

Lakeland Industry & Community Association

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

Prepared By:



November 24, 2009

Lakeland Industry & Community Association Ambient Air Monitoring

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Introduction

The following Ambient Air Monitoring report was prepared for:

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Monitoring Location: Cold Lake
Data Period: October 2009

The monthly ambient data report:

- Prepared by Lily Lin
- Reviewed by Craig Snider

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

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 - COLD LAKE

Continuous Ambient Monitoring – October 2009

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION COLD LAKE SITE						MAXIMUM VALUES							OPERATIONAL TIME (PERCENT)
						OBJECTIVES					EXCEEDENCES		
PARAMETER	1-HR	24-HR	1-HR	24-HR		READING	DAY	HOUR	WIND SPEED (KPH)	WIND DIRECTION (DEGREES)	READING	DAY	
SO ₂ (PPB)	172	57	0	0	0.05	4	16	12, 13	5.4, 6.1	190(S), 154(SSE)	0.9	16	99.9
TRS (PPB)	-	-	-	-	0.00	0	ALL	ALL	VAR	VAR	0.0	ALL	99.9
NO ₂ (PPB)	212	106	0	0	2.68	16	26	18	0.9	97(E)	7.0	26	99.9
NO (PPB)	-	-	-	-	0.69	36	15	8	5.5	129(SE)	4.1	2	99.9
NOx (PPB)	-	-	-	-	3.62	44	15	8	5.5	129(SE)	11.5	26	99.9
O ₃ (PPB)	82	-	0	-	15.55	36	17	12	11.1	257(WSW)	26.1	11	99.7
THC (PPM)	-	-	-	-	2.01	3.1	27	4	2	242(WSW)	2.3	16, 26	99.9
PM 2.5 (UG/M ³)	-	30	-	0	3.33	14.3	16	12	5.4	190(S)	9.1	16	98.3
TEMPERATURE (DEG C)	-	-	-	-	1.23	13.6	17	13	10	250(WSW)	6.3	17	99.9
RELATIVE HUMIDITY (%)	-	-	-	-	79.45	98.0	21	VAR	VAR	VAR	92.5	28	99.9
VECTOR WS (KPH)	-	-	-	-	5.58	17.8	6	19	-	320(NW)	13.1	9	99.9
VECTOR WD (DEGREES)	-	-	-	-	338(NNW)	-	-	-	-	-	-	-	99.9

VAR-VARIOUS

Monthly Non-Continuous Data Summary

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - COLD LAKE

Passive Ambient Monitoring Network – October 2009

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION PASSIVE NETWORK			
NETWORK MAXIMUM			NETWORK AVERAGE
PARAMETER	STATION	READING (PPB)	READING (PPB)
SO ₂	#14	0.8	0.3
H ₂ S	#5	0.15	0.10
NO ₂	#28	4.7	1.7
O ₃	#32	18.9	15.3

Note: The network averages include samples and duplicates.

Volatile Volatile Organics Data Summary

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - COLD LAKE

Xontech Model 910A – October 04, 2009

Maximum reading (ppb)	Volatile Organic
<3.2	Methyl Isobutyl Ketone

Xontech Model 910A – October 10, 2009

Maximum reading (ppb)	Volatile Organic
<3.2	Methyl Isobutyl Ketone

Xontech Model 910A – October 16, 2009

Maximum reading (ppb)	Volatile Organic
<3.2	Methyl Isobutyl Ketone

Xontech Model 910A – October 22, 2009

Maximum reading (ppb)	Volatile Organic
<3.2	Methyl Isobutyl Ketone

Xontech Model 910A – October 28, 2009

Maximum reading (ppb)	Volatile Organic
<3.2	Methyl Isobutyl Ketone

Polycyclic Aromatic Hydrocarbons (PAHs) Data Summary

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - COLD LAKE

PUF cartridge – October 04, 2009

Maximum reading (ug)	Semi-Volatile Organic
< 2.0	3-Methylcholanthrene

PUF cartridge – October 10, 2009

Maximum reading (ug)	Semi-Volatile Organic
< 2.0	3-Methylcholanthrene

PUF cartridge – October 16, 2009

Maximum reading (ug)	Semi-Volatile Organic
< 2.0	3-Methylcholanthrene

PUF cartridge – October 22, 2009

Maximum reading (ug)	Semi-Volatile Organic
< 2.0	3-Methylcholanthrene

PUF cartridge – October 28, 2009

Maximum reading (ug)	Semi-Volatile Organic
< 2.0	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

No operational issues observed during the month. The inlet filter was changed before the monthly calibration was started on October 1st. One hour of data is missing on October 27th. Data was corrected using daily zero information.

Total Reduced Sulphur (PPB)

- Analyzer make / model –TEI 450i
- Converter - CD NOVA CDN 101

No operational issues observed during the month. The inlet filter was changed before the monthly calibration was started on October 1st. One hour of data is missing on October 27th. Data was corrected using daily zero information.

Nitrogen Dioxide (PPB)

- Analyzer make / model - TECO 42C

No operational issues observed during the month. The inlet filter was changed before the monthly calibration was started on October 1st. A Maxxam-supplied scrubber for the daily zero calibration was installed on October 1st. One hour of data is missing on October 27th. 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

No operational issues observed during the month. The inlet filter was changed before the monthly calibration was started on October 1st. One hour of data is missing on October 27th. Data was corrected using daily zero information.

Ozone (PPB)

- Analyzer make / model - TECO 49i

No operational issues observed during the month. The inlet filter was changed before the monthly calibration was started on October 1st. The pump was also rebuilt on the same day. A multi-points calibration was performed on October 2nd. One hour of data is missing on October 27th.

Particulate Matter 2.5 (ug/m³)

- Analyzer make / model –TEOM1405F

No operational issues observed during the month. An intermittent warning for pump pressure was observed during the trip of October 1st. An audit including a leak check was performed; no issues were discovered. The pump was rebuilt on October 8th. Requested firmware upgrade from the manufacturer. This issue did not affected data quality. One hour of data is missing on October 27th. 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. Four hours of data were invalidated as it was below –3.0 ug/m³.

General Monthly Summary - Cold Lake

AQM STATION – LICA – COLD LAKE

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

- System make / model – Met One 50.5

No operational issues observed during the month. The wind system is reported as vector wind speed and vector wind direction. . One hour of data is missing on October 27th.

Relative Humidity (PERCENT)

- System make / model - Rotronic Hygroclip-S3

No operational issues observed during the month. . One hour of data is missing on October 27th.

Ambient Temperature (DEGC)

- System make / model - Rotronic Hygroclip-S3

No operational issues observed during the month. One hour of data is missing on October 27th.

Trailer Temperature (DEGC)

- System make / model - R&R 61

No operational issues observed during the month. One hour of data is missing on October 27th.

Datalogger

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

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

General Monthly Summary - Cold Lake

AQM STATION – LICA – COLD LAKE

Trailer

No issue was observed during this month.

Air Quality Index (AQI)

The AQI data was adjusted to reflect regular monthly and daily calibrations, maintenance, and downtime. All data were within the Good range. The highest hourly concentration of PM2.5 was 14.3 UG/M3 and an AQI value of 12 on October 16th, hour 12. The highest hourly concentration of Ozone was 36 ppb and an AQI value of 17 on October 17th, hour 12.

Passive Network

No issue was observed during this month. Due to ozone sample shortage, ozone samples put at station #8 and station #28 were used sample blank instead.

Volatile Organics (VOCs)

The volatile organics were sampled on October 4th, 10th, 16th, 22nd and 28th. The sampler was programmed to run for 24 hours, and, every 6 days per sample cycle.

Polycyclic Aromatic Hydrocarbons (PAHs)

The PAHs were sampled on October 4th, 10th, 16th, 22nd and 28th. The sampler was programmed to run for 24 hours, and, every 6 days per sample cycle.

Continuous Monitoring

Cold Lake

Monthly Summaries, Graphs & Wind Roses

Air Quality Index

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - COLD LAKE

OCTOBER 2009

AIR QUALITY INDEX (AQI)

MST		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		
DAY	PEAK	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	0:00	MAX	
1		3	3	3	3	2	5	2	3	-	-	-	-	-	-	-	-	-	-	8	6	3	1	4	2	4	11	
2		3	1	2	2	7	5	-	-	-	-	-	-	10	10	10	10	10	7	4	5	3	4	3	4	4	10	
3		6	7	7	6	5	5	5	5	6	6	-	7	7	7	7	7	7	7	8	7	7	7	7	7	10	10	
4		10	10	11	11	11	12	11	11	11	-	12	12	12	11	11	11	11	11	10	8	6	7	8	8	5	12	
5		3	2	2	2	2	2	2	1	-	9	10	9	9	10	10	11	11	11	10	10	10	10	9	10	9	11	
6		9	9	9	9	9	7	6	-	5	5	5	5	6	7	7	9	7	6	7	8	7	-	9	10	10	10	
7		10	11	11	10	9	9	-	8	9	9	9	9	9	9	10	11	12	11	11	9	8	8	8	7	-	12	
8		6	5	9	10	10	-	12	13	13	13	-	-	-	-	-	14	14	13	13	13	13	12	12	13	13	14	
9		13	13	13	12	-	12	12	12	11	11	12	13	13	12	12	12	12	12	12	13	13	13	13	13	13	14	14
10		13	12	13	-	13	13	12	12	12	13	13	13	13	13	12	13	13	13	12	11	10	10	10	10	11	13	
11		11	13	-	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	13	12	11	11	11	11	14	
12		7	-	4	9	8	9	11	12	13	14	14	14	14	15	14	14	14	14	13	12	12	12	11	11	11	15	
13		9	11	11	10	10	9	9	9	10	11	12	12	13	13	13	13	13	13	13	12	12	12	12	13	13	-	13
14		13	12	12	12	11	11	10	9	9	10	9	10	10	10	10	11	11	11	11	11	11	11	11	11	-	10	13
15		10	11	11	10	10	9	9	9	9	9	9	9	9	9	9	9	9	9	8	7	6	5	6	-	6	11	
16		6	6	7	6	6	5	8	7	5	6	10	9	12	9	11	11	10	10	9	10	10	-	8	11	5	12	
17		9	6	5	1	2	5	10	10	11	11	14	14	17	18	18	18	17	14	9	7	-	7	2	5	6	18	
18		5	3	5	3	2	4	6	4	5	7	10	12	12	12	14	16	15	12	-	4	3	6	5	9	16	16	
19		8	7	8	10	8	-	3	8	6	9	11	12	12	14	15	13	11	-	12	13	11	11	11	10	9	15	
20		10	10	9	7	6	5	3	5	4	5	11	10	11	12	12	12	-	8	6	6	7	5	3	3	12	12	
21		3	3	4	5	7	4	4	3	4	7	10	11	12	12	12	-	8	6	8	7	7	7	7	7	8	12	
22		8	8	7	7	6	5	4	3	4	4	5	5	6	5	-	7	7	7	8	6	4	4	5	4	8	8	
23		4	4	3	4	4	5	7	8	9	9	8	8	8	-	7	8	8	7	10	8	8	8	8	7	7	10	
24		6	5	5	7	7	6	6	6	8	6	8	9	-	10	10	9	8	8	8	8	8	8	9	10	11	11	
25		11	12	11	7	7	7	7	7	7	7	7	7	11	-	12	13	14	14	14	11	10	9	7	4	7	14	
26		10	10	10	9	8	8	5	3	5	8	-	9	9	10	11	10	8	5	6	8	6	7	7	6	11	11	
27		9	5	3	3	3	-	4	4	5	-	5	8	9	9	10	11	8	6	9	9	9	8	7	6	11	11	
28		5	5	3	2	3	2	2	1	-	4	2	3	5	5	6	5	5	4	4	4	4	3	3	5	3	6	
29		2	2	1	2	3	1	1	-	4	5	6	6	7	7	7	6	6	6	6	6	6	7	8	8	8	8	
30		8	7	7	8	7	7	-	6	7	8	8	9	9	8	9	9	9	8	7	6	8	7	8	8	9	9	
31		8	8	8	8	9	-	9	10	11	11	11	11	10	10	10	9	8	9	8	7	6	5	4	6	11	11	
PEAK		13	13	13	14	14	14	14	14	14	14	14	14	17	18	18	18	17	15	14	13	13	13	13	13	14	14	

STATUS FLAG CODES

NA - NOT APPLICABLE

V - VARIOUS

AQI CLASS	OZONE (O ₃)					PARTICULATE MATTER 2.5 (PM _{2.5})					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)	561	75.4%	18	12, 13, 14	17	129	17.3%	12	12	16	0	0.0%	-	-	-	0	0.0%	-	-	-	690	92.7%
OVERALL	561	75.4%	-	-	-	129	17.3%	-	-	-	0	0.0%	-	-	-	0	0.0%	-	-	-	690	92.7%
UNAVAILABLE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	54	7.3%

Sulphur Dioxide

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - COLD LAKE

OCTOBER 2009

SULPHUR DIOXIDE (SO₂) 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 MAX.	24-HOUR AVG.	RDGS.	
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	0	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
DAY 2	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	0.0	24
DAY 3	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	0.0	24
DAY 4	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	0.0	24
DAY 5	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0.0	24
DAY 6	1	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.0	24
DAY 7	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	0.0	24
DAY 8	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0.0	24
DAY 9	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	0.0	24
DAY 10	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	1	1	1	1	0	0	1	0.2	24
DAY 11	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	0.0	24
DAY 12	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	0.0	24
DAY 13	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	IZS	0.0	24
DAY 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	IZS	0	0.0	24
DAY 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
DAY 16	0	0	0	0	0	0	0	0	0	0	1	2	4	4	3	2	1	1	1	1	1	IZS	0	0	0	4	0.9	24
DAY 17	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	0.0	24
DAY 18	0	0	0	0	0	0	0	0	0	0	1	3	1	1	0	0	0	0	0	IZS	0	0	0	0	0	3	0.3	24
DAY 19	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	0.0	24
DAY 20	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	0.0	24
DAY 21	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	0.0	24
DAY 22	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	0.0	24
DAY 23	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	0.0	24
DAY 24	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	0.0	24
DAY 25	0	0	0	0	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
DAY 26	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	0.0	24
DAY 27	0	0	0	0	0	N	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	23
DAY 28	0	0	0	0	0	0	0	1	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.0	24
DAY 29	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	0.0	24
DAY 30	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	0.0	24
DAY 31	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	0.0	24
HOURLY MAX	1	0	0	0	0	0	NA	1	0	0	1	3	4	4	3	2	1	1	1	1	1	1	1	0	1			
HOURLY AVG	0.0	0.0	0.0	0.0	0.0	0.0	NA	0.0	0.0	0.0	0.1	0.2	0.2	0.2	0.2	0.1	0.0	0.0	0.0	0.1	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

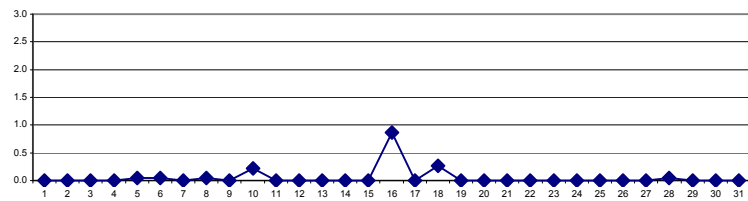
OBJECTIVE LIMIT:

ALBERTA ENVIRONMENT:	1-HR	172	PPB	24-HR	57	PPB
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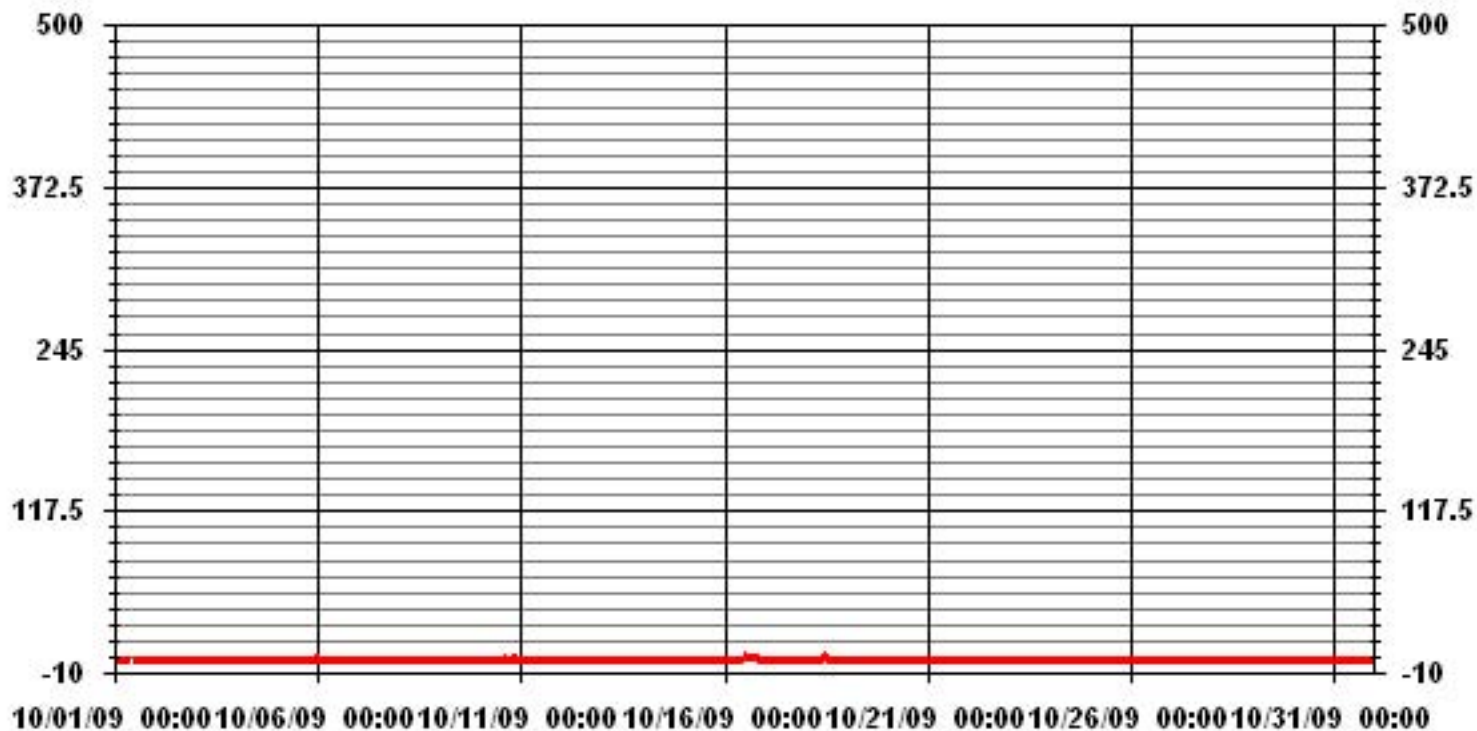
MONTHLY SUMMARY

NUMBER OF 1-HR EXCEEDENCES:	0		
NUMBER OF 24-HR EXCEEDENCES:	0		
NUMBER OF NON-ZERO READINGS:	23		
MAXIMUM 1-HR AVERAGE:	4 PPB @ HOUR(S) 12, 13 ON DAY(S) 16		
MAXIMUM 24-HR AVERAGE:	0.9 PPB ON DAY(S) 16		
IZS CALIBRATION TIME:	31 HRS	OPERATIONAL TIME:	743 HRS
MONTHLY CALIBRATION TIME:	5 HRS	AMD OPERATION UPTIME:	99.9 %
STANDARD DEVIATION:	0.32	MONTHLY AVERAGE:	0.05 PPB

24 HOUR AVERAGES FOR OCTOBER 2009



01 Hour Averages



— LICA SO2_ PPB

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - COLD LAKE

OCTOBER 2009

SULPHUR DIOXIDE MAX instantaneous maximum in ppt

MST		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	23:00	DAILY	24-HOUR		
DAY	HR	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	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.		
1	1	1	1	0	0	0	0	0	0	C	C	C	C	C	0	0	0	0	0	0	0	0	0	0	0	0	1	0.1	24	
2	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	0.0	24	
3	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	0.0	24	
4	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	0.0	24	
5	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	2	0.1	24	
6	1	1	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.1	24	
7	0	0	1	1	1	1	IZS	1	1	1	0	0	0	0	0	0	1	0	1	0	1	0	0	0	0	0	1	0.4	24	
8	0	0	0	0	0	IZS	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	0	0	0	0	0	1	0.3	24	
9	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	1	1	0.0	24	
10	0	0	0	IZS	1	0	0	1	1	1	1	1	1	0	0	1	1	1	1	1	1	1	1	1	1	0	1	0.7	24	
11	1	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	1	0.0	24	
12	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	0.0	24	
13	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	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	IZS	0	0.0	24	
15	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	1	0.0	24
16	0	0	0	0	0	0	0	0	0	0	1	2	4	5	5	4	2	2	2	2	2	1	IZS	0	0	0	5	1.3	24	
17	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	0.0	24	
18	0	0	0	0	0	0	0	0	0	0	1	2	4	2	2	1	0	0	0	0	IZS	0	0	0	0	0	4	0.5	24	
19	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	0.0	24	
20	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	0.0	24	
21	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	0.0	24	
22	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	0.0	24	
23	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	0.0	24	
24	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	0.0	24	
25	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	0.0	24	
26	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	0.0	24	
27	0	0	0	0	0	0	N	0	0	0	IZS	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0.1	23	
28	0	0	0	0	0	0	0	2	IZS	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0.2	24	
29	0	0	0	0	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	
30	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	0.0	24	
31	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	0.0	24	
HOURLY MAX		1	1	1	1	1	1	0	2	1	1	2	4	5	5	4	2	2	2	2	2	1	1	1	1	2				
HOURLY AVG		0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.2	0.3	0.4	0.3	0.3	0.2	0.1	0.2	0.1	0.2	0.1	0.0	0.0	0.1	0.1					

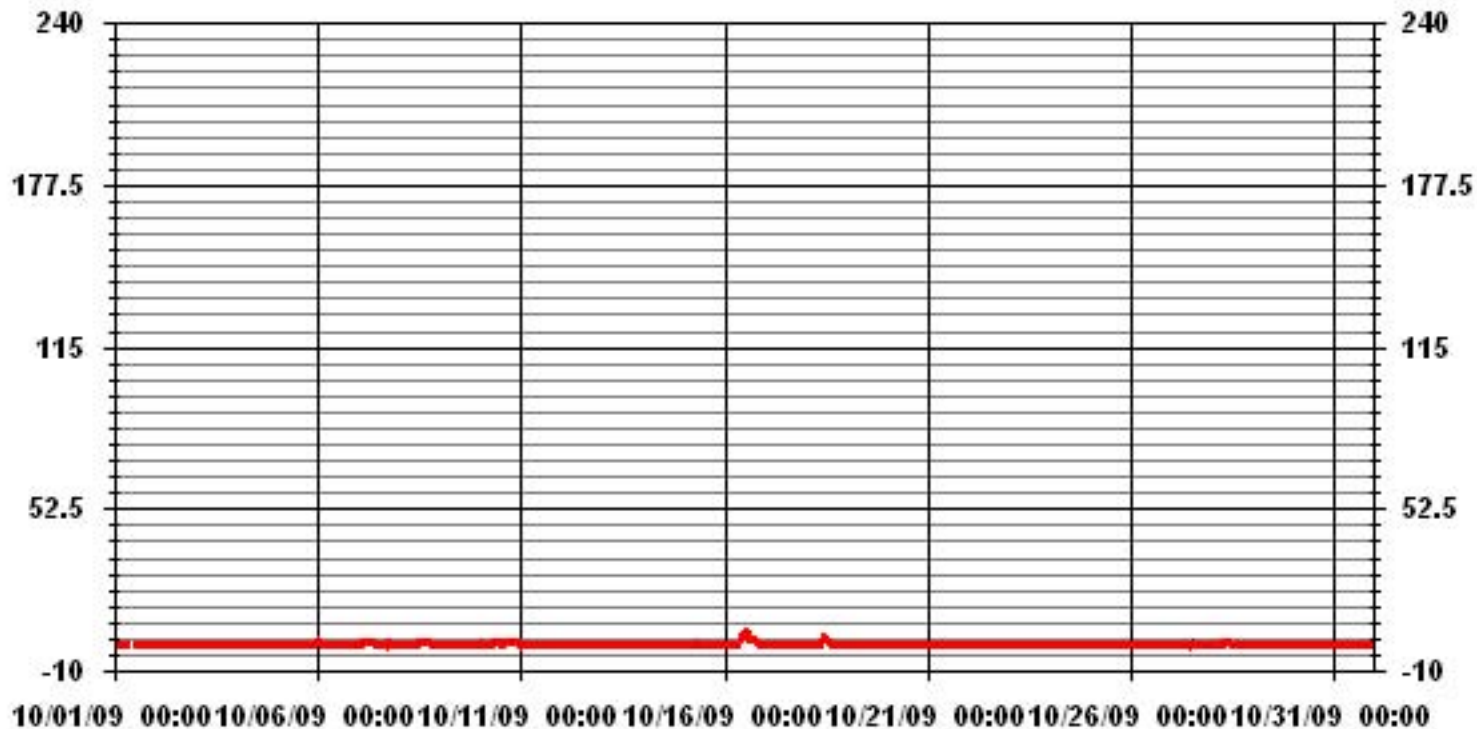
STATUS FLAG CODES

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:	64					
MAXIMUM INSTANTANEOUS VALUE:	5	PPB	@ HOUR(S)	12,13	ON DAY(S)	16
IZS CALIBRATION TIME:	31	HRS	OPERATIONAL TIME:	743	HRS	
MONTHLY CALIBRATION TIME:	5	HRS				
STANDARD DEVIATION:	0.50					

01 Hour Averages



— LICA SO2MAX PPB

LICA
 SO2_ / WDR Joint Frequency Distribution (Percent)

October 2009

Distribution By % Of Samples

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

Wind Parameter : WDR
 Instrument Height : 10 Meters

	Direction																
Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 20	3.11	1.55	3.11	3.39	11.31	14.42	10.18	3.53	4.10	4.52	5.09	7.07	4.95	8.48	11.17	3.96	100.00
< 60	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
< 110	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
< 170	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
< 340	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
>= 340	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
Totals	3.11	1.55	3.11	3.39	11.31	14.42	10.18	3.53	4.10	4.52	5.09	7.07	4.95	8.48	11.17	3.96	

Calm : .00 %

Total # Operational Hours : 707

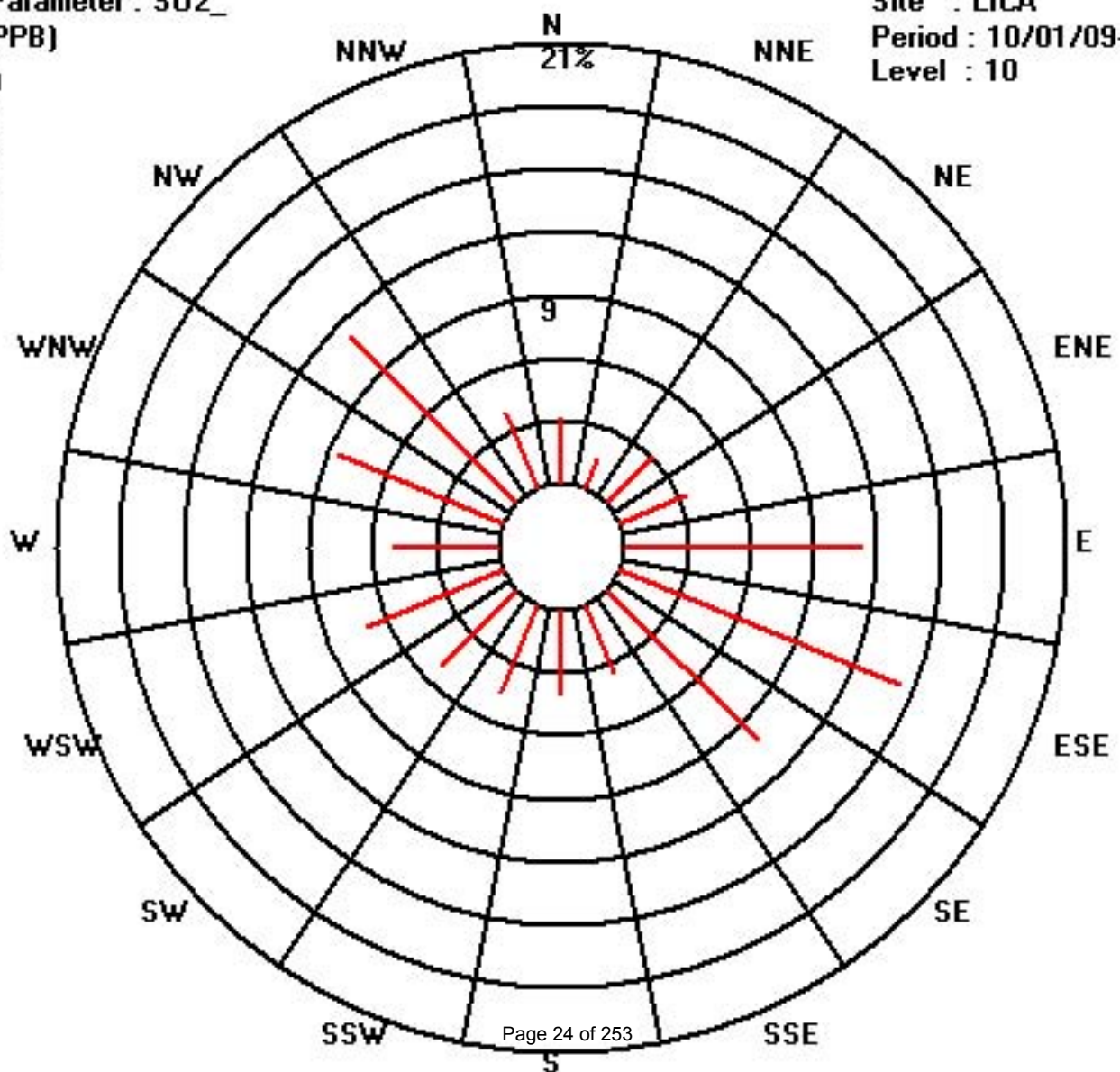
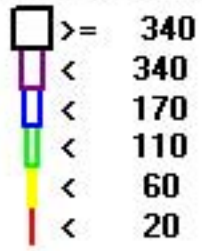
Distribution By Samples

	Direction																
Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 20	22	11	22	24	80	102	72	25	29	32	36	50	35	60	79	28	707
< 60																	
< 110																	
< 170																	
< 340																	
>= 340																	
Totals	22	11	22	24	80	102	72	25	29	32	36	50	35	60	79	28	

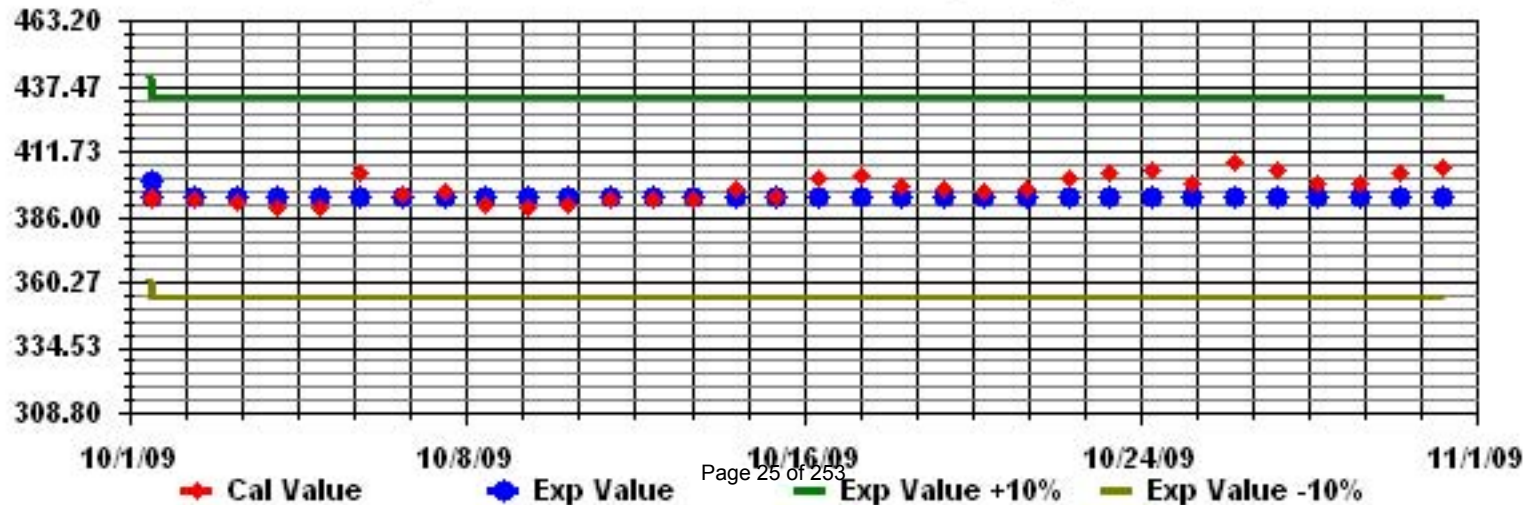
Calm : .00 %

Total # Operational Hours : 707

Class Limits (PPB)



Calibration Graph for Site: LICA Parameter: SO2_ Sequence: SO2 Phase: SPAN



Total Reduced Sulphur

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - COLD LAKE

OCTOBER 2009

TOTAL REDUCED SULPHUR (TRS) hourly averages in ppb

MST

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

STATUS FLAG CODES

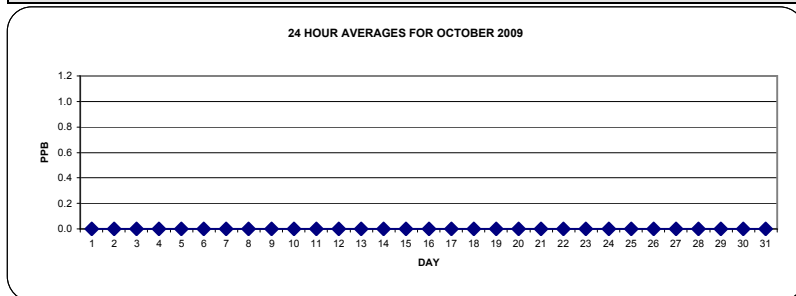
S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	- MISSING DATA
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE

OBJECTIVE LIMIT:

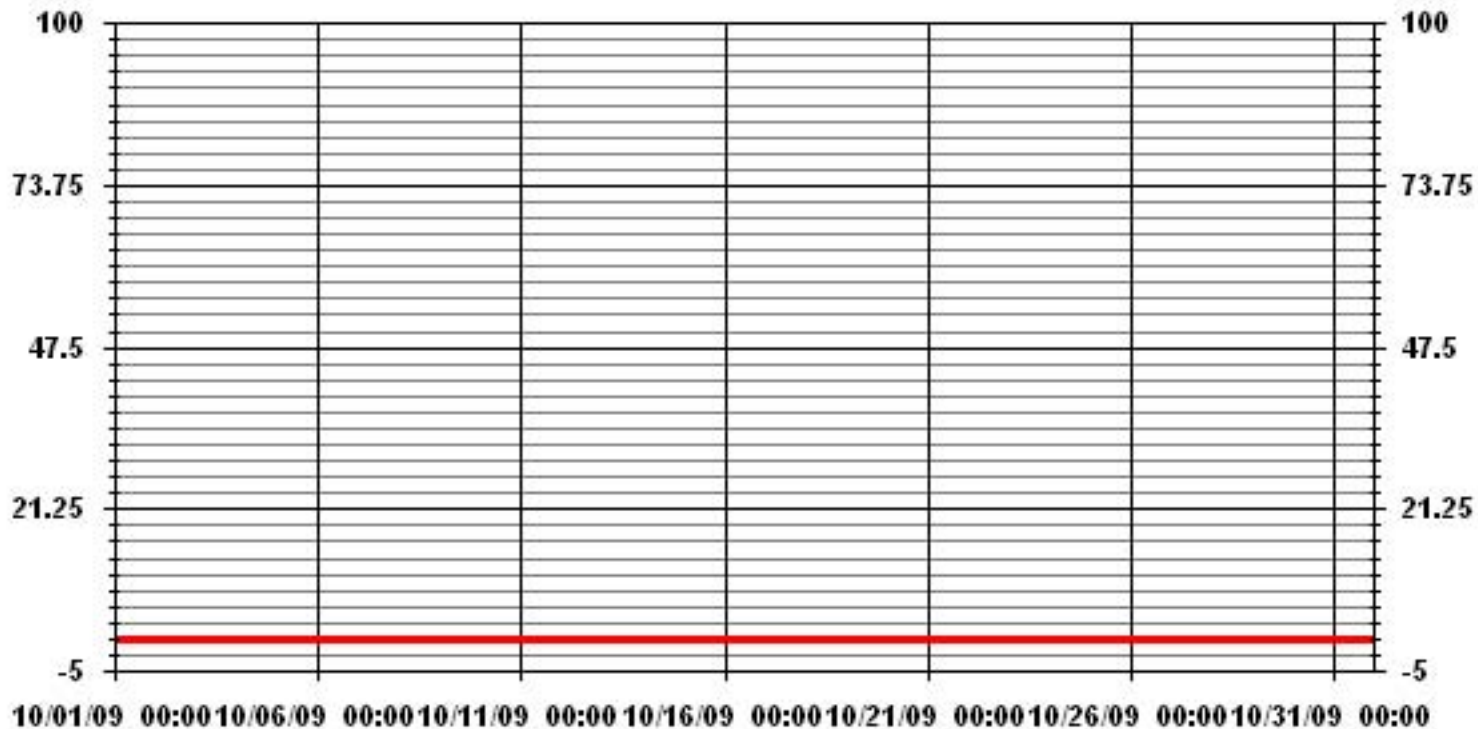
ALBERTA ENVIRONMENT:	1-HR	172	PPB	24-HR	57	PPB
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MONTHLY SUMMARY

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:	743	HRS	
MONTHLY CALIBRATION TIME:	4	HRS	AMD OPERATION UPTIME:	99.9	%	
STANDARD DEVIATION:	0.00		MONTHLY AVERAGE:	0.00	PPB	



01 Hour Averages



— LICA TRS_ PPB

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - COLD LAKE

OCTOBER 2009

TOTAL REDUCED SULPHUR MAX instantaneous maximum in ppb

MST		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 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	0:00	MAX.	AVG.	RDGS.
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		0	0	0	0	0	0	0	C	C	0	C	C	C	C	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	IZS	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	IZS	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	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
5		0	0	0	0	0	0	0	0	0	IZS	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	IZS	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	IZS	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	IZS	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	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
10		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	0.0	24
11		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	0.0	24
12		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	0.0	24
13		IZS	0	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
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	IZS	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	IZS	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	IZS	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	IZS	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	IZS	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	IZS	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	IZS	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	IZS	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	IZS	0	0	0	0	0	0	0	0	0	0	0.0	24	
23		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	
24		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	
25		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	
26		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	
27		0	0	0	0	0	N	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	23	
28		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	
29		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	
30		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	
31		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	
HOURLY MAX		0																											
HOURLY AVG		0.0																											

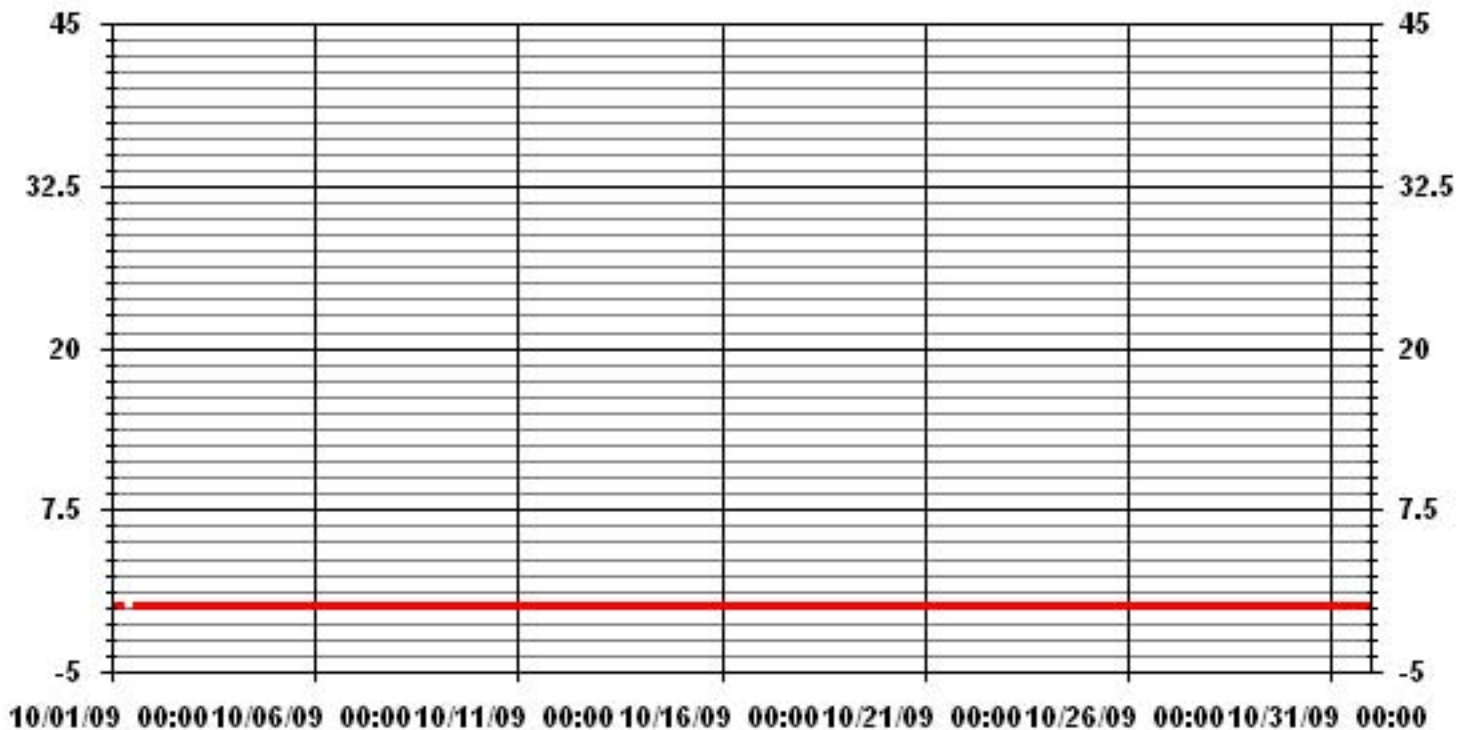
STATUS FLAG CODES

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:	743	HRS	
MONTHLY CALIBRATION TIME:	7	HRS				
STANDARD DEVIATION:	0.00					

01 Hour Averages



— LICA TRSMAX PPB

LICA
 TRS_ / WD Joint Frequency Distribution (Percent)

October 2009

Distribution By % Of Samples

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

Wind Parameter : WD
 Instrument Height : 10 Meters

	Direction																
Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 3	3.10	1.41	3.10	3.38	11.29	14.40	10.16	3.53	4.09	4.51	5.08	7.06	4.94	8.47	11.29	4.09	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	3.10	1.41	3.10	3.38	11.29	14.40	10.16	3.53	4.09	4.51	5.08	7.06	4.94	8.47	11.29	4.09	

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	22	10	22	24	80	102	72	25	29	32	36	50	35	60	80	29	708
< 10																	
< 50																	
>= 50																	
Totals	22	10	22	24	80	102	72	25	29	32	36	50	35	60	80	29	

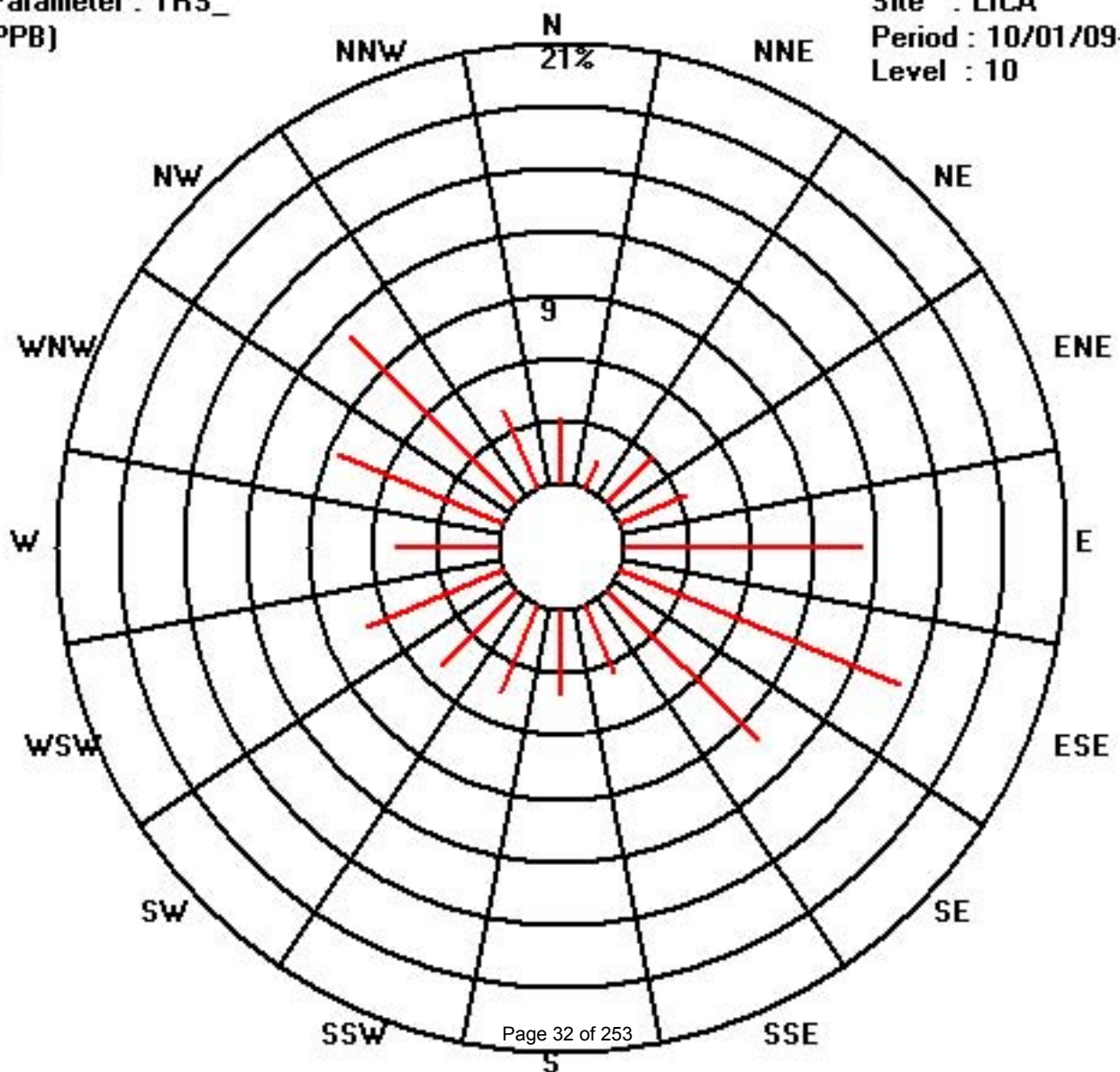
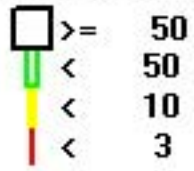
Calm : .00 %

Total # Operational Hours : 708

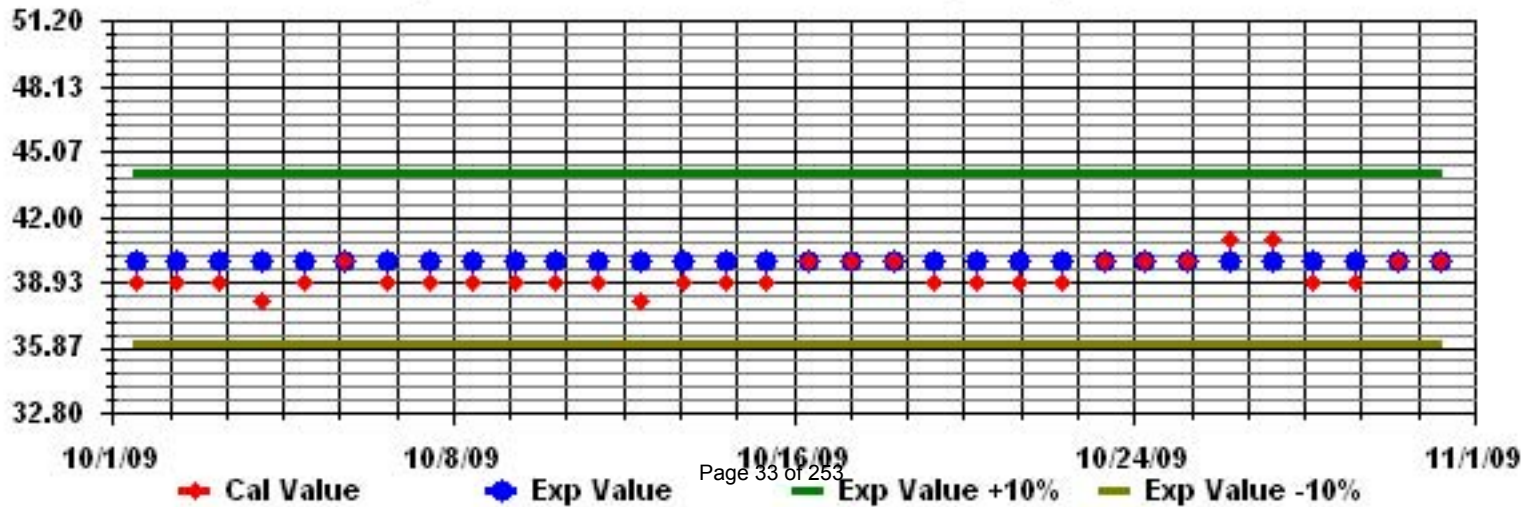
Class Limits (PPB)

Period : 10/01/09-10/31/09

Level : 10



Calibration Graph for Site: LICA Parameter: TRS_ Sequence: TRS Phase: SPAN



Total Hydrocarbons

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - COLD LAKE

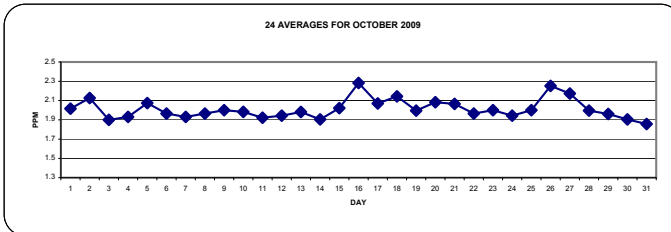
OCTOBER 2009

TOTAL HYDROCARBONS (THIC) hourly averages in ppm

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

STATUS FLAG IZSODES

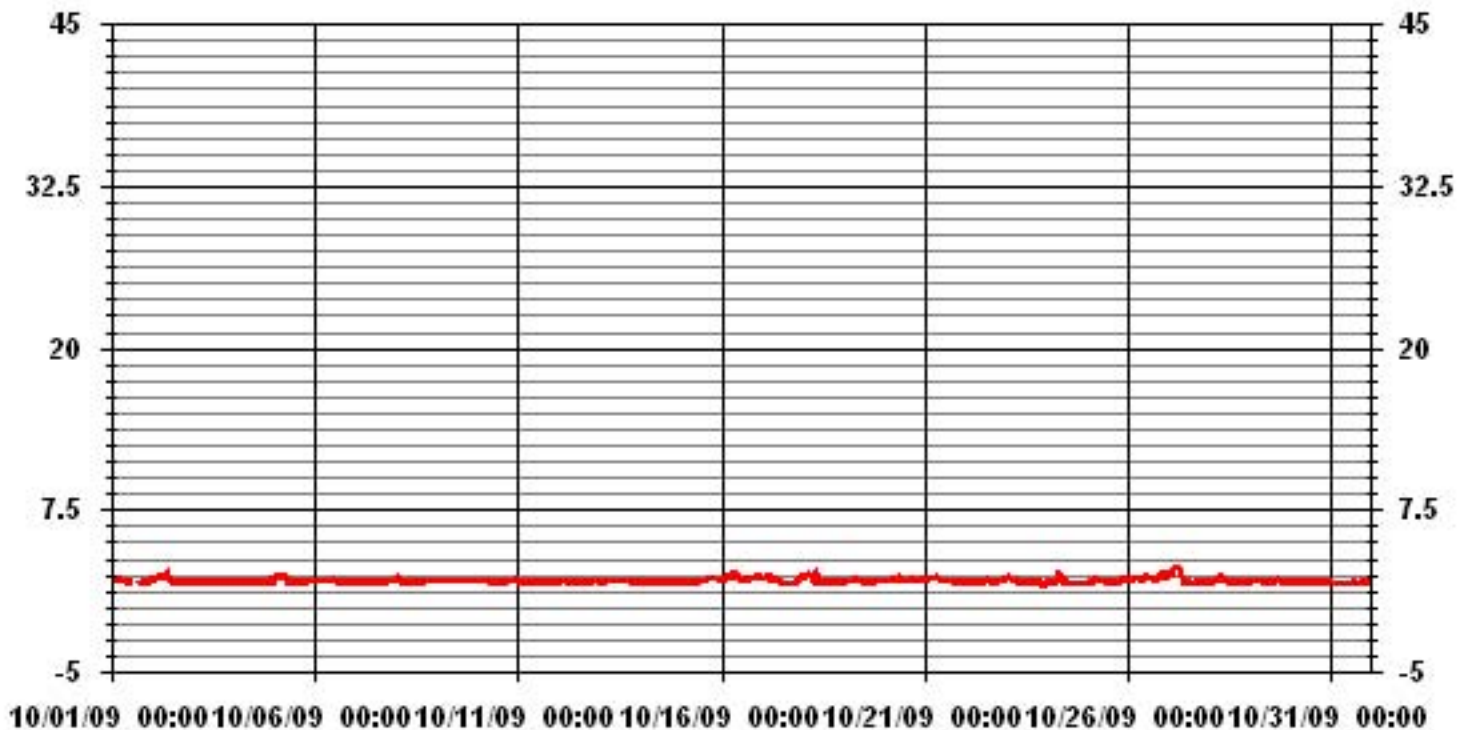
S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	- MAINTENANCE
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
IZS	- CALIBRATION	NA	- NOT APPLICABLE
BB	- BELOW BACKGROUND OF 1.5 PPM		



MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:	707					
MAXIMUM 1-HR AVERAGE:	3.1	PPM	@ HOUR(S)	4	ON DAY(S)	27
MAXIMUM 24-HR AVERAGE:	2.3	PPM			ON DAY(S)	16, 26
IZS CALIBRATION TIME:	32	HRS	OPERATIONAL TIME:	743	HRS	
MONTHLY CALIBRATION TIME:	32	HRS	AMD OPERATION UPTIME:	99.9	%	
STANDARD DEVIATION:	0.17		MONTHLY AVERAGE:	2.01	PPM	

01 Hour Averages



— LICA — THC — PPM

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - COLD LAKE

OCTOBER 2009

TOTAL HYDROCARBONS MAX instantaneous maximum in ppr

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

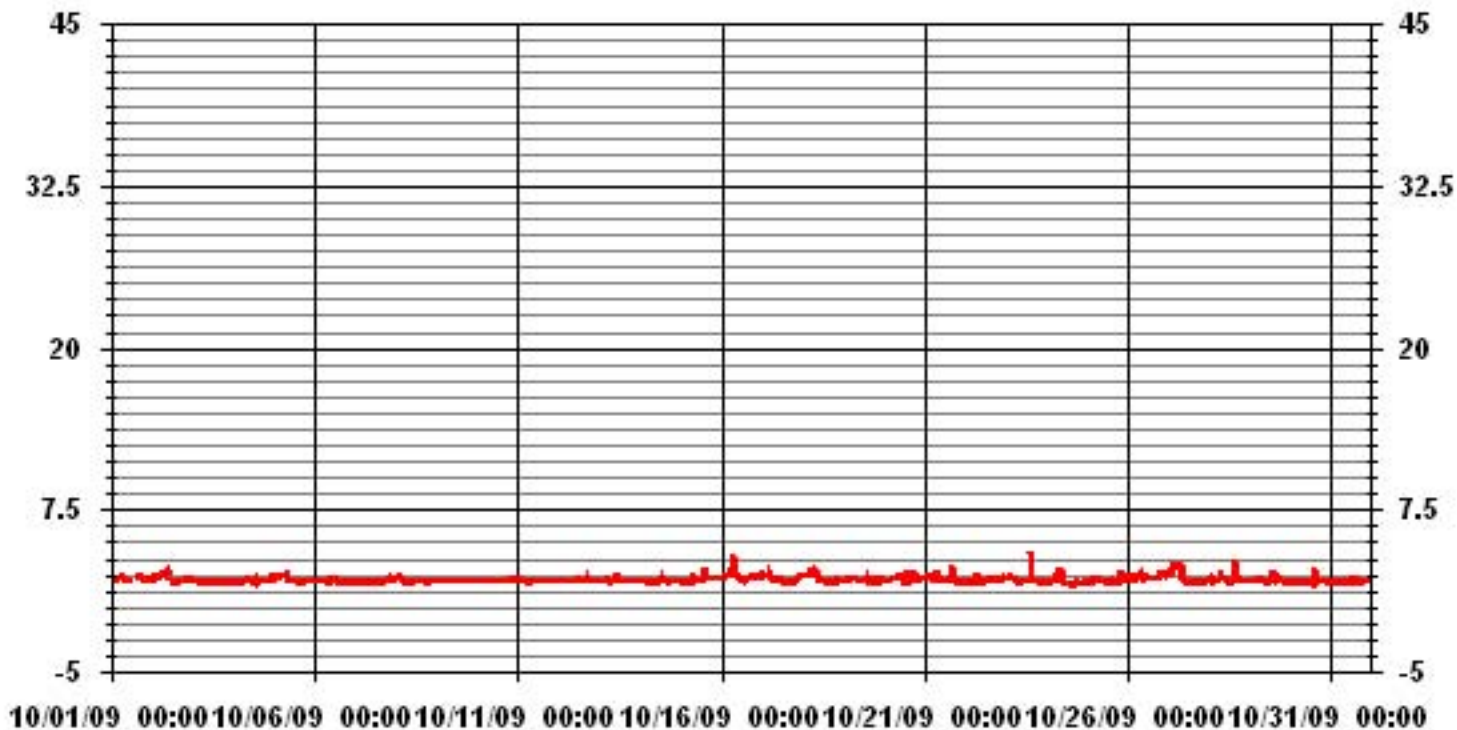
STATUS FLAG CODES

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

MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:	707					
MAXIMUM INSTANTANEOUS VALUE:	4.1	PPM	@ HOUR(S)	7	ON DAY(S)	16
IZS CALIBRATION TIME:	32	HRS	OPERATIONAL TIME:	743	HRS	
MONTHLY CALIBRATION TIME:	4	HRS				
STANDARD DEVIATION:	0.26					

01 Hour Averages



— LICA THC MAX PPM

LICA
 THC / WD Joint Frequency Distribution (Percent)

October 2009

Distribution By % Of Samples

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

Wind Parameter : WD
 Instrument Height : 10 Meters

	Direction																
Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 3.0	3.11	1.41	2.97	3.11	11.31	14.42	10.18	3.53	4.10	4.52	5.09	6.93	4.95	8.48	11.59	4.10	99.85
< 10.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.14	.00	.00	.00	.00	.14
< 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	1.41	2.97	3.11	11.31	14.42	10.18	3.53	4.10	4.52	5.09	7.07	4.95	8.48	11.59	4.10	

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	22	10	21	22	80	102	72	25	29	32	36	49	35	60	82	29	706
< 10.0												1					1
< 50.0																	
>= 50.0																	
Totals	22	10	21	22	80	102	72	25	29	32	36	50	35	60	82	29	

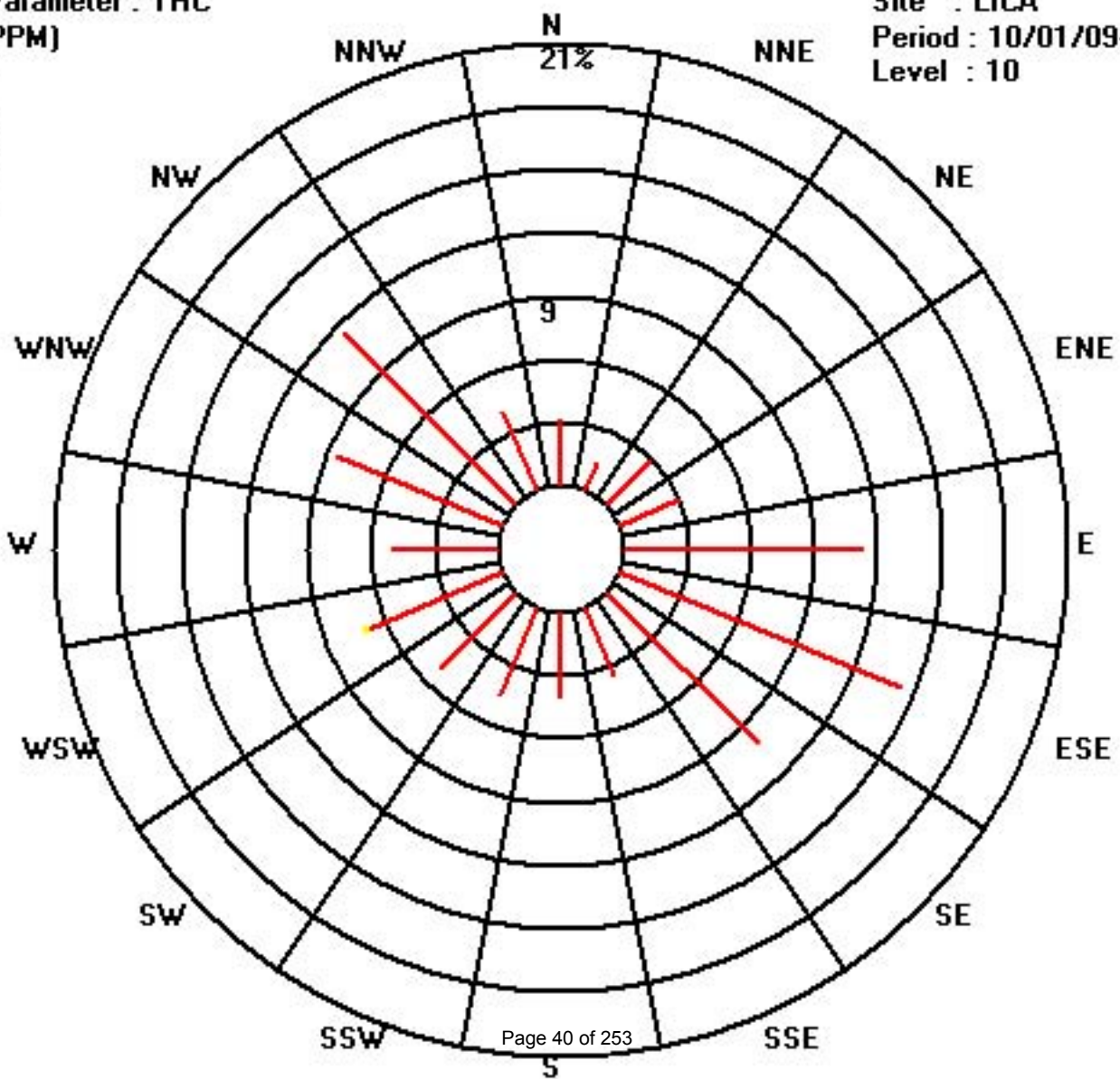
Calm : .00 %

Total # Operational Hours : 707

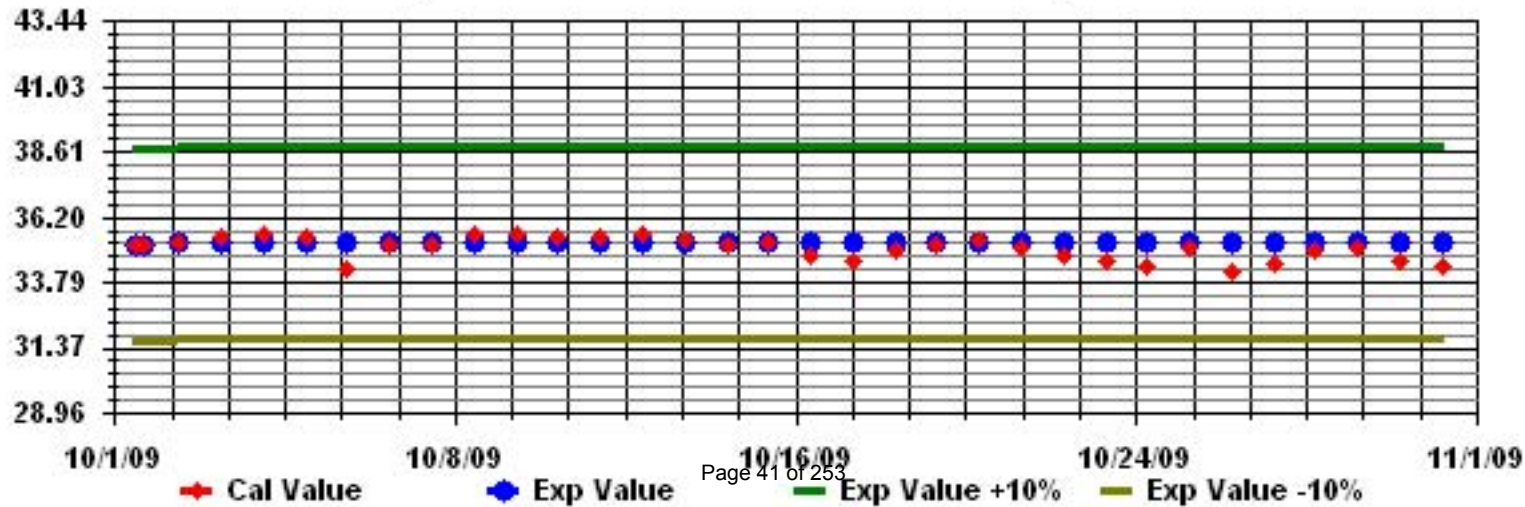
Class Limits (PPM)

Period : 10/01/09-10/31/09

Level : 10



Calibration Graph for Site: LICA Parameter: THC Sequence: THC Phase: SPAN



Particulate Matter 2.5

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - COLD LAKE

OCTOBER 2009

PARTICULATE MATTER 2.5 (PM2.5) hourly averages in ug/m³

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	0.1	1.9	2.6	3.3	2.3	5.4	2.9	C	C	C	M	M	M	M	4.8	4	3.6	5.4	6.7	3.7	0.1	5.1	2.3	4.3	6.7	3.4	21
2	3.4	1.7	2.9	2.1	8	5.6	0	1.6	8	11.1	6.7	2.1	3.4	2.9	0	0	3.1	3.1	5.1	6.3	3.3	5	3.7	5	11.1	3.9	24
3	2.7	1.8	0.2	0.2	0.1	0	1.3	0	0.1	1.5	2.2	2.9	3.2	4.1	1.6	0.8	0.4	2.1	0	1	1.1	2.5	2.7	5.9	5.9	1.6	24
4	4.6	2.6	3.3	1.3	3.2	1.5	1	0.8	0	3.4	0.7	2.9	1.9	2.6	1.9	1.2	2.6	0.8	0.9	1.6	0	3.1	1.2	1.4	4.6	1.9	24
5	0.8	2.6	2.4	2.6	0.3	0	1.9	1.2	3.5	6.7	2.8	2.7	0	1.8	3.5	3.5	3.7	5.2	1.7	1.3	3.4	3.1	3.5	2.7	6.7	2.5	24
6	7.4	5.2	3.5	5.7	3.4	2	2.7	1.8	3.8	6	5.4	6.2	6.8	8.4	4.9	2.5	3.8	4.3	3.8	1.9	0	N	0	0.2	8.4	3.9	23
7	2.1	0	3.1	3.7	4.1	1	3.9	4.3	1.6	1.6	3.6	0.9	0	0.8	0.9	0	1.7	0	0.4	0	0	1.3	0	N	4.3	1.5	23
8	0.7	0	0	0.4	0	0.4	2.8	1.9	0	0	M	M	M	M	M	3.4	2.4	1.2	0	0	0	1.7	1.6	0.4	3.4	0.9	19
9	0	2	0.9	0.9	2.2	0.9	0	1.6	1.7	1.1	0.1	0	1.2	5.4	1.9	0	0.8	0	0	0.7	1.2	3.1	0	1.2	5.4	1.1	24
10	0.6	0	3.8	0	1.1	0.4	0.7	1.4	0	0	2.4	0	0	0.6	1	3.1	0.9	5.4	2.1	2.6	0	0.3	3	0.6	5.4	1.3	24
11	2.9	2.8	0	0	3	0.9	0.9	0	0	0	0	2.4	3.1	3.7	3.4	3.5	3.1	0.1	3	2.5	2	1.8	0.3	0.7	3.7	1.7	24
12	2.8	3.6	2.1	1.4	4.1	2.7	0.6	0	0	0.6	1.7	0	N	0.8	1.2	2.5	2	1.4	3.2	0	1.7	0	2	1.1	4.1	1.5	23
13	1.5	0.1	0	0.4	3.4	2.1	2.1	3.9	3.8	1.2	2.2	0.1	0	2.3	2.2	0.2	0	2.3	0.4	2.1	3.2	5	3.7	0	5.0	1.8	24
14	0	3.3	5.1	2.8	4.6	2.2	0	5.9	3.3	1.3	2	4	4	5	3	3.6	5.1	3.6	5	7.1	6.8	5.3	2.5	1.7	7.1	3.6	24
15	2.6	5.2	4.4	4.9	5.5	3.1	6.3	7.9	7.7	7	7.2	6.6	5.4	8.2	7.3	4.4	7.2	7.8	7.3	4.9	6.7	7.8	3.1	3.7	8.2	5.9	24
16	2.1	4.3	8.4	5.3	6.9	5.8	9.7	8.5	5.9	7.6	12.1	11.3	14.3	11.4	12.1	11.2	7	9.9	10.2	12.2	13.6	9	12.8	6.1	14.3	9.1	24
17	11.4	7	5.8	1.3	2.5	0.9	1.4	6.9	0.5	2.1	0	2.4	3.3	3.1	6.1	0.6	3.6	2.7	2.1	3.1	1.4	2.1	6.3	7.7	11.4	3.5	24
18	6.2	3.7	5.6	0	1.4	1.7	2.7	4.2	2.5	5.1	2.2	2.2	3.9	2.1	4.9	2.5	5.6	4.2	2.2	4.6	3.7	3.1	3.6	0.1	6.2	3.3	24
19	1.6	8	9.1	11.5	9.7	N	3.4	9.3	7.6	8.3	8.5	3.9	2.7	0	2	0	0.2	1.2	3.5	2.5	1.3	3.9	4.1	7.1	11.5	4.8	23
20	3.9	1.7	3.9	2.4	6.3	5.7	3.4	5.9	4.8	6.4	13	11.2	7	8.3	4.4	4.4	6.2	8.5	4.2	6.7	8.5	4.4	4.1	2.3	13.0	5.7	24
21	3.8	3.5	4.4	5.6	8.2	4.8	4.7	2	4.7	8.5	6.1	7.1	4.1	4	2	0.3	3.7	4.7	9.7	5	3.6	5.8	3.6	2.6	9.7	4.7	24
22	1.8	2.2	3.6	4.4	4.9	1.6	2.8	3.8	2.3	1.9	2.7	0	0	0	0	0.2	1.2	5.5	4.6	4.4	2.9	4.2	6	5.2	6.0	2.8	24
23	5.1	4.6	3.7	4.4	3.9	2.7	8.1	7.4	6.3	7	8.1	9.4	7.7	7.2	4.9	9.8	9.3	8	12.3	9	9	7.2	5.7	8.1	12.3	7.0	24
24	5.3	5.4	6.4	8.1	7.9	7.6	6.9	7	10.1	7.4	7.4	2.5	2	0.4	1.9	0.5	0	0.2	1	1.1	1.4	1.3	2.9	1.6	10.1	4.0	24
25	0.3	2.1	0.9	0.3	3.1	2	0	2.1	1.6	1.8	3.2	1.5	2.1	2.8	1.1	1.7	0	1.5	2.9	7.8	8.5	3	3.8	3.2	8.5	2.4	24
26	7.6	4.4	3.4	4.9	1.2	4.1	4.3	3.6	0	0	1.4	1.8	2.6	3.1	4.5	2.4	2.8	5.4	7.2	9.5	6.7	8	8.3	7.5	9.5	4.4	24
27	10.6	5.7	3.3	3.8	4.1	N	4.6	5.3	4.3	0.6	3.2	3.5	3.3	3.5	1.6	1.7	4	3.5	4.8	2.3	2.8	3	5.2	3.9	10.6	3.9	23
28	3.5	4.4	1.4	2.3	3.3	2.6	2.3	0.9	1.8	4.3	1.8	1.2	0.9	3.3	1	2.7	4.1	2.5	3.2	2.9	2.2	2.7	5	2.6	5.0	2.6	24
29	0	0	0.3	1.5	1.8	0.4	0.5	1.2	2.5	2.6	0.5	0	4	3.3	0	3.3	2.2	3.9	2.4	0.9	2.8	4	3.5	4.9	4.9	1.9	24
30	0	3.4	3.4	2.8	4.4	5.9	4	2.5	1.7	1.1	0.4	1.5	2.8	5.9	6.8	4.1	4.4	4	3.9	3.1	3.8	5.1	9.4	1.1	9.4	3.6	24
31	2.1	4.1	0.5	2.6	5.5	1.6	0.5	0.9	0	0	2.2	3.1	2.8	4.1	9.6	7.1	1.3	3.1	0	2.1	0	0	3.7	7.1	9.6	2.7	24
HOURLY MAX	11	8	9	12	10	8	10	9	10	11	13	11	14	11	12	11	9	10	12	12	14	9	13	8			
HOURLY AVG	3.1	3.1	3.2	2.9	3.9	2.6	2.8	3.5	3.0	3.5	3.8	3.2	3.3	3.8	3.4	2.7	3.1	3.6	3.7	3.6	3.3	3.7	3.8	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

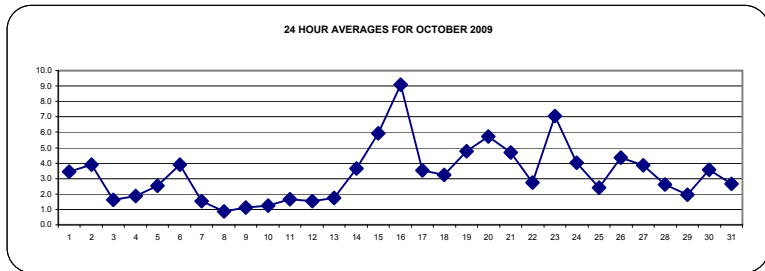
OBJECTIVE LIMIT:

ALBERTA ENVIRONMENT:

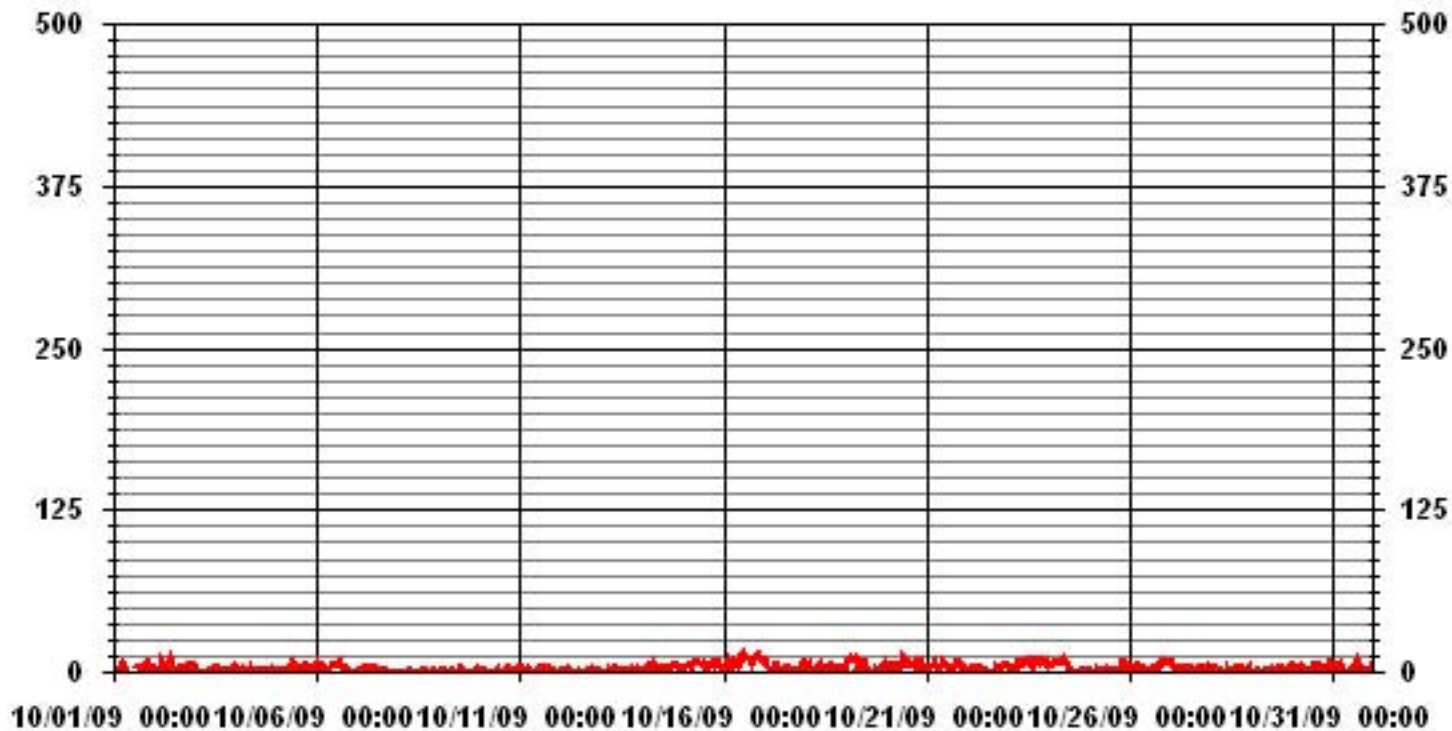
1-HR	-	PPB	24-HR	30	PPB
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MONTHLY SUMMARY

