobutyl Ketone	2010/10/29	<3.2		ppbv	
			Methyl Butyl Ketone (2-Hexanone)	2010/10/29	<2.0		ppbv	
			Methyl t-butyl ether (MTBE)	2010/10/29	<0.20		ppbv	
			Ethyl Acetate	2010/10/29	<2.2		ppbv	
			1,1-Dichloroethylene	2010/10/29	<0.25		ppbv	
			cis-1,2-Dichloroethylene	2010/10/29	<0.19		ppbv	
			trans-1,2-Dichloroethylene	2010/10/29	<0.20		ppbv	
			Methylene Chloride(Dichloromethane)	2010/10/29	<0.90		ppbv	
			Chloroform	2010/10/29	<0.15		ppbv	
			Carbon Tetrachloride	2010/10/29	<0.30		ppbv	
			1,1-Dichloroethane	2010/10/29	<0.20		ppbv	
			1,2-Dichloroethane	2010/10/29	<0.20		ppbv	
			Ethylene Dibromide	2010/10/29	<0.17		ppbv	
			1,1,1-Trichloroethane	2010/10/29	<0.30		ppbv	
			1,1,2-Trichloroethane	2010/10/29	<0.15		ppbv	
			1,1,2,2-Tetrachloroethane	2010/10/29	<0.20		ppbv	
			cis-1,3-Dichloropropene	2010/10/29	<0.18		ppbv	
			trans-1,3-Dichloropropene	2010/10/29	<0.17		ppbv	
			1,2-Dichloropropane	2010/10/29	<0.40		ppbv	
			Bromomethane	2010/10/29	<0.18		ppbv	
			Bromoform	2010/10/29	<0.20		ppbv	
			Bromodichloromethane	2010/10/29	<0.20		ppbv	
			Dibromochloromethane	2010/10/29	<0.20		ppbv	
			Heptane	2010/10/29	<0.30		ppbv	

Maxxam Analytics
Attention: Michael Bisaga
Client Project #:
P.O. #:
Project name:

Quality Assurance Report (Continued)

Maxxam Job Number: GB0F0576

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2314914	MMU	Method Blank	Trichloroethylene	2010/10/29	<0.30		ppbv	
			Tetrachloroethylene	2010/10/29	<0.20		ppbv	
			Benzene	2010/10/29	<0.18		ppbv	
			Toluene	2010/10/29	<0.20		ppbv	
			Ethylbenzene	2010/10/29	<0.20		ppbv	
			p+m-Xylene	2010/10/29	<0.37		ppbv	
			o-Xylene	2010/10/29	<0.20		ppbv	
			Styrene	2010/10/29	<0.20		ppbv	
			1,3,5-Trimethylbenzene	2010/10/29	<0.50		ppbv	
			1,2,4-Trimethylbenzene	2010/10/29	<0.50		ppbv	
			4-ethyltoluene	2010/10/29	<2.2		ppbv	
			Chlorobenzene	2010/10/29	<0.20		ppbv	
			Benzyl chloride	2010/10/29	<1.0		ppbv	
			1,3-Dichlorobenzene	2010/10/29	<0.40		ppbv	
			1,4-Dichlorobenzene	2010/10/29	<0.40		ppbv	
			1,2-Dichlorobenzene	2010/10/29	<0.40		ppbv	
			1,2,4-Trichlorobenzene	2010/10/29	<2.0		ppbv	
			Hexachlorobutadiene	2010/10/29	<3.0		ppbv	
			Hexane	2010/10/29	<0.30		ppbv	
			Cyclohexane	2010/10/29	<0.20		ppbv	
			Tetrahydrofuran	2010/10/29	<0.40		ppbv	
			1,4-Dioxane	2010/10/29	<2.0		ppbv	
			Xylene (Total)	2010/10/29	<0.60		ppbv	

Spiked Blank: A blank matrix to which a known amount of the analyte has been added. Used to evaluate analyte recovery.
Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.
Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.
(1) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.

Maxxam Analytics

Xontech Model 910A VOC Sample Collection Data Sheet

Client: LICA
Location: 13-16-62-5 W4M
Station ID: Lica 33 (Portable)
Field Sample ID: LICA VOC/PORT/ Oct 23 ,10

Sampler s/n: 6200
Canister ID: 7819
Canister Installation Date/Time: Oct 22, 2010 @ 9:42 mst
Canister Removal Date/Time: Oct 26, 2010 @ 8:35 mst

Date and Time Information			
Sample Date	Start Time (MST)	End Time (MST)	Elapsed Time (Hours)
23-Oct-10	23/10/2010 0:00	24/10/2010 0:00	24.00

Flow Settings		
Meter Reading (sccm)	Pot Set Pt.	Pump Pressure Setting (psig)
10.0	1482	25

Canister Information	
Initial Canister Vacuum (inHg)	Final Canister Pressure (psig)
-28	21

Canister valve open prior to sampling?: YES / NO
Timer set to 0.00 minutes prior to sampling? YES / NO
Canister valve closed prior to disconnection?: YES / NO

Comments: System leak check prior to sampling. COC # 4874

Technician Signiture: Ting Xu

Your C.O.C. #: 4874

Attention: Michael Bisaga
Maxxam Analytics
2608 6A Ave.
Cold Lake, AB
CANADA T9M 2C7

Report Date: 2010/11/09

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B0F3644
Received: 2010/10/28, 10:50

Sample Matrix: AIR
Samples Received: 2

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Method Reference
Canister Pressure (TO-15)	2	N/A	2010/11/03	BRL SOP-00304	EPA TO-15
Volatile Organics in Air (TO-15) (1)	2	N/A	2010/11/03	BRL SOP-00304	EPA TO-15

(1) Air sampling canisters have been cleaned in accordance with U.S. EPA Method TO14A. At the end of the cleaning, evacuation, and pressurization cycles, one canister was selected and was pressurized with Zero Air. This canister was then analyzed via TO14A on a GC/MS. The canister must have been found to contain <0.2 ppbv concentration of all target analytes in order for the batch to have been considered clean. Each canister also underwent a leak check prior to shipment.

Please Note: SUMMA® canister samples will be retained by Maxxam for a period of 5 calendar days from the date of this report, after which time they will be cleaned for reuse. If you require a longer sample storage period, please contact your service representative.

Encryption Key

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

THERESA STEPHENSON, Project Manager
Email: TStephenson@maxxam.ca
Phone# (905) 817-5763

==========

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. For Service Group specific validation please refer to the Validation Signature Page.

Total cover pages: 1

Maxxam Analytics

Maxxam Job #: B0F3644
Report Date: 2010/11/09

RESULTS OF ANALYSES OF AIR

Maxxam ID		HQ9360	HQ9361	
Sampling Date		2010/10/23	2010/10/23	
COC Number		4874	4874	
	Units	**LICA VOC\CLS\OCT 23,10 - 7866**	**LICA VOC\PORT\ OCT 23,10 - 7819**	**QC Batch**
Volatile Organics				
Pressure on Receipt	psig	20	21	2320983

QC Batch = Quality Control Batch

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Maxxam Analytics

Maxxam Job #: B0F3644
Report Date: 2010/11/09

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		HQ9360			HQ9361				
Sampling Date		2010/10/23			2010/10/23				
COC Number		4874			4874				
	Units	**LICA VOC\CLS\OCT 23,10 - 7866**	**ug/m3**	**DL (ug/m3)**	**LICA VOC\PORT\ OCT 23,10 - 7819**	**RDL**	**ug/m3**	**DL (ug/m3)**	**QC Batch**
Volatile Organics									
2,2,4-Trimethylpentane	ppbv	<0.20	<0.934	0.934	<0.20	0.20	<0.934	0.934	2320996
Carbon Disulfide	ppbv	<0.50	<1.56	1.56	<0.50	0.50	<1.56	1.56	2320996
Propene	ppbv	0.34	0.588	0.516	0.40	0.30	0.692	0.516	2320996
Vinyl Acetate	ppbv	<0.20	<0.704	0.704	<0.20	0.20	<0.704	0.704	2320996
Vinyl Bromide	ppbv	<0.20	<0.875	0.875	<0.20	0.20	<0.875	0.875	2320996
Dichlorodifluoromethane (FREON 12)	ppbv	0.60	2.95	0.989	0.58	0.20	2.87	0.989	2320996
1,2-Dichlorotetrafluoroethane	ppbv	<0.17	<1.19	1.19	<0.17	0.17	<1.19	1.19	2320996
Chloromethane	ppbv	0.48	0.997	0.620	0.46	0.30	0.950	0.620	2320996
Vinyl Chloride	ppbv	<0.18	<0.460	0.460	<0.18	0.18	<0.460	0.460	2320996
Chloroethane	ppbv	<0.30	<0.792	0.792	<0.30	0.30	<0.792	0.792	2320996
1,3-Butadiene	ppbv	<0.50	<1.11	1.11	<0.50	0.50	<1.11	1.11	2320996
Trichlorofluoromethane (FREON 11)	ppbv	0.26	1.44	1.12	0.24	0.20	1.37	1.12	2320996
Trichlorotrifluoroethane	ppbv	<0.15	<1.15	1.15	<0.15	0.15	<1.15	1.15	2320996
Ethanol	ppbv	<2.3	<4.33	4.33	<2.3	2.3	<4.33	4.33	2320996
2-propanol	ppbv	<3.0	<7.37	7.37	<3.0	3.0	<7.37	7.37	2320996
2-Propanone	ppbv	1.28	3.04	1.90	0.87	0.80	2.06	1.90	2320996
Methyl Ethyl Ketone (2-Butanone)	ppbv	<3.0	<8.85	8.85	<3.0	3.0	<8.85	8.85	2320996
Methyl Isobutyl Ketone	ppbv	<3.2	<13.1	13.1	<3.2	3.2	<13.1	13.1	2320996
Methyl Butyl Ketone (2-Hexanone)	ppbv	<2.0	<8.19	8.19	<2.0	2.0	<8.19	8.19	2320996
Methyl t-butyl ether (MTBE)	ppbv	<0.20	<0.721	0.721	<0.20	0.20	<0.721	0.721	2320996
Ethyl Acetate	ppbv	<2.2	<7.93	7.93	<2.2	2.2	<7.93	7.93	2320996
1,1-Dichloroethylene	ppbv	<0.25	<0.991	0.991	<0.25	0.25	<0.991	0.991	2320996
cis-1,2-Dichloroethylene	ppbv	<0.19	<0.753	0.753	<0.19	0.19	<0.753	0.753	2320996
trans-1,2-Dichloroethylene	ppbv	<0.20	<0.793	0.793	<0.20	0.20	<0.793	0.793	2320996
Methylene Chloride(Dichloromethane)	ppbv	0.34	1.20	1.04	0.33	0.30	1.16	1.04	2320996
Chloroform	ppbv	<0.15	<0.732	0.732	<0.15	0.15	<0.732	0.732	2320996
Carbon Tetrachloride	ppbv	<0.30	<1.89	1.89	<0.30	0.30	<1.89	1.89	2320996
1,1-Dichloroethane	ppbv	<0.20	<0.809	0.809	<0.20	0.20	<0.809	0.809	2320996
1,2-Dichloroethane	ppbv	<0.20	<0.809	0.809	<0.20	0.20	<0.809	0.809	2320996
Ethylene Dibromide	ppbv	<0.17	<1.31	1.31	<0.17	0.17	<1.31	1.31	2320996

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Maxxam Job #: B0F3644
Report Date: 2010/11/09

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		HQ9360			HQ9361				
Sampling Date		2010/10/23			2010/10/23				
COC Number		4874			4874				
	Units	**LICA VOC\CLS\OCT 23,10 - 7866**	**ug/m3**	**DL (ug/m3)**	**LICA VOC\PORT\ OCT 23,10 - 7819**	**RDL**	**ug/m3**	**DL (ug/m3)**	**QC Batch**
1,1,1-Trichloroethane	ppbv	<0.30	<1.64	1.64	<0.30	0.30	<1.64	1.64	2320996
1,1,2-Trichloroethane	ppbv	<0.15	<0.818	0.818	<0.15	0.15	<0.818	0.818	2320996
1,1,2,2-Tetrachloroethane	ppbv	<0.20	<1.37	1.37	<0.20	0.20	<1.37	1.37	2320996
cis-1,3-Dichloropropene	ppbv	<0.18	<0.817	0.817	<0.18	0.18	<0.817	0.817	2320996
trans-1,3-Dichloropropene	ppbv	<0.17	<0.772	0.772	<0.17	0.17	<0.772	0.772	2320996
1,2-Dichloropropane	ppbv	<0.40	<1.85	1.85	<0.40	0.40	<1.85	1.85	2320996
Bromomethane	ppbv	<0.18	<0.699	0.699	<0.18	0.18	<0.699	0.699	2320996
Bromoform	ppbv	<0.20	<2.07	2.07	<0.20	0.20	<2.07	2.07	2320996
Bromodichloromethane	ppbv	<0.20	<1.34	1.34	<0.20	0.20	<1.34	1.34	2320996
Dibromochloromethane	ppbv	<0.20	<1.70	1.70	<0.20	0.20	<1.70	1.70	2320996
Heptane	ppbv	<0.30	<1.23	1.23	<0.30	0.30	<1.23	1.23	2320996
Trichloroethylene	ppbv	<0.30	<1.61	1.61	<0.30	0.30	<1.61	1.61	2320996
Tetrachloroethylene	ppbv	<0.20	<1.36	1.36	<0.20	0.20	<1.36	1.36	2320996
Benzene	ppbv	<0.18	<0.575	0.575	<0.18	0.18	<0.575	0.575	2320996
Toluene	ppbv	<0.20	<0.753	0.753	<0.20	0.20	<0.753	0.753	2320996
Ethylbenzene	ppbv	<0.20	<0.868	0.868	<0.20	0.20	<0.868	0.868	2320996
p+m-Xylene	ppbv	<0.37	<1.61	1.61	<0.37	0.37	<1.61	1.61	2320996
o-Xylene	ppbv	<0.20	<0.868	0.868	<0.20	0.20	<0.868	0.868	2320996
Styrene	ppbv	<0.20	<0.852	0.852	<0.20	0.20	<0.852	0.852	2320996
1,3,5-Trimethylbenzene	ppbv	<0.50	<2.46	2.46	<0.50	0.50	<2.46	2.46	2320996
1,2,4-Trimethylbenzene	ppbv	<0.50	<2.46	2.46	<0.50	0.50	<2.46	2.46	2320996
4-ethyltoluene	ppbv	<2.2	<10.8	10.8	<2.2	2.2	<10.8	10.8	2320996
Chlorobenzene	ppbv	<0.20	<0.921	0.921	<0.20	0.20	<0.921	0.921	2320996
Benzyl chloride	ppbv	<1.0	<5.18	5.18	<1.0	1.0	<5.18	5.18	2320996
1,3-Dichlorobenzene	ppbv	<0.40	<2.40	2.40	<0.40	0.40	<2.40	2.40	2320996
1,4-Dichlorobenzene	ppbv	<0.40	<2.40	2.40	<0.40	0.40	<2.40	2.40	2320996
1,2-Dichlorobenzene	ppbv	<0.40	<2.40	2.40	<0.40	0.40	<2.40	2.40	2320996
1,2,4-Trichlorobenzene	ppbv	<2.0	<14.8	14.8	<2.0	2.0	<14.8	14.8	2320996
Hexachlorobutadiene	ppbv	<3.0	<32.0	32.0	<3.0	3.0	<32.0	32.0	2320996
Hexane	ppbv	<0.30	<1.06	1.06	<0.30	0.30	<1.06	1.06	2320996
Cyclohexane	ppbv	<0.20	<0.688	0.688	<0.20	0.20	<0.688	0.688	2320996
Tetrahydrofuran	ppbv	<0.40	<1.18	1.18	<0.40	0.40	<1.18	1.18	2320996

QC Batch = Quality Control Batch

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Maxxam Analytics

Maxxam Job #: B0F3644
Report Date: 2010/11/09

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		HQ9360			HQ9361				
Sampling Date		2010/10/23			2010/10/23				
COC Number		4874			4874				
	Units	**LICA VOC\CLS\OCT 23,10 - 7866**	**ug/m3**	**DL (ug/m3)**	**LICA VOC\PORT\ OCT 23,10 - 7819**	**RDL**	**ug/m3**	**DL (ug/m3)**	**QC Batch**
1,4-Dioxane	ppbv	<2.0	<7.21	7.21	<2.0	2.0	<7.21	7.21	2320996
Xylene (Total)	ppbv	<0.60	<2.61	2.61	<0.60	0.60	<2.61	2.61	2320996
Surrogate Recovery (%)									
Bromochloromethane	%	83	N/A	N/A	85		N/A	N/A	2320996
D5-Chlorobenzene	%	80	N/A	N/A	85		N/A	N/A	2320996
Difluorobenzene	%	82	N/A	N/A	86		N/A	N/A	2320996

N/A = Not Applicable
QC Batch = Quality Control Batch

Maxxam Analytics International Corporation o/a Maxxam Analytics 6740 Campobello Road, Mississauga, Ontario, L5N 2L8 Tel: (905) 817-5700 Toll-Free: 800-563-6266 Fax: (905) 817-5777 www.maxxam.ca

Maxxam Analytics

Maxxam Job #: B0F3644
Report Date: 2010/11/09

Test Summary

Maxxam ID HQ9360 **Collected** 2010/10/23
Sample ID LICA VOC\CLS\OCT 23,10 - 7866 **Shipped**
Matrix AIR **Received** 2010/10/28

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Canister Pressure (TO-15)	PRES	2320983	N/A	2010/11/03	DVO
Volatile Organics in Air (TO-15)	GC/MS	2320996	N/A	2010/11/03	DVO

Maxxam ID HQ9361 **Collected** 2010/10/23
Sample ID LICA VOC\PORT\ OCT 23,10 - 7819 **Shipped**
Matrix AIR **Received** 2010/10/28

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Canister Pressure (TO-15)	PRES	2320983	N/A	2010/11/03	DVO
Volatile Organics in Air (TO-15)	GC/MS	2320996	N/A	2010/11/03	DVO

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Maxxam Analytics

Maxxam Job #: B0F3644
Report Date: 2010/11/09

GENERAL COMMENTS

Results relate only to the items tested.