NUMBER OF 1-HR EXCEEDENCES:	-					
NUMBER OF 24-HR EXCEEDENCES:	0	PROPOSED CANADA WIDE GUIDELINE				
NUMBER OF NON-ZERO READINGS:	646					
MAXIMUM 1-HR AVERAGE:	14.3	UG/M ³	@ HOUR(S)	12	ON DAY(S)	16
MAXIMUM 24-HR AVERAGE:	9.1	UG/M ³			ON DAY(S)	16
IZS CALIBRATION TIME:	0	HRS	OPERATIONAL TIME:	731	HRS	
MONTHLY CALIBRATION TIME:	3	HRS	AMD OPERATION UPTIME:	98.3	%	
STANDARD DEVIATION:	2.75		MONTHLY AVERAGE:	3.33	UG/M ³	



01 Hour Averages



— LICA PM2 UG/M3

LICA
PM2 / WD Joint Frequency Distribution (Percent)

October 2009

Distribution By % Of Samples

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

Wind Parameter : WD
Instrument Height : 10 Meters

	Direction																
Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 30.0	3.02	1.65	3.30	3.30	10.86	14.85	10.31	3.43	4.26	4.67	5.08	7.01	5.08	8.52	11.00	3.57	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	3.02	1.65	3.30	3.30	10.86	14.85	10.31	3.43	4.26	4.67	5.08	7.01	5.08	8.52	11.00	3.57	

Calm : .00 %

Total # Operational Hours : 727

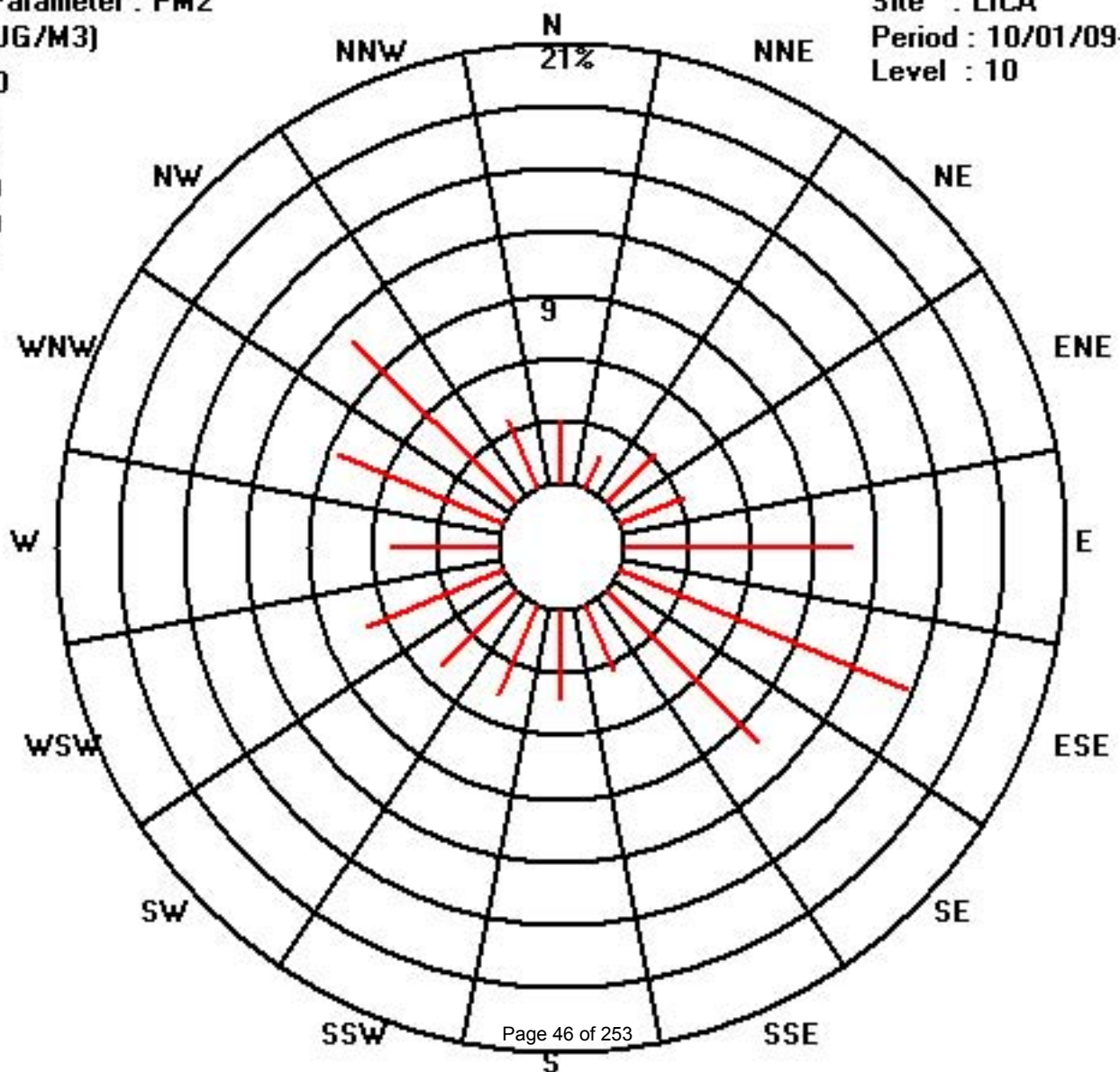
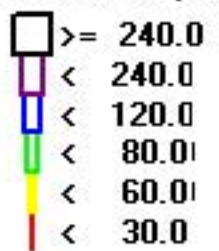
Distribution By Samples

	Direction																
Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 30.0	22	12	24	24	79	108	75	25	31	34	37	51	37	62	80	26	727
< 60.0																	
< 80.0																	
< 120.0																	
< 240.0																	
>= 240.0																	
Totals	22	12	24	24	79	108	75	25	31	34	37	51	37	62	80	26	

Calm : .00 %

Total # Operational Hours : 727

Class Limits (UG/M3)



Nitrogen Dioxide

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - COLD LAKE

OCTOBER 2009

NITROGEN DIOXIDE hourly averages in ppb

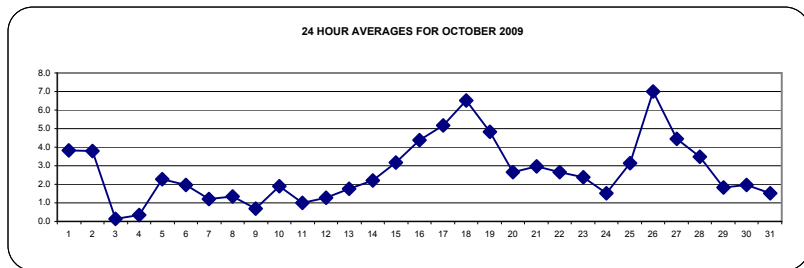
MST	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
DAY	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
1	4	3	2	3	4	5	4	2	C	C	C	C	C	C	2	1	3	3	8	8	5	4	4	8	3.8	24	
2	3	3	4	3	4	4	4	4	5	5	1	IZS	0	0	0	1	6	8	7	9	6	6	4	9	3.8	24	
3	2	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	1	0	0	0	0	0	0	2	0.1	24	
4	0	0	0	0	0	1	0	1	IZS	0	0	0	0	0	0	0	1	1	1	1	0	0	2	2	0.3	24	
5	2	2	1	5	4	5	7	5	IZS	1	1	1	1	1	1	1	2	2	2	2	1	2	3	7	2.3	24	
6	3	2	2	2	2	2	3	IZS	2	2	3	4	4	4	2	1	2	2	1	0	0	1	0	1	4	2.0	24
7	1	0	1	0	1	0	IZS	2	1	0	0	0	0	1	0	0	1	1	2	2	4	3	3	5	5	1.2	24
8	5	6	2	1	1	IZS	1	1	0	0	0	1	1	1	1	0	0	2	1	1	3	2	1	0	6	1.3	24
9	1	1	1	2	IZS	0	0	0	0	0	1	0	1	0	0	0	1	2	1	1	1	1	1	2	0.7	24	
10	1	2	0	IZS	2	1	2	2	2	1	0	1	0	1	2	1	1	1	2	4	4	5	4	5	5	1.9	24
11	4	1	IZS	0	0	0	0	0	0	0	0	1	1	1	0	1	1	2	3	2	2	2	1	1	4	1.0	24
12	4	IZS	3	2	2	1	1	1	0	0	0	1	0	0	1	1	1	2	2	1	1	2	1	4	1.3	24	
13	IZS	1	1	1	1	2	2	4	4	2	1	0	1	1	1	1	3	3	3	2	1	1	IZS	4	1.8	24	
14	1	1	1	1	1	2	2	4	4	3	2	3	2	3	3	2	2	2	2	2	3	2	IZS	3	4	2.2	24
15	3	2	2	2	3	3	4	4	11	1	1	1	2	1	2	3	4	5	5	4	4	IZS	3	3	11	3.2	24
16	3	2	2	3	3	4	6	5	3	3	3	4	5	6	6	5	6	6	6	6	IZS	5	5	4	6	4.4	24
17	4	3	4	4	6	4	3	5	5	4	3	2	1	1	1	1	6	11	9	IZS	5	13	12	12	13	5.2	24
18	11	7	9	8	10	10	6	9	10	7	6	2	3	4	2	1	1	6	IZS	11	12	8	5	2	12	6.5	24
19	3	5	6	6	6	7	10	14	15	5	2	1	1	1	1	3	6	IZS	3	2	3	3	4	4	15	4.8	24
20	2	2	1	1	2	5	5	4	3	4	6	2	1	2	2	2	IZS	3	3	3	2	2	2	2	6	2.7	24
21	1	1	2	1	5	5	5	4	3	2	2	1	1	1	2	IZS	9	12	4	2	2	1	1	1	12	3.0	24
22	1	1	2	2	1	4	5	5	2	2	1	2	2	3	IZS	2	2	2	2	3	4	4	5	4	5	2.7	24
23	4	4	4	2	2	2	2	3	1	1	1	2	2	IZS	3	3	3	6	4	2	1	1	1	1	6	2.4	24
24	1	1	1	1	1	1	3	7	7	3	2	2	IZS	1	1	0	0	1	1	0	1	0	0	0	7	1.5	24
25	0	0	1	3	3	3	3	7	5	1	1	IZS	1	1	1	2	2	4	5	3	9	7	5	5	9	3.1	24
26	4	4	3	4	4	3	9	12	7	2	IZS	4	3	3	4	5	7	14	16	13	10	10	10	16	7.0	24	
27	8	7	6	7	9	N	8	9	3	IZS	3	2	2	2	2	5	6	4	2	2	2	3	4	9	4.5	23	
28	6	3	5	6	4	5	6	5	IZS	4	2	1	1	1	1	2	3	4	5	3	4	4	3	2	6	3.5	24
29	1	2	2	1	1	3	5	IZS	4	1	1	1	1	1	1	2	3	2	3	2	2	1	1	1	5	1.8	24
30	1	1	1	1	3	3	IZS	5	3	3	2	1	1	1	2	1	2	2	2	3	2	4	1	0	5	2.0	24
31	1	1	1	1	2	IZS	1	1	1	1	1	2	1	3	3	3	2	1	1	1	1	2	3	3	1.5	24	
HOURLY MAX	11	7	9	8	10	10	10	14	15	7	6	4	5	6	6	5	9	14	16	13	12	13	12	12			
HOURLY AVG	2.8	2.3	2.3	2.4	2.9	3.0	3.7	4.3	3.7	2.1	1.6	1.5	1.4	1.6	1.5	1.6	2.5	3.8	3.5	3.2	3.5	3.2	2.9	2.9			

STATUS FLAG CODES

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

OBJECTIVE LIMIT:

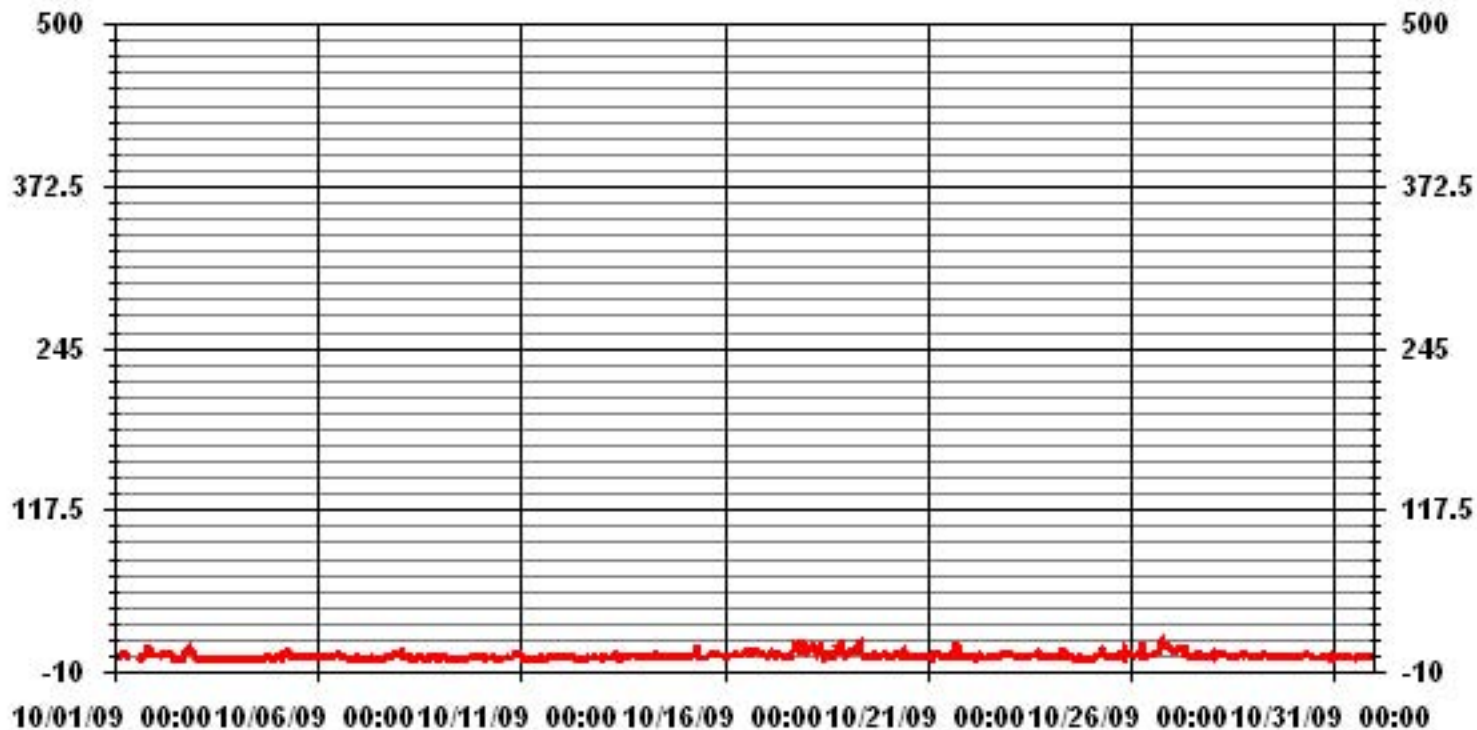
ALBERTA ENVIRONMENT:	1-HR	212	PPB	24-HR	106	PPB
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MONTHLY SUMMARY

NUMBER OF 1-HR EXCEEDENCES:	0
NUMBER OF 24-HR EXCEEDENCES:	0
NUMBER OF NON-ZERO READINGS:	610
MAXIMUM 1-HR AVERAGE:	16 PPB @ HOUR(S) 18 ON DAY(S) 26
MAXIMUM 24-HR AVERAGE:	7.0 PPB ON DAY(S) 26
IZS CALIBRATION TIME:	31 HRS
MONTHLY CALIBRATION TIME:	7 HRS
STANDARD DEVIATION:	2.58
OPERATIONAL TIME:	743 HRS
AMD OPERATION UPTIME:	99.9 %
MONTHLY AVERAGE:	2.68 PPB

01 Hour Averages



— LICA H02_ PPB

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - COLD LAKE

OCTOBER 2009

NITROGEN DIOXIDE MAX instantaneous maximum in ppb

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR		
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.	
DAY																												
1	5	4	3	3	5	6	4	4	C	C	C	C	C	C	C	11	13	13	10	11	10	7	6	5	13	7.1	24	
2	4	6	5	4	5	7	8	7	7	27	3	IZS	3	1	2	2	12	19	18	11	11	8	8	7	27	8.0	24	
3	5	1	1	0	0	3	0	0	0	1	IZS	1	1	0	1	3	3	1	1	0	0	1	0	1	5	1.0	24	
4	0	1	0	0	1	1	2	1	1	IZS	2	2	1	2	1	1	2	2	4	5	2	1	1	4	5	1.6	24	
5	3	3	2	8	7	7	8	8	IZS	2	1	3	7	2	2	3	4	3	10	2	3	2	3	3	10	4.2	24	
6	3	3	2	2	3	3	4	IZS	4	3	4	6	4	4	3	2	2	3	1	1	1	2	1	1	6	2.7	24	
7	1	1	1	1	1	1	1	IZS	2	2	1	1	1	1	1	1	1	2	4	8	8	4	4	10	10	2.5	24	
8	9	8	5	2	1	IZS	2	1	1	0	1	2	1	2	6	1	1	3	4	3	4	3	2	1	9	2.7	24	
9	2	2	2	2	IZS	1	1	1	1	1	1	1	1	2	0	1	1	1	2	2	2	2	1	2	2	2	1.4	24
10	2	3	1	IZS	3	1	3	2	2	1	1	1	1	2	2	1	1	3	3	7	5	5	5	5	7	2.6	24	
11	5	4	IZS	1	0	1	1	0	0	1	8	10	2	2	8	3	3	6	6	6	5	3	4	4	10	3.6	24	
12	6	IZS	5	3	6	4	5	2	2	2	2	1	2	1	1	4	6	6	7	5	3	3	3	2	7	3.5	24	
13	IZS	2	2	2	2	3	5	6	8	4	3	2	3	11	3	8	5	5	7	5	3	2	1	IZS	11	4.2	24	
14	3	2	2	2	2	3	3	5	6	5	6	5	8	12	5	3	3	4	4	5	7	3	IZS	6	12	4.5	24	
15	4	3	5	4	4	7	6	8	110	7	13	2	7	2	4	4	5	13	9	7	6	IZS	4	5	110	10.4	24	
16	5	3	3	4	4	8	10	13	26	27	6	5	7	7	6	9	10	7	7	7	IZS	6	9	6	27	8.5	24	
17	7	7	8	8	13	6	5	9	10	6	5	3	2	2	4	4	11	22	15	IZS	8	18	17	15	22	8.9	24	
18	14	9	12	10	13	17	8	12	12	8	7	4	4	5	2	2	3	16	IZS	14	18	14	10	4	18	9.5	24	
19	7	7	13	9	8	9	13	28	18	11	4	4	5	8	9	5	8	IZS	5	5	11	6	6	8	28	9.0	24	
20	5	3	2	2	4	6	8	7	4	6	10	4	8	6	12	4	IZS	5	5	6	3	2	4	12	5.2	24		
21	4	2	3	2	12	8	8	6	3	6	22	10	2	5	4	IZS	15	17	8	7	3	3	2	1	22	6.7	24	
22	2	3	3	3	2	6	6	7	8	3	2	3	2	5	IZS	3	4	2	2	6	8	6	8	5	8	4.3	24	
23	5	8	7	3	3	3	4	5	6	4	2	6	12	IZS	6	6	5	8	6	5	5	3	2	3	12	5.1	24	
24	8	1	1	1	1	1	7	8	8	4	3	3	IZS	2	1	1	1	1	1	1	1	1	1	1	8	2.5	24	
25	1	1	2	5	5	4	4	10	9	3	2	IZS	3	2	3	10	6	8	15	5	24	12	14	7	24	6.7	24	
26	7	7	5	6	7	5	15	18	18	6	IZS	5	4	5	5	5	18	18	24	18	15	17	13	12	24	11.0	24	
27	11	9	9	11	11	N	11	14	4	IZS	5	3	3	2	4	4	14	15	23	5	2	3	4	6	23	7.9	23	
28	8	4	7	7	5	6	7	7	IZS	5	3	2	5	4	6	7	7	7	9	5	5	9	5	3	9	5.8	24	
29	2	4	3	3	6	11	12	IZS	8	4	5	7	2	13	4	2	24	7	7	4	9	2	2	2	24	6.2	24	
30	2	2	2	3	9	7	IZS	7	4	7	5	8	7	5	14	2	12	2	5	5	5	6	3	1	14	5.3	24	
31	1	2	1	1	6	IZS	2	1	2	2	2	3	4	6	4	5	4	7	3	4	2	2	3	4	7	3.1	24	
HOURLY MAX	14	9	13	11	13	17	15	28	110	27	22	10	12	13	14	11	24	22	24	18	24	18	17	15				
HOURLY AVG	4.7	3.8	3.9	3.7	5.0	5.2	5.9	6.9	10.1	5.6	4.6	3.8	3.9	4.1	4.3	3.9	6.8	7.6	7.5	5.8	6.3	5.2	4.8	4.6				

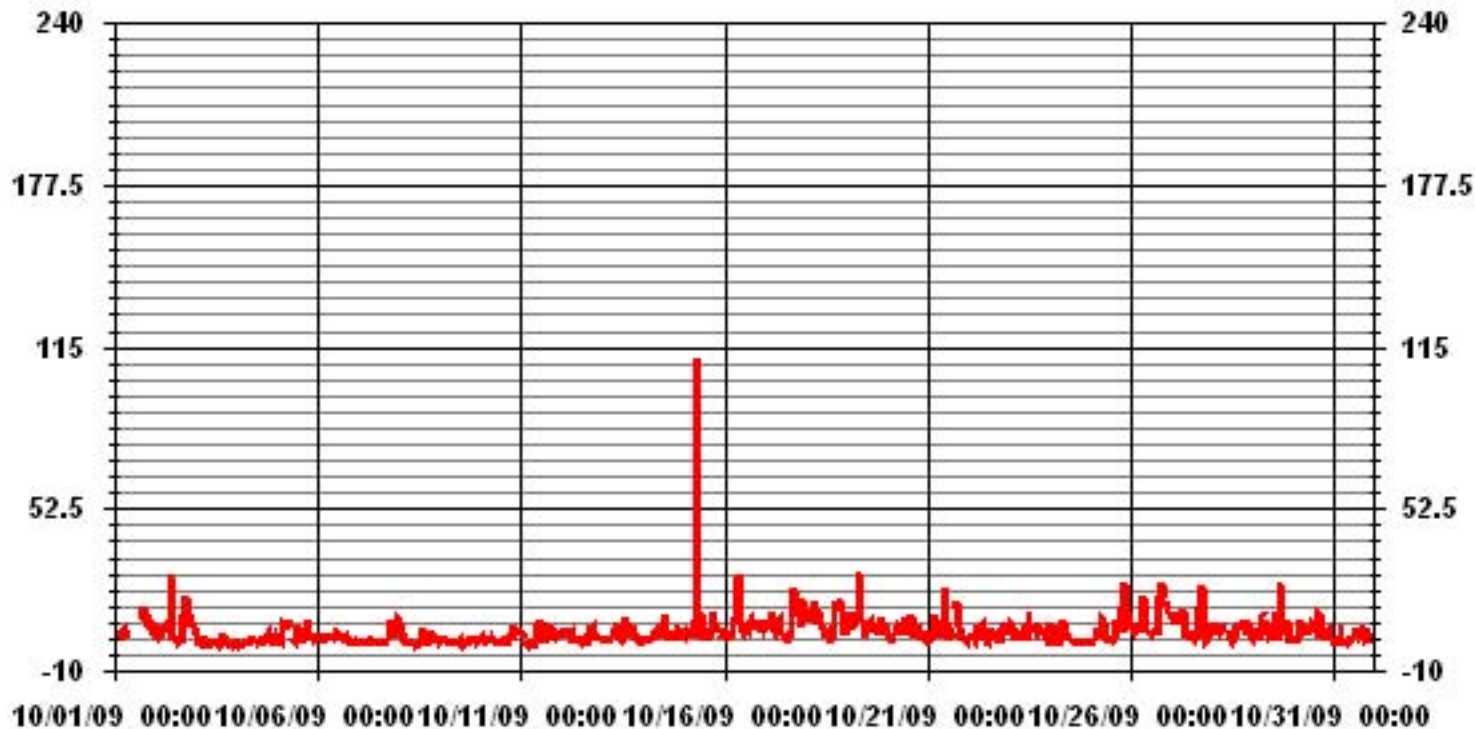
STATUS FLAG CODES

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:	688					
MAXIMUM INSTANTANEOUS VALUE:	110	PPB	@ HOUR(S)	8	ON DAY(S)	15
IZS CALIBRATION TIME:	31	HRS	OPERATIONAL TIME:	743	HRS	
MONTHLY CALIBRATION TIME:	7	HRS				
STANDARD DEVIATION	5.95					

01 Hour Averages



— LICA NO2MAX PPB

LICA
 NO2_ / WD Joint Frequency Distribution (Percent)

October 2009

Distribution By % Of Samples

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

Wind Parameter : WD
 Instrument Height : 10 Meters

	Direction																
Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 50	3.12	1.41	2.97	3.40	11.34	14.46	10.21	3.54	4.11	4.53	5.10	7.09	4.96	8.51	11.20	3.97	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	3.12	1.41	2.97	3.40	11.34	14.46	10.21	3.54	4.11	4.53	5.10	7.09	4.96	8.51	11.20	3.97	

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	22	10	21	24	80	102	72	25	29	32	36	50	35	60	79	28	705
< 110																	
< 210																	
>= 210																	
Totals	22	10	21	24	80	102	72	25	29	32	36	50	35	60	79	28	

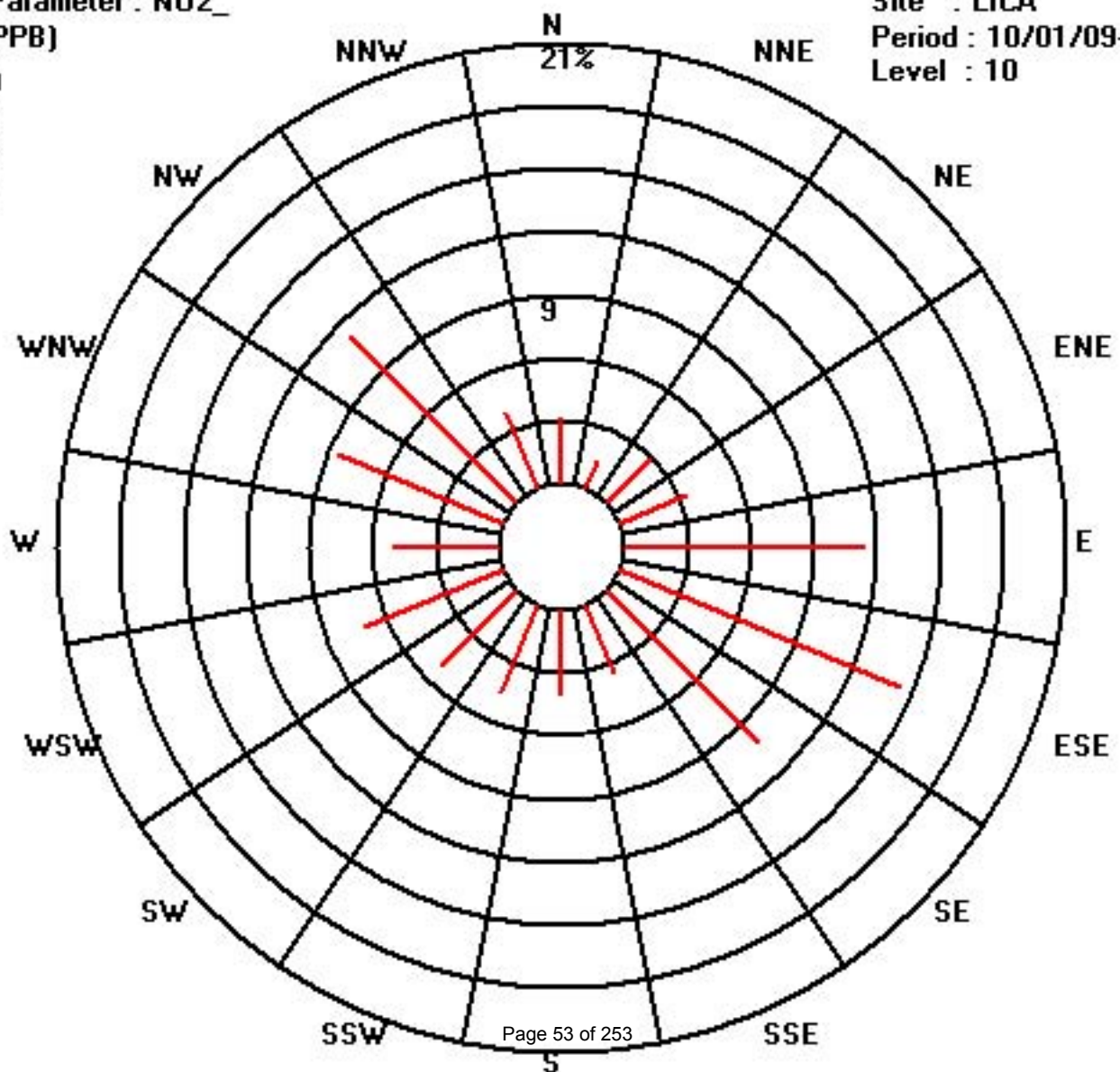
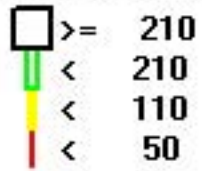
Calm : .00 %

Total # Operational Hours : 705

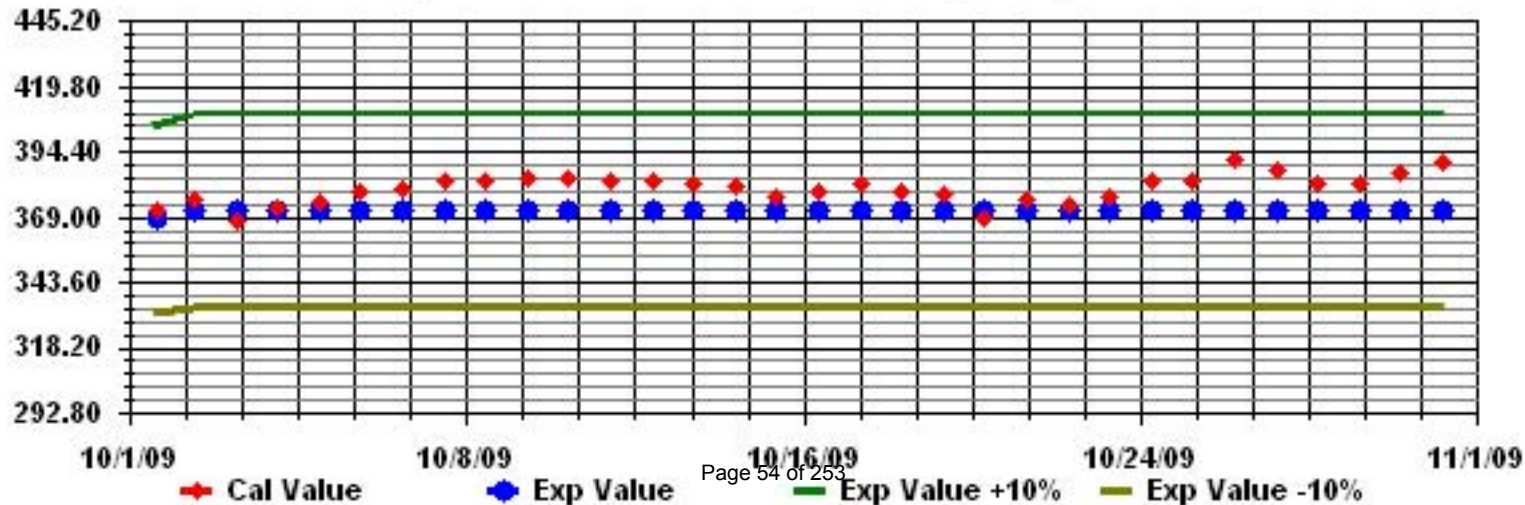
Class Limits (PPB)

Period : 10/01/09-10/31/09

Level : 10



Calibration Graph for Site: LICA Parameter: H02_ Sequence: H02 Phase: SPAN



Nitric Oxide

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - COLD LAKE

OCTOBER 2009

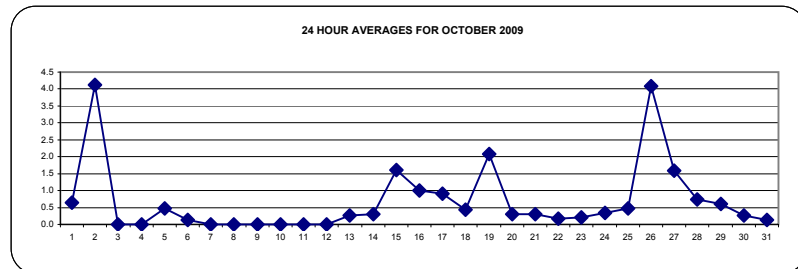
NITRIC OXIDE hourly averages in ppb

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY MAX.	24-HOUR AVG.	RDGS.	
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	0	0	0	0	0	3	0	1	C	C	C	C	C	C	1	1	1	0	2	1	0	0	1	3	0.6	24		
2	0	1	1	1	2	5	12	22	21	10	1	IZS	0	0	0	0	0	2	2	0	4	3	6	2	22	4.1	24	
3	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	
4	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	
5	0	0	0	0	0	0	3	7	IZS	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	7	0.5	24	
6	0	0	0	0	0	0	0	IZS	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	1	0.1	24	
7	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	
8	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	
9	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	
10	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	
11	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	
12	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	
13	IZS	0	0	0	0	0	0	1	2	1	1	0	1	0	0	0	0	0	0	0	0	0	0	IZS	2	0.3	24	
14	0	0	0	0	0	0	0	1	1	1	0	1	1	1	1	0	0	0	0	0	0	0	0	IZS	0	1	0.3	24
15	0	0	0	0	0	0	0	0	36	0	0	0	0	0	0	0	0	1	0	0	0	0	0	36	1.6	24		
16	0	0	0	0	0	0	1	1	2	3	3	3	4	3	2	1	0	0	0	0	IZS	0	0	4	1.0	24		
17	0	1	1	1	5	0	0	0	1	1	1	0	0	0	0	0	0	0	0	IZS	0	4	3	3	5	0.9	24	
18	0	0	0	0	0	0	0	0	1	2	2	1	1	2	0	0	0	0	0	IZS	0	1	0	0	2	0.4	24	
19	0	0	0	0	0	1	9	15	19	2	1	0	1	0	0	0	0	0	IZS	0	0	0	0	0	19	2.1	24	
20	0	0	0	0	0	0	0	0	0	2	2	1	1	1	0	0	IZS	0	0	0	0	0	0	0	2	0.3	24	
21	0	0	0	0	1	1	0	1	1	0	0	0	0	0	0	IZS	2	1	0	0	0	0	0	0	2	0.3	24	
22	0	0	0	0	0	0	1	1	1	0	0	0	0	1	IZS	0	0	0	0	0	0	0	0	0	1	0.2	24	
23	0	0	0	0	0	0	0	0	0	0	0	1	1	IZS	0	1	0	1	1	0	0	0	0	0	1	0.2	24	
24	0	0	0	0	0	0	1	3	3	1	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	3	0.3	24	
25	0	0	0	0	0	0	0	2	3	0	0	IZS	0	0	0	0	0	0	0	0	0	4	1	1	0	4	0.5	24
26	0	0	0	0	0	0	1	3	3	0	IZS	1	2	2	1	1	1	2	11	16	11	16	12	11	16	4.1	24	
27	8	5	4	4	5	N	3	6	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	1.6	23	
28	0	0	0	0	0	0	1	1	IZS	4	3	2	1	0	0	1	1	0	1	1	0	1	0	0	4	0.7	24	
29	0	0	0	0	0	3	3	IZS	2	2	2	0	1	1	0	0	0	0	0	0	0	0	0	0	3	0.6	24	
30	0	0	0	0	1	0	IZS	1	0	1	1	0	0	1	1	0	0	0	0	0	0	0	0	0	1	0.3	24	
31	0	0	0	0	0	IZS	0	0	0	0	0	0	0	1	0	2	0	0	0	0	0	0	0	0	2	0.1	24	
HOURLY MAX	8	5	4	4	5	5	12	22	36	10	3	3	4	3	2	2	2	2	11	16	11	16	12	11				
HOURLY AVG	0.3	0.2	0.2	0.2	0.5	0.5	1.2	2.3	3.4	1.1	0.6	0.4	0.6	0.4	0.2	0.2	0.2	0.3	0.5	0.6	0.7	0.8	0.7	0.6				

STATUS FLAG CODES

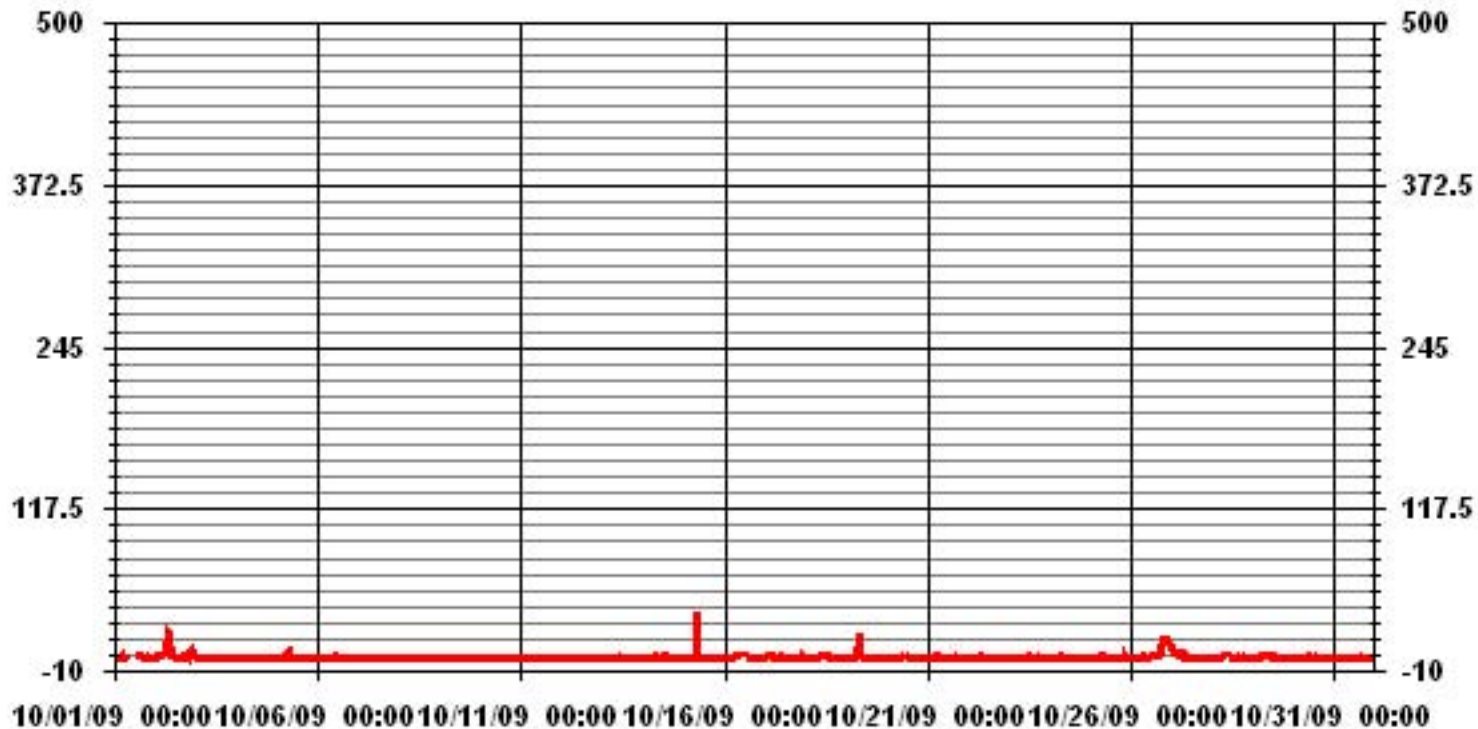
S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	- MISSING DATA
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE



MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:	156					
MAXIMUM 1-HR AVERAGE:	36	PPB	@ HOUR(S)	8	ON DAY(S)	15
MAXIMUM 24-HR AVERAGE:	4.1	PPB			ON DAY(S)	2
IZS CALIBRATION TIME:	31	HRS	OPERATIONAL TIME:	743	HRS	
MONTHLY CALIBRATION TIME:	7	HRS	AMD OPERATION UPTIME:	99.9	%	
STANDARD DEVIATION:	2.54		MONTHLY AVERAGE:	0.69	PPB	

01 Hour Averages



— LICA NO_ PPB

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - COLD LAKE

OCTOBER 2009

NITRIC OXIDE MAX instantaneous maximum in ppb

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	0	0	0	0	2	7	1	7	C	C	C	C	C	C	18	12	10	14	4	3	1	4	6	18	5.2	24	
2	4	15	2	2	5	11	48	36	27	50	8	IZS	5	1	2	2	4	28	17	3	23	11	13	6	50	14.0	24
3	2	1	1	0	0	3	3	2	3	1	IZS	1	0	2	0	1	5	1	0	0	0	0	0	0	5	1.1	24
4	0	1	0	0	1	1	1	1	1	IZS	1	2	1	4	0	1	2	1	0	0	0	0	1	0	4	0.8	24
5	0	1	0	3	0	2	11	15	IZS	0	1	3	9	1	1	1	2	1	6	0	1	0	0	0	15	2.5	24
6	0	0	0	0	0	0	1	IZS	1	1	6	5	1	3	1	0	0	0	0	0	0	0	0	0	6	0.8	24
7	0	0	0	0	0	0	IZS	0	0	1	0	0	1	0	0	0	0	0	0	16	3	2	1	2	16	1.1	24
8	2	3	0	0	0	IZS	0	0	1	0	3	1	0	1	4	0	0	0	0	0	0	0	0	0	4	0.7	24
9	0	0	0	0	IZS	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	4	0.2	24
10	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
11	0	0	IZS	0	0	0	0	0	1	0	20	6	5	1	1	2	1	2	1	1	2	1	0	1	20	2.0	24
12	1	IZS	0	2	1	1	5	1	1	1	3	1	1	1	1	2	12	4	4	6	2	3	1	1	12	2.4	24
13	IZS	1	1	2	1	7	1	5	5	3	17	5	6	5	2	2	2	1	2	2	0	1	0	IZS	17	3.2	24
14	1	0	1	1	1	3	1	3	2	2	2	3	12	3	3	3	2	2	2	2	7	2	IZS	1	12	2.6	24
15	1	1	1	1	2	3	2	4	179	3	5	0	3	7	2	3	4	17	0	0	1	IZS	2	4	179	10.7	24
16	1	0	0	0	1	2	11	10	19	19	4	4	8	4	3	6	3	1	2	0	IZS	2	3	1	19	4.5	24
17	4	21	9	9	12	5	1	1	5	2	4	1	1	0	1	1	1	2	2	IZS	3	14	8	12	21	5.2	24
18	4	3	4	2	2	2	2	2	4	2	3	2	2	3	1	0	0	1	IZS	1	9	2	2	1	9	2.3	24
19	2	1	4	3	2	7	16	51	27	11	4	2	9	3	3	1	1	IZS	2	5	5	2	1	1	51	7.1	24
20	1	1	0	0	0	4	4	6	1	3	7	9	7	23	1	6	IZS	1	2	0	0	2	0	2	23	3.5	24
21	3	0	1	1	9	8	3	6	6	4	15	9	2	4	6	IZS	18	5	3	8	1	2	2	1	18	5.1	24
22	1	1	1	2	1	1	3	4	11	2	4	1	1	2	IZS	1	1	0	0	2	8	2	1	1	11	2.2	24
23	2	1	1	0	0	1	0	1	3	2	1	7	10	IZS	6	7	4	6	3	2	5	9	0	1	10	3.1	24
24	16	0	0	0	1	0	3	20	5	2	1	1	IZS	1	0	0	0	0	0	0	0	0	0	0	20	2.2	24
25	0	0	1	1	1	2	1	5	6	1	1	IZS	1	1	1	7	1	0	20	0	64	7	6	2	64	5.6	24
26	1	2	1	2	2	3	4	14	25	3	IZS	4	3	3	3	2	5	10	32	33	19	35	16	15	35	10.3	24
27	11	8	6	11	11	N	18	19	0	IZS	1	0	0	0	4	0	9	10	0	0	0	0	0	0	19	4.9	23
28	1	0	2	3	1	1	2	2	IZS	6	4	3	6	4	6	11	8	5	6	5	1	9	1	3	11	3.9	24
29	1	1	0	2	5	16	9	IZS	29	27	41	4	6	7	4	1	11	2	4	2	9	0	1	1	41	8.0	24
30	1	1	2	1	5	1	IZS	3	2	6	6	2	2	17	9	2	9	0	1	4	1	1	1	0	17	3.3	24
31	0	1	1	1	3	IZS	1	2	2	1	3	5	4	2	2	12	2	6	1	9	0	0	1	1	12	2.6	24
HOURLY MAX	16	21	9	11	12	16	48	51	179	50	41	9	12	23	9	18	18	28	32	33	64	35	16	15			
HOURLY AVG	2.0	2.1	1.3	1.6	2.3	3.3	5.2	7.6	13.1	5.5	5.9	2.9	3.8	3.6	2.3	3.1	4.0	3.9	4.1	3.5	5.6	3.6	2.2	2.1			

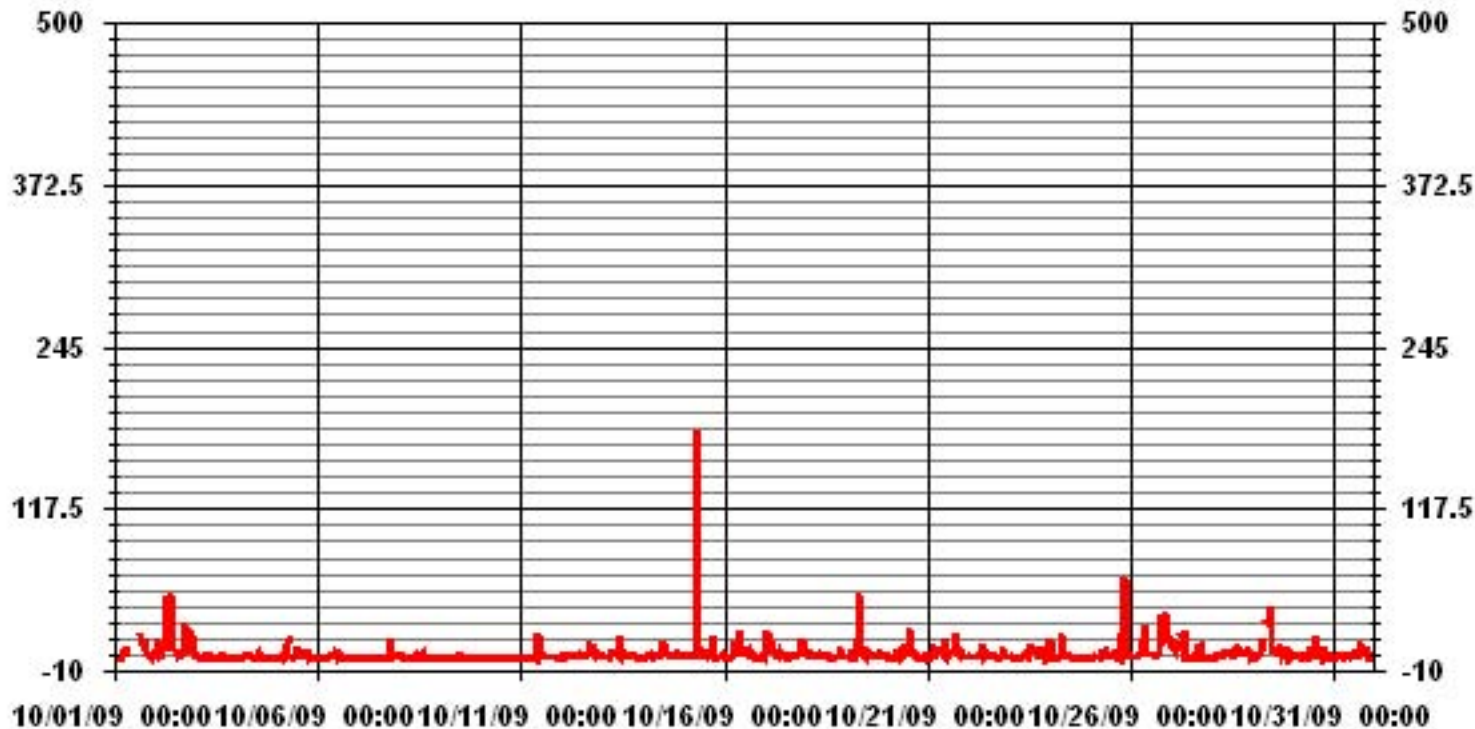
STATUS FLAG CODES

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

MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:	509					
MAXIMUM INSTANTANEOUS VALUE:	179	PPB	@ HOUR(S)	8	ON DAY(S)	15
IZS CALIBRATION TIME:	31	HRS	OPERATIONAL TIME:	743	HRS	
MONTHLY CALIBRATION TIME:	7	HRS				
STANDARD DEVIATION	9.31					

01 Hour Averages



LICA
NO_ / WD Joint Frequency Distribution (Percent)

October 2009

Distribution By % Of Samples

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

Wind Parameter : WD
Instrument Height : 10 Meters

	Direction																
Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 50	3.12	1.41	2.97	3.40	11.34	14.46	10.21	3.54	4.11	4.53	5.10	7.09	4.96	8.51	11.20	3.97	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	3.12	1.41	2.97	3.40	11.34	14.46	10.21	3.54	4.11	4.53	5.10	7.09	4.96	8.51	11.20	3.97	

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	22	10	21	24	80	102	72	25	29	32	36	50	35	60	79	28	705
< 110																	
< 210																	
>= 210																	
Totals	22	10	21	24	80	102	72	25	29	32	36	50	35	60	79	28	

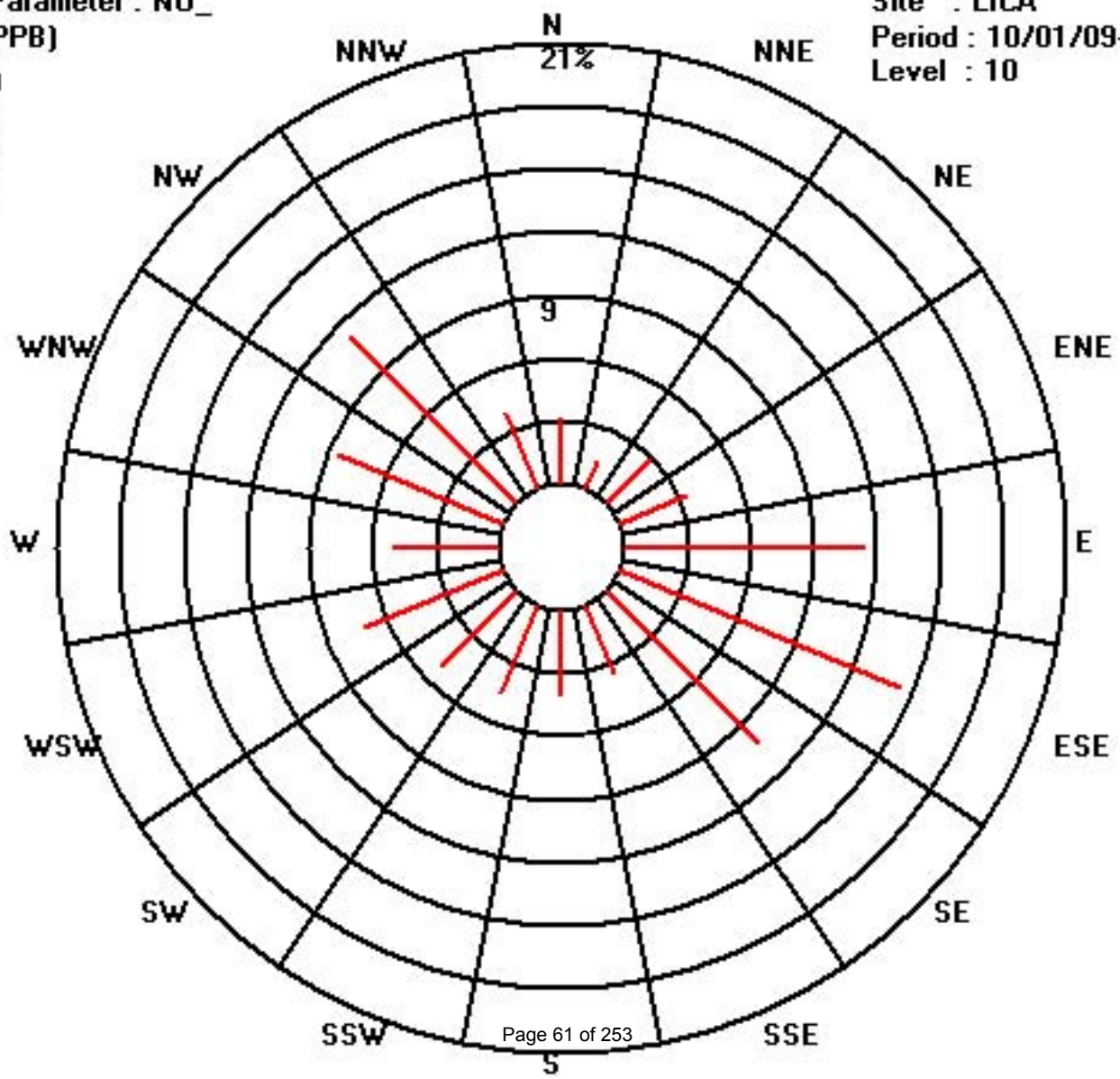
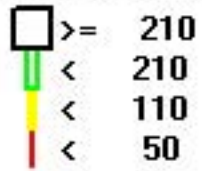
Calm : .00 %

Total # Operational Hours : 705

Class Limits (PPB)

Period : 10/01/09-10/31/09

Level : 10



Oxides of Nitrogen

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - COLD LAKE

OCTOBER 2009

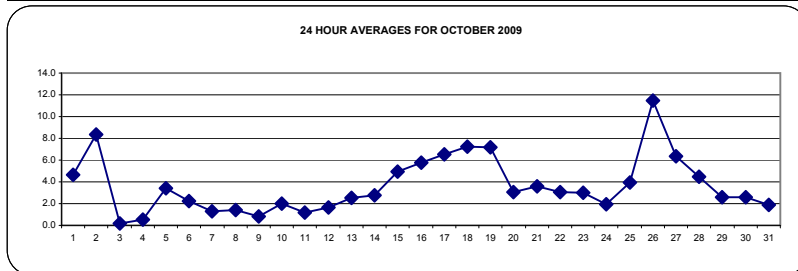
OXIDES OF NITROGEN hourly averages in ppb

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY MAX.	24-HOUR AVG.	RDGS.
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	4	3	2	3	4	8	4	3	C	C	C	C	C	C	3	2	4	4	10	9	6	5	5	10	4.6	24	
2	3	4	5	4	6	9	16	26	27	15	3	IZS	0	0	1	1	2	9	11	8	13	10	12	7	27	8.3	24
3	2	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	1	1	0	0	0	0	0	2	0.2	24
4	0	0	0	0	0	0	1	1	1	IZS	1	1	0	0	0	0	1	1	1	1	1	0	0	2	2	0.5	24
5	2	2	1	6	5	6	11	13	IZS	2	1	2	3	2	2	2	2	3	2	2	2	2	3	13	3.4	24	
6	3	2	2	2	2	2	3	IZS	3	3	4	6	5	5	2	2	2	2	1	0	0	1	0	0	6	2.3	24
7	1	0	1	0	0	0	IZS	2	1	0	0	0	0	1	1	0	1	2	3	5	3	3	5	5	5	1.3	24
8	5	6	2	1	1	IZS	1	1	1	0	0	1	1	1	1	0	0	2	1	1	3	2	1	0	6	1.4	24
9	1	1	1	2	IZS	0	0	0	1	1	1	1	1	0	0	1	1	1	1	1	1	1	1	1	2	0.8	24
10	1	2	0	IZS	2	1	2	2	2	1	1	1	1	1	1	2	1	1	2	4	4	5	4	5	5	2.0	24
11	4	1	IZS	0	0	0	0	0	0	0	1	1	1	1	0	1	2	2	4	2	2	2	1	2	4	1.2	24
12	4	IZS	4	2	2	2	1	2	1	1	1	1	1	0	1	1	1	2	2	2	2	2	2	1	4	1.7	24
13	IZS	1	1	2	2	3	3	5	6	3	2	1	2	2	2	2	4	4	4	3	2	1	1	IZS	6	2.5	24
14	1	1	1	1	1	2	3	5	5	4	3	4	4	4	4	2	2	3	2	3	3	3	IZS	3	5	2.7	24
15	3	2	2	2	3	4	4	5	44	2	2	1	2	2	2	3	4	7	5	5	4	IZS	3	3	44	5.0	24
16	3	2	2	3	3	4	8	7	5	7	7	7	9	10	8	7	6	6	6	IZS	5	6	5	10	5.8	24	
17	4	5	6	6	11	5	3	6	6	5	5	3	1	1	1	1	6	11	9	IZS	6	18	16	15	18	6.5	24
18	12	8	10	8	10	11	6	9	11	9	8	4	4	6	2	1	1	6	IZS	11	14	8	6	2	14	7.3	24
19	3	5	7	7	6	8	20	29	34	7	3	2	2	2	2	3	6	IZS	3	2	3	3	4	4	34	7.2	24
20	2	2	1	1	2	5	6	5	4	6	8	3	2	3	2	2	IZS	3	3	3	2	2	2	2	8	3.1	24
21	1	1	2	2	6	6	5	5	4	3	2	2	1	2	2	IZS	11	14	5	3	2	1	1	1	14	3.6	24
22	1	2	2	2	1	4	6	6	3	2	2	2	2	4	IZS	3	3	2	2	3	4	5	6	4	6	3.1	24
23	4	5	4	3	2	2	2	3	2	2	2	3	3	IZS	3	5	4	7	5	3	2	1	1	1	7	3.0	24
24	1	1	1	1	1	1	4	10	10	4	2	3	IZS	1	1	1	0	1	1	0	1	0	0	0	10	2.0	24
25	0	0	1	3	3	3	3	10	8	2	2	IZS	2	2	1	3	2	4	6	3	14	8	6	5	14	4.0	24
26	4	4	3	4	4	4	10	16	10	3	IZS	5	6	6	6	6	8	17	27	30	21	27	22	21	30	11.5	24
27	16	13	10	12	14	N	12	15	4	IZS	4	2	2	2	2	2	6	7	4	2	2	2	3	4	16	6.4	23
28	6	3	6	6	4	5	7	7	IZS	8	5	3	2	2	2	2	5	5	6	4	4	5	4	2	8	4.5	24
29	1	2	2	1	2	6	9	IZS	6	4	3	1	1	2	2	2	3	3	3	2	2	1	1	1	9	2.6	24
30	2	1	2	2	4	4	IZS	7	3	4	3	1	2	2	3	1	2	2	2	3	2	4	2	1	7	2.6	24
31	1	1	1	1	2	IZS	1	1	1	2	2	2	2	4	3	5	2	2	1	1	1	2	2	3	5	1.9	24
HOURLY MAX	16	13	10	12	14	11	20	29	44	15	8	7	9	10	8	7	11	17	27	30	21	27	22	21			
HOURLY AVG	3.2	2.7	2.7	2.9	3.4	3.8	5.2	6.9	7.3	3.6	2.8	2.3	2.1	2.3	2.0	2.1	3.1	4.4	4.2	4.0	4.4	4.3	3.9	3.6			

STATUS FLAG CODES

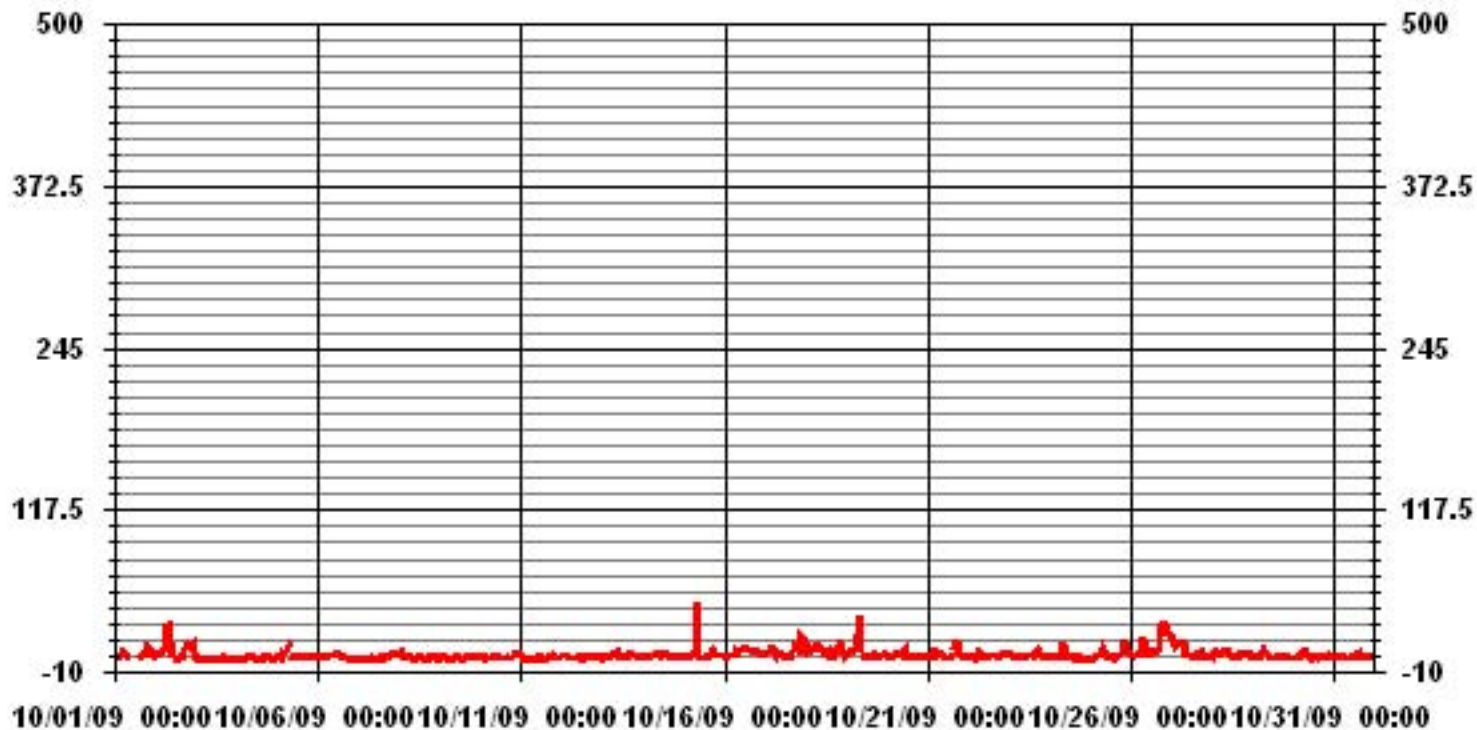
S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	- MISSING DATA
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE



MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:	631
MAXIMUM 1-HR AVERAGE:	44 PPB @ HOUR(S) 8 ON DAY(S) 15
MAXIMUM 24-HR AVERAGE:	11.5 PPB ON DAY(S) 26
IZS CALIBRATION TIME:	31 HRS
MONTHLY CALIBRATION TIME:	7 HRS
STANDARD DEVIATION:	4.45
OPERATIONAL TIME:	743 HRS
AMD OPERATION UPTIME:	99.9 %
MONTHLY AVERAGE:	3.62 PPB

01 Hour Averages



— LICA NOx_ PPB

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - COLD LAKE

OCTOBER 2009

OXIDES OF NITROGEN MAX instantaneous maximum in ppb

MST		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 START	HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.	
DAY																													
1		5	4	3	3	7	12	6	10	C	C	C	C	C	C	29	23	20	21	15	12	8	8	10	29	11.5	24		
2		8	18	7	6	9	18	39	40	33	75	11	IZS	8	2	3	4	16	47	34	14	31	19	18	14	75	20.6	24	
3		7	2	2	0	0	5	2	3	1	1	IZS	2	2	2	2	5	6	2	1	0	0	1	0	1	7	2.0	24	
4		1	1	1	1	1	1	3	3	2	IZS	3	3	2	6	1	2	4	3	4	5	2	2	1	4	6	2.4	24	
5		4	4	2	10	7	9	19	21	IZS	3	2	6	10	3	3	4	5	4	17	2	5	2	3	4	21	6.5	24	
6		3	3	3	2	3	3	5	IZS	5	5	8	9	6	7	4	2	2	3	1	1	1	2	1	1	9	3.5	24	
7		1	1	1	1	1	1	IZS	2	3	2	1	1	1	1	1	1	1	2	4	20	11	5	5	12	20	3.4	24	
8		9	10	5	2	1	IZS	2	2	2	1	3	3	1	2	10	1	1	3	4	3	4	3	2	1	10	3.3	24	
9		2	2	2	2	IZS	1	1	1	1	1	1	1	5	0	1	1	2	2	2	2	2	1	2	2	5	1.6	24	
10		2	3	1	IZS	3	2	3	3	3	2	1	2	1	2	2	2	1	3	3	7	5	6	6	5	7	3.0	24	
11		5	4	IZS	1	1	1	1	1	2	1	27	16	6	3	10	5	4	9	7	7	7	4	5	5	27	5.7	24	
12		7	IZS	6	6	7	5	9	3	3	2	4	3	3	2	2	6	8	8	11	9	5	4	4	3	11	5.2	24	
13		IZS	3	3	4	4	5	7	11	11	6	10	5	8	16	5	10	6	7	9	7	3	3	2	IZS	16	6.6	24	
14		4	3	2	3	3	4	4	8	8	7	8	8	10	15	9	6	5	5	5	6	13	6	IZS	7	15	6.5	24	
15		5	4	6	5	7	10	7	11	248	10	17	2	10	6	5	7	9	27	9	8	6	IZS	6	7	248	18.8	24	
16		6	3	3	4	5	9	20	17	45	46	9	9	13	11	9	14	13	8	8	7	IZS	9	12	8	46	12.5	24	
17		11	24	14	16	24	11	5	11	13	9	8	5	3	3	4	5	11	25	18	IZS	11	32	23	27	32	13.6	24	
18		18	13	14	12	13	18	10	14	15	10	10	6	7	7	4	2	3	17	IZS	15	26	16	12	6	26	11.7	24	
19		10	8	17	12	10	15	29	75	44	22	6	6	12	11	12	5	9	IZS	7	9	16	7	7	9	75	15.6	24	
20		5	4	2	2	4	10	12	10	5	10	17	12	10	20	13	9	IZS	5	7	6	4	5	3	5	20	7.8	24	
21		7	3	3	2	20	12	9	8	7	10	35	18	4	9	10	IZS	21	20	9	15	5	5	2	2	35	10.3	24	
22		2	3	3	5	3	7	10	10	11	4	6	4	4	7	IZS	4	6	3	2	7	14	7	9	5	14	5.9	24	
23		7	8	7	3	3	5	4	5	9	6	3	10	23	IZS	11	12	7	14	8	7	11	5	2	3	23	7.5	24	
24		23	2	1	1	2	2	10	22	13	6	4	4	IZS	3	1	1	1	1	1	1	1	1	1	1	1	23	4.5	24
25		1	1	2	6	6	5	5	15	15	4	4	IZS	4	3	4	17	6	8	33	5	82	20	20	9	82	12.0	24	
26		8	9	6	8	9	8	19	32	39	10	IZS	8	7	7	7	7	21	27	55	49	32	52	28	27	55	20.7	24	
27		21	17	14	18	20	N	29	31	5	IZS	6	3	3	3	8	5	21	23	24	5	2	4	4	6	31	12.4	23	
28		9	5	9	9	5	6	9	8	IZS	11	7	5	12	8	11	18	13	11	15	10	6	18	6	5	18	9.4	24	
29		3	5	3	5	11	27	17	IZS	35	16	22	10	7	21	6	4	33	9	7	5	18	3	2	2	35	11.8	24	
30		3	3	3	5	13	9	IZS	9	5	12	10	10	9	10	24	4	19	3	6	7	6	6	3	2	24	7.9	24	
31		2	3	3	2	9	IZS	3	2	2	3	3	5	5	8	5	15	5	11	4	8	2	2	4	5	15	4.8	24	
HOURLY MAX		23	24	17	18	24	27	39	75	248	75	35	18	23	21	24	29	33	47	55	49	82	52	28	27				
HOURLY AVG		6.6	5.8	4.9	5.2	7.0	7.9	10.3	13.4	20.9	10.5	8.8	6.3	6.8	6.8	6.4	6.9	9.4	11.0	11.2	8.7	11.4	8.6	6.7	6.6				

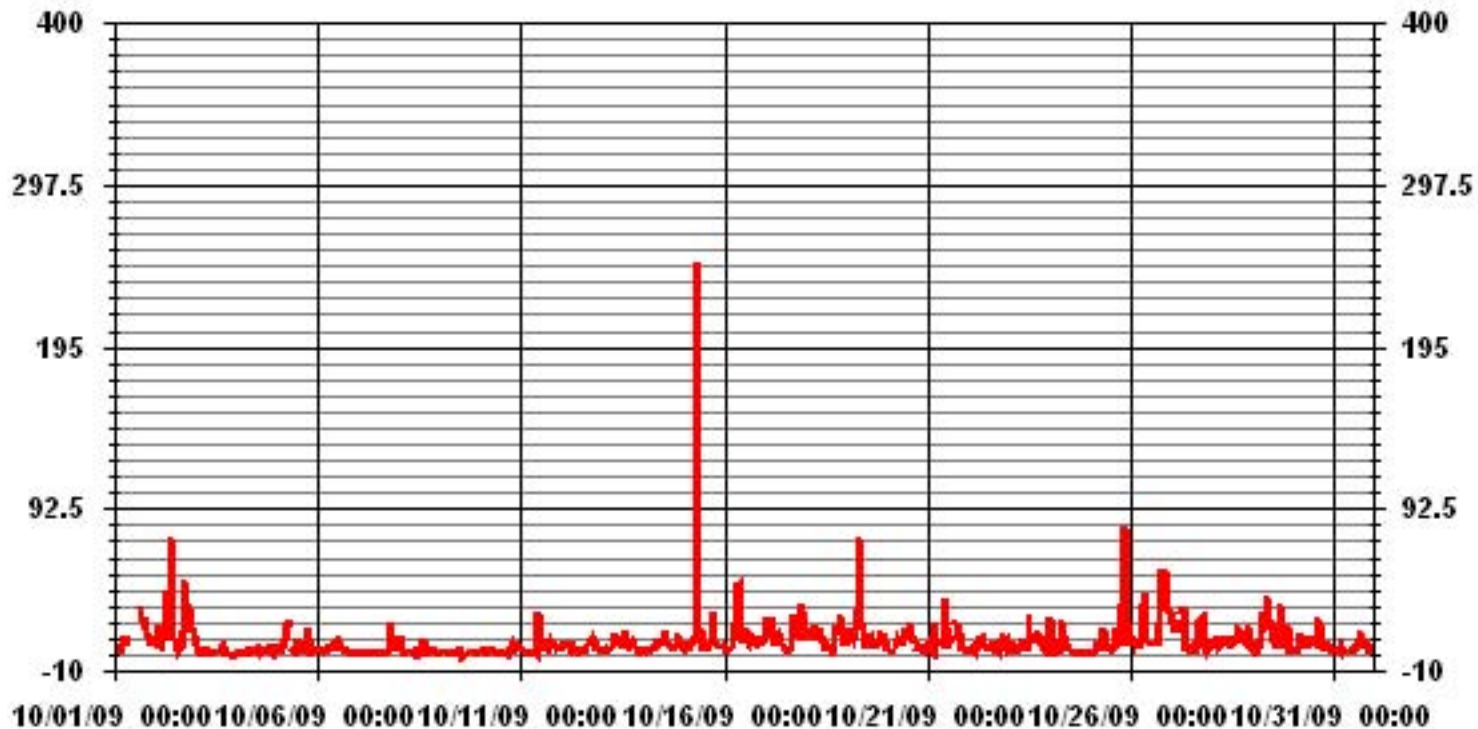
STATUS FLAG CODES

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:	699					
MAXIMUM INSTANTANEOUS VALUE:	248	PPB	@ HOUR(S)	8	ON DAY(S)	15
IZS CALIBRATION TIME:	31	HRS	OPERATIONAL TIME:	743	HRS	
MONTHLY CALIBRATION TIME:	7	HRS				
STANDARD DEVIATION	12.90					

01 Hour Averages



— LICA NOXMAX PPB

LICA
NOX_ / WD Joint Frequency Distribution (Percent)

October 2009

Distribution By % Of Samples

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

Wind Parameter : WD
Instrument Height : 10 Meters

	Direction																
Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 50	3.12	1.41	2.97	3.40	11.34	14.46	10.21	3.54	4.11	4.53	5.10	7.09	4.96	8.51	11.20	3.97	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	3.12	1.41	2.97	3.40	11.34	14.46	10.21	3.54	4.11	4.53	5.10	7.09	4.96	8.51	11.20	3.97	

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	22	10	21	24	80	102	72	25	29	32	36	50	35	60	79	28	705
< 110																	
< 210																	
>= 210																	
Totals	22	10	21	24	80	102	72	25	29	32	36	50	35	60	79	28	

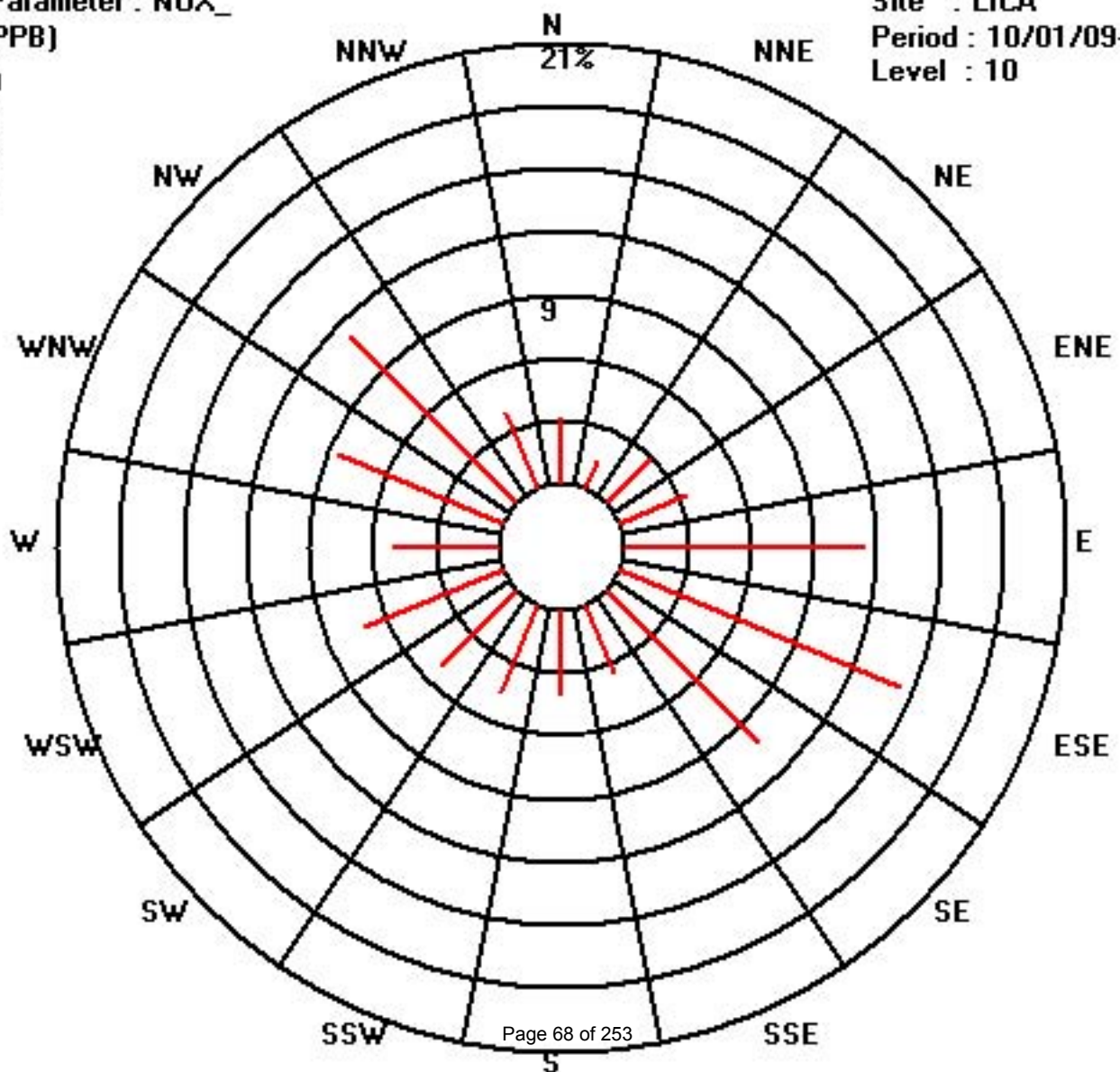
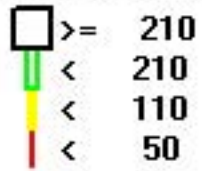
Calm : .00 %

Total # Operational Hours : 705

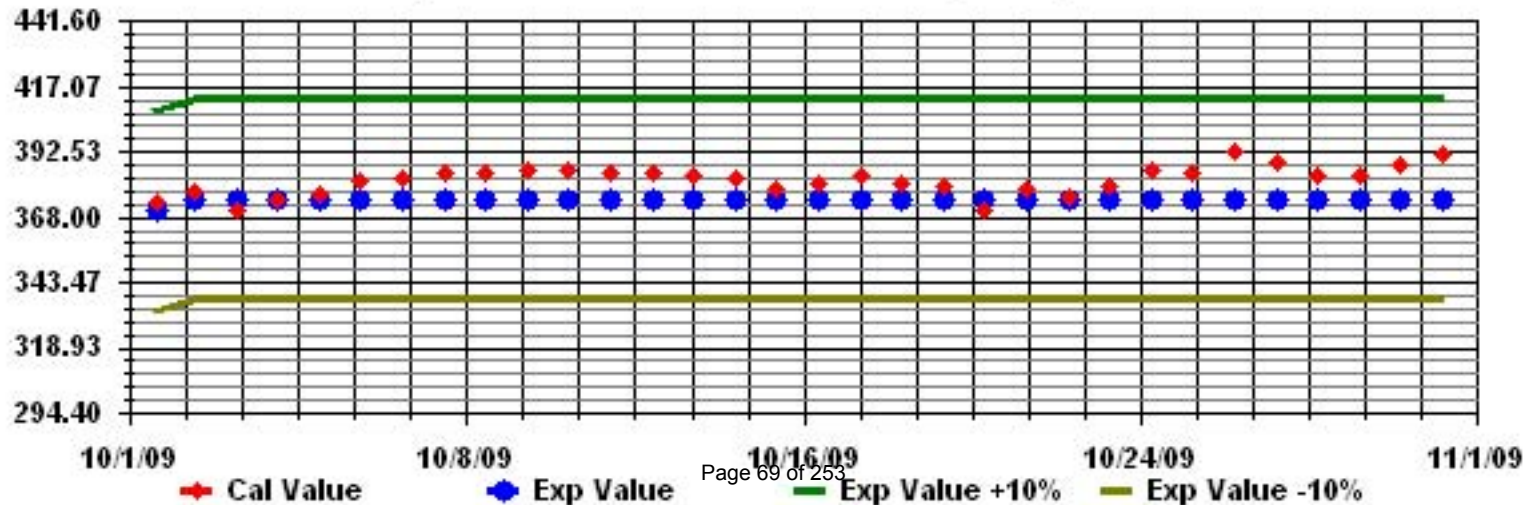
Class Limits (PPB)

Period : 10/01/09-10/31/09

Level : 10



Calibration Graph for Site: LICA Parameter: NOX_ Sequence: NO2 Phase: SPAN



Ozone

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - COLD LAKE

OCTOBER 2009

OZONE (O₃) 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	RDGS.	
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.		
DAY																												
1	5	5	6	4	2	1	3	6	9	13	17	17	IZS	21	C	C	M	15	10	2	1	2	1	1	21	7.1	23	
2	2	1	0	0	0	0	0	C	C	C	C	IZS	19	20	20	20	19	14	7	4	1	1	0	5	20	7.0	24	
3	11	14	13	11	10	10	10	10	11	12	IZS	14	14	14	13	13	14	14	15	13	14	14	14	19	19	12.9	24	
4	20	20	21	21	22	24	22	22	22	IZS	24	23	23	22	21	22	20	16	12	13	16	15	10	24	19.7	24		
5	5	4	4	3	4	3	1	2	IZS	17	19	18	18	19	20	22	22	22	20	20	19	18	19	17	22	13.7	24	
6	18	18	18	18	17	14	11	IZS	10	9	8	8	8	8	14	17	14	12	14	15	14	13	17	19	19	13.7	24	
7	20	21	21	19	17	17	IZS	16	17	17	18	18	18	18	20	22	23	22	21	18	16	15	13	12	23	18.2	24	
8	12	10	17	19	20	IZS	23	25	26	26	27	26	26	26	26	27	27	25	26	25	23	24	25	26	27	23.3	24	
9	25	25	25	24	IZS	24	24	23	22	22	24	25	25	24	24	24	24	24	25	26	26	26	26	27	27	24.5	24	
10	25	24	26	IZS	25	26	24	24	24	25	25	25	26	25	23	25	26	25	24	21	20	19	20	21	26	23.8	24	
11	22	25	IZS	27	28	28	28	28	28	28	28	28	28	28	28	28	27	27	25	24	21	22	22	22	28	26.1	24	
12	13	IZS	8	17	15	18	22	23	25	27	27	27	28	29	28	28	27	26	24	23	23	22	21	22	29	22.7	24	
13	IZS	22	21	20	20	18	18	17	17	19	21	23	24	25	25	26	25	25	23	23	24	25	26	IZS	26	22.1	24	
14	25	24	24	23	22	21	20	18	17	18	19	18	19	19	20	22	22	21	22	21	21	22	IZS	20	25	20.8	24	
15	20	21	21	20	19	18	18	17	16	19	18	18	17	17	17	15	11	8	9	11	IZS	11	8	21	15.9	24		
16	11	12	12	11	10	9	5	7	9	10	12	13	14	17	21	21	20	19	16	14	IZS	15	10	9	21	12.9	24	
17	7	6	2	2	0	9	20	19	21	22	27	33	36	35	35	33	27	17	14	IZS	14	3	2	2	36	16.8	24	
18	4	4	3	5	4	8	12	8	9	13	19	23	24	24	28	31	30	23	IZS	8	6	11	10	18	31	14.1	24	
19	15	10	5	5	6	3	0	2	3	17	21	23	24	28	29	25	21	IZS	24	25	22	21	19	18	29	15.9	24	
20	19	20	18	13	12	9	6	7	8	7	11	19	22	23	24	24	IZS	15	11	10	14	10	6	5	24	13.6	24	
21	5	2	4	5	3	7	6	5	7	10	19	22	23	23	24	IZS	16	12	14	14	14	13	14	15	24	12.0	24	
22	16	15	14	13	11	9	7	6	8	8	9	10	11	9	IZS	13	13	13	14	15	11	7	6	5	5	16	10.2	24
23	7	7	4	7	8	9	11	15	18	18	15	15	15	IZS	14	13	13	11	12	14	16	15	13	12	18	12.3	24	
24	11	9	8	7	6	5	2	2	4	12	16	17	IZS	20	19	18	16	15	15	16	17	20	21	21	21	12.9	24	
25	22	23	21	14	13	13	14	9	12	18	21	IZS	24	26	28	28	27	21	19	17	5	8	14	14	28	17.9	24	
26	19	19	20	18	16	16	9	6	9	15	IZS	17	18	19	21	20	16	3	1	0	0	0	0	21	11.4	24		
27	0	0	0	0	0	N	3	5	9	IZS	10	15	17	18	20	21	15	12	17	17	16	14	12	21	10.8	23		
28	9	9	5	4	4	3	1	1	IZS	2	3	6	10	10	11	10	9	8	8	8	5	6	9	6	11	6.4	24	
29	4	3	2	4	5	1	1	IZS	7	10	11	12	13	13	13	12	11	11	11	12	14	15	15	16	16	9.4	24	
30	15	14	14	15	14	13	IZS	12	14	15	16	17	17	16	17	18	17	15	13	12	15	13	14	16	18	14.9	24	
31	16	16	16	16	17	IZS	18	19	21	21	21	21	21	20	19	19	17	16	17	15	14	12	9	8	8	21	16.3	24
HOURLY MAX	25	25	26	27	28	28	28	28	28	28	28	33	36	35	35	33	30	27	26	26	26	26	26	27				
HOURLY AVG	13.4	13.4	12.4	12.2	11.7	12.0	11.7	12.6	14.4	16.1	18.1	19.0	20.0	20.5	21.5	21.2	19.8	17.2	16.2	14.9	14.2	14.0	13.5	13.5				

STATUS FLAG CODES

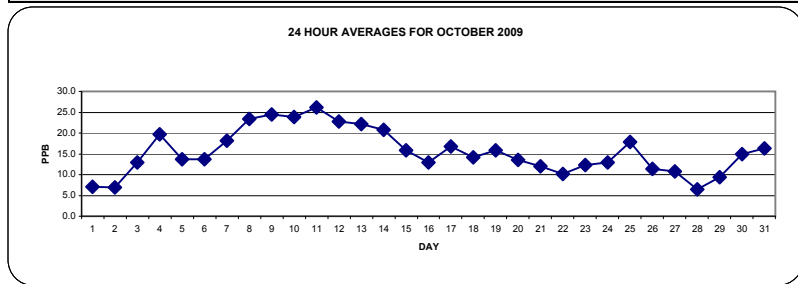
S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	- MISSING DATA
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE

OBJECTIVE LIMIT:

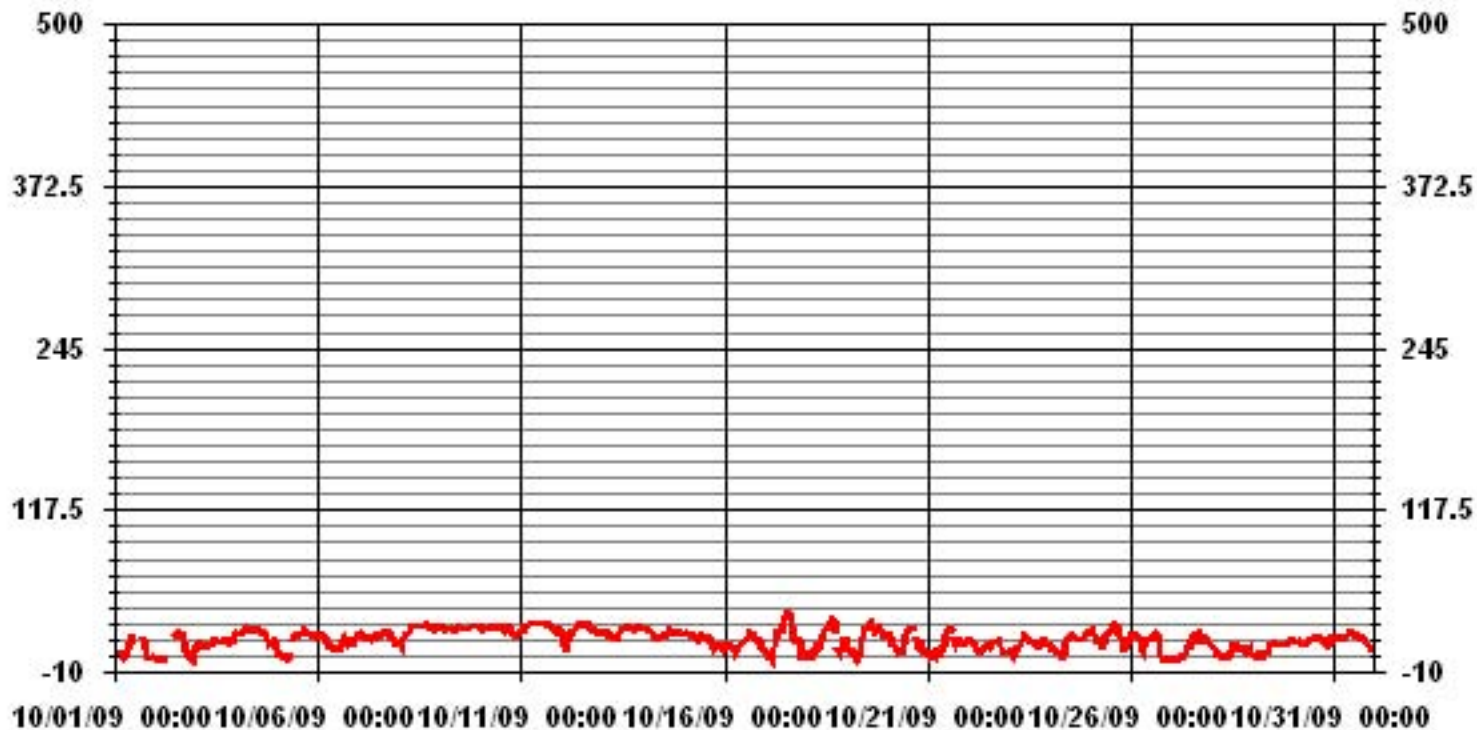
ALBERTA ENVIRONMENT: 1-HR 82 PPB

MONTHLY SUMMARY

NUMBER OF 1-HR EXCEEDENCES:	0
NUMBER OF NON-ZERO READINGS:	686
MAXIMUM 1-HR AVERAGE:	36 PPB @ HOUR(S) 12 ON DAY(S) 17
MAXIMUM 24-HR AVERAGE:	26.1 PPB ON DAY(S) 11
	VAR-VARIOUS
IZS CALIBRATION TIME:	32 HRS
MONTHLY CALIBRATION TIME:	6 HRS
STANDARD DEVIATION	7.69
OPERATIONAL TIME:	742 HRS
AMD OPERATION UPTIME	99.7 %
MONTHLY AVERAGE	15.55 PPB



01 Hour Averages



LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - COLD LAKE

OCTOBER 2009

OZONE MAX instantaneous maximum in ppb

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR		
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.	
DAY																												
1	5	5	7	5	4	3	4	8	10	17	18	17	IZS	22	C	C	M	18	15	11	2	3	2	3	22	9.0	23	
2	2	2	1	1	0	0	C	C	C	C	C	IZS	20	21	22	22	20	21	9	8	2	3	0	11	22	9.2	24	
3	14	15	14	12	11	11	11	10	12	13	IZS	15	15	15	14	14	15	15	16	15	15	14	15	23	23	14.1	24	
4	22	22	22	23	23	25	24	23	23	IZS	26	24	24	23	23	23	24	22	20	17	16	20	19	16	26	21.9	24	
5	8	6	6	4	6	4	2	5	IZS	20	20	20	20	20	22	24	23	25	22	22	20	19	19	18	25	15.4	24	
6	18	19	19	18	18	16	13	IZS	11	10	9	9	8	10	17	18	17	13	15	16	15	15	20	20	20	15.0	24	
7	21	22	23	20	18	18	IZS	17	17	18	19	19	19	20	21	24	24	24	23	20	19	17	16	14	24	19.7	24	
8	16	12	18	21	21	IZS	23	27	27	27	28	26	27	27	27	28	28	26	27	26	24	25	26	26	28	24.5	24	
9	26	25	25	24	IZS	25	24	24	23	23	26	26	26	25	25	25	25	25	26	28	27	27	28	28	28	25.5	24	
10	26	26	26	IZS	25	26	25	24	25	25	25	26	26	26	25	26	26	27	26	23	21	20	21	22	27	24.7	24	
11	24	26	IZS	27	29	29	29	28	28	29	29	29	29	29	30	30	28	29	27	26	25	24	25	23	30	27.4	24	
12	21	IZS	10	22	19	21	23	24	27	28	28	28	29	29	30	30	30	28	26	25	24	23	24	23	30	24.9	24	
13	IZS	23	22	21	20	19	19	18	19	20	23	24	25	26	27	27	26	26	24	25	26	26	26	IZS	27	23.3	24	
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17	12	12	4	3	1	17	22	22	24	25	29	37	37	37	36	35	31	27	20	IZS	19	13	4	4	37	20.5	24	
18	9	8	7	8	8	14	15	12	12	16	40	25	25	27	30	32	32	29	IZS	11	13	15	15	20	40	18.4	24	
19	19	14	9	8	10	6	1	4	8	19	24	24	25	30	32	28	24	IZS	29	28	24	25	20	19	32	18.7	24	
20	21	21	21	16	14	10	8	10	9	9	19	21	24	26	27	26	IZS	19	16	15	17	13	11	10	27	16.7	24	
21	9	4	6	7	5	10	8	5	10	13	24	24	24	25	25	IZS	23	15	15	15	14	14	15	16	25	14.2	24	
22	17	16	15	14	13	10	9	8	9	9	11	13	13	11	IZS	14	14	15	16	14	10	8	6	7	17	11.8	24	
23	8	9	7	9	10	11	15	21	20	20	17	16	16	IZS	16	15	15	12	14	15	17	16	15	13	21	14.2	24	
24	13	10	9	8	7	6	4	2	9	14	18	19	IZS	21	20	19	17	15	16	17	19	21	21	22	22	14.2	24	
25	23	24	23	18	14	15	14	14	16	20	22	IZS	25	28	29	30	30	25	25	23	13	18	21	21	30	21.3	24	
26	21	21	20	19	17	17	15	9	12	16	IZS	18	19	21	23	21	20	11	7	1	1	0	0	0	23	13.4	24	
27	0	0	0	0	1	N	8	10	10	IZS	16	16	19	19	23	23	21	19	19	18	18	17	15	15	23	13.0	23	
28	10	10	7	5	5	3	2	1	IZS	3	4	10	12	12	13	11	10	12	12	9	8	10	11	9	13	8.2	24	
29	7	7	3	8	8	3	3	IZS	8	12	13	13	14	14	14	13	12	12	12	13	15	15	16	17	17	11.0	24	
30	16	15	15	16	15	15	IZS	13	15	16	19	18	18	17	19	19	18	16	15	15	17	15	15	17	19	16.3	24	
31	17	17	17	17	18	IZS	18	20	21	22	22	22	21	21	23	20	18	18	16	15	14	11	9	9	23	17.7	24	
HOURLY MAX	26	26	26	27	29	29	29	28	28	28	40	37	37	37	37	36	35	32	29	29	28	27	27	28	28			
HOURLY AVG	15.5	15.0	13.8	13.7	13.1	13.8	13.8	14.5	16.2	17.6	20.7	20.4	21.2	22.0	23.2	22.8	21.8	20.0	18.7	17.4	16.4	16.2	15.4	15.7				

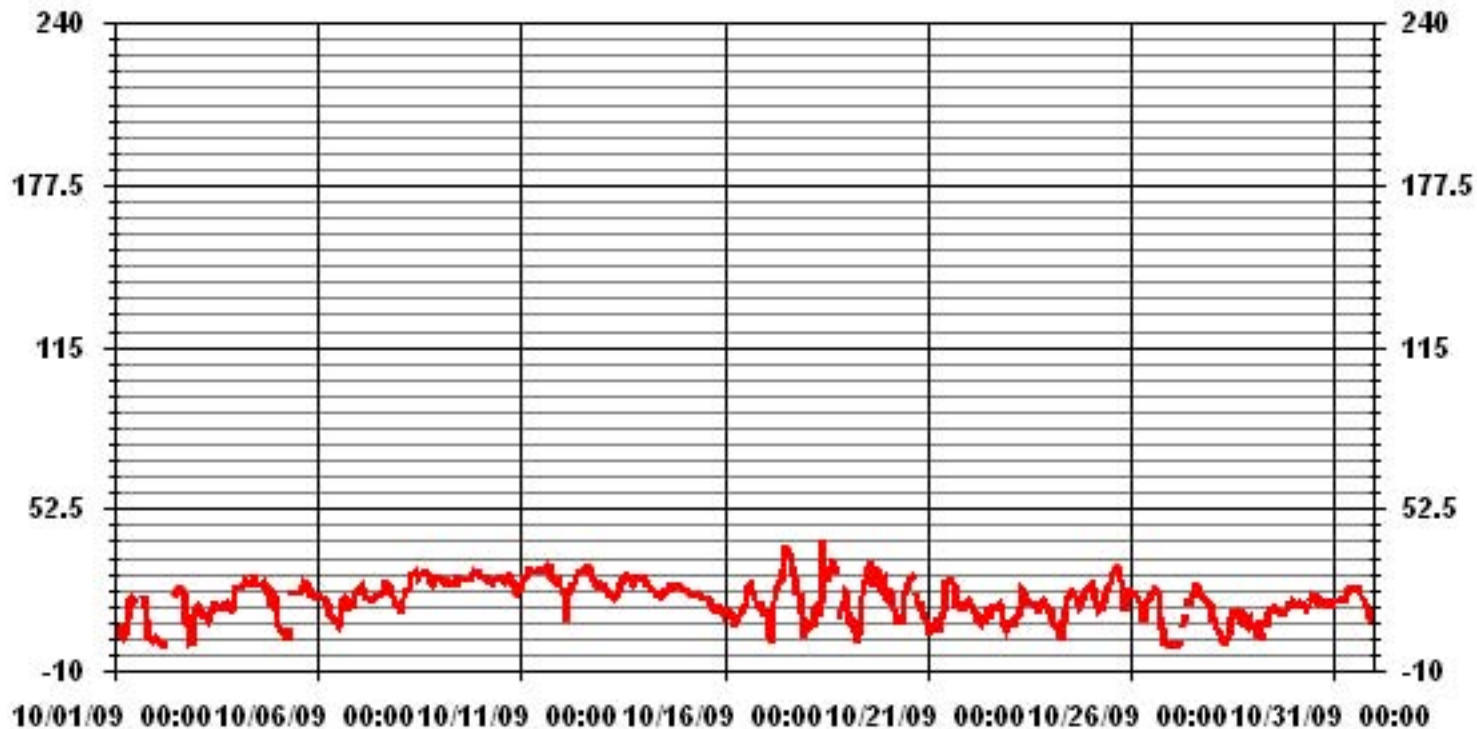
STATUS FLAG CODES

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

MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:	693					
MAXIMUM INSTANTANEOUS VALUE:	40	PPB	@ HOUR(S)	10	ON DAY(S)	18
IZS CALIBRATION TIME:	32	HRS	OPERATIONAL TIME:	742	HRS	
MONTHLY CALIBRATION TIME:	7	HRS				
STANDARD DEVIATION	7.51					

01 Hour Averages



— LICA O3MAX PPB

LICA
O3_ / WD Joint Frequency Distribution (Percent)

October 2009

Distribution By % Of Samples

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

Wind Parameter : WD
Instrument Height : 10 Meters

	Direction																
Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 50	3.12	1.42	2.98	3.12	11.36	14.48	10.22	3.55	4.11	4.40	4.82	7.10	4.97	8.52	11.64	4.11	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	1.42	2.98	3.12	11.36	14.48	10.22	3.55	4.11	4.40	4.82	7.10	4.97	8.52	11.64	4.11	

Calm : .00 %

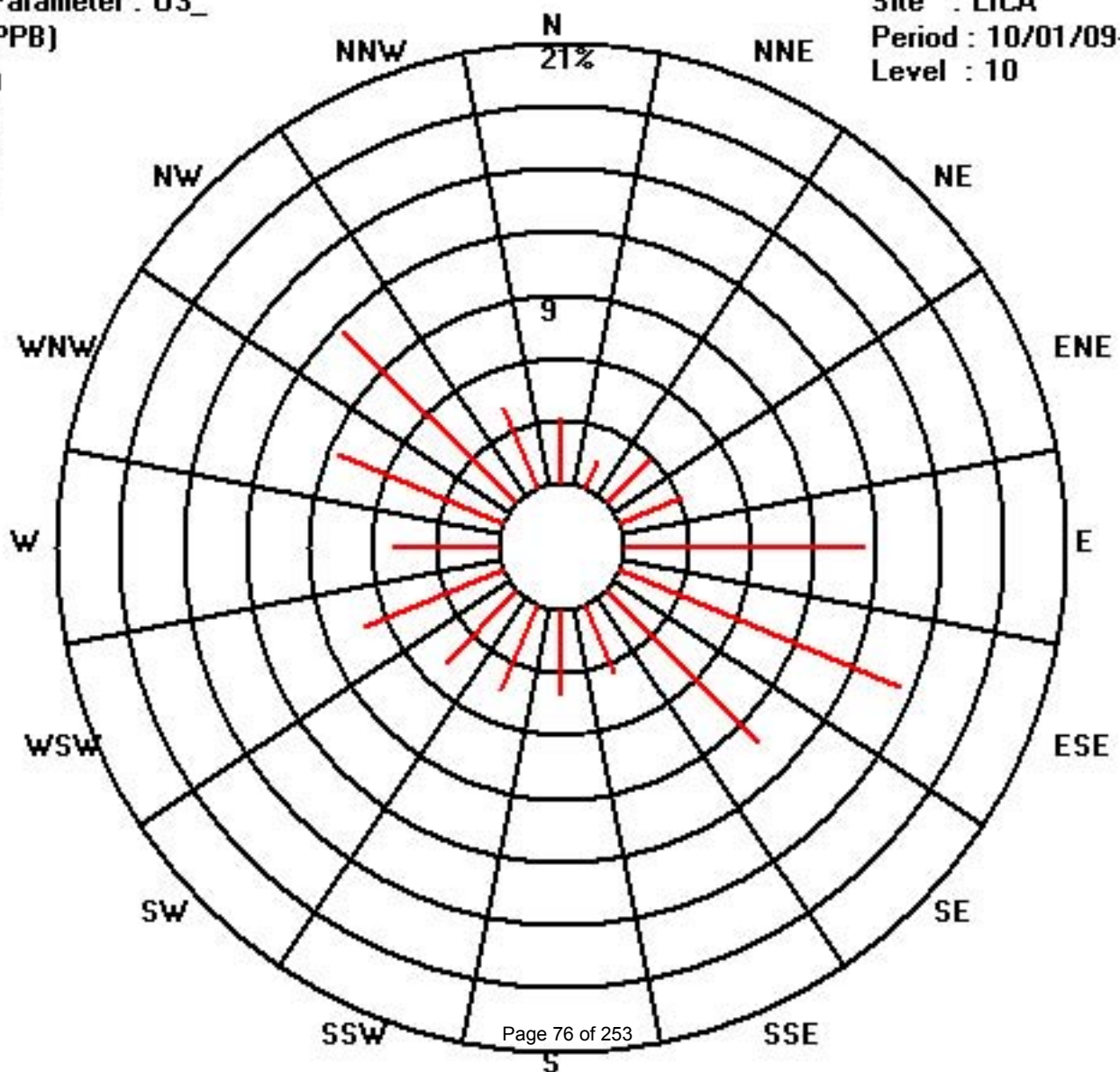
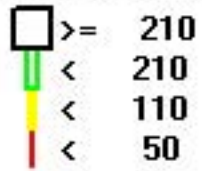
Total # Operational Hours : 704

Distribution By Samples

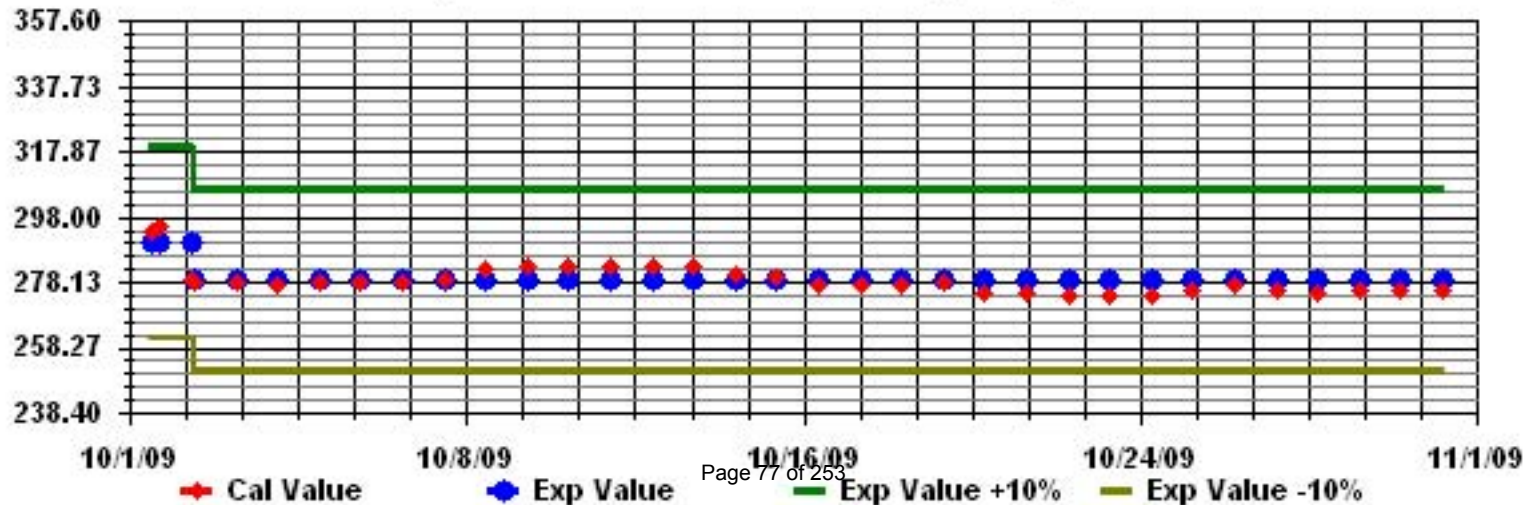
	Direction																
Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 50	22	10	21	22	80	102	72	25	29	31	34	50	35	60	82	29	704
< 110																	
< 210																	
>= 210																	
Totals	22	10	21	22	80	102	72	25	29	31	34	50	35	60	82	29	

Calm : .00 %

Total # Operational Hours : 704



Calibration Graph for Site: LICA Parameter: 03_ Sequence: 03 Phase: SPAll



Ambient Temperature

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - COLD LAKE

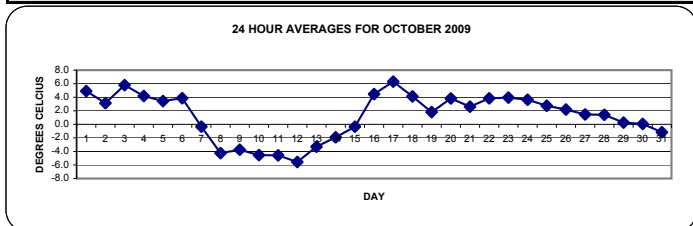
OCTOBER 2009

AMBIENT TEMPERATURE hourly averages (Degrees C)

MST		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	0:00	DAILY	24-HOUR				
HOURLY MAX	HOURLY AVG	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	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		4.6	4.6	4	2.7	1.9	1	1.7	2.4	3.7	6.1	7.5	8.6	9.4	9.7	9.5	9.4	9.2	8.4	6.1	4.5	2.9	1.1	-0.2	-0.9	9.7	4.9	24				
2		-1.3	-1.7	-1.8	-2	-2.1	-2.2	-2.5	-1.4	0.8	3.2	6.5	7.6	8.7	9.7	9.9	9.8	9.4	8.6	6.3	3.8	2	0.8	0.3	2.8	9.9	3.1	24				
3		4.7	5.1	5	4.3	4.4	4.7	5.1	5.4	6.1	6.1	6.2	6.4	6.5	6.7	6.6	6.6	6.9	6.6	6.4	5.8	5.8	6	6	5.6	6.9	5.8	24				
4		5.2	5	4.3	3.8	3.5	3.6	3.4	3.5	3.6	3.7	4.5	4.2	5.1	5.3	5.2	5.6	5.6	5	4.5	3.7	3.6	3.2	2.9	2.3	5.6	4.2	24				
5		1.4	0.8	0.6	0.7	1	1.1	0.6	0.5	2	2.8	3.3	4.1	4.6	5.7	6.3	7	6.9	6.1	4.7	4.6	4.4	4.1	4.4	4.7	7.0	3.4	24				
6		4.7	4.6	4.4	4.1	4.2	3.6	3.1	3.1	3.7	4.3	5.1	5.7	6	5.9	5	4	2.7	2.9	3.1	2.8	2.7	2.4	2.5	2	6.0	3.9	24				
7		1.6	1.2	0.4	0.3	0.2	0.1	0.1	0.1	0.2	0.3	0.7	0.7	0.9	0.7	1	0.8	0.6	-0.4	-1.5	-2.3	-2.7	-3.8	-3.7	-3.6	1.6	-0.3	24				
8		-3.5	-3.4	-3.4	-3.8	-3.9	-4	-4.3	-4.4	-4	-3.9	-3.4	-3.8	-3.2	-3.4	-3.4	-4.4	-4.3	-4.8	-4.9	-5.1	-5.4	-5.7	-5.9	-5.8	-3.2	-4.3	24				
9		-5.8	-5.6	-5.7	-5.9	-6	-6	-5.9	-5.7	-5	-4.1	-3	-2.5	-2.1	-2	-1.7	-1.4	-1.9	-2.1	-2.3	-2.6	-2.9	-3.1	-3.2	-3.5	-1.4	-3.8	24				
10		-4	-5	-5.4	-5.7	-5.9	-5.7	-5.8	-5.5	-5.5	-4.6	-4	-3.7	-3.3	-3	-3.2	-3.2	-3.5	-3.9	-4.5	-4.7	-4.7	-4.7	-4.7	-4.8	-3.0	-4.5	24				
11		-4.9	-5	-5	-4.9	-4.9	-5	-5.2	-5.6	-5	-4.2	-3.9	-3.9	-3.5	-3.4	-3.3	-3.6	-3.8	-4.2	-4.6	-4.7	-4.6	-4.8	-5.3	-6.5	-3.3	-4.6	24				
12		-8.1	-9.4	-9.3	-9	-9.1	-8.7	-7.5	-6.8	-5.6	-5.2	-4.4	-3.6	-3.2	-3	-3.2	-3.1	-3.5	-3.8	-4	-4.1	-4.3	-4.7	-5	-4.9	-3.0	-5.6	24				
13		-5.1	-5.4	-5.5	-5.7	-5.7	-5.6	-5.6	-5.4	-5.1	-4.2	-3.2	-2.4	-1.5	-0.5	-0.5	-0.9	-1.3	-1.4	-1.8	-2.1	-2.4	-2.5	-2.6	-2.8	-0.5	-3.3	24				
14		-3.2	-3.8	-3.9	-3.9	-3.8	-3.8	-3.8	-3.7	-3.3	-2.9	-2.2	-1.4	-0.9	-0.6	0	0.2	0.1	-0.1	-0.1	-0.5	-0.6	-1.1	-1.2	-1.4	0.2	-1.9	24				
15		-1.8	-1.8	-1.6	-2	-2.3	-2.2	-2.1	-1.6	-0.9	0	0.7	0.8	0.9	1.3	1.5	1.5	1.2	0.6	0.5	0.6	0.6	0.1	-0.2	1.5	-0.4	24					
16		0.1	0.2	0.2	0.3	0.5	0.1	-1.2	-0.8	0.9	3.2	5.7	7.6	9.1	10.3	11.2	11.1	9.4	7.6	6.3	5.5	5.3	5.5	4.7	4.4	11.2	4.5	24				
17		3.1	1.9	0	-0.5	-0.2	2.5	6.2	5.7	7.2	8.5	10.4	13.1	13.4	13.6	13.4	12.1	10.1	6.8	5.9	5.4	4.7	3.2	2.4	2.5	13.6	6.3	24				
18		2.6	2.6	2.7	2.5	2.6	3.1	3.3	3.1	3.7	4.8	6.7	8.5	9.1	9.7	10	9.9	9.2	5.9	2.1	0	-0.2	-0.2	-1.5	-1.4	10.0	4.1	24				
19		-2.3	-3.1	-3.4	-2.9	-2.7	-3.6	-3.5	-3.1	-1.4	1	2.1	3.4	6.4	8.1	8.6	6.7	6.1	5.5	5.2	3.9	3.7	3.1	2.9	2.6	8.6	1.8	24				
20		2.3	2	1.9	2	2	2.2	2.4	2.6	3.1	3.8	4.3	5.5	7.3	6.8	6.8	6.9	6.2	5.7	4.7	4	3.6	2.1	1.9	1.6	7.3	3.8	24				
21		1.9	1.6	1.9	2	1.7	1.4	1.7	2	2.3	2.6	2.9	2.9	2.8	3.3	3.8	4.5	3.4	2.5	2.7	2.7	2.9	2.9	2.9	3.3	4.5	2.6	24				
22		3.5	3.3	3.2	3.2	3.2	3.1	3.2	3.1	3.2	3.4	3.9	4.4	4.6	4.8	4.7	4.7	4.7	4.7	4.7	4.5	3.8	3.6	3.6	3.8	3.9	4.8	3.8	24			
23		3.9	3.8	3.7	3.6	3.7	3.6	3.4	3.3	3.2	3.2	3.2	3.5	4	4.6	4.8	5	4.9	4.6	4.4	4.3	4.4	4.3	3.8	3.6	5.0	4.0	24				
24		3.2	2.7	2.8	2.6	2.5	1.8	1.6	1.8	2.5	3.9	5.1	5.6	5.8	5.5	5.3	5.1	4.4	3.9	3.9	3.7	3.6	3.5	3.3	3.2	5.8	3.6	24				
25		3.2	3.1	2.5	1.5	0.5	-0.4	-0.7	-0.9	0.3	2.2	4	5.8	6.9	7.7	8.3	8.6	7.4	4.2	2.6	1.3	-0.7	-1	-0.1	-0.5	8.6	2.7	24				
26		0.4	1.1	1.2	1	0.4	0.1	0	-0.2	-0.4	0.7	2.1	3.3	5.7	7.2	8.7	8.7	6.5	2.5	0.9	0.6	0.4	0.4	0.7	0.3	8.7	2.2	24				
27		-1.2	-2.1	-2.4	-1.2	-0.2	N	-0.8	-0.7	0.8	1.8	2.8	3.1	3.5	3.3	3.1	3.6	3.5	2.9	3	2.7	2.6	2.3	1.8	1.4	3.6	1.5	23				
28		1.2	1.1	1	1	1	1	0.9	0.9	1	1.3	1.9	2.5	3.1	2.9	2.6	1.6	1.8	1.8	1.5	1.3	1	0.7	0.5	0.2	3.1	1.4	24				
29		0.2	0.1	-0.3	-0.7	-0.3	-0.7	-0.5	-0.6	-0.2	0.2	0.6	0.7	1.1	1.4	1.4	1.2	0.9	0.7	0.5	0.3	0.3	0.3	-0.2	-0.2	1.4	0.3	24				
30		-0.3	-0.3	-0.3	-0.3	-0.2	-0.2	-0.3	-0.3	-0.1	0.1	0.3	0.6	0.7	0.7	0.6	0.6	0.5	0.4	0.1	0	0	0	-0.3	-0.5	0.7	0.1	24				
31		-0.7	-0.8	-1	-1.6	-1.6	-1.7	-1.9	-2.1	-2	-1.8	-1.5	-1.1	-0.8	-0.8	-1.1	-1.2	-1.3	-1.4	-1.3	-1.2	-1.2	-0.7	-0.1	0	-0.3	0.0	-1.2	24			
HOURLY MAX		5.2	5.1	5.0	4.3	4.4	4.7	6.2	5.7	7.2	8.5	10.4	13.1	13.4	13.6	13.4	12.1	10.1	8.6	6.4	5.8	5.8	6.0	6.0	5.6							
HOURLY AVG		0.2	-0.1	-0.3	-0.5	-0.5	-0.6	-0.5	-0.4	0.3	1.1	2.1	2.8	3.5	3.8	3.9	3.8	3.3	2.5	1.8	1.2	0.9	0.6	0.4	0.2							

STATUS FLAG CODES

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

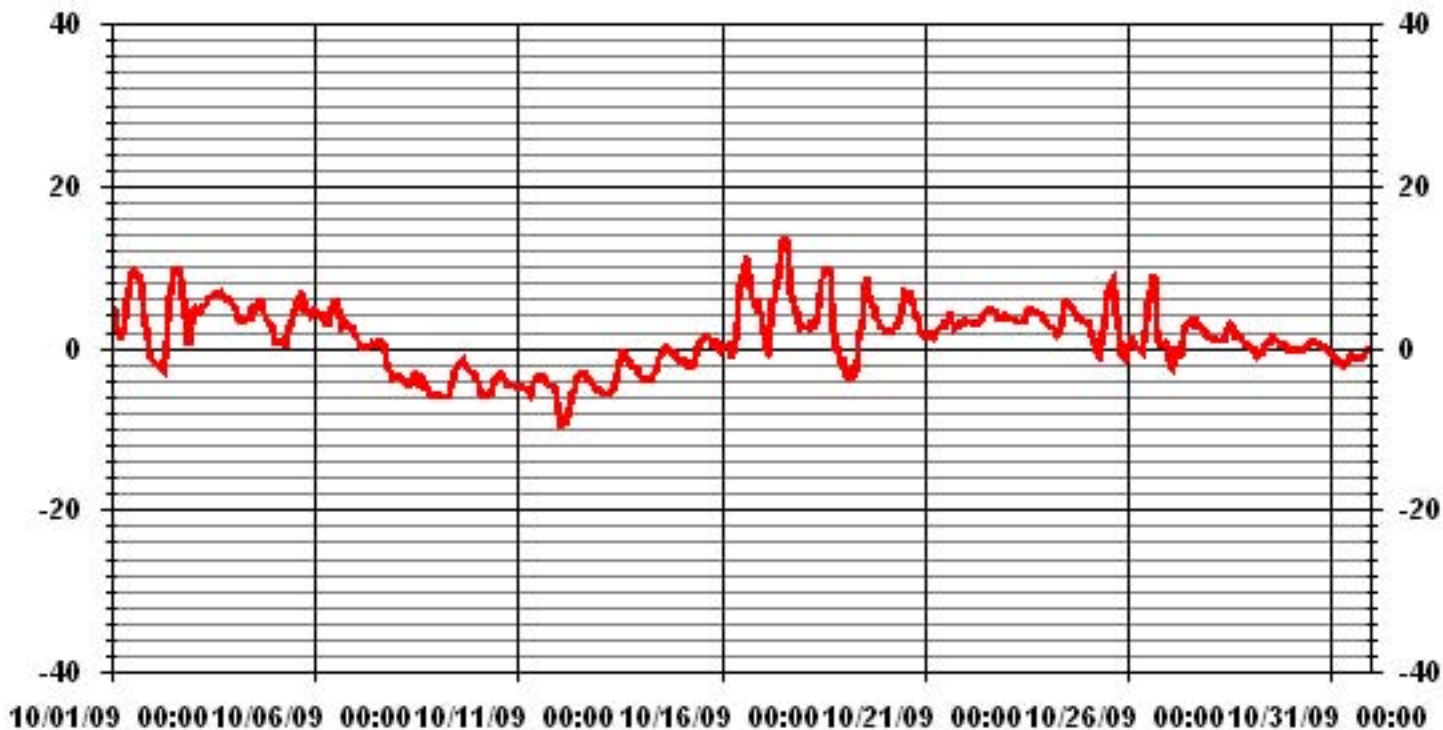


MONTHLY SUMMARY

MINIMUM 1-HR AVERAGE:	-9.4 °C	@ HOUR(S)	1	ON DAY(S)	12
MAXIMUM 1-HR AVERAGE:	13.6 °C	@ HOUR(S)	13	ON DAY(S)	17
MAXIMUM 24-HR AVERAGE:	6.3 °C			ON DAY(S)	17
				VAR-VARIOUS	
CALIBRATION TIME:	0	HRS	OPERATIONAL TIME:	743	HRS
STANDARD DEVIATION:	4.02		AMD OPERATION UPTIME:	99.9	%
			MONTHLY AVERAGE:	1.23	°C

* Outside detection limits of sensor.

01 Hour Averages



— LICA TPX DGC

Relative Humidity

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - COLD LAKE

OCTOBER 2009

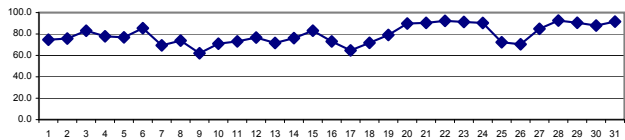
RELATIVE HUMIDITY hourly averages (%)

MST		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	0:00	DAILY MAX.	24-HOUR AVG.	RDGS.	
HOUR START	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		80.0	81.0	84.0	89.0	91.0	92.0	94.0	92.0	86.0	71.0	61.0	55.0	52.0	49.0	49.0	50.0	52.0	60.0	73.0	79.0	84.0	89.0	89.0	90.0	94.0	74.7	24		
2		91.0	92.0	91.0	91.0	91.0	90.0	90.0	88.0	85.0	84.0	72.0	62.0	54.0	49.0	46.0	47.0	50.0	53.0	68.0	79.0	84.0	86.0	87.0	88.0	92.0	75.8	24		
3		85.0	82.0	82.0	85.0	84.0	83.0	83.0	82.0	79.0	84.0	86.0	82.0	80.0	81.0	85.0	82.0	81.0	82.0	83.0	85.0	84.0	83.0	84.0	86.0	86.0	83.0	24		
4		88.0	83.0	81.0	80.0	79.0	78.0	79.0	78.0	78.0	75.0	69.0	74.0	67.0	68.0	70.0	66.0	65.0	70.0	76.0	82.0	87.0	90.0	92.0	93.0	93.0	77.8	24		
5		95.0	95.0	96.0	96.0	95.0	93.0	94.0	94.0	87.0	76.0	74.0	71.0	69.0	62.0	60.0	58.0	60.0	61.0	67.0	66.0	69.0	71.0	69.0	67.0	96.0	76.9	24		
6		67.0	67.0	68.0	70.0	70.0	81.0	90.0	92.0	93.0	93.0	93.0	93.0	94.0	95.0	91.0	90.0	93.0	92.0	89.0	88.0	87.0	86.0	84.0	84.0	95.0	85.4	24		
7		81.0	78.0	80.0	72.0	71.0	69.0	68.0	70.0	65.0	60.0	58.0	59.0	58.0	61.0	63.0	61.0	62.0	69.0	72.0	78.0	75.0	78.0	79.0	78.0	81.0	69.4	24		
8		77.0	77.0	82.0	89.0	91.0	91.0	86.0	78.0	71.0	66.0	61.0	65.0	57.0	62.0	70.0	73.0	69.0	76.0	78.0	74.0	73.0	70.0	68.0	67.0	91.0	73.8	24		
9		66.0	61.0	61.0	64.0	65.0	66.0	68.0	67.0	66.0	65.0	61.0	59.0	58.0	60.0	59.0	55.0	65.0	64.0	62.0	60.0	61.0	59.0	58.0	58.0	68.0	62.0	24		
10		63.0	67.0	70.0	69.0	70.0	72.0	74.0	74.0	76.0	71.0	69.0	67.0	65.0	64.0	72.0	63.0	63.0	68.0	75.0	78.0	79.0	80.0	78.0	76.0	80.0	71.0	24		
11		75.0	76.0	76.0	72.0	67.0	65.0	67.0	69.0	69.0	71.0	69.0	66.0	64.0	64.0	67.0	71.0	74.0	78.0	84.0	85.0	84.0	81.0	79.0	81.0	85.0	73.1	24		
12		86.0	88.0	88.0	89.0	88.0	88.0	88.0	86.0	82.0	79.0	72.0	69.0	64.0	59.0	61.0	57.0	58.0	65.0	69.0	72.0	74.0	83.0	88.0	87.0	89.0	76.7	24		
13		86.0	87.0	88.0	88.0	89.0	89.0	89.0	89.0	88.0	83.0	73.0	66.0	60.0	54.0	52.0	51.0	56.0	56.0	58.0	59.0	63.0	65.0	65.0	65.0	89.0	71.6	24		
14		67.0	71.0	73.0	76.0	78.0	81.0	82.0	83.0	82.0	81.0	78.0	77.0	73.0	71.0	68.0	64.0	65.0	67.0	69.0	78.0	79.0	85.0	89.0	90.0	90.0	76.1	24		
15		89.0	89.0	88.0	89.0	90.0	89.0	88.0	87.0	86.0	84.0	82.0	80.0	80.0	80.0	78.0	76.0	76.0	78.0	81.0	82.0	80.0	77.0	81.0	84.0	90.0	83.1	24		
16		81.0	81.0	81.0	82.0	82.0	84.0	90.0	90.0	82.0	74.0	65.0	59.0	54.0	50.0	48.0	50.0	57.0	65.0	73.0	77.0	79.0	80.0	84.0	85.0	90.0	73.0	24		
17		89.0	90.0	92.0	93.0	93.0	86.0	68.0	68.0	62.0	58.0	48.0	38.0	35.0	34.0	34.0	38.0	44.0	57.0	62.0	65.0	67.0	75.0	78.0	78.0	93.0	64.7	24		
18		78.0	79.0	79.0	80.0	80.0	77.0	75.0	78.0	75.0	72.0	62.0	55.0	JULY	51.0	48.0	44.0	44.0	64.0	78.0	84.0	85.0	86.0	89.0	87.0	89.0	71.7	24		
19		89.0	90.0	90.0	89.0	90.0	90.0	90.0	88.0	79.0	74.0	69.0	58.0	50.0	46.0	62.0	68.0	71.0	72.0	83.0	84.0	90.0	93.0	93.0	93.0	79.1	24			
20		94.0	94.0	93.0	94.0	95.0	96.0	96.0	97.0	96.0	96.0	94.0	87.0	77.0	76.0	75.0	73.0	81.0	85.0	90.0	92.0	91.0	94.0	94.0	95.0	97.0	89.8	24		
21		95.0	95.0	96.0	96.0	97.0	97.0	98.0	98.0	98.0	98.0	90.0	85.0	85.0	81.0	77.0	74.0	79.0	85.0	91.0	92.0	92.0	92.0	91.0	88.0	98.0	90.4	24		
22		86.0	87.0	90.0	92.0	94.0	95.0	95.0	96.0	96.0	96.0	95.0	93.0	91.0	91.0	91.0	92.0	92.0	89.0	88.0	91.0	93.0	94.0	94.0	94.0	96.0	92.3	24		
23		94.0	93.0	94.0	95.0	95.0	94.0	95.0	93.0	93.0	93.0	93.0	91.0	89.0	87.0	87.0	86.0	87.0	89.0	89.0	90.0	89.0	90.0	92.0	92.0	95.0	91.3	24		
24		93.0	95.0	96.0	97.0	97.0	97.0	97.0	94.0	88.0	84.0	83.0	86.0	87.0	86.0	83.0	83.0	88.0	88.0	90.0	90.0	89.0	90.0	89.0	97.0	90.3	24			
25		87.0	85.0	87.0	90.0	88.0	90.0	90.0	91.0	84.0	76.0	67.0	60.0	57.0	52.0	46.0	43.0	47.0	59.0	63.0	70.0	80.0	79.0	71.0	73.0	91.0	72.3	24		
26		67.0	66.0	67.0	68.0	73.0	74.0	76.0	79.0	81.0	75.0	69.0	64.0	55.0	50.0	46.0	47.0	57.0	74.0	80.0	82.0	84.0	85.0	85.0	86.0	86.0	70.4	24		
27		91.0	92.0	92.0	91.0	90.0	N	92.0	92.0	88.0	86.0	83.0	81.0	79.0	78.0	82.0	76.0	78.0	81.0	76.0	79.0	80.0	83.0	89.0	92.0	84.8	23			
28		93.0	93.0	93.0	94.0	93.0	94.0	94.0	94.0	94.0	94.0	94.0	89.0	85.0	87.0	90.0	94.0	95.0	94.0	94.0	93.0	94.0	94.0	89.0	93.0	95.0	92.5	24		
29		95.0	94.0	95.0	96.0	95.0	95.0	95.0	95.0	94.0	91.0	90.0	91.0	87.0	84.0	83.0	83.0	84.0	86.0	87.0	88.0	88.0	89.0	94.0	93.0	96.0	90.5	24		
30		95.0	95.0	95.0	95.0	94.0	94.0	94.0	93.0	92.0	89.0	86.0	84.0	83.0	83.0	81.0	81.0	81.0	83.0	86.0	86.0	84.0	85.0	88.0	82.0	95.0	87.9	24		
31		82.0	81.0	85.0	91.0	90.0	90.0	94.0	93.0	91.0	91.0	90.0	91.0	92.0	93.0	92.0	94.0	93.0	93.0	94.0	95.0	96.0	97.0	97.0	97.0	97.0	91.6	24		
HOURLY MAX		95.0	95.0	96.0	97.0	97.0	97.0	98.0	98.0	98.0	98.0	95.0	93.0	94.0	93.0	92.0	94.0	95.0	94.0	94.0	94.0	95.0	96.0	97.0	97.0	97.0	97.0	97.0	97.0	97.0
HOURLY AVG		84.0	84.0	84.9	85.9	86.0	86.0	86.4	86.2	83.9	80.6	76.2	73.1	70.3	68.2	67.8	67.2	69.6	74.3	77.9	80.7	81.9	83.4	84.1	84.2					

STATUS FLAG CODES

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

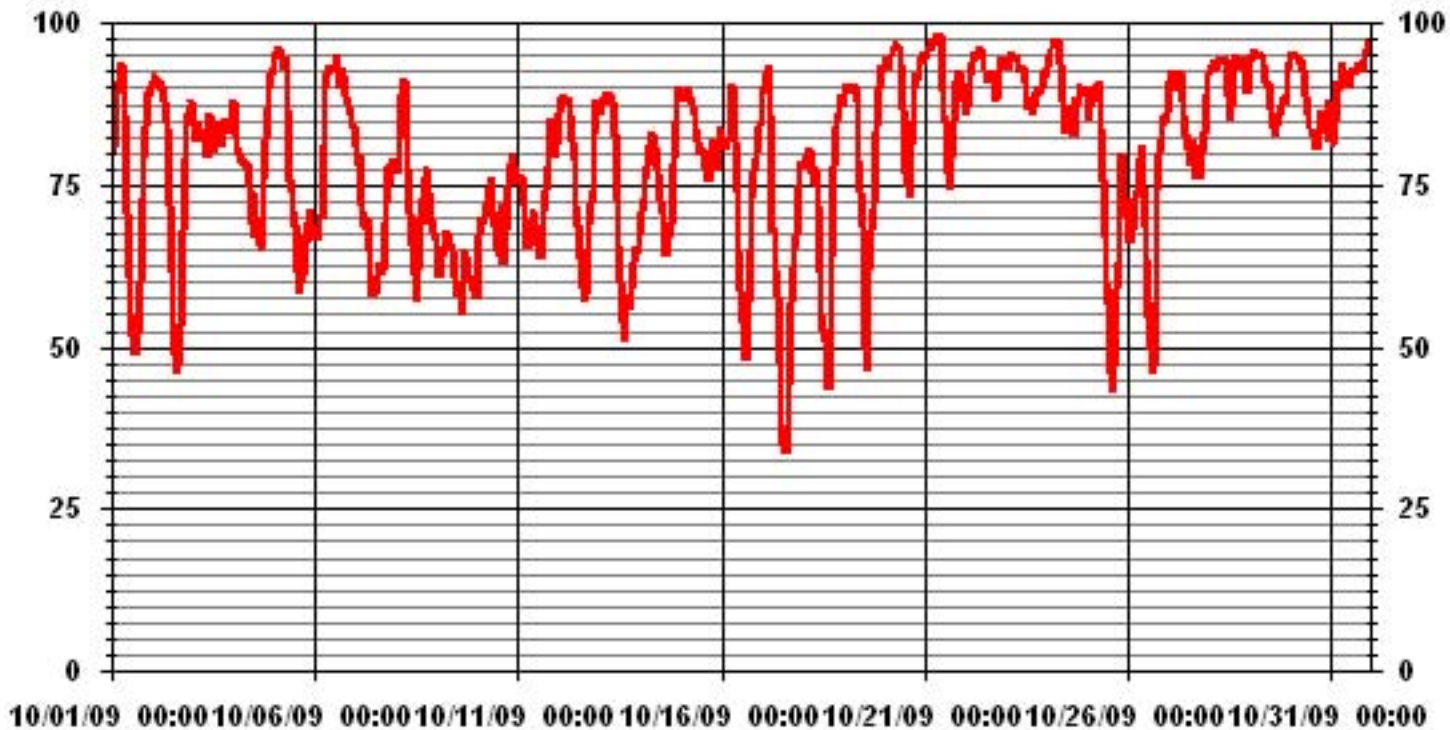
24 HOUR AVERAGES FOR OCTOBER 2009



MONTHLY SUMMARY

MAXIMUM 1-HR AVERAGE:	98.0	%	@ HOUR(S)	VAR	ON DAY(S)	21
MAXIMUM 24-HR AVERAGE:	92.5	%			ON DAY(S)	28
CALIBRATION TIME:	0	HRS	OPERATIONAL TIME:		743	HRS
STANDARD DEVIATION:	13.29		AMD OPERATION UPTIME:		99.9	%
			MONTHLY AVERAGE:		79.45	%

01 Hour Averages



Vector Wind Speed

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - COLD LAKE

OCTOBER 2009

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

MST		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		
HOURLY MAX	HOURLY AVG	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.	
DAY																													
1		8.1	7.1	7.3	3.1	2.8	3.5	5.9	6.7	5.9	7.6	7.4	8.4	5	5.6	5.1	4.1	2.2	0.9	0.2	0.7	0.9	1.1	0.3	0.9	8.4	3	24	
2		0.5	0.6	0.1	0.6	0.8	0.5	1.7	0.9	1.3	1.6	2.8	4.4	3.2	4.2	6.4	6.6	7.3	4.1	2	0.4	0.4	0.8	0.9	3.1	7.3	1.4	24	
3		3.6	5.3	4.9	4.8	6	6.6	6.9	8.1	10.4	10.4	9	10.2	9.7	8.7	8	9.3	9.8	9.4	8.6	8.4	10	9.3	10.5	8.4	10.5	7.7	24	
4		7.4	9.5	10.6	7.8	7.7	9.7	7.2	8.5	8.4	9.2	10.2	8.1	7.9	7.4	7.3	5.9	5.8	3.3	0.8	1.3	1.4	1.4	0.3	0.9	10.6	5.6	24	
5		0.8	1.4	1.5	2.7	1.7	1.4	2.2	1.8	1.3	2.1	3	2.9	3.3	6.5	5.7	6.2	3.6	4.7	2.7	3.6	3.5	2.8	3.6	4.2	6.5	3.1	24	
6		4.5	3.6	4.8	3.9	4.6	2.7	1.9	2.1	2.4	2.1	1.8	2.7	5.1	7.4	11.9	15.2	14.5	15.1	17.6	17.8	16.5	17.1	17.4	16.7	17.8	8.7	24	
7		13.9	15.7	15.6	14.1	13.7	14.1	12.6	11	13.2	14.6	14.8	15.1	12.1	11.7	12.1	12.2	10.1	11.4	5.8	3	4	3.6	1.4	3.4	15.7	10.8	24	
8		3.1	2.3	4.7	3.6	5.1	6.2	7.1	8.9	9.7	12.1	11.8	13.2	12.1	14.2	10.5	16.1	13.8	9.6	13.3	10.1	11.1	8.8	9.6	12.1	16.1	9.5	24	
9		11.4	15.5	16.6	14.2	13.3	10.8	10.7	11.1	13.6	13.2	12.9	15	14.6	16	14.4	13.8	12.9	10.3	12.7	13.2	12.4	12.7	11.5	11.5	16.6	13.1	24	
10		11.7	7.7	10.1	9.8	8.8	9.6	8.2	9.9	10.6	12.1	11.2	10.6	10.6	9.8	9.2	9.8	9.6	9.8	7.6	8.3	6.5	6.4	5.3	5.2	12.1	9.1	24	
11		6.6	7.2	7.2	7	6.7	6.4	5.5	6.1	6.8	3.1	4.1	3.2	1.6	1.1	2.5	1.6	2.4	3	1.8	1.5	0.9	1.8	2.1	3.4	7.2	3.9	24	
12		1.2	0.5	0.3	3.3	1.3	2.7	5.3	4.9	7.3	7.8	7.8	5.9	6.4	7.1	6.4	6.7	7.5	5.9	3.6	2.4	3.9	4.6	4	6	7.8	4.7	24	
13		4.9	5.8	5.4	5.8	6.4	5.4	5	5.8	6.3	7.1	9	9.2	10.1	10.5	11	10.2	10.1	6.9	7.1	8.4	9	7	7.9	7.1	11.0	7.6	24	
14		7.1	9.7	10.2	10.2	11.5	11.5	10.1	9	8.9	8.4	9.1	9.4	11	10.2	9.3	9.8	8.8	8	6.6	3.9	3.6	3.9	4.1	3.2	11.5	8.2	24	
15		3.9	3.6	3.9	3.9	4.2	4.3	4.7	5.7	5.5	5.9	3	1.1	1.4	2.9	1.4	2.3	2	1.1	1.3	1.4	2.5	1.7	1.2	0.8	5.9	2.9	24	
16		1.5	1.8	2.1	2.6	1.1	1.6	1.8	2.5	3.1	4.3	4.6	5.5	5.4	6.1	6	3.8	5.9	7.9	9.5	8.7	6.4	2.7	1.2	1.1	9.5	4.1	24	
17		0.8	1.3	1.6	1.2	0.4	4.6	6.5	4.5	5.8	6.6	8.1	10.5	11.1	10	8.8	6.9	3.5	2.2	1.9	0.6	1.9	1.1	0.4	0.3	11.1	4.2	24	
18		0.7	0.9	0.9	0.9	2.6	4.4	2.1	2.6	2	2.9	5.8	6.4	5.4	7.6	9.2	7.7	5.3	1.9	0.4	0.4	1.5	2.2	2.2	3.2	9.2	3.3	24	
19		1.9	0.4	0.5	0.5	0.1	0.1	0.2	1.4	1.2	3.6	5.6	6.8	3.9	5	5.8	5.4	1.7	3.5	2	5.4	3.6	1.9	3	3.1	6.8	2.8	24	
20		2.9	4	4.4	0.9	1.3	2.4	0.3	1.2	0.7	1.3	2.5	3	4.4	2.1	3.5	3.2	4.1	1.4	0.3	1.7	3.2	2.7	0.7	0.4	4.4	2.2	24	
21		0.5	0.5	0.8	0.3	1.5	2.9	1	4.3	5.4	5.7	6.1	7.4	6.5	6.8	6.9	5.4	3.7	3.3	5.6	6.2	7.2	4.7	7	5.7	7.4	4.4	24	
22		6.5	7.1	5.8	2.9	0.9	3.1	3.2	2.9	4.7	3.3	2.2	4	6.4	7	7.3	7.2	6.1	8	7.7	2.9	1.9	3	3.4	2.3	8.0	4.6	24	
23		3.2	3	1	1.9	1.1	1.2	2.4	2.1	2	3	4.2	5.8	5.8	4.9	5.2	5.1	4.1	4.7	4	6.2	7.8	6.7	6.8	3.6	7.8	4.0	24	
24		6.7	5.2	6.6	4.2	2.4	1.9	2.5	4.3	5.1	8.8	11.3	10.9	11.7	11.9	11.4	10.2	12	9	8.6	6.5	8.5	11.4	10.6	12.5	12.5	8.1	24	
25		10.9	10.8	5	7.8	8	6.1	6.2	5.8	5.4	7.7	8.4	8	9.3	10.5	10.7	8.8	4.3	1.9	2.8	1.9	1.4	0.9	3.8	2.2	10.9	6.2	24	
26		3	4.3	4.4	3.3	2.6	4.4	1.4	2.1	0.4	2.8	2.3	1.8	1.9	2.8	2.7	2.6	1.4	0.7	0.9	0.4	0.8	0.7	0.2	1.2	4.4	2.0	24	
27		0.6	1.1	1.3	1.8	2	N	2.8	4	7.8	6.4	7.6	8.2	9.3	9.6	7.9	2.6	0.3	3.1	4.8	4.8	4.2	4	3.8	4	9.6	4.4	23	
28		3	3.1	2.6	2.9	3.4	3.5	3.7	3.6	4.3	5.7	5.8	6.5	4	3.6	3.4	3.3	4.1	0.9	3.2	3.5	1.1	2.1	2.6	0.4	6.5	3.3	24	
29		1	1.6	1.3	1.3	0.1	0.8	1.2	4.3	4.2	6.3	7	8.6	8.7	8.9	9	8.8	10.1	8	6.7	6.7	6.5	6.4	7.3	7.8	10.1	5.5	24	
30		8	7.4	7	5.6	4.6	4.4	3	4.1	4.6	5	4.7	6	4.3	6.6	6.3	5.6	4.6	2	1.9	2.1	3.6	4.4	6.1	6.9	8.0	5.0	24	
31		6.2	6.8	7.1	8.2	8.9	8.3	8.5	11.2	9.8	9.7	9.2	7.7	6.7	7.1	6.5	6	4.1	5.1	2.1	3	2.3	2.3	1.8	2.5	11.2	6.3	24	
HOURLY MAX		13.9	15.7	16.6	14.2	13.7	14.1	12.6	11.2	13.6	14.6	14.8	15.1	14.6	16.0	14.4	16.1	14.5	15.1	17.6	17.8	16.5	17.1	17.4	16.7				
HOURLY AVG		4.7	5.0	5.0	4.6	4.4	4.8	4.6	5.2	5.7	6.5	6.9	7.3	7.1	7.5	7.5	7.2	6.3	5.4	5.0	4.7	4.8	4.5	4.5	4.6				

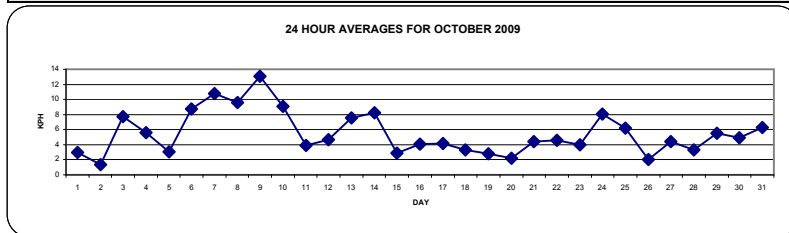
STATUS FLAG CODES

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

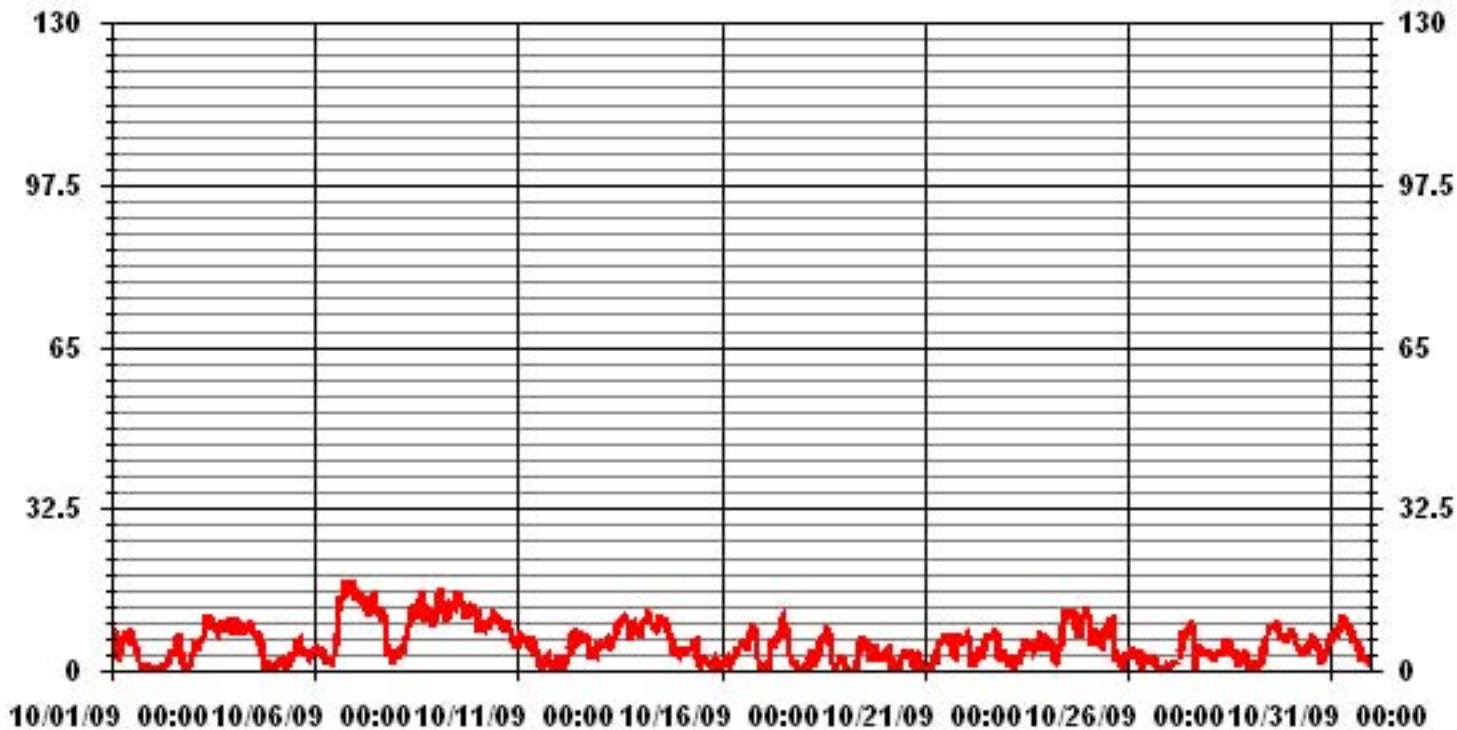
LAST CALIBRATION: November 5, 2008

MONTHLY SUMMARY

MAXIMUM 1-HR AVERAGE:	17.8	KPH	@ HOUR(S)	19	ON DAY(S)	6
MAXIMUM 24-HR AVERAGE:	13.1	KPH			ON DAY(S)	9
CALMS (≤ 1 KPH)	2.02	%	OPERATIONAL TIME:	743	HRS	
MONTHLY CALIBRATION TIME:	0	HRS	AMD OPERATION UPTIME	99.9	%	
STANDARD DEVIATION:	3.85		MONTHLY AVERAGE	5.58	KPH	



01 Hour Averages



— LICA WSP KPH

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - COLD LAKE

OCTOBER 2009

VECTOR WIND SPEED MAX instantaneous maximum in km/hr

MST		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 START	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		13.2	10.9	11.9	6.8	4.5	8.7	8	9.6	9.4	11.6	13	13.8	12.7	10.1	8.9	9.2	5.8	6.1	2.1	2.7	2.9	5	2.2	5.3	13.8	
2		3.5	4.1	3.4	3.4	2.7	1.9	4.5	2.9	2.6	3.6	10.7	9.7	9.3	11.5	10.1	11.7	11.2	9.5	3.9	1.1	2.5	2.1	2.4	6.1	11.7	
3		5.8	9.3	9	8.4	9.3	10.4	10.7	12.6	15.5	16.2	18.2	15.6	15.9	13.3	12.5	15	16.5	14.8	13.1	13.1	17.1	15.1	17.4	16.4	18.2	
4		11.3	18.5	15.5	15.1	12	14.6	13.1	13.8	14.8	14.5	16.4	16.6	12.7	12.2	12.1	10.9	10.4	8.5	2.6	3.1	4.3	5.9	3.5	5.6	18.5	
5		2.6	4.6	4.5	4.4	3	3.4	3.6	3.6	3.3	6.1	6.5	7.3	9.8	12.8	9.8	11.2	9.1	8.7	6.8	6.7	5.8	5.6	7.3	8.3	12.8	
6		9.4	7.3	9.8	8.4	8.4	5.2	5.1	5.2	5.4	4.5	5.2	6	9.5	14.6	19.3	23.6	20.1	22.4	24.6	25.9	21.4	26.8	25.3	23.8	26.8	
7		23.5	28.4	25.7	23.6	19.7	20.6	20.4	14.5	20.6	23.4	23	23	19.4	18.5	19.6	19.9	17.1	20	11.1	4.6	5.4	5.2	3.9	5	28.4	
8		4.9	3.9	6.9	6	7.3	12.4	11.4	12.3	13.7	16.8	18.5	24.2	19.6	26.9	17	27.9	28.3	14.1	21.6	15.2	18.1	14.7	16.1	17.3	28.3	
9		21	26.3	24.6	25.1	20.7	15	15.9	18	21.5	20.5	21.9	22.2	21.3	23.5	21.7	25.8	24.7	15.5	19.2	23.1	19.2	21.9	20.8	17	26.3	
10		16.9	12.1	15.2	18.9	12.6	13.4	11	16	16.9	18.1	16	19.1	19.3	15.9	13.6	16.4	15.3	14.5	12.6	12.1	8.8	9.6	8.8	9.2	19.3	
11		10.1	10.3	9.6	9.2	9.2	10.6	8.1	9.4	9.9	10.5	7.6	6.9	4.5	4.7	6.4	5.2	5.8	5.1	4	4.2	3.3	3.9	3.9	5.1	10.6	
12		2.5	2.5	3	5.3	2.6	4.8	7.4	10.1	12.8	13.5	12	10.8	10.1	10.9	11.9	10.2	11.6	11.4	6.4	5.5	8.1	7.8	7.8	10.4	13.5	
13		9.1	9.1	10.3	10.3	10.4	7.9	7.7	10.5	11.8	10.9	14	18.5	14.9	16.1	17.8	17.2	16.6	11.4	13.7	11.3	13.7	12.5	11.5	10.4	18.5	
14		10	15.1	17.1	15.5	16	24.2	16.6	15.4	14.5	15.1	13.7	16.1	19.7	15.6	16.4	15.1	14.1	12	14.4	10	7.6	8.1	7.8	5.8	24.2	
15		7.6	5.9	6	6.5	7.1	6.1	8.1	9.2	8.1	11	7.9	5	4.6	6.7	3.6	4.6	3.9	2.9	2	3.6	6.4	5.4	3.4	1.8	11	
16		5	4.5	4	5.6	3.9	5.4	6.2	5.9	5.5	9.3	10.4	11.6	12.1	12.9	11.6	9.2	8.4	11.1	12.2	12.7	11	7	4.1	3.7	12.9	
17		3	4.9	4	3.9	2.4	10.2	11.6	7.5	8.9	10.9	12.2	16.8	16.7	14.8	14.6	12.9	6.1	4.3	4.3	2.7	3.8	2.9	3.8	4.9	16.8	
18		4.4	3.7	3.4	4.4	5.8	6	5.2	4.7	4.1	5	11.4	13.1	13.1	14.1	15.5	12.4	10.7	5.9	2.7	1.9	2.9	3.7	3.2	4.9	15.5	
19		3.5	2.4	4	2.5	1.7	2.1	1.3	2.6	3.6	6.7	10	11.3	8.4	11.9	10.5	9.3	5.9	8.2	10.6	11.3	6.8	7.1	6.1	5.3	11.9	
20		5.4	6.3	8.7	3.9	3.9	3.8	4.3	3.9	3.3	3.8	5.2	8	8.9	5.7	5.8	5	6.8	5.2	3.5	3.3	6.8	4.4	2.5	4	8.9	
21		4	3.9	2.5	2.8	5.6	5.6	3.8	6.1	8.7	10.7	13.3	11.6	12	11.8	13.2	10.6	8	6.8	8.3	10.3	10.4	8.9	10.5	9	13.3	
22		10.8	11	11.8	7.9	4.8	5.6	5.7	5	7.9	9.6	5.9	7.3	10.7	11.1	11.8	12.3	9.8	12.7	14.1	4.6	4.2	6.3	5.3	4.7	14.1	
23		5.3	5.2	3.2	5.3	2.4	5.2	5.2	5.1	5.9	6.7	8.7	11.8	9.6	9.4	8.5	7.9	7.5	8	7.5	9.7	11	11.1	13	5.8	13	
24		11.5	9.5	10.7	8.6	5.1	4.2	5.7	7.5	8.8	12.6	18	17.7	17.6	17.4	19.1	21.5	19.2	14	15.1	9.6	12.7	21.2	16.4	21.5	21.5	
25		15.3	18.8	13.1	10.6	11	9.7	8.3	8	8.3	12.7	13.5	15.2	14.7	15.9	16.4	14.4	7.9	4	5	5.3	2.6	2.4	6.7	4	18.8	
26		6.3	7.5	6.5	8.4	6.5	7.6	3.6	4.4	6.9	7.1	5.4	8.2	6.8	6.9	6.6	5.6	3.8	2.4	2.2	2	3.2	2.3	2.5	3.8	8.4	
27		3.5	3.9	5.2	6.2	6	0	4.7	12.2	12	9.8	13.8	11.8	13.9	13.9	15.1	9	1.8	6.9	7.3	7.2	5.9	7.2	7.3	7.1	15.1	
28		4.3	4	3.5	5	5.4	4.9	5.3	5.2	6.6	9.5	8.6	9.7	8	7.2	10.8	8.3	6.7	4.4	5.1	6.1	3.3	4.6	5.2	2.7	10.8	
29		3.5	3	3.3	4	1.7	3.8	4.3	6.4	6.7	9.5	11.1	12.2	12.4	13	14.5	13.7	14.8	15.4	8.5	10	11	10.2	12.3	13.6	15.4	
30		12.5	12.6	10.9	10.4	7.5	7.4	5.4	7.2	8.4	9	7.8	10.3	8.3	11.2	10.8	10.2	7.3	3.5	3.9	3.1	5.3	7.2	10.6	9.7	12.6	
31		8.8	10.3	12.1	12.9	13.5	12.9	12.8	20	14.8	16.5	14.5	13.4	16.2	12	12.3	9.3	8.3	7.7	5.7	4.9	4.6	4.7	5.2	5.1	20	
PEAK		23.5	28.4	25.7	25.1	20.7	24.2	20.4	20.0	21.5	23.4	23.0	24.2	21.3	26.9	21.7	27.9	28.3	22.4	24.6	25.9	21.4	26.8	25.3	23.8		