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Maxxam Analytics
Attention: Michael Bisaga
Client Project #:
P.O. #:
Project name:

Quality Assurance Report

Maxxam Job Number: GB0F3644

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2320996	DVO	Spiked Blank	Bromochloromethane	2010/11/03		102	%	60 - 140
			D5-Chlorobenzene	2010/11/03		105	%	60 - 140
			Difluorobenzene	2010/11/03		104	%	60 - 140
			2,2,4-Trimethylpentane	2010/11/03		79	%	70 - 130
			Carbon Disulfide	2010/11/03		69 (1)	%	70 - 130
			Propene	2010/11/03		74	%	70 - 130
			Vinyl Acetate	2010/11/03		82	%	70 - 130
			Vinyl Bromide	2010/11/03		81	%	70 - 130
			Dichlorodifluoromethane (FREON 12)	2010/11/03		85	%	70 - 130
			1,2-Dichlorotetrafluoroethane	2010/11/03		91	%	70 - 130
			Chloromethane	2010/11/03		80	%	70 - 130
			Vinyl Chloride	2010/11/03		77	%	70 - 130
			Chloroethane	2010/11/03		76	%	70 - 130
			1,3-Butadiene	2010/11/03		65 (1)	%	70 - 130
			Trichlorofluoromethane (FREON 11)	2010/11/03		76	%	70 - 130
			Trichlorotrifluoroethane	2010/11/03		75	%	70 - 130
			Ethanol	2010/11/03		91	%	70 - 130
			2-propanol	2010/11/03		84	%	70 - 130
			2-Propanone	2010/11/03		77	%	70 - 130
			Methyl Ethyl Ketone (2-Butanone)	2010/11/03		91	%	70 - 130
			Methyl Isobutyl Ketone	2010/11/03		79	%	70 - 130
			Methyl Butyl Ketone (2-Hexanone)	2010/11/03		87	%	70 - 130
			Methyl t-butyl ether (MTBE)	2010/11/03		82	%	70 - 130
			Ethyl Acetate	2010/11/03		81	%	70 - 130
			1,1-Dichloroethylene	2010/11/03		78	%	70 - 130
			cis-1,2-Dichloroethylene	2010/11/03		79	%	70 - 130
			trans-1,2-Dichloroethylene	2010/11/03		78	%	70 - 130
			Methylene Chloride(Dichloromethane)	2010/11/03		71	%	70 - 130
			Chloroform	2010/11/03		78	%	70 - 130
			Carbon Tetrachloride	2010/11/03		79	%	70 - 130
			1,1-Dichloroethane	2010/11/03		75	%	70 - 130
			1,2-Dichloroethane	2010/11/03		78	%	70 - 130
			Ethylene Dibromide	2010/11/03		75	%	70 - 130
			1,1,1-Trichloroethane	2010/11/03		78	%	70 - 130
			1,1,2-Trichloroethane	2010/11/03		76	%	70 - 130
			1,1,2,2-Tetrachloroethane	2010/11/03		74	%	70 - 130
			cis-1,3-Dichloropropene	2010/11/03		80	%	70 - 130
			trans-1,3-Dichloropropene	2010/11/03		81	%	70 - 130
			1,2-Dichloropropane	2010/11/03		77	%	70 - 130
			Bromomethane	2010/11/03		76	%	70 - 130
			Bromoform	2010/11/03		85	%	70 - 130
			Bromodichloromethane	2010/11/03		77	%	70 - 130
			Dibromochloromethane	2010/11/03		82	%	70 - 130
			Heptane	2010/11/03		75	%	70 - 130
			Trichloroethylene	2010/11/03		77	%	70 - 130
			Tetrachloroethylene	2010/11/03		76	%	70 - 130
			Benzene	2010/11/03		77	%	70 - 130
			Toluene	2010/11/03		77	%	70 - 130
			Ethylbenzene	2010/11/03		80	%	70 - 130
			p+m-Xylene	2010/11/03		86	%	70 - 130
			o-Xylene	2010/11/03		78	%	70 - 130
			Styrene	2010/11/03		77	%	70 - 130
			1,3,5-Trimethylbenzene	2010/11/03		76	%	70 - 130
			1,2,4-Trimethylbenzene	2010/11/03		75	%	70 - 130
			4-ethyltoluene	2010/11/03		78	%	70 - 130

Maxxam Analytics
Attention: Michael Bisaga
Client Project #:
P.O. #:
Project name:

Quality Assurance Report (Continued)

Maxxam Job Number: GB0F3644

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2320996	DVO	Spiked Blank	Chlorobenzene	2010/11/03		76	%	70 - 130
			Benzyl chloride	2010/11/03		88	%	70 - 130
			1,3-Dichlorobenzene	2010/11/03		72	%	70 - 130
			1,4-Dichlorobenzene	2010/11/03		73	%	70 - 130
			1,2-Dichlorobenzene	2010/11/03		72	%	70 - 130
			1,2,4-Trichlorobenzene	2010/11/03		123	%	70 - 130
			Hexachlorobutadiene	2010/11/03		90	%	70 - 130
			Hexane	2010/11/03		75	%	70 - 130
			Cyclohexane	2010/11/03		78	%	70 - 130
			Tetrahydrofuran	2010/11/03		82	%	70 - 130
			1,4-Dioxane	2010/11/03		98	%	70 - 130
		Method Blank	Bromochloromethane	2010/11/03		90	%	60 - 140
			D5-Chlorobenzene	2010/11/03		88	%	60 - 140
			Difluorobenzene	2010/11/03		91	%	60 - 140
			2,2,4-Trimethylpentane	2010/11/03	<0.20		ppbv	
			Carbon Disulfide	2010/11/03	<0.50		ppbv	
			Propene	2010/11/03	<0.30		ppbv	
			Vinyl Acetate	2010/11/03	<0.20		ppbv	
			Vinyl Bromide	2010/11/03	<0.20		ppbv	
			Dichlorodifluoromethane (FREON 12)	2010/11/03	<0.20		ppbv	
			1,2-Dichlorotetrafluoroethane	2010/11/03	<0.17		ppbv	
			Chloromethane	2010/11/03	<0.30		ppbv	
			Vinyl Chloride	2010/11/03	<0.18		ppbv	
			Chloroethane	2010/11/03	<0.30		ppbv	
			1,3-Butadiene	2010/11/03	<0.50		ppbv	
			Trichlorofluoromethane (FREON 11)	2010/11/03	<0.20		ppbv	
			Trichlorotrifluoroethane	2010/11/03	<0.15		ppbv	
			Ethanol	2010/11/03	<2.3		ppbv	
			2-propanol	2010/11/03	<3.0		ppbv	
			2-Propanone	2010/11/03	<0.80		ppbv	
			Methyl Ethyl Ketone (2-Butanone)	2010/11/03	<3.0		ppbv	
			Methyl Isobutyl Ketone	2010/11/03	<3.2		ppbv	
			Methyl Butyl Ketone (2-Hexanone)	2010/11/03	<2.0		ppbv	
			Methyl t-butyl ether (MTBE)	2010/11/03	<0.20		ppbv	
			Ethyl Acetate	2010/11/03	<2.2		ppbv	
			1,1-Dichloroethylene	2010/11/03	<0.25		ppbv	
			cis-1,2-Dichloroethylene	2010/11/03	<0.19		ppbv	
			trans-1,2-Dichloroethylene	2010/11/03	<0.20		ppbv	
			Methylene Chloride(Dichloromethane)	2010/11/03	<0.30		ppbv	
			Chloroform	2010/11/03	<0.15		ppbv	
			Carbon Tetrachloride	2010/11/03	<0.30		ppbv	
			1,1-Dichloroethane	2010/11/03	<0.20		ppbv	
			1,2-Dichloroethane	2010/11/03	<0.20		ppbv	
			Ethylene Dibromide	2010/11/03	<0.17		ppbv	
			1,1,1-Trichloroethane	2010/11/03	<0.30		ppbv	
			1,1,2-Trichloroethane	2010/11/03	<0.15		ppbv	
			1,1,2,2-Tetrachloroethane	2010/11/03	<0.20		ppbv	
			cis-1,3-Dichloropropene	2010/11/03	<0.18		ppbv	
			trans-1,3-Dichloropropene	2010/11/03	<0.17		ppbv	
			1,2-Dichloropropane	2010/11/03	<0.40		ppbv	
			Bromomethane	2010/11/03	<0.18		ppbv	
			Bromoform	2010/11/03	<0.20		ppbv	
			Bromodichloromethane	2010/11/03	<0.20		ppbv	
			Dibromochloromethane	2010/11/03	<0.20		ppbv	
			Heptane	2010/11/03	<0.30		ppbv	

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Maxxam Analytics
Attention: Michael Bisaga
Client Project #:
P.O. #:
Project name:

Quality Assurance Report (Continued)

Maxxam Job Number: GB0F3644

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2320996	DVO	Method Blank	Trichloroethylene	2010/11/03	<0.30		ppbv	
			Tetrachloroethylene	2010/11/03	<0.20		ppbv	
			Benzene	2010/11/03	<0.18		ppbv	
			Toluene	2010/11/03	<0.20		ppbv	
			Ethylbenzene	2010/11/03	<0.20		ppbv	
			p+m-Xylene	2010/11/03	<0.37		ppbv	
			o-Xylene	2010/11/03	<0.20		ppbv	
			Styrene	2010/11/03	<0.20		ppbv	
			1,3,5-Trimethylbenzene	2010/11/03	<0.50		ppbv	
			1,2,4-Trimethylbenzene	2010/11/03	<0.50		ppbv	
			4-ethyltoluene	2010/11/03	<2.2		ppbv	
			Chlorobenzene	2010/11/03	<0.20		ppbv	
			Benzyl chloride	2010/11/03	<1.0		ppbv	
			1,3-Dichlorobenzene	2010/11/03	<0.40		ppbv	
			1,4-Dichlorobenzene	2010/11/03	<0.40		ppbv	
			1,2-Dichlorobenzene	2010/11/03	<0.40		ppbv	
			1,2,4-Trichlorobenzene	2010/11/03	<2.0		ppbv	
			Hexachlorobutadiene	2010/11/03	<3.0		ppbv	
			Hexane	2010/11/03	<0.30		ppbv	
			Cyclohexane	2010/11/03	<0.20		ppbv	
			Tetrahydrofuran	2010/11/03	<0.40		ppbv	
			1,4-Dioxane	2010/11/03	<2.0		ppbv	
			Xylene (Total)	2010/11/03	<0.60		ppbv	

Spiked Blank: A blank matrix to which a known amount of the analyte has been added. Used to evaluate analyte recovery.
Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.
Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.
(1) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.

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MAXXAM

Xontech Model 910A VOC Sample Collection Data Sheet

Client: LICA
Location: 13-16-62-5 W4M
Station ID: Lica 33 (Portable)
Field Sample ID: LICA VOC/PORT/ Oct 29 ,10

Sampler s/n: 6200
Canister ID: 7788
Canister Installation Date/Time: Oct 28, 2010 @ 10:54 mst
Canister Removal Date/Time: Nov 01, 2010 @ 10:25 mst

Date and Time Information			
Sample Date	Start Time (MST)	End Time (MST)	Elapsed Time (Hours)
29-Oct-10	29/10/2010 0:00	30/10/2010 0:00	24.00

Flow Settings		
Meter Reading (sccm)	Pot Set Pt.	Pump Pressure Setting (psig)
10.0	1482	25

Canister Information	
Initial Canister Vacuum (inHg)	Final Canister Pressure (psig)
-28	21

Canister valve open prior to sampling?: YES / NO
Timer set to 0.00 minutes prior to sampling? YES / NO
Canister valve closed prior to disconnection?: YES / NO

Comments: System leak check prior to sampling. COC # 2327

Technician Signiture: Ting Xu

Success Through Science®

Your C.O.C. #: 2327

Attention: Michael Bisaga
Maxxam Analytics
2608 6A Ave.
Cold Lake, AB
CANADA T9M 2C7

Report Date: 2010/11/15

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B0F9274
Received: 2010/11/05, 09:51

Sample Matrix: AIR
Samples Received: 2

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Method Reference
Canister Pressure (TO-15)	2	N/A	2010/11/10	BRL SOP-00304	EPA TO-15
Volatile Organics in Air (TO-15) (1)	2	N/A	2010/11/10	BRL SOP-00304	EPA TO-15

(1) Air sampling canisters have been cleaned in accordance with U.S. EPA Method TO14A. At the end of the cleaning, evacuation, and pressurization cycles, one canister was selected and was pressurized with Zero Air. This canister was then analyzed via TO14A on a GC/MS. The canister must have been found to contain <0.2 ppbv concentration of all target analytes in order for the batch to have been considered clean. Each canister also underwent a leak check prior to shipment.

Please Note: SUMMA® canister samples will be retained by Maxxam for a period of 5 calendar days from the date of this report, after which time they will be cleaned for reuse. If you require a longer sample storage period, please contact your service representative.

Encryption Key

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

THERESA STEPHENSON, Project Manager
Email: TStephenson@maxxam.ca
Phone# (905) 817-5763

==========

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. For Service Group specific validation please refer to the Validation Signature Page.

Total cover pages: 1

Maxxam Analytics

Maxxam Job #: B0F9274
Report Date: 2010/11/15

RESULTS OF ANALYSES OF AIR

Maxxam ID		HT7155	HT7156	
Sampling Date		2010/10/29	2010/10/29	
COC Number		2327	2327	
	Units	**LICA VOC\CLS\OCT 29,10**	**LICA VOC\PORT\OCT 29,10**	**QC Batch**
Volatile Organics				
Pressure on Receipt	psig	20	21	2328261

QC Batch = Quality Control Batch

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Maxxam Job #: B0F9274
Report Date: 2010/11/15

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		HT7155			HT7156				
Sampling Date		2010/10/29			2010/10/29				
COC Number		2327			2327				
	Units	**LICA VOC\CLS\OCT 29,10**	**ug/m3**	**DL (ug/m3)**	**LICA VOC\PORT\OCT 29,10**	**RDL**	**ug/m3**	**DL (ug/m3)**	**QC Batch**
Volatile Organics									
2,2,4-Trimethylpentane	ppbv	<0.20	<0.934	0.934	<0.20	0.20	<0.934	0.934	2327012
Carbon Disulfide	ppbv	<0.50	<1.56	1.56	<0.50	0.50	<1.56	1.56	2327012
Propene	ppbv	<0.30	<0.516	0.516	<0.30	0.30	<0.516	0.516	2327012
Vinyl Acetate	ppbv	<0.20	<0.704	0.704	<0.20	0.20	<0.704	0.704	2327012
Vinyl Bromide	ppbv	<0.20	<0.875	0.875	<0.20	0.20	<0.875	0.875	2327012
Dichlorodifluoromethane (FREON 12)	ppbv	0.64	3.18	0.989	0.61	0.20	3.04	0.989	2327012
1,2-Dichlorotetrafluoroethane	ppbv	<0.17	<1.19	1.19	<0.17	0.17	<1.19	1.19	2327012
Chloromethane	ppbv	0.53	1.08	0.620	0.50	0.30	1.04	0.620	2327012
Vinyl Chloride	ppbv	<0.18	<0.460	0.460	<0.18	0.18	<0.460	0.460	2327012
Chloroethane	ppbv	<0.30	<0.792	0.792	<0.30	0.30	<0.792	0.792	2327012
1,3-Butadiene	ppbv	<0.50	<1.11	1.11	<0.50	0.50	<1.11	1.11	2327012
Trichlorofluoromethane (FREON 11)	ppbv	0.29	1.65	1.12	0.28	0.20	1.59	1.12	2327012
Trichlorotrifluoroethane	ppbv	<0.15	<1.15	1.15	<0.15	0.15	<1.15	1.15	2327012
Ethanol	ppbv	<2.3	<4.33	4.33	<2.3	2.3	<4.33	4.33	2327012
2-propanol	ppbv	<3.0	<7.37	7.37	<3.0	3.0	<7.37	7.37	2327012
2-Propanone	ppbv	1.30	3.09	1.90	2.08	0.80	4.93	1.90	2327012
Methyl Ethyl Ketone (2-Butanone)	ppbv	<3.0	<8.85	8.85	<3.0	3.0	<8.85	8.85	2327012
Methyl Isobutyl Ketone	ppbv	<3.2	<13.1	13.1	<3.2	3.2	<13.1	13.1	2327012
Methyl Butyl Ketone (2-Hexanone)	ppbv	<2.0	<8.19	8.19	<2.0	2.0	<8.19	8.19	2327012
Methyl t-butyl ether (MTBE)	ppbv	<0.20	<0.721	0.721	<0.20	0.20	<0.721	0.721	2327012
Ethyl Acetate	ppbv	<2.2	<7.93	7.93	<2.2	2.2	<7.93	7.93	2327012
1,1-Dichloroethylene	ppbv	<0.25	<0.991	0.991	<0.25	0.25	<0.991	0.991	2327012
cis-1,2-Dichloroethylene	ppbv	<0.19	<0.753	0.753	<0.19	0.19	<0.753	0.753	2327012
trans-1,2-Dichloroethylene	ppbv	<0.20	<0.793	0.793	<0.20	0.20	<0.793	0.793	2327012
Methylene Chloride(Dichloromethane)	ppbv	<0.80	<2.78	2.78	<0.80	0.80	<2.78	2.78	2327012
Chloroform	ppbv	<0.15	<0.732	0.732	<0.15	0.15	<0.732	0.732	2327012
Carbon Tetrachloride	ppbv	<0.30	<1.89	1.89	<0.30	0.30	<1.89	1.89	2327012
1,1-Dichloroethane	ppbv	<0.20	<0.809	0.809	<0.20	0.20	<0.809	0.809	2327012
1,2-Dichloroethane	ppbv	<0.20	<0.809	0.809	<0.20	0.20	<0.809	0.809	2327012
Ethylene Dibromide	ppbv	<0.17	<1.31	1.31	<0.17	0.17	<1.31	1.31	2327012
1,1,1-Trichloroethane	ppbv	<0.30	<1.64	1.64	<0.30	0.30	<1.64	1.64	2327012