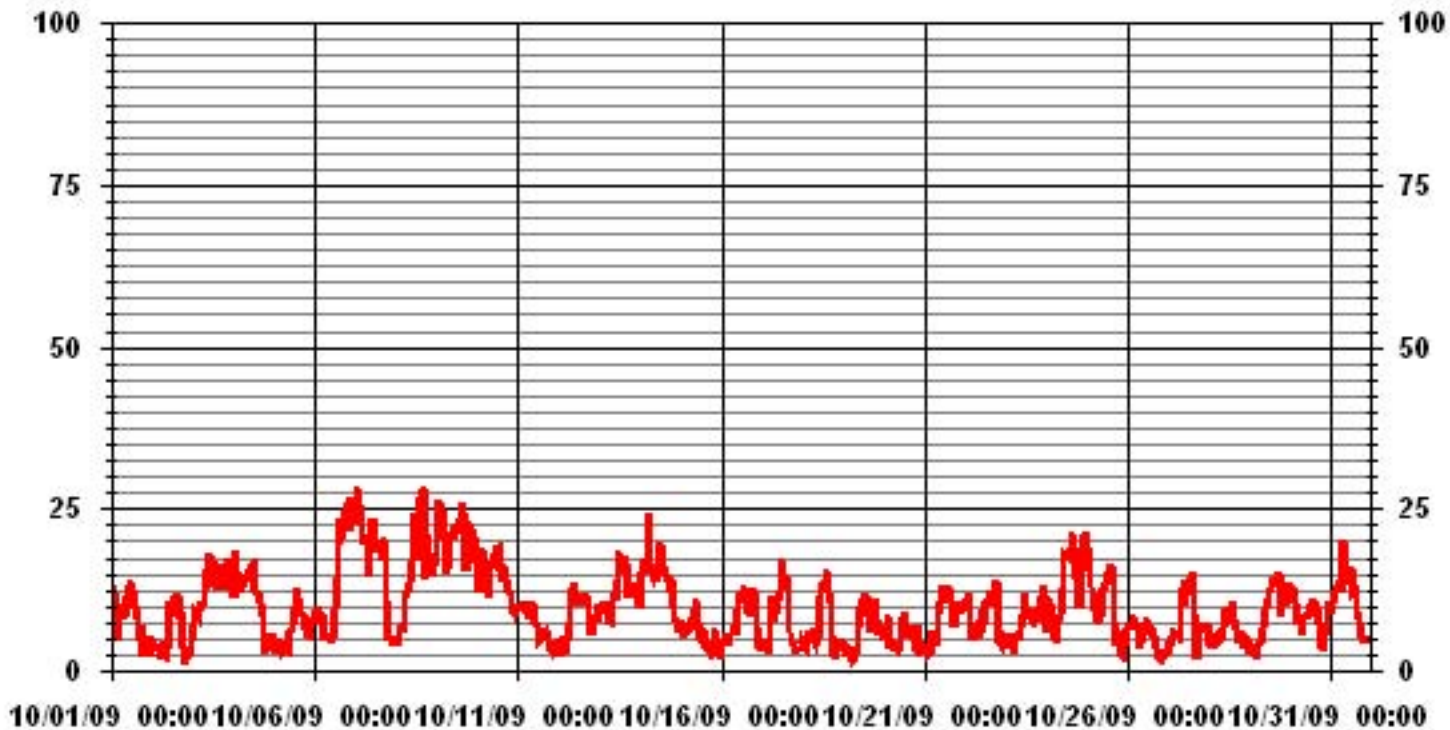
STATUS FLAG CODES

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

MONTHLY SUMMARY

MAXIMUM INSTANTANEOUS READING	28.4	KPH	@ HOUR(S)	1
			ON DAY(S)	7

01 Hour Averages



— LICA WSMAX KPH

LICA
WSP / WD Joint Frequency Distribution (Percent)

October 2009

Distribution By % Of Samples

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

Wind Parameter : WD
Instrument Height : 10 Meters

	Direction																
Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 6.0	1.07	1.21	1.74	2.55	4.97	9.15	6.72	3.23	3.76	4.17	4.17	4.57	3.23	3.09	1.61	.80	56.12
< 12.0	2.01	.53	1.48	.40	5.78	5.38	2.96	.13	.13	.00	.67	2.42	1.61	3.76	5.24	2.42	34.99
< 20.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	1.48	4.71	.67	6.86
< 29.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
< 39.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
>= 39.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
Totals	3.09	1.74	3.23	2.96	10.76	14.53	9.69	3.36	3.90	4.17	4.84	6.99	4.84	8.34	11.57	3.90	

Calm : 2.01 %

Total # Operational Hours : 743

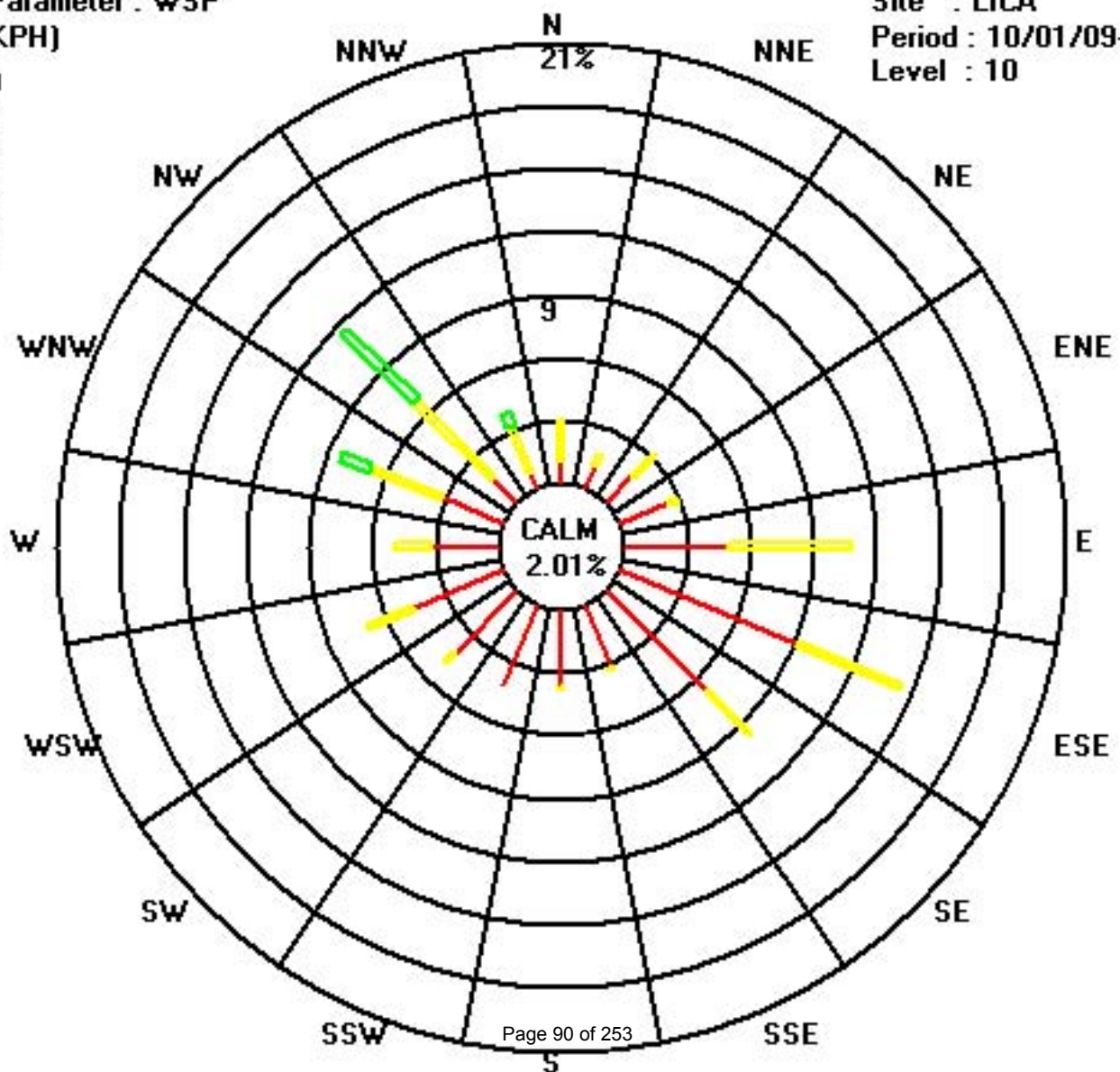
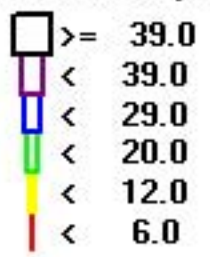
Distribution By Samples

	Direction																
Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 6.0	8	9	13	19	37	68	50	24	28	31	31	34	24	23	12	6	417
< 12.0	15	4	11	3	43	40	22	1	1		5	18	12	28	39	18	260
< 20.0														11	35	5	51
< 29.0																	
< 39.0																	
>= 39.0																	
Totals	23	13	24	22	80	108	72	25	29	31	36	52	36	62	86	29	

Calm : 2.01 %

Total # Operational Hours : 743

Class Limits (KPH)



Vector Wind Direction

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - COLD LAKE

OCTOBER 2009

VECTOR WIND DIRECTION (WD) hourly averages in degrees

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	24-HOUR	24-HOUR AVG	QUADRANT	RDGS.	
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.	QUADRANT	RDGS.		
DAY																													
1	302	310	311	292	273	273	296	305	310	333	317	322	1	32	45	71	77	51	233	104	237	228	76	223	322	NW	24		
2	175	213	199	205	239	179	239	212	227	229	13	12	4	32	44	58	69	58	72	226	78	79	93	76	51	NE	24		
3	59	42	3	314	323	338	348	357	4	11	18	18	357	350	349	351	353	352	344	341	352	348	350	9	356	N	24		
4	3	41	50	43	34	28	48	49	57	55	43	46	44	13	8	30	31	35	262	242	271	354	127	269	36	NE	24		
5	205	256	220	259	266	268	238	263	214	199	187	177	209	252	236	238	214	205	188	188	189	167	180	190	214	SSW	24		
6	195	194	183	196	200	196	189	184	186	191	195	248	310	329	333	333	312	314	319	320	318	320	324	313	308	NW	24		
7	317	329	316	321	319	315	310	308	312	318	325	311	318	307	308	316	303	309	300	282	252	258	261	237	312	NW	24		
8	247	283	324	319	322	329	331	342	344	335	342	334	326	326	336	328	316	303	322	305	302	295	294	299	320	NW	24		
9	298	303	305	305	299	292	289	293	302	298	301	304	303	302	303	306	307	304	306	310	309	309	311	306	302	WNW	24		
10	306	296	300	305	305	302	298	302	312	312	316	319	321	315	304	319	318	315	307	292	291	289	286	294	306	NW	24		
11	298	307	311	326	337	1	354	330	336	6	106	99	123	34	352	51	116	51	110	128	150	128	122	127	352	N	24		
12	87	255	169	126	118	132	126	110	114	115	124	92	92	117	117	111	122	117	109	122	119	103	93	93	112	ESE	24		
13	103	95	94	92	92	106	102	100	105	105	102	111	103	98	94	99	87	93	85	88	90	101	97	102	97	E	24		
14	92	87	88	86	87	90	92	92	91	94	93	88	86	87	91	102	101	96	109	107	101	104	105	84	92	E	24		
15	84	101	103	104	97	112	123	124	129	135	160	227	192	141	166	214	224	193	149	191	234	212	194	151	134	SE	24		
16	127	151	152	138	158	140	126	160	182	186	176	180	190	154	183	173	135	135	132	129	126	126	112	135	150	SSE	24		
17	124	238	126	118	104	207	223	228	237	239	252	265	257	250	241	242	237	219	248	170	214	62	41	132	239	WSW	24		
18	217	253	341	164	250	243	245	250	261	298	319	334	335	298	304	312	341	43	35	118	67	94	112	123	306	NW	24		
19	102	100	194	48	204	116	71	44	79	114	128	125	124	121	85	26	343	323	115	130	118	89	77	72	99	E	24		
20	107	108	129	132	112	116	179	149	202	215	220	152	121	159	151	143	140	194	275	324	342	270	259	212	145	SE	24		
21	358	201	253	208	100	118	140	127	126	127	138	132	129	116	115	102	70	72	90	100	95	96	104	98	110	ESE	24		
22	90	80	77	67	205	104	95	115	127	139	170	256	271	271	266	264	272	294	301	265	239	247	238	234	256	WSW	24		
23	259	250	176	203	247	213	209	200	186	149	157	129	119	118	115	103	119	89	103	119	121	124	124	119	131	SE	24		
24	128	134	130	138	140	189	242	226	233	247	251	258	263	265	275	283	289	280	280	276	285	290	290	294	265	W	24		
25	296	296	274	249	245	240	239	234	236	246	253	241	230	233	233	225	212	164	129	131	108	121	124	110	241	WSW	24		
26	110	105	113	86	104	122	65	95	155	150	206	254	256	247	253	224	183	126	97	32	220	57	337	220	144	SE	24		
27	212	224	236	271	242	N	287	275	320	319	309	314	316	309	316	329	139	271	301	293	289	287	298	300	302	WNW	23		
28	278	291	275	276	288	292	297	292	295	293	305	317	325	266	308	20	75	56	81	75	109	102	89	161	311	NW	24		
29	303	126	216	170	325	261	122	130	118	125	129	134	132	131	128	128	125	119	111	113	113	109	96	95	121	ESE	24		
30	90	91	89	93	99	92	109	102	106	84	97	128	111	109	106	135	140	143	133	127	120	94	107	110	106	ESE	24		
31	102	111	109	97	104	110	105	104	112	112	106	104	108	93	80	91	112	132	155	137	135	166	162	223	109	ESE	24		
HOURLY AVG	358	329	341	326	337	338	354	357	344	335	342	334	357	350	352	351	353	352	344	341	352	354	350	313					

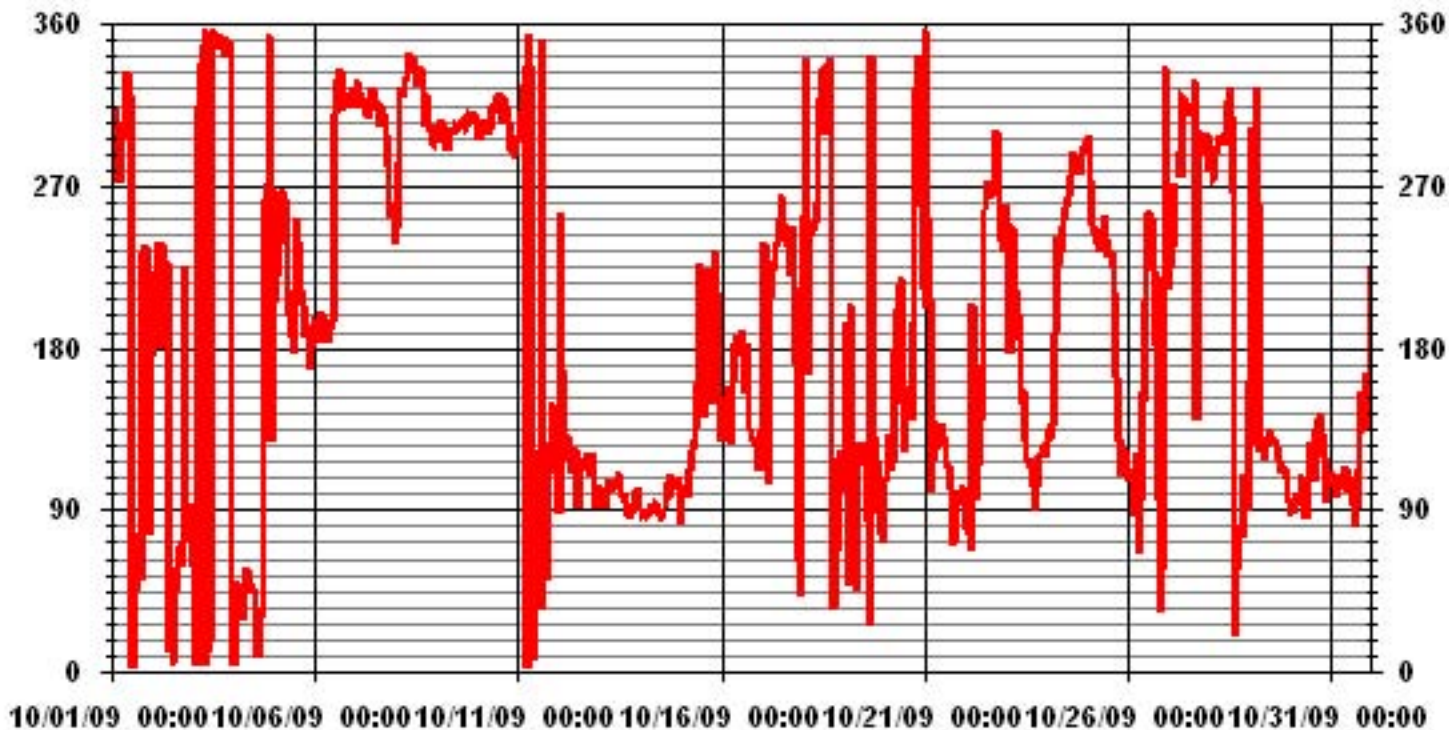
STATUS FLAG CODES

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:	743	HRS
STANDARD DEVIATION	95.60		AMD OPERATION UPTIME	99.9	%
			MONTHLY AVERAGE	338	DEG

01 Hour Averages



— LICA WDR DEG

Standard Deviation Wind Direction

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - COLD LAKE

OCTOBER 2009

STANDARD DEVIATION WIND DIRECTION (STDWDIR) hourly averages in degrees

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00
DAY																								
1	15	18	13	15	13	14	13	13	18	23	26	29	36	36	24	24	49	54	58	42	40	42	72	55
2	63	43	67	53	38	49	29	38	31	29	47	40	56	51	27	24	23	18	25	48	62	21	36	16
3	20	19	23	13	15	17	19	20	19	21	21	21	20	26	20	21	19	20	19	19	20	19	18	32
4	18	19	18	20	20	21	19	19	19	20	23	22	25	25	25	26	24	25	40	39	45	35	59	45
5	50	37	43	20	26	32	14	23	35	31	35	44	33	29	27	27	26	22	33	31	31	39	37	36
6	35	38	39	42	31	28	35	43	41	41	29	17	18	18	17	14	15	15	16	15	15	15	15	15
7	15	16	15	16	16	15	14	14	15	18	19	15	18	17	20	17	19	14	13	14	12	14	27	12
8	15	16	12	16	12	15	17	19	20	19	27	20	20	20	22	18	15	14	18	15	14	16	16	15
9	16	15	14	15	16	17	19	18	16	17	17	17	16	15	16	17	17	15	15	15	14	14	16	15
10	13	14	15	14	14	16	19	16	16	16	19	23	18	18	17	17	16	15	14	13	14	16	16	16
11	14	14	13	14	16	19	20	16	20	49	32	32	59	47	36	37	39	21	23	31	49	22	14	11
12	18	33	39	11	37	21	12	22	21	21	19	26	27	22	25	22	16	20	22	21	17	19	20	20
13	22	21	22	21	20	22	24	22	22	22	22	22	22	23	22	23	20	19	20	18	19	21	21	22
14	21	19	19	19	18	21	20	22	20	23	20	21	22	21	22	23	22	21	21	23	22	22	21	18
15	18	21	23	21	21	20	18	16	16	18	30	57	40	33	41	25	22	20	13	30	21	27	22	29
16	38	37	37	23	49	41	40	37	34	38	37	42	39	35	39	36	14	14	12	13	17	39	48	38
17	55	49	36	55	64	30	21	20	23	19	21	21	19	21	20	18	17	14	43	32	24	38	54	61
18	69	50	29	40	27	18	33	17	16	16	20	32	33	33	21	19	19	23	73	63	21	17	17	12
19	16	70	36	63	65	37	40	26	39	25	17	18	40	29	28	20	37	31	51	17	30	47	20	28
20	27	18	42	46	49	19	51	52	44	44	34	28	28	35	19	16	11	38	65	24	19	16	60	57
21	62	64	49	76	36	18	53	13	15	19	25	17	19	21	21	23	17	21	22	22	22	25	23	23
22	21	18	19	48	42	21	21	17	12	35	35	20	19	20	20	19	20	16	14	18	31	17	18	21
23	19	17	37	36	41	56	26	28	37	35	33	21	20	21	21	24	21	18	20	17	15	16	15	21
24	20	16	14	28	28	38	29	18	19	17	17	20	19	19	19	20	17	18	18	18	17	17	16	15
25	15	15	18	13	14	14	14	15	17	19	20	24	22	22	20	20	21	27	18	60	27	61	18	18
26	17	17	21	42	48	19	45	31	66	29	38	62	66	46	42	30	30	56	48	37	41	49	57	33
27	52	30	36	46	46	N	18	26	14	17	16	16	14	15	13	24	59	15	10	12	13	15	13	13
28	16	12	15	15	14	11	12	12	13	14	20	20	26	19	36	23	20	46	19	18	35	20	21	46
29	29	23	24	39	70	54	24	11	17	14	14	15	14	13	14	14	13	18	20	20	21	22	22	20
30	18	19	18	20	20	19	22	22	22	19	21	18	26	21	24	17	16	26	18	14	17	19	20	21
31	22	21	22	22	22	21	22	22	21	21	22	23	22	19	18	19	31	17	38	26	30	34	40	29

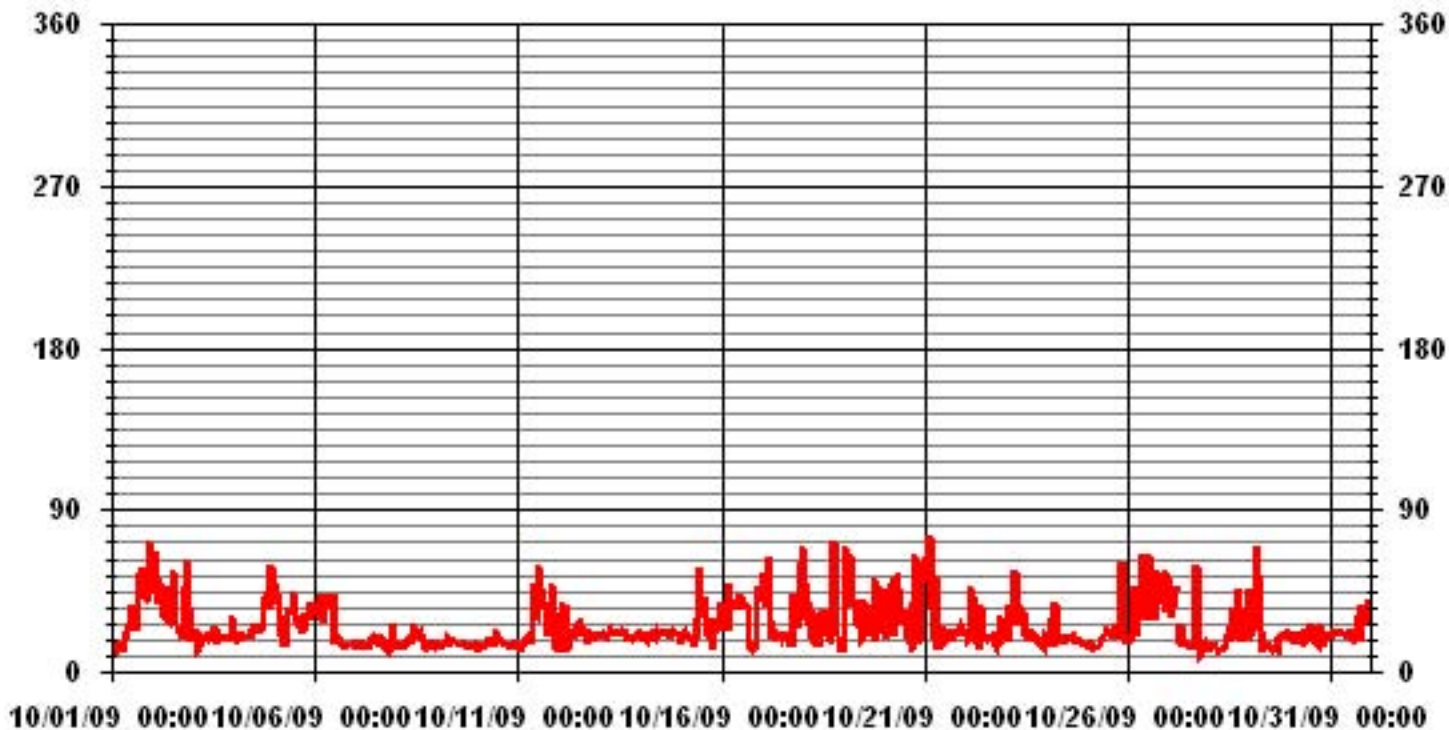
STATUS FLAG CODES

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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: 743 HRS

01 Hour Averages



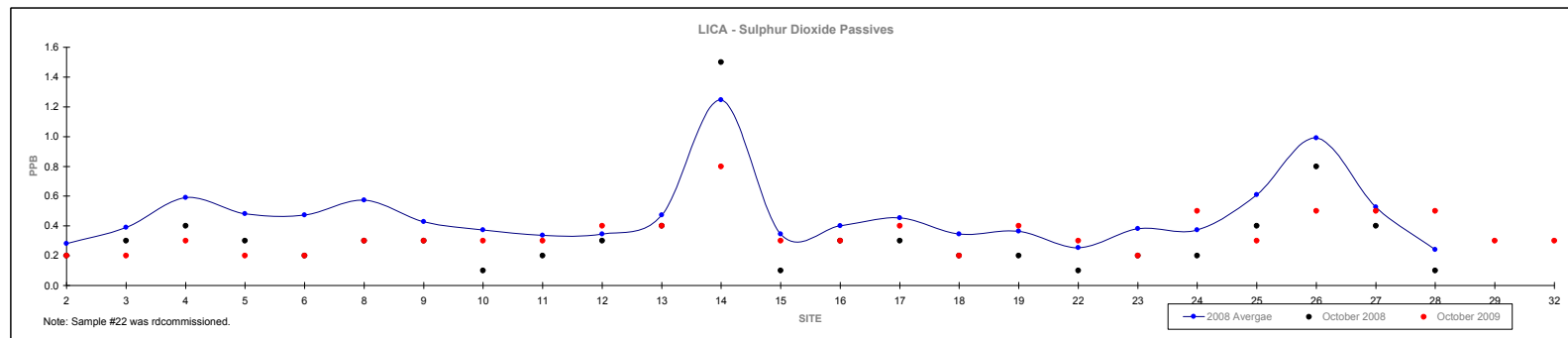
— LICA STDWDIR DEG

Non-Continuous Monitoring

Passive Summary Results for October 2009

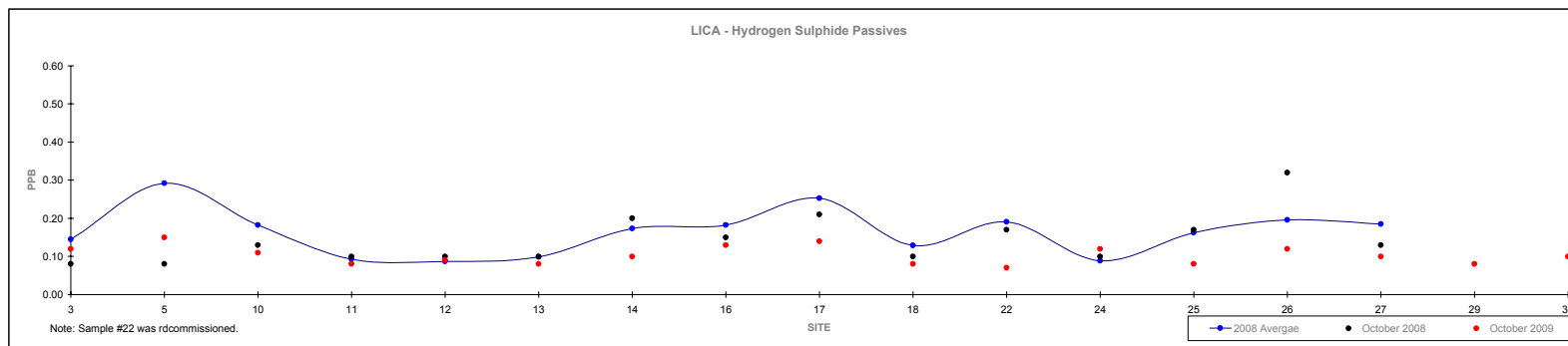
Lakeland Industry & Community Association

	Sulphur Dioxide ppb																												Reading	Site
	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					
Mean	0.3	0.4	0.6	0.5	0.5	0.6	0.4	0.4	0.3	0.3	0.5	1.2	0.3	0.4	0.5	0.3	0.4	0.4	0.3	0.4	0.4	0.6	1.0	0.5	0.2	0.3	-			
Minimum	0.1	0.1	0.2	0.3	0.2	0.3	0.1	0.1	0.1	0.1	0.1	0.7	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.4	0.6	0.3	0.1	0.2	VARIOUS			
Maximum	0.3	0.4	0.5	0.4	0.6	1.4	1.3	1.1	1.0	1.0	1.3	2.1	1.0	1.3	1.2	1.2	1.2	0.8	0.8	1.1	1.3	1.3	1.9	1.1	0.5	0.8	#14			



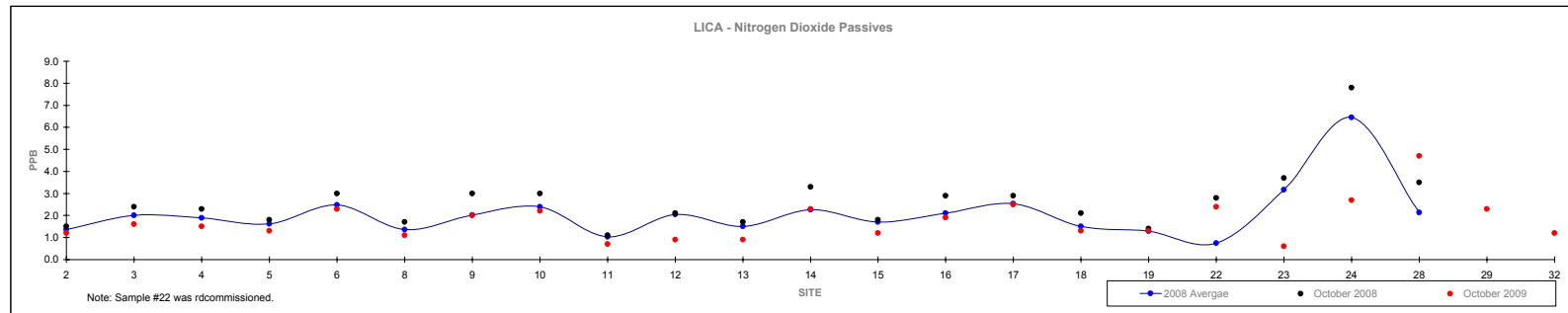
Passive Summary Results for October 2009 Lakeland Industry & Community Association

	Hydrogen Sulphide ppb															October 2009		
	3	5	10	11	12	13	14	16	17	18	22	24	25	26	27	29	Reading	Site
Mean	0.1	0.3	0.2	0.1	0.1	0.1	0.2	0.2	0.3	0.1	0.2	0.2	0.1	0.2	0.2	0.2	0.10	-
Minimum	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.07	#22
Maximum	0.3	1.0	0.5	0.2	0.2	0.2	0.3	0.4	0.5	0.2	0.3	0.4	0.2	0.3	0.3	0.3	0.15	#5



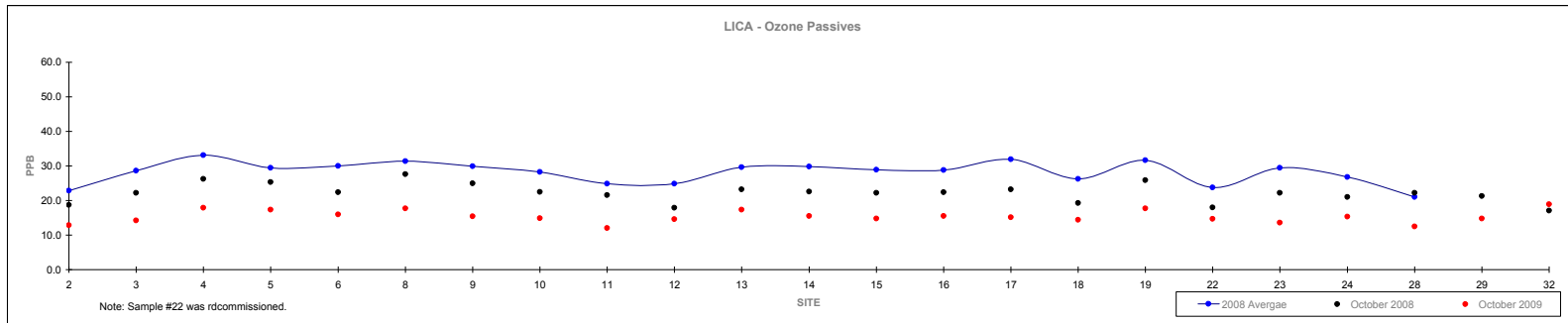
Passive Summary Results for October 2009 Lakeland Industry & Community Association

	Nitrogen Dioxide ppb																												October 2009	
	2	3	4	5	6	8	9	10	11	12	13	14	15	16	17	18	19	22	23	24	28	29	Reading	Site						
Mean	1.4	2.0	1.9	1.6	2.5	1.4	2.0	2.4	1.0	2.0	1.5	2.3	1.7	2.1	2.5	1.5	1.3	2.8	0.7	3.2	6.5	2.1	1.7	-						
Minimum	0.5	0.9	0.4	0.6	1.2	0.6	1.0	1.1	0.3	0.9	0.5	1.1	0.8	1.1	0.9	0.8	0.4	0.9	0.2	1.7	3.1	1.2	0.3	#23						
Maximum	2.9	4.3	4.8	4.3	4.8	2.9	4.4	5.5	2.3	6.0	3.4	3.8	4.4	4.4	5.1	3.2	3.2	6.8	2.8	6.6	13.2	3.5	4.7	#28						



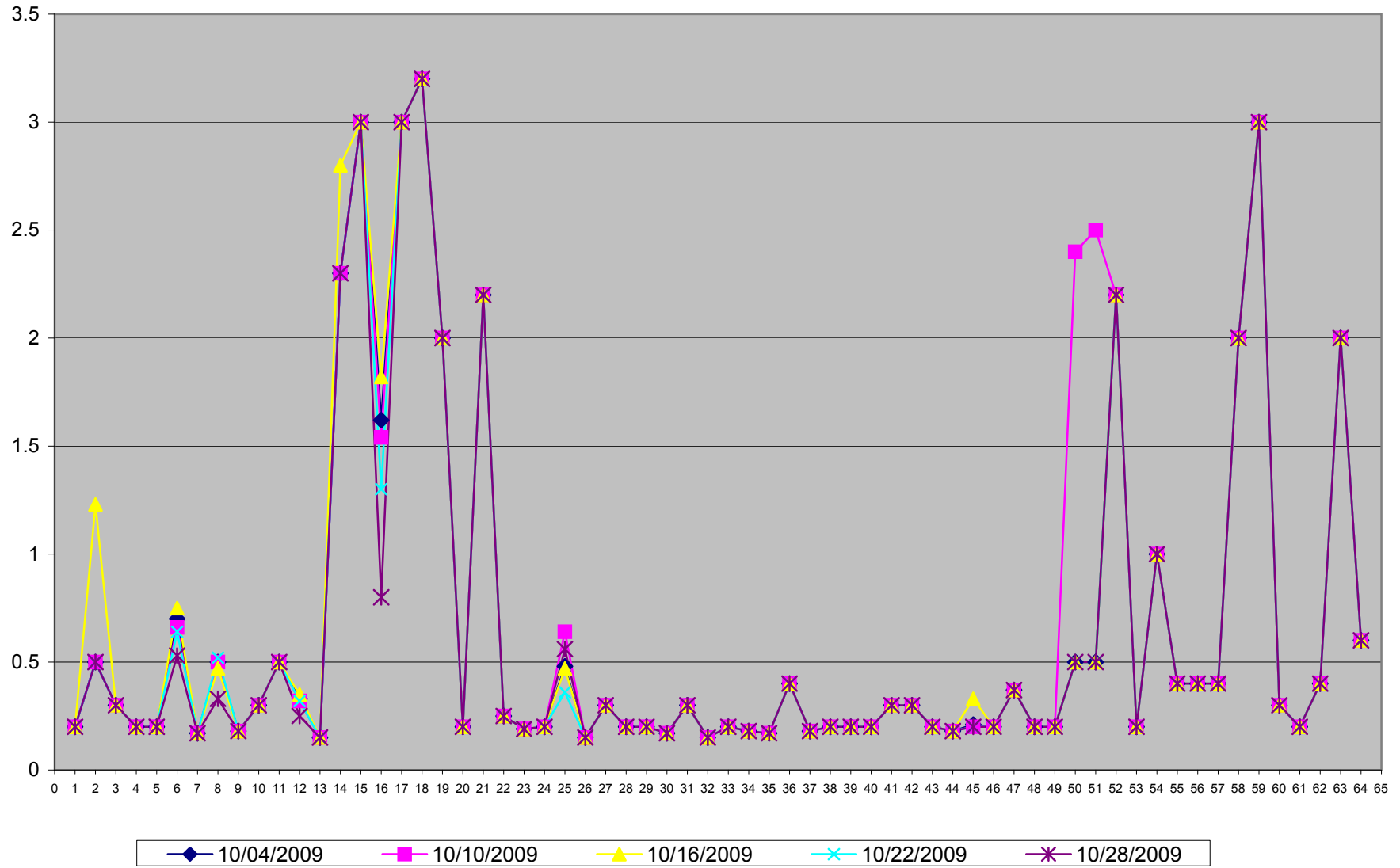
Passive Summary Results for October 2009 Lakeland Industry & Community Association

	1	2	3	4	5	7	8	9	10	11	2008 12	13	14	15	16	17	18	19	20	21	25	26	October 2009 Reading	Site
Mean	22.9	28.6	33.1	29.5	30.0	31.4	29.9	28.3	24.9	24.9	29.6	29.8	28.9	28.8	32.0	26.2	31.7	26.2	23.8	29.5	26.8	21.0	15.3	-
Minimum	12.8	17.8	20.8	17.8	18.2	18.5	19.3	16.3	12.6	14.1	17.2	17.8	16.9	18.8	16.6	13.7	20.9	15.7	13.4	17.7	15.5	17.7	12.0	#11
Maximum	39.1	47.6	54.5	46.9	47.6	47.2	45.4	44.3	40.1	41.9	48.2	43.9	50.3	47.7	52.9	45.4	46.8	40.4	36.9	51.1	45.9	26.8	18.9	#32



Volatile Organics

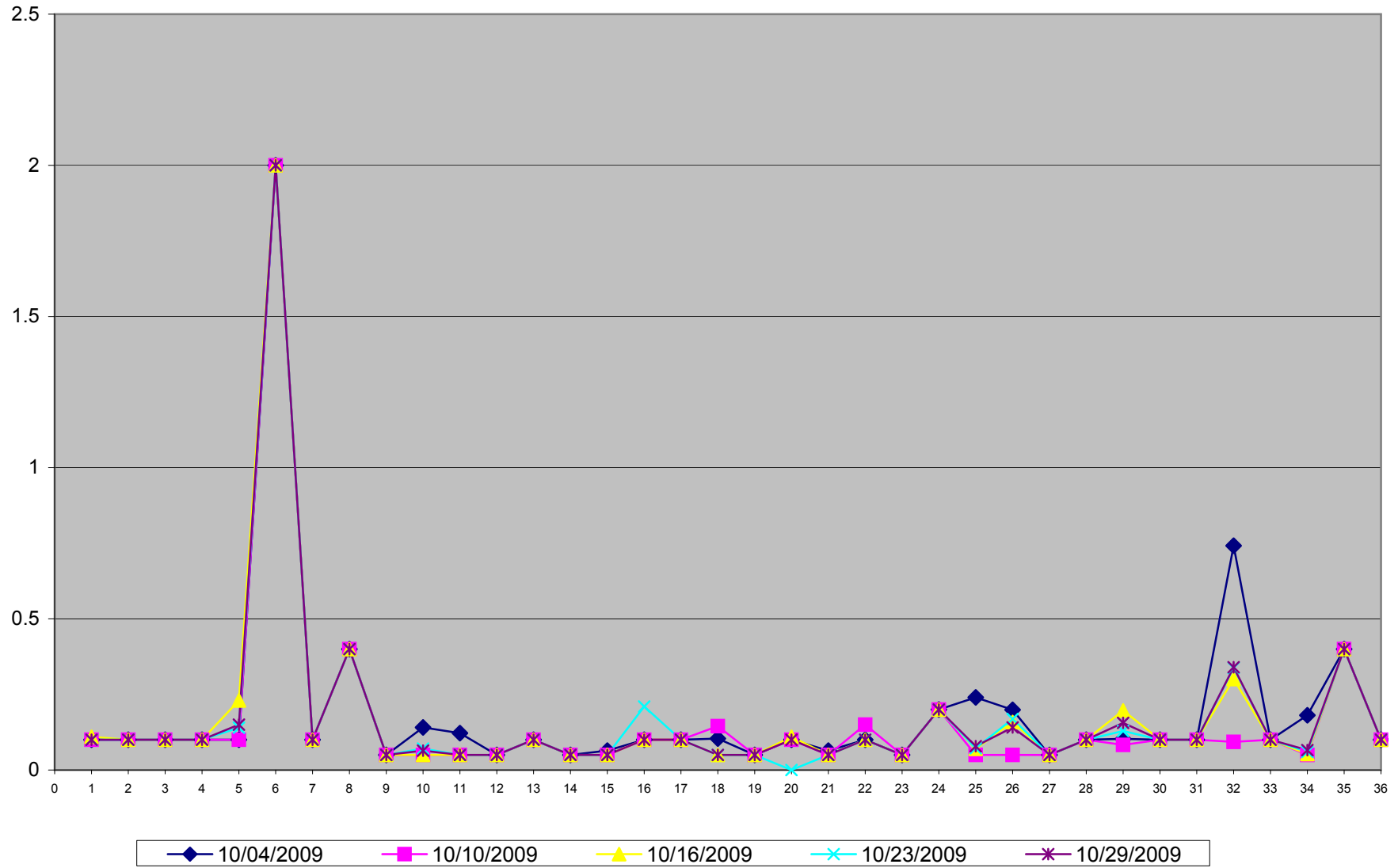
Volatile Organics in ppb Site: LICA - Cold Lake South



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	Ethylbenzene
15	2-Propanol	47	p+m-Xylene
16	2-Propanone	48	o-Xylene
17	Methyl 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

PAHs in ug 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,l)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

Cold Lake

Sulphur Dioxide

SO₂ Calibration Report

Station Information

Calibration Date	October 1, 2009	Previous Calibration	September 8, 2009
Company	Lakeland Community and Industry Association		
Plant / Location	LICA 1 - Cold Lake South		
Start Time (MST)	8:10	End Time (MST)	11:45
Reason:	Monthly Calibration		
Barometric Pressure	718 mmHg	Station Temperature	23 Deg C
Cal Gas	52.2 ppm	Cal Gas Expiry date	12/19/2010
DAS Output Voltage	0 - 10 Volts		

Equipment Information

Analyzer Make / Model:	Thermon 43i	S/N :	806528242	Method:	UV absorbtion
Converter Make / Model:	-	S/N :	-		
Calibrator Make / Model:	API 700	S/N :	831	Method:	Dilution
DAS Make / Model:	ESC 8832	S/N :	263		
Flow Meter:	API 700	S/N :	831		

Analyzer Settings

Before Calibration		After Calibration	
Concentration Range	0 - 500 ppb		
Sample Flow / Box Temp	450 ccm, 27.4 Deg C	449 ccm, 28.9 Deg C	
HVPS / Lamp Setting	-631.2, 745	-631.6, 745	
PMT / RxCell Temp	OK Deg C, 45.3 Deg C	OK Deg C, 45.1 Deg C	
Converter / IZS Temp	NA Deg C, 45.0 Deg C	NA Deg C, 45.0 Deg C	
Offset / Slope	5, 1.041	5, 1.041	

Calibration Data

Dilution Flow Rate	Source Gas Flow Rate	Calculated Concentration	Indicated Conc. (DAS)	Correction Factor
4998	0	0	0	N/A
4961	38.3	400	400	0.9998
4977	24	251	251	0.9980
4986	14.4	150	151	0.9955
4999	0	0	0	N/A
Sum of Least Squares				0.3476
New Correction Factor				0.9998

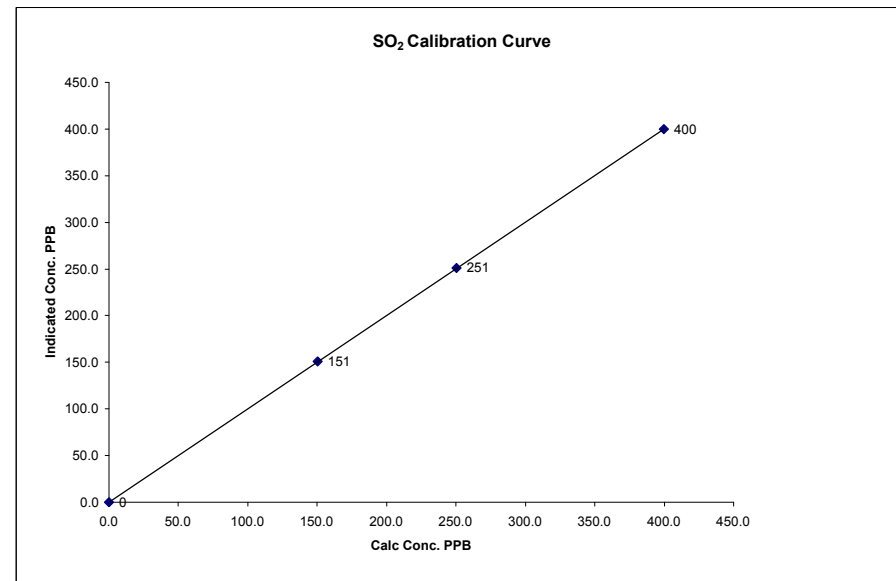
	Before Calibration	After Calibration
Auto Zero	0.2	0.2
Auto Span	399.0	394.0
Sample Lines Connected		YES
Percent Change from Previous Calibration		0.0%

Calibration Performed by: Shea Beaton

SO₂ Calibration Curve

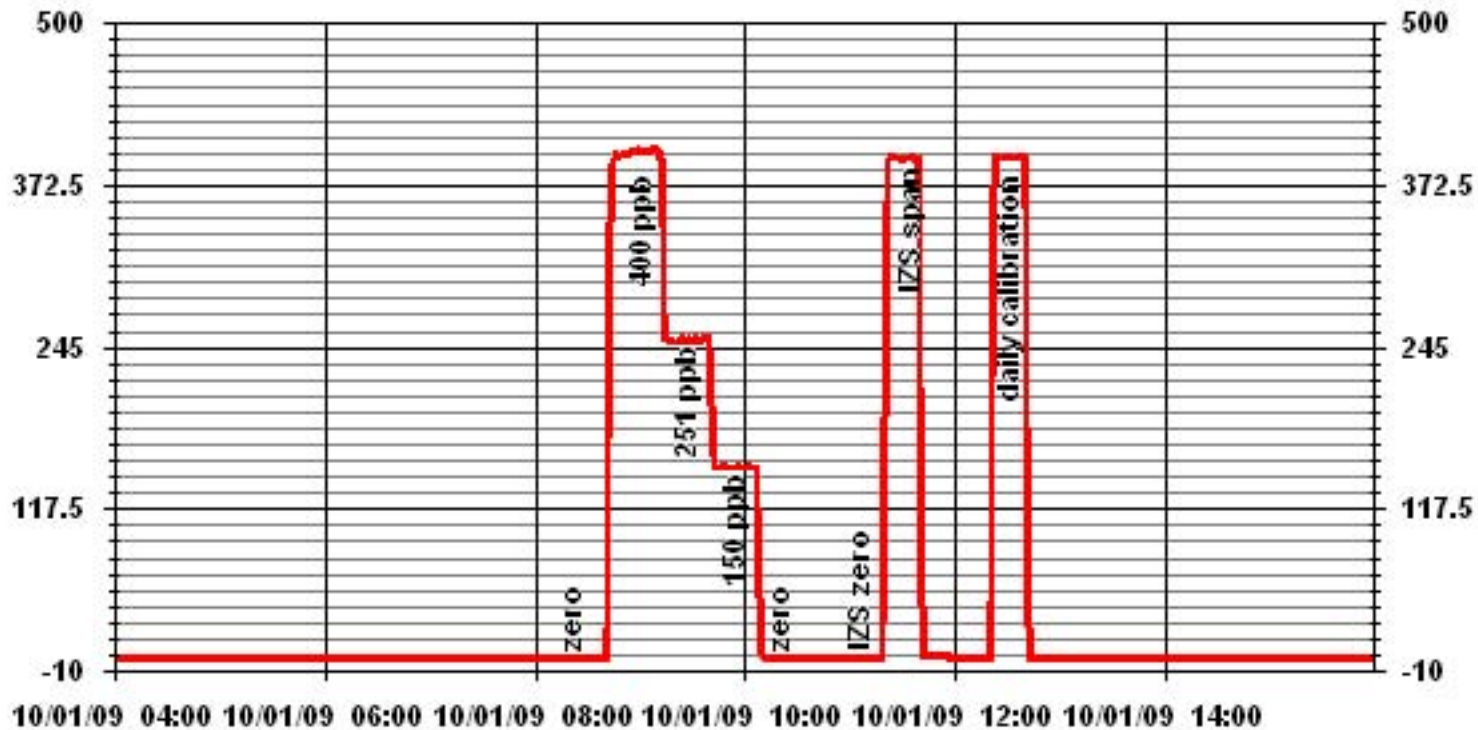
Calibration Date	October 1, 2009
Company	Lakeland Community and Industry Association
Plant / Location	LICA 1 - Cold Lake South
Start Time (MST)	8:10
End Time (MST)	11:45

Calculated Conc. ppb	Indicated Response ppb	Correction Factor	Correlation Coefficient Slope	(≥ 0.995)	0.999996
0	0	n/a	Intercept	(0.85 to 1.15)	1.000110
150	151	0.9955		(± 3% F.S.)	0.292549
251	251	0.9980			
400	400	0.9998			



Notes:

01 Minute Averages



Total Reduced Sulphur

**TRS Calibration Report
Station Information**

Calibration Date	October 1, 2009	Previous Calibration	September 8, 2009
Company	Lakeland Industry & Community Association		
Plant / Location	LICA 1 - Cold Lake South		
Start Time (MST)	11:00	End Time (MST)	14:09
Reason:	Monthly Calibration		
Barometric Pressure	718 mm Hg	Station Temperature	23 Deg C
Cal Gas	10.8 ppm	Cal Gas Expiry date	June 22, 2010
DAS Output Voltage	0 - 10 Volts		

Equipment Information

Analyzer Make / Model:	TEI 4501	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 :	263		
Flow Meter:	API 700	S/N :	831		

Analyzer Settings

Before Calibration			After Calibration		
Concentration Range	0 - 100 ppb				
Sample Flow / Box Temp	362 ccm	30.6 Deg C	363 ccm	31.7 Deg C	
HVPS / Lamp Setting	-622.7	757	-622.3	758	
PMT / RxCell Temp	OK Deg C	44.9 Deg C	OK Deg C	45.2 Deg C	
Converter / IZS Temp	849 Deg C	45.0 Deg C	849 Deg C	45.0 Deg C	
Offset / Slope	11	1.151	11.1	1.151	

Calibration Data

Dilution Flow Rate	Source Gas Flow Rate	Calculated Concentration	Indicated Conc. (DAS)	Correction Factor
4998	0	0	0	N/A
4961	37	80	80	0.9994
4979	20.8	45	45	0.9984
4990	11.6	25	25	1.0019
4999	0	0	0	N/A
Sum of Least Squares				0.9994
New Correction Factor				0.9994

Before Calibration

After Calibration

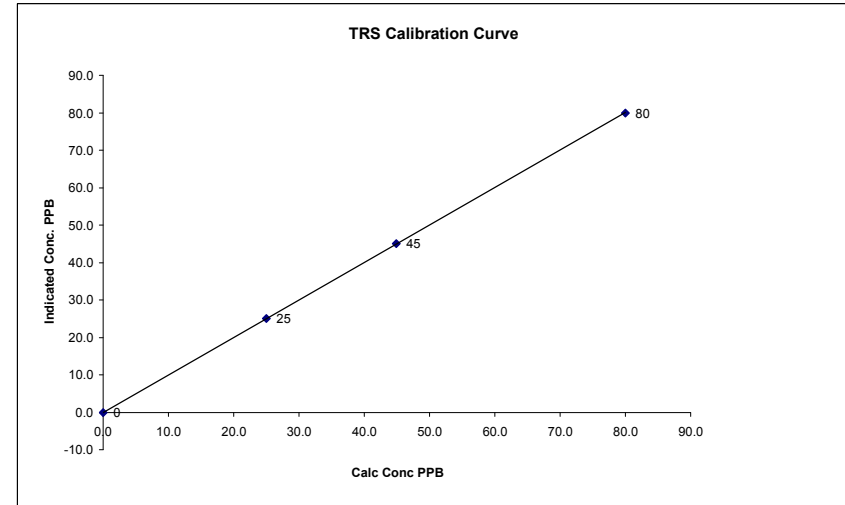
Auto Zero	-0.1	0.2
Auto Span	40.0	40.0
Sample Lines Connected	YES	
Percent Change from Previous Calibration	-1.3%	

Calibration Performed by: Shea Beaton

TRS Calibration Curve

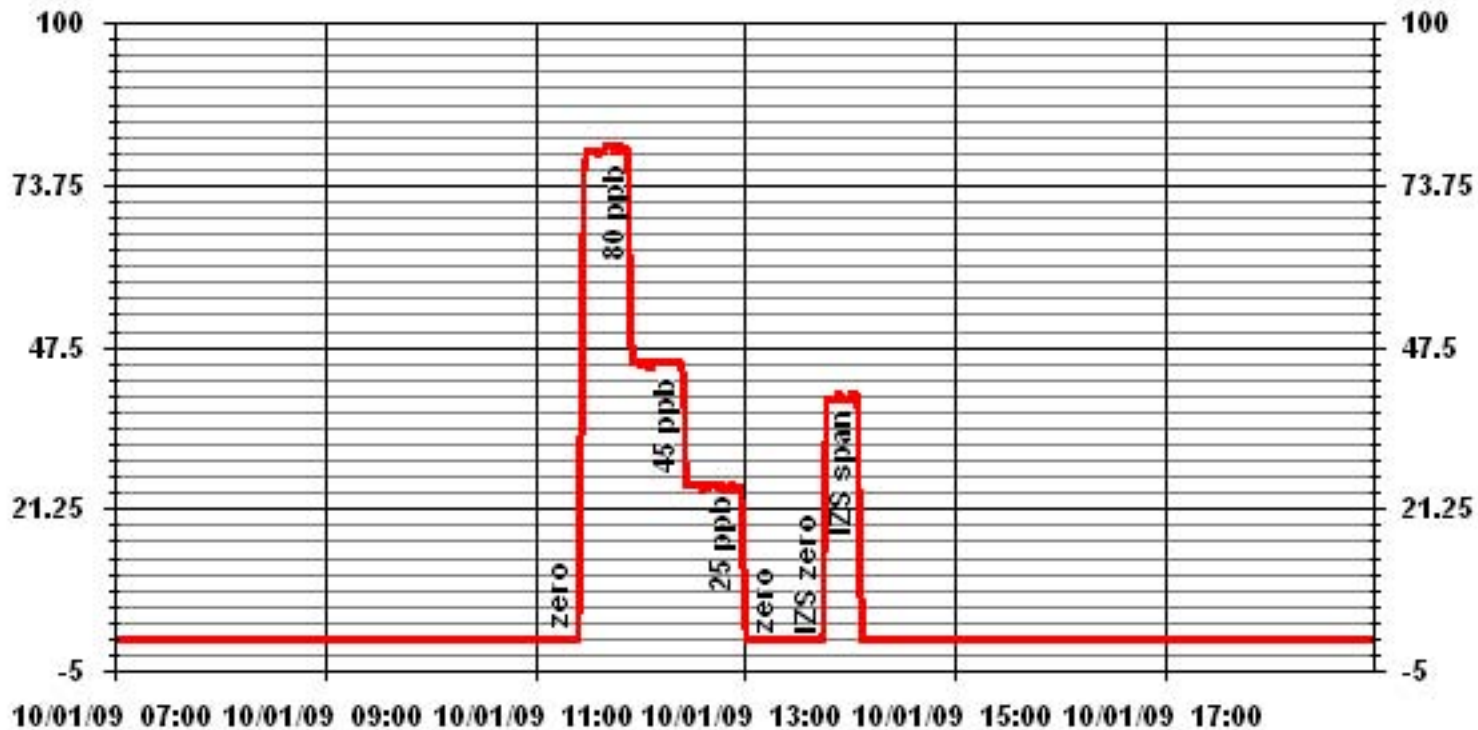
Calibration Date	October 1, 2009
Company	Lakeland Industry & Community Association
Plant / Location	LICA 1 - Cold Lake South
Start Time (MST)	11:00
End Time (MST)	14:09

Calculated Conc. ppb	Indicated Response ppb	Correction Factor	Correlation Coefficient (≥ 0.995)	0.999998
0	0	n/a	Slope (0.85 to 1.15)	1.000924
25	25	1.0019	Intercept (± 3% F.S.)	-0.017074
45	45	0.9984		
80	80	0.9994		



Notes: _____

01 Minute Averages



Total Hydrocarbons

THC Calibration Report

Station Information

Calibration Date:	October 1, 2009	Previous Calibration	September 25, 2009
Company:	Lakeland Industry and Community Association		
Plant / Location:	LICA1/Cold Lake		
Start Time (MST)	13:34	End Time (MST)	16:45
Reason:	Monthly Calibration		
Barometric Pressure:	718 mmHg	Station Temperature:	23 Deg C
Calibrator:	API 700	S/N:	831
Cal Gas Concentration:	299Prop/1019Meth	ppm	Cal Gas Expiry Date: 8/11/2011
DAS make & Model:	ESC 8832	S/N :	263
Output Voltage Range:	0 - 10 VDC		

Analyzer Information

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

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

Calibration Data

Dilution Flow	Source Gas Flow	Calculated Concentration	Indicated Concentration	Correction Factor
2998	0.0	0.0	0.0	N/A
2998	65.0	39.1	39.2	0.9968
2998	35.0	21.2	20.9	1.0166
2998	20.0	12.2	11.8	1.0340
2998	0	0.0	0.0	N/A
Correction Factor:				0.9968

Percent Change

Previous Calibration Correction Factor:	0.9993
Current Correction Factor Before Span Adjust:	0.9968
Percent Change:	0.3%

IZS Calibration Data

	Before Calibration	After Calibration
Auto Zero	0.0	0.0
Auto Span	35.2	35.3
Sample Lines Connected		YES

Cylinder Pressures

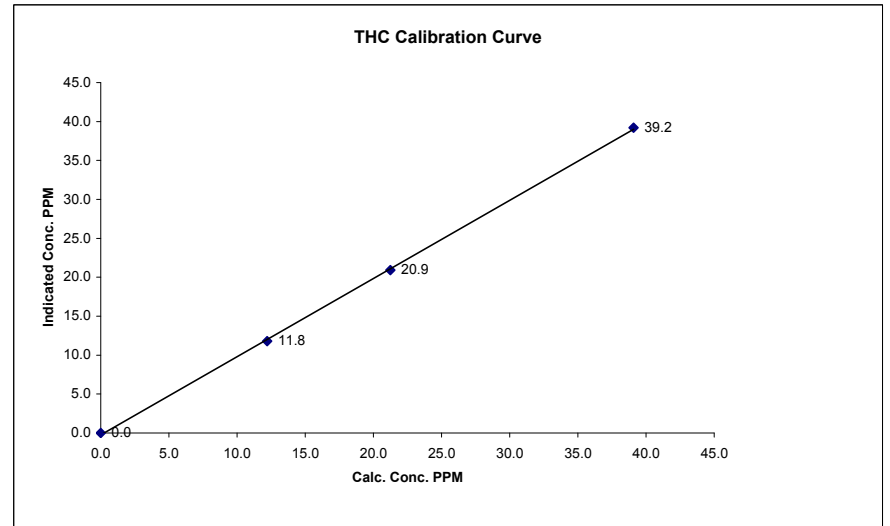
Span	750 psi
Hydrogen	1900 psi
Zero Air	unlimited psi Maxxam-owned API 701 zero air supply with catalytic oxidizer

Calibration Performed by: Shea Beaton

THC Calibration Curve

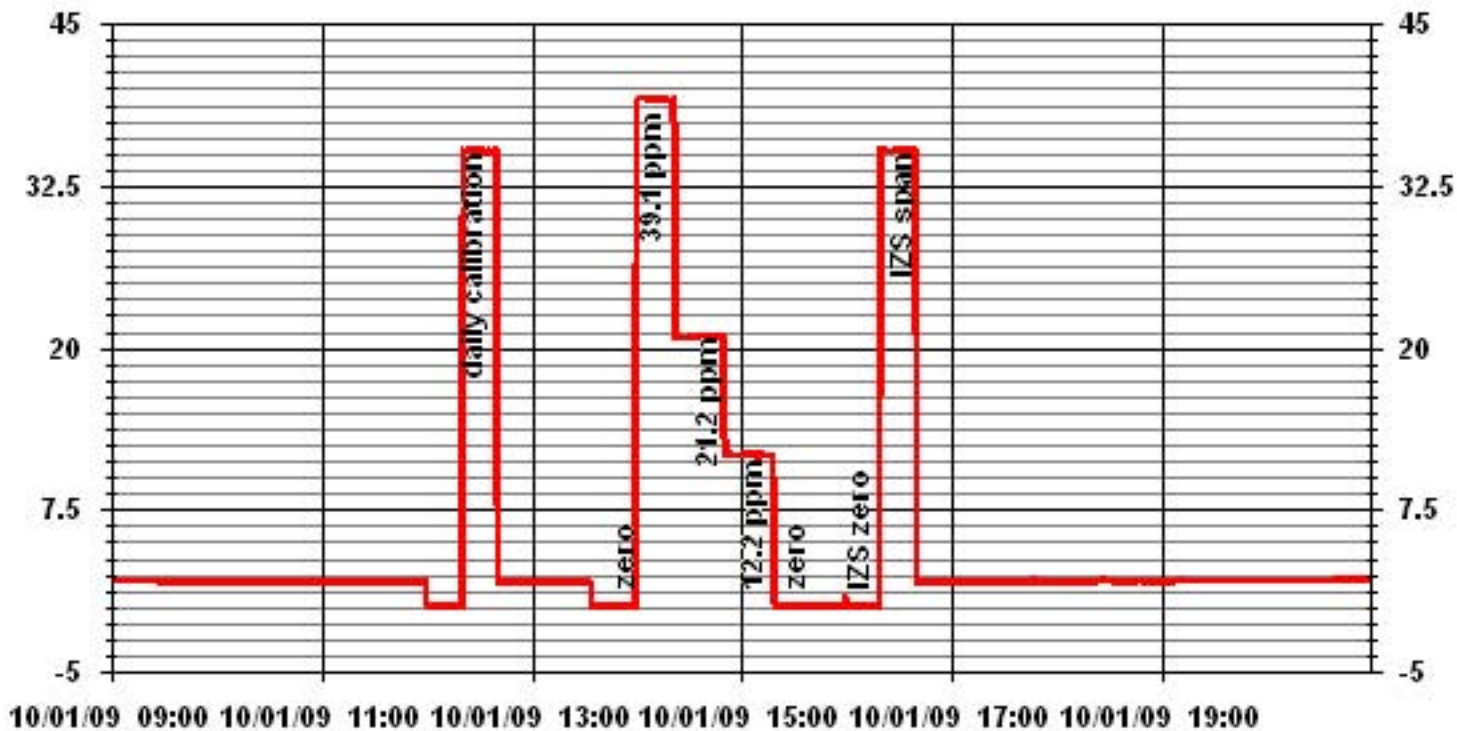
Calibration Date	October 1, 2009
Company	Lakeland Industry and Community Association
Plant / Location	LICA1/Cold Lake
Start Time (MST)	13:34
End Time (MST)	16:45

Calculated Conc. ppm	Indicated Response ppm	Correction Factor	Correlation Coefficient Slope	(≥ 0.995)	0.999778
0.0	0.0		Intercept	(0.85 to 1.15)	1.004869
12.2	11.8	1.0340		(± 3% F.S.)	-0.243904
21.2	20.9	1.0166			
39.1	39.2	0.9968			



Notes:

01 Minute Averages



Particulate Matter 2.5

TEOM® 1405F Audit

	<u>Station</u>		<u>Audit Transfer Standard</u>
Date:	October 1, 2009	Make/Model:	Bios DC2
Station Name:	LICA 1	Serial Number:	738
Location:	Cold Lake South	Cell s/n:	1625
Operator:	LICA	Thermometer s/n:	14-990A

	<u>Sampler</u>		<u>Set-up and current Sampler readings</u>
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 (%)	19%
Firmware Ver.	1.28	K _o Factor	14578.0
Parameter	PM 2.5 (with FDMS)	Temp (°C)	2.5
		Press (ATM)	0.948

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 <0.10ug	0.009	Warnings	Intermittant Vacuum
Pump Vacuum	0.40		Pressure Warning
Temperature/Pressure			
Measured Temp (± 2 °C)	2.8	Δ °C	-0.3
Measured Press (± 0.01atm)	0.945	ΔATM	0.003
Flow Audit			
Indicated Main Flow (l/min)	3.00	Main Flow Drift (±10.0%)	2.34%
Measured Main Flow (l/min)	3.11	Flow Adjusted to Measured?	YES
Indicated Bypass Flow (l/min)	13.67	Bypass Flow Drift (±10.0%)	2.70%
Measured Bypass Flow (l/min)	13.96	Flow Adjusted to Measured?	YES
Leak Check		Instrument Setup	
Main (< 0.15 l/min)	0.01	Flow Control = Active	
Aux (< 0.15 l/min)	0.00	Report Conditions = Standard (25.0 C and 1atm)	
K_o Factor			
Measured	NA		
K _o Difference (± 2.5%)	NA		

Start Time: 7:15 **Finish Time:** 7:45

Sample Inlet Cleaned: NO **New Filters Installed:** NO
New Filter Loading %: NA

Comments: Teom audited, filter changed, and inlet cleaned Sept 25, 09. That day a firmware upgrade was performed; since there has been an intermittant Vacuum Pressure warning. The calculation method for vacuum pressure was changed by the last firmwar upgrade. Will contact manufacturer for advise.

Auditor/s: Shea Beaton

Nitrogen Dioxide

NOx - NO- NO2 Calibration Report

Station Information

Calibration Date	October 1, 2009		Previous Calibration	September 8, 2009	
Company	Lakeland Ind & Comm. Assoc.		Plant/Location	LICA 1 - Cold Lake South	
Start Time (MST)	8:10		End Time (MST)	14:51	
Reason:	Monthly Calibration				
Barometric Pressure	718	mmHg	Station Temperature	22.0	Deg C
Cal Gas Concentration	NOx 51.8	ppm	NO 51.6	ppm	Cal Gas Expiry date 12/19/2010
DAS Output Voltage	0 - 1	Volts	Chart Rec. Output	NA	Volts

Equipment Information

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

Analyzer Settings

		Before Calibration			After Calibration		
Concentration Range		0 - 1000			ppb		
Sample Flow/Conv. Temp	727	ccm	317	Deg C	724	ccm	317
Ozone Flow / Vacuum	OK	ccm	179.7	mmHg	OK	ccm	179.8
HVPS	-820	Volts			-820	Volts	
Rx/ Temp / PMT Temp	49.5	Deg C	-2.5	Deg C	49.8	Deg C	-2.4
Box Temp / IZS Temp	27.1	Deg C	OK	Deg C	27.8	Deg C	OK
Offset	3.7	NOx	3.5	NO	3.7	NOx	3.5
Slope	1.004	NOx	0.945	NO	1.007	NOx	0.926

Gas Phase Titration Calibration Data

Dilution Air Flow Rate	Source Flow Rate	O3 Set Point	Calculated Concentration		Indicated Concentration			Correction Factor	
			NOx	NO	NOx	NO	NO2	NOx	NO
4998.0	0.0	N/A	0	0	0	0	0	N/A	N/A
4965.0	38.8	N/A	402	400	410	409	1	0.9797	0.9783
4965.0	38.8	N/A	402	400	403	400	3	0.9967	1.0003
4982.0	24.3	N/A	251	250	251	249	1	1.0017	1.0059
4993.0	14.6	N/A	151	150	151	150	1	1.0002	1.0030
5003.0	0.0	N/A	0	0	1	1	0	N/A	N/A
Converter Efficiency									
4963.0	38.8	N/A	402	400	402	400	2	N/A	
4963.0	38.8	300	402	400	399	120	279	99%	
4963.0	38.8	200	402	400	399	201	199	99%	
4963.0	38.8	100	402	400	400	299	101	98%	
4964.0	38.8	N/A	402	400	400	398	2	N/A	
5005.0	0	N/A	0	0	0	1	0	N/A	N/A

Linearity OK?	Yes	No	Sum of Least Squares	0.9983	1.0019
Flows Checked on-site?	Yes	No	New Correction Factor	0.9967	1.0003
			Average Converter Efficiency	99%	

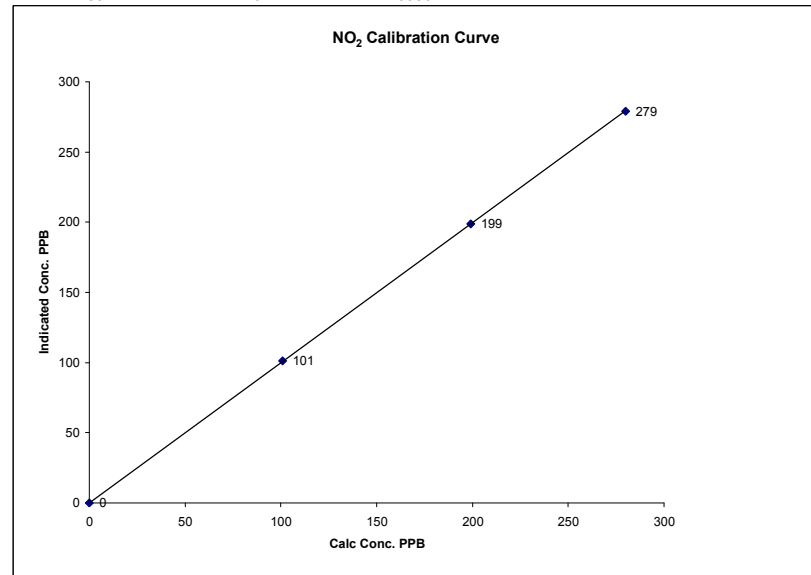
		Before Calibration			After Calibration		
Auto Zero	0.6	NOx	0.7	NO2	0.6	NOx	0.4
Auto Span	383.0	NOx	380.0	NO2	375.0	NOx	372.0
Sample Lines Connected	YES						
Percent Change from Previous Calibration		NOx	2.3%	NO	2.3%		

Calibration Performed by: Shea Beaton

NO2 Calibration Curve

Calibration Date	October 1, 2009	
Company	Lakeland Ind & Comm. Assoc.	
Plant / Location	LICA 1 - Cold Lake South	
Start Time (MST)	8:10	End Time (MST) 14:51

Calculated Conc.	Indicated Response	Correction Factor	Correlation Coefficient	(≥ 0.995)	0.999992
0	0	N/A	Slope	(0.85 to 1.15)	0.996939
101	101	1.0000	Intercept	(± 3% F.S.)	0.19386
199	199	1.0000			
280	279	1.0036			

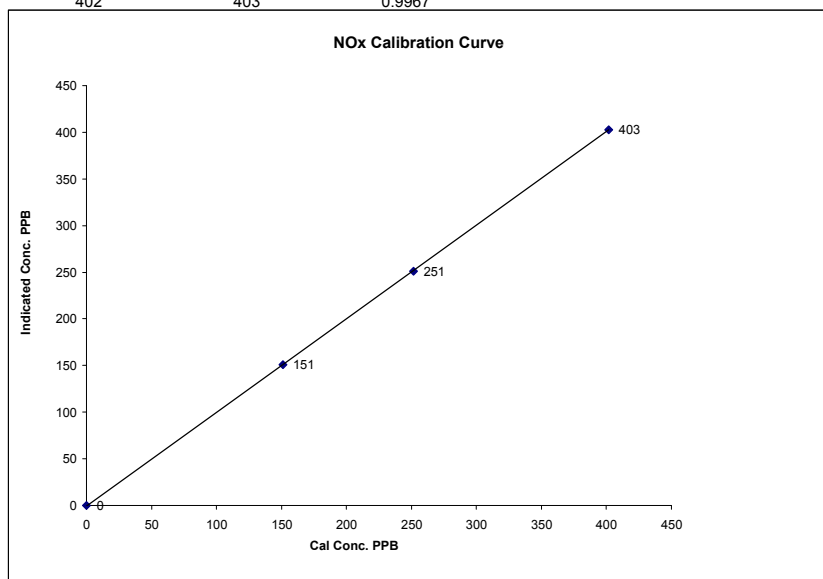


Notes: _____

NOx Calibration Curve

Calibration Date October 1, 2009
 Company Lakeland Ind & Comm. Assoc.
 Plant / Location LICA 1 - Cold Lake South
 Start Time (MST) 8:10 End Time (MST) 14:51

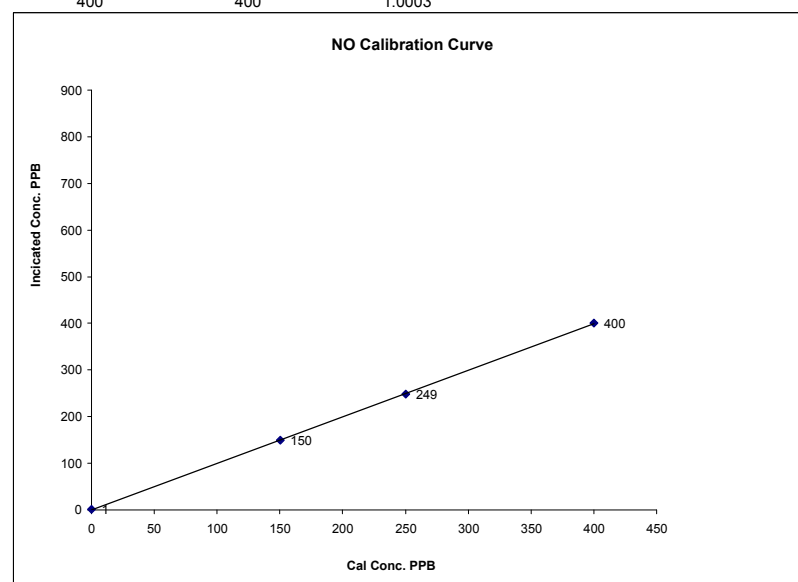
Calculated Conc.	Indicated Response	Correction Factor	Correlation Coefficient	(≥ 0.995)	0.999988
ppb	ppb		Slope	(0.85 to 1.15)	1.002892
0	0	N/A	Intercept	(± 3% F.S.)	-0.36153
151	151	1.0002			
251	251	1.0017			
402	403	0.9967			



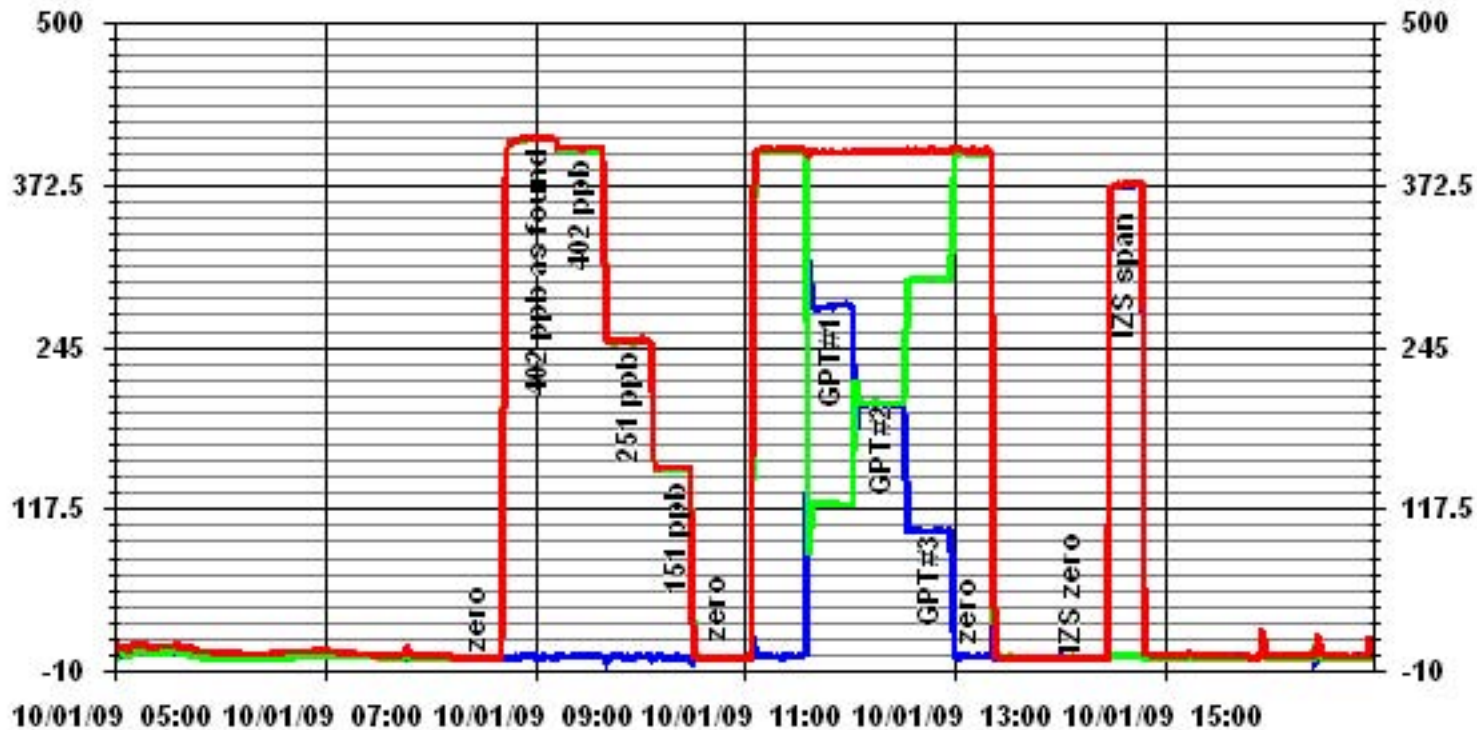
NO Calibration Curve

Calibration Date October 1, 2009
 Company Lakeland Ind & Comm. Assoc.
 Plant / Location LICA 1 - Cold Lake South
 Start Time (MST) 8:10 End Time (MST) 14:51

Calculated Conc.	Indicated Response	Correction Factor	Correlation Coefficient	(≥ 0.995)	0.999974
ppb	ppb		Slope	(0.85 to 1.15)	1.001930
0	1	N/A	Intercept	(± 3% F.S.)	-3.7173
150	150	1.0030			
250	249	1.0059			
400	400	1.0003			

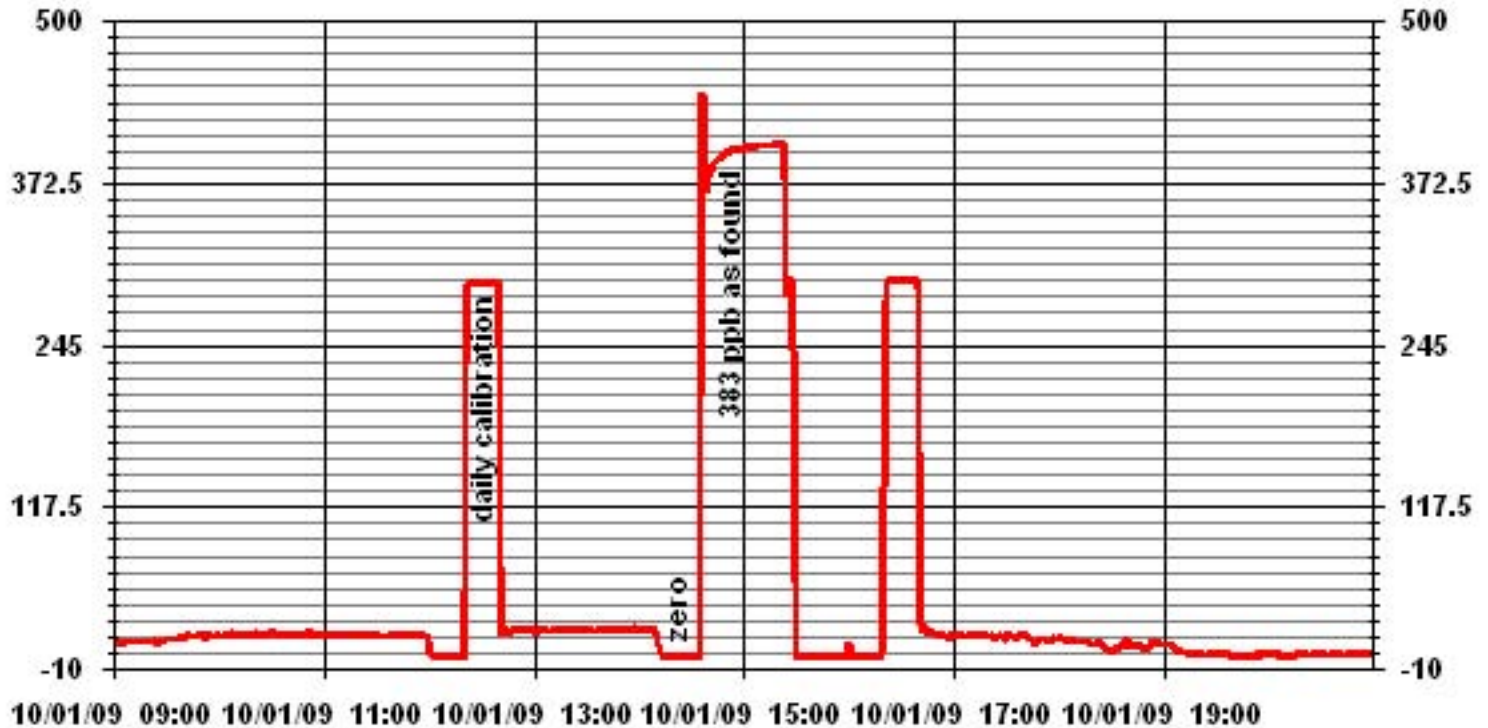


01 Minute Averages



Ozone

01 Minute Averages



O₃ Calibration Report

Station Information

Calibration Date	October 2, 2009	Previous Calibration	September 8, 2009
Company	Lakeland Industry & Community Association		
Plant / Location	LICA 1 - Cold Lake South		
Start Time (MST)	6:50	End Time (MST)	10:17
Reason:	Post Repair Calibration		
Barometric Pressure	718 mm Hg	Station Temperature	23 Deg C
DAS Output Voltage	0 - 10 Volts		

Equipment Information

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

Analyzer Settings

	Before Calibration		After Calibration	
Concentration Range	0 - 500 ppb			
Bench Temp/ Pressure	26.8 Deg C		28.2 Deg C	
O ₃ Set Level	29%		29%	
Bench Lamp/O3 Lamp				
Sample Flow A/B	0.742 LPM	0.756 LPM	0.74 LPM	0.755 LPM
Offset / Slope	0.7	1.049	0.7	0.991

Calibration Data

Dilution Flow Rate	Ozone Set Point	Calculated Concentration	Indicated Conc. (DAS)	Correction Factor
4998	0	0	0	N/A
4998	400	383	405	0.9457
4998	400	383	383	1.0000
4998	200	193	192	1.0052
4998	100	96	94	1.0213
4998	0	0	0	N/A
Sum of Least Squares				N/A
New Correction Factor				1.0000

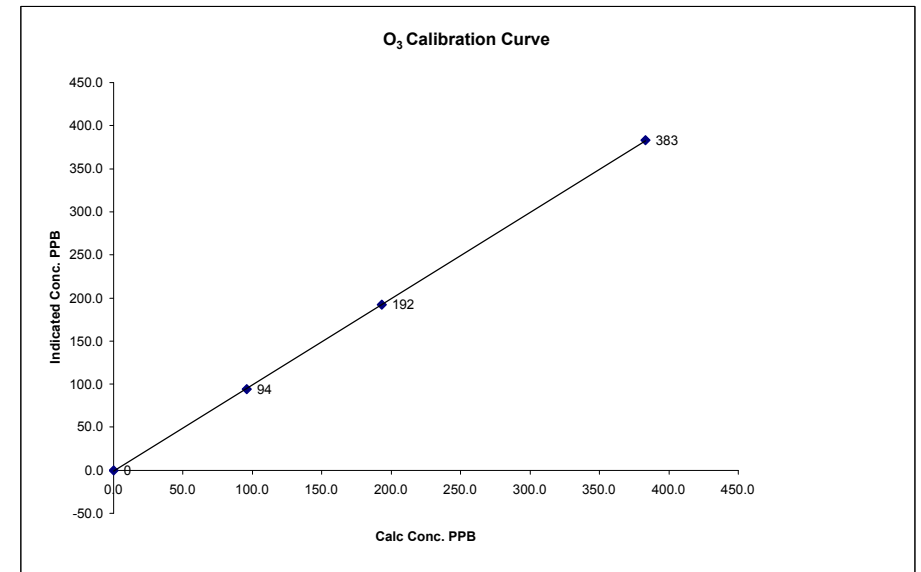
	Before Calibration	After Calibration
Auto Zero	-0.6	0.2
Auto Span	296.0	279.0
Sample Lines Connected		YES
Percent Change from Previous Calibration		5.7%

Calibration Performed by: Shea Beaton

O₃ Calibration Curve

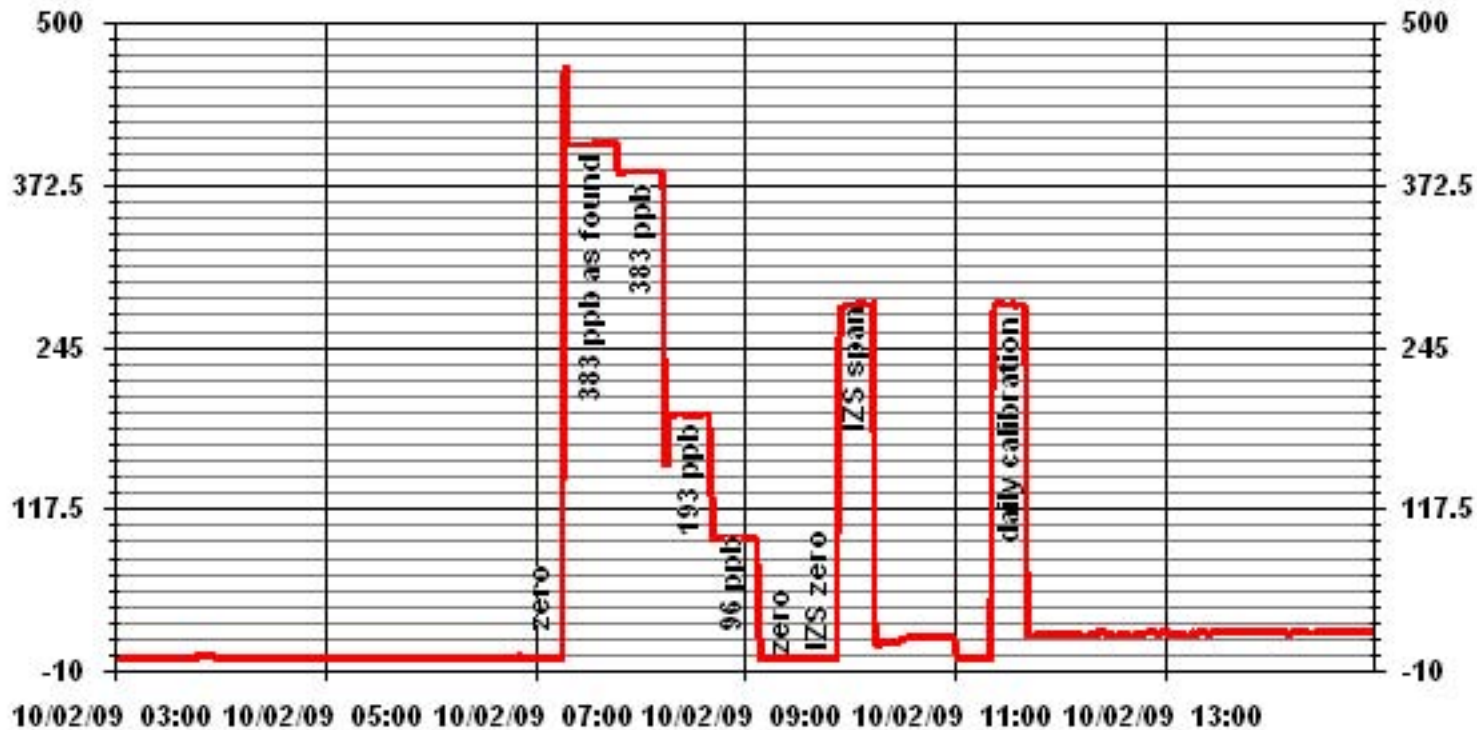
Calibration Date	October 2, 2009
Company	Lakeland Industry & Community Association
Plant / Location	LICA 1 - Cold Lake South
Start Time (MST)	6:50
End Time (MST)	10:17

Calculated Conc. ppb	Indicated Response ppb	Correction Factor	Correlation Coefficient Slope (≥ 0.995)	Intercept (± 3% F.S.)
0	0	n/a	0.999968	1.001483
96	94	1.0213		
193	192	1.0052		
383	383	1.0000		-0.999097



Notes: Bench Temp=53.5C, O3 lamp temp=67.6C. Pump was rebuilt yesterday.

01 Minute Averages



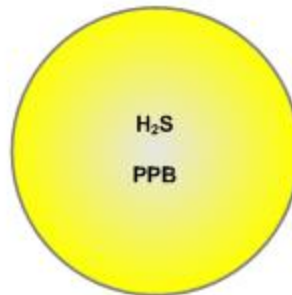
Passive Bubble Maps

Lakeland Industry & Community Association H₂S Passive Bubble Map

OCTOBER 2009

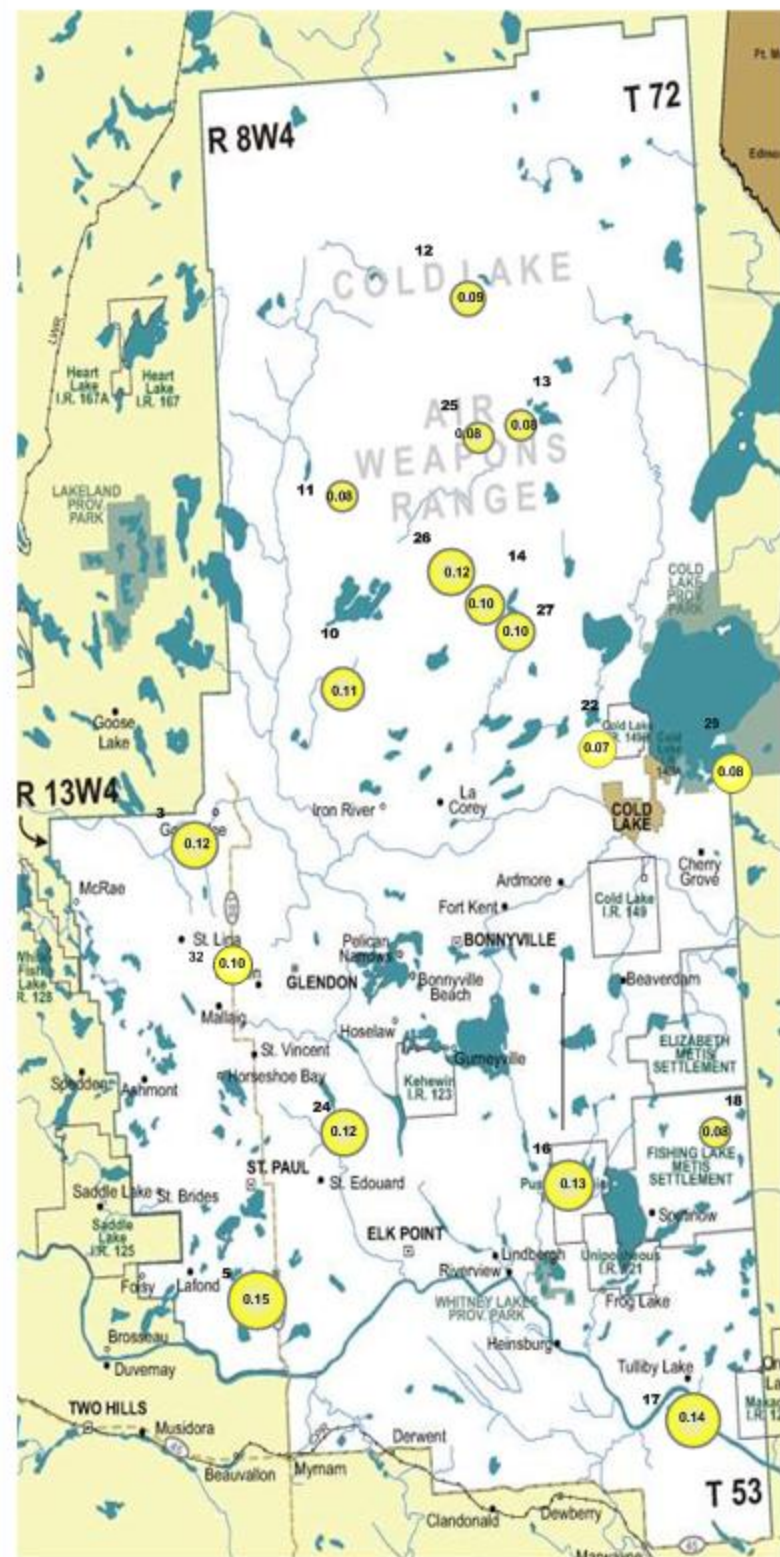
PASSIVE STATIONS

		DUPLICATE
3 – Therien	0.11 PPB	0.12 PPB
5 – Lake Eliza	0.15 PPB	NA
10 – La Corey	0.11 PPB	NA
11 – Wolf Lake	0.08 PPB	0.07 PPB
12 – Foster Creek	0.09 PPB	NA
13 – Primrose	0.07 PPB	0.08 PPB
14 – Maskwa	0.10 PPB	NA
16 – Frog Lake	0.14 PPB	0.12 PPB
17 – Clear Range	0.14 PPB	NA
18 – Fishing Lake	0.08 PPB	0.08 PPB
22 – Cold Lake South	0.07 PPB	NA
24 – Fort George	0.12 PPB	NA
25 – Burnt Lake	0.07 PPB	0.08 PPB
26 – Mahihkan	0.12 PPB	NA
27 – Mahkeses	0.09 PPB	0.11 PPB
29 – Cold Lake South 2	0.08 PPB	NA
32 – St. Lina	0.10 PPB	NA



Summary

Minimum : 0.07 PPB – Cold Lake South
Maximum: 0.15 PPB –Lake Eliza
Average: 0.10 PPB *Includes Duplicates

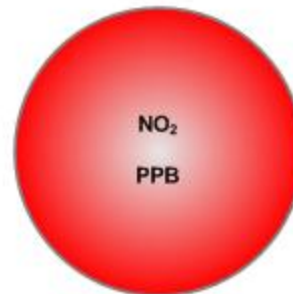


Lakeland Industry & Community Association NO₂ Passive Bubble Map

OCTOBER 2009

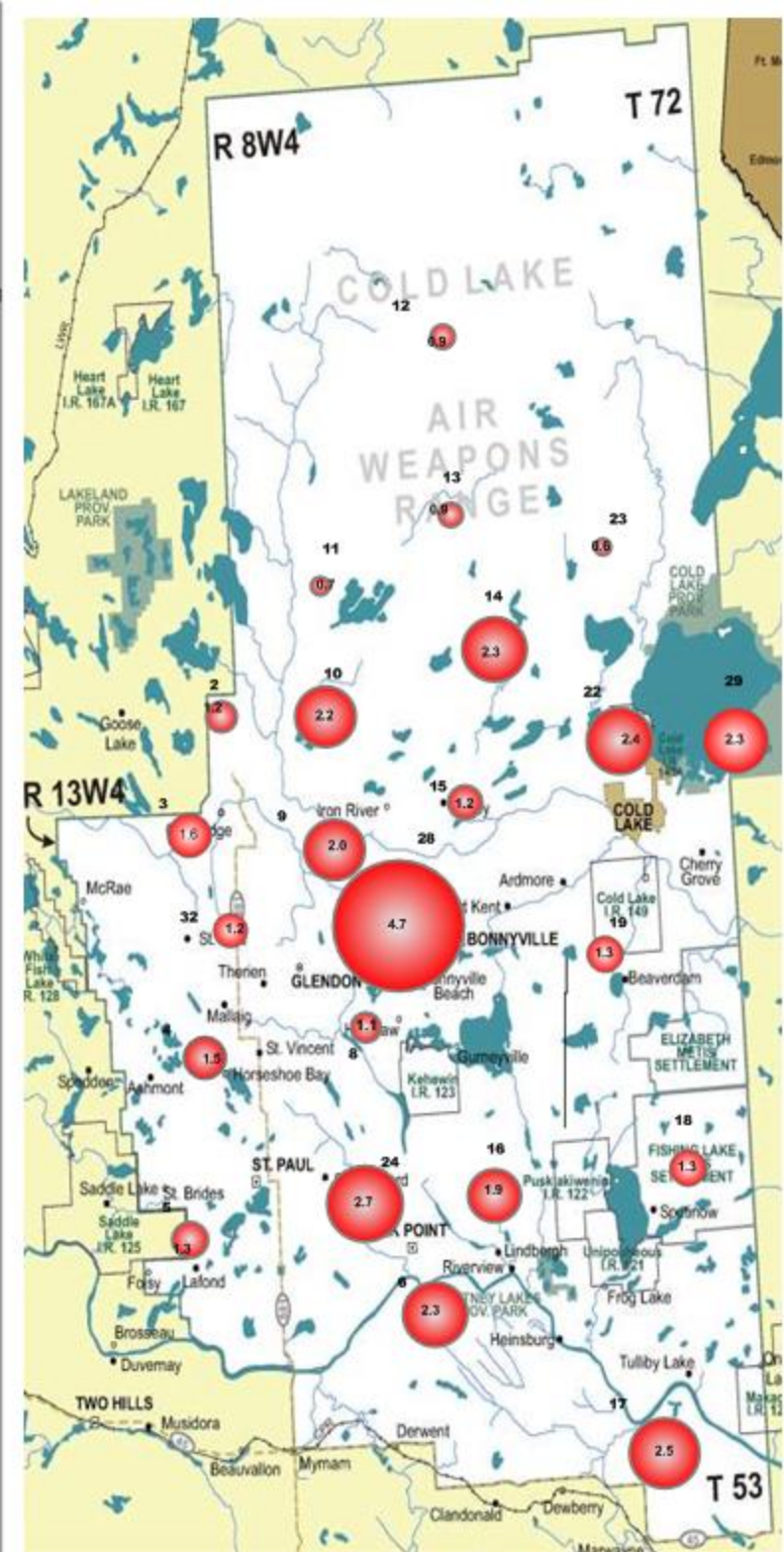
PASSIVE STATIONS

		DUPLICATE
2 – Sand River	1.2 PPB	1.2 PPB
3 – Therien	1.6 PPB	NA
4 – Flat Lake	1.3 PPB	1.6 PPB
5 – Lake Eliza	1.3 PPB	NA
6 – Telegraph Creek	2.4 PPB	2.2 PPB
8 – Muriel-Kehewin	1.1 PPB	NA
9 – Dupre	1.9 PPB	2.0 PPB
10 – La Corey	2.2 PPB	NA
11 – Wolf Lake	0.6 PPB	0.8 PPB
12 – Foster Creek	0.9 PPB	NA
13 – Primrose	0.8 PPB	0.9 PPB
14 – Maskwa	2.3 PPB	NA
15 – Ardmore	1.1 PPB	1.3 PPB
16 – Frog Lake	1.9 PPB	NA
17 – Clear Range	2.5 PPB	2.4 PPB
18 – Fishing Lake	1.3 PPB	NA
19 – Beaverdam	1.2 PPB	1.4 PPB
22 – Cold Lake South	2.4 PPB	NA
23 – Medley-Martineau	0.6 PPB	NA
24 – Fort George	2.6 PPB	2.8 PPB
28 – Town of Bonnyville	4.7 PPB	NA
29 – Cold Lake South 2	2.3 PPB	2.3 PPB
32 – St. Lina	1.2 PPB	NA



Summary

Minimum : 0.6 PPB – Medley-Martineau
Maximum: 4.7 PPB – Town of Bonnyville
Average: 1.7 PPB *Includes Duplicates

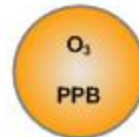


Lakeland Industry & Community Association O₃ Passive Bubble Map

OCTOBER 2009

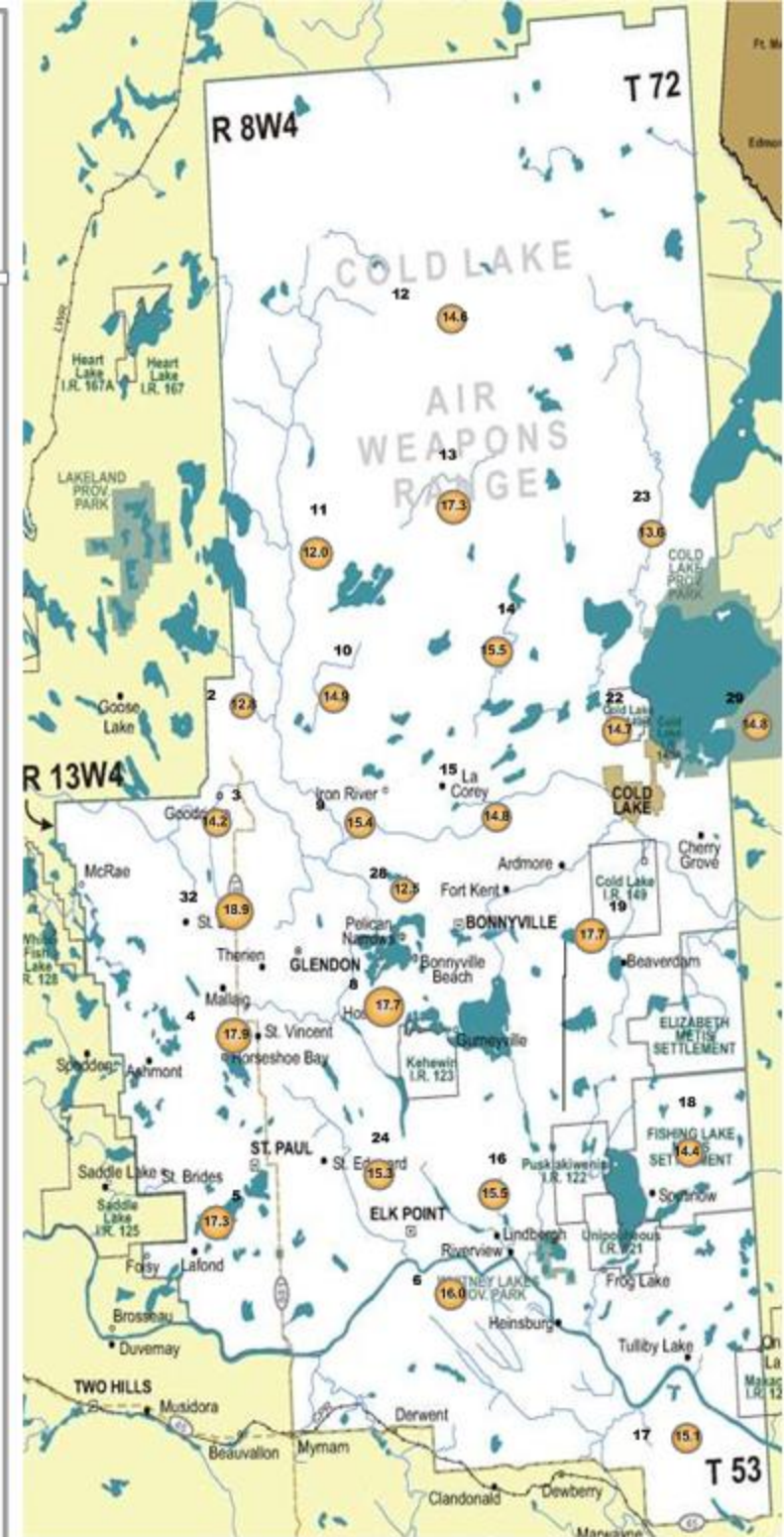
PASSIVE STATIONS

		DUPLICATE
2 – Sand River	12.7 PPB	12.9 PPB
3 – Therien	14.2 PPB	NA
4 – Flat Lake	18.8 PPB	16.9 PPB
5 – Lake Eliza	17.3 PPB	NA
6 – Telegraph Creek	16.1 PPB	15.8 PPB
8 – Muriel-Kehewin	17.7 PPB	NA
9 – Dupre	15.2 PPB	15.6 PPB
10 – La Corey	14.9 PPB	NA
11 – Wolf Lake	12.0 PPB	11.9 PPB
12 – Foster Creek	14.6 PPB	NA
13 – Primrose	17.1 PPB	17.5 PPB
14 – Maskwa	15.5 PPB	NA
15 – Ardmore	14.1 PPB	15.4 PPB
16 – Frog Lake	15.5 PPB	NA
17 – Clear Range	15.1 PPB	15.1 PPB
18 – Fishing Lake	14.4 PPB	NA
19 – Beaverdam	18.3 PPB	17.1 PPB
22 – Cold Lake South	14.7 PPB	NA
23 – Medley-Martineau	13.6 PPB	NA
24 – Fort George	15.0 PPB	15.5 PPB
28 – Town of Bonnyville	15.5 PPB	NA
29 – Cold Lake South 2	14.9 PPB	14.6 PPB
32 – St. Lina	18.9 PPB	NA



Summary

Minimum : 12.0 PPB – Wolf Lake
 Maximum: 18.9 PPB – St. Lina
 Average: 15.3 PPB *Includes Duplicates



Lakeland Industry & Community Association SO₂ Passive Bubble Map

OCTOBER 2009

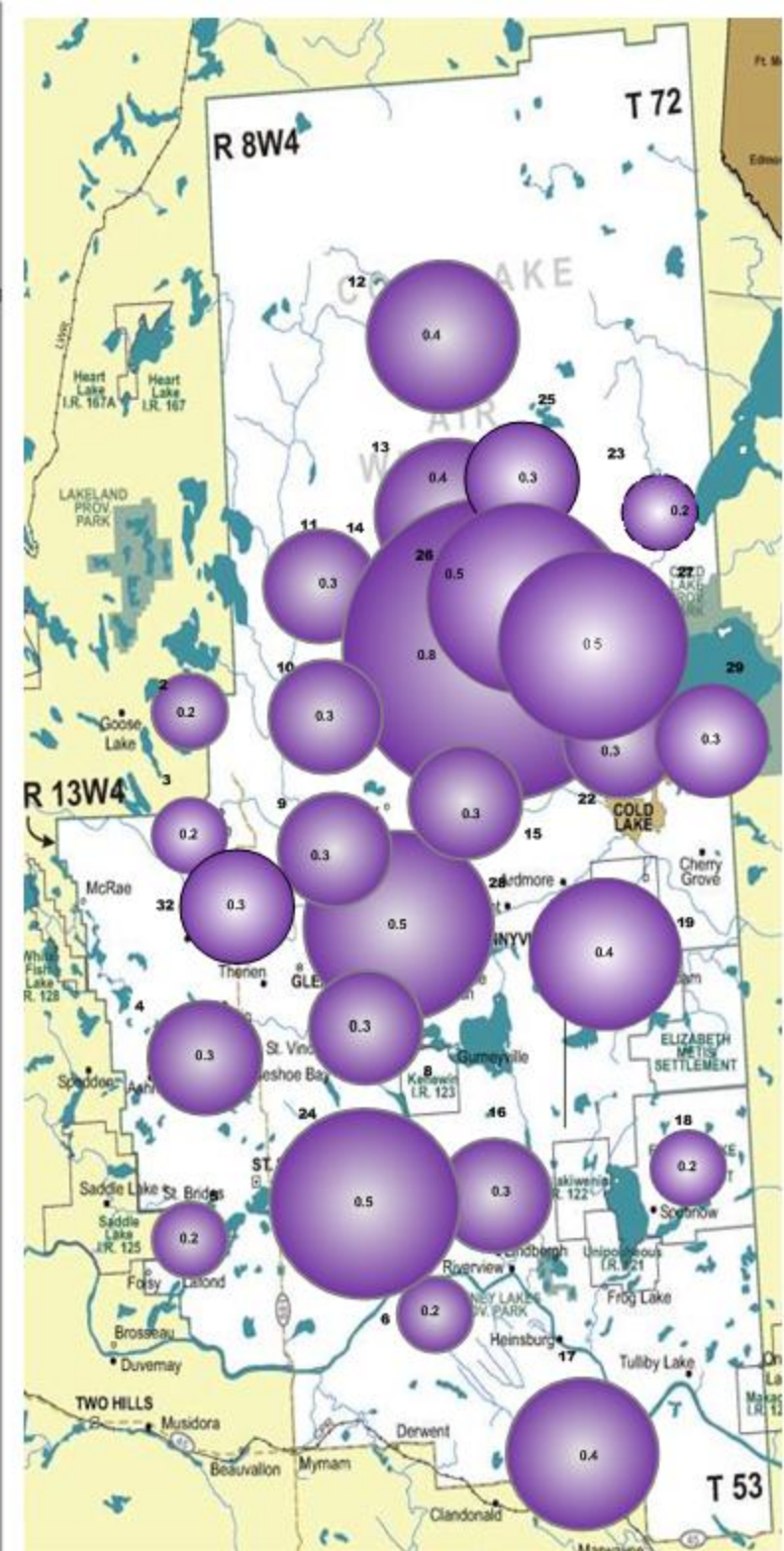
PASSIVE STATIONS

		DUPLICATE
2 – Sand River	0.1 PPB	0.2 PPB
3 – Therien	0.2 PPB	NA
4 – Flat Lake	0.3 PPB	0.3 PPB
5 – Lake Eliza	0.2 PPB	NA
6 – Telegraph Creek	0.2 PPB	0.2 PPB
8 – Muriel-Kehewin	0.3 PPB	NA
9 – Dupre	0.3 PPB	0.3 PPB
10 – La Corey	0.3 PPB	NA
11 – Wolf Lake	0.3 PPB	0.3 PPB
12 – Foster Creek	0.4 PPB	NA
13 – Primrose	0.3 PPB	0.4 PPB
14 – Maskwa	0.8 PPB	NA
15 – Ardmore	0.3 PPB	0.3 PPB
16 – Frog Lake	0.3 PPB	NA
17 – Clear Range	0.4 PPB	0.3 PPB
18 – Fishing Lake	0.2 PPB	NA
19 – Beaverdam	0.3 PPB	0.4 PPB
22 – Cold Lake South	0.3 PPB	NA
23 – Medley-Martineau	0.2 PPB	NA
24 – Fort George	0.4 PPB	0.5 PPB
25 – Burnt Lake	0.3 PPB	NA
26 – Mahikan	0.4 PPB	0.6 PPB
27 – Mahkeses	0.5 PPB	NA
28 – Town of Bonnyville	0.5 PPB	0.5 PPB
29 – Cold Lake South 2	0.3 PPB	NA
32 – St. Lina	0.3 PPB	NA



Summary

Minimum : 0.2 PPB – Various
 Maximum: 0.8 PPB –Maskwa
 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	09/29/09	08:30	11/01/09	10:55	
2A (Dup)	SO ₂ /NO ₂ /O ₃	09/29/09	08:30	11/01/09	10:55	
3	H ₂ S/SO ₂ /NO ₂ /O ₃	09/29/09	07:45	11/01/09	10:10	
3A (Dup)	H ₂ S	09/29/09	07:45	11/01/09	10:10	
4	SO ₂ /NO ₂ /O ₃	09/30/09	12:15	11/02/09	13:45	
4A (Dup)	SO ₂ /NO ₂ /O ₃	09/30/09	12:15	11/02/09	13:45	
5	H ₂ S/SO ₂ /NO ₂ /O ₃	09/30/09	11:40	11/02/09	13:05	
5A (Dup)	NA	NA	NA	NA	NA	
6	SO ₂ /NO ₂ /O ₃	09/30/09	10:10	11/02/09	11:30	
6A (Dup)	SO ₂ /NO ₂ /O ₃	09/30/09	10:10	11/02/09	11:30	
8	SO ₂ /NO ₂ /O ₃	09/30/09	13:10	11/02/09	14:35	Short O3 sample, used blank
8A (Dup)	NA	NA	NA	NA	NA	
9	SO ₂ /NO ₂ /O ₃	09/29/09	17:15	11/01/09	08:30	
9A (Dup)	SO ₂ /NO ₂ /O ₃	09/29/09	17:15	11/01/09	08:30	
10	H ₂ S/SO ₂ /NO ₂ /O ₃	09/29/09	09:20	11/01/09	11:55	
10A (Dup)	NA	NA	NA	NA	NA	
11	H ₂ S/SO ₂ /NO ₂ /O ₃	09/29/09	09:55	11/01/09	12:35	
11A (Dup)	H ₂ S/SO ₂ /NO ₂ /O ₃	09/29/09	09:55	11/01/09	12:35	
12	H ₂ S/SO ₂ /NO ₂ /O ₃	09/29/09	11:10	11/01/09	13:50	
12A (Dup)	NA	NA	NA	NA	NA	
13	H ₂ S/SO ₂ /NO ₂ /O ₃	09/29/09	12:40	11/01/09	15:30	
13A (Dup)	H ₂ S/SO ₂ /NO ₂ /O ₃	09/29/09	12:40	11/01/09	15:30	
14	H ₂ S/SO ₂ /NO ₂ /O ₃	09/29/09	13:30	11/01/09	16:35	
14A (Dup)	NA	NA	NA	NA	NA	
15	SO ₂ /NO ₂ /O ₃	09/29/09	16:40	11/01/09	07:20	
15A (Dup)	SO ₂ /NO ₂ /O ₃	09/29/09	16:40	11/01/09	07:20	
16	H ₂ S/SO ₂ /NO ₂ /O ₃	09/30/09	08:30	11/02/09	09:50	
16A (Dup)	H ₂ S	09/30/09	08:30	11/02/09	09:50	

ID	SAMPLER	START		END		NOTES
		DATE	TIME	DATE	TIME	
17	H ₂ S/SO ₂ /NO ₂ /O ₃	09/30/09	09:15	11/02/09	10:40	
17A (Dup)	SO ₂ /NO ₂ /O ₃	09/30/09	09:15	11/02/09	10:40	
18	H ₂ S/SO ₂ /NO ₂ /O ₃	09/30/09	07:45	11/02/09	09:05	
18A (Dup)	H ₂ S	09/30/09	07:45	11/02/09	09:05	
19	SO ₂ /NO ₂ /O ₃	09/30/09	06:45	11/02/09	08:00	
19A (Dup)	SO ₂ /NO ₂ /O ₃	09/30/09	06:45	11/02/09	08:00	
22	H ₂ S/SO ₂ /NO ₂ /O ₃	09/29/09	15:45	11/02/09	17:15	
22A (Dup)	NA	NA	NA	NA	NA	
23	SO ₂ /NO ₂ /O ₃	09/29/09	14:50	11/01/09	17:55	
23A (Dup)	NA	NA	NA	NA	NA	
24	H ₂ S/SO ₂ /NO ₂ /O ₃	09/30/09	10:55	11/02/09	12:20	
24A (Dup)	SO ₂ /NO ₂ /O ₃	09/30/09	10:55	11/02/09	12:20	
25	H ₂ S/SO ₂	09/29/09	12:20	11/01/09	15:05	
25A (Dup)	H ₂ S	09/29/09	12:20	11/01/09	15:05	
26	H ₂ S/SO ₂	09/29/09	13:15	11/01/09	16:10	
26A (Dup)	SO ₂	09/29/09	13:15	11/01/09	16:10	
27	H ₂ S/SO ₂	09/29/09	13:50	11/01/09	16:55	
27A (Dup)	H ₂ S	09/29/09	13:50	11/01/09	16:55	
28	SO ₂ /NO ₂ /O ₃	09/30/09	14:00	11/01/09	07:55	Short O3 sample, used blank
28A (Dup)	SO ₂	09/30/09	14:00	11/01/09	07:55	
29	H ₂ S/SO ₂ /NO ₂ /O ₃	09/29/09	15:55	11/02/09	17:05	
29A (Dup)	NO ₂ /O ₃	09/29/09	15:55	11/02/09	17:05	
32	H ₂ S/SO ₂ /NO ₂ /O ₃	09/29/09	07:16	11/01/09	09:30	
32A(Dup)	NA	NA	NA	NA	NA	

Passive Network Laboratory Analysis



Your Project #: 2009/09/29 - 2009/11/01
Site:LICA

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

Report Date: 2009/11/20

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: A962927
Received: 2009/11/05, 08:29

Sample Matrix: Air
Samples Received: 44

Analyses	Quantity	Date		Laboratory Method	Analytical Method
		Extracted	Analyzed		
H2S Passive Analysis (1)	24	2009/11/19	2009/11/20		EDM SOP-0320
NO2 Passive Analysis (1)	34	2009/11/09	2009/11/20		EDM SOP-0318
O3 Passive Analysis (1)	34	2009/11/19	2009/11/20		EDM SOP-0317
SO2 Passive Analysis (1)	38	2009/11/14	2009/11/20		EDM SOP-0319

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

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

Encryption Key

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

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

=====

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

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

Total cover pages: 1

RESULTS OF CHEMICAL ANALYSES OF AIR

Maxxam ID		R60868	R60869	R60870	R60871		
Sampling Date		2009/09/29 08:30	2009/09/29 08:30	2009/09/29 07:45	2009/09/29 07:45		
	Units	2	2A (DUP)	3	3A (DUP)	RDL	QC Batch

Passive Monitoring							
Calculated H2S	ppb			0.11	0.12	0.02	3572423
Calculated NO2	ppb	1.1	1.2	1.6		0.1	3549609
Calculated O3	ppb	12.7	12.9	14.2		0.1	3575763
Calculated SO2	ppb	0.1	0.2	0.2		0.1	3562515

RDL = Reportable Detection Limit

Maxxam ID		R60872	R60873	R60874	R60875		
Sampling Date		2009/09/30 12:15	2009/09/30 12:15	2009/09/30	2009/09/30 10:10		
	Units	4	4A (DUP)	5	6	RDL	QC Batch

Passive Monitoring							
Calculated H2S	ppb			0.15		0.02	3572423
Calculated NO2	ppb	1.3	1.6	1.3	2.4	0.1	3549609
Calculated O3	ppb	18.8	16.9	17.3	16.1	0.1	3575763
Calculated SO2	ppb	0.3	0.3	0.2	0.2	0.1	3562515

RDL = Reportable Detection Limit

Maxxam ID		R60876	R60877	R60878	R60879		
Sampling Date		2009/09/30 10:10	2009/09/30 13:10	2009/09/29 17:15	2009/09/29 17:15		
	Units	6A (DUP)	8	9	9A (DUP)	RDL	QC Batch

Passive Monitoring							
Calculated NO2	ppb	2.2	1.1	1.9	2.0	0.1	3549609
Calculated O3	ppb	15.8	17.7	15.2	15.6	0.1	3575763
Calculated SO2	ppb	0.2	0.3	0.3	0.3	0.1	3562515

RDL = Reportable Detection Limit

RESULTS OF CHEMICAL ANALYSES OF AIR

Maxxam ID		R60880	R60881	R60882	R60883		
Sampling Date		2009/09/29 09:20	2009/09/29 09:55	2009/09/29 09:55	2009/09/29 11:10		
	Units	10	11	11A (DUP)	12	RDL	QC Batch

Passive Monitoring							
Calculated H2S	ppb	0.11	0.08	0.07	0.09	0.02	3572423
Calculated NO2	ppb	2.2	0.6	0.8	0.9	0.1	3549609
Calculated O3	ppb	14.9	12.0	11.9	14.6	0.1	3575763
Calculated SO2	ppb	0.3	0.3	0.3	0.4	0.1	3562515

RDL = Reportable Detection Limit

Maxxam ID		R60884	R60885	R60886		
Sampling Date		2009/09/29 12:40	2009/09/29 12:40	2009/09/29 13:30		
	Units	13	13A (DUP)	14	RDL	QC Batch

Passive Monitoring						
Calculated H2S	ppb	0.07	0.08	0.10	0.02	3572423
Calculated NO2	ppb	0.8	0.9	2.3	0.1	3549609
Calculated O3	ppb	17.1	17.5	15.5	0.1	3575763
Calculated SO2	ppb	0.3	0.4	0.8	0.1	3562515

RDL = Reportable Detection Limit

Maxxam ID		R60887		R60888		
Sampling Date		2009/09/29 16:40		2009/09/29 16:40		
	Units	15	QC Batch	15A (DUP)	RDL	QC Batch

Passive Monitoring						
Calculated NO2	ppb	1.1	3549632	1.3	0.1	3549632
Calculated O3	ppb	14.1	3575763	15.4	0.1	3575763
Calculated SO2	ppb	0.3	3562515	0.3	0.1	3562517

RDL = Reportable Detection Limit

RESULTS OF CHEMICAL ANALYSES OF AIR

Maxxam ID		R60889	R60890	R60891	R60892		
Sampling Date		2009/09/30 08:30	2009/09/30 08:30	2009/09/30 09:15	2009/09/30 09:15		
	Units	16	16A (DUP)	17	17A (DUP)	RDL	QC Batch

Passive Monitoring							
Calculated H2S	ppb	0.14	0.12	0.14		0.02	3572423
Calculated NO2	ppb	1.9		2.5	2.4	0.1	3549632
Calculated O3	ppb	15.5		15.1	15.1	0.1	3575765
Calculated SO2	ppb	0.3		0.4	0.3	0.1	3562517
RDL = Reportable Detection Limit							

Maxxam ID		R60893	R60894	R60895	R60896		
Sampling Date		2009/09/30 07:45	2009/09/30 07:45	2009/09/30 06:45	2009/09/30 06:45		
	Units	18	18A (DUP)	19	19A (DUP)	RDL	QC Batch

Passive Monitoring							
Calculated H2S	ppb	0.08	0.08			0.02	3572423
Calculated NO2	ppb	1.3		1.2	1.4	0.1	3549632
Calculated O3	ppb	14.4		18.3	17.1	0.1	3575765
Calculated SO2	ppb	0.2		0.3	0.4	0.1	3562517
RDL = Reportable Detection Limit							

Maxxam ID		R60897	R60898	R60899	R60900		
Sampling Date		2009/09/29 15:45	2009/09/29 14:50	2009/09/30 10:55	2009/09/30 10:55		
	Units	22	23	24	24A (DUP)	RDL	QC Batch

Passive Monitoring							
Calculated H2S	ppb	0.07		0.12		0.02	3572423
Calculated NO2	ppb	2.4	0.6	2.6	2.8	0.1	3549632
Calculated O3	ppb	14.7	13.6	15.0	15.5	0.1	3575765
Calculated SO2	ppb	0.3	0.2	0.4	0.5	0.1	3562517
RDL = Reportable Detection Limit							

RESULTS OF CHEMICAL ANALYSES OF AIR

Maxxam ID		R60901	R60902	R60903	R60904		
Sampling Date		2009/09/29 12:20	2009/09/29 12:20	2009/09/29 13:15	2009/09/29 13:15		
	Units	25	25A (DUP)	26	26A (DUP)	RDL	QC Batch

Passive Monitoring							
Calculated H2S	ppb	0.07	0.08	0.12		0.02	3572423
Calculated SO2	ppb	0.3		0.4	0.6	0.1	3562517

RDL = Reportable Detection Limit

Maxxam ID		R60905	R60906	R60907	R60908		
Sampling Date		2009/09/29 13:50	2009/09/29 13:50	2009/09/30 14:00	2009/09/30 14:00		
	Units	27	27A (DUP)	28	28A (DUP)	RDL	QC Batch

Passive Monitoring							
Calculated H2S	ppb	0.09	0.11			0.02	3572423
Calculated NO2	ppb			4.7		0.1	3549632
Calculated O3	ppb			12.5		0.1	3575765
Calculated SO2	ppb	0.5		0.5	0.5	0.1	3562517

RDL = Reportable Detection Limit

Maxxam ID		R60909	R60910	R60911		
Sampling Date		2009/09/29 15:55	2009/09/29 15:55	2009/09/29 07:10		
	Units	29	29A (DUP)	32	RDL	QC Batch

Passive Monitoring						
Calculated H2S	ppb	0.08		0.10	0.02	3572423
Calculated NO2	ppb	2.3	2.3	1.2	0.1	3549632
Calculated O3	ppb	14.9	14.6	18.9	0.1	3575765
Calculated SO2	ppb	0.3		0.3	0.1	3562517

RDL = Reportable Detection Limit



Maxxam Job #: A962927
Report Date: 2009/11/20

LAKELAND INDUSTRY AND COMMUNITY ASSOCIATION
Client Project #: 2009/09/29 - 2009/11/01
Site Reference: LICA
Sampler Initials: SB

General Comments

Results relate only to the items tested.

Quality Assurance Report
 Maxxam Job Number: PA962927

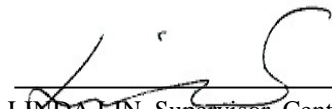
QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
3549609 DF4	Calibration Check	Calculated NO2	2009/11/09		100	%	76 - 118
	Spiked Blank	Calculated NO2	2009/11/09		100	%	N/A
	Method Blank	Calculated NO2	2009/11/09	<0.1		ppb	
3549632 DF4	Calibration Check	Calculated NO2	2009/11/09		99	%	76 - 118
	Spiked Blank	Calculated NO2	2009/11/09		97	%	N/A
	Method Blank	Calculated NO2	2009/11/09	<0.1		ppb	
3562515 DF4	Calibration Check	Calculated SO2	2009/11/14		100	%	95 - 105
	Spiked Blank	Calculated SO2	2009/11/14		102	%	N/A
	Method Blank	Calculated SO2	2009/11/14	<0.1		ppb	
3562517 DF4	Calibration Check	Calculated SO2	2009/11/14		99	%	95 - 105
	Spiked Blank	Calculated SO2	2009/11/14		102	%	N/A
	Method Blank	Calculated SO2	2009/11/14	<0.1		ppb	
3572423 TM5	Calibration Check	Calculated H2S	2009/11/19		98	%	80 - 120
	Spiked Blank	Calculated H2S	2009/11/19		100	%	N/A
3575763 OZ	Calibration Check	Calculated O3	2009/11/19		97	%	91 - 107
	Spiked Blank	Calculated O3	2009/11/19		100	%	N/A
	Method Blank	Calculated O3	2009/11/19	<0.1		ppb	
3575765 OZ	Calibration Check	Calculated O3	2009/11/19		100	%	91 - 107
	Spiked Blank	Calculated O3	2009/11/19		96	%	N/A
	Method Blank	Calculated O3	2009/11/19	<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 #: A962927

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

=====

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

Volatile Organics Laboratory Analysis



Your C.O.C. #: 5382

Lakeland Industry & Community Assoc.
P.O. Box 8237
Bonnyville, AB
CANADA T9N 2J5

Report Date: 2009/10/28

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: A9D5296
Received: 2009/10/09, 11:46

Sample Matrix: AIR
Samples Received: 2

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Method Reference
Canister Pressure (TO-15)	2	N/A	2009/10/15	BRL SOP-00304	EPA TO-15
Volatile Organics in Air (TO-15) ¶	2	N/A	2009/10/15	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: 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. SCC and CALA have approved this reporting process and electronic report format.

Maxxam Analytics Inc. is a NELAC accredited laboratory. Certificate # CANA001. Use of the NELAC logo however does not insure that Maxxam is accredited for all of the methods indicated. This certificate shall not be reproduced except in full, without the written approval of Maxxam Analytics Inc. Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section.

Total cover pages: 1

Maxxam Job #: A9D5296
 Report Date: 2009/10/28

RESULTS OF ANALYSES OF AIR

Maxxam ID		DZ2799	DZ2800		
Sampling Date		2009/10/04	2009/09/30		
		00:00	00:00		
COC Number		5382	5382		
	Units	LICAVOC/CLS/OCT4,09	LICAVOC/PORT/SEPT30,09	DL	QC Batch
		(7869)	(7914)		

Volatile Organics					
Pressure on Receipt	psig	20	20	N/A	1974802

RDL = Reportable Detection Limit
 QC Batch = Quality Control Batch

Maxxam Job #: A9D5296
 Report Date: 2009/10/28

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		DZ2799				
Sampling Date		2009/10/04				
		00:00				
COC Number		5382				
	Units	LICAVOC/CLS/OCT4,09	DL	ug/m3	DL (ug/m3)	QC Batch
		(7869)				
Volatile Organics						
2,2,4-Trimethylpentane	ppbv	<0.20	0.20	<0.934	0.934	1975647
Carbon Disulfide	ppbv	<0.50	0.50	<1.56	1.56	1975647
Propene	ppbv	<0.30	0.30	<0.516	0.516	1975647
Vinyl Acetate	ppbv	<0.20	0.20	<0.704	0.704	1975647
Vinyl Bromide	ppbv	<0.20	0.20	<0.875	0.875	1975647
Dichlorodifluoromethane (FREON 12)	ppbv	0.70	0.20	3.46	0.989	1975647
1,2-Dichlorotetrafluoroethane	ppbv	<0.17	0.17	<1.19	1.19	1975647
Chloromethane	ppbv	0.50	0.30	1.03	0.620	1975647
Vinyl Chloride	ppbv	<0.18	0.18	<0.460	0.460	1975647
Chloroethane	ppbv	<0.30	0.30	<0.792	0.792	1975647
1,3-Butadiene	ppbv	<0.50	0.50	<1.11	1.11	1975647
Trichlorofluoromethane (FREON 11)	ppbv	0.33	0.20	1.84	1.12	1975647
Trichlorotrifluoroethane	ppbv	<0.15	0.15	<1.15	1.15	1975647
Ethanol	ppbv	<2.3	2.3	<4.33	4.33	1975647
2-propanol	ppbv	<3.0	3.0	<7.37	7.37	1975647
2-Propanone	ppbv	1.62	0.80	3.84	1.90	1975647
Methyl Ethyl Ketone (2-Butanone)	ppbv	<3.0	3.0	<8.85	8.85	1975647
Methyl Isobutyl Ketone	ppbv	<3.2	3.2	<13.1	13.1	1975647
Methyl Butyl Ketone (2-Hexanone)	ppbv	<2.0	2.0	<8.19	8.19	1975647
Methyl t-butyl ether (MTBE)	ppbv	<0.20	0.20	<0.721	0.721	1975647
Ethyl Acetate	ppbv	<2.2	2.2	<7.93	7.93	1975647
1,1-Dichloroethylene	ppbv	<0.25	0.25	<0.991	0.991	1975647
cis-1,2-Dichloroethylene	ppbv	<0.19	0.19	<0.753	0.753	1975647
trans-1,2-Dichloroethylene	ppbv	<0.20	0.20	<0.793	0.793	1975647
Methylene Chloride(Dichloromethane)	ppbv	0.48	0.30	1.68	1.04	1975647
Chloroform	ppbv	<0.15	0.15	<0.732	0.732	1975647
Carbon Tetrachloride	ppbv	<0.30	0.30	<1.89	1.89	1975647
1,1-Dichloroethane	ppbv	<0.20	0.20	<0.809	0.809	1975647
1,2-Dichloroethane	ppbv	<0.20	0.20	<0.809	0.809	1975647
Ethylene Dibromide	ppbv	<0.17	0.17	<1.31	1.31	1975647
1,1,1-Trichloroethane	ppbv	<0.30	0.30	<1.64	1.64	1975647
RDL = Reportable Detection Limit QC Batch = Quality Control Batch						

Maxxam Job #: A9D5296
 Report Date: 2009/10/28

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		DZ2799				
Sampling Date		2009/10/04				
		00:00				
COC Number		5382				
	Units	LICAVOC/CLS/OCT4,09	DL	ug/m3	DL (ug/m3)	QC Batch
		(7869)				
1,1,2-Trichloroethane	ppbv	<0.15	0.15	<0.818	0.818	1975647
1,1,2,2-Tetrachloroethane	ppbv	<0.20	0.20	<1.37	1.37	1975647
cis-1,3-Dichloropropene	ppbv	<0.18	0.18	<0.817	0.817	1975647
trans-1,3-Dichloropropene	ppbv	<0.17	0.17	<0.772	0.772	1975647
1,2-Dichloropropane	ppbv	<0.40	0.40	<1.85	1.85	1975647
Bromomethane	ppbv	<0.18	0.18	<0.699	0.699	1975647
Bromoform	ppbv	<0.20	0.20	<2.07	2.07	1975647
Bromodichloromethane	ppbv	<0.20	0.20	<1.34	1.34	1975647
Dibromochloromethane	ppbv	<0.20	0.20	<1.70	1.70	1975647
Heptane	ppbv	<0.30	0.30	<1.23	1.23	1975647
Trichloroethylene	ppbv	<0.30	0.30	<1.61	1.61	1975647
Tetrachloroethylene	ppbv	<0.20	0.20	<1.36	1.36	1975647
Benzene	ppbv	<0.18	0.18	<0.575	0.575	1975647
Toluene	ppbv	0.21	0.20	0.796	0.753	1975647
Ethylbenzene	ppbv	<0.20	0.20	<0.868	0.868	1975647
p+m-Xylene	ppbv	<0.37	0.37	<1.61	1.61	1975647
o-Xylene	ppbv	<0.20	0.20	<0.868	0.868	1975647
Styrene	ppbv	<0.20	0.20	<0.852	0.852	1975647
1,3,5-Trimethylbenzene	ppbv	<0.50	0.50	<2.46	2.46	1975647
1,2,4-Trimethylbenzene	ppbv	<0.50	0.50	<2.46	2.46	1975647
4-ethyltoluene	ppbv	<2.2	2.2	<10.8	10.8	1975647
Chlorobenzene	ppbv	<0.20	0.20	<0.921	0.921	1975647
Benzyl chloride	ppbv	<1.0	1.0	<5.18	5.18	1975647
1,3-Dichlorobenzene	ppbv	<0.40	0.40	<2.40	2.40	1975647
1,4-Dichlorobenzene	ppbv	<0.40	0.40	<2.40	2.40	1975647
1,2-Dichlorobenzene	ppbv	<0.40	0.40	<2.40	2.40	1975647
1,2,4-Trichlorobenzene	ppbv	<2.0	2.0	<14.8	14.8	1975647
Hexachlorobutadiene	ppbv	<3.0	3.0	<32.0	32.0	1975647
Hexane	ppbv	<0.30	0.30	<1.06	1.06	1975647
Cyclohexane	ppbv	<0.20	0.20	<0.688	0.688	1975647
Tetrahydrofuran	ppbv	<0.40	0.40	<1.18	1.18	1975647
1,4-Dioxane	ppbv	<2.0	2.0	<7.21	7.21	1975647
Xylene (Total)	ppbv	<0.60	0.60	<2.61	2.61	1975647
QC Batch = Quality Control Batch						

Maxxam Job #: A9D5296
 Report Date: 2009/10/28

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		DZ2799				
Sampling Date		2009/10/04				
		00:00				
COC Number		5382				
	Units	LICAVOC/CLS/OCT4,09 (7869)	DL	ug/m3	DL (ug/m3)	QC Batch

Surrogate Recovery (%)						
Bromochloromethane	%	81		N/A	N/A	1975647
D5-Chlorobenzene	%	82		N/A	N/A	1975647
Difluorobenzene	%	82		N/A	N/A	1975647

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

Maxxam Job #: A9D5296
 Report Date: 2009/10/28

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		DZ2800				
Sampling Date		2009/09/30 00:00				
COC Number		5382				
	Units	LICAVOC/PORT/SEPT30,09 (7914)	DL	ug/m3	DL (ug/m3)	QC Batch

Volatile Organics						
2,2,4-Trimethylpentane	ppbv	<0.20	0.20	<0.934	0.934	1975647
Carbon Disulfide	ppbv	<0.50	0.50	<1.56	1.56	1975647
Propene	ppbv	<0.30	0.30	<0.516	0.516	1975647
Vinyl Acetate	ppbv	<0.20	0.20	<0.704	0.704	1975647
Vinyl Bromide	ppbv	<0.20	0.20	<0.875	0.875	1975647
Dichlorodifluoromethane (FREON 12)	ppbv	0.69	0.20	3.43	0.989	1975647
1,2-Dichlorotetrafluoroethane	ppbv	<0.17	0.17	<1.19	1.19	1975647
Chloromethane	ppbv	0.47	0.30	0.972	0.620	1975647
Vinyl Chloride	ppbv	<0.18	0.18	<0.460	0.460	1975647
Chloroethane	ppbv	<0.30	0.30	<0.792	0.792	1975647
1,3-Butadiene	ppbv	<0.50	0.50	<1.11	1.11	1975647
Trichlorofluoromethane (FREON 11)	ppbv	0.32	0.20	1.82	1.12	1975647
Trichlorotrifluoroethane	ppbv	<0.15	0.15	<1.15	1.15	1975647
Ethanol	ppbv	<2.3	2.3	<4.33	4.33	1975647
2-propanol	ppbv	<3.0	3.0	<7.37	7.37	1975647
2-Propanone	ppbv	2.32	0.80	5.52	1.90	1975647
Methyl Ethyl Ketone (2-Butanone)	ppbv	<3.0	3.0	<8.85	8.85	1975647
Methyl Isobutyl Ketone	ppbv	<3.2	3.2	<13.1	13.1	1975647
Methyl Butyl Ketone (2-Hexanone)	ppbv	<2.0	2.0	<8.19	8.19	1975647
Methyl t-butyl ether (MTBE)	ppbv	<0.20	0.20	<0.721	0.721	1975647
Ethyl Acetate	ppbv	<2.2	2.2	<7.93	7.93	1975647
1,1-Dichloroethylene	ppbv	<0.25	0.25	<0.991	0.991	1975647
cis-1,2-Dichloroethylene	ppbv	<0.19	0.19	<0.753	0.753	1975647
trans-1,2-Dichloroethylene	ppbv	<0.20	0.20	<0.793	0.793	1975647
Methylene Chloride(Dichloromethane)	ppbv	0.45	0.30	1.57	1.04	1975647
Chloroform	ppbv	<0.15	0.15	<0.732	0.732	1975647
Carbon Tetrachloride	ppbv	<0.30	0.30	<1.89	1.89	1975647
1,1-Dichloroethane	ppbv	<0.20	0.20	<0.809	0.809	1975647
1,2-Dichloroethane	ppbv	<0.20	0.20	<0.809	0.809	1975647
Ethylene Dibromide	ppbv	<0.17	0.17	<1.31	1.31	1975647
1,1,1-Trichloroethane	ppbv	<0.30	0.30	<1.64	1.64	1975647

 RDL = Reportable Detection Limit
 QC Batch = Quality Control Batch

Maxxam Job #: A9D5296
 Report Date: 2009/10/28

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		DZ2800				
Sampling Date		2009/09/30				
		00:00				
COC Number		5382				
	Units	LICAVOC/PORT/SEPT30,09	DL	ug/m3	DL (ug/m3)	QC Batch
		(7914)				
1,1,2-Trichloroethane	ppbv	<0.15	0.15	<0.818	0.818	1975647
1,1,2,2-Tetrachloroethane	ppbv	<0.20	0.20	<1.37	1.37	1975647
cis-1,3-Dichloropropene	ppbv	<0.18	0.18	<0.817	0.817	1975647
trans-1,3-Dichloropropene	ppbv	<0.17	0.17	<0.772	0.772	1975647
1,2-Dichloropropane	ppbv	<0.40	0.40	<1.85	1.85	1975647
Bromomethane	ppbv	<0.18	0.18	<0.699	0.699	1975647
Bromoform	ppbv	<0.20	0.20	<2.07	2.07	1975647
Bromodichloromethane	ppbv	<0.20	0.20	<1.34	1.34	1975647
Dibromochloromethane	ppbv	<0.20	0.20	<1.70	1.70	1975647
Heptane	ppbv	<0.30	0.30	<1.23	1.23	1975647
Trichloroethylene	ppbv	<0.30	0.30	<1.61	1.61	1975647
Tetrachloroethylene	ppbv	<0.20	0.20	<1.36	1.36	1975647
Benzene	ppbv	<0.18	0.18	<0.575	0.575	1975647
Toluene	ppbv	<0.20	0.20	<0.753	0.753	1975647
Ethylbenzene	ppbv	<0.20	0.20	<0.868	0.868	1975647
p+m-Xylene	ppbv	<0.37	0.37	<1.61	1.61	1975647
o-Xylene	ppbv	<0.20	0.20	<0.868	0.868	1975647
Styrene	ppbv	<0.20	0.20	<0.852	0.852	1975647
1,3,5-Trimethylbenzene	ppbv	<0.50	0.50	<2.46	2.46	1975647
1,2,4-Trimethylbenzene	ppbv	<0.50	0.50	<2.46	2.46	1975647
4-ethyltoluene	ppbv	<2.2	2.2	<10.8	10.8	1975647
Chlorobenzene	ppbv	<0.20	0.20	<0.921	0.921	1975647
Benzyl chloride	ppbv	<1.0	1.0	<5.18	5.18	1975647
1,3-Dichlorobenzene	ppbv	<0.40	0.40	<2.40	2.40	1975647
1,4-Dichlorobenzene	ppbv	<0.40	0.40	<2.40	2.40	1975647
1,2-Dichlorobenzene	ppbv	<0.40	0.40	<2.40	2.40	1975647
1,2,4-Trichlorobenzene	ppbv	<2.0	2.0	<14.8	14.8	1975647
Hexachlorobutadiene	ppbv	<3.0	3.0	<32.0	32.0	1975647
Hexane	ppbv	<0.30	0.30	<1.06	1.06	1975647
Cyclohexane	ppbv	<0.20	0.20	<0.688	0.688	1975647
Tetrahydrofuran	ppbv	<0.40	0.40	<1.18	1.18	1975647
1,4-Dioxane	ppbv	<2.0	2.0	<7.21	7.21	1975647
Xylene (Total)	ppbv	<0.60	0.60	<2.61	2.61	1975647
QC Batch = Quality Control Batch						

Maxxam Job #: A9D5296
 Report Date: 2009/10/28

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		DZ2800				
Sampling Date		2009/09/30				
		00:00				
COC Number		5382				
	Units	LICAVOC/PORT/SEPT30,09	DL	ug/m3	DL (ug/m3)	QC Batch
		(7914)				

Surrogate Recovery (%)						
Bromochloromethane	%	79		N/A	N/A	1975647
D5-Chlorobenzene	%	80		N/A	N/A	1975647
Difluorobenzene	%	80		N/A	N/A	1975647

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

Maxxam Job #: A9D5296
 Report Date: 2009/10/28

Test Summary

Maxxam ID DZ2799 **Collected** 2009/10/04
Sample ID LICAVOC/CLS/OCT4,09 (7869) **Shipped**
Matrix AIR **Received** 2009/10/09

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Canister Pressure (TO-15)	PRES	1974802	N/A	2009/10/15	LSY
Volatile Organics in Air (TO-15)	GC/MS	1975647	N/A	2009/10/15	LSY

Maxxam ID DZ2800 **Collected** 2009/09/30
Sample ID LICAVOC/PORT/SEPT30,09 (7914) **Shipped**
Matrix AIR **Received** 2009/10/09

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Canister Pressure (TO-15)	PRES	1974802	N/A	2009/10/15	LSY
Volatile Organics in Air (TO-15)	GC/MS	1975647	N/A	2009/10/15	LSY

Maxxam Job #: A9D5296
Report Date: 2009/10/28

GENERAL COMMENTS

Results relate only to the items tested.

Lakeland Industry & Community Assoc.
 Attention:
 Client Project #:
 P.O. #:
 Project name:

Quality Assurance Report
 Maxxam Job Number: GA9D5296

QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
1975647 LSY	Spiked Blank	Bromochloromethane	2009/10/15		99	%	60 - 140
		D5-Chlorobenzene	2009/10/15		100	%	60 - 140
		Difluorobenzene	2009/10/15		100	%	60 - 140
		2,2,4-Trimethylpentane	2009/10/15		103	%	70 - 130
		Carbon Disulfide	2009/10/15		100	%	70 - 130
		Propene	2009/10/15		98	%	70 - 130
		Vinyl Acetate	2009/10/15		96	%	70 - 130
		Vinyl Bromide	2009/10/15		105	%	70 - 130
		Dichlorodifluoromethane (FREON 12)	2009/10/15		99	%	70 - 130
		1,2-Dichlorotetrafluoroethane	2009/10/15		95	%	70 - 130
		Chloromethane	2009/10/15		94	%	70 - 130
		Vinyl Chloride	2009/10/15		96	%	70 - 130
		Chloroethane	2009/10/15		99	%	70 - 130
		1,3-Butadiene	2009/10/15		86	%	70 - 130
		Trichlorofluoromethane (FREON 11)	2009/10/15		101	%	70 - 130
		Trichlorotrifluoroethane	2009/10/15		96	%	70 - 130
		Ethanol	2009/10/15		88	%	70 - 130
		2-propanol	2009/10/15		97	%	70 - 130
		2-Propanone	2009/10/15		97	%	70 - 130
		Methyl Ethyl Ketone (2-Butanone)	2009/10/15		101	%	70 - 130
		Methyl Isobutyl Ketone	2009/10/15		98	%	70 - 130
		Methyl Butyl Ketone (2-Hexanone)	2009/10/15		95	%	70 - 130
		Methyl t-butyl ether (MTBE)	2009/10/15		100	%	70 - 130
		Ethyl Acetate	2009/10/15		100	%	70 - 130
		1,1-Dichloroethylene	2009/10/15		97	%	70 - 130
		cis-1,2-Dichloroethylene	2009/10/15		100	%	70 - 130
		trans-1,2-Dichloroethylene	2009/10/15		98	%	70 - 130
		Methylene Chloride(Dichloromethane)	2009/10/15		88	%	70 - 130
		Chloroform	2009/10/15		97	%	70 - 130
		Carbon Tetrachloride	2009/10/15		104	%	70 - 130
		1,1-Dichloroethane	2009/10/15		98	%	70 - 130
		1,2-Dichloroethane	2009/10/15		97	%	70 - 130
		Ethylene Dibromide	2009/10/15		91	%	70 - 130
		1,1,1-Trichloroethane	2009/10/15		99	%	70 - 130
		1,1,2-Trichloroethane	2009/10/15		94	%	70 - 130
		1,1,2,2-Tetrachloroethane	2009/10/15		89	%	70 - 130
		cis-1,3-Dichloropropene	2009/10/15		95	%	70 - 130
		trans-1,3-Dichloropropene	2009/10/15		91	%	70 - 130
		1,2-Dichloropropane	2009/10/15		94	%	70 - 130
		Bromomethane	2009/10/15		97	%	70 - 130
		Bromoform	2009/10/15		105	%	70 - 130
		Bromodichloromethane	2009/10/15		102	%	70 - 130
		Dibromochloromethane	2009/10/15		105	%	70 - 130
		Heptane	2009/10/15		98	%	70 - 130
		Trichloroethylene	2009/10/15		93	%	70 - 130
		Tetrachloroethylene	2009/10/15		94	%	70 - 130
		Benzene	2009/10/15		94	%	70 - 130
		Toluene	2009/10/15		93	%	70 - 130
		Ethylbenzene	2009/10/15		92	%	70 - 130
		p+m-Xylene	2009/10/15		91	%	70 - 130
		o-Xylene	2009/10/15		91	%	70 - 130
		Styrene	2009/10/15		77	%	70 - 130
		1,3,5-Trimethylbenzene	2009/10/15		87	%	70 - 130
		1,2,4-Trimethylbenzene	2009/10/15		82	%	70 - 130
		4-ethyltoluene	2009/10/15		88	%	70 - 130

Lakeland Industry & Community Assoc.
 Attention:
 Client Project #:
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Quality Assurance Report (Continued)

Maxxam Job Number: GA9D5296

QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
1975647 LSY	Spiked Blank	Chlorobenzene	2009/10/15		84	%	70 - 130
		Benzyl chloride	2009/10/15		83	%	70 - 130
		1,3-Dichlorobenzene	2009/10/15		77	%	70 - 130
		1,4-Dichlorobenzene	2009/10/15		74	%	70 - 130
		1,2-Dichlorobenzene	2009/10/15		78	%	70 - 130
		1,2,4-Trichlorobenzene	2009/10/15		87	%	70 - 130
		Hexachlorobutadiene	2009/10/15		91	%	70 - 130
		Hexane	2009/10/15		93	%	70 - 130
		Cyclohexane	2009/10/15		98	%	70 - 130
		Tetrahydrofuran	2009/10/15		100	%	70 - 130
		1,4-Dioxane	2009/10/15		97	%	70 - 130
	Method Blank	Bromochloromethane	2009/10/15		95	%	60 - 140
		D5-Chlorobenzene	2009/10/15		95	%	60 - 140
		Difluorobenzene	2009/10/15		96	%	60 - 140
		2,2,4-Trimethylpentane	2009/10/15	ND, RDL=0.20		ppbv	
		Carbon Disulfide	2009/10/15	ND, RDL=0.50		ppbv	
		Propene	2009/10/15	ND, RDL=0.30		ppbv	
		Vinyl Acetate	2009/10/15	ND, RDL=0.20		ppbv	
		Vinyl Bromide	2009/10/15	ND, RDL=0.20		ppbv	
		Dichlorodifluoromethane (FREON 12)	2009/10/15	ND, RDL=0.20		ppbv	
		1,2-Dichlorotetrafluoroethane	2009/10/15	ND, RDL=0.17		ppbv	
		Chloromethane	2009/10/15	ND, RDL=0.30		ppbv	
		Vinyl Chloride	2009/10/15	ND, RDL=0.18		ppbv	
		Chloroethane	2009/10/15	ND, RDL=0.30		ppbv	
		1,3-Butadiene	2009/10/15	ND, RDL=0.50		ppbv	
		Trichlorofluoromethane (FREON 11)	2009/10/15	ND, RDL=0.20		ppbv	
		Trichlorotrifluoroethane	2009/10/15	ND, RDL=0.15		ppbv	
		Ethanol	2009/10/15	ND, RDL=2.3		ppbv	
		2-propanol	2009/10/15	ND, RDL=3.0		ppbv	
		2-Propanone	2009/10/15	ND, RDL=0.80		ppbv	
		Methyl Ethyl Ketone (2-Butanone)	2009/10/15	ND, RDL=3.0		ppbv	
		Methyl Isobutyl Ketone	2009/10/15	ND, RDL=3.2		ppbv	
		Methyl Butyl Ketone (2-Hexanone)	2009/10/15	ND, RDL=2.0		ppbv	
		Methyl t-butyl ether (MTBE)	2009/10/15	ND, RDL=0.20		ppbv	
		Ethyl Acetate	2009/10/15	ND, RDL=2.2		ppbv	
		1,1-Dichloroethylene	2009/10/15	ND, RDL=0.25		ppbv	
		cis-1,2-Dichloroethylene	2009/10/15	ND, RDL=0.19		ppbv	
		trans-1,2-Dichloroethylene	2009/10/15	ND, RDL=0.20		ppbv	
		Methylene Chloride(Dichloromethane)	2009/10/15	0.48, RDL=0.30		ppbv	
		Chloroform	2009/10/15	ND, RDL=0.15		ppbv	
		Carbon Tetrachloride	2009/10/15	ND, RDL=0.30		ppbv	
		1,1-Dichloroethane	2009/10/15	ND, RDL=0.20		ppbv	
		1,2-Dichloroethane	2009/10/15	ND, RDL=0.20		ppbv	
		Ethylene Dibromide	2009/10/15	ND, RDL=0.17		ppbv	
		1,1,1-Trichloroethane	2009/10/15	ND, RDL=0.30		ppbv	
		1,1,2-Trichloroethane	2009/10/15	ND, RDL=0.15		ppbv	
		1,1,2,2-Tetrachloroethane	2009/10/15	ND, RDL=0.20		ppbv	
		cis-1,3-Dichloropropene	2009/10/15	ND, RDL=0.18		ppbv	
		trans-1,3-Dichloropropene	2009/10/15	ND, RDL=0.17		ppbv	
		1,2-Dichloropropane	2009/10/15	ND, RDL=0.40		ppbv	
		Bromomethane	2009/10/15	ND, RDL=0.18		ppbv	
		Bromoform	2009/10/15	ND, RDL=0.20		ppbv	
		Bromodichloromethane	2009/10/15	ND, RDL=0.20		ppbv	
		Dibromochloromethane	2009/10/15	ND, RDL=0.20		ppbv	
		Heptane	2009/10/15	ND, RDL=0.30		ppbv	

Lakeland Industry & Community Assoc.
 Attention:
 Client Project #:
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 Project name:

Quality Assurance Report (Continued)
 Maxxam Job Number: GA9D5296

QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
1975647 LSY	Method Blank	Trichloroethylene	2009/10/15	ND, RDL=0.30		ppbv	
		Tetrachloroethylene	2009/10/15	ND, RDL=0.20		ppbv	
		Benzene	2009/10/15	ND, RDL=0.18		ppbv	
		Toluene	2009/10/15	ND, RDL=0.20		ppbv	
		Ethylbenzene	2009/10/15	ND, RDL=0.20		ppbv	
		p+m-Xylene	2009/10/15	ND, RDL=0.37		ppbv	
		o-Xylene	2009/10/15	ND, RDL=0.20		ppbv	
		Styrene	2009/10/15	ND, RDL=0.20		ppbv	
		1,3,5-Trimethylbenzene	2009/10/15	ND, RDL=0.50		ppbv	
		1,2,4-Trimethylbenzene	2009/10/15	ND, RDL=0.50		ppbv	
		4-ethyltoluene	2009/10/15	ND, RDL=2.2		ppbv	
		Chlorobenzene	2009/10/15	ND, RDL=0.20		ppbv	
		Benzyl chloride	2009/10/15	ND, RDL=1.0		ppbv	
		1,3-Dichlorobenzene	2009/10/15	ND, RDL=0.40		ppbv	
		1,4-Dichlorobenzene	2009/10/15	ND, RDL=0.40		ppbv	
		1,2-Dichlorobenzene	2009/10/15	ND, RDL=0.40		ppbv	
		1,2,4-Trichlorobenzene	2009/10/15	ND, RDL=2.0		ppbv	
		Hexachlorobutadiene	2009/10/15	ND, RDL=3.0		ppbv	
		Hexane	2009/10/15	ND, RDL=0.30		ppbv	
		Cyclohexane	2009/10/15	ND, RDL=0.20		ppbv	
		Tetrahydrofuran	2009/10/15	ND, RDL=0.40		ppbv	
		1,4-Dioxane	2009/10/15	ND, RDL=2.0		ppbv	
		Xylene (Total)	2009/10/15	ND, RDL=0.60		ppbv	
	RPD - Sample/Sample Dup	2,2,4-Trimethylpentane	2009/10/15	NC		%	25
		Carbon Disulfide	2009/10/15	NC		%	25
		Propene	2009/10/15	NC		%	25
		Vinyl Acetate	2009/10/15	NC		%	25
		Vinyl Bromide	2009/10/15	NC		%	25
		Dichlorodifluoromethane (FREON 12)	2009/10/15	NC		%	25
		1,2-Dichlorotetrafluoroethane	2009/10/15	NC		%	25
		Chloromethane	2009/10/15	NC		%	25
		Vinyl Chloride	2009/10/15	NC		%	25
		Chloroethane	2009/10/15	NC		%	25
		1,3-Butadiene	2009/10/15	NC		%	25
		Trichlorofluoromethane (FREON 11)	2009/10/15	NC		%	25
		Trichlorotrifluoroethane	2009/10/15	NC		%	25
		Ethanol	2009/10/15	1.2		%	25
		2-propanol	2009/10/15	NC		%	25
		2-Propanone	2009/10/15	4.1		%	25
		Methyl Ethyl Ketone (2-Butanone)	2009/10/15	NC		%	25
		Methyl Isobutyl Ketone	2009/10/15	NC		%	25
		Methyl Butyl Ketone (2-Hexanone)	2009/10/15	NC		%	25
		Methyl t-butyl ether (MTBE)	2009/10/15	NC		%	25
		Ethyl Acetate	2009/10/15	NC		%	25
		1,1-Dichloroethylene	2009/10/15	NC		%	25
		cis-1,2-Dichloroethylene	2009/10/15	0.7		%	25
		trans-1,2-Dichloroethylene	2009/10/15	NC		%	25
		Methylene Chloride(Dichloromethane)	2009/10/15	0.6		%	25
		Chloroform	2009/10/15	1.4		%	25
		Carbon Tetrachloride	2009/10/15	NC		%	25
		1,1-Dichloroethane	2009/10/15	NC		%	25
		1,2-Dichloroethane	2009/10/15	NC		%	25
		Ethylene Dibromide	2009/10/15	NC		%	25

Lakeland Industry & Community Assoc.
 Attention:
 Client Project #:
 P.O. #:
 Project name:

Quality Assurance Report (Continued)

Maxxam Job Number: GA9D5296

QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
1975647 LSY	RPD - Sample/Sample Dup	1,1,1-Trichloroethane	2009/10/15	NC		%	25
		1,1,2-Trichloroethane	2009/10/15	NC		%	25
		1,1,2,2-Tetrachloroethane	2009/10/15	NC		%	25
		cis-1,3-Dichloropropene	2009/10/15	NC		%	25
		trans-1,3-Dichloropropene	2009/10/15	NC		%	25
		1,2-Dichloropropane	2009/10/15	NC		%	25
		Bromomethane	2009/10/15	NC		%	25
		Bromoform	2009/10/15	NC		%	25
		Bromodichloromethane	2009/10/15	NC		%	25
		Dibromochloromethane	2009/10/15	NC		%	25
		Heptane	2009/10/15	NC		%	25
		Trichloroethylene	2009/10/15	0.02		%	25
		Tetrachloroethylene	2009/10/15	0.8		%	25
		Benzene	2009/10/15	NC		%	25
		Toluene	2009/10/15	0.8		%	25
		Ethylbenzene	2009/10/15	NC		%	25
		p+m-Xylene	2009/10/15	0.8		%	25
		o-Xylene	2009/10/15	0.7		%	25
		Styrene	2009/10/15	NC		%	25
		1,3,5-Trimethylbenzene	2009/10/15	NC		%	25
		1,2,4-Trimethylbenzene	2009/10/15	NC		%	25
		4-ethyltoluene	2009/10/15	NC		%	25
		Chlorobenzene	2009/10/15	NC		%	25
		Benzyl chloride	2009/10/15	NC		%	25
		1,3-Dichlorobenzene	2009/10/15	NC		%	25
		1,4-Dichlorobenzene	2009/10/15	NC		%	25
		1,2-Dichlorobenzene	2009/10/15	NC		%	25
		1,2,4-Trichlorobenzene	2009/10/15	NC		%	25
		Hexachlorobutadiene	2009/10/15	NC		%	25
		Hexane	2009/10/15	NC		%	25
		Cyclohexane	2009/10/15	NC		%	25
		Tetrahydrofuran	2009/10/15	NC		%	25
		1,4-Dioxane	2009/10/15	NC		%	25
		Xylene (Total)	2009/10/15	0.8		%	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.