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		HT7155			HT7156				
Sampling Date		2010/10/29			2010/10/29				
COC Number		2327			2327				
	Units	**LICA VOC\CLS\OCT 29,10**	**ug/m3**	**DL (ug/m3)**	**LICA VOC\PORT\OCT 29,10**	**RDL**	**ug/m3**	**DL (ug/m3)**	**QC Batch**
1,1,2-Trichloroethane	ppbv	<0.15	<0.818	0.818	<0.15	0.15	<0.818	0.818	2327012
1,1,2,2-Tetrachloroethane	ppbv	<0.20	<1.37	1.37	<0.20	0.20	<1.37	1.37	2327012
cis-1,3-Dichloropropene	ppbv	<0.18	<0.817	0.817	<0.18	0.18	<0.817	0.817	2327012
trans-1,3-Dichloropropene	ppbv	<0.17	<0.772	0.772	<0.17	0.17	<0.772	0.772	2327012
1,2-Dichloropropane	ppbv	<0.40	<1.85	1.85	<0.40	0.40	<1.85	1.85	2327012
Bromomethane	ppbv	<0.18	<0.699	0.699	<0.18	0.18	<0.699	0.699	2327012
Bromoform	ppbv	<0.20	<2.07	2.07	<0.20	0.20	<2.07	2.07	2327012
Bromodichloromethane	ppbv	<0.20	<1.34	1.34	<0.20	0.20	<1.34	1.34	2327012
Dibromochloromethane	ppbv	<0.20	<1.70	1.70	<0.20	0.20	<1.70	1.70	2327012
Heptane	ppbv	<0.30	<1.23	1.23	<0.30	0.30	<1.23	1.23	2327012
Trichloroethylene	ppbv	<0.30	<1.61	1.61	<0.30	0.30	<1.61	1.61	2327012
Tetrachloroethylene	ppbv	<0.20	<1.36	1.36	<0.20	0.20	<1.36	1.36	2327012
Benzene	ppbv	<0.18	<0.575	0.575	<0.18	0.18	<0.575	0.575	2327012
Toluene	ppbv	<0.20	<0.753	0.753	<0.20	0.20	<0.753	0.753	2327012
Ethylbenzene	ppbv	<0.20	<0.868	0.868	<0.20	0.20	<0.868	0.868	2327012
p+m-Xylene	ppbv	<0.37	<1.61	1.61	<0.37	0.37	<1.61	1.61	2327012
o-Xylene	ppbv	<0.20	<0.868	0.868	<0.20	0.20	<0.868	0.868	2327012
Styrene	ppbv	<0.20	<0.852	0.852	<0.20	0.20	<0.852	0.852	2327012
1,3,5-Trimethylbenzene	ppbv	<0.50	<2.46	2.46	<0.50	0.50	<2.46	2.46	2327012
1,2,4-Trimethylbenzene	ppbv	<0.50	<2.46	2.46	<0.50	0.50	<2.46	2.46	2327012
4-ethyltoluene	ppbv	<2.2	<10.8	10.8	<2.2	2.2	<10.8	10.8	2327012
Chlorobenzene	ppbv	<0.20	<0.921	0.921	<0.20	0.20	<0.921	0.921	2327012
Benzyl chloride	ppbv	<1.0	<5.18	5.18	<1.0	1.0	<5.18	5.18	2327012
1,3-Dichlorobenzene	ppbv	<0.40	<2.40	2.40	<0.40	0.40	<2.40	2.40	2327012
1,4-Dichlorobenzene	ppbv	<0.40	<2.40	2.40	<0.40	0.40	<2.40	2.40	2327012
1,2-Dichlorobenzene	ppbv	<0.40	<2.40	2.40	<0.40	0.40	<2.40	2.40	2327012
1,2,4-Trichlorobenzene	ppbv	<2.0	<14.8	14.8	<2.0	2.0	<14.8	14.8	2327012
Hexachlorobutadiene	ppbv	<3.0	<32.0	32.0	<3.0	3.0	<32.0	32.0	2327012
Hexane	ppbv	<0.30	<1.06	1.06	<0.30	0.30	<1.06	1.06	2327012
Cyclohexane	ppbv	<0.20	<0.688	0.688	<0.20	0.20	<0.688	0.688	2327012
Tetrahydrofuran	ppbv	<0.40	<1.18	1.18	<0.40	0.40	<1.18	1.18	2327012
1,4-Dioxane	ppbv	<2.0	<7.21	7.21	<2.0	2.0	<7.21	7.21	2327012
Xylene (Total)	ppbv	<0.60	<2.61	2.61	<0.60	0.60	<2.61	2.61	2327012

QC Batch = Quality Control Batch

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Maxxam Analytics

Maxxam Job #: B0F9274
Report Date: 2010/11/15

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		HT7155			HT7156				
Sampling Date		2010/10/29			2010/10/29				
COC Number		2327			2327				
	Units	**LICA VOC\CLS\OCT 29,10**	**ug/m3**	**DL (ug/m3)**	**LICA VOC\PORT\OCT 29,10**	**RDL**	**ug/m3**	**DL (ug/m3)**	**QC Batch**
Surrogate Recovery (%)									
Bromochloromethane	%	79	N/A	N/A	81		N/A	N/A	2327012
D5-Chlorobenzene	%	74	N/A	N/A	76		N/A	N/A	2327012
Difluorobenzene	%	81	N/A	N/A	81		N/A	N/A	2327012

N/A = Not Applicable
QC Batch = Quality Control Batch

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Maxxam Analytics

Maxxam Job #: B0F9274
Report Date: 2010/11/15

Test Summary

Maxxam ID HT7155 **Collected** 2010/10/29
Sample ID LICA VOC\CLS\OCT 29,10 **Shipped**
Matrix AIR **Received** 2010/11/05

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Canister Pressure (TO-15)	PRES	2328261	N/A	2010/11/10	DVO
Volatile Organics in Air (TO-15)	GC/MS	2327012	N/A	2010/11/10	DVO

Maxxam ID HT7155 Dup **Collected** 2010/10/29
Sample ID LICA VOC\CLS\OCT 29,10 **Shipped**
Matrix AIR **Received** 2010/11/05

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Volatile Organics in Air (TO-15)	GC/MS	2327012	N/A	2010/11/10	DVO

Maxxam ID HT7156 **Collected** 2010/10/29
Sample ID LICA VOC\PORT\OCT 29,10 **Shipped**
Matrix AIR **Received** 2010/11/05

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Canister Pressure (TO-15)	PRES	2328261	N/A	2010/11/10	DVO
Volatile Organics in Air (TO-15)	GC/MS	2327012	N/A	2010/11/10	DVO

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Maxxam Analytics

Maxxam Job #: B0F9274
Report Date: 2010/11/15

GENERAL COMMENTS

Results relate only to the items tested.

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Maxxam Analytics
Attention: Michael Bisaga
Client Project #:
P.O. #:
Project name:

Quality Assurance Report

Maxxam Job Number: GB0F9274

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2327012	DVO	Spiked Blank	Bromochloromethane	2010/11/10		92	%	60 - 140
			D5-Chlorobenzene	2010/11/10		90	%	60 - 140
			Difluorobenzene	2010/11/10		94	%	60 - 140
			2,2,4-Trimethylpentane	2010/11/10		87	%	70 - 130
			Carbon Disulfide	2010/11/10		75	%	70 - 130
			Propene	2010/11/10		83	%	70 - 130
			Vinyl Acetate	2010/11/10		94	%	70 - 130
			Vinyl Bromide	2010/11/10		85	%	70 - 130
			Dichlorodifluoromethane (FREON 12)	2010/11/10		84	%	70 - 130
			1,2-Dichlorotetrafluoroethane	2010/11/10		93	%	70 - 130
			Chloromethane	2010/11/10		84	%	70 - 130
			Vinyl Chloride	2010/11/10		84	%	70 - 130
			Chloroethane	2010/11/10		80	%	70 - 130
			1,3-Butadiene	2010/11/10		86	%	70 - 130
			Trichlorofluoromethane (FREON 11)	2010/11/10		81	%	70 - 130
			Trichlorotrifluoroethane	2010/11/10		82	%	70 - 130
			Ethanol	2010/11/10		90	%	70 - 130
			2-propanol	2010/11/10		88	%	70 - 130
			2-Propanone	2010/11/10		87	%	70 - 130
			Methyl Ethyl Ketone (2-Butanone)	2010/11/10		95	%	70 - 130
			Methyl Isobutyl Ketone	2010/11/10		93	%	70 - 130
			Methyl Butyl Ketone (2-Hexanone)	2010/11/10		90	%	70 - 130
			Methyl t-butyl ether (MTBE)	2010/11/10		90	%	70 - 130
			Ethyl Acetate	2010/11/10		92	%	70 - 130
			1,1-Dichloroethylene	2010/11/10		85	%	70 - 130
			cis-1,2-Dichloroethylene	2010/11/10		86	%	70 - 130
			trans-1,2-Dichloroethylene	2010/11/10		86	%	70 - 130
			Methylene Chloride(Dichloromethane)	2010/11/10		71	%	70 - 130
			Chloroform	2010/11/10		84	%	70 - 130
			Carbon Tetrachloride	2010/11/10		88	%	70 - 130
			1,1-Dichloroethane	2010/11/10		85	%	70 - 130
			1,2-Dichloroethane	2010/11/10		85	%	70 - 130
			Ethylene Dibromide	2010/11/10		87	%	70 - 130
			1,1,1-Trichloroethane	2010/11/10		86	%	70 - 130
			1,1,2-Trichloroethane	2010/11/10		86	%	70 - 130
			1,1,2,2-Tetrachloroethane	2010/11/10		81	%	70 - 130
			cis-1,3-Dichloropropene	2010/11/10		92	%	70 - 130
			trans-1,3-Dichloropropene	2010/11/10		92	%	70 - 130
			1,2-Dichloropropane	2010/11/10		86	%	70 - 130
			Bromomethane	2010/11/10		77	%	70 - 130
			Bromoform	2010/11/10		93	%	70 - 130
			Bromodichloromethane	2010/11/10		88	%	70 - 130
			Dibromochloromethane	2010/11/10		94	%	70 - 130
			Heptane	2010/11/10		89	%	70 - 130
			Trichloroethylene	2010/11/10		83	%	70 - 130
			Tetrachloroethylene	2010/11/10		86	%	70 - 130
			Benzene	2010/11/10		86	%	70 - 130
			Toluene	2010/11/10		90	%	70 - 130
			Ethylbenzene	2010/11/10		88	%	70 - 130
			p+m-Xylene	2010/11/10		87	%	70 - 130
			o-Xylene	2010/11/10		88	%	70 - 130
			Styrene	2010/11/10		85	%	70 - 130
			1,3,5-Trimethylbenzene	2010/11/10		86	%	70 - 130
			1,2,4-Trimethylbenzene	2010/11/10		86	%	70 - 130
			4-ethyltoluene	2010/11/10		89	%	70 - 130

Maxxam Analytics
Attention: Michael Bisaga
Client Project #:
P.O. #:
Project name:

Quality Assurance Report (Continued)

Maxxam Job Number: GB0F9274

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2327012	DVO	Spiked Blank	Chlorobenzene	2010/11/10		81	%	70 - 130
			Benzyl chloride	2010/11/10		94	%	70 - 130
			1,3-Dichlorobenzene	2010/11/10		80	%	70 - 130
			1,4-Dichlorobenzene	2010/11/10		82	%	70 - 130
			1,2-Dichlorobenzene	2010/11/10		79	%	70 - 130
			1,2,4-Trichlorobenzene	2010/11/10		103	%	70 - 130
			Hexachlorobutadiene	2010/11/10		88	%	70 - 130
			Hexane	2010/11/10		85	%	70 - 130
			Cyclohexane	2010/11/10		90	%	70 - 130
			Tetrahydrofuran	2010/11/10		91	%	70 - 130
			1,4-Dioxane	2010/11/10		91	%	70 - 130
			Xylene (Total)	2010/11/10		87	%	N/A
		Method Blank	Bromochloromethane	2010/11/10		80	%	60 - 140
			D5-Chlorobenzene	2010/11/10		74	%	60 - 140
			Difluorobenzene	2010/11/10		81	%	60 - 140
			2,2,4-Trimethylpentane	2010/11/10	<0.20		ppbv	
			Carbon Disulfide	2010/11/10	<0.50		ppbv	
			Propene	2010/11/10	<0.30		ppbv	
			Vinyl Acetate	2010/11/10	<0.20		ppbv	
			Vinyl Bromide	2010/11/10	<0.20		ppbv	
			Dichlorodifluoromethane (FREON 12)	2010/11/10	<0.20		ppbv	
			1,2-Dichlorotetrafluoroethane	2010/11/10	<0.17		ppbv	
			Chloromethane	2010/11/10	<0.30		ppbv	
			Vinyl Chloride	2010/11/10	<0.18		ppbv	
			Chloroethane	2010/11/10	<0.30		ppbv	
			1,3-Butadiene	2010/11/10	<0.50		ppbv	
			Trichlorofluoromethane (FREON 11)	2010/11/10	<0.20		ppbv	
			Trichlorotrifluoroethane	2010/11/10	<0.15		ppbv	
			Ethanol	2010/11/10	<2.3		ppbv	
			2-propanol	2010/11/10	<3.0		ppbv	
			2-Propanone	2010/11/10	<0.80		ppbv	
			Methyl Ethyl Ketone (2-Butanone)	2010/11/10	<3.0		ppbv	
			Methyl Isobutyl Ketone	2010/11/10	<3.2		ppbv	
			Methyl Butyl Ketone (2-Hexanone)	2010/11/10	<2.0		ppbv	
			Methyl t-butyl ether (MTBE)	2010/11/10	<0.20		ppbv	
			Ethyl Acetate	2010/11/10	<2.2		ppbv	
			1,1-Dichloroethylene	2010/11/10	<0.25		ppbv	
			cis-1,2-Dichloroethylene	2010/11/10	<0.19		ppbv	
			trans-1,2-Dichloroethylene	2010/11/10	<0.20		ppbv	
			Methylene Chloride(Dichloromethane)	2010/11/10	<0.80		ppbv	
			Chloroform	2010/11/10	<0.15		ppbv	
			Carbon Tetrachloride	2010/11/10	<0.30		ppbv	
			1,1-Dichloroethane	2010/11/10	<0.20		ppbv	
			1,2-Dichloroethane	2010/11/10	<0.20		ppbv	
			Ethylene Dibromide	2010/11/10	<0.17		ppbv	
			1,1,1-Trichloroethane	2010/11/10	<0.30		ppbv	
			1,1,2-Trichloroethane	2010/11/10	<0.15		ppbv	
			1,1,2,2-Tetrachloroethane	2010/11/10	<0.20		ppbv	
			cis-1,3-Dichloropropene	2010/11/10	<0.18		ppbv	
			trans-1,3-Dichloropropene	2010/11/10	<0.17		ppbv	
			1,2-Dichloropropane	2010/11/10	<0.40		ppbv	
			Bromomethane	2010/11/10	<0.18		ppbv	
			Bromoform	2010/11/10	<0.20		ppbv	
			Bromodichloromethane	2010/11/10	<0.20		ppbv	
			Dibromochloromethane	2010/11/10	<0.20		ppbv	

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Maxxam Analytics
Attention: Michael Bisaga
Client Project #:
P.O. #:
Project name:

Quality Assurance Report (Continued)

Maxxam Job Number: GB0F9274

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2327012	DVO	Method Blank	Heptane	2010/11/10	<0.30		ppbv	
			Trichloroethylene	2010/11/10	<0.30		ppbv	
			Tetrachloroethylene	2010/11/10	<0.20		ppbv	
			Benzene	2010/11/10	<0.18		ppbv	
			Toluene	2010/11/10	<0.20		ppbv	
			Ethylbenzene	2010/11/10	<0.20		ppbv	
			p+m-Xylene	2010/11/10	<0.37		ppbv	
			o-Xylene	2010/11/10	<0.20		ppbv	
			Styrene	2010/11/10	<0.20		ppbv	
			1,3,5-Trimethylbenzene	2010/11/10	<0.50		ppbv	
			1,2,4-Trimethylbenzene	2010/11/10	<0.50		ppbv	
			4-ethyltoluene	2010/11/10	<2.2		ppbv	
			Chlorobenzene	2010/11/10	<0.20		ppbv	
			Benzyl chloride	2010/11/10	<1.0		ppbv	
			1,3-Dichlorobenzene	2010/11/10	<0.40		ppbv	
			1,4-Dichlorobenzene	2010/11/10	<0.40		ppbv	
			1,2-Dichlorobenzene	2010/11/10	<0.40		ppbv	
			1,2,4-Trichlorobenzene	2010/11/10	<2.0		ppbv	
			Hexachlorobutadiene	2010/11/10	<3.0		ppbv	
			Hexane	2010/11/10	<0.30		ppbv	
			Cyclohexane	2010/11/10	<0.20		ppbv	
			Tetrahydrofuran	2010/11/10	<0.40		ppbv	
			1,4-Dioxane	2010/11/10	<2.0		ppbv	
			Xylene (Total)	2010/11/10	<0.60		ppbv	
		RPD - Sample/Sample Dup	2,2,4-Trimethylpentane	2010/11/10	NC		%	25
			Carbon Disulfide	2010/11/10	NC		%	25
			Propene	2010/11/10	NC		%	25
			Vinyl Acetate	2010/11/10	NC		%	25
			Vinyl Bromide	2010/11/10	NC		%	25
			Dichlorodifluoromethane (FREON 12)	2010/11/10	NC		%	25
			1,2-Dichlorotetrafluoroethane	2010/11/10	NC		%	25
			Chloromethane	2010/11/10	NC		%	25
			Vinyl Chloride	2010/11/10	NC		%	25
			Chloroethane	2010/11/10	NC		%	25
			1,3-Butadiene	2010/11/10	NC		%	25
			Trichlorofluoromethane (FREON 11)	2010/11/10	NC		%	25
			Trichlorotrifluoroethane	2010/11/10	NC		%	25
			Ethanol	2010/11/10	NC		%	25
			2-propanol	2010/11/10	NC		%	25
			2-Propanone	2010/11/10	NC		%	25
			Methyl Ethyl Ketone (2-Butanone)	2010/11/10	NC		%	25
			Methyl Isobutyl Ketone	2010/11/10	NC		%	25
			Methyl Butyl Ketone (2-Hexanone)	2010/11/10	NC		%	25
			Methyl t-butyl ether (MTBE)	2010/11/10	NC		%	25
			Ethyl Acetate	2010/11/10	NC		%	25
			1,1-Dichloroethylene	2010/11/10	NC		%	25
			cis-1,2-Dichloroethylene	2010/11/10	NC		%	25
			trans-1,2-Dichloroethylene	2010/11/10	NC		%	25
			Methylene Chloride(Dichloromethane)	2010/11/10	NC		%	25
			Chloroform	2010/11/10	NC		%	25
			Carbon Tetrachloride	2010/11/10	NC		%	25
			1,1-Dichloroethane	2010/11/10	NC		%	25
			1,2-Dichloroethane	2010/11/10	NC		%	25

Maxxam Analytics
Attention: Michael Bisaga
Client Project #:
P.O. #:
Project name:

Quality Assurance Report (Continued)

Maxxam Job Number: GB0F9274

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2327012	DVO	RPD - Sample/Sample Dup	Ethylene Dibromide	2010/11/10	NC		%	25
			1,1,1-Trichloroethane	2010/11/10	NC		%	25
			1,1,2-Trichloroethane	2010/11/10	NC		%	25
			1,1,2,2-Tetrachloroethane	2010/11/10	NC		%	25
			cis-1,3-Dichloropropene	2010/11/10	NC		%	25
			trans-1,3-Dichloropropene	2010/11/10	NC		%	25
			1,2-Dichloropropane	2010/11/10	NC		%	25
			Bromomethane	2010/11/10	NC		%	25
			Bromoform	2010/11/10	NC		%	25
			Bromodichloromethane	2010/11/10	NC		%	25
			Dibromochloromethane	2010/11/10	NC		%	25
			Heptane	2010/11/10	NC		%	25
			Trichloroethylene	2010/11/10	NC		%	25
			Tetrachloroethylene	2010/11/10	NC		%	25
			Benzene	2010/11/10	NC		%	25
			Toluene	2010/11/10	NC		%	25
			Ethylbenzene	2010/11/10	NC		%	25
			p+m-Xylene	2010/11/10	NC		%	25
			o-Xylene	2010/11/10	NC		%	25
			Styrene	2010/11/10	NC		%	25
			1,3,5-Trimethylbenzene	2010/11/10	NC		%	25
			1,2,4-Trimethylbenzene	2010/11/10	NC		%	25
			4-ethyltoluene	2010/11/10	NC		%	25
			Chlorobenzene	2010/11/10	NC		%	25
			Benzyl chloride	2010/11/10	NC		%	25
			1,3-Dichlorobenzene	2010/11/10	NC		%	25
			1,4-Dichlorobenzene	2010/11/10	NC		%	25
			1,2-Dichlorobenzene	2010/11/10	NC		%	25
			1,2,4-Trichlorobenzene	2010/11/10	NC		%	25
			Hexachlorobutadiene	2010/11/10	NC		%	25
			Hexane	2010/11/10	NC		%	25
			Cyclohexane	2010/11/10	NC		%	25
			Tetrahydrofuran	2010/11/10	NC		%	25
			1,4-Dioxane	2010/11/10	NC		%	25
			Xylene (Total)	2010/11/10	NC		%	25

Spiked Blank: A blank matrix to which a known amount of the analyte has been added. Used to evaluate analyte recovery.
Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.
Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.
NC (RPD): The RPD was not calculated. The level of analyte detected in the parent sample and its duplicate was not sufficiently significant to permit a reliable calculation.

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Polycyclic Aromatic Hydrocarbons Laboratory Analysis

Maxxam Analytics

Tisch Hi-Vol PUF+ Sample Collection Data Sheet

Client: Lica
Location: 13-16-62-5 W4M
Station ID: Lica 33 (Portable)
Field Sample ID: LICA PUF/PORT/Oct 05, 10

Puf+ s/n: 100-1015
Motor s/n: 1139
Installation Date/Time: Oct 04, 10 @ 15:29 mst
Removal Date/Time: Oct 06, 10 @ 9:09 mst

Date and Time Information			
Sample Date	Start Time (MST)	End Time (MST)	Elapsed Time (Hours)
05-Oct-10	05/10/2010 0:00	06/10/2010 0:00	24.00

PUF and QFF Information			
Date Received	Date Shipped	Puf Expiration Date	QFF Prep Date
04-Oct-10	06-Oct-10	14-Oct-10	????

Set Flow Rate (slpm): 230

Date of Last Calibration: 29-Mar-10

Sampling Data			
Average Pressure(mmHg)	AverageFlow (Qstd slpm)	Average Tempurature (C)	Volume (Vstd m^3)
711	229	9.1	330.33

Time set correctly prior to sampling? YES
Timer set correctly prior to sampling? YES
Sampling data saved to memory card after sampling? YES

Comments: COC # 3477
GB0D7193 Puff #2
Ran with a 102mm Quartz Fiber Filter - Sample ID - LICA QFF/PORT/Oct 05, 10

- Noticed condensation on the PUFF glass holder

Technician Signiture: Ting Xu

Your C.O.C. #: 3477

Attention: Michael Bisaga
Maxxam Analytics
2608 6A Ave.
Cold Lake, AB
CANADA T9M 2C7

Report Date: 2010/10/17

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B0E2644
Received: 2010/10/08, 10:20

Sample Matrix: PUF AND FILTER
Samples Received: 2

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Method Reference
PAH's in Air (CARB429mod)	2	2010/10/12	2010/10/14	BRL SOP-00201	CARB429(ARBM1,M2)mod

Encryption Key

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

THERESA STEPHENSON, Project Manager
Email: Theresa.Stephenson@MaxxamAnalytics.com
Phone# (905) 817-5763

==========

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. For Service Group specific validation please refer to the Validation Signature Page.

Total cover pages: 1

Maxxam Analytics

Maxxam Job #: B0E2644
Report Date: 2010/10/17

SEMI-VOLATILE ORGANICS BY GC-MS (PUF AND FILTER)

Maxxam ID		HL3136	HL3137		
Sampling Date		2010/10/05	2010/10/05		
COC Number		3477	3477		
	Units	**LICA PUFF+QFF/CLS/OCT 05,10**	**LICA PUFF+QFF/PORT/OCT 05,10**	**RDL**	**QC Batch**
Semivolatile Organics					
1-Methylnaphthalene	ug	0.10	<0.10	0.10	2297320
1-Methylphenanthrene	ug	<0.10	<0.10	0.10	2297320
2-Chloronaphthalene	ug	<0.10	<0.10	0.10	2297320
2-Methylanthracene	ug	<0.10	<0.10	0.10	2297320
2-Methylnaphthalene	ug	0.18	<0.10	0.10	2297320
3-Methylcholanthrene	ug	<2.0	<2.0	2.0	2297320
7,12-Dimethylbenzo(a)anthracene	ug	<0.10	<0.10	0.10	2297320
9,10-Dimethylanthracene	ug	<0.40	<0.40	0.40	2297320
Acenaphthene	ug	<0.050	<0.050	0.050	2297320
Acenaphthylene	ug	<0.050	<0.050	0.050	2297320
Anthracene	ug	<0.050	<0.050	0.050	2297320
Benzo(a)anthracene	ug	<0.050	<0.050	0.050	2297320
Benzo(a)fluorene	ug	<0.10	<0.10	0.10	2297320
Benzo(a)pyrene	ug	<0.050	<0.050	0.050	2297320
Benzo(b)fluoranthene	ug	<0.050	<0.050	0.050	2297320
Benzo(b)fluorene	ug	<0.10	<0.10	0.10	2297320
Benzo(e)pyrene	ug	<0.10	<0.10	0.10	2297320
Benzo(g,h,i)perylene	ug	<0.050	<0.050	0.050	2297320
Benzo(k)fluoranthene	ug	<0.050	<0.050	0.050	2297320
Biphenyl	ug	<0.10	<0.10	0.10	2297320
Chrysene	ug	<0.050	<0.050	0.050	2297320
Coronene	ug	<0.10	<0.10	0.10	2297320
Dibenz(a,h)anthracene	ug	<0.050	<0.050	0.050	2297320
Dibenzo(a,e)pyrene	ug	<0.20	<0.20	0.20	2297320
Fluoranthene	ug	<0.050	<0.050	0.050	2297320
Fluorene	ug	0.062	<0.050	0.050	2297320
Indeno(1,2,3-cd)pyrene	ug	<0.050	<0.050	0.050	2297320
m-Terphenyl	ug	<0.10	<0.10	0.10	2297320
Naphthalene	ug	0.124	<0.072	0.072	2297320
o-Terphenyl	ug	<0.10	<0.10	0.10	2297320
Perylene	ug	<0.10	<0.10	0.10	2297320

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Maxxam Analytics

Maxxam Job #: B0E2644
Report Date: 2010/10/17

SEMI-VOLATILE ORGANICS BY GC-MS (PUF AND FILTER)

Maxxam ID		HL3136	HL3137		
Sampling Date		2010/10/05	2010/10/05		
COC Number		3477	3477		
	Units	**LICA PUFF+QFF/CLS/OCT 05,10**	**LICA PUFF+QFF/PORT/OCT 05,10**	**RDL**	**QC Batch**
Phenanthrene	ug	0.148	0.108	0.050	2297320
p-Terphenyl	ug	<0.10	<0.10	0.10	2297320
Pyrene	ug	<0.050	<0.050	0.050	2297320
Quinoline	ug	<0.40	<0.40	0.40	2297320
Tetralin	ug	<0.10	<0.10	0.10	2297320
Surrogate Recovery (%)					
D10-2-Methylnaphthalene	%	70	76		2297320
D10-Fluoranthene	%	92	94		2297320
D10-Fluorene (FS)	%	7.8 (1)	8.0 (1)		2297320
D10-Phenanthrene	%	84	88		2297320
D12-Benzo(a)anthracene	%	88	86		2297320
D12-Benzo(a)pyrene	%	92	90		2297320
D12-Benzo(b)fluoranthene	%	86	86		2297320
D12-Benzo(ghi)perylene	%	92	92		2297320
D12-Benzo(k)fluoranthene	%	84	84		2297320
D12-Chrysene	%	80	78		2297320
D12-Indeno(1,2,3-cd)pyrene	%	90	92		2297320
D12-Perylene	%	90	88		2297320
D14-Dibenzo(a,h)anthracene	%	92	94		2297320
D14-Terphenyl (FS)	%	77	76		2297320
D8-Acenaphthylene	%	80	88		2297320
D8-Naphthalene	%	66	72		2297320

QC Batch = Quality Control Batch
(1) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.

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Maxxam Analytics

Maxxam Job #: B0E2644
Report Date: 2010/10/17

Test Summary

Maxxam ID	HL3136	**Collected**	2010/10/05
Sample ID	LICA PUFF+QFF/CLS/OCT 05,10	**Shipped**	
Matrix	PUF AND FILTER	**Received**	2010/10/08

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
PAH's in Air (CARB429mod)	GC/MS	2297320	2010/10/12	2010/10/14	JIW

Maxxam ID	HL3137	**Collected**	2010/10/05
Sample ID	LICA PUFF+QFF/PORT/OCT 05,10	**Shipped**	
Matrix	PUF AND FILTER	**Received**	2010/10/08

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
PAH's in Air (CARB429mod)	GC/MS	2297320	2010/10/12	2010/10/14	JIW

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Maxxam Analytics

Maxxam Job #: B0E2644
Report Date: 2010/10/17

GENERAL COMMENTS

PAHMS-F(WS:2297320)
9.10-Dimethylanthracene and 7,12-Dimethylbenzo(a)anthracene are above 25% RSD in initial calibration. No positives found for these 2 compounds.

Not calibrated for Benzo(b)Anthracene, Picene, Dibenzo(a,c) anthracene and Triphenylene. An estimated mdl for each of these compounds is 0.1ug.
Since Dibenzo(a,c) anthracene co-elutes with Dibenz(a,h) anthracene and Triphenylene with Chrysene each would have a value below estimated mdl.
Benzo(b)Anthracene elutes after Benzo(a)Anthracene and Chysene. Picene elutes after Dibenz(a,h) anthracene. Searched for ions specific to these 2 compounds in the appropriate retention time range with no possible positives detected.

Sample HL3136-01: PAHMS-F(WS:2297320)
Low D10-Fluorene field spike recovery. Suspect sample matrix as cause due to acceptable recovery of D14-Terphenyl field spike.

Sample HL3137-01: PAHMS-F(WS:2297320)
Low D10-Fluorene field spike recovery. Suspect sample matrix as cause due to acceptable recovery of D14-Terphenyl field spike.

Results relate only to the items tested.

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Maxxam Analytics
Attention: Michael Bisaga
Client Project #:
P.O. #:
Project name:

Quality Assurance Report

Maxxam Job Number: GB0E2644

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2297320	JIW	Spiked Blank	D10-2-Methylnaphthalene	2010/10/14		80	%	50 - 150
			D10-Fluoranthene	2010/10/14		92	%	50 - 150
			D10-Phenanthrene	2010/10/14		84	%	50 - 150
			D12-Benzo(a)anthracene	2010/10/14		86	%	50 - 150
			D12-Benzo(a)pyrene	2010/10/14		92	%	50 - 150
			D12-Benzo(b)fluoranthene	2010/10/14		88	%	50 - 150
			D12-Benzo(ghi)perylene	2010/10/14		94	%	50 - 150
			D12-Benzo(k)fluoranthene	2010/10/14		86	%	50 - 150
			D12-Chrysene	2010/10/14		80	%	50 - 150
			D12-Indeno(1,2,3-cd)pyrene	2010/10/14		92	%	50 - 150
			D12-Perylene	2010/10/14		92	%	50 - 150
			D14-Dibenzo(a,h)anthracene	2010/10/14		94	%	50 - 150
			D8-Acenaphthylene	2010/10/14		86	%	50 - 150
			D8-Naphthalene	2010/10/14		78	%	50 - 150
			Acenaphthene	2010/10/14		81	%	60 - 130
		RPD	Acenaphthene	2010/10/14	2.5		%	50
		Spiked Blank	Acenaphthylene	2010/10/14		86	%	60 - 130
		RPD	Acenaphthylene	2010/10/14	1.5		%	50
		Spiked Blank	Anthracene	2010/10/14		84	%	60 - 130
		RPD	Anthracene	2010/10/14	1.8		%	50
		Spiked Blank	Benzo(a)anthracene	2010/10/14		75	%	60 - 130
		RPD	Benzo(a)anthracene	2010/10/14	0		%	50
		Spiked Blank	Benzo(a)pyrene	2010/10/14		71	%	60 - 130
		RPD	Benzo(a)pyrene	2010/10/14	0.7		%	50
		Spiked Blank	Benzo(b)fluoranthene	2010/10/14		74	%	60 - 130
		RPD	Benzo(b)fluoranthene	2010/10/14	2.4		%	50
		Spiked Blank	Benzo(g,h,i)perylene	2010/10/14		80	%	60 - 130
		RPD	Benzo(g,h,i)perylene	2010/10/14	1.6		%	50
		Spiked Blank	Benzo(k)fluoranthene	2010/10/14		79	%	60 - 130
		RPD	Benzo(k)fluoranthene	2010/10/14	2.2		%	50
		Spiked Blank	Chrysene	2010/10/14		76	%	60 - 130
		RPD	Chrysene	2010/10/14	0.7		%	50
		Spiked Blank	Dibenz(a,h)anthracene	2010/10/14		78	%	60 - 130
		RPD	Dibenz(a,h)anthracene	2010/10/14	3.5		%	50
		Spiked Blank	Fluoranthene	2010/10/14		89	%	60 - 130
		RPD	Fluoranthene	2010/10/14	2.8		%	50
		Spiked Blank	Fluorene	2010/10/14		81	%	60 - 130
		RPD	Fluorene	2010/10/14	1.2		%	50
		Spiked Blank	Indeno(1,2,3-cd)pyrene	2010/10/14		79	%	60 - 130
		RPD	Indeno(1,2,3-cd)pyrene	2010/10/14	2.5		%	50
		Spiked Blank	Naphthalene	2010/10/14		68	%	60 - 130
		RPD	Naphthalene	2010/10/14	4.5		%	50
		Spiked Blank	Phenanthrene	2010/10/14		79	%	60 - 130
		RPD	Phenanthrene	2010/10/14	0.6		%	50
		Spiked Blank	Pyrene	2010/10/14		81	%	60 - 130
		RPD	Pyrene	2010/10/14	3.0		%	50
		Method Blank	D10-2-Methylnaphthalene	2010/10/14		76	%	50 - 150
			D10-Fluoranthene	2010/10/14		90	%	50 - 150
			D10-Phenanthrene	2010/10/14		80	%	50 - 150
			D12-Benzo(a)anthracene	2010/10/14		84	%	50 - 150
			D12-Benzo(a)pyrene	2010/10/14		90	%	50 - 150
			D12-Benzo(b)fluoranthene	2010/10/14		82	%	50 - 150
			D12-Benzo(ghi)perylene	2010/10/14		92	%	50 - 150
			D12-Benzo(k)fluoranthene	2010/10/14		84	%	50 - 150
			D12-Chrysene	2010/10/14		80	%	50 - 150