Your C.O.C. #: 0561

Lakeland Industry & Community Assoc.
P.O. Box 8237
Bonnyville, AB
CANADA T9N 2J5

Report Date: 2009/10/28

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: A9D9384
Received: 2009/10/19, 14:02

Sample Matrix: AIR
Samples Received: 2

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Method Reference
Canister Pressure (TO-15)	2	N/A	2009/10/20	BRL SOP-00304	EPA TO-15
Volatile Organics in Air (TO-15) ¶	2	N/A	2009/10/20	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: Theresa.Stephenson@MaxxamAnalytics.com
Phone# (905) 817-5763

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Total cover pages: 1

Maxxam Job #: A9D9384
 Report Date: 2009/10/28

RESULTS OF ANALYSES OF AIR

Maxxam ID		EB5371	EB5372		
Sampling Date		2009/10/10	2009/10/10		
COC Number		0561	0561		
	Units	LICAVOC/CLS/OCT10,09 (7827)	LICAVOC/PORT/OCT10,09 (7821)	DL	QC Batch

Volatile Organics					
Pressure on Receipt	psig	20	20	N/A	1979084

RDL = Reportable Detection Limit
 QC Batch = Quality Control Batch

Maxxam Job #: A9D9384
 Report Date: 2009/10/28

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		EB5371				
Sampling Date		2009/10/10				
COC Number		0561				
	Units	LICAVOC/CLS/OCT10,09 (7827)	DL	ug/m3	DL (ug/m3)	QC Batch

Volatile Organics						
2,2,4-Trimethylpentane	ppbv	<0.20	0.20	<0.934	0.934	1979082
Carbon Disulfide	ppbv	<0.50	0.50	<1.56	1.56	1979082
Propene	ppbv	<0.30	0.30	<0.516	0.516	1979082
Vinyl Acetate	ppbv	<0.20	0.20	<0.704	0.704	1979082
Vinyl Bromide	ppbv	<0.20	0.20	<0.875	0.875	1979082
Dichlorodifluoromethane (FREON 12)	ppbv	0.66	0.20	3.24	0.989	1979082
1,2-Dichlorotetrafluoroethane	ppbv	<0.17	0.17	<1.19	1.19	1979082
Chloromethane	ppbv	0.50	0.30	1.04	0.620	1979082
Vinyl Chloride	ppbv	<0.18	0.18	<0.460	0.460	1979082
Chloroethane	ppbv	<0.30	0.30	<0.792	0.792	1979082
1,3-Butadiene	ppbv	<0.50	0.50	<1.11	1.11	1979082
Trichlorofluoromethane (FREON 11)	ppbv	0.32	0.20	1.78	1.12	1979082
Trichlorotrifluoroethane	ppbv	<0.15	0.15	<1.15	1.15	1979082
Ethanol	ppbv	<2.3	2.3	<4.33	4.33	1979082
2-propanol	ppbv	<3.0	3.0	<7.37	7.37	1979082
2-Propanone	ppbv	1.54	0.80	3.65	1.90	1979082
Methyl Ethyl Ketone (2-Butanone)	ppbv	<3.0	3.0	<8.85	8.85	1979082
Methyl Isobutyl Ketone	ppbv	<3.2	3.2	<13.1	13.1	1979082
Methyl Butyl Ketone (2-Hexanone)	ppbv	<2.0	2.0	<8.19	8.19	1979082
Methyl t-butyl ether (MTBE)	ppbv	<0.20	0.20	<0.721	0.721	1979082
Ethyl Acetate	ppbv	<2.2	2.2	<7.93	7.93	1979082
1,1-Dichloroethylene	ppbv	<0.25	0.25	<0.991	0.991	1979082
cis-1,2-Dichloroethylene	ppbv	<0.19	0.19	<0.753	0.753	1979082
trans-1,2-Dichloroethylene	ppbv	<0.20	0.20	<0.793	0.793	1979082
Methylene Chloride(Dichloromethane)	ppbv	0.64	0.30	2.21	1.04	1979082
Chloroform	ppbv	<0.15	0.15	<0.732	0.732	1979082
Carbon Tetrachloride	ppbv	<0.30	0.30	<1.89	1.89	1979082
1,1-Dichloroethane	ppbv	<0.20	0.20	<0.809	0.809	1979082
1,2-Dichloroethane	ppbv	<0.20	0.20	<0.809	0.809	1979082
Ethylene Dibromide	ppbv	<0.17	0.17	<1.31	1.31	1979082
1,1,1-Trichloroethane	ppbv	<0.30	0.30	<1.64	1.64	1979082
1,1,2-Trichloroethane	ppbv	<0.15	0.15	<0.818	0.818	1979082

 RDL = Reportable Detection Limit
 QC Batch = Quality Control Batch

Maxxam Job #: A9D9384
 Report Date: 2009/10/28

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		EB5371				
Sampling Date		2009/10/10				
COC Number		0561				
	Units	LICAVOC/CLS/OCT10,09 (7827)	DL	ug/m3	DL (ug/m3)	QC Batch
1,1,2,2-Tetrachloroethane	ppbv	<0.20	0.20	<1.37	1.37	1979082
cis-1,3-Dichloropropene	ppbv	<0.18	0.18	<0.817	0.817	1979082
trans-1,3-Dichloropropene	ppbv	<0.17	0.17	<0.772	0.772	1979082
1,2-Dichloropropane	ppbv	<0.40	0.40	<1.85	1.85	1979082
Bromomethane	ppbv	<0.18	0.18	<0.699	0.699	1979082
Bromoform	ppbv	<0.20	0.20	<2.07	2.07	1979082
Bromodichloromethane	ppbv	<0.20	0.20	<1.34	1.34	1979082
Dibromochloromethane	ppbv	<0.20	0.20	<1.70	1.70	1979082
Heptane	ppbv	<0.30	0.30	<1.23	1.23	1979082
Trichloroethylene	ppbv	<0.30	0.30	<1.61	1.61	1979082
Tetrachloroethylene	ppbv	<0.20	0.20	<1.36	1.36	1979082
Benzene	ppbv	<0.18	0.18	<0.575	0.575	1979082
Toluene	ppbv	<0.20	0.20	<0.753	0.753	1979082
Ethylbenzene	ppbv	<0.20	0.20	<0.868	0.868	1979082
p+m-Xylene	ppbv	<0.37	0.37	<1.61	1.61	1979082
o-Xylene	ppbv	<0.20	0.20	<0.868	0.868	1979082
Styrene	ppbv	<0.20	0.20	<0.852	0.852	1979082
1,3,5-Trimethylbenzene	ppbv	<2.4	2.4	<11.8	11.8	1979082
1,2,4-Trimethylbenzene	ppbv	<2.5	2.5	<12.3	12.3	1979082
4-ethyltoluene	ppbv	<2.2	2.2	<10.8	10.8	1979082
Chlorobenzene	ppbv	<0.20	0.20	<0.921	0.921	1979082
Benzyl chloride	ppbv	<1.0	1.0	<5.18	5.18	1979082
1,3-Dichlorobenzene	ppbv	<0.40	0.40	<2.40	2.40	1979082
1,4-Dichlorobenzene	ppbv	<0.40	0.40	<2.40	2.40	1979082
1,2-Dichlorobenzene	ppbv	<0.40	0.40	<2.40	2.40	1979082
1,2,4-Trichlorobenzene	ppbv	<2.0	2.0	<14.8	14.8	1979082
Hexachlorobutadiene	ppbv	<3.0	3.0	<32.0	32.0	1979082
Hexane	ppbv	<0.30	0.30	<1.06	1.06	1979082
Cyclohexane	ppbv	<0.20	0.20	<0.688	0.688	1979082
Tetrahydrofuran	ppbv	<0.40	0.40	<1.18	1.18	1979082
1,4-Dioxane	ppbv	<2.0	2.0	<7.21	7.21	1979082
Xylene (Total)	ppbv	<0.60	0.60	<2.61	2.61	1979082
Surrogate Recovery (%)						
Bromochloromethane	%	81		N/A	N/A	1979082
N/A = Not Applicable QC Batch = Quality Control Batch						

Maxxam Job #: A9D9384
 Report Date: 2009/10/28

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		EB5371				
Sampling Date		2009/10/10				
COC Number		0561				
	Units	LICAVOC/CLS/OCT10,09 (7827)	DL	ug/m3	DL (ug/m3)	QC Batch

D5-Chlorobenzene	%	80		N/A	N/A	1979082
Difluorobenzene	%	82		N/A	N/A	1979082

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

Maxxam Job #: A9D9384
 Report Date: 2009/10/28

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		EB5372				
Sampling Date		2009/10/10				
COC Number		0561				
	Units	LICAVOC/PORT/OCT10,09 (7821)	DL	ug/m3	DL (ug/m3)	QC Batch

Volatile Organics						
2,2,4-Trimethylpentane	ppbv	<0.20	0.20	<0.934	0.934	1979082
Carbon Disulfide	ppbv	<0.50	0.50	<1.56	1.56	1979082
Propene	ppbv	<0.30	0.30	<0.516	0.516	1979082
Vinyl Acetate	ppbv	<0.20	0.20	<0.704	0.704	1979082
Vinyl Bromide	ppbv	<0.20	0.20	<0.875	0.875	1979082
Dichlorodifluoromethane (FREON 12)	ppbv	0.69	0.20	3.41	0.989	1979082
1,2-Dichlorotetrafluoroethane	ppbv	<0.17	0.17	<1.19	1.19	1979082
Chloromethane	ppbv	0.46	0.30	0.960	0.620	1979082
Vinyl Chloride	ppbv	<0.18	0.18	<0.460	0.460	1979082
Chloroethane	ppbv	<0.30	0.30	<0.792	0.792	1979082
1,3-Butadiene	ppbv	<0.50	0.50	<1.11	1.11	1979082
Trichlorofluoromethane (FREON 11)	ppbv	0.32	0.20	1.79	1.12	1979082
Trichlorotrifluoroethane	ppbv	<0.15	0.15	<1.15	1.15	1979082
Ethanol	ppbv	<2.3	2.3	<4.33	4.33	1979082
2-propanol	ppbv	<3.0	3.0	<7.37	7.37	1979082
2-Propanone	ppbv	1.97	0.80	4.69	1.90	1979082
Methyl Ethyl Ketone (2-Butanone)	ppbv	<3.0	3.0	<8.85	8.85	1979082
Methyl Isobutyl Ketone	ppbv	<3.2	3.2	<13.1	13.1	1979082
Methyl Butyl Ketone (2-Hexanone)	ppbv	<2.0	2.0	<8.19	8.19	1979082
Methyl t-butyl ether (MTBE)	ppbv	<0.20	0.20	<0.721	0.721	1979082
Ethyl Acetate	ppbv	<2.2	2.2	<7.93	7.93	1979082
1,1-Dichloroethylene	ppbv	<0.25	0.25	<0.991	0.991	1979082
cis-1,2-Dichloroethylene	ppbv	<0.19	0.19	<0.753	0.753	1979082
trans-1,2-Dichloroethylene	ppbv	<0.20	0.20	<0.793	0.793	1979082
Methylene Chloride(Dichloromethane)	ppbv	0.70	0.30	2.42	1.04	1979082
Chloroform	ppbv	<0.15	0.15	<0.732	0.732	1979082
Carbon Tetrachloride	ppbv	<0.30	0.30	<1.89	1.89	1979082
1,1-Dichloroethane	ppbv	<0.20	0.20	<0.809	0.809	1979082
1,2-Dichloroethane	ppbv	<0.20	0.20	<0.809	0.809	1979082
Ethylene Dibromide	ppbv	<0.17	0.17	<1.31	1.31	1979082
1,1,1-Trichloroethane	ppbv	<0.30	0.30	<1.64	1.64	1979082
1,1,2-Trichloroethane	ppbv	<0.15	0.15	<0.818	0.818	1979082

 RDL = Reportable Detection Limit
 QC Batch = Quality Control Batch

Maxxam Job #: A9D9384
 Report Date: 2009/10/28

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		EB5372				
Sampling Date		2009/10/10				
COC Number		0561				
	Units	LICAVOC/PORT/OCT10,09 (7821)	DL	ug/m3	DL (ug/m3)	QC Batch
1,1,2,2-Tetrachloroethane	ppbv	<0.20	0.20	<1.37	1.37	1979082
cis-1,3-Dichloropropene	ppbv	<0.18	0.18	<0.817	0.817	1979082
trans-1,3-Dichloropropene	ppbv	<0.17	0.17	<0.772	0.772	1979082
1,2-Dichloropropane	ppbv	<0.40	0.40	<1.85	1.85	1979082
Bromomethane	ppbv	<0.18	0.18	<0.699	0.699	1979082
Bromoform	ppbv	<0.20	0.20	<2.07	2.07	1979082
Bromodichloromethane	ppbv	<0.20	0.20	<1.34	1.34	1979082
Dibromochloromethane	ppbv	<0.20	0.20	<1.70	1.70	1979082
Heptane	ppbv	<0.30	0.30	<1.23	1.23	1979082
Trichloroethylene	ppbv	<0.30	0.30	<1.61	1.61	1979082
Tetrachloroethylene	ppbv	<0.20	0.20	<1.36	1.36	1979082
Benzene	ppbv	<0.18	0.18	<0.575	0.575	1979082
Toluene	ppbv	<0.20	0.20	<0.753	0.753	1979082
Ethylbenzene	ppbv	<0.20	0.20	<0.868	0.868	1979082
p+m-Xylene	ppbv	<0.37	0.37	<1.61	1.61	1979082
o-Xylene	ppbv	<0.20	0.20	<0.868	0.868	1979082
Styrene	ppbv	<0.20	0.20	<0.852	0.852	1979082
1,3,5-Trimethylbenzene	ppbv	<2.4	2.4	<11.8	11.8	1979082
1,2,4-Trimethylbenzene	ppbv	<2.5	2.5	<12.3	12.3	1979082
4-ethyltoluene	ppbv	<2.2	2.2	<10.8	10.8	1979082
Chlorobenzene	ppbv	<0.20	0.20	<0.921	0.921	1979082
Benzyl chloride	ppbv	<1.0	1.0	<5.18	5.18	1979082
1,3-Dichlorobenzene	ppbv	<0.40	0.40	<2.40	2.40	1979082
1,4-Dichlorobenzene	ppbv	<0.40	0.40	<2.40	2.40	1979082
1,2-Dichlorobenzene	ppbv	<0.40	0.40	<2.40	2.40	1979082
1,2,4-Trichlorobenzene	ppbv	<2.0	2.0	<14.8	14.8	1979082
Hexachlorobutadiene	ppbv	<3.0	3.0	<32.0	32.0	1979082
Hexane	ppbv	<0.30	0.30	<1.06	1.06	1979082
Cyclohexane	ppbv	<0.20	0.20	<0.688	0.688	1979082
Tetrahydrofuran	ppbv	<0.40	0.40	<1.18	1.18	1979082
1,4-Dioxane	ppbv	<2.0	2.0	<7.21	7.21	1979082
Xylene (Total)	ppbv	<0.60	0.60	<2.61	2.61	1979082
Surrogate Recovery (%)						
Bromochloromethane	%	83		N/A	N/A	1979082
N/A = Not Applicable QC Batch = Quality Control Batch						

Maxxam Job #: A9D9384
 Report Date: 2009/10/28

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		EB5372				
Sampling Date		2009/10/10				
COC Number		0561				
	Units	LICAVOC/PORT/OCT10,09 (7821)	DL	ug/m3	DL (ug/m3)	QC Batch

D5-Chlorobenzene	%	81		N/A	N/A	1979082
Difluorobenzene	%	83		N/A	N/A	1979082

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

Maxxam Job #: A9D9384
 Report Date: 2009/10/28

Test Summary

Maxxam ID EB5371 **Collected** 2009/10/10
Sample ID LICAVOC/CLS/OCT10,09 (7827) **Shipped**
Matrix AIR **Received** 2009/10/19

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Canister Pressure (TO-15)	PRES	1979084	N/A	2009/10/20	VEA
Volatile Organics in Air (TO-15)	GC/MS	1979082	N/A	2009/10/20	VEA

Maxxam ID EB5372 **Collected** 2009/10/10
Sample ID LICAVOC/PORT/OCT10,09 (7821) **Shipped**
Matrix AIR **Received** 2009/10/19

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Canister Pressure (TO-15)	PRES	1979084	N/A	2009/10/20	VEA
Volatile Organics in Air (TO-15)	GC/MS	1979082	N/A	2009/10/20	VEA

Maxxam Job #: A9D9384
Report Date: 2009/10/28

GENERAL COMMENTS

Results relate only to the items tested.

Lakeland Industry & Community Assoc.
 Attention:
 Client Project #:
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Quality Assurance Report
 Maxxam Job Number: GA9D9384

QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
1979082 VEA	Spiked Blank	Bromochloromethane	2009/10/20		109	%	60 - 140
		D5-Chlorobenzene	2009/10/20		107	%	60 - 140
		Difluorobenzene	2009/10/20		111	%	60 - 140
		2,2,4-Trimethylpentane	2009/10/20		100	%	70 - 130
		Carbon Disulfide	2009/10/20		86	%	70 - 130
		Propene	2009/10/20		91	%	70 - 130
		Vinyl Acetate	2009/10/20		88	%	70 - 130
		Vinyl Bromide	2009/10/20		102	%	70 - 130
		Dichlorodifluoromethane (FREON 12)	2009/10/20		85	%	70 - 130
		1,2-Dichlorotetrafluoroethane	2009/10/20		86	%	70 - 130
		Chloromethane	2009/10/20		84	%	70 - 130
		Vinyl Chloride	2009/10/20		88	%	70 - 130
		Chloroethane	2009/10/20		88	%	70 - 130
		1,3-Butadiene	2009/10/20		78	%	70 - 130
		Trichlorofluoromethane (FREON 11)	2009/10/20		86	%	70 - 130
		Trichlorotrifluoroethane	2009/10/20		83	%	70 - 130
		Ethanol	2009/10/20		72	%	70 - 130
		2-propanol	2009/10/20		84	%	70 - 130
		2-Propanone	2009/10/20		111	%	70 - 130
		Methyl Ethyl Ketone (2-Butanone)	2009/10/20		93	%	70 - 130
		Methyl Isobutyl Ketone	2009/10/20		83	%	70 - 130
		Methyl Butyl Ketone (2-Hexanone)	2009/10/20		78	%	70 - 130
		Methyl t-butyl ether (MTBE)	2009/10/20		92	%	70 - 130
		Ethyl Acetate	2009/10/20		92	%	70 - 130
		1,1-Dichloroethylene	2009/10/20		85	%	70 - 130
		cis-1,2-Dichloroethylene	2009/10/20		86	%	70 - 130
		trans-1,2-Dichloroethylene	2009/10/20		91	%	70 - 130
		Methylene Chloride(Dichloromethane)	2009/10/20		73	%	70 - 130
		Chloroform	2009/10/20		83	%	70 - 130
		Carbon Tetrachloride	2009/10/20		88	%	70 - 130
		1,1-Dichloroethane	2009/10/20		84	%	70 - 130
		1,2-Dichloroethane	2009/10/20		84	%	70 - 130
		Ethylene Dibromide	2009/10/20		86	%	70 - 130
		1,1,1-Trichloroethane	2009/10/20		84	%	70 - 130
		1,1,2-Trichloroethane	2009/10/20		83	%	70 - 130
		1,1,2,2-Tetrachloroethane	2009/10/20		82	%	70 - 130
		cis-1,3-Dichloropropene	2009/10/20		89	%	70 - 130
		trans-1,3-Dichloropropene	2009/10/20		94	%	70 - 130
		1,2-Dichloropropane	2009/10/20		81	%	70 - 130
		Bromomethane	2009/10/20		90	%	70 - 130
		Bromoform	2009/10/20		93	%	70 - 130
		Bromodichloromethane	2009/10/20		90	%	70 - 130
		Dibromochloromethane	2009/10/20		93	%	70 - 130
		Heptane	2009/10/20		92	%	70 - 130
		Trichloroethylene	2009/10/20		82	%	70 - 130
		Tetrachloroethylene	2009/10/20		83	%	70 - 130
		Benzene	2009/10/20		84	%	70 - 130
		Toluene	2009/10/20		88	%	70 - 130
		Ethylbenzene	2009/10/20		89	%	70 - 130
		p+m-Xylene	2009/10/20		87	%	70 - 130
		o-Xylene	2009/10/20		85	%	70 - 130
		Styrene	2009/10/20		73	%	70 - 130
		1,3,5-Trimethylbenzene	2009/10/20		82	%	70 - 130
		1,2,4-Trimethylbenzene	2009/10/20		85	%	70 - 130
		4-ethyltoluene	2009/10/20		97	%	70 - 130

Lakeland Industry & Community Assoc.
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Quality Assurance Report (Continued)

Maxxam Job Number: GA9D9384

QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits	
1979082 VEA	Spiked Blank	Chlorobenzene	2009/10/20		82	%	70 - 130	
		Benzyl chloride	2009/10/20		105	%	70 - 130	
1,3-Dichlorobenzene		2009/10/20		88	%	70 - 130		
1,4-Dichlorobenzene		2009/10/20		89	%	70 - 130		
1,2-Dichlorobenzene		2009/10/20		86	%	70 - 130		
1,2,4-Trichlorobenzene		2009/10/20		82	%	70 - 130		
Hexachlorobutadiene		2009/10/20		75	%	70 - 130		
Hexane		2009/10/20		92	%	70 - 130		
Cyclohexane		2009/10/20		91	%	70 - 130		
Tetrahydrofuran		2009/10/20		91	%	70 - 130		
Method Blank	Method Blank	1,4-Dioxane	2009/10/20		89	%	70 - 130	
		Bromochloromethane	2009/10/20		79	%	60 - 140	
		D5-Chlorobenzene	2009/10/20		81	%	60 - 140	
		Difluorobenzene	2009/10/20		84	%	60 - 140	
		2,2,4-Trimethylpentane	2009/10/20	ND, RDL=0.20			ppbv	
		Carbon Disulfide	2009/10/20	ND, RDL=0.50			ppbv	
		Propene	2009/10/20	ND, RDL=0.30			ppbv	
		Vinyl Acetate	2009/10/20	ND, RDL=0.20			ppbv	
		Vinyl Bromide	2009/10/20	ND, RDL=0.20			ppbv	
		Dichlorodifluoromethane (FREON 12)	2009/10/20	ND, RDL=0.20			ppbv	
		1,2-Dichlorotetrafluoroethane	2009/10/20	ND, RDL=0.17			ppbv	
		Chloromethane	2009/10/20	ND, RDL=0.30			ppbv	
		Vinyl Chloride	2009/10/20	ND, RDL=0.18			ppbv	
		Chloroethane	2009/10/20	ND, RDL=0.30			ppbv	
		1,3-Butadiene	2009/10/20	ND, RDL=0.50			ppbv	
		Trichlorofluoromethane (FREON 11)	2009/10/20	ND, RDL=0.20			ppbv	
		Trichlorotrifluoroethane	2009/10/20	ND, RDL=0.15			ppbv	
		Ethanol	2009/10/20	ND, RDL=2.3			ppbv	
		2-propanol	2009/10/20	ND, RDL=3.0			ppbv	
		2-Propanone	2009/10/20	ND, RDL=0.80			ppbv	
		Methyl Ethyl Ketone (2-Butanone)	2009/10/20	ND, RDL=3.0			ppbv	
		Methyl Isobutyl Ketone	2009/10/20	ND, RDL=3.2			ppbv	
		Methyl Butyl Ketone (2-Hexanone)	2009/10/20	ND, RDL=2.0			ppbv	
		Methyl t-butyl ether (MTBE)	2009/10/20	ND, RDL=0.20			ppbv	
		Ethyl Acetate	2009/10/20	ND, RDL=2.2			ppbv	
		1,1-Dichloroethylene	2009/10/20	ND, RDL=0.25			ppbv	
		cis-1,2-Dichloroethylene	2009/10/20	ND, RDL=0.19			ppbv	
		trans-1,2-Dichloroethylene	2009/10/20	ND, RDL=0.20			ppbv	
		Methylene Chloride(Dichloromethane)	2009/10/20	0.66, RDL=0.30			ppbv	
		Chloroform	2009/10/20	ND, RDL=0.15			ppbv	
		Carbon Tetrachloride	2009/10/20	ND, RDL=0.30			ppbv	
		1,1-Dichloroethane	2009/10/20	ND, RDL=0.20			ppbv	
		1,2-Dichloroethane	2009/10/20	ND, RDL=0.20			ppbv	
		Ethylene Dibromide	2009/10/20	ND, RDL=0.17			ppbv	
		1,1,1-Trichloroethane	2009/10/20	ND, RDL=0.30			ppbv	
		1,1,2-Trichloroethane	2009/10/20	ND, RDL=0.15			ppbv	
		1,1,2,2-Tetrachloroethane	2009/10/20	ND, RDL=0.20			ppbv	
		cis-1,3-Dichloropropene	2009/10/20	ND, RDL=0.18			ppbv	
trans-1,3-Dichloropropene	2009/10/20	ND, RDL=0.17			ppbv			
1,2-Dichloropropane	2009/10/20	ND, RDL=0.40			ppbv			
Bromomethane	2009/10/20	ND, RDL=0.18			ppbv			
Bromoform	2009/10/20	ND, RDL=0.20			ppbv			
Bromodichloromethane	2009/10/20	ND, RDL=0.20			ppbv			
Dibromochloromethane	2009/10/20	ND, RDL=0.20			ppbv			
Heptane	2009/10/20	ND, RDL=0.30			ppbv			

Lakeland Industry & Community Assoc.
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Quality Assurance Report (Continued)
 Maxxam Job Number: GA9D9384

QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
1979082 VEA	Method Blank	Trichloroethylene	2009/10/20	ND, RDL=0.30		ppbv	
		Tetrachloroethylene	2009/10/20	ND, RDL=0.20		ppbv	
		Benzene	2009/10/20	ND, RDL=0.18		ppbv	
		Toluene	2009/10/20	ND, RDL=0.20		ppbv	
		Ethylbenzene	2009/10/20	ND, RDL=0.20		ppbv	
		p+m-Xylene	2009/10/20	ND, RDL=0.37		ppbv	
		o-Xylene	2009/10/20	ND, RDL=0.20		ppbv	
		Styrene	2009/10/20	ND, RDL=0.20		ppbv	
		1,3,5-Trimethylbenzene	2009/10/20	ND, RDL=2.4		ppbv	
		1,2,4-Trimethylbenzene	2009/10/20	ND, RDL=2.5		ppbv	
		4-ethyltoluene	2009/10/20	ND, RDL=2.2		ppbv	
		Chlorobenzene	2009/10/20	ND, RDL=0.20		ppbv	
		Benzyl chloride	2009/10/20	ND, RDL=1.0		ppbv	
		1,3-Dichlorobenzene	2009/10/20	ND, RDL=0.40		ppbv	
		1,4-Dichlorobenzene	2009/10/20	ND, RDL=0.40		ppbv	
		1,2-Dichlorobenzene	2009/10/20	ND, RDL=0.40		ppbv	
		1,2,4-Trichlorobenzene	2009/10/20	ND, RDL=2.0		ppbv	
		Hexachlorobutadiene	2009/10/20	ND, RDL=3.0		ppbv	
		Hexane	2009/10/20	ND, RDL=0.30		ppbv	
		Cyclohexane	2009/10/20	ND, RDL=0.20		ppbv	
		Tetrahydrofuran	2009/10/20	ND, RDL=0.40		ppbv	
		1,4-Dioxane	2009/10/20	ND, RDL=2.0		ppbv	
		Xylene (Total)	2009/10/20	ND, RDL=0.60		ppbv	
	RPD - Sample/Sample Dup	2,2,4-Trimethylpentane	2009/10/20	NC		%	25
		Carbon Disulfide	2009/10/20	NC		%	25
		Propene	2009/10/20	NC		%	25
		Vinyl Acetate	2009/10/20	NC		%	25
		Vinyl Bromide	2009/10/20	NC		%	25
		Dichlorodifluoromethane (FREON 12)	2009/10/20	NC		%	25
		1,2-Dichlorotetrafluoroethane	2009/10/20	NC		%	25
		Chloromethane	2009/10/20	NC		%	25
		Vinyl Chloride	2009/10/20	NC		%	25
		Chloroethane	2009/10/20	NC		%	25
		1,3-Butadiene	2009/10/20	NC		%	25
		Trichlorofluoromethane (FREON 11)	2009/10/20	NC		%	25
		Trichlorotrifluoroethane	2009/10/20	NC		%	25
		Ethanol	2009/10/20	NC		%	25
		2-propanol	2009/10/20	NC		%	25
		2-Propanone	2009/10/20	NC		%	25
		Methyl Ethyl Ketone (2-Butanone)	2009/10/20	NC		%	25
		Methyl Isobutyl Ketone	2009/10/20	NC		%	25
		Methyl Butyl Ketone (2-Hexanone)	2009/10/20	NC		%	25
		Methyl t-butyl ether (MTBE)	2009/10/20	NC		%	25
		Ethyl Acetate	2009/10/20	NC		%	25
		1,1-Dichloroethylene	2009/10/20	NC		%	25
		cis-1,2-Dichloroethylene	2009/10/20	NC		%	25
		trans-1,2-Dichloroethylene	2009/10/20	NC		%	25
		Methylene Chloride(Dichloromethane)	2009/10/20	NC		%	25
		Chloroform	2009/10/20	NC		%	25
		Carbon Tetrachloride	2009/10/20	NC		%	25
		1,1-Dichloroethane	2009/10/20	NC		%	25
		1,2-Dichloroethane	2009/10/20	NC		%	25
		Ethylene Dibromide	2009/10/20	NC		%	25

Lakeland Industry & Community Assoc.
 Attention:
 Client Project #:
 P.O. #:
 Project name:

Quality Assurance Report (Continued)

Maxxam Job Number: GA9D9384

QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
1979082 VEA	RPD - Sample/Sample Dup	1,1,1-Trichloroethane	2009/10/20	NC		%	25
		1,1,2-Trichloroethane	2009/10/20	NC		%	25
		1,1,2,2-Tetrachloroethane	2009/10/20	NC		%	25
		cis-1,3-Dichloropropene	2009/10/20	NC		%	25
		trans-1,3-Dichloropropene	2009/10/20	NC		%	25
		1,2-Dichloropropane	2009/10/20	NC		%	25
		Bromomethane	2009/10/20	NC		%	25
		Bromoform	2009/10/20	NC		%	25
		Bromodichloromethane	2009/10/20	NC		%	25
		Dibromochloromethane	2009/10/20	NC		%	25
		Heptane	2009/10/20	NC		%	25
		Trichloroethylene	2009/10/20	NC		%	25
		Tetrachloroethylene	2009/10/20	NC		%	25
		Benzene	2009/10/20	NC		%	25
		Toluene	2009/10/20	NC		%	25
		Ethylbenzene	2009/10/20	NC		%	25
		p+m-Xylene	2009/10/20	NC		%	25
		o-Xylene	2009/10/20	NC		%	25
		Styrene	2009/10/20	NC		%	25
		1,3,5-Trimethylbenzene	2009/10/20	NC		%	25
		1,2,4-Trimethylbenzene	2009/10/20	NC		%	25
		4-ethyltoluene	2009/10/20	NC		%	25
		Chlorobenzene	2009/10/20	NC		%	25
		Benzyl chloride	2009/10/20	NC		%	25
		1,3-Dichlorobenzene	2009/10/20	NC		%	25
		1,4-Dichlorobenzene	2009/10/20	NC		%	25
		1,2-Dichlorobenzene	2009/10/20	NC		%	25
		1,2,4-Trichlorobenzene	2009/10/20	NC		%	25
		Hexachlorobutadiene	2009/10/20	NC		%	25
		Hexane	2009/10/20	NC		%	25
		Cyclohexane	2009/10/20	NC		%	25
		Tetrahydrofuran	2009/10/20	NC		%	25
		1,4-Dioxane	2009/10/20	NC		%	25
		Xylene (Total)	2009/10/20	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.



Your C.O.C. #: 5415

Lakeland Industry & Community Assoc.
P.O. Box 8237
Bonnyville, AB
CANADA T9N 2J5

Report Date: 2009/11/02

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: A9E1758
Received: 2009/10/22, 13:58

Sample Matrix: AIR
Samples Received: 2

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Method Reference
Canister Pressure (TO-15)	2	N/A	2009/10/26	BRL SOP-00304	EPA TO-15
Volatile Organics in Air (TO-15) ¶	2	N/A	2009/10/26	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: 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. SCC and CALA have approved this reporting process and electronic report format.

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Total cover pages: 1

Maxxam Job #: A9E1758
 Report Date: 2009/11/02

RESULTS OF ANALYSES OF AIR

Maxxam ID		EC6197	EC6198		
Sampling Date		2009/10/16	2009/10/16		
COC Number		5415	5415		
	Units	LICA	LICA	DL	QC Batch
		VOC/CLS/OCT16,09	VOC/PORT/OCT16/09		
		S2210	7844		

Volatile Organics					
Pressure on Receipt	psig	19	19	N/A	1985490

RDL = Reportable Detection Limit
 QC Batch = Quality Control Batch

Maxxam Job #: A9E1758
 Report Date: 2009/11/02

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		EC6197				
Sampling Date		2009/10/16				
COC Number		5415				
	Units	LICA VOC/CLS/OCT16,09 S2210	DL	ug/m3	DL (ug/m3)	QC Batch
Volatile Organics						
2,2,4-Trimethylpentane	ppbv	<0.20	0.20	<0.934	0.934	1985505
Carbon Disulfide	ppbv	1.23	0.50	3.82	1.56	1985505
Propene	ppbv	<0.30	0.30	<0.516	0.516	1985505
Vinyl Acetate	ppbv	<0.20	0.20	<0.704	0.704	1985505
Vinyl Bromide	ppbv	<0.20	0.20	<0.875	0.875	1985505
Dichlorodifluoromethane (FREON 12)	ppbv	0.75	0.20	3.71	0.989	1985505
1,2-Dichlorotetrafluoroethane	ppbv	<0.17	0.17	<1.19	1.19	1985505
Chloromethane	ppbv	0.47	0.30	0.978	0.620	1985505
Vinyl Chloride	ppbv	<0.18	0.18	<0.460	0.460	1985505
Chloroethane	ppbv	<0.30	0.30	<0.792	0.792	1985505
1,3-Butadiene	ppbv	<0.50	0.50	<1.11	1.11	1985505
Trichlorofluoromethane (FREON 11)	ppbv	0.35	0.20	1.98	1.12	1985505
Trichlorotrifluoroethane	ppbv	<0.15	0.15	<1.15	1.15	1985505
Ethanol	ppbv	2.8	2.3	5.27	4.33	1985505
2-propanol	ppbv	<3.0	3.0	<7.37	7.37	1985505
2-Propanone	ppbv	1.82	0.80	4.33	1.90	1985505
Methyl Ethyl Ketone (2-Butanone)	ppbv	<3.0	3.0	<8.85	8.85	1985505
Methyl Isobutyl Ketone	ppbv	<3.2	3.2	<13.1	13.1	1985505
Methyl Butyl Ketone (2-Hexanone)	ppbv	<2.0	2.0	<8.19	8.19	1985505
Methyl t-butyl ether (MTBE)	ppbv	<0.20	0.20	<0.721	0.721	1985505
Ethyl Acetate	ppbv	<2.2	2.2	<7.93	7.93	1985505
1,1-Dichloroethylene	ppbv	<0.25	0.25	<0.991	0.991	1985505
cis-1,2-Dichloroethylene	ppbv	<0.19	0.19	<0.753	0.753	1985505
trans-1,2-Dichloroethylene	ppbv	<0.20	0.20	<0.793	0.793	1985505
Methylene Chloride(Dichloromethane)	ppbv	0.47	0.30	1.64	1.04	1985505
Chloroform	ppbv	<0.15	0.15	<0.732	0.732	1985505
Carbon Tetrachloride	ppbv	<0.30	0.30	<1.89	1.89	1985505
1,1-Dichloroethane	ppbv	<0.20	0.20	<0.809	0.809	1985505
1,2-Dichloroethane	ppbv	<0.20	0.20	<0.809	0.809	1985505
Ethylene Dibromide	ppbv	<0.17	0.17	<1.31	1.31	1985505
1,1,1-Trichloroethane	ppbv	<0.30	0.30	<1.64	1.64	1985505
RDL = Reportable Detection Limit QC Batch = Quality Control Batch						

Maxxam Job #: A9E1758
 Report Date: 2009/11/02

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		EC6197				
Sampling Date		2009/10/16				
COC Number		5415				
	Units	LICA VOC/CLS/OCT16,09 S2210	DL	ug/m3	DL (ug/m3)	QC Batch
1,1,2-Trichloroethane	ppbv	<0.15	0.15	<0.818	0.818	1985505
1,1,2,2-Tetrachloroethane	ppbv	<0.20	0.20	<1.37	1.37	1985505
cis-1,3-Dichloropropene	ppbv	<0.18	0.18	<0.817	0.817	1985505
trans-1,3-Dichloropropene	ppbv	<0.17	0.17	<0.772	0.772	1985505
1,2-Dichloropropane	ppbv	<0.40	0.40	<1.85	1.85	1985505
Bromomethane	ppbv	<0.18	0.18	<0.699	0.699	1985505
Bromoform	ppbv	<0.20	0.20	<2.07	2.07	1985505
Bromodichloromethane	ppbv	<0.20	0.20	<1.34	1.34	1985505
Dibromochloromethane	ppbv	<0.20	0.20	<1.70	1.70	1985505
Heptane	ppbv	<0.30	0.30	<1.23	1.23	1985505
Trichloroethylene	ppbv	<0.30	0.30	<1.61	1.61	1985505
Tetrachloroethylene	ppbv	<0.20	0.20	<1.36	1.36	1985505
Benzene	ppbv	<0.18	0.18	<0.575	0.575	1985505
Toluene	ppbv	0.33	0.20	1.23	0.753	1985505
Ethylbenzene	ppbv	<0.20	0.20	<0.868	0.868	1985505
p+m-Xylene	ppbv	<0.37	0.37	<1.61	1.61	1985505
o-Xylene	ppbv	<0.20	0.20	<0.868	0.868	1985505
Styrene	ppbv	<0.20	0.20	<0.852	0.852	1985505
1,3,5-Trimethylbenzene	ppbv	<0.50	0.50	<2.46	2.46	1985505
1,2,4-Trimethylbenzene	ppbv	<0.50	0.50	<2.46	2.46	1985505
4-ethyltoluene	ppbv	<2.2	2.2	<10.8	10.8	1985505
Chlorobenzene	ppbv	<0.20	0.20	<0.921	0.921	1985505
Benzyl chloride	ppbv	<1.0	1.0	<5.18	5.18	1985505
1,3-Dichlorobenzene	ppbv	<0.40	0.40	<2.40	2.40	1985505
1,4-Dichlorobenzene	ppbv	<0.40	0.40	<2.40	2.40	1985505
1,2-Dichlorobenzene	ppbv	<0.40	0.40	<2.40	2.40	1985505
1,2,4-Trichlorobenzene	ppbv	<2.0	2.0	<14.8	14.8	1985505
Hexachlorobutadiene	ppbv	<3.0	3.0	<32.0	32.0	1985505
Hexane	ppbv	<0.30	0.30	<1.06	1.06	1985505
Cyclohexane	ppbv	<0.20	0.20	<0.688	0.688	1985505
Tetrahydrofuran	ppbv	<0.40	0.40	<1.18	1.18	1985505
1,4-Dioxane	ppbv	<2.0	2.0	<7.21	7.21	1985505
Xylene (Total)	ppbv	<0.60	0.60	<2.61	2.61	1985505
QC Batch = Quality Control Batch						

Maxxam Job #: A9E1758
 Report Date: 2009/11/02

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		EC6197				
Sampling Date		2009/10/16				
COC Number		5415				
	Units	LICA	DL	ug/m3	DL (ug/m3)	QC Batch
		VOC/CLS/OCT16,09				
		S2210				

Surrogate Recovery (%)						
Bromochloromethane	%	109		N/A	N/A	1985505
D5-Chlorobenzene	%	102		N/A	N/A	1985505
Difluorobenzene	%	109		N/A	N/A	1985505

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

Maxxam Job #: A9E1758
 Report Date: 2009/11/02

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		EC6198				
Sampling Date		2009/10/16				
COC Number		5415				
	Units	LICA VOC/PORT/OCT16/09 7844	DL	ug/m3	DL (ug/m3)	QC Batch

Volatile Organics						
2,2,4-Trimethylpentane	ppbv	<0.20	0.20	<0.934	0.934	1985505
Carbon Disulfide	ppbv	<0.50	0.50	<1.56	1.56	1985505
Propene	ppbv	<0.30	0.30	<0.516	0.516	1985505
Vinyl Acetate	ppbv	<0.20	0.20	<0.704	0.704	1985505
Vinyl Bromide	ppbv	<0.20	0.20	<0.875	0.875	1985505
Dichlorodifluoromethane (FREON 12)	ppbv	0.82	0.20	4.04	0.989	1985505
1,2-Dichlorotetrafluoroethane	ppbv	<0.17	0.17	<1.19	1.19	1985505
Chloromethane	ppbv	0.51	0.30	1.05	0.620	1985505
Vinyl Chloride	ppbv	<0.18	0.18	<0.460	0.460	1985505
Chloroethane	ppbv	<0.30	0.30	<0.792	0.792	1985505
1,3-Butadiene	ppbv	<0.50	0.50	<1.11	1.11	1985505
Trichlorofluoromethane (FREON 11)	ppbv	0.40	0.20	2.24	1.12	1985505
Trichlorotrifluoroethane	ppbv	<0.15	0.15	<1.15	1.15	1985505
Ethanol	ppbv	6.2	2.3	11.7	4.33	1985505
2-propanol	ppbv	<3.0	3.0	<7.37	7.37	1985505
2-Propanone	ppbv	4.20	0.80	9.97	1.90	1985505
Methyl Ethyl Ketone (2-Butanone)	ppbv	<3.0	3.0	<8.85	8.85	1985505
Methyl Isobutyl Ketone	ppbv	<3.2	3.2	<13.1	13.1	1985505
Methyl Butyl Ketone (2-Hexanone)	ppbv	<2.0	2.0	<8.19	8.19	1985505
Methyl t-butyl ether (MTBE)	ppbv	<0.20	0.20	<0.721	0.721	1985505
Ethyl Acetate	ppbv	<2.2	2.2	<7.93	7.93	1985505
1,1-Dichloroethylene	ppbv	<0.25	0.25	<0.991	0.991	1985505
cis-1,2-Dichloroethylene	ppbv	<0.19	0.19	<0.753	0.753	1985505
trans-1,2-Dichloroethylene	ppbv	<0.20	0.20	<0.793	0.793	1985505
Methylene Chloride(Dichloromethane)	ppbv	0.54	0.30	1.88	1.04	1985505
Chloroform	ppbv	<0.15	0.15	<0.732	0.732	1985505
Carbon Tetrachloride	ppbv	<0.30	0.30	<1.89	1.89	1985505
1,1-Dichloroethane	ppbv	<0.20	0.20	<0.809	0.809	1985505
1,2-Dichloroethane	ppbv	<0.20	0.20	<0.809	0.809	1985505
Ethylene Dibromide	ppbv	<0.17	0.17	<1.31	1.31	1985505
1,1,1-Trichloroethane	ppbv	<0.30	0.30	<1.64	1.64	1985505

 RDL = Reportable Detection Limit
 QC Batch = Quality Control Batch

Maxxam Job #: A9E1758
 Report Date: 2009/11/02

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		EC6198				
Sampling Date		2009/10/16				
COC Number		5415				
	Units	LICA VOC/PORT/OCT16/09 7844	DL	ug/m3	DL (ug/m3)	QC Batch
1,1,2-Trichloroethane	ppbv	<0.15	0.15	<0.818	0.818	1985505
1,1,2,2-Tetrachloroethane	ppbv	<0.20	0.20	<1.37	1.37	1985505
cis-1,3-Dichloropropene	ppbv	<0.18	0.18	<0.817	0.817	1985505
trans-1,3-Dichloropropene	ppbv	<0.17	0.17	<0.772	0.772	1985505
1,2-Dichloropropane	ppbv	<0.40	0.40	<1.85	1.85	1985505
Bromomethane	ppbv	<0.18	0.18	<0.699	0.699	1985505
Bromoform	ppbv	<0.20	0.20	<2.07	2.07	1985505
Bromodichloromethane	ppbv	<0.20	0.20	<1.34	1.34	1985505
Dibromochloromethane	ppbv	<0.20	0.20	<1.70	1.70	1985505
Heptane	ppbv	<0.30	0.30	<1.23	1.23	1985505
Trichloroethylene	ppbv	<0.30	0.30	<1.61	1.61	1985505
Tetrachloroethylene	ppbv	<0.20	0.20	<1.36	1.36	1985505
Benzene	ppbv	<0.18	0.18	<0.575	0.575	1985505
Toluene	ppbv	0.38	0.20	1.44	0.753	1985505
Ethylbenzene	ppbv	<0.20	0.20	<0.868	0.868	1985505
p+m-Xylene	ppbv	<0.37	0.37	<1.61	1.61	1985505
o-Xylene	ppbv	<0.20	0.20	<0.868	0.868	1985505
Styrene	ppbv	<0.20	0.20	<0.852	0.852	1985505
1,3,5-Trimethylbenzene	ppbv	<0.50	0.50	<2.46	2.46	1985505
1,2,4-Trimethylbenzene	ppbv	<0.50	0.50	<2.46	2.46	1985505
4-ethyltoluene	ppbv	<2.2	2.2	<10.8	10.8	1985505
Chlorobenzene	ppbv	<0.20	0.20	<0.921	0.921	1985505
Benzyl chloride	ppbv	<1.0	1.0	<5.18	5.18	1985505
1,3-Dichlorobenzene	ppbv	<0.40	0.40	<2.40	2.40	1985505
1,4-Dichlorobenzene	ppbv	<0.40	0.40	<2.40	2.40	1985505
1,2-Dichlorobenzene	ppbv	<0.40	0.40	<2.40	2.40	1985505
1,2,4-Trichlorobenzene	ppbv	<2.0	2.0	<14.8	14.8	1985505
Hexachlorobutadiene	ppbv	<3.0	3.0	<32.0	32.0	1985505
Hexane	ppbv	<0.30	0.30	<1.06	1.06	1985505
Cyclohexane	ppbv	0.26	0.20	0.886	0.688	1985505
Tetrahydrofuran	ppbv	<0.40	0.40	<1.18	1.18	1985505
1,4-Dioxane	ppbv	<2.0	2.0	<7.21	7.21	1985505
Xylene (Total)	ppbv	<0.60	0.60	<2.61	2.61	1985505
QC Batch = Quality Control Batch						

Maxxam Job #: A9E1758
 Report Date: 2009/11/02

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		EC6198				
Sampling Date		2009/10/16				
COC Number		5415				
	Units	LICA VOC/PORT/OCT16/09 7844	DL	ug/m3	DL (ug/m3)	QC Batch

Surrogate Recovery (%)						
Bromochloromethane	%	94		N/A	N/A	1985505
D5-Chlorobenzene	%	88		N/A	N/A	1985505
Difluorobenzene	%	94		N/A	N/A	1985505

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

Maxxam Job #: A9E1758
 Report Date: 2009/11/02

Test Summary

Maxxam ID EC6197 **Collected** 2009/10/16
Sample ID LICA VOC/CLS/OCT16,09 S2210 **Shipped**
Matrix AIR **Received** 2009/10/22

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Canister Pressure (TO-15)	PRES	1985490	N/A	2009/10/26	LSY
Volatile Organics in Air (TO-15)	GC/MS	1985505	N/A	2009/10/26	LSY

Maxxam ID EC6198 **Collected** 2009/10/16
Sample ID LICA VOC/PORT/OCT16/09 7844 **Shipped**
Matrix AIR **Received** 2009/10/22

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Canister Pressure (TO-15)	PRES	1985490	N/A	2009/10/26	LSY
Volatile Organics in Air (TO-15)	GC/MS	1985505	N/A	2009/10/26	LSY

Maxxam Job #: A9E1758
Report Date: 2009/11/02

GENERAL COMMENTS

Results relate only to the items tested.

Lakeland Industry & Community Assoc.
 Attention:
 Client Project #:
 P.O. #:
 Project name:

Quality Assurance Report
 Maxxam Job Number: GA9E1758

QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
1985505 LSY	Spiked Blank	Bromochloromethane	2009/10/26		114	%	60 - 140
		D5-Chlorobenzene	2009/10/26		112	%	60 - 140
		Difluorobenzene	2009/10/26		115	%	60 - 140
		2,2,4-Trimethylpentane	2009/10/26		86	%	70 - 130
		Carbon Disulfide	2009/10/26		86	%	70 - 130
		Propene	2009/10/26		85	%	70 - 130
		Vinyl Acetate	2009/10/26		93	%	70 - 130
		Vinyl Bromide	2009/10/26		92	%	70 - 130
		Dichlorodifluoromethane (FREON 12)	2009/10/26		101	%	70 - 130
		1,2-Dichlorotetrafluoroethane	2009/10/26		90	%	70 - 130
		Chloromethane	2009/10/26		88	%	70 - 130
		Vinyl Chloride	2009/10/26		83	%	70 - 130
		Chloroethane	2009/10/26		85	%	70 - 130
		1,3-Butadiene	2009/10/26		80	%	70 - 130
		Trichlorofluoromethane (FREON 11)	2009/10/26		109	%	70 - 130
		Trichlorotrifluoroethane	2009/10/26		89	%	70 - 130
		Ethanol	2009/10/26		97	%	70 - 130
		2-propanol	2009/10/26		101	%	70 - 130
		2-Propanone	2009/10/26		91	%	70 - 130
		Methyl Ethyl Ketone (2-Butanone)	2009/10/26		97	%	70 - 130
		Methyl Isobutyl Ketone	2009/10/26		95	%	70 - 130
		Methyl Butyl Ketone (2-Hexanone)	2009/10/26		106	%	70 - 130
		Methyl t-butyl ether (MTBE)	2009/10/26		94	%	70 - 130
		Ethyl Acetate	2009/10/26		99	%	70 - 130
		1,1-Dichloroethylene	2009/10/26		93	%	70 - 130
		cis-1,2-Dichloroethylene	2009/10/26		94	%	70 - 130
		trans-1,2-Dichloroethylene	2009/10/26		91	%	70 - 130
		Methylene Chloride(Dichloromethane)	2009/10/26		82	%	70 - 130
		Chloroform	2009/10/26		96	%	70 - 130
		Carbon Tetrachloride	2009/10/26		112	%	70 - 130
		1,1-Dichloroethane	2009/10/26		91	%	70 - 130
		1,2-Dichloroethane	2009/10/26		105	%	70 - 130
		Ethylene Dibromide	2009/10/26		91	%	70 - 130
		1,1,1-Trichloroethane	2009/10/26		104	%	70 - 130
		1,1,2-Trichloroethane	2009/10/26		88	%	70 - 130
		1,1,2,2-Tetrachloroethane	2009/10/26		85	%	70 - 130
		cis-1,3-Dichloropropene	2009/10/26		91	%	70 - 130
		trans-1,3-Dichloropropene	2009/10/26		97	%	70 - 130
		1,2-Dichloropropane	2009/10/26		84	%	70 - 130
		Bromomethane	2009/10/26		85	%	70 - 130
		Bromoform	2009/10/26		114	%	70 - 130
		Bromodichloromethane	2009/10/26		103	%	70 - 130
		Dibromochloromethane	2009/10/26		109	%	70 - 130
		Heptane	2009/10/26		89	%	70 - 130
		Trichloroethylene	2009/10/26		87	%	70 - 130
		Tetrachloroethylene	2009/10/26		91	%	70 - 130
		Benzene	2009/10/26		84	%	70 - 130
		Toluene	2009/10/26		87	%	70 - 130
		Ethylbenzene	2009/10/26		87	%	70 - 130
		p+m-Xylene	2009/10/26		88	%	70 - 130
		o-Xylene	2009/10/26		88	%	70 - 130
		Styrene	2009/10/26		98	%	70 - 130
		1,3,5-Trimethylbenzene	2009/10/26		88	%	70 - 130
		1,2,4-Trimethylbenzene	2009/10/26		84	%	70 - 130
		4-ethyltoluene	2009/10/26		89	%	70 - 130

Lakeland Industry & Community Assoc.
 Attention:
 Client Project #:
 P.O. #:
 Project name:

Quality Assurance Report (Continued)

Maxxam Job Number: GA9E1758

QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
1985505 LSY	Spiked Blank	Chlorobenzene	2009/10/26		80	%	70 - 130
		Benzyl chloride	2009/10/26		102	%	70 - 130
		1,3-Dichlorobenzene	2009/10/26		83	%	70 - 130
		1,4-Dichlorobenzene	2009/10/26		84	%	70 - 130
		1,2-Dichlorobenzene	2009/10/26		82	%	70 - 130
		1,2,4-Trichlorobenzene	2009/10/26		112	%	70 - 130
		Hexachlorobutadiene	2009/10/26		98	%	70 - 130
		Hexane	2009/10/26		82	%	70 - 130
		Cyclohexane	2009/10/26		85	%	70 - 130
		Tetrahydrofuran	2009/10/26		93	%	70 - 130
		1,4-Dioxane	2009/10/26		95	%	70 - 130
	Method Blank	Bromochloromethane	2009/10/26		76	%	60 - 140
		D5-Chlorobenzene	2009/10/26		72	%	60 - 140
		Difluorobenzene	2009/10/26		75	%	60 - 140
		2,2,4-Trimethylpentane	2009/10/26	ND, RDL=0.20		ppbv	
		Carbon Disulfide	2009/10/26	ND, RDL=0.50		ppbv	
		Propene	2009/10/26	ND, RDL=0.30		ppbv	
		Vinyl Acetate	2009/10/26	ND, RDL=0.20		ppbv	
		Vinyl Bromide	2009/10/26	ND, RDL=0.20		ppbv	
		Dichlorodifluoromethane (FREON 12)	2009/10/26	ND, RDL=0.20		ppbv	
		1,2-Dichlorotetrafluoroethane	2009/10/26	ND, RDL=0.17		ppbv	
		Chloromethane	2009/10/26	ND, RDL=0.30		ppbv	
		Vinyl Chloride	2009/10/26	ND, RDL=0.18		ppbv	
		Chloroethane	2009/10/26	ND, RDL=0.30		ppbv	
		1,3-Butadiene	2009/10/26	ND, RDL=0.50		ppbv	
		Trichlorofluoromethane (FREON 11)	2009/10/26	ND, RDL=0.20		ppbv	
		Trichlorotrifluoroethane	2009/10/26	ND, RDL=0.15		ppbv	
		Ethanol	2009/10/26	ND, RDL=2.3		ppbv	
		2-propanol	2009/10/26	ND, RDL=3.0		ppbv	
		2-Propanone	2009/10/26	ND, RDL=0.80		ppbv	
		Methyl Ethyl Ketone (2-Butanone)	2009/10/26	ND, RDL=3.0		ppbv	
		Methyl Isobutyl Ketone	2009/10/26	ND, RDL=3.2		ppbv	
		Methyl Butyl Ketone (2-Hexanone)	2009/10/26	ND, RDL=2.0		ppbv	
		Methyl t-butyl ether (MTBE)	2009/10/26	ND, RDL=0.20		ppbv	
		Ethyl Acetate	2009/10/26	ND, RDL=2.2		ppbv	
		1,1-Dichloroethylene	2009/10/26	ND, RDL=0.25		ppbv	
		cis-1,2-Dichloroethylene	2009/10/26	ND, RDL=0.19		ppbv	
		trans-1,2-Dichloroethylene	2009/10/26	ND, RDL=0.20		ppbv	
		Methylene Chloride(Dichloromethane)	2009/10/26	0.48, RDL=0.30		ppbv	
		Chloroform	2009/10/26	ND, RDL=0.15		ppbv	
		Carbon Tetrachloride	2009/10/26	ND, RDL=0.30		ppbv	
		1,1-Dichloroethane	2009/10/26	ND, RDL=0.20		ppbv	
		1,2-Dichloroethane	2009/10/26	ND, RDL=0.20		ppbv	
		Ethylene Dibromide	2009/10/26	ND, RDL=0.17		ppbv	
		1,1,1-Trichloroethane	2009/10/26	ND, RDL=0.30		ppbv	
		1,1,2-Trichloroethane	2009/10/26	ND, RDL=0.15		ppbv	
		1,1,2,2-Tetrachloroethane	2009/10/26	ND, RDL=0.20		ppbv	
		cis-1,3-Dichloropropene	2009/10/26	ND, RDL=0.18		ppbv	
		trans-1,3-Dichloropropene	2009/10/26	ND, RDL=0.17		ppbv	
		1,2-Dichloropropane	2009/10/26	ND, RDL=0.40		ppbv	
		Bromomethane	2009/10/26	ND, RDL=0.18		ppbv	
		Bromoform	2009/10/26	ND, RDL=0.20		ppbv	
		Bromodichloromethane	2009/10/26	ND, RDL=0.20		ppbv	
		Dibromochloromethane	2009/10/26	ND, RDL=0.20		ppbv	
		Heptane	2009/10/26	ND, RDL=0.30		ppbv	

Lakeland Industry & Community Assoc.
 Attention:
 Client Project #:
 P.O. #:
 Project name:

Quality Assurance Report (Continued)

Maxxam Job Number: GA9E1758

QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
1985505 LSY	Method Blank	Trichloroethylene	2009/10/26	ND, RDL=0.30		ppbv	
		Tetrachloroethylene	2009/10/26	ND, RDL=0.20		ppbv	
		Benzene	2009/10/26	ND, RDL=0.18		ppbv	
		Toluene	2009/10/26	ND, RDL=0.20		ppbv	
		Ethylbenzene	2009/10/26	ND, RDL=0.20		ppbv	
		p+m-Xylene	2009/10/26	ND, RDL=0.37		ppbv	
		o-Xylene	2009/10/26	ND, RDL=0.20		ppbv	
		Styrene	2009/10/26	ND, RDL=0.20		ppbv	
		1,3,5-Trimethylbenzene	2009/10/26	ND, RDL=0.50		ppbv	
		1,2,4-Trimethylbenzene	2009/10/26	ND, RDL=0.50		ppbv	
		4-ethyltoluene	2009/10/26	ND, RDL=2.2		ppbv	
		Chlorobenzene	2009/10/26	ND, RDL=0.20		ppbv	
		Benzyl chloride	2009/10/26	ND, RDL=1.0		ppbv	
		1,3-Dichlorobenzene	2009/10/26	ND, RDL=0.40		ppbv	
		1,4-Dichlorobenzene	2009/10/26	ND, RDL=0.40		ppbv	
		1,2-Dichlorobenzene	2009/10/26	ND, RDL=0.40		ppbv	
		1,2,4-Trichlorobenzene	2009/10/26	ND, RDL=2.0		ppbv	
		Hexachlorobutadiene	2009/10/26	ND, RDL=3.0		ppbv	
		Hexane	2009/10/26	ND, RDL=0.30		ppbv	
		Cyclohexane	2009/10/26	ND, RDL=0.20		ppbv	
		Tetrahydrofuran	2009/10/26	ND, RDL=0.40		ppbv	
		1,4-Dioxane	2009/10/26	ND, RDL=2.0		ppbv	
		Xylene (Total)	2009/10/26	ND, RDL=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.



Site Location: COLD LAKE SOUTH 13-16-62-5 W4M
Your C.O.C. #: 5358

Attention: Shea Beaton

Lakeland Industry & Community Assoc.
P.O. Box 8237
Bonnyville, AB
CANADA T9N 2J5

Report Date: 2009/11/06

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: A9E5014

Received: 2009/10/28, 14:39

Sample Matrix: AIR
Samples Received: 2

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Method Reference
Canister Pressure (TO-15)	2	N/A	2009/10/30	BRL SOP-00304	EPA TO-15
Volatile Organics in Air (TO-15) ¶	2	N/A	2009/10/30	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: Theresa.Stephenson@MaxxamAnalytics.com
Phone# (905) 817-5763

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Total cover pages: 1

Lakeland Industry & Community Assoc.

Maxxam Job #: A9E5014
 Report Date: 2009/11/06

Project name: COLD LAKE SOUTH 13-16-62-5 W4M

RESULTS OF ANALYSES OF AIR

Maxxam ID		EE2019	EE2020		
Sampling Date		2009/10/22	2009/10/22		
COC Number		5358	5358		
	Units	LICA	LICA	DL	QC Batch
		VOC/CLS/OCT22,09-7850	VOC/PORT/OCT22,09-S2297		

Volatile Organics					
Pressure on Receipt	psig	9.0	20	N/A	1995537

RDL = Reportable Detection Limit
 QC Batch = Quality Control Batch

Lakeland Industry & Community Assoc.

Maxxam Job #: A9E5014
Report Date: 2009/11/06

Project name: COLD LAKE SOUTH 13-16-62-5 W4M

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		EE2019				
Sampling Date		2009/10/22				
COC Number		5358				
	Units	LICA	DL	ug/m3	DL (ug/m3)	QC Batch
		VOC/CLS/OCT22,09-7850				

Volatile Organics						
2,2,4-Trimethylpentane	ppbv	<0.20	0.20	<0.934	0.934	1995564
Carbon Disulfide	ppbv	<0.50	0.50	<1.56	1.56	1995564
Propene	ppbv	<0.30	0.30	<0.516	0.516	1995564
Vinyl Acetate	ppbv	<0.20	0.20	<0.704	0.704	1995564
Vinyl Bromide	ppbv	<0.20	0.20	<0.875	0.875	1995564
Dichlorodifluoromethane (FREON 12)	ppbv	0.64	0.20	3.15	0.989	1995564
1,2-Dichlorotetrafluoroethane	ppbv	<0.17	0.17	<1.19	1.19	1995564
Chloromethane	ppbv	0.52	0.30	1.08	0.620	1995564
Vinyl Chloride	ppbv	<0.18	0.18	<0.460	0.460	1995564
Chloroethane	ppbv	<0.30	0.30	<0.792	0.792	1995564
1,3-Butadiene	ppbv	<0.50	0.50	<1.11	1.11	1995564
Trichlorofluoromethane (FREON 11)	ppbv	0.32	0.20	1.82	1.12	1995564
Trichlorotrifluoroethane	ppbv	<0.15	0.15	<1.15	1.15	1995564
Ethanol	ppbv	<2.3	2.3	<4.33	4.33	1995564
2-propanol	ppbv	<3.0	3.0	<7.37	7.37	1995564
2-Propanone	ppbv	1.30	0.80	3.10	1.90	1995564
Methyl Ethyl Ketone (2-Butanone)	ppbv	<3.0	3.0	<8.85	8.85	1995564
Methyl Isobutyl Ketone	ppbv	<3.2	3.2	<13.1	13.1	1995564
Methyl Butyl Ketone (2-Hexanone)	ppbv	<2.0	2.0	<8.19	8.19	1995564
Methyl t-butyl ether (MTBE)	ppbv	<0.20	0.20	<0.721	0.721	1995564
Ethyl Acetate	ppbv	<2.2	2.2	<7.93	7.93	1995564
1,1-Dichloroethylene	ppbv	<0.25	0.25	<0.991	0.991	1995564
cis-1,2-Dichloroethylene	ppbv	<0.19	0.19	<0.753	0.753	1995564
trans-1,2-Dichloroethylene	ppbv	<0.20	0.20	<0.793	0.793	1995564
Methylene Chloride(Dichloromethane)	ppbv	0.36	0.30	1.25	1.04	1995564
Chloroform	ppbv	<0.15	0.15	<0.732	0.732	1995564
Carbon Tetrachloride	ppbv	<0.30	0.30	<1.89	1.89	1995564
1,1-Dichloroethane	ppbv	<0.20	0.20	<0.809	0.809	1995564
1,2-Dichloroethane	ppbv	<0.20	0.20	<0.809	0.809	1995564
Ethylene Dibromide	ppbv	<0.17	0.17	<1.31	1.31	1995564
1,1,1-Trichloroethane	ppbv	<0.30	0.30	<1.64	1.64	1995564
1,1,2-Trichloroethane	ppbv	<0.15	0.15	<0.818	0.818	1995564

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Lakeland Industry & Community Assoc.

 Maxxam Job #: A9E5014
 Report Date: 2009/11/06

Project name: COLD LAKE SOUTH 13-16-62-5 W4M

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		EE2019				
Sampling Date		2009/10/22				
COC Number		5358				
	Units	LICA	DL	ug/m3	DL (ug/m3)	QC Batch
		VOC/CLS/OCT22,09-7850				
1,1,2,2-Tetrachloroethane	ppbv	<0.20	0.20	<1.37	1.37	1995564
cis-1,3-Dichloropropene	ppbv	<0.18	0.18	<0.817	0.817	1995564
trans-1,3-Dichloropropene	ppbv	<0.17	0.17	<0.772	0.772	1995564
1,2-Dichloropropane	ppbv	<0.40	0.40	<1.85	1.85	1995564
Bromomethane	ppbv	<0.18	0.18	<0.699	0.699	1995564
Bromoform	ppbv	<0.20	0.20	<2.07	2.07	1995564
Bromodichloromethane	ppbv	<0.20	0.20	<1.34	1.34	1995564
Dibromochloromethane	ppbv	<0.20	0.20	<1.70	1.70	1995564
Heptane	ppbv	<0.30	0.30	<1.23	1.23	1995564
Trichloroethylene	ppbv	<0.30	0.30	<1.61	1.61	1995564
Tetrachloroethylene	ppbv	<0.20	0.20	<1.36	1.36	1995564
Benzene	ppbv	<0.18	0.18	<0.575	0.575	1995564
Toluene	ppbv	<0.20	0.20	<0.753	0.753	1995564
Ethylbenzene	ppbv	<0.20	0.20	<0.868	0.868	1995564
p+m-Xylene	ppbv	<0.37	0.37	<1.61	1.61	1995564
o-Xylene	ppbv	<0.20	0.20	<0.868	0.868	1995564
Styrene	ppbv	<0.20	0.20	<0.852	0.852	1995564
1,3,5-Trimethylbenzene	ppbv	<0.50	0.50	<2.46	2.46	1995564
1,2,4-Trimethylbenzene	ppbv	<0.50	0.50	<2.46	2.46	1995564
4-ethyltoluene	ppbv	<2.2	2.2	<10.8	10.8	1995564
Chlorobenzene	ppbv	<0.20	0.20	<0.921	0.921	1995564
Benzyl chloride	ppbv	<1.0	1.0	<5.18	5.18	1995564
1,3-Dichlorobenzene	ppbv	<0.40	0.40	<2.40	2.40	1995564
1,4-Dichlorobenzene	ppbv	<0.40	0.40	<2.40	2.40	1995564
1,2-Dichlorobenzene	ppbv	<0.40	0.40	<2.40	2.40	1995564
1,2,4-Trichlorobenzene	ppbv	<2.0	2.0	<14.8	14.8	1995564
Hexachlorobutadiene	ppbv	<3.0	3.0	<32.0	32.0	1995564
Hexane	ppbv	<0.30	0.30	<1.06	1.06	1995564
Cyclohexane	ppbv	<0.20	0.20	<0.688	0.688	1995564
Tetrahydrofuran	ppbv	<0.40	0.40	<1.18	1.18	1995564
1,4-Dioxane	ppbv	<2.0	2.0	<7.21	7.21	1995564
Xylene (Total)	ppbv	<0.60	0.60	<2.61	2.61	1995564
Surrogate Recovery (%)						
Bromochloromethane	%	102		N/A	N/A	1995564
N/A = Not Applicable QC Batch = Quality Control Batch						

Lakeland Industry & Community Assoc.

Maxxam Job #: A9E5014
 Report Date: 2009/11/06

Project name: COLD LAKE SOUTH 13-16-62-5 W4M

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		EE2019				
Sampling Date		2009/10/22				
COC Number		5358				
	Units	LICA	DL	ug/m3	DL (ug/m3)	QC Batch
		VOC/CLS/OCT22,09-7850				

D5-Chlorobenzene	%	95		N/A	N/A	1995564
Difluorobenzene	%	90		N/A	N/A	1995564

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

Lakeland Industry & Community Assoc.

Maxxam Job #: A9E5014
Report Date: 2009/11/06

Project name: COLD LAKE SOUTH 13-16-62-5 W4M

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		EE2020				
Sampling Date		2009/10/22				
COC Number		5358				
	Units	LICA VOC/PORT/OCT22,09 -S2297	DL	ug/m3	DL (ug/m3)	QC Batch

Volatile Organics						
2,2,4-Trimethylpentane	ppbv	<0.20	0.20	<0.934	0.934	1995564
Carbon Disulfide	ppbv	<0.50	0.50	<1.56	1.56	1995564
Propene	ppbv	<0.30	0.30	<0.516	0.516	1995564
Vinyl Acetate	ppbv	<0.20	0.20	<0.704	0.704	1995564
Vinyl Bromide	ppbv	<0.20	0.20	<0.875	0.875	1995564
Dichlorodifluoromethane (FREON 12)	ppbv	0.60	0.20	2.94	0.989	1995564
1,2-Dichlorotetrafluoroethane	ppbv	<0.17	0.17	<1.19	1.19	1995564
Chloromethane	ppbv	0.49	0.30	1.02	0.620	1995564
Vinyl Chloride	ppbv	<0.18	0.18	<0.460	0.460	1995564
Chloroethane	ppbv	<0.30	0.30	<0.792	0.792	1995564
1,3-Butadiene	ppbv	<0.50	0.50	<1.11	1.11	1995564
Trichlorofluoromethane (FREON 11)	ppbv	0.29	0.20	1.63	1.12	1995564
Trichlorotrifluoroethane	ppbv	<0.15	0.15	<1.15	1.15	1995564
Ethanol	ppbv	<2.3	2.3	<4.33	4.33	1995564
2-propanol	ppbv	<3.0	3.0	<7.37	7.37	1995564
2-Propanone	ppbv	1.27	0.80	3.01	1.90	1995564
Methyl Ethyl Ketone (2-Butanone)	ppbv	<3.0	3.0	<8.85	8.85	1995564
Methyl Isobutyl Ketone	ppbv	<3.2	3.2	<13.1	13.1	1995564
Methyl Butyl Ketone (2-Hexanone)	ppbv	<2.0	2.0	<8.19	8.19	1995564
Methyl t-butyl ether (MTBE)	ppbv	<0.20	0.20	<0.721	0.721	1995564
Ethyl Acetate	ppbv	<2.2	2.2	<7.93	7.93	1995564
1,1-Dichloroethylene	ppbv	<0.25	0.25	<0.991	0.991	1995564
cis-1,2-Dichloroethylene	ppbv	<0.19	0.19	<0.753	0.753	1995564
trans-1,2-Dichloroethylene	ppbv	<0.20	0.20	<0.793	0.793	1995564
Methylene Chloride(Dichloromethane)	ppbv	<0.30	0.30	<1.04	1.04	1995564
Chloroform	ppbv	<0.15	0.15	<0.732	0.732	1995564
Carbon Tetrachloride	ppbv	<0.30	0.30	<1.89	1.89	1995564
1,1-Dichloroethane	ppbv	<0.20	0.20	<0.809	0.809	1995564
1,2-Dichloroethane	ppbv	<0.20	0.20	<0.809	0.809	1995564
Ethylene Dibromide	ppbv	<0.17	0.17	<1.31	1.31	1995564
1,1,1-Trichloroethane	ppbv	<0.30	0.30	<1.64	1.64	1995564

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Lakeland Industry & Community Assoc.

Maxxam Job #: A9E5014

Report Date: 2009/11/06

Project name: COLD LAKE SOUTH 13-16-62-5 W4M

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		EE2020				
Sampling Date		2009/10/22				
COC Number		5358				
	Units	LICA VOC/PORT/OCT22,09 -S2297	DL	ug/m3	DL (ug/m3)	QC Batch
1,1,2-Trichloroethane	ppbv	<0.15	0.15	<0.818	0.818	1995564
1,1,2,2-Tetrachloroethane	ppbv	<0.20	0.20	<1.37	1.37	1995564
cis-1,3-Dichloropropene	ppbv	<0.18	0.18	<0.817	0.817	1995564
trans-1,3-Dichloropropene	ppbv	<0.17	0.17	<0.772	0.772	1995564
1,2-Dichloropropane	ppbv	<0.40	0.40	<1.85	1.85	1995564
Bromomethane	ppbv	<0.18	0.18	<0.699	0.699	1995564
Bromoform	ppbv	<0.20	0.20	<2.07	2.07	1995564
Bromodichloromethane	ppbv	<0.20	0.20	<1.34	1.34	1995564
Dibromochloromethane	ppbv	<0.20	0.20	<1.70	1.70	1995564
Heptane	ppbv	<0.30	0.30	<1.23	1.23	1995564
Trichloroethylene	ppbv	<0.30	0.30	<1.61	1.61	1995564
Tetrachloroethylene	ppbv	<0.20	0.20	<1.36	1.36	1995564
Benzene	ppbv	<0.18	0.18	<0.575	0.575	1995564
Toluene	ppbv	<0.20	0.20	<0.753	0.753	1995564
Ethylbenzene	ppbv	<0.20	0.20	<0.868	0.868	1995564
p+m-Xylene	ppbv	<0.37	0.37	<1.61	1.61	1995564
o-Xylene	ppbv	<0.20	0.20	<0.868	0.868	1995564
Styrene	ppbv	<0.20	0.20	<0.852	0.852	1995564
1,3,5-Trimethylbenzene	ppbv	<0.50	0.50	<2.46	2.46	1995564
1,2,4-Trimethylbenzene	ppbv	<0.50	0.50	<2.46	2.46	1995564
4-ethyltoluene	ppbv	<2.2	2.2	<10.8	10.8	1995564
Chlorobenzene	ppbv	<0.20	0.20	<0.921	0.921	1995564
Benzyl chloride	ppbv	<1.0	1.0	<5.18	5.18	1995564
1,3-Dichlorobenzene	ppbv	<0.40	0.40	<2.40	2.40	1995564
1,4-Dichlorobenzene	ppbv	<0.40	0.40	<2.40	2.40	1995564
1,2-Dichlorobenzene	ppbv	<0.40	0.40	<2.40	2.40	1995564
1,2,4-Trichlorobenzene	ppbv	<2.0	2.0	<14.8	14.8	1995564
Hexachlorobutadiene	ppbv	<3.0	3.0	<32.0	32.0	1995564
Hexane	ppbv	<0.30	0.30	<1.06	1.06	1995564
Cyclohexane	ppbv	<0.20	0.20	<0.688	0.688	1995564
Tetrahydrofuran	ppbv	<0.40	0.40	<1.18	1.18	1995564
1,4-Dioxane	ppbv	<2.0	2.0	<7.21	7.21	1995564
Xylene (Total)	ppbv	<0.60	0.60	<2.61	2.61	1995564
QC Batch = Quality Control Batch						

Lakeland Industry & Community Assoc.

Maxxam Job #: A9E5014
 Report Date: 2009/11/06

Project name: COLD LAKE SOUTH 13-16-62-5 W4M

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		EE2020				
Sampling Date		2009/10/22				
COC Number		5358				
	Units	LICA VOC/PORT/OCT22,09 -S2297	DL	ug/m3	DL (ug/m3)	QC Batch

Surrogate Recovery (%)						
Bromochloromethane	%	103		N/A	N/A	1995564
D5-Chlorobenzene	%	94		N/A	N/A	1995564
Difluorobenzene	%	89		N/A	N/A	1995564

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

Lakeland Industry & Community Assoc.

Maxxam Job #: A9E5014
 Report Date: 2009/11/06

Project name: COLD LAKE SOUTH 13-16-62-5 W4M

Test Summary

Maxxam ID EE2019 **Collected** 2009/10/22
Sample ID LICA VOC/CLS/OCT22,09-7850 **Shipped**
Matrix AIR **Received** 2009/10/28

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Canister Pressure (TO-15)	PRES	1995537	N/A	2009/10/30	S_S
Volatile Organics in Air (TO-15)	GC/MS	1995564	N/A	2009/10/30	S_S

Maxxam ID EE2020 **Collected** 2009/10/22
Sample ID LICA VOC/PORT/OCT22,09 -S2297 **Shipped**
Matrix AIR **Received** 2009/10/28

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Canister Pressure (TO-15)	PRES	1995537	N/A	2009/10/30	S_S
Volatile Organics in Air (TO-15)	GC/MS	1995564	N/A	2009/10/30	S_S

Maxxam Job #: A9E5014
Report Date: 2009/11/06

Lakeland Industry & Community Assoc.

Project name: COLD LAKE SOUTH 13-16-62-5 W4M

GENERAL COMMENTS

Results relate only to the items tested.

Lakeland Industry & Community Assoc.
 Attention: Shea Beaton
 Client Project #:
 P.O. #:
 Site Location: COLD LAKE SOUTH 13-16-62-5 W4M

Quality Assurance Report

Maxxam Job Number: GA9E5014

QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
1995564 S_S	Spiked Blank	Bromochloromethane	2009/10/30		99	%	60 - 140
		D5-Chlorobenzene	2009/10/30		102	%	60 - 140
		Difluorobenzene	2009/10/30		103	%	60 - 140
		2,2,4-Trimethylpentane	2009/10/30		96	%	70 - 130
		Carbon Disulfide	2009/10/30		89	%	70 - 130
		Propene	2009/10/30		90	%	70 - 130
		Vinyl Acetate	2009/10/30		101	%	70 - 130
		Vinyl Bromide	2009/10/30		86	%	70 - 130
		Dichlorodifluoromethane (FREON 12)	2009/10/30		84	%	70 - 130
		1,2-Dichlorotetrafluoroethane	2009/10/30		82	%	70 - 130
		Chloromethane	2009/10/30		80	%	70 - 130
		Vinyl Chloride	2009/10/30		83	%	70 - 130
		Chloroethane	2009/10/30		82	%	70 - 130
		1,3-Butadiene	2009/10/30		71	%	70 - 130
		Trichlorofluoromethane (FREON 11)	2009/10/30		84	%	70 - 130
		Trichlorotrifluoroethane	2009/10/30		81	%	70 - 130
		Ethanol	2009/10/30		86	%	70 - 130
		2-propanol	2009/10/30		89	%	70 - 130
		2-Propanone	2009/10/30		92	%	70 - 130
		Methyl Ethyl Ketone (2-Butanone)	2009/10/30		106	%	70 - 130
		Methyl Isobutyl Ketone	2009/10/30		100	%	70 - 130
		Methyl Butyl Ketone (2-Hexanone)	2009/10/30		110	%	70 - 130
		Methyl t-butyl ether (MTBE)	2009/10/30		102	%	70 - 130
		Ethyl Acetate	2009/10/30		100	%	70 - 130
		1,1-Dichloroethylene	2009/10/30		86	%	70 - 130
		cis-1,2-Dichloroethylene	2009/10/30		92	%	70 - 130
		trans-1,2-Dichloroethylene	2009/10/30		95	%	70 - 130
		Methylene Chloride(Dichloromethane)	2009/10/30		80	%	70 - 130
		Chloroform	2009/10/30		82	%	70 - 130
		Carbon Tetrachloride	2009/10/30		87	%	70 - 130
		1,1-Dichloroethane	2009/10/30		87	%	70 - 130
		1,2-Dichloroethane	2009/10/30		87	%	70 - 130
		Ethylene Dibromide	2009/10/30		91	%	70 - 130
		1,1,1-Trichloroethane	2009/10/30		86	%	70 - 130
		1,1,2-Trichloroethane	2009/10/30		85	%	70 - 130
		1,1,2,2-Tetrachloroethane	2009/10/30		84	%	70 - 130
		cis-1,3-Dichloropropene	2009/10/30		96	%	70 - 130
		trans-1,3-Dichloropropene	2009/10/30		107	%	70 - 130
		1,2-Dichloropropane	2009/10/30		86	%	70 - 130
		Bromomethane	2009/10/30		80	%	70 - 130
		Bromoform	2009/10/30		96	%	70 - 130
		Bromodichloromethane	2009/10/30		90	%	70 - 130
		Dibromochloromethane	2009/10/30		95	%	70 - 130
		Heptane	2009/10/30		98	%	70 - 130
		Trichloroethylene	2009/10/30		85	%	70 - 130
		Tetrachloroethylene	2009/10/30		88	%	70 - 130
		Benzene	2009/10/30		93	%	70 - 130
		Toluene	2009/10/30		99	%	70 - 130
		Ethylbenzene	2009/10/30		95	%	70 - 130
		p+m-Xylene	2009/10/30		95	%	70 - 130
		o-Xylene	2009/10/30		96	%	70 - 130
		Styrene	2009/10/30		113	%	70 - 130
		1,3,5-Trimethylbenzene	2009/10/30		97	%	70 - 130
		1,2,4-Trimethylbenzene	2009/10/30		99	%	70 - 130
		4-ethyltoluene	2009/10/30		105	%	70 - 130

Lakeland Industry & Community Assoc.
 Attention: Shea Beaton
 Client Project #:
 P.O. #:
 Site Location: COLD LAKE SOUTH 13-16-62-5 W4M

Quality Assurance Report (Continued)

Maxxam Job Number: GA9E5014

QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
1995564 S_S	Spiked Blank	Chlorobenzene	2009/10/30		83	%	70 - 130
		Benzyl chloride	2009/10/30		99	%	70 - 130
		1,3-Dichlorobenzene	2009/10/30		92	%	70 - 130
		1,4-Dichlorobenzene	2009/10/30		94	%	70 - 130
		1,2-Dichlorobenzene	2009/10/30		91	%	70 - 130
		1,2,4-Trichlorobenzene	2009/10/30		93	%	70 - 130
		Hexachlorobutadiene	2009/10/30		79	%	70 - 130
		Hexane	2009/10/30		98	%	70 - 130
		Cyclohexane	2009/10/30		102	%	70 - 130
		Tetrahydrofuran	2009/10/30		103	%	70 - 130
		1,4-Dioxane	2009/10/30		100	%	70 - 130
	Method Blank	Bromochloromethane	2009/10/30		78	%	60 - 140
		D5-Chlorobenzene	2009/10/30		73	%	60 - 140
		Difluorobenzene	2009/10/30		78	%	60 - 140
		2,2,4-Trimethylpentane	2009/10/30	ND, RDL=0.20		ppbv	
		Carbon Disulfide	2009/10/30	ND, RDL=0.50		ppbv	
		Propene	2009/10/30	ND, RDL=0.30		ppbv	
		Vinyl Acetate	2009/10/30	ND, RDL=0.20		ppbv	
		Vinyl Bromide	2009/10/30	ND, RDL=0.20		ppbv	
		Dichlorodifluoromethane (FREON 12)	2009/10/30	ND, RDL=0.20		ppbv	
		1,2-Dichlorotetrafluoroethane	2009/10/30	ND, RDL=0.17		ppbv	
		Chloromethane	2009/10/30	ND, RDL=0.30		ppbv	
		Vinyl Chloride	2009/10/30	ND, RDL=0.18		ppbv	
		Chloroethane	2009/10/30	ND, RDL=0.30		ppbv	
		1,3-Butadiene	2009/10/30	ND, RDL=0.50		ppbv	
		Trichlorofluoromethane (FREON 11)	2009/10/30	ND, RDL=0.20		ppbv	
		Trichlorotrifluoroethane	2009/10/30	ND, RDL=0.15		ppbv	
		Ethanol	2009/10/30	ND, RDL=2.3		ppbv	
		2-propanol	2009/10/30	ND, RDL=3.0		ppbv	
		2-Propanone	2009/10/30	ND, RDL=0.80		ppbv	
		Methyl Ethyl Ketone (2-Butanone)	2009/10/30	ND, RDL=3.0		ppbv	
		Methyl Isobutyl Ketone	2009/10/30	ND, RDL=3.2		ppbv	
		Methyl Butyl Ketone (2-Hexanone)	2009/10/30	ND, RDL=2.0		ppbv	
		Methyl t-butyl ether (MTBE)	2009/10/30	ND, RDL=0.20		ppbv	
		Ethyl Acetate	2009/10/30	ND, RDL=2.2		ppbv	
		1,1-Dichloroethylene	2009/10/30	ND, RDL=0.25		ppbv	
		cis-1,2-Dichloroethylene	2009/10/30	ND, RDL=0.19		ppbv	
		trans-1,2-Dichloroethylene	2009/10/30	ND, RDL=0.20		ppbv	
		Methylene Chloride(Dichloromethane)	2009/10/30	ND, RDL=0.30		ppbv	
		Chloroform	2009/10/30	ND, RDL=0.15		ppbv	
		Carbon Tetrachloride	2009/10/30	ND, RDL=0.30		ppbv	
		1,1-Dichloroethane	2009/10/30	ND, RDL=0.20		ppbv	
		1,2-Dichloroethane	2009/10/30	ND, RDL=0.20		ppbv	
		Ethylene Dibromide	2009/10/30	ND, RDL=0.17		ppbv	
		1,1,1-Trichloroethane	2009/10/30	ND, RDL=0.30		ppbv	
		1,1,2-Trichloroethane	2009/10/30	ND, RDL=0.15		ppbv	
		1,1,2,2-Tetrachloroethane	2009/10/30	ND, RDL=0.20		ppbv	
		cis-1,3-Dichloropropene	2009/10/30	ND, RDL=0.18		ppbv	
		trans-1,3-Dichloropropene	2009/10/30	ND, RDL=0.17		ppbv	
		1,2-Dichloropropane	2009/10/30	ND, RDL=0.40		ppbv	
		Bromomethane	2009/10/30	ND, RDL=0.18		ppbv	
		Bromoform	2009/10/30	ND, RDL=0.20		ppbv	
		Bromodichloromethane	2009/10/30	ND, RDL=0.20		ppbv	
		Dibromochloromethane	2009/10/30	ND, RDL=0.20		ppbv	
		Heptane	2009/10/30	ND, RDL=0.30		ppbv	

Lakeland Industry & Community Assoc.
 Attention: Shea Beaton
 Client Project #:
 P.O. #:
 Site Location: COLD LAKE SOUTH 13-16-62-5 W4M

Quality Assurance Report (Continued)

Maxxam Job Number: GA9E5014

QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
1995564 S_S	Method Blank	Trichloroethylene	2009/10/30	ND, RDL=0.30		ppbv	
		Tetrachloroethylene	2009/10/30	ND, RDL=0.20		ppbv	
		Benzene	2009/10/30	ND, RDL=0.18		ppbv	
		Toluene	2009/10/30	ND, RDL=0.20		ppbv	
		Ethylbenzene	2009/10/30	ND, RDL=0.20		ppbv	
		p+m-Xylene	2009/10/30	ND, RDL=0.37		ppbv	
		o-Xylene	2009/10/30	ND, RDL=0.20		ppbv	
		Styrene	2009/10/30	ND, RDL=0.20		ppbv	
		1,3,5-Trimethylbenzene	2009/10/30	ND, RDL=0.50		ppbv	
		1,2,4-Trimethylbenzene	2009/10/30	ND, RDL=0.50		ppbv	
		4-ethyltoluene	2009/10/30	ND, RDL=2.2		ppbv	
		Chlorobenzene	2009/10/30	ND, RDL=0.20		ppbv	
		Benzyl chloride	2009/10/30	ND, RDL=1.0		ppbv	
		1,3-Dichlorobenzene	2009/10/30	ND, RDL=0.40		ppbv	
		1,4-Dichlorobenzene	2009/10/30	ND, RDL=0.40		ppbv	
		1,2-Dichlorobenzene	2009/10/30	ND, RDL=0.40		ppbv	
		1,2,4-Trichlorobenzene	2009/10/30	ND, RDL=2.0		ppbv	
		Hexachlorobutadiene	2009/10/30	ND, RDL=3.0		ppbv	
		Hexane	2009/10/30	ND, RDL=0.30		ppbv	
		Cyclohexane	2009/10/30	ND, RDL=0.20		ppbv	
		Tetrahydrofuran	2009/10/30	ND, RDL=0.40		ppbv	
		1,4-Dioxane	2009/10/30	ND, RDL=2.0		ppbv	
		Xylene (Total)	2009/10/30	ND, RDL=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.



Your C.O.C. #: 5416

Attention: Shea Beaton

Lakeland Industry & Community Assoc.
P.O. Box 8237
Bonnyville, AB
CANADA T9N 2J5

Report Date: 2009/11/16

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: A9E9350

Received: 2009/11/05, 13:37

Sample Matrix: AIR
Samples Received: 2

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Method Reference
Canister Pressure (TO-15)	2	N/A	2009/11/06	BRL SOP-00304	EPA TO-15
Volatile Organics in Air (TO-15) ¶	2	N/A	2009/11/06	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: Theresa.Stephenson@MaxxamAnalytics.com
Phone# (905) 817-5763

=====

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Total cover pages: 1

Maxxam Job #: A9E9350
 Report Date: 2009/11/16

RESULTS OF ANALYSES OF AIR

Maxxam ID		EG3852	EG3853		
Sampling Date		2009/10/28	2009/10/28		
COC Number		5416	5416		
	Units	LICAVOC/CLS/OCT28,09 (7793)	LICAVOC/PORT/OCT28/09 (7839)	DL	QC Batch

Volatile Organics					
Pressure on Receipt	psig	19	19	N/A	2004176

RDL = Reportable Detection Limit
 QC Batch = Quality Control Batch

Maxxam Job #: A9E9350
 Report Date: 2009/11/16

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		EG3852				
Sampling Date		2009/10/28				
COC Number		5416				
	Units	LICAVOC/CLS/OCT28,09 (7793)	DL	ug/m3	DL (ug/m3)	QC Batch

Volatile Organics						
2,2,4-Trimethylpentane	ppbv	<0.20	0.20	<0.934	0.934	2004171
Carbon Disulfide	ppbv	<0.50	0.50	<1.56	1.56	2004171
Propene	ppbv	<0.30	0.30	<0.516	0.516	2004171
Vinyl Acetate	ppbv	<0.20	0.20	<0.704	0.704	2004171
Vinyl Bromide	ppbv	<0.20	0.20	<0.875	0.875	2004171
Dichlorodifluoromethane (FREON 12)	ppbv	0.53	0.20	2.61	0.989	2004171
1,2-Dichlorotetrafluoroethane	ppbv	<0.17	0.17	<1.19	1.19	2004171
Chloromethane	ppbv	0.33	0.30	0.687	0.620	2004171
Vinyl Chloride	ppbv	<0.18	0.18	<0.460	0.460	2004171
Chloroethane	ppbv	<0.30	0.30	<0.792	0.792	2004171
1,3-Butadiene	ppbv	<0.50	0.50	<1.11	1.11	2004171
Trichlorofluoromethane (FREON 11)	ppbv	0.25	0.20	1.39	1.12	2004171
Trichlorotrifluoroethane	ppbv	<0.15	0.15	<1.15	1.15	2004171
Ethanol	ppbv	<2.3	2.3	<4.33	4.33	2004171
2-propanol	ppbv	<3.0	3.0	<7.37	7.37	2004171
2-Propanone	ppbv	<0.80	0.80	<1.90	1.90	2004171
Methyl Ethyl Ketone (2-Butanone)	ppbv	<3.0	3.0	<8.85	8.85	2004171
Methyl Isobutyl Ketone	ppbv	<3.2	3.2	<13.1	13.1	2004171
Methyl Butyl Ketone (2-Hexanone)	ppbv	<2.0	2.0	<8.19	8.19	2004171
Methyl t-butyl ether (MTBE)	ppbv	<0.20	0.20	<0.721	0.721	2004171
Ethyl Acetate	ppbv	<2.2	2.2	<7.93	7.93	2004171
1,1-Dichloroethylene	ppbv	<0.25	0.25	<0.991	0.991	2004171
cis-1,2-Dichloroethylene	ppbv	<0.19	0.19	<0.753	0.753	2004171
trans-1,2-Dichloroethylene	ppbv	<0.20	0.20	<0.793	0.793	2004171
Methylene Chloride(Dichloromethane)	ppbv	0.56	0.30	1.96	1.04	2004171
Chloroform	ppbv	<0.15	0.15	<0.732	0.732	2004171
Carbon Tetrachloride	ppbv	<0.30	0.30	<1.89	1.89	2004171
1,1-Dichloroethane	ppbv	<0.20	0.20	<0.809	0.809	2004171
1,2-Dichloroethane	ppbv	<0.20	0.20	<0.809	0.809	2004171
Ethylene Dibromide	ppbv	<0.17	0.17	<1.31	1.31	2004171
1,1,1-Trichloroethane	ppbv	<0.30	0.30	<1.64	1.64	2004171
1,1,2-Trichloroethane	ppbv	<0.15	0.15	<0.818	0.818	2004171

 RDL = Reportable Detection Limit
 QC Batch = Quality Control Batch

Maxxam Job #: A9E9350
 Report Date: 2009/11/16

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		EG3852				
Sampling Date		2009/10/28				
COC Number		5416				
	Units	LICAVOC/CLS/OCT28,09 (7793)	DL	ug/m3	DL (ug/m3)	QC Batch
1,1,2,2-Tetrachloroethane	ppbv	<0.20	0.20	<1.37	1.37	2004171
cis-1,3-Dichloropropene	ppbv	<0.18	0.18	<0.817	0.817	2004171
trans-1,3-Dichloropropene	ppbv	<0.17	0.17	<0.772	0.772	2004171
1,2-Dichloropropane	ppbv	<0.40	0.40	<1.85	1.85	2004171
Bromomethane	ppbv	<0.18	0.18	<0.699	0.699	2004171
Bromoform	ppbv	<0.20	0.20	<2.07	2.07	2004171
Bromodichloromethane	ppbv	<0.20	0.20	<1.34	1.34	2004171
Dibromochloromethane	ppbv	<0.20	0.20	<1.70	1.70	2004171
Heptane	ppbv	<0.30	0.30	<1.23	1.23	2004171
Trichloroethylene	ppbv	<0.30	0.30	<1.61	1.61	2004171
Tetrachloroethylene	ppbv	<0.20	0.20	<1.36	1.36	2004171
Benzene	ppbv	<0.18	0.18	<0.575	0.575	2004171
Toluene	ppbv	<0.20	0.20	<0.753	0.753	2004171
Ethylbenzene	ppbv	<0.20	0.20	<0.868	0.868	2004171
p+m-Xylene	ppbv	<0.37	0.37	<1.61	1.61	2004171
o-Xylene	ppbv	<0.20	0.20	<0.868	0.868	2004171
Styrene	ppbv	<0.20	0.20	<0.852	0.852	2004171
1,3,5-Trimethylbenzene	ppbv	<0.50	0.50	<2.46	2.46	2004171
1,2,4-Trimethylbenzene	ppbv	<0.50	0.50	<2.46	2.46	2004171
4-ethyltoluene	ppbv	<2.2	2.2	<10.8	10.8	2004171
Chlorobenzene	ppbv	<0.20	0.20	<0.921	0.921	2004171
Benzyl chloride	ppbv	<1.0	1.0	<5.18	5.18	2004171
1,3-Dichlorobenzene	ppbv	<0.40	0.40	<2.40	2.40	2004171
1,4-Dichlorobenzene	ppbv	<0.40	0.40	<2.40	2.40	2004171
1,2-Dichlorobenzene	ppbv	<0.40	0.40	<2.40	2.40	2004171
1,2,4-Trichlorobenzene	ppbv	<2.0	2.0	<14.8	14.8	2004171
Hexachlorobutadiene	ppbv	<3.0	3.0	<32.0	32.0	2004171
Hexane	ppbv	<0.30	0.30	<1.06	1.06	2004171
Cyclohexane	ppbv	<0.20	0.20	<0.688	0.688	2004171
Tetrahydrofuran	ppbv	<0.40	0.40	<1.18	1.18	2004171
1,4-Dioxane	ppbv	<2.0	2.0	<7.21	7.21	2004171
Xylene (Total)	ppbv	<0.60	0.60	<2.61	2.61	2004171
Surrogate Recovery (%)						
Bromochloromethane	%	91		N/A	N/A	2004171
N/A = Not Applicable QC Batch = Quality Control Batch						

Maxxam Job #: A9E9350
 Report Date: 2009/11/16

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		EG3852				
Sampling Date		2009/10/28				
COC Number		5416				
	Units	LICAVOC/CLS/OCT28,09 (7793)	DL	ug/m3	DL (ug/m3)	QC Batch

D5-Chlorobenzene	%	88		N/A	N/A	2004171
Difluorobenzene	%	91		N/A	N/A	2004171

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

Maxxam Job #: A9E9350
 Report Date: 2009/11/16

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		EG3853				
Sampling Date		2009/10/28				
COC Number		5416				
	Units	LICAVOC/PORT/OCT28/09 (7839)	DL	ug/m3	DL (ug/m3)	QC Batch

Volatile Organics						
2,2,4-Trimethylpentane	ppbv	<0.20	0.20	<0.934	0.934	2004171
Carbon Disulfide	ppbv	<0.50	0.50	<1.56	1.56	2004171
Propene	ppbv	<0.30	0.30	<0.516	0.516	2004171
Vinyl Acetate	ppbv	<0.20	0.20	<0.704	0.704	2004171
Vinyl Bromide	ppbv	<0.20	0.20	<0.875	0.875	2004171
Dichlorodifluoromethane (FREON 12)	ppbv	0.54	0.20	2.69	0.989	2004171
1,2-Dichlorotetrafluoroethane	ppbv	<0.17	0.17	<1.19	1.19	2004171
Chloromethane	ppbv	0.34	0.30	0.711	0.620	2004171
Vinyl Chloride	ppbv	<0.18	0.18	<0.460	0.460	2004171
Chloroethane	ppbv	<0.30	0.30	<0.792	0.792	2004171
1,3-Butadiene	ppbv	<0.50	0.50	<1.11	1.11	2004171
Trichlorofluoromethane (FREON 11)	ppbv	0.26	0.20	1.46	1.12	2004171
Trichlorotrifluoroethane	ppbv	<0.15	0.15	<1.15	1.15	2004171
Ethanol	ppbv	<2.3	2.3	<4.33	4.33	2004171
2-propanol	ppbv	<3.0	3.0	<7.37	7.37	2004171
2-Propanone	ppbv	0.83	0.80	1.97	1.90	2004171
Methyl Ethyl Ketone (2-Butanone)	ppbv	<3.0	3.0	<8.85	8.85	2004171
Methyl Isobutyl Ketone	ppbv	<3.2	3.2	<13.1	13.1	2004171
Methyl Butyl Ketone (2-Hexanone)	ppbv	<2.0	2.0	<8.19	8.19	2004171
Methyl t-butyl ether (MTBE)	ppbv	<0.20	0.20	<0.721	0.721	2004171
Ethyl Acetate	ppbv	<2.2	2.2	<7.93	7.93	2004171
1,1-Dichloroethylene	ppbv	<0.25	0.25	<0.991	0.991	2004171
cis-1,2-Dichloroethylene	ppbv	<0.19	0.19	<0.753	0.753	2004171
trans-1,2-Dichloroethylene	ppbv	<0.20	0.20	<0.793	0.793	2004171
Methylene Chloride(Dichloromethane)	ppbv	0.58	0.30	2.03	1.04	2004171
Chloroform	ppbv	<0.15	0.15	<0.732	0.732	2004171
Carbon Tetrachloride	ppbv	<0.30	0.30	<1.89	1.89	2004171
1,1-Dichloroethane	ppbv	<0.20	0.20	<0.809	0.809	2004171
1,2-Dichloroethane	ppbv	<0.20	0.20	<0.809	0.809	2004171
Ethylene Dibromide	ppbv	<0.17	0.17	<1.31	1.31	2004171
1,1,1-Trichloroethane	ppbv	<0.30	0.30	<1.64	1.64	2004171
1,1,2-Trichloroethane	ppbv	<0.15	0.15	<0.818	0.818	2004171

 RDL = Reportable Detection Limit
 QC Batch = Quality Control Batch

Maxxam Job #: A9E9350
 Report Date: 2009/11/16

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		EG3853				
Sampling Date		2009/10/28				
COC Number		5416				
	Units	LICAVOC/PORT/OCT28/09 (7839)	DL	ug/m3	DL (ug/m3)	QC Batch
1,1,2,2-Tetrachloroethane	ppbv	<0.20	0.20	<1.37	1.37	2004171
cis-1,3-Dichloropropene	ppbv	<0.18	0.18	<0.817	0.817	2004171
trans-1,3-Dichloropropene	ppbv	<0.17	0.17	<0.772	0.772	2004171
1,2-Dichloropropane	ppbv	<0.40	0.40	<1.85	1.85	2004171
Bromomethane	ppbv	<0.18	0.18	<0.699	0.699	2004171
Bromoform	ppbv	<0.20	0.20	<2.07	2.07	2004171
Bromodichloromethane	ppbv	<0.20	0.20	<1.34	1.34	2004171
Dibromochloromethane	ppbv	<0.20	0.20	<1.70	1.70	2004171
Heptane	ppbv	<0.30	0.30	<1.23	1.23	2004171
Trichloroethylene	ppbv	<0.30	0.30	<1.61	1.61	2004171
Tetrachloroethylene	ppbv	<0.20	0.20	<1.36	1.36	2004171
Benzene	ppbv	<0.18	0.18	<0.575	0.575	2004171
Toluene	ppbv	<0.20	0.20	<0.753	0.753	2004171
Ethylbenzene	ppbv	<0.20	0.20	<0.868	0.868	2004171
p+m-Xylene	ppbv	<0.37	0.37	<1.61	1.61	2004171
o-Xylene	ppbv	<0.20	0.20	<0.868	0.868	2004171
Styrene	ppbv	<0.20	0.20	<0.852	0.852	2004171
1,3,5-Trimethylbenzene	ppbv	<0.50	0.50	<2.46	2.46	2004171
1,2,4-Trimethylbenzene	ppbv	<0.50	0.50	<2.46	2.46	2004171
4-ethyltoluene	ppbv	<2.2	2.2	<10.8	10.8	2004171
Chlorobenzene	ppbv	<0.20	0.20	<0.921	0.921	2004171
Benzyl chloride	ppbv	<1.0	1.0	<5.18	5.18	2004171
1,3-Dichlorobenzene	ppbv	<0.40	0.40	<2.40	2.40	2004171
1,4-Dichlorobenzene	ppbv	<0.40	0.40	<2.40	2.40	2004171
1,2-Dichlorobenzene	ppbv	<0.40	0.40	<2.40	2.40	2004171
1,2,4-Trichlorobenzene	ppbv	<2.0	2.0	<14.8	14.8	2004171
Hexachlorobutadiene	ppbv	<3.0	3.0	<32.0	32.0	2004171
Hexane	ppbv	<0.30	0.30	<1.06	1.06	2004171
Cyclohexane	ppbv	<0.20	0.20	<0.688	0.688	2004171
Tetrahydrofuran	ppbv	<0.40	0.40	<1.18	1.18	2004171
1,4-Dioxane	ppbv	<2.0	2.0	<7.21	7.21	2004171
Xylene (Total)	ppbv	<0.60	0.60	<2.61	2.61	2004171
Surrogate Recovery (%)						
Bromochloromethane	%	77		N/A	N/A	2004171
N/A = Not Applicable QC Batch = Quality Control Batch						

Maxxam Job #: A9E9350
 Report Date: 2009/11/16

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		EG3853				
Sampling Date		2009/10/28				
COC Number		5416				
	Units	LICAVOC/PORT/OCT28/09 (7839)	DL	ug/m3	DL (ug/m3)	QC Batch

D5-Chlorobenzene	%	74		N/A	N/A	2004171
Difluorobenzene	%	76		N/A	N/A	2004171

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

Maxxam Job #: A9E9350
 Report Date: 2009/11/16

Test Summary

Maxxam ID EG3852
Sample ID LICAVOC/CLS/OCT28,09 (7793)
Matrix AIR
Collected 2009/10/28
Shipped
Received 2009/11/05

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Canister Pressure (TO-15)	PRES	2004176	N/A	2009/11/06	MM2
Volatile Organics in Air (TO-15)	GC/MS	2004171	N/A	2009/11/06	MM2

Maxxam ID EG3852 Dup
Sample ID LICAVOC/CLS/OCT28,09 (7793)
Matrix AIR
Collected 2009/10/28
Shipped
Received 2009/11/05

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Volatile Organics in Air (TO-15)	GC/MS	2004171	N/A	2009/11/06	MM2

Maxxam ID EG3853
Sample ID LICAVOC/PORT/OCT28/09 (7839)
Matrix AIR
Collected 2009/10/28
Shipped
Received 2009/11/05

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Canister Pressure (TO-15)	PRES	2004176	N/A	2009/11/06	MM2
Volatile Organics in Air (TO-15)	GC/MS	2004171	N/A	2009/11/06	MM2

Maxxam Job #: A9E9350
Report Date: 2009/11/16

GENERAL COMMENTS

Results relate only to the items tested.

Lakeland Industry & Community Assoc.
 Attention: Shea Beaton
 Client Project #:
 P.O. #:
 Project name:

Quality Assurance Report
 Maxxam Job Number: GA9E9350

QA/QC Batch	Date Analyzed	Parameter	Value	%Recovery	Units	QC Limits
Num Init QC Type	yyyy/mm/dd					
2004171 MM2 Spiked Blank	2009/11/06	Bromochloromethane		93	%	60 - 140
	2009/11/06	D5-Chlorobenzene		93	%	60 - 140
	2009/11/06	Difluorobenzene		92	%	60 - 140
	2009/11/06	2,2,4-Trimethylpentane		101	%	70 - 130
	2009/11/06	Carbon Disulfide		94	%	70 - 130
	2009/11/06	Propene		91	%	70 - 130
	2009/11/06	Vinyl Acetate		91	%	70 - 130
	2009/11/06	Vinyl Bromide		107	%	70 - 130
	2009/11/06	Dichlorodifluoromethane (FREON 12)		87	%	70 - 130
	2009/11/06	1,2-Dichlorotetrafluoroethane		88	%	70 - 130
	2009/11/06	Chloromethane		86	%	70 - 130
	2009/11/06	Vinyl Chloride		92	%	70 - 130
	2009/11/06	Chloroethane		92	%	70 - 130
	2009/11/06	1,3-Butadiene		80	%	70 - 130
	2009/11/06	Trichlorofluoromethane (FREON 11)		89	%	70 - 130
	2009/11/06	Trichlorotrifluoroethane		89	%	70 - 130
	2009/11/06	Ethanol		73	%	70 - 130
	2009/11/06	2-propanol		83	%	70 - 130
	2009/11/06	2-Propanone		122	%	70 - 130
	2009/11/06	Methyl Ethyl Ketone (2-Butanone)		95	%	70 - 130
	2009/11/06	Methyl Isobutyl Ketone		79	%	70 - 130
	2009/11/06	Methyl Butyl Ketone (2-Hexanone)		70	%	70 - 130
	2009/11/06	Methyl t-butyl ether (MTBE)		98	%	70 - 130
	2009/11/06	Ethyl Acetate		95	%	70 - 130
	2009/11/06	1,1-Dichloroethylene		90	%	70 - 130
	2009/11/06	cis-1,2-Dichloroethylene		90	%	70 - 130
	2009/11/06	trans-1,2-Dichloroethylene		95	%	70 - 130
	2009/11/06	Methylene Chloride(Dichloromethane)		79	%	70 - 130
	2009/11/06	Chloroform		86	%	70 - 130
	2009/11/06	Carbon Tetrachloride		89	%	70 - 130
	2009/11/06	1,1-Dichloroethane		87	%	70 - 130
	2009/11/06	1,2-Dichloroethane		87	%	70 - 130
	2009/11/06	Ethylene Dibromide		87	%	70 - 130
	2009/11/06	1,1,1-Trichloroethane		85	%	70 - 130
	2009/11/06	1,1,2-Trichloroethane		84	%	70 - 130
	2009/11/06	1,1,2,2-Tetrachloroethane		81	%	70 - 130
	2009/11/06	cis-1,3-Dichloropropene		91	%	70 - 130
	2009/11/06	trans-1,3-Dichloropropene		96	%	70 - 130
	2009/11/06	1,2-Dichloropropane		83	%	70 - 130
	2009/11/06	Bromomethane		94	%	70 - 130
	2009/11/06	Bromoform		93	%	70 - 130
	2009/11/06	Bromodichloromethane		91	%	70 - 130
	2009/11/06	Dibromochloromethane		94	%	70 - 130
	2009/11/06	Heptane		92	%	70 - 130
	2009/11/06	Trichloroethylene		83	%	70 - 130
	2009/11/06	Tetrachloroethylene		84	%	70 - 130
	2009/11/06	Benzene		85	%	70 - 130
	2009/11/06	Toluene		89	%	70 - 130
	2009/11/06	Ethylbenzene		89	%	70 - 130
	2009/11/06	p+m-Xylene		86	%	70 - 130
	2009/11/06	o-Xylene		84	%	70 - 130
	2009/11/06	Styrene		61 (1)	%	70 - 130
	2009/11/06	1,3,5-Trimethylbenzene		75	%	70 - 130
	2009/11/06	1,2,4-Trimethylbenzene		80	%	70 - 130
	2009/11/06	4-ethyltoluene		94	%	70 - 130

Lakeland Industry & Community Assoc.
 Attention: Shea Beaton
 Client Project #:
 P.O. #:
 Project name:

Quality Assurance Report (Continued)

Maxxam Job Number: GA9E9350

QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2004171 MM2	Spiked Blank	Chlorobenzene	2009/11/06		82	%	70 - 130
		Benzyl chloride	2009/11/06		103	%	70 - 130
		1,3-Dichlorobenzene	2009/11/06		86	%	70 - 130
		1,4-Dichlorobenzene	2009/11/06		86	%	70 - 130
		1,2-Dichlorobenzene	2009/11/06		83	%	70 - 130
		1,2,4-Trichlorobenzene	2009/11/06		82	%	70 - 130
		Hexachlorobutadiene	2009/11/06		76	%	70 - 130
		Hexane	2009/11/06		96	%	70 - 130
		Cyclohexane	2009/11/06		92	%	70 - 130
		Tetrahydrofuran	2009/11/06		92	%	70 - 130
		1,4-Dioxane	2009/11/06		87	%	70 - 130
	Method Blank	Bromochloromethane	2009/11/06		86	%	60 - 140
		D5-Chlorobenzene	2009/11/06		82	%	60 - 140
		Difluorobenzene	2009/11/06		84	%	60 - 140
		2,2,4-Trimethylpentane	2009/11/06	ND, RDL=0.20		ppbv	
		Carbon Disulfide	2009/11/06	ND, RDL=0.50		ppbv	
		Propene	2009/11/06	ND, RDL=0.30		ppbv	
		Vinyl Acetate	2009/11/06	ND, RDL=0.20		ppbv	
		Vinyl Bromide	2009/11/06	ND, RDL=0.20		ppbv	
		Dichlorodifluoromethane (FREON 12)	2009/11/06	ND, RDL=0.20		ppbv	
		1,2-Dichlorotetrafluoroethane	2009/11/06	ND, RDL=0.17		ppbv	
		Chloromethane	2009/11/06	ND, RDL=0.30		ppbv	
		Vinyl Chloride	2009/11/06	ND, RDL=0.18		ppbv	
		Chloroethane	2009/11/06	ND, RDL=0.30		ppbv	
		1,3-Butadiene	2009/11/06	ND, RDL=0.50		ppbv	
		Trichlorofluoromethane (FREON 11)	2009/11/06	ND, RDL=0.20		ppbv	
		Trichlorotrifluoroethane	2009/11/06	ND, RDL=0.15		ppbv	
		Ethanol	2009/11/06	ND, RDL=2.3		ppbv	
		2-propanol	2009/11/06	ND, RDL=3.0		ppbv	
		2-Propanone	2009/11/06	ND, RDL=0.80		ppbv	
		Methyl Ethyl Ketone (2-Butanone)	2009/11/06	ND, RDL=3.0		ppbv	
		Methyl Isobutyl Ketone	2009/11/06	ND, RDL=3.2		ppbv	
		Methyl Butyl Ketone (2-Hexanone)	2009/11/06	ND, RDL=2.0		ppbv	
		Methyl t-butyl ether (MTBE)	2009/11/06	ND, RDL=0.20		ppbv	
		Ethyl Acetate	2009/11/06	ND, RDL=2.2		ppbv	
		1,1-Dichloroethylene	2009/11/06	ND, RDL=0.25		ppbv	
		cis-1,2-Dichloroethylene	2009/11/06	ND, RDL=0.19		ppbv	
		trans-1,2-Dichloroethylene	2009/11/06	ND, RDL=0.20		ppbv	
		Methylene Chloride(Dichloromethane)	2009/11/06	0.50, RDL=0.30		ppbv	
		Chloroform	2009/11/06	ND, RDL=0.15		ppbv	
		Carbon Tetrachloride	2009/11/06	ND, RDL=0.30		ppbv	
		1,1-Dichloroethane	2009/11/06	ND, RDL=0.20		ppbv	
		1,2-Dichloroethane	2009/11/06	ND, RDL=0.20		ppbv	
		Ethylene Dibromide	2009/11/06	ND, RDL=0.17		ppbv	
		1,1,1-Trichloroethane	2009/11/06	ND, RDL=0.30		ppbv	
		1,1,2-Trichloroethane	2009/11/06	ND, RDL=0.15		ppbv	
		1,1,2,2-Tetrachloroethane	2009/11/06	ND, RDL=0.20		ppbv	
		cis-1,3-Dichloropropene	2009/11/06	ND, RDL=0.18		ppbv	
		trans-1,3-Dichloropropene	2009/11/06	ND, RDL=0.17		ppbv	
		1,2-Dichloropropane	2009/11/06	ND, RDL=0.40		ppbv	
		Bromomethane	2009/11/06	ND, RDL=0.18		ppbv	
		Bromoform	2009/11/06	ND, RDL=0.20		ppbv	
		Bromodichloromethane	2009/11/06	ND, RDL=0.20		ppbv	
		Dibromochloromethane	2009/11/06	ND, RDL=0.20		ppbv	
		Heptane	2009/11/06	ND, RDL=0.30		ppbv	

Lakeland Industry & Community Assoc.
 Attention: Shea Beaton
 Client Project #:
 P.O. #:
 Project name:

Quality Assurance Report (Continued)

Maxxam Job Number: GA9E9350

QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2004171	MM2	Method Blank					
		Trichloroethylene	2009/11/06	ND, RDL=0.30		ppbv	
		Tetrachloroethylene	2009/11/06	ND, RDL=0.20		ppbv	
		Benzene	2009/11/06	ND, RDL=0.18		ppbv	
		Toluene	2009/11/06	ND, RDL=0.20		ppbv	
		Ethylbenzene	2009/11/06	ND, RDL=0.20		ppbv	
		p+m-Xylene	2009/11/06	ND, RDL=0.37		ppbv	
		o-Xylene	2009/11/06	ND, RDL=0.20		ppbv	
		Styrene	2009/11/06	ND, RDL=0.20		ppbv	
		1,3,5-Trimethylbenzene	2009/11/06	ND, RDL=0.50		ppbv	
		1,2,4-Trimethylbenzene	2009/11/06	ND, RDL=0.50		ppbv	
		4-ethyltoluene	2009/11/06	ND, RDL=2.2		ppbv	
		Chlorobenzene	2009/11/06	ND, RDL=0.20		ppbv	
		Benzyl chloride	2009/11/06	ND, RDL=1.0		ppbv	
		1,3-Dichlorobenzene	2009/11/06	ND, RDL=0.40		ppbv	
		1,4-Dichlorobenzene	2009/11/06	ND, RDL=0.40		ppbv	
		1,2-Dichlorobenzene	2009/11/06	ND, RDL=0.40		ppbv	
		1,2,4-Trichlorobenzene	2009/11/06	ND, RDL=2.0		ppbv	
		Hexachlorobutadiene	2009/11/06	ND, RDL=3.0		ppbv	
		Hexane	2009/11/06	ND, RDL=0.30		ppbv	
		Cyclohexane	2009/11/06	ND, RDL=0.20		ppbv	
		Tetrahydrofuran	2009/11/06	ND, RDL=0.40		ppbv	
		1,4-Dioxane	2009/11/06	ND, RDL=2.0		ppbv	
		Xylene (Total)	2009/11/06	ND, RDL=0.60		ppbv	
	RPD - Sample/Sample Dup	2,2,4-Trimethylpentane	2009/11/06	NC		%	25
		Carbon Disulfide	2009/11/06	NC		%	25
		Propene	2009/11/06	NC		%	25
		Vinyl Acetate	2009/11/06	NC		%	25
		Vinyl Bromide	2009/11/06	NC		%	25
		Dichlorodifluoromethane (FREON 12)	2009/11/06	NC		%	25
		1,2-Dichlorotetrafluoroethane	2009/11/06	NC		%	25
		Chloromethane	2009/11/06	NC		%	25
		Vinyl Chloride	2009/11/06	NC		%	25
		Chloroethane	2009/11/06	NC		%	25
		1,3-Butadiene	2009/11/06	NC		%	25
		Trichlorofluoromethane (FREON 11)	2009/11/06	NC		%	25
		Trichlorotrifluoroethane	2009/11/06	NC		%	25
		Ethanol	2009/11/06	NC		%	25
		2-propanol	2009/11/06	NC		%	25
		2-Propanone	2009/11/06	NC		%	25
		Methyl Ethyl Ketone (2-Butanone)	2009/11/06	NC		%	25
		Methyl Isobutyl Ketone	2009/11/06	NC		%	25
		Methyl Butyl Ketone (2-Hexanone)	2009/11/06	NC		%	25
		Methyl t-butyl ether (MTBE)	2009/11/06	NC		%	25
		Ethyl Acetate	2009/11/06	NC		%	25
		1,1-Dichloroethylene	2009/11/06	NC		%	25
		cis-1,2-Dichloroethylene	2009/11/06	NC		%	25
		trans-1,2-Dichloroethylene	2009/11/06	NC		%	25
		Methylene Chloride(Dichloromethane)	2009/11/06	NC		%	25
		Chloroform	2009/11/06	NC		%	25
		Carbon Tetrachloride	2009/11/06	NC		%	25
		1,1-Dichloroethane	2009/11/06	NC		%	25
		1,2-Dichloroethane	2009/11/06	NC		%	25
		Ethylene Dibromide	2009/11/06	NC		%	25

Lakeland Industry & Community Assoc.
 Attention: Shea Beaton
 Client Project #:
 P.O. #:
 Project name:

Quality Assurance Report (Continued)
 Maxxam Job Number: GA9E9350

QA/QC Batch Num Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2004171 MM2	RPD - Sample/Sample Dup	1,1,1-Trichloroethane	2009/11/06	NC		%	25
		1,1,2-Trichloroethane	2009/11/06	NC		%	25
		1,1,2,2-Tetrachloroethane	2009/11/06	NC		%	25
		cis-1,3-Dichloropropene	2009/11/06	NC		%	25
		trans-1,3-Dichloropropene	2009/11/06	NC		%	25
		1,2-Dichloropropane	2009/11/06	NC		%	25
		Bromomethane	2009/11/06	NC		%	25
		Bromoform	2009/11/06	NC		%	25
		Bromodichloromethane	2009/11/06	NC		%	25
		Dibromochloromethane	2009/11/06	NC		%	25
		Heptane	2009/11/06	NC		%	25
		Trichloroethylene	2009/11/06	NC		%	25
		Tetrachloroethylene	2009/11/06	NC		%	25
		Benzene	2009/11/06	NC		%	25
		Toluene	2009/11/06	NC		%	25
		Ethylbenzene	2009/11/06	NC		%	25
		p+m-Xylene	2009/11/06	NC		%	25
		o-Xylene	2009/11/06	NC		%	25
		Styrene	2009/11/06	NC		%	25
		1,3,5-Trimethylbenzene	2009/11/06	NC		%	25
		1,2,4-Trimethylbenzene	2009/11/06	NC		%	25
		4-ethyltoluene	2009/11/06	NC		%	25
		Chlorobenzene	2009/11/06	NC		%	25
		Benzyl chloride	2009/11/06	NC		%	25
		1,3-Dichlorobenzene	2009/11/06	NC		%	25
		1,4-Dichlorobenzene	2009/11/06	NC		%	25
		1,2-Dichlorobenzene	2009/11/06	NC		%	25
		1,2,4-Trichlorobenzene	2009/11/06	NC		%	25
		Hexachlorobutadiene	2009/11/06	NC		%	25
		Hexane	2009/11/06	NC		%	25
		Cyclohexane	2009/11/06	NC		%	25
		Tetrahydrofuran	2009/11/06	NC		%	25
		1,4-Dioxane	2009/11/06	NC		%	25
		Xylene (Total)	2009/11/06	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.
 (1) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.

Polycyclic Aromatic Hydrocarbons Laboratory Analysis



Your C.O.C. #: 1039

Lakeland Industry & Community Assoc.
P.O. Box 8237
Bonnyville, AB
CANADA T9N 2J5

Report Date: 2009/10/20

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: A9D5453

Received: 2009/10/09, 11:41

Sample Matrix: PUF AND FILTER
Samples Received: 2

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Method Reference
PAH's in Air (CARB429mod)	2	2009/10/13	2009/10/15	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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Total cover pages: 1

Maxxam Job #: A9D5453
 Report Date: 2009/10/20

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

Maxxam ID		DZ3471	DZ3473		
Sampling Date		2009/10/04 00:00	2009/10/04 00:00		
COC Number		1039	1039		
	Units	LICA	LICA	DL	QC Batch
		PUF/QFF/CLS/OCT4,09	PUF/QFF/PORT/OCT4,09		

Semivolatile Organics					
1-Methylnaphthalene	ug	<0.10	<0.10	0.10	1971052
1-Methylphenanthrene	ug	<0.10	<0.10	0.10	1971052
2-Chloronaphthalene	ug	<0.10	<0.10	0.10	1971052
2-Methylantracene	ug	<0.10	<0.10	0.10	1971052
2-Methylnaphthalene	ug	<0.10	<0.10	0.10	1971052
3-Methylcholanthrene	ug	<2.0	<2.0	2.0	1971052
7,12-Dimethylbenzo(a)anthracene	ug	<0.10	<0.10	0.10	1971052
9,10-Dimethylantracene	ug	<0.40	<0.40	0.40	1971052
Acenaphthene	ug	<0.050	<0.050	0.050	1971052
Acenaphthylene	ug	0.141	<0.050	0.050	1971052
Anthracene	ug	0.122	<0.050	0.050	1971052
Benzo(a)anthracene	ug	<0.050	<0.050	0.050	1971052
Benzo(a)fluorene	ug	<0.10	<0.10	0.10	1971052
Benzo(a)pyrene	ug	<0.050	<0.050	0.050	1971052
Benzo(b)fluoranthene	ug	0.064	<0.050	0.050	1971052
Benzo(b)fluorene	ug	<0.10	<0.10	0.10	1971052
Benzo(e)pyrene	ug	<0.10	<0.10	0.10	1971052
Benzo(g,h,i)perylene	ug	0.104	0.150	0.050	1971052
Benzo(k)fluoranthene	ug	<0.050	<0.050	0.050	1971052
Biphenyl	ug	<0.10	<0.10	0.10	1971052
Chrysene	ug	0.064	<0.050	0.050	1971052
Coronene	ug	<0.10	0.11	0.10	1971052
Dibenz(a,h)anthracene	ug	<0.050	<0.050	0.050	1971052
Dibenzo(a,e)pyrene	ug	<0.20	<0.20	0.20	1971052
Fluoranthene	ug	0.240	<0.050	0.050	1971052
Fluorene	ug	0.199	0.053	0.050	1971052
Indeno(1,2,3-cd)pyrene	ug	<0.050	<0.050	0.050	1971052
m-Terphenyl	ug	<0.10	<0.10	0.10	1971052
Naphthalene	ug	0.103	<0.072	0.072	1971052
o-Terphenyl	ug	<0.10	<0.10	0.10	1971052
Perylene	ug	<0.10	<0.10	0.10	1971052

 RDL = Reportable Detection Limit
 QC Batch = Quality Control Batch

Maxxam Job #: A9D5453
 Report Date: 2009/10/20

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

Maxxam ID		DZ3471	DZ3473		
Sampling Date		2009/10/04	2009/10/04		
		00:00	00:00		
COC Number		1039	1039		
	Units	LICA	LICA	DL	QC Batch
		PUF/QFF/CLS/OCT4,09	PUF/QFF/PORT/OCT4,09		

Phenanthrene	ug	0.742	0.107	0.050	1971052
p-Terphenyl	ug	<0.10	<0.10	0.10	1971052
Pyrene	ug	0.181	<0.050	0.050	1971052
Quinoline	ug	<0.40	<0.40	0.40	1971052
Tetralin	ug	<0.10	<0.10	0.10	1971052
Surrogate Recovery (%)					
D10-2-Methylnaphthalene	%	87	95		1971052
D10-Fluoranthene	%	113	115		1971052
D10-Fluorene (FS)	%	37 (1)	33 (1)		1971052
D10-Phenanthrene	%	105	110		1971052
D12-Benzo(a)anthracene	%	102	106		1971052
D12-Benzo(a)pyrene	%	108	115		1971052
D12-Benzo(b)fluoranthene	%	112	115		1971052
D12-Benzo(ghi)perylene	%	108	111		1971052
D12-Benzo(k)fluoranthene	%	93	94		1971052
D12-Chrysene	%	103	103		1971052
D12-Indeno(1,2,3-cd)pyrene	%	110	112		1971052
D12-Perylene	%	108	112		1971052
D14-Dibenzo(a,h)anthracene	%	110	112		1971052
D14-Terphenyl (FS)	%	90	91		1971052
D8-Acenaphthylene	%	105	115		1971052
D8-Naphthalene	%	88	97		1971052

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 #: A9D5453
 Report Date: 2009/10/20

Test Summary

Maxxam ID	DZ3471	Collected	2009/10/04
Sample ID	LICA PUF/QFF/CLS/OCT4,09	Shipped	
Matrix	PUF AND FILTER	Received	2009/10/09

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
PAH's in Air (CARB429mod)	GC/MS	1971052	2009/10/13	2009/10/15	WZ

Maxxam ID	DZ3473	Collected	2009/10/04
Sample ID	LICA PUF/QFF/PORT/OCT4,09	Shipped	
Matrix	PUF AND FILTER	Received	2009/10/09

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
PAH's in Air (CARB429mod)	GC/MS	1971052	2009/10/13	2009/10/15	WZ

Maxxam Job #: A9D5453
Report Date: 2009/10/20

GENERAL COMMENTS

PAHMS-F

7,12-Dimethylbenzo(a)anthracene is above 25% RSD in initial calibration. No positives found for this compound.

Pyrene is statistically out of control but within method control at 101% recovery in the spike. Spike dup recovery is in control.

Naphthalene positive found in blank. Samples should be considered to be possibly contaminated to the level found in the blank.

Sample DZ3471-01: PAHMS-F

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

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 it would have a value below the estimated mdl.

Since Triphenylene co-elutes with Chrysene, the maximum possible value for this compound would be 0.064ug, which is the value reported for Chrysene.

Benzo(b)Anthracene elutes after Benzo(a)Anthracene and Chrysene. Searched for ions specific to this compound in the appropriate retention time range with no possible positive detected.

Picene elutes after Dibenzo(a,h) anthracene. Searched for ions specific to this compounds in the appropriate retention time range, possible positive detected, but would fall below the mdl using Dibenzo(a,h) anthracene calibration.

Sample DZ3473-01: PAHMS-F

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

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 Chrysene. 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.

Results relate only to the items tested.

Lakeland Industry & Community Assoc.
 Attention:
 Client Project #:
 P.O. #:
 Project name:

Quality Assurance Report
 Maxxam Job Number: GA9D5453

QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
1971052 WZ	Spiked Blank	D10-2-Methylnaphthalene	2009/10/15		90	%	50 - 150
		D10-Fluoranthene	2009/10/15		119	%	50 - 150
		D10-Phenanthrene	2009/10/15		112	%	50 - 150
		D12-Benzo(a)anthracene	2009/10/15		107	%	50 - 150
		D12-Benzo(a)pyrene	2009/10/15		118	%	50 - 150
		D12-Benzo(b)fluoranthene	2009/10/15		119	%	50 - 150
		D12-Benzo(ghi)perylene	2009/10/15		112	%	50 - 150
		D12-Benzo(k)fluoranthene	2009/10/15		94	%	50 - 150
		D12-Chrysene	2009/10/15		104	%	50 - 150
		D12-Indeno(1,2,3-cd)pyrene	2009/10/15		116	%	50 - 150
		D12-Perylene	2009/10/15		114	%	50 - 150
		D14-Dibenzo(a,h)anthracene	2009/10/15		116	%	50 - 150
		D8-Acenaphthylene	2009/10/15		107	%	50 - 150
		D8-Naphthalene	2009/10/15		93	%	50 - 150
		Acenaphthene	2009/10/15		95	%	60 - 130
	RPD	Acenaphthene	2009/10/15	3.7		%	50
	Spiked Blank	Acenaphthylene	2009/10/15		105	%	60 - 130
	RPD	Acenaphthylene	2009/10/15	4.2		%	50
	Spiked Blank	Anthracene	2009/10/15		102	%	60 - 130
	RPD	Anthracene	2009/10/15	9.8		%	50
	Spiked Blank	Benzo(a)anthracene	2009/10/15		93	%	60 - 130
	RPD	Benzo(a)anthracene	2009/10/15	2.4		%	50
	Spiked Blank	Benzo(a)pyrene	2009/10/15		105	%	60 - 130
	RPD	Benzo(a)pyrene	2009/10/15	0.06		%	50
	Spiked Blank	Benzo(b)fluoranthene	2009/10/15		97	%	60 - 130
	RPD	Benzo(b)fluoranthene	2009/10/15	3.8		%	50
	Spiked Blank	Benzo(g,h,i)perylene	2009/10/15		122	%	60 - 130
	RPD	Benzo(g,h,i)perylene	2009/10/15	8.2		%	50
	Spiked Blank	Benzo(k)fluoranthene	2009/10/15		104	%	60 - 130
	RPD	Benzo(k)fluoranthene	2009/10/15	1.8		%	50
	Spiked Blank	Chrysene	2009/10/15		97	%	60 - 130
	RPD	Chrysene	2009/10/15	3.1		%	50
	Spiked Blank	Dibenz(a,h)anthracene	2009/10/15		108	%	60 - 130
	RPD	Dibenz(a,h)anthracene	2009/10/15	1.5		%	50
	Spiked Blank	Fluoranthene	2009/10/15		114	%	60 - 130
	RPD	Fluoranthene	2009/10/15	14.6		%	50
	Spiked Blank	Fluorene	2009/10/15		99	%	60 - 130
	RPD	Fluorene	2009/10/15	7.1		%	50
	Spiked Blank	Indeno(1,2,3-cd)pyrene	2009/10/15		109	%	60 - 130
	RPD	Indeno(1,2,3-cd)pyrene	2009/10/15	1.7		%	50
	Spiked Blank	Naphthalene	2009/10/15		89	%	60 - 130
	RPD	Naphthalene	2009/10/15	0.9		%	50
	Spiked Blank	Phenanthrene	2009/10/15		101	%	60 - 130
	RPD	Phenanthrene	2009/10/15	13.7		%	50
	Spiked Blank	Pyrene	2009/10/15		101	%	60 - 130
RPD	Pyrene	2009/10/15	14.0		%	50	
Method Blank	D10-2-Methylnaphthalene	2009/10/15		86	%	50 - 150	
	D10-Fluoranthene	2009/10/15		106	%	50 - 150	
	D10-Phenanthrene	2009/10/15		101	%	50 - 150	
	D12-Benzo(a)anthracene	2009/10/15		106	%	50 - 150	
	D12-Benzo(a)pyrene	2009/10/15		108	%	50 - 150	
	D12-Benzo(b)fluoranthene	2009/10/15		111	%	50 - 150	
	D12-Benzo(ghi)perylene	2009/10/15		104	%	50 - 150	
	D12-Benzo(k)fluoranthene	2009/10/15		93	%	50 - 150	
	D12-Chrysene	2009/10/15		102	%	50 - 150	

Lakeland Industry & Community Assoc.
 Attention:
 Client Project #:
 P.O. #:
 Project name:

Quality Assurance Report (Continued)
 Maxxam Job Number: GA9D5453

QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
1971052 WZ	Method Blank	D12-Indeno(1,2,3-cd)pyrene	2009/10/15		108	%	50 - 150
		D12-Perylene	2009/10/15		106	%	50 - 150
		D14-Dibenzo(a,h)anthracene	2009/10/15		108	%	50 - 150
		D8-Acenaphthylene	2009/10/15		101	%	50 - 150
		D8-Naphthalene	2009/10/15		87	%	50 - 150
		1-Methylnaphthalene	2009/10/15	ND, RDL=0.10		ug	
		1-Methylphenanthrene	2009/10/15	ND, RDL=0.10		ug	
		2-Chloronaphthalene	2009/10/15	ND, RDL=0.10		ug	
		2-Methylantracene	2009/10/15	ND, RDL=0.10		ug	
		2-Methylnaphthalene	2009/10/15	ND, RDL=0.10		ug	
		3-Methylcholanthrene	2009/10/15	ND, RDL=2.0		ug	
		7,12-Dimethylbenzo(a)anthracene	2009/10/15	ND, RDL=0.10		ug	
		9,10-Dimethylantracene	2009/10/15	ND, RDL=0.40		ug	
		Acenaphthene	2009/10/15	ND, RDL=0.050		ug	
		Acenaphthylene	2009/10/15	ND, RDL=0.050		ug	
		Anthracene	2009/10/15	ND, RDL=0.050		ug	
		Benzo(a)anthracene	2009/10/15	ND, RDL=0.050		ug	
		Benzo(a)fluorene	2009/10/15	ND, RDL=0.10		ug	
		Benzo(a)pyrene	2009/10/15	ND, RDL=0.050		ug	
		Benzo(b)fluoranthene	2009/10/15	ND, RDL=0.050		ug	
		Benzo(b)fluorene	2009/10/15	ND, RDL=0.10		ug	
		Benzo(e)pyrene	2009/10/15	ND, RDL=0.10		ug	
		Benzo(g,h,i)perylene	2009/10/15	ND, RDL=0.050		ug	
		Benzo(k)fluoranthene	2009/10/15	ND, RDL=0.050		ug	
		Biphenyl	2009/10/15	ND, RDL=0.10		ug	
		Chrysene	2009/10/15	ND, RDL=0.050		ug	
		Coronene	2009/10/15	ND, RDL=0.10		ug	
		Dibenz(a,h)anthracene	2009/10/15	ND, RDL=0.050		ug	
		Dibenzo(a,e)pyrene	2009/10/15	ND, RDL=0.20		ug	
		Fluoranthene	2009/10/15	ND, RDL=0.050		ug	
		Fluorene	2009/10/15	ND, RDL=0.050		ug	
		Indeno(1,2,3-cd)pyrene	2009/10/15	ND, RDL=0.050		ug	
		m-Terphenyl	2009/10/15	ND, RDL=0.10		ug	
		Naphthalene	2009/10/15	0.098, RDL=0.072		ug	
		o-Terphenyl	2009/10/15	ND, RDL=0.10		ug	
		Perylene	2009/10/15	ND, RDL=0.10		ug	
		Phenanthrene	2009/10/15	ND, RDL=0.050		ug	
		p-Terphenyl	2009/10/15	ND, RDL=0.10		ug	
		Pyrene	2009/10/15	ND, RDL=0.050		ug	
		Quinoline	2009/10/15	ND, RDL=0.40		ug	
		Tetralin	2009/10/15	ND, RDL=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.



Your C.O.C. #: 1046

Lakeland Industry & Community Assoc.
P.O. Box 8237
Bonnyville, AB
CANADA T9N 2J5

Report Date: 2009/11/16

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: A9D9562

Received: 2009/10/19, 10:52

Sample Matrix: PUF AND FILTER

Samples Received: 2

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Method Reference
PAH's in Air (CARB429mod)	2	2009/10/21	2009/10/29	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. SCC and CALA have approved this reporting process and electronic report format.

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Total cover pages: 1

Maxxam Job #: A9D9562
 Report Date: 2009/11/16

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

Maxxam ID		EB6266		
Sampling Date		2009/10/10		
COC Number		1046		
	Units	LICA/PUFF/QFF/LCIS/OCT10,09	DL	QC Batch

Semivolatile Organics				
1-Methylnaphthalene	ug	<0.10	0.10	1984034
1-Methylphenanthrene	ug	<0.10	0.10	1984034
2-Chloronaphthalene	ug	<0.10	0.10	1984034
2-Methylantracene	ug	<0.10	0.10	1984034
2-Methylnaphthalene	ug	<0.10	0.10	1984034
3-Methylcholanthrene	ug	<2.0	2.0	1984034
7,12-Dimethylbenzo(a)anthracene	ug	<0.10	0.10	1984034
9,10-Dimethylantracene	ug	<0.40	0.40	1984034
Acenaphthene	ug	<0.050	0.050	1984034
Acenaphthylene	ug	<0.050	0.050	1984034
Anthracene	ug	<0.050	0.050	1984034
Benzo(a)anthracene	ug	<0.050	0.050	1984034
Benzo(a)fluorene	ug	<0.10	0.10	1984034
Benzo(a)pyrene	ug	<0.050	0.050	1984034
Benzo(b)fluoranthene	ug	<0.050	0.050	1984034
Benzo(b)fluorene	ug	<0.10	0.10	1984034
Benzo(e)pyrene	ug	<0.10	0.10	1984034
Benzo(g,h,i)perylene	ug	0.145	0.050	1984034
Benzo(k)fluoranthene	ug	<0.050	0.050	1984034
Biphenyl	ug	<0.10	0.10	1984034
Chrysene	ug	<0.050	0.050	1984034
Coronene	ug	0.15	0.10	1984034
Dibenz(a,h)anthracene	ug	<0.050	0.050	1984034
Dibenzo(a,e)pyrene	ug	<0.20	0.20	1984034
Fluoranthene	ug	<0.050	0.050	1984034
Fluorene	ug	<0.050	0.050	1984034
Indeno(1,2,3-cd)pyrene	ug	<0.050	0.050	1984034
m-Terphenyl	ug	<0.10	0.10	1984034
Naphthalene	ug	0.083	0.072	1984034
o-Terphenyl	ug	<0.10	0.10	1984034
Perylene	ug	<0.10	0.10	1984034
Phenanthrene	ug	0.093	0.050	1984034

 RDL = Reportable Detection Limit
 QC Batch = Quality Control Batch

Maxxam Job #: A9D9562
 Report Date: 2009/11/16

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

Maxxam ID		EB6266		
Sampling Date		2009/10/10		
COC Number		1046		
	Units	LICA/PUFF/QFF/LCIS/OCT10,09	DL	QC Batch
p-Terphenyl	ug	<0.10	0.10	1984034
Pyrene	ug	<0.050	0.050	1984034
Quinoline	ug	<0.40	0.40	1984034
Tetralin	ug	<0.10	0.10	1984034
Surrogate Recovery (%)				
D10-2-Methylnaphthalene	%	87		1984034
D10-Fluoranthene	%	105		1984034
D10-Fluorene (FS)	%	54		1984034
D10-Phenanthrene	%	102		1984034
D12-Benzo(a)anthracene	%	112		1984034
D12-Benzo(a)pyrene	%	103		1984034
D12-Benzo(b)fluoranthene	%	108		1984034
D12-Benzo(ghi)perylene	%	102		1984034
D12-Benzo(k)fluoranthene	%	96		1984034
D12-Chrysene	%	94		1984034
D12-Indeno(1,2,3-cd)pyrene	%	102		1984034
D12-Perylene	%	106		1984034
D14-Dibenzo(a,h)anthracene	%	101		1984034
D14-Terphenyl (FS)	%	94		1984034
D8-Acenaphthylene	%	92		1984034
D8-Naphthalene	%	89		1984034
QC Batch = Quality Control Batch				

Maxxam Job #: A9D9562
 Report Date: 2009/11/16

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

Maxxam ID		EB6267		
Sampling Date		2009/10/10		
COC Number		1046		
	Units	LICA/PUFF/QFF/PORT/OCT10,09	DL	QC Batch

Semivolatile Organics				
1-Methylnaphthalene	ug	<0.10	0.10	1984034
1-Methylphenanthrene	ug	<0.10	0.10	1984034
2-Chloronaphthalene	ug	<0.10	0.10	1984034
2-Methylanthracene	ug	<0.10	0.10	1984034
2-Methylnaphthalene	ug	0.12	0.10	1984034
3-Methylcholanthrene	ug	<2.0	2.0	1984034
7,12-Dimethylbenzo(a)anthracene	ug	<0.10	0.10	1984034
9,10-Dimethylanthracene	ug	<0.40	0.40	1984034
Acenaphthene	ug	<0.050	0.050	1984034
Acenaphthylene	ug	0.091	0.050	1984034
Anthracene	ug	<0.050	0.050	1984034
Benzo(a)anthracene	ug	<0.050	0.050	1984034
Benzo(a)fluorene	ug	<0.10	0.10	1984034
Benzo(a)pyrene	ug	<0.050	0.050	1984034
Benzo(b)fluoranthene	ug	<0.050	0.050	1984034
Benzo(b)fluorene	ug	<0.10	0.10	1984034
Benzo(e)pyrene	ug	<0.10	0.10	1984034
Benzo(g,h,i)perylene	ug	0.114	0.050	1984034
Benzo(k)fluoranthene	ug	<0.050	0.050	1984034
Biphenyl	ug	<0.10	0.10	1984034
Chrysene	ug	<0.050	0.050	1984034
Coronene	ug	0.11	0.10	1984034
Dibenz(a,h)anthracene	ug	<0.050	0.050	1984034
Dibenzo(a,e)pyrene	ug	<0.20	0.20	1984034
Fluoranthene	ug	0.053	0.050	1984034
Fluorene	ug	0.060	0.050	1984034
Indeno(1,2,3-cd)pyrene	ug	<0.050	0.050	1984034
m-Terphenyl	ug	<0.10	0.10	1984034
Naphthalene	ug	0.129	0.072	1984034
o-Terphenyl	ug	<0.10	0.10	1984034
Perylene	ug	<0.10	0.10	1984034
Phenanthrene	ug	0.153	0.050	1984034

RDL = Reportable Detection Limit
 QC Batch = Quality Control Batch

Maxxam Job #: A9D9562
 Report Date: 2009/11/16

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

Maxxam ID		EB6267		
Sampling Date		2009/10/10		
COC Number		1046		
	Units	LICA/PUFF/QFF/PORT/OCT10,09	DL	QC Batch
p-Terphenyl	ug	<0.10	0.10	1984034
Pyrene	ug	0.052	0.050	1984034
Quinoline	ug	<0.40	0.40	1984034
Tetralin	ug	<0.10	0.10	1984034
Surrogate Recovery (%)				
D10-2-Methylnaphthalene	%	85		1984034
D10-Fluoranthene	%	103		1984034
D10-Fluorene (FS)	%	56		1984034
D10-Phenanthrene	%	97		1984034
D12-Benzo(a)anthracene	%	108		1984034
D12-Benzo(a)pyrene	%	100		1984034
D12-Benzo(b)fluoranthene	%	109		1984034
D12-Benzo(ghi)perylene	%	102		1984034
D12-Benzo(k)fluoranthene	%	91		1984034
D12-Chrysene	%	99		1984034
D12-Indeno(1,2,3-cd)pyrene	%	103		1984034
D12-Perylene	%	102		1984034
D14-Dibenzo(a,h)anthracene	%	102		1984034
D14-Terphenyl (FS)	%	92		1984034
D8-Acenaphthylene	%	94		1984034
D8-Naphthalene	%	83		1984034
QC Batch = Quality Control Batch				

Maxxam Job #: A9D9562
 Report Date: 2009/11/16

Test Summary

Maxxam ID EB6266 **Collected** 2009/10/10
Sample ID LICA/PUFF/QFF/LCIS/OCT10,09 **Shipped**
Matrix PUF AND FILTER **Received** 2009/10/19

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
PAH's in Air (CARB429mod)	GC/MS	1984034	2009/10/21	2009/10/29	WZ

Maxxam ID EB6267 **Collected** 2009/10/10
Sample ID LICA/PUFF/QFF/PORT/OCT10,09 **Shipped**
Matrix PUF AND FILTER **Received** 2009/10/19

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
PAH's in Air (CARB429mod)	GC/MS	1984034	2009/10/21	2009/10/29	WZ

Maxxam Job #: A9D9562
Report Date: 2009/11/16

GENERAL COMMENTS

PAHMS-F

7,12-Dimethylbenzo(a)anthracene is above 25% RSD in initial calibration. No positives found for this compound.

Naphthalene positive found in blank. Samples should be considered to be possibly contaminated to the level found in the blank.

Sample EB6266-01: PAHMS-F

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 Chrysene. 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.

Sample EB6267-01: PAHMS-F

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 Chrysene. 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.

Results relate only to the items tested.

Lakeland Industry & Community Assoc.
 Attention:
 Client Project #:
 P.O. #:
 Project name:

Quality Assurance Report
 Maxxam Job Number: GA9D9562

QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
1984034 WZ	Spiked Blank	D10-2-Methylnaphthalene	2009/10/29		96	%	50 - 150
		D10-Fluoranthene	2009/10/29		107	%	50 - 150
		D10-Phenanthrene	2009/10/29		105	%	50 - 150
		D12-Benzo(a)anthracene	2009/10/29		111	%	50 - 150
		D12-Benzo(a)pyrene	2009/10/29		106	%	50 - 150
		D12-Benzo(b)fluoranthene	2009/10/29		94	%	50 - 150
		D12-Benzo(ghi)perylene	2009/10/29		104	%	50 - 150
		D12-Benzo(k)fluoranthene	2009/10/29		98	%	50 - 150
		D12-Chrysene	2009/10/29		93	%	50 - 150
		D12-Indeno(1,2,3-cd)pyrene	2009/10/29		105	%	50 - 150
		D12-Perylene	2009/10/29		107	%	50 - 150
		D14-Dibenzo(a,h)anthracene	2009/10/29		103	%	50 - 150
		D8-Acenaphthylene	2009/10/29		100	%	50 - 150
		D8-Naphthalene	2009/10/29		95	%	50 - 150
		RPD	Acenaphthene	2009/10/29		4.0	%
	Spiked Blank	Acenaphthene	2009/10/29			%	50
	RPD	Acenaphthylene	2009/10/29		5.9	%	60 - 130
	Spiked Blank	Acenaphthylene	2009/10/29			%	50
	RPD	Anthracene	2009/10/29		0.5	%	60 - 130
	Spiked Blank	Anthracene	2009/10/29			%	50
	RPD	Benzo(a)anthracene	2009/10/29		2.2	%	60 - 130
	Spiked Blank	Benzo(a)anthracene	2009/10/29			%	50
	RPD	Benzo(a)pyrene	2009/10/29		0.3	%	60 - 130
	Spiked Blank	Benzo(a)pyrene	2009/10/29			%	50
	RPD	Benzo(b)fluoranthene	2009/10/29		0.2	%	60 - 130
	Spiked Blank	Benzo(b)fluoranthene	2009/10/29			%	50
	RPD	Benzo(g,h,i)perylene	2009/10/29		8.5	%	60 - 130
	Spiked Blank	Benzo(g,h,i)perylene	2009/10/29			%	50
	RPD	Benzo(k)fluoranthene	2009/10/29		3.5	%	60 - 130
	Spiked Blank	Benzo(k)fluoranthene	2009/10/29			%	50
	RPD	Chrysene	2009/10/29		8.5	%	60 - 130
	Spiked Blank	Chrysene	2009/10/29			%	50
	RPD	Dibenz(a,h)anthracene	2009/10/29		1.9	%	60 - 130
	Spiked Blank	Dibenz(a,h)anthracene	2009/10/29			%	50
	RPD	Fluoranthene	2009/10/29		4.2	%	60 - 130
	Spiked Blank	Fluoranthene	2009/10/29			%	50
	RPD	Fluorene	2009/10/29		2.4	%	60 - 130
	Spiked Blank	Fluorene	2009/10/29			%	50
	RPD	Indeno(1,2,3-cd)pyrene	2009/10/29		3.0	%	60 - 130
	Spiked Blank	Indeno(1,2,3-cd)pyrene	2009/10/29			%	50
	RPD	Naphthalene	2009/10/29		8.5	%	60 - 130
	Spiked Blank	Naphthalene	2009/10/29			%	50
	RPD	Phenanthrene	2009/10/29		6.2	%	60 - 130
	Spiked Blank	Phenanthrene	2009/10/29			%	50
	RPD	Pyrene	2009/10/29		3.9	%	60 - 130
Spiked Blank	Pyrene	2009/10/29			%	50	
Method Blank	D10-2-Methylnaphthalene	2009/10/29			88	%	50 - 150
	D10-Fluoranthene	2009/10/29			110	%	50 - 150
	D10-Phenanthrene	2009/10/29			105	%	50 - 150
	D12-Benzo(a)anthracene	2009/10/29			114	%	50 - 150
	D12-Benzo(a)pyrene	2009/10/29			102	%	50 - 150
	D12-Benzo(b)fluoranthene	2009/10/29			107	%	50 - 150
	D12-Benzo(ghi)perylene	2009/10/29			100	%	50 - 150
	D12-Benzo(k)fluoranthene	2009/10/29			95	%	50 - 150
	D12-Chrysene	2009/10/29			90	%	50 - 150

Lakeland Industry & Community Assoc.
 Attention:
 Client Project #:
 P.O. #:
 Project name:

Quality Assurance Report (Continued)

Maxxam Job Number: GA9D9562

QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
1984034 WZ	Method Blank	D12-Indeno(1,2,3-cd)pyrene	2009/10/29		103	%	50 - 150
		D12-Perylene	2009/10/29		102	%	50 - 150
		D14-Dibenzo(a,h)anthracene	2009/10/29		102	%	50 - 150
		D8-Acenaphthylene	2009/10/29		94	%	50 - 150
		D8-Naphthalene	2009/10/29		88	%	50 - 150
		1-Methylnaphthalene	2009/10/29	ND, RDL=0.10		ug	
		1-Methylphenanthrene	2009/10/29	ND, RDL=0.10		ug	
		2-Chloronaphthalene	2009/10/29	ND, RDL=0.10		ug	
		2-Methylanthracene	2009/10/29	ND, RDL=0.10		ug	
		2-Methylnaphthalene	2009/10/29	ND, RDL=0.10		ug	
		3-Methylcholanthrene	2009/10/29	ND, RDL=2.0		ug	
		7,12-Dimethylbenzo(a)anthracene	2009/10/29	ND, RDL=0.10		ug	
		9,10-Dimethylanthracene	2009/10/29	ND, RDL=0.40		ug	
		Acenaphthene	2009/10/29	ND, RDL=0.050		ug	
		Acenaphthylene	2009/10/29	ND, RDL=0.050		ug	
		Anthracene	2009/10/29	ND, RDL=0.050		ug	
		Benzo(a)anthracene	2009/10/29	ND, RDL=0.050		ug	
		Benzo(a)fluorene	2009/10/29	ND, RDL=0.10		ug	
		Benzo(a)pyrene	2009/10/29	ND, RDL=0.050		ug	
		Benzo(b)fluoranthene	2009/10/29	ND, RDL=0.050		ug	
		Benzo(b)fluorene	2009/10/29	ND, RDL=0.10		ug	
		Benzo(e)pyrene	2009/10/29	ND, RDL=0.10		ug	
		Benzo(g,h,i)perylene	2009/10/29	ND, RDL=0.050		ug	
		Benzo(k)fluoranthene	2009/10/29	ND, RDL=0.050		ug	
		Biphenyl	2009/10/29	ND, RDL=0.10		ug	
		Chrysene	2009/10/29	ND, RDL=0.050		ug	
		Coronene	2009/10/29	ND, RDL=0.10		ug	
		Dibenz(a,h)anthracene	2009/10/29	ND, RDL=0.050		ug	
		Dibenzo(a,e)pyrene	2009/10/29	ND, RDL=0.20		ug	
		Fluoranthene	2009/10/29	ND, RDL=0.050		ug	
		Fluorene	2009/10/29	ND, RDL=0.050		ug	
		Indeno(1,2,3-cd)pyrene	2009/10/29	ND, RDL=0.050		ug	
		m-Terphenyl	2009/10/29	ND, RDL=0.10		ug	
		Naphthalene	2009/10/29	0.100, RDL=0.072		ug	
		o-Terphenyl	2009/10/29	ND, RDL=0.10		ug	
		Perylene	2009/10/29	ND, RDL=0.10		ug	
		Phenanthrene	2009/10/29	ND, RDL=0.050		ug	
		p-Terphenyl	2009/10/29	ND, RDL=0.10		ug	
		Pyrene	2009/10/29	ND, RDL=0.050		ug	
		Quinoline	2009/10/29	ND, RDL=0.40		ug	
		Tetralin	2009/10/29	ND, RDL=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.