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Maxxam Analytics
Attention: Michael Bisaga
Client Project #:
P.O. #:
Project name:

Quality Assurance Report (Continued)

Maxxam Job Number: GB0E2644

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2297320	JIW	Method Blank	D12-Indeno(1,2,3-cd)pyrene	2010/10/14		90	%	50 - 150
			D12-Perylene	2010/10/14		92	%	50 - 150
			D14-Dibenzo(a,h)anthracene	2010/10/14		92	%	50 - 150
			D8-Acenaphthylene	2010/10/14		82	%	50 - 150
			D8-Naphthalene	2010/10/14		74	%	50 - 150
			1-Methylnaphthalene	2010/10/14	<0.10		ug	
			1-Methylphenanthrene	2010/10/14	<0.10		ug	
			2-Chloronaphthalene	2010/10/14	<0.10		ug	
			2-Methylanthracene	2010/10/14	<0.10		ug	
			2-Methylnaphthalene	2010/10/14	<0.10		ug	
			3-Methylcholanthrene	2010/10/14	<2.0		ug	
			7,12-Dimethylbenzo(a)anthracene	2010/10/14	<0.10		ug	
			9,10-Dimethylanthracene	2010/10/14	<0.40		ug	
			Acenaphthene	2010/10/14	<0.050		ug	
			Acenaphthylene	2010/10/14	<0.050		ug	
			Anthracene	2010/10/14	<0.050		ug	
			Benzo(a)anthracene	2010/10/14	<0.050		ug	
			Benzo(a)fluorene	2010/10/14	<0.10		ug	
			Benzo(a)pyrene	2010/10/14	<0.050		ug	
			Benzo(b)fluoranthene	2010/10/14	<0.050		ug	
			Benzo(b)fluorene	2010/10/14	<0.10		ug	
			Benzo(e)pyrene	2010/10/14	<0.10		ug	
			Benzo(g,h,i)perylene	2010/10/14	<0.050		ug	
			Benzo(k)fluoranthene	2010/10/14	<0.050		ug	
			Biphenyl	2010/10/14	<0.10		ug	
			Chrysene	2010/10/14	<0.050		ug	
			Coronene	2010/10/14	<0.10		ug	
			Dibenz(a,h)anthracene	2010/10/14	<0.050		ug	
			Dibenzo(a,e)pyrene	2010/10/14	<0.20		ug	
			Fluoranthene	2010/10/14	<0.050		ug	
			Fluorene	2010/10/14	<0.050		ug	
			Indeno(1,2,3-cd)pyrene	2010/10/14	<0.050		ug	
			m-Terphenyl	2010/10/14	<0.10		ug	
			Naphthalene	2010/10/14	<0.072		ug	
			o-Terphenyl	2010/10/14	<0.10		ug	
			Perylene	2010/10/14	<0.10		ug	
			Phenanthrene	2010/10/14	<0.050		ug	
			p-Terphenyl	2010/10/14	<0.10		ug	
			Pyrene	2010/10/14	<0.050		ug	
			Quinoline	2010/10/14	<0.40		ug	
			Tetralin	2010/10/14	<0.10		ug	

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.
Spiked Blank: A blank matrix to which a known amount of the analyte has been added. Used to evaluate analyte recovery.
Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.
Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.

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Maxxam Analytics

Tisch Hi-Vol PUF+ Sample Collection Data Sheet

Client: Lica
Location: 13-16-62-5 W4M
Station ID: Lica 33 (Portable)
Field Sample ID: LICA PUF/PORT/Oct 11, 10

Puf+ s/n: 100-1015
Motor s/n: 1139
Installation Date/Time: Oct 08, 10 @ 8:42 mst
Removal Date/Time: Oct 12, 10 @ 8:40 mst

Date and Time Information			
Sample Date	Start Time (MST)	End Time (MST)	Elapsed Time (Hours)
11-Oct-10	11/10/2010 0:00	12/10/2010 0:00	24.00

PUF and QFF Information			
Date Received	Date Shipped	Puf Expiration Date	QFF Prep Date
07-Oct-10	12-Oct-10	19-Oct-10	????

Set Flow Rate (slpm): 230

Date of Last Calibration: 29-Mar-10

Sampling Data			
Average Pressure(mmHg)	AverageFlow (Qstd slpm)	Average Tempurature (C)	Volume (Vstd m^3)
710	229	8.1	330.33

Time set correctly prior to sampling? YES
Timer set correctly prior to sampling? YES
Sampling data saved to memory card after sampling? YES

Comments: COC # 2324
GB0D7198 Puff #2
Ran with a 102mm Quartz Fiber Filter - Sample ID - LICA QFF/PORT/Oct 11, 10

- Noticed condensation on the PUFF glass holder

Technician Signiture: Ting Xu

Your C.O.C. #: 2324

Attention: Michael Bisaga
Maxxam Analytics
2608 6A Ave.
Cold Lake, AB
CANADA T9M 2C7

Report Date: 2010/10/19

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B0E5009
Received: 2010/10/14, 09:30

Sample Matrix: PUF AND FILTER
Samples Received: 2

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Method Reference
PAH's in Air (CARB429mod)	2	2010/10/15	2010/10/18	BRL SOP-00201	CARB429(ARBM1,M2)mod

Encryption Key

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

THERESA STEPHENSON, Project Manager
Email: Theresa.Stephenson@MaxxamAnalytics.com
Phone# (905) 817-5763

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Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Total cover pages: 1

Maxxam Analytics

Maxxam Job #: B0E5009
Report Date: 2010/10/19

SEMI-VOLATILE ORGANICS BY GC-MS (PUF AND FILTER)

Maxxam ID		HM5324	HM5325		
Sampling Date		2010/10/11	2010/10/11		
COC Number		2324	2324		
	Units	**LICA PUFF/QFF/CLS/OCT 11,2010**	**LICA PUFF/QFF/PORT/OCT 11,2010**	**RDL**	**QC Batch**
Semivolatile Organics					
1-Methylnaphthalene	ug	<0.10	<0.10	0.10	2300182
1-Methylphenanthrene	ug	<0.10	<0.10	0.10	2300182
2-Chloronaphthalene	ug	<0.10	<0.10	0.10	2300182
2-Methylanthracene	ug	<0.10	<0.10	0.10	2300182
2-Methylnaphthalene	ug	0.16	<0.10	0.10	2300182
3-Methylcholanthrene	ug	<2.0	<2.0	2.0	2300182
7,12-Dimethylbenzo(a)anthracene	ug	<0.10	<0.10	0.10	2300182
9,10-Dimethylanthracene	ug	<0.40	<0.40	0.40	2300182
Acenaphthene	ug	<0.050	<0.050	0.050	2300182
Acenaphthylene	ug	<0.050	<0.050	0.050	2300182
Anthracene	ug	<0.050	<0.050	0.050	2300182
Benzo(a)anthracene	ug	<0.050	<0.050	0.050	2300182
Benzo(a)fluorene	ug	<0.10	<0.10	0.10	2300182
Benzo(a)pyrene	ug	<0.050	<0.050	0.050	2300182
Benzo(b)fluoranthene	ug	<0.050	<0.050	0.050	2300182
Benzo(b)fluorene	ug	<0.10	<0.10	0.10	2300182
Benzo(e)pyrene	ug	<0.10	<0.10	0.10	2300182
Benzo(g,h,i)perylene	ug	<0.050	<0.050	0.050	2300182
Benzo(k)fluoranthene	ug	<0.050	<0.050	0.050	2300182
Biphenyl	ug	<0.10	<0.10	0.10	2300182
Chrysene	ug	<0.050	<0.050	0.050	2300182
Coronene	ug	<0.10	<0.10	0.10	2300182
Dibenz(a,h)anthracene	ug	<0.050	<0.050	0.050	2300182
Dibenzo(a,e)pyrene	ug	<0.20	<0.20	0.20	2300182
Fluoranthene	ug	<0.050	<0.050	0.050	2300182
Fluorene	ug	0.064	<0.050	0.050	2300182
Indeno(1,2,3-cd)pyrene	ug	<0.050	<0.050	0.050	2300182
m-Terphenyl	ug	<0.10	<0.10	0.10	2300182
Naphthalene	ug	0.100	<0.072	0.072	2300182
o-Terphenyl	ug	<0.10	<0.10	0.10	2300182
Perylene	ug	<0.10	<0.10	0.10	2300182

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Maxxam Analytics

Maxxam Job #: B0E5009
Report Date: 2010/10/19

SEMI-VOLATILE ORGANICS BY GC-MS (PUF AND FILTER)

Maxxam ID		HM5324	HM5325		
Sampling Date		2010/10/11	2010/10/11		
COC Number		2324	2324		
	Units	**LICA PUFF/QFF/CLS/OCT 11,2010**	**LICA PUFF/QFF/PORT/OCT 11,2010**	**RDL**	**QC Batch**
Phenanthrene	ug	0.124	0.082	0.050	2300182
p-Terphenyl	ug	<0.10	<0.10	0.10	2300182
Pyrene	ug	<0.050	<0.050	0.050	2300182
Quinoline	ug	<0.40	<0.40	0.40	2300182
Tetralin	ug	<0.10	<0.10	0.10	2300182
Surrogate Recovery (%)					
D10-2-Methylnaphthalene	%	72	82		2300182
D10-Fluoranthene	%	96	92		2300182
D10-Fluorene (FS)	%	12 (1)	14 (1)		2300182
D10-Phenanthrene	%	86	84		2300182
D12-Benzo(a)anthracene	%	86	84		2300182
D12-Benzo(a)pyrene	%	92	92		2300182
D12-Benzo(b)fluoranthene	%	88	86		2300182
D12-Benzo(ghi)perylene	%	92	94		2300182
D12-Benzo(k)fluoranthene	%	86	90		2300182
D12-Chrysene	%	78	82		2300182
D12-Indeno(1,2,3-cd)pyrene	%	92	92		2300182
D12-Perylene	%	92	96		2300182
D14-Dibenzo(a,h)anthracene	%	94	94		2300182
D14-Terphenyl (FS)	%	78	78		2300182
D8-Acenaphthylene	%	80	88		2300182
D8-Naphthalene	%	68	78		2300182

QC Batch = Quality Control Batch
(1) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.

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Maxxam Analytics

Maxxam Job #: B0E5009
Report Date: 2010/10/19

Test Summary

Maxxam ID	HM5324	**Collected**	2010/10/11
Sample ID	LICA PUFF/QFF/CLS/OCT 11,2010	**Shipped**	
Matrix	PUF AND FILTER	**Received**	2010/10/14

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
PAH's in Air (CARB429mod)	GC/MS	2300182	2010/10/15	2010/10/18	JIW

Maxxam ID	HM5325	**Collected**	2010/10/11
Sample ID	LICA PUFF/QFF/PORT/OCT 11,2010	**Shipped**	
Matrix	PUF AND FILTER	**Received**	2010/10/14

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
PAH's in Air (CARB429mod)	GC/MS	2300182	2010/10/15	2010/10/18	JIW

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Maxxam Analytics

Maxxam Job #: B0E5009
Report Date: 2010/10/19

GENERAL COMMENTS

PAHMS-F(WS:2300182)
9.10-Dimethylanthracene and 7,12-Dimethylbenzo(a)anthracene are above 25% RSD in initial calibration. No positives found for these 2 compounds.

7,12-Dimethylbenzo(a)anthracene is above 25% RSD in continuing calibration.

Not calibrated for Benzo(b)Anthracene, Picene, Dibenzo(a,c) anthracene and Triphenylene. An estimated mdl for each of these compounds is 0.1ug.
Since Dibenzo(a,c) anthracene co-elutes with Dibenz(a,h) anthracene and Triphenylene with Chrysene each would have a value below estimated mdl.
Benzo(b)Anthracene elutes after Benzo(a)Anthracene and Chysene. Picene elutes after Dibenz(a,h) anthracene. Searched for ions specific to these 2 compounds in the appropriate retention time range with no possible positives detected.

Sample HM5324-01: PAHMS-F(WS:2300182)
Low D10-Fluorene field spike recovery.

Sample HM5325-01: PAHMS-F(WS:2300182)
Low D10-Fluorene field spike recovery.

Results relate only to the items tested.

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Maxxam Analytics
Attention: Michael Bisaga
Client Project #:
P.O. #:
Project name:

Quality Assurance Report

Maxxam Job Number: GB0E5009

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2300182	JIW	Spiked Blank	D10-2-Methylnaphthalene	2010/10/18		88	%	50 - 150
			D10-Fluoranthene	2010/10/18		94	%	50 - 150
			D10-Phenanthrene	2010/10/18		84	%	50 - 150
			D12-Benzo(a)anthracene	2010/10/18		82	%	50 - 150
			D12-Benzo(a)pyrene	2010/10/18		90	%	50 - 150
			D12-Benzo(b)fluoranthene	2010/10/18		86	%	50 - 150
			D12-Benzo(ghi)perylene	2010/10/18		94	%	50 - 150
			D12-Benzo(k)fluoranthene	2010/10/18		92	%	50 - 150
			D12-Chrysene	2010/10/18		88	%	50 - 150
			D12-Indeno(1,2,3-cd)pyrene	2010/10/18		92	%	50 - 150
			D12-Perylene	2010/10/18		92	%	50 - 150
			D14-Dibenzo(a,h)anthracene	2010/10/18		92	%	50 - 150
			D8-Acenaphthylene	2010/10/18		86	%	50 - 150
			D8-Naphthalene	2010/10/18		86	%	50 - 150
			Acenaphthene	2010/10/18		83	%	60 - 130
		RPD	Acenaphthene	2010/10/18	1.8		%	50
		Spiked Blank	Acenaphthylene	2010/10/18		84	%	60 - 130
		RPD	Acenaphthylene	2010/10/18	2.6		%	50
		Spiked Blank	Anthracene	2010/10/18		84	%	60 - 130
		RPD	Anthracene	2010/10/18	1.8		%	50
		Spiked Blank	Benzo(a)anthracene	2010/10/18		73	%	60 - 130
		RPD	Benzo(a)anthracene	2010/10/18	3.7		%	50
		Spiked Blank	Benzo(a)pyrene	2010/10/18		72	%	60 - 130
		RPD	Benzo(a)pyrene	2010/10/18	0		%	50
		Spiked Blank	Benzo(b)fluoranthene	2010/10/18		74	%	60 - 130
		RPD	Benzo(b)fluoranthene	2010/10/18	0.3		%	50
		Spiked Blank	Benzo(g,h,i)perylene	2010/10/18		81	%	60 - 130
		RPD	Benzo(g,h,i)perylene	2010/10/18	0.6		%	50
		Spiked Blank	Benzo(k)fluoranthene	2010/10/18		86	%	60 - 130
		RPD	Benzo(k)fluoranthene	2010/10/18	1.7		%	50
		Spiked Blank	Chrysene	2010/10/18		83	%	60 - 130
		RPD	Chrysene	2010/10/18	2.4		%	50
		Spiked Blank	Dibenz(a,h)anthracene	2010/10/18		77	%	60 - 130
		RPD	Dibenz(a,h)anthracene	2010/10/18	0.6		%	50
		Spiked Blank	Fluoranthene	2010/10/18		89	%	60 - 130
		RPD	Fluoranthene	2010/10/18	0.3		%	50
		Spiked Blank	Fluorene	2010/10/18		82	%	60 - 130
		RPD	Fluorene	2010/10/18	0.6		%	50
		Spiked Blank	Indeno(1,2,3-cd)pyrene	2010/10/18		80	%	60 - 130
		RPD	Indeno(1,2,3-cd)pyrene	2010/10/18	0.6		%	50
		Spiked Blank	Naphthalene	2010/10/18		74	%	60 - 130
		RPD	Naphthalene	2010/10/18	0		%	50
		Spiked Blank	Phenanthrene	2010/10/18		76	%	60 - 130
		RPD	Phenanthrene	2010/10/18	3.2		%	50
		Spiked Blank	Pyrene	2010/10/18		83	%	60 - 130
		RPD	Pyrene	2010/10/18	1.8		%	50
		Method Blank	D10-2-Methylnaphthalene	2010/10/18		88	%	50 - 150
			D10-Fluoranthene	2010/10/18		96	%	50 - 150
			D10-Phenanthrene	2010/10/18		82	%	50 - 150
			D12-Benzo(a)anthracene	2010/10/18		86	%	50 - 150
			D12-Benzo(a)pyrene	2010/10/18		96	%	50 - 150
			D12-Benzo(b)fluoranthene	2010/10/18		90	%	50 - 150
			D12-Benzo(ghi)perylene	2010/10/18		98	%	50 - 150
			D12-Benzo(k)fluoranthene	2010/10/18		92	%	50 - 150
			D12-Chrysene	2010/10/18		86	%	50 - 150

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Maxxam Analytics
Attention: Michael Bisaga
Client Project #:
P.O. #:
Project name:

Quality Assurance Report (Continued)

Maxxam Job Number: GB0E5009

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2300182	JIW	Method Blank	D12-Indeno(1,2,3-cd)pyrene	2010/10/18		96	%	50 - 150
			D12-Perylene	2010/10/18		98	%	50 - 150
			D14-Dibenzo(a,h)anthracene	2010/10/18		96	%	50 - 150
			D8-Acenaphthylene	2010/10/18		88	%	50 - 150
			D8-Naphthalene	2010/10/18		84	%	50 - 150
			1-Methylnaphthalene	2010/10/18	<0.10		ug	
			1-Methylphenanthrene	2010/10/18	<0.10		ug	
			2-Chloronaphthalene	2010/10/18	<0.10		ug	
			2-Methylanthracene	2010/10/18	<0.10		ug	
			2-Methylnaphthalene	2010/10/18	<0.10		ug	
			3-Methylcholanthrene	2010/10/18	<2.0		ug	
			7,12-Dimethylbenzo(a)anthracene	2010/10/18	<0.10		ug	
			9,10-Dimethylanthracene	2010/10/18	<0.40		ug	
			Acenaphthene	2010/10/18	<0.050		ug	
			Acenaphthylene	2010/10/18	<0.050		ug	
			Anthracene	2010/10/18	<0.050		ug	
			Benzo(a)anthracene	2010/10/18	<0.050		ug	
			Benzo(a)fluorene	2010/10/18	<0.10		ug	
			Benzo(a)pyrene	2010/10/18	<0.050		ug	
			Benzo(b)fluoranthene	2010/10/18	<0.050		ug	
			Benzo(b)fluorene	2010/10/18	<0.10		ug	
			Benzo(e)pyrene	2010/10/18	<0.10		ug	
			Benzo(g,h,i)perylene	2010/10/18	<0.050		ug	
			Benzo(k)fluoranthene	2010/10/18	<0.050		ug	
			Biphenyl	2010/10/18	<0.10		ug	
			Chrysene	2010/10/18	<0.050		ug	
			Coronene	2010/10/18	<0.10		ug	
			Dibenz(a,h)anthracene	2010/10/18	<0.050		ug	
			Dibenzo(a,e)pyrene	2010/10/18	<0.20		ug	
			Fluoranthene	2010/10/18	<0.050		ug	
			Fluorene	2010/10/18	<0.050		ug	
			Indeno(1,2,3-cd)pyrene	2010/10/18	<0.050		ug	
			m-Terphenyl	2010/10/18	<0.10		ug	
			Naphthalene	2010/10/18	<0.072		ug	
			o-Terphenyl	2010/10/18	<0.10		ug	
			Perylene	2010/10/18	<0.10		ug	
			Phenanthrene	2010/10/18	<0.050		ug	
			p-Terphenyl	2010/10/18	<0.10		ug	
			Pyrene	2010/10/18	<0.050		ug	
			Quinoline	2010/10/18	<0.40		ug	
			Tetralin	2010/10/18	<0.10		ug	

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.
Spiked Blank: A blank matrix to which a known amount of the analyte has been added. Used to evaluate analyte recovery.
Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.
Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.

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Maxxam Analytics

Tisch Hi-Vol PUF+ Sample Collection Data Sheet

Client: Lica
Location: 13-16-62-5 W4M
Station ID: Lica 33 (Portable)
Field Sample ID: LICA PUF/PORT/Oct 17, 10

Puf+ s/n: 100-1015
Motor s/n: 1139
Installation Date/Time: Oct 15, 10 @ 14:57 mst
Removal Date/Time: Oct 18, 10 @ 11:10 mst

Date and Time Information			
Sample Date	Start Time (MST)	End Time (MST)	Elapsed Time (Hours)
17-Oct-10	17/10/2010 0:00	18/10/2010 0:00	24.00

PUF and QFF Information			
Date Received	Date Shipped	Puf Expiration Date	QFF Prep Date
14-Oct-10	18-Oct-10	26-Oct-10	????

Set Flow Rate (slpm): 230

Date of Last Calibration: 29-Mar-10

Sampling Data			
Average Pressure(mmHg)	AverageFlow (Qstd slpm)	Average Tempurature (C)	Volume (Vstd m^3)
711	229	1.9	330.33

Time set correctly prior to sampling? YES
Timer set correctly prior to sampling? YES
Sampling data saved to memory card after sampling? YES

Comments: COC # 2326
GB0D7266 Puff #2
Ran with a 102mm Quartz Fiber Filter - Sample ID - LICA QFF/PORT/Oct 17, 10

- Noticed condensation on the PUFF glass holder

Technician Signiture: Ting Xu

Success Through Science®

Your C.O.C. #: 2326

Attention: Michael Bisaga
Maxxam Analytics
2608 6A Ave.
Cold Lake, AB
CANADA T9M 2C7

Report Date: 2010/10/29

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B0E8276
Received: 2010/10/20, 09:15

Sample Matrix: PUF AND FILTER
Samples Received: 2

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Method Reference
PAH's in Air (CARB429mod)	2	2010/10/22	2010/10/27	BRL SOP-00201	CARB429(ARBM1,M2)mod

Encryption Key

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

THERESA STEPHENSON, Project Manager
Email: TStephenson@maxxam.ca
Phone# (905) 817-5763

==========

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. For Service Group specific validation please refer to the Validation Signature Page.

Total cover pages: 1

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Maxxam Job #: B0E8276
Report Date: 2010/10/29

SEMI-VOLATILE ORGANICS BY GC-MS (PUF AND FILTER)

Maxxam ID		HO0979	HO0980		
Sampling Date		2010/10/17	2010/10/17		
COC Number		2326	2326		
	Units	**LICA PUFF/QFF/CLS/OCT17, 2010**	**LICA PUFF/QFF/PORT/OCT17, 2010**	**RDL**	**QC Batch**
Semivolatile Organics					
1-Methylnaphthalene	ug	0.23	<0.10	0.10	2306251
1-Methylphenanthrene	ug	<0.10	<0.10	0.10	2306251
2-Chloronaphthalene	ug	<0.10	<0.10	0.10	2306251
2-Methylanthracene	ug	<0.10	<0.10	0.10	2306251
2-Methylnaphthalene	ug	0.46	<0.10	0.10	2306251
3-Methylcholanthrene	ug	<2.0	<2.0	2.0	2306251
7,12-Dimethylbenzo(a)anthracene	ug	<0.10	<0.10	0.10	2306251
9,10-Dimethylanthracene	ug	<0.40	<0.40	0.40	2306251
Acenaphthene	ug	0.060	<0.050	0.050	2306251
Acenaphthylene	ug	<0.050	<0.050	0.050	2306251
Anthracene	ug	<0.050	<0.050	0.050	2306251
Benzo(a)anthracene	ug	<0.050	<0.050	0.050	2306251
Benzo(a)fluorene	ug	<0.10	<0.10	0.10	2306251
Benzo(a)pyrene	ug	<0.050	<0.050	0.050	2306251
Benzo(b)fluoranthene	ug	<0.050	<0.050	0.050	2306251
Benzo(b)fluorene	ug	<0.10	<0.10	0.10	2306251
Benzo(e)pyrene	ug	<0.10	<0.10	0.10	2306251
Benzo(g,h,i)perylene	ug	<0.050	<0.050	0.050	2306251
Benzo(k)fluoranthene	ug	<0.050	<0.050	0.050	2306251
Biphenyl	ug	<0.10	<0.10	0.10	2306251
Chrysene	ug	<0.050	<0.050	0.050	2306251
Coronene	ug	<0.10	<0.10	0.10	2306251
Dibenz(a,h)anthracene	ug	<0.050	<0.050	0.050	2306251
Dibenzo(a,e)pyrene	ug	<0.20	<0.20	0.20	2306251
Fluoranthene	ug	<0.050	<0.050	0.050	2306251
Fluorene	ug	0.114	0.072	0.050	2306251
Indeno(1,2,3-cd)pyrene	ug	<0.050	<0.050	0.050	2306251
m-Terphenyl	ug	<0.10	<0.10	0.10	2306251
Naphthalene	ug	0.340	0.074	0.072	2306251
o-Terphenyl	ug	<0.10	<0.10	0.10	2306251
Perylene	ug	<0.10	<0.10	0.10	2306251

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Maxxam Analytics

Maxxam Job #: B0E8276
Report Date: 2010/10/29

SEMI-VOLATILE ORGANICS BY GC-MS (PUF AND FILTER)

Maxxam ID		HO0979	HO0980		
Sampling Date		2010/10/17	2010/10/17		
COC Number		2326	2326		
	Units	**LICA PUFF/QFF/CLS/OCT17, 2010**	**LICA PUFF/QFF/PORT/OCT17, 2010**	**RDL**	**QC Batch**
Phenanthrene	ug	0.176	0.140	0.050	2306251
p-Terphenyl	ug	<0.10	<0.10	0.10	2306251
Pyrene	ug	<0.050	<0.050	0.050	2306251
Quinoline	ug	<0.40	<0.40	0.40	2306251
Tetralin	ug	<0.10	<0.10	0.10	2306251
Surrogate Recovery (%)					
D10-2-Methylnaphthalene	%	60	72		2306251
D10-Fluoranthene	%	98	98		2306251
D10-Fluorene (FS)	%	15 (1)	14 (1)		2306251
D10-Phenanthrene	%	86	88		2306251
D12-Benzo(a)anthracene	%	94	96		2306251
D12-Benzo(a)pyrene	%	94	98		2306251
D12-Benzo(b)fluoranthene	%	88	94		2306251
D12-Benzo(ghi)perylene	%	100	104		2306251
D12-Benzo(k)fluoranthene	%	90	92		2306251
D12-Chrysene	%	80	84		2306251
D12-Indeno(1,2,3-cd)pyrene	%	102	106		2306251
D12-Perylene	%	94	98		2306251
D14-Dibenzo(a,h)anthracene	%	104	106		2306251
D14-Terphenyl (FS)	%	80	82		2306251
D8-Acenaphthylene	%	72	84		2306251
D8-Naphthalene	%	54	66		2306251

QC Batch = Quality Control Batch
(1) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.

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Maxxam Analytics

Maxxam Job #: B0E8276
Report Date: 2010/10/29

Test Summary

Maxxam ID	HO0979	**Collected**	2010/10/17
Sample ID	LICA PUFF/QFF/CLS/OCT17, 2010	**Shipped**	
Matrix	PUF AND FILTER	**Received**	2010/10/20

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
PAH's in Air (CARB429mod)	GC/MS	2306251	2010/10/22	2010/10/27	WZ

Maxxam ID	HO0980	**Collected**	2010/10/17
Sample ID	LICA PUFF/QFF/PORT/OCT17, 2010	**Shipped**	
Matrix	PUF AND FILTER	**Received**	2010/10/20

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
PAH's in Air (CARB429mod)	GC/MS	2306251	2010/10/22	2010/10/27	WZ

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Maxxam Analytics

Maxxam Job #: B0E8276
Report Date: 2010/10/29

GENERAL COMMENTS

PAHMS-F
9.10-Dimethylanthracene and 7,12-Dimethylbenzo(a)anthracene are above 25% RSD in initial calibation. No positives found for these 2 compounds.

Not calibrated for Benzo(b)Anthracene, Picene, Dibenzo(a,c) anthracene or Triphenylene. An estimated mdl for each of these compounds is 0.1ug .
Since Dibenzo(a,c) anthracene co-elutes with Dibenzo(a,h) anthracene and Triphenylene with Chrysene each would have a value below estimated mdl.
Benzo(b)Anthracene elutes after Benzo(a)Anthracene and Chysene. Picene elutes after Dibenzo(a,h) anthracene. Searched for ions specific to these 2 compounds in the appropriate retention time range with no possible positives detected.

Low recovery of Naphthalene in spike and spike:dup is OK.

Sample HO0979-01: PAHMS-F

Low d10-fluorene field spike recovery. Suspect sample matrix as cause due to acceptable recovery of d14-terphenyl field spike.

Sample HO0980-01: PAHMS-F

Low d10-fluorene field spike recovery. Suspect sample matrix as cause due to acceptable recovery of d14-terphenyl field spike.

Results relate only to the items tested.

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Maxxam Analytics
Attention: Michael Bisaga
Client Project #:
P.O. #:
Project name:

Quality Assurance Report

Maxxam Job Number: GB0E8276

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2306251	WZ	Spiked Blank	D10-2-Methylnaphthalene	2010/10/26		72	%	50 - 150
			D10-Fluoranthene	2010/10/26		90	%	50 - 150
			D10-Phenanthrene	2010/10/26		80	%	50 - 150
			D12-Benzo(a)anthracene	2010/10/26		90	%	50 - 150
			D12-Benzo(a)pyrene	2010/10/26		92	%	50 - 150
			D12-Benzo(b)fluoranthene	2010/10/26		88	%	50 - 150
			D12-Benzo(ghi)perylene	2010/10/26		100	%	50 - 150
			D12-Benzo(k)fluoranthene	2010/10/26		84	%	50 - 150
			D12-Chrysene	2010/10/26		80	%	50 - 150
			D12-Indeno(1,2,3-cd)pyrene	2010/10/26		100	%	50 - 150
			D12-Perylene	2010/10/26		92	%	50 - 150
			D14-Dibenzo(a,h)anthracene	2010/10/26		100	%	50 - 150
			D8-Acenaphthylene	2010/10/26		82	%	50 - 150
			D8-Naphthalene	2010/10/26		68	%	50 - 150
			Acenaphthene	2010/10/26		73	%	60 - 130
		RPD	Acenaphthene	2010/10/27	8.2		%	50
		Spiked Blank	Acenaphthylene	2010/10/26		80	%	60 - 130
		RPD	Acenaphthylene	2010/10/27	7.2		%	50
		Spiked Blank	Anthracene	2010/10/26		75	%	60 - 130
		RPD	Anthracene	2010/10/27	9.5		%	50
		Spiked Blank	Benzo(a)anthracene	2010/10/26		78	%	60 - 130
		RPD	Benzo(a)anthracene	2010/10/27	6.5		%	50
		Spiked Blank	Benzo(a)pyrene	2010/10/26		70	%	60 - 130
		RPD	Benzo(a)pyrene	2010/10/27	6.9		%	50
		Spiked Blank	Benzo(b)fluoranthene	2010/10/26		77	%	60 - 130
		RPD	Benzo(b)fluoranthene	2010/10/27	0		%	50
		Spiked Blank	Benzo(g,h,i)perylene	2010/10/26		84	%	60 - 130
		RPD	Benzo(g,h,i)perylene	2010/10/27	4.9		%	50
		Spiked Blank	Benzo(k)fluoranthene	2010/10/26		78	%	60 - 130
		RPD	Benzo(k)fluoranthene	2010/10/27	9.8		%	50
		Spiked Blank	Chrysene	2010/10/26		77	%	60 - 130
		RPD	Chrysene	2010/10/27	4.8		%	50
		Spiked Blank	Dibenz(a,h)anthracene	2010/10/26		84	%	60 - 130
		RPD	Dibenz(a,h)anthracene	2010/10/27	5.2		%	50
		Spiked Blank	Fluoranthene	2010/10/26		85	%	60 - 130
		RPD	Fluoranthene	2010/10/27	6.5		%	50
		Spiked Blank	Fluorene	2010/10/26		75	%	60 - 130
		RPD	Fluorene	2010/10/27	8.0		%	50
		Spiked Blank	Indeno(1,2,3-cd)pyrene	2010/10/26		84	%	60 - 130
		RPD	Indeno(1,2,3-cd)pyrene	2010/10/27	4.9		%	50
		Spiked Blank	Naphthalene	2010/10/26		60 (1)	%	60 - 130
		RPD	Naphthalene	2010/10/27	2.9		%	50
		Spiked Blank	Phenanthrene	2010/10/26		75	%	60 - 130
		RPD	Phenanthrene	2010/10/27	8.0		%	50
		Spiked Blank	Pyrene	2010/10/26		79	%	60 - 130
		RPD	Pyrene	2010/10/27	6.5		%	50
		Method Blank	D10-2-Methylnaphthalene	2010/10/27		72	%	50 - 150
			D10-Fluoranthene	2010/10/27		96	%	50 - 150
			D10-Phenanthrene	2010/10/27		84	%	50 - 150
			D12-Benzo(a)anthracene	2010/10/27		92	%	50 - 150
			D12-Benzo(a)pyrene	2010/10/27		96	%	50 - 150
			D12-Benzo(b)fluoranthene	2010/10/27		92	%	50 - 150
			D12-Benzo(ghi)perylene	2010/10/27		104	%	50 - 150
			D12-Benzo(k)fluoranthene	2010/10/27		86	%	50 - 150
			D12-Chrysene	2010/10/27		80	%	50 - 150

Maxxam Analytics
Attention: Michael Bisaga
Client Project #:
P.O. #:
Project name:

Quality Assurance Report (Continued)

Maxxam Job Number: GB0E8276

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2306251	WZ	Method Blank	D12-Indeno(1,2,3-cd)pyrene	2010/10/27		104	%	50 - 150
			D12-Perylene	2010/10/27		98	%	50 - 150
			D14-Dibenzo(a,h)anthracene	2010/10/27		106	%	50 - 150
			D8-Acenaphthylene	2010/10/27		82	%	50 - 150
			D8-Naphthalene	2010/10/27		66	%	50 - 150
			1-Methylnaphthalene	2010/10/27	<0.10		ug	
			1-Methylphenanthrene	2010/10/27	<0.10		ug	
			2-Chloronaphthalene	2010/10/27	<0.10		ug	
			2-Methylanthracene	2010/10/27	<0.10		ug	
			2-Methylnaphthalene	2010/10/27	<0.10		ug	
			3-Methylcholanthrene	2010/10/27	<2.0		ug	
			7,12-Dimethylbenzo(a)anthracene	2010/10/27	<0.10		ug	
			9,10-Dimethylanthracene	2010/10/27	<0.40		ug	
			Acenaphthene	2010/10/27	<0.050		ug	
			Acenaphthylene	2010/10/27	<0.050		ug	
			Anthracene	2010/10/27	<0.050		ug	
			Benzo(a)anthracene	2010/10/27	<0.050		ug	
			Benzo(a)fluorene	2010/10/27	<0.10		ug	
			Benzo(a)pyrene	2010/10/27	<0.050		ug	
			Benzo(b)fluoranthene	2010/10/27	<0.050		ug	
			Benzo(b)fluorene	2010/10/27	<0.10		ug	
			Benzo(e)pyrene	2010/10/27	<0.10		ug	
			Benzo(g,h,i)perylene	2010/10/27	<0.050		ug	
			Benzo(k)fluoranthene	2010/10/27	<0.050		ug	
			Biphenyl	2010/10/27	<0.10		ug	
			Chrysene	2010/10/27	<0.050		ug	
			Coronene	2010/10/27	<0.10		ug	
			Dibenz(a,h)anthracene	2010/10/27	<0.050		ug	
			Dibenzo(a,e)pyrene	2010/10/27	<0.20		ug	
			Fluoranthene	2010/10/27	<0.050		ug	
			Fluorene	2010/10/27	<0.050		ug	
			Indeno(1,2,3-cd)pyrene	2010/10/27	<0.050		ug	
			m-Terphenyl	2010/10/27	<0.10		ug	
			Naphthalene	2010/10/27	<0.072		ug	
			o-Terphenyl	2010/10/27	<0.10		ug	
			Perylene	2010/10/27	<0.10		ug	
			Phenanthrene	2010/10/27	<0.050		ug	
			p-Terphenyl	2010/10/27	<0.10		ug	
			Pyrene	2010/10/27	<0.050		ug	
			Quinoline	2010/10/27	<0.40		ug	
			Tetralin	2010/10/27	<0.10		ug	

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.
Spiked Blank: A blank matrix to which a known amount of the analyte has been added. Used to evaluate analyte recovery.
Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.
Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.
(1) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.

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Maxxam Analytics

Tisch Hi-Vol PUF+ Sample Collection Data Sheet

Client: Lica
Location: 13-16-62-5 W4M
Station ID: Lica 33 (Portable)
Field Sample ID: LICA PUF/PORT/Oct 23, 10

Puf+ s/n: 100-1015
Motor s/n: 1139
Installation Date/Time: Oct 22, 2010 @ 9:52 mst
Removal Date/Time: Oct 26, 2010 @ 8:42 mst

Date and Time Information			
Sample Date	Start Time (MST)	End Time (MST)	Elapsed Time (Hours)
23-Oct-10	23/10/2010 0:00	24/10/2010 0:00	24.00

PUF and QFF Information			
Date Received	Date Shipped	Puf Expiration Date	QFF Prep Date
21-Oct-10	26-Oct-10	02-Nov-10	????

Set Flow Rate (slpm): 230

Date of Last Calibration: 29-Mar-10

Sampling Data			
Average Pressure(mmHg)	AverageFlow (Qstd slpm)	Average Tempurature (C)	Volume (Vstd m^3)
708	229	2.1	330.34

Time set correctly prior to sampling? YES
Timer set correctly prior to sampling? YES
Sampling data saved to memory card after sampling? YES

Comments: COC # 4875
GB0D7360 Puff #2
Ran with a 102mm Quartz Fiber Filter - Sample ID - LICA QFF/PORT/Oct 23, 10

- Noticed condensation on the PUFF glass holder

Technician Signiture: Ting Xu

Success Through Science®

Your C.O.C. #: 4875

Attention: Michael Bisaga
Maxxam Analytics
2608 6A Ave.
Cold Lake, AB
CANADA T9M 2C7

Report Date: 2010/11/02

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B0F3808
Received: 2010/10/28, 09:15

Sample Matrix: PUF AND FILTER
Samples Received: 2

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Method Reference
PAH's in Air (CARB429mod)	2	2010/10/29	2010/11/01	BRL SOP-00201	CARB429(ARBM1,M2)mod

Encryption Key

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

THERESA STEPHENSON, Project Manager
Email: TStephenson@maxxam.ca
Phone# (905) 817-5763

==========

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. For Service Group specific validation please refer to the Validation Signature Page.

Total cover pages: 1

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Maxxam Analytics

Maxxam Job #: B0F3808
Report Date: 2010/11/02

SEMI-VOLATILE ORGANICS BY GC-MS (PUF AND FILTER)

Maxxam ID		HR0073	HR0074		
Sampling Date		2010/10/23	2010/10/23		
COC Number		4875	4875		
	Units	**LICA PUFF/QFF/CLS/OCT 23,10**	**LICA PUFF/QFF/PORT/OCT 23,10**	**RDL**	**QC Batch**
Semivolatile Organics					
1-Methylnaphthalene	ug	<0.10	<0.10	0.10	2313482
1-Methylphenanthrene	ug	<0.10	<0.10	0.10	2313482
2-Chloronaphthalene	ug	<0.10	<0.10	0.10	2313482
2-Methylanthracene	ug	<0.10	<0.10	0.10	2313482
2-Methylnaphthalene	ug	0.12	<0.10	0.10	2313482
3-Methylcholanthrene	ug	<2.0	<2.0	2.0	2313482
7,12-Dimethylbenzo(a)anthracene	ug	<0.10	<0.10	0.10	2313482
9,10-Dimethylanthracene	ug	<0.40	<0.40	0.40	2313482
Acenaphthene	ug	<0.050	<0.050	0.050	2313482
Acenaphthylene	ug	0.134	<0.050	0.050	2313482
Anthracene	ug	<0.050	<0.050	0.050	2313482
Benzo(a)anthracene	ug	<0.050	<0.050	0.050	2313482
Benzo(a)fluorene	ug	<0.10	<0.10	0.10	2313482
Benzo(a)pyrene	ug	<0.050	<0.050	0.050	2313482
Benzo(b)fluoranthene	ug	<0.050	<0.050	0.050	2313482
Benzo(b)fluorene	ug	<0.10	<0.10	0.10	2313482
Benzo(e)pyrene	ug	<0.10	<0.10	0.10	2313482
Benzo(g,h,i)perylene	ug	<0.050	<0.050	0.050	2313482
Benzo(k)fluoranthene	ug	<0.050	<0.050	0.050	2313482
Biphenyl	ug	<0.10	<0.10	0.10	2313482
Chrysene	ug	<0.050	<0.050	0.050	2313482
Coronene	ug	<0.10	<0.10	0.10	2313482
Dibenz(a,h)anthracene	ug	<0.050	<0.050	0.050	2313482
Dibenzo(a,e)pyrene	ug	<0.20	<0.20	0.20	2313482
Fluoranthene	ug	0.128	<0.050	0.050	2313482
Fluorene	ug	0.124	0.074	0.050	2313482
Indeno(1,2,3-cd)pyrene	ug	<0.050	<0.050	0.050	2313482
m-Terphenyl	ug	<0.10	<0.10	0.10	2313482
Naphthalene	ug	0.096	<0.072	0.072	2313482
o-Terphenyl	ug	<0.10	<0.10	0.10	2313482
Perylene	ug	<0.10	<0.10	0.10	2313482

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Maxxam Analytics

Maxxam Job #: B0F3808
Report Date: 2010/11/02

SEMI-VOLATILE ORGANICS BY GC-MS (PUF AND FILTER)

Maxxam ID		HR0073	HR0074		
Sampling Date		2010/10/23	2010/10/23		
COC Number		4875	4875		
	Units	**LICA PUFF/QFF/CLS/OCT 23,10**	**LICA PUFF/QFF/PORT/OCT 23,10**	**RDL**	**QC Batch**
Phenanthrene	ug	0.420	0.150	0.050	2313482
p-Terphenyl	ug	<0.10	<0.10	0.10	2313482
Pyrene	ug	0.094	<0.050	0.050	2313482
Quinoline	ug	<0.40	<0.40	0.40	2313482
Tetralin	ug	<0.10	<0.10	0.10	2313482
Surrogate Recovery (%)					
D10-2-Methylnaphthalene	%	70	90		2313482
D10-Fluoranthene	%	82	96		2313482
D10-Fluorene (FS)	%	23 (1)	21 (1)		2313482
D10-Phenanthrene	%	76	90		2313482
D12-Benzo(a)anthracene	%	78	92		2313482
D12-Benzo(a)pyrene	%	82	98		2313482
D12-Benzo(b)fluoranthene	%	76	90		2313482
D12-Benzo(ghi)perylene	%	82	100		2313482
D12-Benzo(k)fluoranthene	%	80	94		2313482
D12-Chrysene	%	74	88		2313482
D12-Indeno(1,2,3-cd)pyrene	%	80	98		2313482
D12-Perylene	%	82	100		2313482
D14-Dibenzo(a,h)anthracene	%	80	98		2313482
D14-Terphenyl (FS)	%	71	84		2313482
D8-Acenaphthylene	%	74	96		2313482
D8-Naphthalene	%	68	88		2313482

QC Batch = Quality Control Batch
(1) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.

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Maxxam Analytics

Maxxam Job #: B0F3808
Report Date: 2010/11/02

Test Summary

Maxxam ID	HR0073	**Collected**	2010/10/23
Sample ID	LICA PUFF/QFF/CLS/OCT 23,10	**Shipped**	
Matrix	PUF AND FILTER	**Received**	2010/10/28

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
PAH's in Air (CARB429mod)	GC/MS	2313482	2010/10/29	2010/11/01	JIW

Maxxam ID	HR0074	**Collected**	2010/10/23
Sample ID	LICA PUFF/QFF/PORT/OCT 23,10	**Shipped**	
Matrix	PUF AND FILTER	**Received**	2010/10/28

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
PAH's in Air (CARB429mod)	GC/MS	2313482	2010/10/29	2010/11/01	JIW

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Maxxam Analytics

Maxxam Job #: B0F3808
Report Date: 2010/11/02

GENERAL COMMENTS

PAHMS-F(WS:2313482)
9.10-Dimethylanthracene and 7,12-Dimethylbenzo(a)anthracene are above 25% RSD in initial calibration. No positives found for these 2 compounds.

7,12-Dimethylbenzo(a)anthracene is above 25% RSD in continuing calibration.

Pyrene is statistically out of control at 77.3% recovery in the spike:dup. Spike recovery is in control. Acceptance criteria met for both spike and dup. Data reported and flagged.

Not calibrated for Benzo(b)Anthracene, Picene, Dibenzo(a,c) anthracene and Triphenylene. An estimated mdl for each of these compounds is 0.1ug.
Since Dibenzo(a,c) anthracene co-elutes with Dibenz(a,h) anthracene and Triphenylene with Chrysene each would have a value below estimated mdl.
Benzo(b)Anthracene elutes after Benzo(a)Anthracene and Chysene. Picene elutes after Dibenz(a,h) anthracene. Searched for ions specific to these 2 compounds in the appropriate retention time range with no possible positives detected.

Sample HR0073-01: PAHMS-F(WS:2313482)
Low D10-Fluorene field spike recovery.

Sample HR0074-01: PAHMS-F(WS:2313482)
Low D10-Fluorene field spike recovery.

Results relate only to the items tested.

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Maxxam Analytics
Attention: Michael Bisaga
Client Project #:
P.O. #:
Project name:

Quality Assurance Report

Maxxam Job Number: GB0F3808

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2313482	JIW	Spiked Blank	D10-2-Methylnaphthalene	2010/11/01		88	%	50 - 150
			D10-Fluoranthene	2010/11/01		88	%	50 - 150
			D10-Phenanthrene	2010/11/01		82	%	50 - 150
			D12-Benzo(a)anthracene	2010/11/01		86	%	50 - 150
			D12-Benzo(a)pyrene	2010/11/01		94	%	50 - 150
			D12-Benzo(b)fluoranthene	2010/11/01		86	%	50 - 150
			D12-Benzo(ghi)perylene	2010/11/01		92	%	50 - 150
			D12-Benzo(k)fluoranthene	2010/11/01		90	%	50 - 150
			D12-Chrysene	2010/11/01		86	%	50 - 150
			D12-Indeno(1,2,3-cd)pyrene	2010/11/01		90	%	50 - 150
			D12-Perylene	2010/11/01		94	%	50 - 150
			D14-Dibenzo(a,h)anthracene	2010/11/01		92	%	50 - 150
			D8-Acenaphthylene	2010/11/01		90	%	50 - 150
			D8-Naphthalene	2010/11/01		86	%	50 - 150
			Acenaphthene	2010/11/01		86	%	60 - 130
		RPD	Acenaphthene	2010/11/01	1.7		%	50
		Spiked Blank	Acenaphthylene	2010/11/01		89	%	60 - 130
		RPD	Acenaphthylene	2010/11/01	1.7		%	50
		Spiked Blank	Anthracene	2010/11/01		76	%	60 - 130
		RPD	Anthracene	2010/11/01	3.0		%	50
		Spiked Blank	Benzo(a)anthracene	2010/11/01		76	%	60 - 130
		RPD	Benzo(a)anthracene	2010/11/01	1.6		%	50
		Spiked Blank	Benzo(a)pyrene	2010/11/01		72	%	60 - 130
		RPD	Benzo(a)pyrene	2010/11/01	2.4		%	50
		Spiked Blank	Benzo(b)fluoranthene	2010/11/01		76	%	60 - 130
		RPD	Benzo(b)fluoranthene	2010/11/01	0.3		%	50
		Spiked Blank	Benzo(g,h,i)perylene	2010/11/01		81	%	60 - 130
		RPD	Benzo(g,h,i)perylene	2010/11/01	0.6		%	50
		Spiked Blank	Benzo(k)fluoranthene	2010/11/01		84	%	60 - 130
		RPD	Benzo(k)fluoranthene	2010/11/01	3.5		%	50
		Spiked Blank	Chrysene	2010/11/01		84	%	60 - 130
		RPD	Chrysene	2010/11/01	0.9		%	50
		Spiked Blank	Dibenz(a,h)anthracene	2010/11/01		78	%	60 - 130
		RPD	Dibenz(a,h)anthracene	2010/11/01	0.3		%	50
		Spiked Blank	Fluoranthene	2010/11/01		85	%	60 - 130
		RPD	Fluoranthene	2010/11/01	0.3		%	50
		Spiked Blank	Fluorene	2010/11/01		83	%	60 - 130
		RPD	Fluorene	2010/11/01	1.5		%	50
		Spiked Blank	Indeno(1,2,3-cd)pyrene	2010/11/01		80	%	60 - 130
		RPD	Indeno(1,2,3-cd)pyrene	2010/11/01	0.3		%	50
		Spiked Blank	Naphthalene	2010/11/01		74	%	60 - 130
		RPD	Naphthalene	2010/11/01	4.3		%	50
		Spiked Blank	Phenanthrene	2010/11/01		77	%	60 - 130
		RPD	Phenanthrene	2010/11/01	0.3		%	50
		Spiked Blank	Pyrene	2010/11/01		77	%	60 - 130
		RPD	Pyrene	2010/11/01	0		%	50
		Method Blank	D10-2-Methylnaphthalene	2010/11/01		88	%	50 - 150
			D10-Fluoranthene	2010/11/01		90	%	50 - 150
			D10-Phenanthrene	2010/11/01		80	%	50 - 150
			D12-Benzo(a)anthracene	2010/11/01		82	%	50 - 150
			D12-Benzo(a)pyrene	2010/11/01		94	%	50 - 150
			D12-Benzo(b)fluoranthene	2010/11/01		90	%	50 - 150
			D12-Benzo(ghi)perylene	2010/11/01		94	%	50 - 150
			D12-Benzo(k)fluoranthene	2010/11/01		92	%	50 - 150
			D12-Chrysene	2010/11/01		88	%	50 - 150

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Maxxam Analytics
Attention: Michael Bisaga
Client Project #:
P.O. #:
Project name:

Quality Assurance Report (Continued)

Maxxam Job Number: GB0F3808

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2313482	JIW	Method Blank	D12-Indeno(1,2,3-cd)pyrene	2010/11/01		92	%	50 - 150
			D12-Perylene	2010/11/01		98	%	50 - 150
			D14-Dibenzo(a,h)anthracene	2010/11/01		90	%	50 - 150
			D8-Acenaphthylene	2010/11/01		90	%	50 - 150
			D8-Naphthalene	2010/11/01		86	%	50 - 150
			1-Methylnaphthalene	2010/11/01	<0.10		ug	
			1-Methylphenanthrene	2010/11/01	<0.10		ug	
			2-Chloronaphthalene	2010/11/01	<0.10		ug	
			2-Methylanthracene	2010/11/01	<0.10		ug	
			2-Methylnaphthalene	2010/11/01	<0.10		ug	
			3-Methylcholanthrene	2010/11/01	<2.0		ug	
			7,12-Dimethylbenzo(a)anthracene	2010/11/01	<0.10		ug	
			9,10-Dimethylanthracene	2010/11/01	<0.40		ug	
			Acenaphthene	2010/11/01	<0.050		ug	
			Acenaphthylene	2010/11/01	<0.050		ug	
			Anthracene	2010/11/01	<0.050		ug	
			Benzo(a)anthracene	2010/11/01	<0.050		ug	
			Benzo(a)fluorene	2010/11/01	<0.10		ug	
			Benzo(a)pyrene	2010/11/01	<0.050		ug	
			Benzo(b)fluoranthene	2010/11/01	<0.050		ug	
			Benzo(b)fluorene	2010/11/01	<0.10		ug	
			Benzo(e)pyrene	2010/11/01	<0.10		ug	
			Benzo(g,h,i)perylene	2010/11/01	<0.050		ug	
			Benzo(k)fluoranthene	2010/11/01	<0.050		ug	
			Biphenyl	2010/11/01	<0.10		ug	
			Chrysene	2010/11/01	<0.050		ug	
			Coronene	2010/11/01	<0.10		ug	
			Dibenz(a,h)anthracene	2010/11/01	<0.050		ug	
			Dibenzo(a,e)pyrene	2010/11/01	<0.20		ug	
			Fluoranthene	2010/11/01	<0.050		ug	
			Fluorene	2010/11/01	<0.050		ug	
			Indeno(1,2,3-cd)pyrene	2010/11/01	<0.050		ug	
			m-Terphenyl	2010/11/01	<0.10		ug	
			Naphthalene	2010/11/01	<0.072		ug	
			o-Terphenyl	2010/11/01	<0.10		ug	
			Perylene	2010/11/01	<0.10		ug	
			Phenanthrene	2010/11/01	<0.050		ug	
			p-Terphenyl	2010/11/01	<0.10		ug	
			Pyrene	2010/11/01	<0.050		ug	
			Quinoline	2010/11/01	<0.40		ug	
			Tetralin	2010/11/01	<0.10		ug	

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.
Spiked Blank: A blank matrix to which a known amount of the analyte has been added. Used to evaluate analyte recovery.
Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.
Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.

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MAXXAM

Tisch Hi-Vol PUF+ Sample Collection Data Sheet

Client: Lica
Location: 13-16-62-5 W4M
Station ID: Lica 33 (Portable)
Field Sample ID: LICA PUF/PORT/Oct 29, 10

Puf+ s/n: 100-1015
Motor s/n: 1139
Installation Date/Time: Oct 29, 2010 @ 11:08 mst
Removal Date/Time: Nov 01, 2010 @ 10:30 mst

Date and Time Information			
Sample Date	Start Time (MST)	End Time (MST)	Elapsed Time (Hours)
29-Oct-10	29/10/2010 0:00	30/10/2010 0:00	24.00

PUF and QFF Information			
Date Received	Date Shipped	Puf Expiration Date	QFF Prep Date
27-Oct-10	01-Nov-10	08-Nov-10	????

Set Flow Rate (slpm): 230

Date of Last Calibration: 29-Mar-10

Sampling Data			
Average Pressure(mmHg)	AverageFlow (Qstd slpm)	Average Tempurature (C)	Volume (Vstd m^3)
709	229	-2.0	330.32

Time set correctly prior to sampling? YES
Timer set correctly prior to sampling? YES
Sampling data saved to memory card after sampling? YES

Comments: COC # 2328
GB0D7382 Puff #2
Ran with a 102mm Quartz Fiber Filter - Sample ID - LICA QFF/PORT/Oct 29, 10

- Noticed condensation on the PUFF glass holder

Technician Signiture: Ting Xu

Maxxam

Success Through Science®

Your C.O.C. #: 2328

Attention: Michael Bisaga
Maxxam Analytics
2608 6A Ave.
Cold Lake, AB
CANADA T9M 2C7

Report Date: 2010/11/09

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B0F7014
Received: 2010/11/03, 09:28

Sample Matrix: PUF AND FILTER
Samples Received: 2

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Method Reference
PAH's in Air (CARB429mod)	2	2010/11/04	2010/11/09	BRL SOP-00201	CARB429(ARBM1,M2)mod

Encryption Key

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

THERESA STEPHENSON, Project Manager
Email: TStephenson@maxxam.ca
Phone# (905) 817-5763

==========

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. For Service Group specific validation please refer to the Validation Signature Page.

Total cover pages: 1

SEMI-VOLATILE ORGANICS BY GC-MS (PUF AND FILTER)

Maxxam ID		HS5583	HS5584		
Sampling Date		2010/10/29	2010/10/29		
COC Number		2328	2328		
	Units	**LICA PUFF/QFF/CLS/OCT 29, 10**	**LICA PUFF/QFF/PORT/OCT 29, 10**	**RDL**	**QC Batch**
Semivolatile Organics					
1-Methylnaphthalene	ug	<0.10	<0.10	0.10	2321284
1-Methylphenanthrene	ug	<0.10	<0.10	0.10	2321284
2-Chloronaphthalene	ug	<0.10	<0.10	0.10	2321284
2-Methylanthracene	ug	<0.10	<0.10	0.10	2321284
2-Methylnaphthalene	ug	0.11	0.11	0.10	2321284
3-Methylcholanthrene	ug	<2.0	<2.0	2.0	2321284
7,12-Dimethylbenzo(a)anthracene	ug	<0.10	<0.10	0.10	2321284
9,10-Dimethylanthracene	ug	<0.40	<0.40	0.40	2321284
Acenaphthene	ug	<0.050	<0.050	0.050	2321284
Acenaphthylene	ug	<0.050	<0.050	0.050	2321284
Anthracene	ug	<0.050	<0.050	0.050	2321284
Benzo(a)anthracene	ug	<0.050	<0.050	0.050	2321284
Benzo(a)fluorene	ug	<0.10	<0.10	0.10	2321284
Benzo(a)pyrene	ug	<0.050	<0.050	0.050	2321284
Benzo(b)fluoranthene	ug	<0.050	<0.050	0.050	2321284
Benzo(b)fluorene	ug	<0.10	<0.10	0.10	2321284
Benzo(e)pyrene	ug	<0.10	<0.10	0.10	2321284
Benzo(g,h,i)perylene	ug	0.080	0.068	0.050	2321284
Benzo(k)fluoranthene	ug	<0.050	<0.050	0.050	2321284
Biphenyl	ug	0.15	0.16	0.10	2321284
Chrysene	ug	<0.050	<0.050	0.050	2321284
Coronene	ug	<0.10	<0.10	0.10	2321284
Dibenz(a,h)anthracene	ug	0.066	0.056	0.050	2321284
Dibenzo(a,e)pyrene	ug	<0.20	<0.20	0.20	2321284
Fluoranthene	ug	<0.050	0.072	0.050	2321284
Fluorene	ug	0.138	0.166	0.050	2321284
Indeno(1,2,3-cd)pyrene	ug	0.068	0.056	0.050	2321284
m-Terphenyl	ug	<0.10	<0.10	0.10	2321284
Naphthalene	ug	0.108	0.130	0.072	2321284
o-Terphenyl	ug	<0.10	<0.10	0.10	2321284
Perylene	ug	<0.10	<0.10	0.10	2321284

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

SEMI-VOLATILE ORGANICS BY GC-MS (PUF AND FILTER)

Maxxam ID		HS5583	HS5584		
Sampling Date		2010/10/29	2010/10/29		
COC Number		2328	2328		
	Units	**LICA PUFF/QFF/CLS/OCT 29, 10**	**LICA PUFF/QFF/PORT/OCT 29, 10**	**RDL**	**QC Batch**
Phenanthrene	ug	0.228	0.314	0.050	2321284
p-Terphenyl	ug	<0.10	<0.10	0.10	2321284
Pyrene	ug	<0.050	<0.050	0.050	2321284
Quinoline	ug	<0.40	<0.40	0.40	2321284
Tetralin	ug	<0.10	<0.10	0.10	2321284
Surrogate Recovery (%)					
D10-2-Methylnaphthalene	%	74	80		2321284
D10-Fluoranthene	%	100	100		2321284
D10-Fluorene (FS)	%	33 (1)	25 (1)		2321284
D10-Phenanthrene	%	92	92		2321284
D12-Benzo(a)anthracene	%	110	108		2321284
D12-Benzo(a)pyrene	%	104	104		2321284
D12-Benzo(b)fluoranthene	%	98	98		2321284
D12-Benzo(ghi)perylene	%	104	106		2321284
D12-Benzo(k)fluoranthene	%	96	96		2321284
D12-Chrysene	%	90	88		2321284
D12-Indeno(1,2,3-cd)pyrene	%	106	108		2321284
D12-Perylene	%	102	100		2321284
D14-Dibenzo(a,h)anthracene	%	108	108		2321284
D14-Terphenyl (FS)	%	88	87		2321284
D8-Acenaphthylene	%	82	88		2321284
D8-Naphthalene	%	70	74		2321284

QC Batch = Quality Control Batch
(1) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.

Maxxam Job #: B0F7014
Report Date: 2010/11/09

Test Summary

Maxxam ID	HS5583	**Collected**	2010/10/29
Sample ID	LICA PUFF/QFF/CLS/OCT 29, 10	**Shipped**	
Matrix	PUF AND FILTER	**Received**	2010/11/03

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
PAH's in Air (CARB429mod)	GC/MS	2321284	2010/11/04	2010/11/09	JIW

Maxxam ID	HS5584	**Collected**	2010/10/29
Sample ID	LICA PUFF/QFF/PORT/OCT 29, 10	**Shipped**	
Matrix	PUF AND FILTER	**Received**	2010/11/03

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
PAH's in Air (CARB429mod)	GC/MS	2321284	2010/11/04	2010/11/09	JIW

GENERAL COMMENTS

PAHMS-F(WS:2321284)
7,12-Dimethylbenzo(a)anthracene is above 25% RSD in initial calibration. No positive found for this compound.

Not calibrated for Benzo(b)Anthracene, Picene, Dibenzo(a,c) anthracene and Triphenylene. An estimated mdl for each of these compounds is 0.1ug.
Since Dibenzo(a,c) anthracene co-elutes with Dibenz(a,h) anthracene and Triphenylene with Chrysene each would have a value below estimated mdl.
Benzo(b)Anthracene elutes after Benzo(a)Anthracene and Chysene. Picene elutes after Dibenz(a,h) anthracene. Searched for ions specific to these 2 compounds in the appropriate retention time range with no possible positives detected.

Sample HS5583-01: PAHMS-F(WS:2321284)
Low D10-Fluorene field spike recovery. Suspect sample matrix as cause due to acceptable recovery of D14-Terphenyl field spike.

Sample HS5584-01: PAHMS-F(WS:2321284)
Low D10-Fluorene field spike recovery. Suspect sample matrix as cause due to acceptable recovery of D14-Terphenyl field spike.

Results relate only to the items tested.

Maxxam Analytics
Attention: Michael Bisaga
Client Project #:
P.O. #:
Project name:

Quality Assurance Report

Maxxam Job Number: GB0F7014

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2321284	JIW	Spiked Blank	D10-2-Methylnaphthalene	2010/11/08		86	%	50 - 150
			D10-Fluoranthene	2010/11/08		100	%	50 - 150
			D10-Phenanthrene	2010/11/08		96	%	50 - 150
			D12-Benzo(a)anthracene	2010/11/08		104	%	50 - 150
			D12-Benzo(a)pyrene	2010/11/08		104	%	50 - 150
			D12-Benzo(b)fluoranthene	2010/11/08		98	%	50 - 150
			D12-Benzo(ghi)perylene	2010/11/08		104	%	50 - 150
			D12-Benzo(k)fluoranthene	2010/11/08		96	%	50 - 150
			D12-Chrysene	2010/11/08		90	%	50 - 150
			D12-Indeno(1,2,3-cd)pyrene	2010/11/08		106	%	50 - 150
			D12-Perylene	2010/11/08		102	%	50 - 150
			D14-Dibenzo(a,h)anthracene	2010/11/08		108	%	50 - 150
			D8-Acenaphthylene	2010/11/08		88	%	50 - 150
			D8-Naphthalene	2010/11/08		82	%	50 - 150
			Acenaphthene	2010/11/08		84	%	60 - 130
		RPD	Acenaphthene	2010/11/08	6.2		%	50
		Spiked Blank	Acenaphthylene	2010/11/08		85	%	60 - 130
		RPD	Acenaphthylene	2010/11/08	4.8		%	50
		Spiked Blank	Anthracene	2010/11/08		84	%	60 - 130
		RPD	Anthracene	2010/11/08	4.3		%	50
		Spiked Blank	Benzo(a)anthracene	2010/11/08		89	%	60 - 130
		RPD	Benzo(a)anthracene	2010/11/08	0.6		%	50
		Spiked Blank	Benzo(a)pyrene	2010/11/08		81	%	60 - 130
		RPD	Benzo(a)pyrene	2010/11/08	2.2		%	50
		Spiked Blank	Benzo(b)fluoranthene	2010/11/08		91	%	60 - 130
		RPD	Benzo(b)fluoranthene	2010/11/08	1.7		%	50
		Spiked Blank	Benzo(g,h,i)perylene	2010/11/08		102	%	60 - 130
		RPD	Benzo(g,h,i)perylene	2010/11/08	3.5		%	50
		Spiked Blank	Benzo(k)fluoranthene	2010/11/08		86	%	60 - 130
		RPD	Benzo(k)fluoranthene	2010/11/08	1.5		%	50
		Spiked Blank	Chrysene	2010/11/08		86	%	60 - 130
		RPD	Chrysene	2010/11/08	0.9		%	50
		Spiked Blank	Dibenz(a,h)anthracene	2010/11/08		105	%	60 - 130
		RPD	Dibenz(a,h)anthracene	2010/11/08	3.4		%	50
		Spiked Blank	Fluoranthene	2010/11/08		94	%	60 - 130
		RPD	Fluoranthene	2010/11/08	2.4		%	50
		Spiked Blank	Fluorene	2010/11/08		86	%	60 - 130
		RPD	Fluorene	2010/11/08	7.2		%	50
		Spiked Blank	Indeno(1,2,3-cd)pyrene	2010/11/08		102	%	60 - 130
		RPD	Indeno(1,2,3-cd)pyrene	2010/11/08	2.5		%	50
		Spiked Blank	Naphthalene	2010/11/08		77	%	60 - 130
		RPD	Naphthalene	2010/11/08	5.7		%	50
		Spiked Blank	Phenanthrene	2010/11/08		87	%	60 - 130
		RPD	Phenanthrene	2010/11/08	6.5		%	50
		Spiked Blank	Pyrene	2010/11/08		87	%	60 - 130
		RPD	Pyrene	2010/11/08	3.5		%	50
		Method Blank	D10-2-Methylnaphthalene	2010/11/09		82	%	50 - 150
			D10-Fluoranthene	2010/11/09		100	%	50 - 150
			D10-Phenanthrene	2010/11/09		92	%	50 - 150
			D12-Benzo(a)anthracene	2010/11/09		108	%	50 - 150
			D12-Benzo(a)pyrene	2010/11/09		102	%	50 - 150
			D12-Benzo(b)fluoranthene	2010/11/09		98	%	50 - 150
			D12-Benzo(ghi)perylene	2010/11/09		104	%	50 - 150
			D12-Benzo(k)fluoranthene	2010/11/09		92	%	50 - 150
			D12-Chrysene	2010/11/09		88	%	50 - 150

Maxxam Analytics
Attention: Michael Bisaga
Client Project #:
P.O. #:
Project name:

Quality Assurance Report (Continued)

Maxxam Job Number: GB0F7014

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2321284	JIW	Method Blank	D12-Indeno(1,2,3-cd)pyrene	2010/11/09		106	%	50 - 150
			D12-Perylene	2010/11/09		98	%	50 - 150
			D14-Dibenzo(a,h)anthracene	2010/11/09		106	%	50 - 150
			D8-Acenaphthylene	2010/11/09		84	%	50 - 150
			D8-Naphthalene	2010/11/09		78	%	50 - 150
			1-Methylnaphthalene	2010/11/09	<0.10		ug	
			1-Methylphenanthrene	2010/11/09	<0.10		ug	
			2-Chloronaphthalene	2010/11/09	<0.10		ug	
			2-Methylanthracene	2010/11/09	<0.10		ug	
			2-Methylnaphthalene	2010/11/09	<0.10		ug	
			3-Methylcholanthrene	2010/11/09	<2.0		ug	
			7,12-Dimethylbenzo(a)anthracene	2010/11/09	<0.10		ug	
			9,10-Dimethylanthracene	2010/11/09	<0.40		ug	
			Acenaphthene	2010/11/09	<0.050		ug	
			Acenaphthylene	2010/11/09	<0.050		ug	
			Anthracene	2010/11/09	<0.050		ug	
			Benzo(a)anthracene	2010/11/09	<0.050		ug	
			Benzo(a)fluorene	2010/11/09	<0.10		ug	
			Benzo(a)pyrene	2010/11/09	<0.050		ug	
			Benzo(b)fluoranthene	2010/11/09	<0.050		ug	
			Benzo(b)fluorene	2010/11/09	<0.10		ug	
			Benzo(e)pyrene	2010/11/09	<0.10		ug	
			Benzo(g,h,i)perylene	2010/11/09	<0.050		ug	
			Benzo(k)fluoranthene	2010/11/09	<0.050		ug	
			Biphenyl	2010/11/09	<0.10		ug	
			Chrysene	2010/11/09	<0.050		ug	
			Coronene	2010/11/09	<0.10		ug	
			Dibenz(a,h)anthracene	2010/11/09	<0.050		ug	
			Dibenzo(a,e)pyrene	2010/11/09	<0.20		ug	
			Fluoranthene	2010/11/09	<0.050		ug	
			Fluorene	2010/11/09	<0.050		ug	
			Indeno(1,2,3-cd)pyrene	2010/11/09	<0.050		ug	
			m-Terphenyl	2010/11/09	<0.10		ug	
			Naphthalene	2010/11/09	<0.072		ug	
			o-Terphenyl	2010/11/09	<0.10		ug	
			Perylene	2010/11/09	<0.10		ug	
			Phenanthrene	2010/11/09	<0.050		ug	
			p-Terphenyl	2010/11/09	<0.10		ug	
			Pyrene	2010/11/09	<0.050		ug	
			Quinoline	2010/11/09	<0.40		ug	
			Tetralin	2010/11/09	<0.10		ug	

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.
Spiked Blank: A blank matrix to which a known amount of the analyte has been added. Used to evaluate analyte recovery.
Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.
Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.