Your C.O.C. #: 1045

Attention: Michael Bisaga
Lakeland Industry & Community Assoc.
P.O. Box 8237
Bonnyville, AB
CANADA T9N 2J5

Report Date: 2009/11/16

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: A9E1566
Received: 2009/10/22, 11:37

Sample Matrix: Filter
Samples Received: 2

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Method Reference
PAH's in Air (CARB429mod)	2	2009/10/23	2009/10/29	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. SCC and CALA have approved this reporting process and electronic report format.

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Total cover pages: 1

Maxxam Job #: A9E1566
 Report Date: 2009/11/16

SEMI-VOLATILE ORGANICS BY GC-MS (FILTER)

Maxxam ID		EC5411	EC5412		
Sampling Date		2009/10/16	2009/10/16		
COC Number		1045	1045		
	Units	LICA	LICA	DL	QC Batch
		PUF/CLS/OCT16,09	QFF/PORT/OCT16,09		

Semivolatile Organics					
1-Methylnaphthalene	ug	0.11	<0.10	0.10	1984039
1-Methylphenanthrene	ug	<0.10	<0.10	0.10	1984039
2-Chloronaphthalene	ug	<0.10	<0.10	0.10	1984039
2-Methylantracene	ug	<0.10	<0.10	0.10	1984039
2-Methylnaphthalene	ug	0.23	<0.10	0.10	1984039
3-Methylcholanthrene	ug	<2.0	<2.0	2.0	1984039
7,12-Dimethylbenzo(a)anthracene	ug	<0.10	<0.10	0.10	1984039
9,10-Dimethylantracene	ug	<0.40	<0.40	0.40	1984039
Acenaphthene	ug	<0.050	<0.050	0.050	1984039
Acenaphthylene	ug	<0.050	<0.050	0.050	1984039
Anthracene	ug	<0.050	<0.050	0.050	1984039
Benzo(a)anthracene	ug	<0.050	<0.050	0.050	1984039
Benzo(a)fluorene	ug	<0.10	<0.10	0.10	1984039
Benzo(a)pyrene	ug	<0.050	<0.050	0.050	1984039
Benzo(b)fluoranthene	ug	<0.050	<0.050	0.050	1984039
Benzo(b)fluorene	ug	<0.10	<0.10	0.10	1984039
Benzo(e)pyrene	ug	<0.10	<0.10	0.10	1984039
Benzo(g,h,i)perylene	ug	<0.050	<0.050	0.050	1984039
Benzo(k)fluoranthene	ug	<0.050	<0.050	0.050	1984039
Biphenyl	ug	0.11	<0.10	0.10	1984039
Chrysene	ug	<0.050	<0.050	0.050	1984039
Coronene	ug	<0.10	<0.10	0.10	1984039
Dibenz(a,h)anthracene	ug	<0.050	<0.050	0.050	1984039
Dibenzo(a,e)pyrene	ug	<0.20	<0.20	0.20	1984039
Fluoranthene	ug	0.070	0.119	0.050	1984039
Fluorene	ug	0.159	0.169	0.050	1984039
Indeno(1,2,3-cd)pyrene	ug	<0.050	<0.050	0.050	1984039
m-Terphenyl	ug	<0.10	<0.10	0.10	1984039
Naphthalene	ug	0.197	0.074	0.072	1984039
o-Terphenyl	ug	<0.10	<0.10	0.10	1984039
Perylene	ug	<0.10	<0.10	0.10	1984039
Phenanthrene	ug	0.301	0.442	0.050	1984039
RDL = Reportable Detection Limit QC Batch = Quality Control Batch					

Maxxam Job #: A9E1566
 Report Date: 2009/11/16

SEMI-VOLATILE ORGANICS BY GC-MS (FILTER)

Maxxam ID		EC5411	EC5412		
Sampling Date		2009/10/16	2009/10/16		
COC Number		1045	1045		
	Units	LICA	LICA	DL	QC Batch
		PUF/CLS/OCT16,09	QFF/PORT/OCT16,09		

p-Terphenyl	ug	<0.10	<0.10	0.10	1984039
Pyrene	ug	0.053	0.085	0.050	1984039
Quinoline	ug	<0.40	<0.40	0.40	1984039
Tetralin	ug	<0.10	<0.10	0.10	1984039
Surrogate Recovery (%)					
D10-2-Methylnaphthalene	%	86	91		1984039
D10-Fluoranthene	%	101	118		1984039
D10-Fluorene (FS)	%	19 (1)	29 (1)		1984039
D10-Phenanthrene	%	103	113		1984039
D12-Benzo(a)anthracene	%	91	118		1984039
D12-Benzo(a)pyrene	%	88	90		1984039
D12-Benzo(b)fluoranthene	%	106	100		1984039
D12-Benzo(ghi)perylene	%	100	110		1984039
D12-Benzo(k)fluoranthene	%	93	120		1984039
D12-Chrysene	%	109	102		1984039
D12-Indeno(1,2,3-cd)pyrene	%	101	111		1984039
D12-Perylene	%	94	100		1984039
D14-Dibenzo(a,h)anthracene	%	100	110		1984039
D14-Terphenyl (FS)	%	93	98		1984039
D8-Acenaphthylene	%	91	101		1984039
D8-Naphthalene	%	83	91		1984039

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 #: A9E1566
 Report Date: 2009/11/16

Test Summary

Maxxam ID	EC5411	Collected	2009/10/16
Sample ID	LICA PUF/CLS/OCT16,09	Shipped	
Matrix	Filter	Received	2009/10/22

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
PAH's in Air (CARB429mod)	GC/MS	1984039	2009/10/23	2009/10/29	WZ

Maxxam ID	EC5412	Collected	2009/10/16
Sample ID	LICA QFF/PORT/OCT16,09	Shipped	
Matrix	Filter	Received	2009/10/22

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
PAH's in Air (CARB429mod)	GC/MS	1984039	2009/10/23	2009/10/29	WZ

Maxxam Job #: A9E1566
Report Date: 2009/11/16

GENERAL COMMENTS

PAHMS-F

7,12-Dimethylbenzo(a)anthracene is above 25% RSD in initial calibration. No positives found for this compound.

Pyrene is statistically out of control but in method control at 95.1%, 89.6% recovery in the spike spike:dup.
Low d10-fluorene field spike recovery. Suspect sample matrix as cause due to acceptable recovery of d14-terphenyl field spike.

Naphthalene positive found in blank. Samples should be considered to be possibly contaminated to the level found in the blank.

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 Chrysene. 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.

Results relate only to the items tested.

Lakeland Industry & Community Assoc.
 Attention: Michael Bisaga
 Client Project #:
 P.O. #:
 Project name:

Quality Assurance Report
 Maxxam Job Number: GA9E1566

QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
1984039 WZ	Spiked Blank	D10-2-Methylnaphthalene	2009/10/29		93	%	50 - 150
		D10-Fluoranthene	2009/10/29		113	%	50 - 150
		D10-Phenanthrene	2009/10/29		110	%	50 - 150
		D12-Benzo(a)anthracene	2009/10/29		118	%	50 - 150
		D12-Benzo(a)pyrene	2009/10/29		109	%	50 - 150
		D12-Benzo(b)fluoranthene	2009/10/29		103	%	50 - 150
		D12-Benzo(ghi)perylene	2009/10/29		104	%	50 - 150
		D12-Benzo(k)fluoranthene	2009/10/29		104	%	50 - 150
		D12-Chrysene	2009/10/29		96	%	50 - 150
		D12-Indeno(1,2,3-cd)pyrene	2009/10/29		108	%	50 - 150
		D12-Perylene	2009/10/29		105	%	50 - 150
		D14-Dibenzo(a,h)anthracene	2009/10/29		107	%	50 - 150
		D8-Acenaphthylene	2009/10/29		106	%	50 - 150
		D8-Naphthalene	2009/10/29		93	%	50 - 150
		RPD	Acenaphthene	2009/10/29		11.9	%
	Spiked Blank	Acenaphthene	2009/10/29				50
	RPD	Acenaphthylene	2009/10/29		12.6	%	60 - 130
	Spiked Blank	Acenaphthylene	2009/10/29				50
	RPD	Anthracene	2009/10/29		12.8	%	60 - 130
	Spiked Blank	Anthracene	2009/10/29				50
	RPD	Benzo(a)anthracene	2009/10/29		1.5	%	60 - 130
	Spiked Blank	Benzo(a)anthracene	2009/10/29				50
	RPD	Benzo(a)pyrene	2009/10/29		9.6	%	60 - 130
	Spiked Blank	Benzo(a)pyrene	2009/10/29				50
	RPD	Benzo(b)fluoranthene	2009/10/29		9.2	%	60 - 130
	Spiked Blank	Benzo(b)fluoranthene	2009/10/29				50
	RPD	Benzo(g,h,i)perylene	2009/10/29		9.3	%	60 - 130
	Spiked Blank	Benzo(g,h,i)perylene	2009/10/29				50
	RPD	Benzo(k)fluoranthene	2009/10/29		3.5	%	60 - 130
	Spiked Blank	Benzo(k)fluoranthene	2009/10/29				50
	RPD	Chrysene	2009/10/29		1.7	%	60 - 130
	Spiked Blank	Chrysene	2009/10/29				50
	RPD	Dibenz(a,h)anthracene	2009/10/29		3.6	%	60 - 130
	Spiked Blank	Dibenz(a,h)anthracene	2009/10/29				50
	RPD	Fluoranthene	2009/10/29		3.6	%	60 - 130
	Spiked Blank	Fluoranthene	2009/10/29				50
	RPD	Fluorene	2009/10/29		7.9	%	60 - 130
	Spiked Blank	Fluorene	2009/10/29				50
	RPD	Indeno(1,2,3-cd)pyrene	2009/10/29		1.6	%	60 - 130
	Spiked Blank	Indeno(1,2,3-cd)pyrene	2009/10/29				50
	RPD	Naphthalene	2009/10/29		9.3	%	60 - 130
	Spiked Blank	Naphthalene	2009/10/29				50
	RPD	Phenanthrene	2009/10/29		8.1	%	60 - 130
	Spiked Blank	Phenanthrene	2009/10/29				50
	RPD	Pyrene	2009/10/29		5.9	%	60 - 130
Spiked Blank	Pyrene	2009/10/29				50	
Method Blank	D10-2-Methylnaphthalene	2009/10/29				50 - 150	
	D10-Fluoranthene	2009/10/29				50 - 150	
	D10-Phenanthrene	2009/10/29				50 - 150	
	D12-Benzo(a)anthracene	2009/10/29				50 - 150	
	D12-Benzo(a)pyrene	2009/10/29				50 - 150	
	D12-Benzo(b)fluoranthene	2009/10/29				50 - 150	
	D12-Benzo(ghi)perylene	2009/10/29				50 - 150	
	D12-Benzo(k)fluoranthene	2009/10/29				50 - 150	
	D12-Chrysene	2009/10/29				50 - 150	

Lakeland Industry & Community Assoc.
 Attention: Michael Bisaga
 Client Project #:
 P.O. #:
 Project name:

Quality Assurance Report (Continued)
 Maxxam Job Number: GA9E1566

QA/QC Batch Num Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits	
1984039 WZ	Method Blank	D12-Indeno(1,2,3-cd)pyrene	2009/10/29		109	%	50 - 150	
		D12-Perylene	2009/10/29		102	%	50 - 150	
		D14-Dibenzo(a,h)anthracene	2009/10/29		109	%	50 - 150	
		D8-Acenaphthylene	2009/10/29		93	%	50 - 150	
		D8-Naphthalene	2009/10/29		89	%	50 - 150	
		1-Methylnaphthalene	2009/10/29		ND, RDL=0.10		ug	
		1-Methylphenanthrene	2009/10/29		ND, RDL=0.10		ug	
		2-Chloronaphthalene	2009/10/29		ND, RDL=0.10		ug	
		2-Methylantracene	2009/10/29		ND, RDL=0.10		ug	
		2-Methylnaphthalene	2009/10/29		ND, RDL=0.10		ug	
		3-Methylcholanthrene	2009/10/29		ND, RDL=2.0		ug	
		7,12-Dimethylbenzo(a)anthracene	2009/10/29		ND, RDL=0.10		ug	
		9,10-Dimethylantracene	2009/10/29		ND, RDL=0.40		ug	
		Acenaphthene	2009/10/29		ND, RDL=0.050		ug	
		Acenaphthylene	2009/10/29		ND, RDL=0.050		ug	
		Anthracene	2009/10/29		ND, RDL=0.050		ug	
		Benzo(a)anthracene	2009/10/29		ND, RDL=0.050		ug	
		Benzo(a)fluorene	2009/10/29		ND, RDL=0.10		ug	
		Benzo(a)pyrene	2009/10/29		ND, RDL=0.050		ug	
		Benzo(b)fluoranthene	2009/10/29		ND, RDL=0.050		ug	
		Benzo(b)fluorene	2009/10/29		ND, RDL=0.10		ug	
		Benzo(e)pyrene	2009/10/29		ND, RDL=0.10		ug	
		Benzo(g,h,i)perylene	2009/10/29		ND, RDL=0.050		ug	
		Benzo(k)fluoranthene	2009/10/29		ND, RDL=0.050		ug	
		Biphenyl	2009/10/29		ND, RDL=0.10		ug	
		Chrysene	2009/10/29		ND, RDL=0.050		ug	
		Coronene	2009/10/29		ND, RDL=0.10		ug	
		Dibenz(a,h)anthracene	2009/10/29		ND, RDL=0.050		ug	
		Dibenzo(a,e)pyrene	2009/10/29		ND, RDL=0.20		ug	
		Fluoranthene	2009/10/29		ND, RDL=0.050		ug	
		Fluorene	2009/10/29		ND, RDL=0.050		ug	
		Indeno(1,2,3-cd)pyrene	2009/10/29		ND, RDL=0.050		ug	
		m-Terphenyl	2009/10/29		ND, RDL=0.10		ug	
		Naphthalene	2009/10/29		0.101, RDL=0.072		ug	
		o-Terphenyl	2009/10/29		ND, RDL=0.10		ug	
		Perylene	2009/10/29		ND, RDL=0.10		ug	
		Phenanthrene	2009/10/29		ND, RDL=0.050		ug	
		p-Terphenyl	2009/10/29		ND, RDL=0.10		ug	
		Pyrene	2009/10/29		ND, RDL=0.050		ug	
		Quinoline	2009/10/29		ND, RDL=0.40		ug	
Tetralin	2009/10/29		ND, RDL=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.



Your C.O.C. #: 1042

Attention: Michael Bisaga

Lakeland Industry & Community Assoc.
P.O. Box 8237
Bonnyville, AB
CANADA T9N 2J5

Report Date: 2009/11/16

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: A9E5274

Received: 2009/10/28, 09:06

Sample Matrix: Filter
Samples Received: 2

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Method Reference
PAH's in Air (CARB429mod)	2	2009/10/30	2009/11/04	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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Total cover pages: 1

Maxxam Job #: A9E5274
 Report Date: 2009/11/16

SEMI-VOLATILE ORGANICS BY GC-MS (FILTER)

Maxxam ID		EE3120	EE3121		
Sampling Date		2009/10/23	2009/10/23		
		00:00	00:00		
COC Number		1042	1042		
	Units	LICAPUFF/CLS/OCT22,09	LICAQFF/PORT/OCT22,09	DL	QC Batch

Semivolatile Organics					
1-Methylnaphthalene	ug	<0.10	<0.10	0.10	1995746
1-Methylphenanthrene	ug	<0.10	<0.10	0.10	1995746
2-Chloronaphthalene	ug	<0.10	<0.10	0.10	1995746
2-Methylantracene	ug	<0.10	<0.10	0.10	1995746
2-Methylnaphthalene	ug	0.14	<0.10	0.10	1995746
3-Methylcholanthrene	ug	<2.0	<2.0	2.0	1995746
7,12-Dimethylbenzo(a)anthracene	ug	<0.10	<0.10	0.10	1995746
9,10-Dimethylantracene	ug	<0.40	<0.40	0.40	1995746
Acenaphthene	ug	<0.050	<0.050	0.050	1995746
Acenaphthylene	ug	0.071	<0.050	0.050	1995746
Anthracene	ug	<0.050	<0.050	0.050	1995746
Benzo(a)anthracene	ug	<0.050	<0.050	0.050	1995746
Benzo(a)fluorene	ug	<0.10	<0.10	0.10	1995746
Benzo(a)pyrene	ug	<0.050	<0.050	0.050	1995746
Benzo(b)fluoranthene	ug	<0.050	<0.050	0.050	1995746
Benzo(b)fluorene	ug	<0.10	<0.10	0.10	1995746
Benzo(e)pyrene	ug	<0.10	<0.10	0.10	1995746
Benzo(g,h,i)perylene	ug	<0.050	<0.050	0.050	1995746
Benzo(k)fluoranthene	ug	<0.050	<0.050	0.050	1995746
Biphenyl	ug	0.10	<0.10	0.10	1995746
Chrysene	ug	<0.050	<0.050	0.050	1995746
Coronene	ug	<0.10	<0.10	0.10	1995746
Dibenz(a,h)anthracene	ug	<0.050	<0.050	0.050	1995746
Dibenzo(a,e)pyrene	ug	<0.20	<0.20	0.20	1995746
Fluoranthene	ug	0.072	<0.050	0.050	1995746
Fluorene	ug	0.169	0.112	0.050	1995746
Indeno(1,2,3-cd)pyrene	ug	<0.050	<0.050	0.050	1995746
m-Terphenyl	ug	<0.10	<0.10	0.10	1995746
Naphthalene	ug	0.129	0.080	0.072	1995746
o-Terphenyl	ug	<0.10	<0.10	0.10	1995746
Perylene	ug	<0.10	<0.10	0.10	1995746
Phenanthrene	ug	0.338	0.214	0.050	1995746
RDL = Reportable Detection Limit QC Batch = Quality Control Batch					

Maxxam Job #: A9E5274
 Report Date: 2009/11/16

SEMI-VOLATILE ORGANICS BY GC-MS (FILTER)

Maxxam ID		EE3120	EE3121		
Sampling Date		2009/10/23	2009/10/23		
		00:00	00:00		
COC Number		1042	1042		
	Units	LICAPUFF/CLS/OCT22,09	LICAQFF/PORT/OCT22,09	DL	QC Batch

p-Terphenyl	ug	<0.10	<0.10	0.10	1995746
Pyrene	ug	0.060	<0.050	0.050	1995746
Quinoline	ug	<0.40	<0.40	0.40	1995746
Tetralin	ug	<0.10	<0.10	0.10	1995746
Surrogate Recovery (%)					
D10-2-Methylnaphthalene	%	92	93		1995746
D10-Fluoranthene	%	109	115		1995746
D10-Fluorene (FS)	%	26 (1)	26 (1)		1995746
D10-Phenanthrene	%	102	107		1995746
D12-Benzo(a)anthracene	%	102	109		1995746
D12-Benzo(a)pyrene	%	103	107		1995746
D12-Benzo(b)fluoranthene	%	98	103		1995746
D12-Benzo(ghi)perylene	%	105	109		1995746
D12-Benzo(k)fluoranthene	%	104	103		1995746
D12-Chrysene	%	100	101		1995746
D12-Indeno(1,2,3-cd)pyrene	%	107	111		1995746
D12-Perylene	%	105	106		1995746
D14-Dibenzo(a,h)anthracene	%	106	110		1995746
D14-Terphenyl (FS)	%	91	93		1995746
D8-Acenaphthylene	%	102	107		1995746
D8-Naphthalene	%	94	93		1995746

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 #: A9E5274
 Report Date: 2009/11/16

Test Summary

Maxxam ID	EE3120	Collected	2009/10/23
Sample ID	LICAPUFF/CLS/OCT22,09	Shipped	
Matrix	Filter	Received	2009/10/28

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
PAH's in Air (CARB429mod)	GC/MS	1995746	2009/10/30	2009/11/04	WZ

Maxxam ID	EE3121	Collected	2009/10/23
Sample ID	LICAPUFF/PORT/OCT22,09	Shipped	
Matrix	Filter	Received	2009/10/28

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
PAH's in Air (CARB429mod)	GC/MS	1995746	2009/10/30	2009/11/04	WZ

Maxxam Job #: A9E5274
Report Date: 2009/11/16

GENERAL COMMENTS

PAHMS-F

7,12-Dimethylbenzo(a)anthracene is above 25% RSD in initial calibration. No positives found for this compounds.

Pyrene is statistically out of control but in method control at 93.1% 96.3% recovery in the Spike ,Spike:dup.

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

Naphthalene positive found in blank. Samples should be considered to be possibly contaminated to the level found in the blank. Benzo(g,h,i)perylene positive found in blank , suspect glassware contaminated.

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 Chrysene. 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.

Results relate only to the items tested.

Lakeland Industry & Community Assoc.
 Attention: Michael Bisaga
 Client Project #:
 P.O. #:
 Project name:

Quality Assurance Report
 Maxxam Job Number: GA9E5274

QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
1995746 WZ	Spiked Blank	D10-2-Methylnaphthalene	2009/11/04		90	%	50 - 150
		D10-Fluoranthene	2009/11/04		108	%	50 - 150
		D10-Phenanthrene	2009/11/04		102	%	50 - 150
		D12-Benzo(a)anthracene	2009/11/04		106	%	50 - 150
		D12-Benzo(a)pyrene	2009/11/04		110	%	50 - 150
		D12-Benzo(b)fluoranthene	2009/11/04		98	%	50 - 150
		D12-Benzo(ghi)perylene	2009/11/04		103	%	50 - 150
		D12-Benzo(k)fluoranthene	2009/11/04		101	%	50 - 150
		D12-Chrysene	2009/11/04		93	%	50 - 150
		D12-Indeno(1,2,3-cd)pyrene	2009/11/04		105	%	50 - 150
		D12-Perylene	2009/11/04		107	%	50 - 150
		D14-Dibenzo(a,h)anthracene	2009/11/04		104	%	50 - 150
		D8-Acenaphthylene	2009/11/04		105	%	50 - 150
		D8-Naphthalene	2009/11/04		91	%	50 - 150
		Acenaphthene	2009/11/04		87	%	60 - 130
	RPD	Acenaphthene	2009/11/04	7.2		%	50
	Spiked Blank	Acenaphthylene	2009/11/04		98	%	60 - 130
	RPD	Acenaphthylene	2009/11/04	9.6		%	50
	Spiked Blank	Anthracene	2009/11/04		89	%	60 - 130
	RPD	Anthracene	2009/11/04	7.5		%	50
	Spiked Blank	Benzo(a)anthracene	2009/11/04		90	%	60 - 130
	RPD	Benzo(a)anthracene	2009/11/04	8.7		%	50
	Spiked Blank	Benzo(a)pyrene	2009/11/04		96	%	60 - 130
	RPD	Benzo(a)pyrene	2009/11/04	3.4		%	50
	Spiked Blank	Benzo(b)fluoranthene	2009/11/04		96	%	60 - 130
	RPD	Benzo(b)fluoranthene	2009/11/04	5.8		%	50
	Spiked Blank	Benzo(g,h,i)perylene	2009/11/04		100	%	60 - 130
	RPD	Benzo(g,h,i)perylene	2009/11/04	0.4		%	50
	Spiked Blank	Benzo(k)fluoranthene	2009/11/04		88	%	60 - 130
	RPD	Benzo(k)fluoranthene	2009/11/04	9.4		%	50
	Spiked Blank	Chrysene	2009/11/04		87	%	60 - 130
	RPD	Chrysene	2009/11/04	7.6		%	50
	Spiked Blank	Dibenz(a,h)anthracene	2009/11/04		94	%	60 - 130
	RPD	Dibenz(a,h)anthracene	2009/11/04	6.7		%	50
	Spiked Blank	Fluoranthene	2009/11/04		103	%	60 - 130
	RPD	Fluoranthene	2009/11/04	1.5		%	50
	Spiked Blank	Fluorene	2009/11/04		88	%	60 - 130
	RPD	Fluorene	2009/11/04	11.2		%	50
	Spiked Blank	Indeno(1,2,3-cd)pyrene	2009/11/04		94	%	60 - 130
	RPD	Indeno(1,2,3-cd)pyrene	2009/11/04	6.4		%	50
	Spiked Blank	Naphthalene	2009/11/04		89	%	60 - 130
	RPD	Naphthalene	2009/11/04	8.0		%	50
	Spiked Blank	Phenanthrene	2009/11/04		92	%	60 - 130
	RPD	Phenanthrene	2009/11/04	6.2		%	50
	Spiked Blank	Pyrene	2009/11/04		93	%	60 - 130
RPD	Pyrene	2009/11/04	3.4		%	50	
Method Blank	D10-2-Methylnaphthalene	2009/11/04		94	%	50 - 150	
	D10-Fluoranthene	2009/11/04		117	%	50 - 150	
	D10-Phenanthrene	2009/11/04		105	%	50 - 150	
	D12-Benzo(a)anthracene	2009/11/04		113	%	50 - 150	
	D12-Benzo(a)pyrene	2009/11/04		109	%	50 - 150	
	D12-Benzo(b)fluoranthene	2009/11/04		105	%	50 - 150	
	D12-Benzo(ghi)perylene	2009/11/04		111	%	50 - 150	
	D12-Benzo(k)fluoranthene	2009/11/04		103	%	50 - 150	
	D12-Chrysene	2009/11/04		101	%	50 - 150	

Lakeland Industry & Community Assoc.
 Attention: Michael Bisaga
 Client Project #:
 P.O. #:
 Project name:

Quality Assurance Report (Continued)

Maxxam Job Number: GA9E5274

QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
1995746 WZ	Method Blank	D12-Indeno(1,2,3-cd)pyrene	2009/11/04		113	%	50 - 150
		D12-Perylene	2009/11/04		109	%	50 - 150
		D14-Dibenzo(a,h)anthracene	2009/11/04		111	%	50 - 150
		D8-Acenaphthylene	2009/11/04		113	%	50 - 150
		D8-Naphthalene	2009/11/04		92	%	50 - 150
		1-Methylnaphthalene	2009/11/04	ND, RDL=0.10		ug	
		1-Methylphenanthrene	2009/11/04	ND, RDL=0.10		ug	
		2-Chloronaphthalene	2009/11/04	ND, RDL=0.10		ug	
		2-Methylantracene	2009/11/04	ND, RDL=0.10		ug	
		2-Methylnaphthalene	2009/11/04	ND, RDL=0.10		ug	
		3-Methylcholanthrene	2009/11/04	ND, RDL=2.0		ug	
		7,12-Dimethylbenzo(a)anthracene	2009/11/04	ND, RDL=0.10		ug	
		9,10-Dimethylantracene	2009/11/04	ND, RDL=0.40		ug	
		Acenaphthene	2009/11/04	ND, RDL=0.050		ug	
		Acenaphthylene	2009/11/04	ND, RDL=0.050		ug	
		Anthracene	2009/11/04	ND, RDL=0.050		ug	
		Benzo(a)anthracene	2009/11/04	ND, RDL=0.050		ug	
		Benzo(a)fluorene	2009/11/04	ND, RDL=0.10		ug	
		Benzo(a)pyrene	2009/11/04	ND, RDL=0.050		ug	
		Benzo(b)fluoranthene	2009/11/04	ND, RDL=0.050		ug	
		Benzo(b)fluorene	2009/11/04	ND, RDL=0.10		ug	
		Benzo(e)pyrene	2009/11/04	ND, RDL=0.10		ug	
		Benzo(g,h,i)perylene	2009/11/04	0.119, RDL=0.050		ug	
		Benzo(k)fluoranthene	2009/11/04	ND, RDL=0.050		ug	
		Biphenyl	2009/11/04	ND, RDL=0.10		ug	
		Chrysene	2009/11/04	ND, RDL=0.050		ug	
		Coronene	2009/11/04	ND, RDL=0.10		ug	
		Dibenz(a,h)anthracene	2009/11/04	ND, RDL=0.050		ug	
		Dibenzo(a,e)pyrene	2009/11/04	ND, RDL=0.20		ug	
		Fluoranthene	2009/11/04	ND, RDL=0.050		ug	
		Fluorene	2009/11/04	ND, RDL=0.050		ug	
		Indeno(1,2,3-cd)pyrene	2009/11/04	ND, RDL=0.050		ug	
		m-Terphenyl	2009/11/04	ND, RDL=0.10		ug	
		Naphthalene	2009/11/04	0.076, RDL=0.072		ug	
		o-Terphenyl	2009/11/04	ND, RDL=0.10		ug	
		Perylene	2009/11/04	ND, RDL=0.10		ug	
		Phenanthrene	2009/11/04	ND, RDL=0.050		ug	
		p-Terphenyl	2009/11/04	ND, RDL=0.10		ug	
		Pyrene	2009/11/04	ND, RDL=0.050		ug	
		Quinoline	2009/11/04	ND, RDL=0.40		ug	
		Tetralin	2009/11/04	ND, RDL=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.



Your C.O.C. #: 1048

Attention: Shea Beaton

Lakeland Industry & Community Assoc.
P.O. Box 8237
Bonnyville, AB
CANADA T9N 2J5

Report Date: 2009/11/18

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: A9E9144

Received: 2009/11/05, 09:43

Sample Matrix: PUF AND FILTER

Samples Received: 2

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Method Reference
PAH's in Air (CARB429mod)	2	2009/11/09	2009/11/12	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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Total cover pages: 1

Maxxam Job #: A9E9144
 Report Date: 2009/11/18

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

Maxxam ID		EG2726	EG2727		
Sampling Date		2009/10/29	2009/10/29		
COC Number		1048	1048		
	Units	LICA PUF	LICA PUF	DL	QC Batch
		QFF/CLS/OCT29,09	QFF/PORT/OCT29,09		

Semivolatiles Organics					
1-Methylnaphthalene	ug	<0.10	<0.10	0.10	2006187
1-Methylphenanthrene	ug	<0.10	<0.10	0.10	2006187
2-Chloronaphthalene	ug	<0.10	<0.10	0.10	2006187
2-Methylantracene	ug	<0.10	<0.10	0.10	2006187
2-Methylnaphthalene	ug	0.15	<0.10	0.10	2006187
3-Methylcholanthrene	ug	<2.0	<2.0	2.0	2006187
7,12-Dimethylbenzo(a)anthracene	ug	<0.10	<0.10	0.10	2006187
9,10-Dimethylantracene	ug	<0.40	<0.40	0.40	2006187
Acenaphthene	ug	<0.050	<0.050	0.050	2006187
Acenaphthylene	ug	0.064	<0.050	0.050	2006187
Anthracene	ug	<0.050	<0.050	0.050	2006187
Benzo(a)anthracene	ug	<0.050	<0.050	0.050	2006187
Benzo(a)fluorene	ug	<0.10	<0.10	0.10	2006187
Benzo(a)pyrene	ug	<0.050	<0.050	0.050	2006187
Benzo(b)fluoranthene	ug	<0.050	<0.050	0.050	2006187
Benzo(b)fluorene	ug	<0.10	<0.10	0.10	2006187
Benzo(e)pyrene	ug	<0.10	<0.10	0.10	2006187
Benzo(g,h,i)perylene	ug	<0.050	<0.050	0.050	2006187
Benzo(k)fluoranthene	ug	<0.050	<0.050	0.050	2006187
Biphenyl	ug	<0.10	<0.10	0.10	2006187
Chrysene	ug	<0.050	<0.050	0.050	2006187
Coronene	ug	<0.10	<0.10	0.10	2006187
Dibenz(a,h)anthracene	ug	<0.050	<0.050	0.050	2006187
Dibenzo(a,e)pyrene	ug	<0.20	<0.20	0.20	2006187
Fluoranthene	ug	0.079	0.053	0.050	2006187
Fluorene	ug	0.141	0.104	0.050	2006187
Indeno(1,2,3-cd)pyrene	ug	<0.050	<0.050	0.050	2006187
m-Terphenyl	ug	<0.10	<0.10	0.10	2006187
Naphthalene	ug	0.156	0.076	0.072	2006187
o-Terphenyl	ug	<0.10	<0.10	0.10	2006187
Perylene	ug	<0.10	<0.10	0.10	2006187
Phenanthrene	ug	0.340	0.225	0.050	2006187
RDL = Reportable Detection Limit QC Batch = Quality Control Batch					

Maxxam Job #: A9E9144
 Report Date: 2009/11/18

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

Maxxam ID		EG2726	EG2727		
Sampling Date		2009/10/29	2009/10/29		
COC Number		1048	1048		
	Units	LICA PUF QFF/CLS/OCT29,09	LICA PUF QFF/PORT/OCT29,09	DL	QC Batch
p-Terphenyl	ug	<0.10	<0.10	0.10	2006187
Pyrene	ug	0.066	<0.050	0.050	2006187
Quinoline	ug	<0.40	<0.40	0.40	2006187
Tetralin	ug	<0.10	<0.10	0.10	2006187
Surrogate Recovery (%)					
D10-2-Methylnaphthalene	%	91	85		2006187
D10-Fluoranthene	%	113	109		2006187
D10-Fluorene (FS)	%	34 (1)	35 (1)		2006187
D10-Phenanthrene	%	105	102		2006187
D12-Benzo(a)anthracene	%	110	107		2006187
D12-Benzo(a)pyrene	%	105	105		2006187
D12-Benzo(b)fluoranthene	%	105	105		2006187
D12-Benzo(ghi)perylene	%	105	108		2006187
D12-Benzo(k)fluoranthene	%	100	102		2006187
D12-Chrysene	%	105	103		2006187
D12-Indeno(1,2,3-cd)pyrene	%	104	105		2006187
D12-Perylene	%	106	107		2006187
D14-Dibenzo(a,h)anthracene	%	102	104		2006187
D14-Terphenyl (FS)	%	94	94		2006187
D8-Acenaphthylene	%	98	94		2006187
D8-Naphthalene	%	93	86		2006187
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 #: A9E9144
 Report Date: 2009/11/18

Test Summary

Maxxam ID EG2726 **Collected** 2009/10/29
Sample ID LICA PUF QFF/CLS/OCT29,09 **Shipped**
Matrix PUF AND FILTER **Received** 2009/11/05

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
PAH's in Air (CARB429mod)	GC/MS	2006187	2009/11/09	2009/11/12	WZ

Maxxam ID EG2727 **Collected** 2009/10/29
Sample ID LICA PUF QFF/PORT/OCT29,09 **Shipped**
Matrix PUF AND FILTER **Received** 2009/11/05

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
PAH's in Air (CARB429mod)	GC/MS	2006187	2009/11/09	2009/11/12	WZ

Maxxam Job #: A9E9144
Report Date: 2009/11/18

GENERAL COMMENTS

PAHMS-F

7,12-Dimethylbenzo(a)anthracene and 2-Chloronaphthalene are above 25% RSD in initial calibration. No positives found for these 2 compounds.

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

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 Chrysene. 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.

Results relate only to the items tested.

Lakeland Industry & Community Assoc.
 Attention: Shea Beaton
 Client Project #:
 P.O. #:
 Project name:

Quality Assurance Report
 Maxxam Job Number: GA9E9144

QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2006187 WZ	Spiked Blank	D10-2-Methylnaphthalene	2009/11/12		92	%	50 - 150
		D10-Fluoranthene	2009/11/12		103	%	50 - 150
		D10-Phenanthrene	2009/11/12		98	%	50 - 150
		D12-Benzo(a)anthracene	2009/11/12		101	%	50 - 150
		D12-Benzo(a)pyrene	2009/11/12		104	%	50 - 150
		D12-Benzo(b)fluoranthene	2009/11/12		108	%	50 - 150
		D12-Benzo(ghi)perylene	2009/11/12		107	%	50 - 150
		D12-Benzo(k)fluoranthene	2009/11/12		101	%	50 - 150
		D12-Chrysene	2009/11/12		107	%	50 - 150
		D12-Indeno(1,2,3-cd)pyrene	2009/11/12		105	%	50 - 150
		D12-Perylene	2009/11/12		106	%	50 - 150
		D14-Dibenzo(a,h)anthracene	2009/11/12		105	%	50 - 150
		D8-Acenaphthylene	2009/11/12		96	%	50 - 150
		D8-Naphthalene	2009/11/12		95	%	50 - 150
		RPD	Acenaphthene	2009/11/12		88	%
	Spiked Blank	Acenaphthene	2009/11/12	1.7		%	50
	RPD	Acenaphthylene	2009/11/12		91	%	60 - 130
	Spiked Blank	Acenaphthylene	2009/11/12	1.6		%	50
	RPD	Anthracene	2009/11/12		87	%	60 - 130
	Spiked Blank	Anthracene	2009/11/12	1.5		%	50
	RPD	Benzo(a)anthracene	2009/11/12		82	%	60 - 130
	Spiked Blank	Benzo(a)anthracene	2009/11/12	3.5		%	50
	RPD	Benzo(a)pyrene	2009/11/12		90	%	60 - 130
	Spiked Blank	Benzo(a)pyrene	2009/11/12	0.4		%	50
	RPD	Benzo(b)fluoranthene	2009/11/12		85	%	60 - 130
	Spiked Blank	Benzo(b)fluoranthene	2009/11/12	0.1		%	50
	RPD	Benzo(g,h,i)perylene	2009/11/12		95	%	60 - 130
	Spiked Blank	Benzo(g,h,i)perylene	2009/11/12	3.2		%	50
	RPD	Benzo(k)fluoranthene	2009/11/12		106	%	60 - 130
	Spiked Blank	Benzo(k)fluoranthene	2009/11/12	1.8		%	50
	RPD	Chrysene	2009/11/12		102	%	60 - 130
	Spiked Blank	Chrysene	2009/11/12	5.6		%	50
	RPD	Dibenz(a,h)anthracene	2009/11/12		94	%	60 - 130
	Spiked Blank	Dibenz(a,h)anthracene	2009/11/12	2.4		%	50
	RPD	Fluoranthene	2009/11/12		96	%	60 - 130
	Spiked Blank	Fluoranthene	2009/11/12	1.3		%	50
	RPD	Fluorene	2009/11/12		87	%	60 - 130
	Spiked Blank	Fluorene	2009/11/12	2.4		%	50
	RPD	Indeno(1,2,3-cd)pyrene	2009/11/12		95	%	60 - 130
	Spiked Blank	Indeno(1,2,3-cd)pyrene	2009/11/12	1.4		%	50
RPD	Naphthalene	2009/11/12		87	%	60 - 130	
Spiked Blank	Naphthalene	2009/11/12	3.7		%	50	
RPD	Phenanthrene	2009/11/12		85	%	60 - 130	
Spiked Blank	Phenanthrene	2009/11/12	2.8		%	50	
RPD	Pyrene	2009/11/12		85	%	60 - 130	
Spiked Blank	Pyrene	2009/11/12	2.1		%	50	
Method Blank	D10-2-Methylnaphthalene	2009/11/12			88	%	50 - 150
	D10-Fluoranthene	2009/11/12			106	%	50 - 150
	D10-Phenanthrene	2009/11/12			94	%	50 - 150
	D12-Benzo(a)anthracene	2009/11/12			99	%	50 - 150
	D12-Benzo(a)pyrene	2009/11/12			101	%	50 - 150
	D12-Benzo(b)fluoranthene	2009/11/12			102	%	50 - 150
	D12-Benzo(ghi)perylene	2009/11/12			109	%	50 - 150
	D12-Benzo(k)fluoranthene	2009/11/12			96	%	50 - 150
	D12-Chrysene	2009/11/12			99	%	50 - 150

Lakeland Industry & Community Assoc.
 Attention: Shea Beaton
 Client Project #:
 P.O. #:
 Project name:

Quality Assurance Report (Continued)
 Maxxam Job Number: GA9E9144

QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2006187 WZ	Method Blank	D12-Indeno(1,2,3-cd)pyrene	2009/11/12		106	%	50 - 150
		D12-Perylene	2009/11/12		103	%	50 - 150
		D14-Dibenzo(a,h)anthracene	2009/11/12		105	%	50 - 150
		D8-Acenaphthylene	2009/11/12		93	%	50 - 150
		D8-Naphthalene	2009/11/12		88	%	50 - 150
		1-Methylnaphthalene	2009/11/12	ND, RDL=0.10		ug	
		1-Methylphenanthrene	2009/11/12	ND, RDL=0.10		ug	
		2-Chloronaphthalene	2009/11/12	ND, RDL=0.10		ug	
		2-Methylantracene	2009/11/12	ND, RDL=0.10		ug	
		2-Methylnaphthalene	2009/11/12	ND, RDL=0.10		ug	
		3-Methylcholanthrene	2009/11/12	ND, RDL=2.0		ug	
		7,12-Dimethylbenzo(a)anthracene	2009/11/12	ND, RDL=0.10		ug	
		9,10-Dimethylantracene	2009/11/12	ND, RDL=0.40		ug	
		Acenaphthene	2009/11/12	ND, RDL=0.050		ug	
		Acenaphthylene	2009/11/12	ND, RDL=0.050		ug	
		Anthracene	2009/11/12	ND, RDL=0.050		ug	
		Benzo(a)anthracene	2009/11/12	ND, RDL=0.050		ug	
		Benzo(a)fluorene	2009/11/12	ND, RDL=0.10		ug	
		Benzo(a)pyrene	2009/11/12	ND, RDL=0.050		ug	
		Benzo(b)fluoranthene	2009/11/12	ND, RDL=0.050		ug	
		Benzo(b)fluorene	2009/11/12	ND, RDL=0.10		ug	
		Benzo(e)pyrene	2009/11/12	ND, RDL=0.10		ug	
		Benzo(g,h,i)perylene	2009/11/12	ND, RDL=0.050		ug	
		Benzo(k)fluoranthene	2009/11/12	ND, RDL=0.050		ug	
		Biphenyl	2009/11/12	ND, RDL=0.10		ug	
		Chrysene	2009/11/12	ND, RDL=0.050		ug	
		Coronene	2009/11/12	ND, RDL=0.10		ug	
		Dibenz(a,h)anthracene	2009/11/12	ND, RDL=0.050		ug	
		Dibenzo(a,e)pyrene	2009/11/12	ND, RDL=0.20		ug	
		Fluoranthene	2009/11/12	ND, RDL=0.050		ug	
		Fluorene	2009/11/12	ND, RDL=0.050		ug	
		Indeno(1,2,3-cd)pyrene	2009/11/12	ND, RDL=0.050		ug	
		m-Terphenyl	2009/11/12	ND, RDL=0.10		ug	
		Naphthalene	2009/11/12	ND, RDL=0.072		ug	
		o-Terphenyl	2009/11/12	ND, RDL=0.10		ug	
		Perylene	2009/11/12	ND, RDL=0.10		ug	
		Phenanthrene	2009/11/12	ND, RDL=0.050		ug	
		p-Terphenyl	2009/11/12	ND, RDL=0.10		ug	
		Pyrene	2009/11/12	ND, RDL=0.050		ug	
		Quinoline	2009/11/12	ND, RDL=0.40		ug	
		Tetralin	2009/11/12	ND, RDL=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 2009

Prepared By:



November 10, 2009

Lakeland Industry & Community Association Ambient Air Monitoring Maskwa

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Introduction

The following Ambient Air Monitoring report was prepared for:

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

Monitoring Location: Maskwa
Data Period: October 2009

The monthly ambient data report:

- Prepared by Lily Lin
- Reviewed by Craig Snider

The monthly analytical report for static & passive monitoring:

- Authorized by Levi Manchak

Calibration Procedure

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

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

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

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

The calibrations conducted at the LICA - Maskwa Air Monitoring Stations conform to the following Maxxam Analytics 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 2009

LICA MASKWA SITE						MAXIMUM VALUES						OPERATIONAL TIME (PERCENT)	
						OBJECTIVES			EXCEEDENCES		MONTHLY AVERAGE		1-HOUR
PARAMETER	1-HR	24-HR	1-HR	24-HR	READING	DAY	HOUR	WIND SPEED (KPH)	WIND DIRECTION (DEGREES)	READING			DAY
SO2 (PPB)	172	57	0	0	0.23	6	9	5	8.4	309(NW)	1.1	9	99.6
H2S (PPB)	10	3	0	0	0.00	0	ALL	ALL	VAR	VAR	0.0	ALL	99.6
THC (PPM)	-	-	-	-	2.11	2.9	16	6, 8	5.4, 7.4	185(S), 196(SSW)	2.4	16	99.9
NOx (PPB)	-	-	-	-	2.49	60	15	13	4.8	206(SSW)	6.2	16	99.6
NO (PPB)	-	-	-	-	0.52	40	15	13	4.8	206(SSW)	2.5	15	99.6
NO ₂ (PPB)	212	106	0	0	1.90	20	15	13	4.8	206(SSW)	4.5	16	99.6
VECTOR WS (KPH)	-	-	-	-	5.42	14.1	9	0	-	330(NNW)	10.1	9	99.9
VECTOR WD (DEGREES)	-	-	-	-	13(NNE)	-	-	-	-	-	-	-	99.9
RELATIVE HUMIDITY (%)	-	-	-	-	77.77	92	24	6	3.9	231(SW)	88.5	22	99.9
TEMPERATURE (DEG C)	-	-	-	-	0.91	14.5	17	14	7.5	272(W)	6.6	17	99.9
BAROMETRIC PRESSURE (MILIBAR)	-	-	-	-	942	953	3, 4	VAR	VAR	VAR	952.3	4	99.9
PRECIPITATION (MM)	-	-	-	-	0.04	2.8	6	15	10.1	350(N)	11.0	6	99.9

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

No operational issue was observed during the month. The inlet filter was changed before the monthly calibration was performed. A lamp calibration was performed following the as found points on October 6th. A multi-point calibration was performed on October 7th. An alarm test was performed on October 28. One hour of data is missing on October 27th. Data was corrected using daily zero information.

Hydrogen Sulphide (PPB)

- Analyzer make / model - API 101E

No operational issue was observed during the month. The inlet filter was changed before the monthly calibration was performed. The scrubber material was replaced following the as found points on October 6th. After that, a lamp cal was performed, and a PMT was adjusted. A multi-points calibration was performed on October 7th. An alarm test was performed on October 28. One hour of data is missing on October 27th. Data was corrected using daily zero information.

Total HydroCarbon (PPM)

- Analyzer make / model –TECO 51C-LT

No operational issue was observed during the month. The inlet filter was changed before the monthly calibration was performed. The Hydrogen gas cylinder was changed during the trip on October 6th. One hour of data is missing on October 27th. Data was corrected using daily zero information.

General Monthly Summary

AQM STATION – LICA – Maskwa

Nitrogen Dioxide (PPB)

- Analyzer make / model - API 200E

No operational issue was observed during the month. The inlet filter was changed before the monthly calibration was started. One hour of data is missing on October 27th. An alarm test was performed on October 28th. Data was corrected using daily zero information.

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

- System make / model - Climatronics MIII

The wind system is reported as vector wind speed and vector wind direction. The wind system is reported as vector wind speed and vector wind direction. One hour of data is missing on October 27th.

Relative Humidity (PERCENT)

- System make / model - Met One 083

No operational issues observed during the month. One hour of data is missing on October 27th.

Precipitation (MM)

- System make / model - Met One 387

No operational issue was observed during the month. One hour of data is missing on October 27th.

Barometric Pressure (MILLIBAR)

- System make / model - Met One 092

No operation issue was observed during the month. One hour of data is missing on October 27th.

Ambient Temperature (DEGC)

- System make / model - Met One 060

No operational issue was observed during the month. One hour of data is missing on October 27th.

General Monthly Summary

AQM STATION – LICA – Maskwa

Trailer Temperature (DEG C)

- System make / model – R&R 61

No operational issue was observed during the month. One hour of data is missing on October 27th.

Standard Deviation Wind Direction (DEG)

- System make / model – Climatronics MIII

No operational issue was observed during the month. One hour of data is missing on October 27th.

Datalogger

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

No operational issue was observed during the month.

Trailer

No issues with the station.

Continuous Monitoring

Monthly Summaries, Graphs & Wind Roses

Sulphur Dioxide

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - MASKWA
OCTOBER 2009
SULPHUR DIOXIDE (SO₂) 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 MAX.	24-HOUR AVG.	RDGS.		
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	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	1	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	0	0	0	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	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24	
6	0	0	0	0	1	0	0	0	0	0	1	1	0	C	C	C	0	0	0	0	0	0	0	0	0	1	0.2	24	
7	0	0	0	0	0	0	0	0	0	C	C	C	0	0	C	0	0	0	0	1	1	0	0	0	0	1	0.1	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	1	0.1	24	
9	0	0	0	0	3	6	5	5	1	1	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	6	1.1	24	
10	0	2	5	1	4	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0.6	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	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.1	24	
14	0	2	1	0	0	0	0	2	2	0	1	1	1	1	2	2	2	2	2	0	0	0	0	0	0	2	0.8	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	1	2	2	2	2	1	1	1	1	1	1	0	0	0	2	0.6	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	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0.2	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	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.0	24	
21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	1	2	1	2	0.3	24
22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	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	0	0	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	0	0	0	0	0	0	0	0	0	0	0	0.0	24	
25	2	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	0.2	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	2	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	0.1	22	
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	0.2	24	
30	4	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	0.3	24	
31	0	0	0	2	3	1	1	3	1	2	2	2	2	2	2	0	0	0	0	0	0	0	0	0	0	3	1.0	24	
HOURLY MAX	4	2	5	2	4	6	5	5	2	2	2	2	2	2	2	2	2	2	2	1	1	2	4	2	4				
HOURLY AVG	0.3	0.2	0.2	0.1	0.4	0.3	0.2	0.3	0.1	0.2	0.2	0.2	0.3	0.2	0.3	0.2	0.2	0.1	0.1	0.1	0.3	0.2	0.1	0.3					

STATUS FLAG CODES

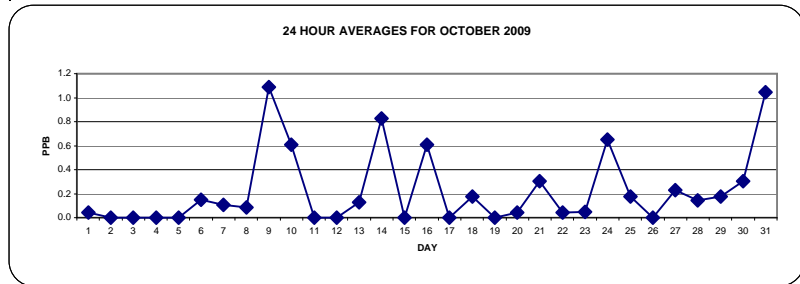
S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	- MAINTENANCE
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE

OBJECTIVE LIMIT:

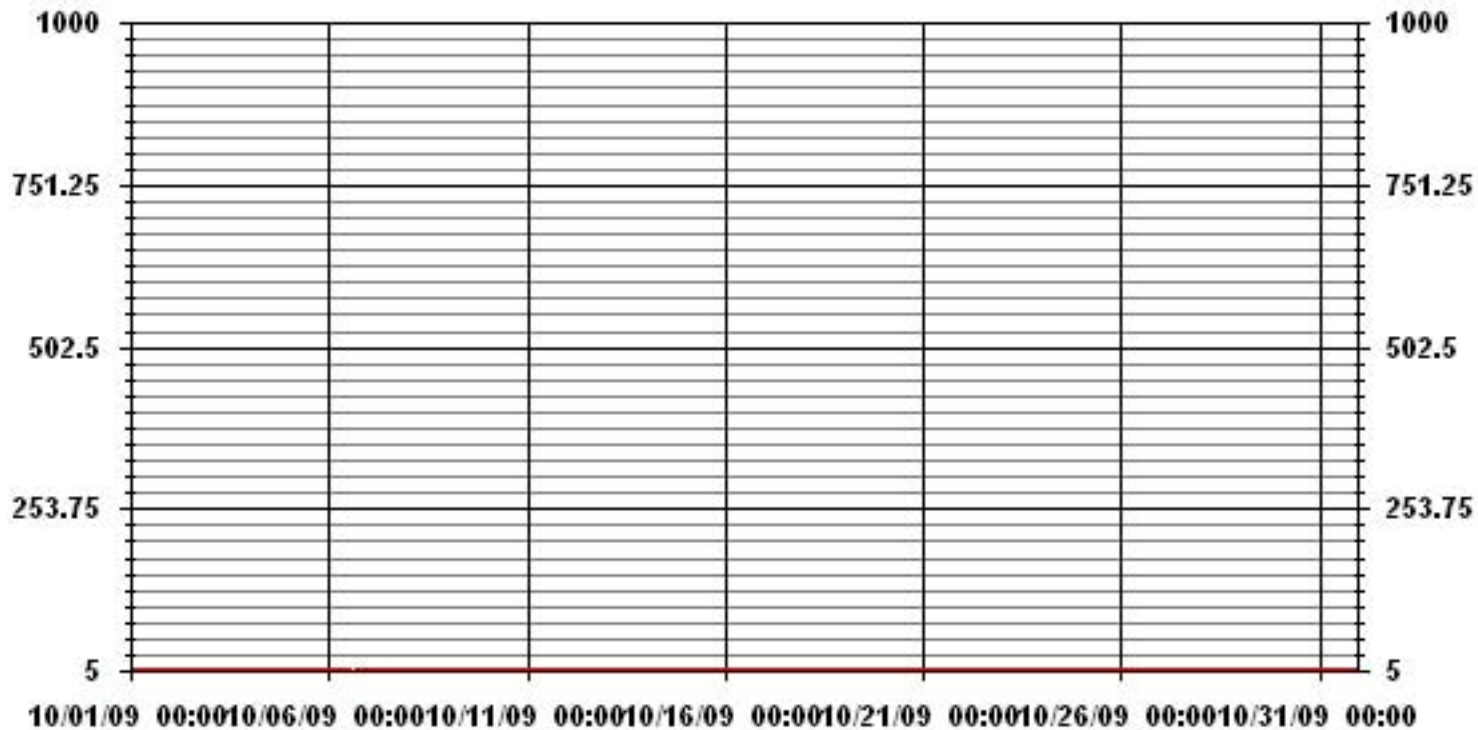
ALBERTA ENVIRONMENT:	1-HR	172	PPB	24-HR	57	PPB
-----------------------------	------	-----	-----	-------	----	-----

MONTHLY SUMMARY

NUMBER OF 1-HR EXCEEDENCES:	0					
NUMBER OF 24-HR EXCEEDENCES:	0					
NUMBER OF NON-ZERO READINGS:	91					
MAXIMUM 1-HR AVERAGE:	6	PPB	@ HOUR(S)	5	ON DAY(S)	9
MAXIMUM 24-HR AVERAGE:	1.1	PPB			ON DAY(S)	9
IZS CALIBRATION TIME:	32	HRS	OPERATIONAL TIME:	741	HRS	
MONTHLY CALIBRATION TIME:	7	HRS	AMD OPERATION UPTIME:	99.6	%	
STANDARD DEVIATION:	0.71		MONTHLY AVERAGE:	0.23	PPB	



01 Hour Averages



— LICA30 SO2_ PPB

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION -MASKWA

OCTOBER 2009

SULPHUR DIOXIDE MAX instantaneous maximum in ppt

MST		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				
DAY	HR	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	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.			
1		0	0	0	0	0	3	1	1	1	1	6	3	3	2	1	0	0	0	0	0	0	0	0	0	IZS	0	6	1.0	24	
2		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	IZS	0	2	0.2	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	IZS	0	0	0.0	24	
4		0	0	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	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0.1	24
6		1	1	1	1	1	1	1	1	1	1	1	1	1	C	C	C	0	0	0	0	0	0	0	0	0	0	0	1	0.7	24
7		0	0	0	0	0	0	0	0	C	C	C	0	0	C	C	2	IZS	0	2	5	6	1	0	0	0	6	0.9	24		
8		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	0	3	1	7	0.5	24		
9		0	2	0	0	9	9	8	12	6	5	4	2	6	6	IZS	5	0	3	0	2	0	0	0	0	0	12	3.4	24		
10		0	7	9	4	9	6	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	9	1.5	24		
11		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	0.0	24		
12		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	0.0	24		
13		0	0	0	0	0	0	0	2	1	3	IZS	2	2	1	2	2	1	0	0	0	3	5	0	1	5	1.1	24			
14		2	4	4	1	0	0	1	4	4	IZS	4	2	3	2	4	4	5	3	2	0	0	0	0	0	5	2.1	24			
15		0	0	0	0	0	0	0	0	0	0	0	2	5	0	0	0	0	0	0	0	0	0	0	0	5	0.3	24			
16		0	0	0	0	0	0	0	0	IZS	0	0	1	2	2	3	3	2	2	2	3	1	1	0	0	3	1.1	24			
17		0	0	0	0	0	0	IZS	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.1	24			
18		0	0	0	0	0	IZS	0	0	3	3	2	2	2	1	0	3	0	0	1	0	0	0	0	0	3	0.7	24			
19		0	0	0	0	IZS	0	0	0	0	1	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0.1	24		
20		0	0	0	IZS	0	0	0	0	0	0	1	3	1	0	0	0	0	0	0	0	0	0	0	0	3	0.2	24			
21		0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	2	4	2	4	4	4	0.7	24			
22		0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	3	0	0	0	0	0	1	3	0.3	24		
23		IZS	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	3	0	0	0	0	0	IZS	3	0.3	24		
24		0	1	1	1	0	0	1	0	0	1	1	0	0	0	3	5	2	1	2	2	5	6	IZS	6	6	1.7	24			
25		3	5	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	5	0.4	24	
26		0	0	0	0	2	0	0	0	0	1	1	1	1	0	1	1	1	1	1	0	0	0	0	0	IZS	0	2	0.5	24	
27		0	0	1	1	1	N	2	1	1	1	0	0	0	0	1	7	2	3	IZS	5	1	1	1	1	7	1.3	23			
28		4	4	0	2	0	1	1	0	0	1	1	M	M	0	0	0	0	0	0	0	0	0	0	0	0	4	0.7	22		
29		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	1	2	8	8	0.5	24		
30		5	2	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	1	3	4	0	5	0.8	24	
31		0	1	0	5	5	1	2	4	2	2	4	5	6	5	4	IZS	3	0	1	0	0	0	0	0	6	2.2	24			
HOURLY MAX		5	7	9	5	9	9	8	12	6	5	6	5	6	6	4	5	7	3	3	5	7	6	4	8						
HOURLY AVG		0.5	0.9	0.6	0.6	0.9	0.7	0.6	0.9	0.7	0.8	0.9	0.8	1.0	0.9	0.7	1.0	0.8	0.6	0.7	0.5	1.1	0.7	0.5	0.8						

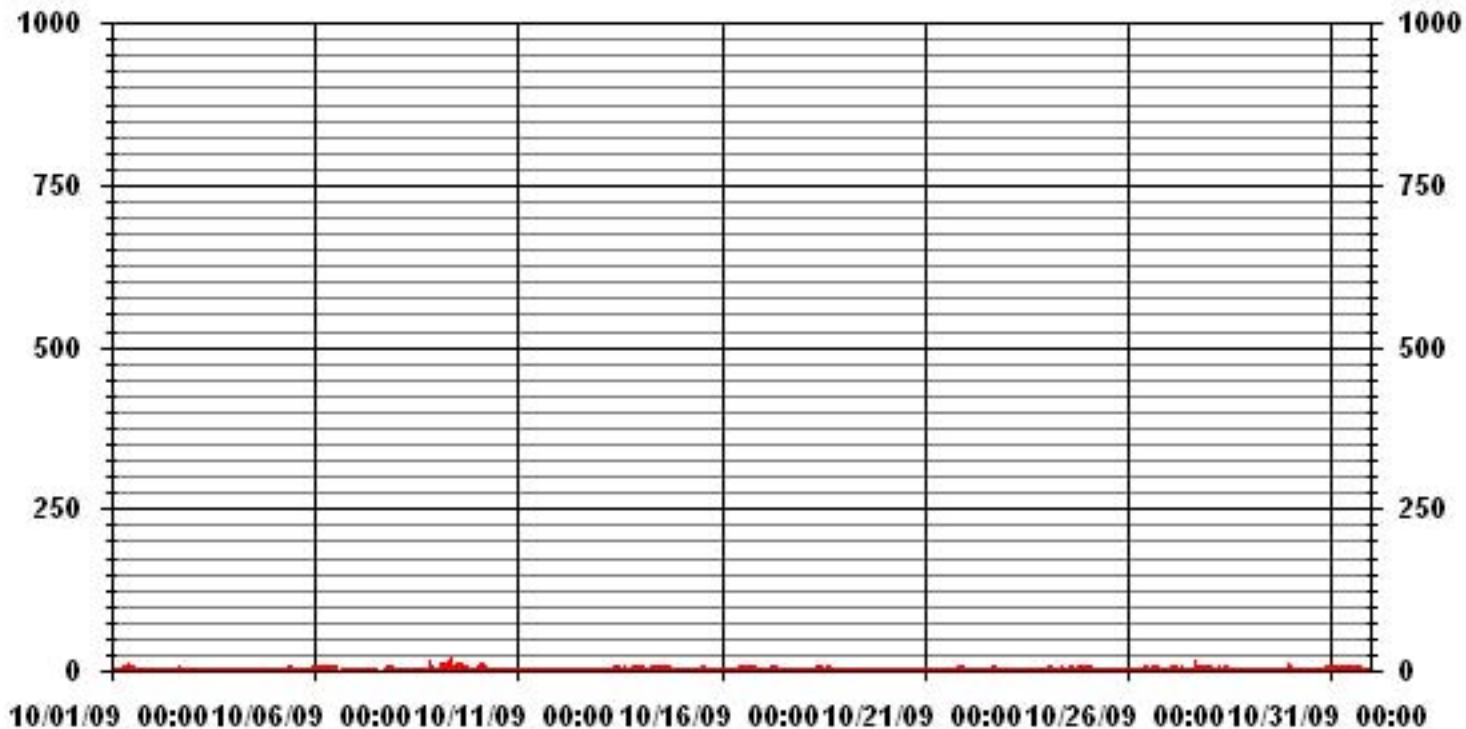
STATUS FLAG CODES

S - OUT OF SERVICE	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:	202					
MAXIMUM INSTANTANEOUS VALUE:	12	PPB	@ HOUR(S)	7	ON DAY(S)	9
IZS CALIBRATION TIME:	32	HRS	OPERATIONAL TIME:	741	HRS	
MONTHLY CALIBRATION TIME:	8	HRS				
STANDARD DEVIATION:	1.61					

01 Hour Averages



— LICA30 SO2MAX PPB

LICA30
 SO2_ / WDR Joint Frequency Distribution (Percent)

October 2009

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	7.69	6.83	7.12	4.98	4.41	6.41	10.68	5.12	3.98	8.83	5.84	3.13	3.13	4.41	6.41	10.96	100.00
< 60	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
< 110	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
< 170	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
< 340	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
>= 340	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
Totals	7.69	6.83	7.12	4.98	4.41	6.41	10.68	5.12	3.98	8.83	5.84	3.13	3.13	4.41	6.41	10.96	

Calm : .00 %

Total # Operational Hours : 702

Distribution By Samples

	Direction																
Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 20	54	48	50	35	31	45	75	36	28	62	41	22	22	31	45	77	702
< 60																	
< 110																	
< 170																	
< 340																	
>= 340																	
Totals	54	48	50	35	31	45	75	36	28	62	41	22	22	31	45	77	

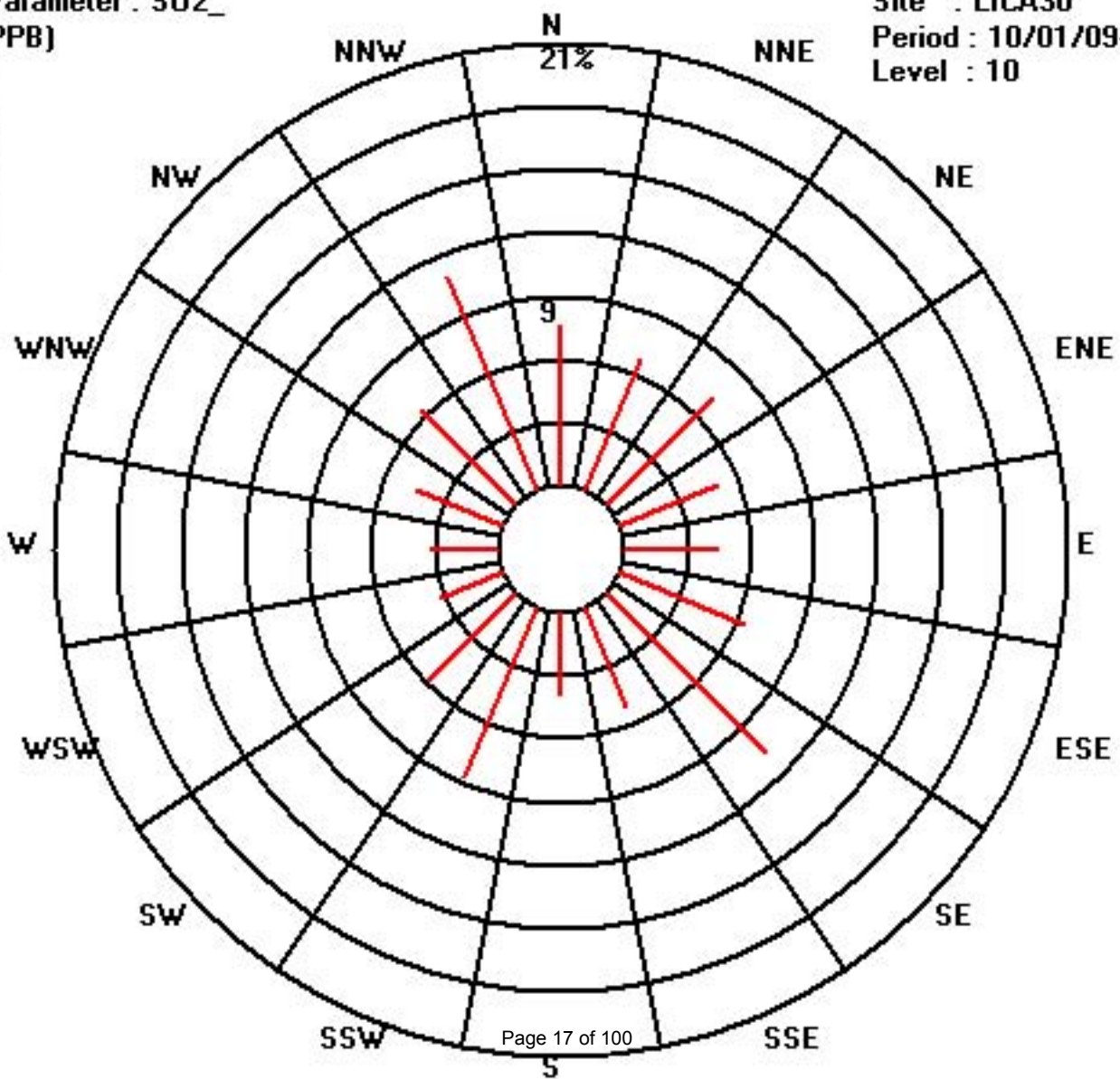
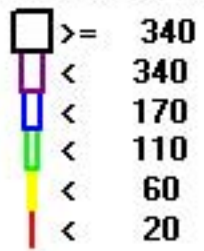
Calm : .00 %

Total # Operational Hours : 702

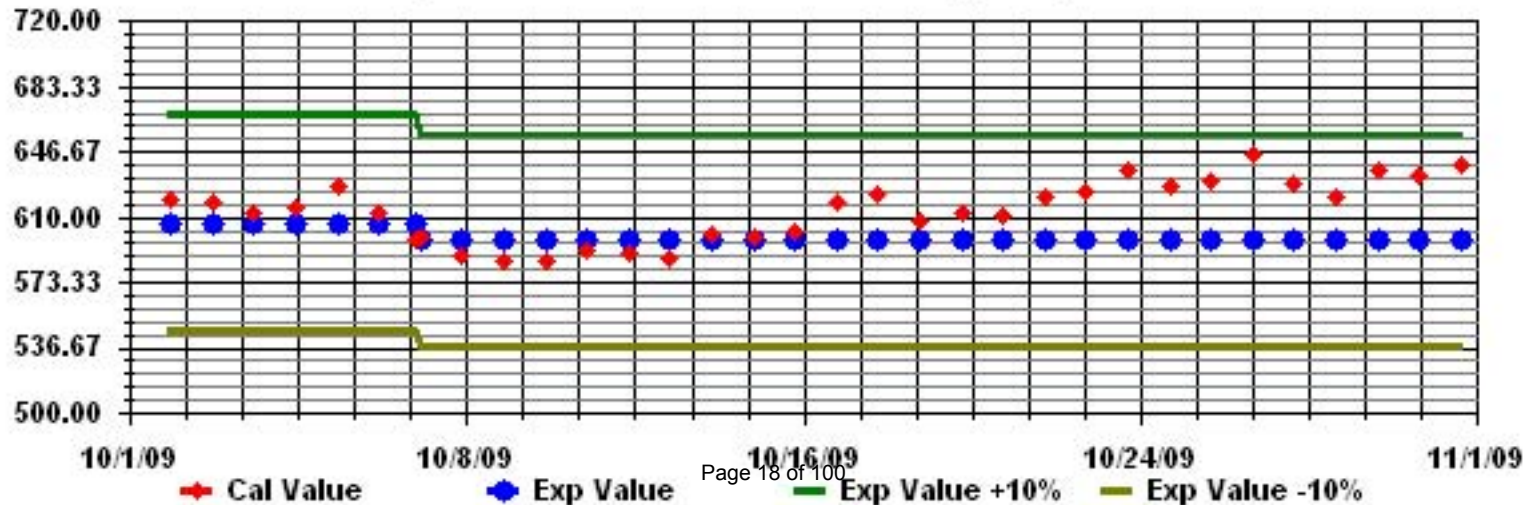
Class Limits (PPB)

Period : 10/01/09-10/31/09

Level : 10



Calibration Graph for Site: LICA30 Parameter: S02_ Sequence: S02 Phase: SPAN



Hydrogen Sulphide

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - MASKWA

OCTOBER 2009

HYDROGEN SULPHIDE (H₂S) hourly averages in ppb

MST		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				
		1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.		
DAY																														
1		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	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	0.0	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	0.0	24
4		0	0	0	0	0	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		0	0	0	0	0	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	C	C	C	C	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	C	C	C	C	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	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	0	0	0	0	0	0	0	0.0	24	
24		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	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	0	0	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	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	23	
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	22	
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	0	0	0	0	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 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	0.0	0.0	0.0	0.0	24

STATUS FLAG CODES

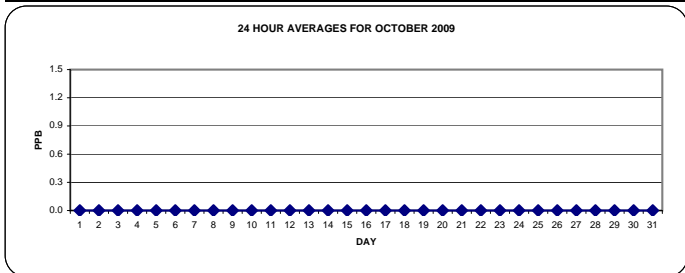
S - OUT OF SERVICE	IZS - IZS - DAILY ZERO/SPAN CHECK
N - INVALID DATA	M - MAINTENANCE
D - INSTRUMENT DRIFT	P - POWER FAILURE
C - CALIBRATION	NA - NOT APPLICABLE

OBJECTIVE LIMIT:

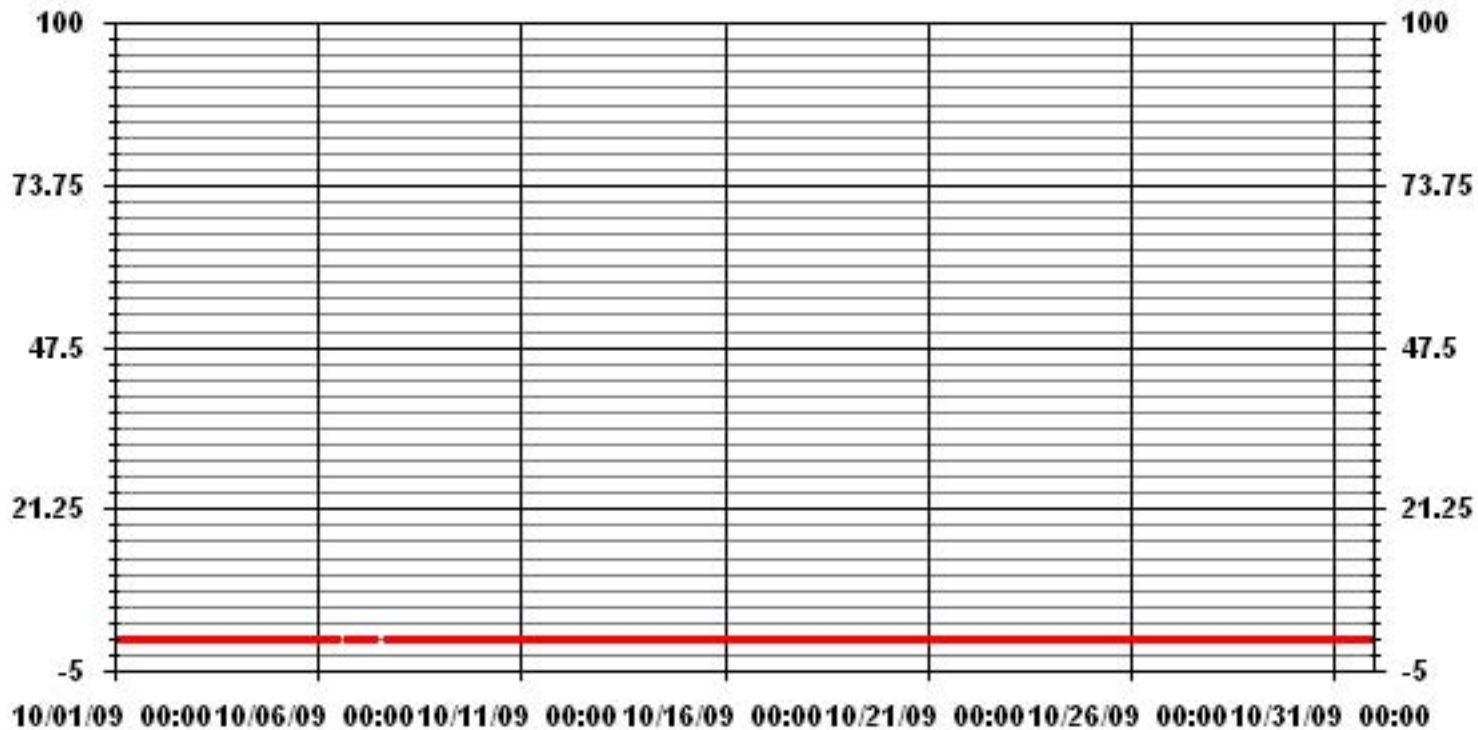
ALBERTA ENVIRONMENT: 1-HR 10 PPB 24-HR 3 PPB

MONTHLY SUMMARY

NUMBER OF 1-HR EXCEEDENCES:	0				
NUMBER OF 24-HR EXCEEDENCES:	0				
NUMBER OF NON-ZERO READINGS:	0				
MAXIMUM 1-HR AVERAGE:	0	PPB	@ HOUR(S)	ALL	ON DAY(S) ALL
MAXIMUM 24-HR AVERAGE:	0.0	PPB			ON DAY(S) ALL
					VAR-VARIOUS
IZS CALIBRATION TIME:	32	HRS	OPERATIONAL TIME:	741	HRS
MONTHLY CALIBRATION TIME:	8	HRS	AMD OPERATION UPTIME:	99.6	%
STANDARD DEVIATION:	0.00		MONTHLY AVERAGE:	0.00	PPB



01 Hour Averages



— LICA30 H2S_ PPB

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - MASKWA

OCTOBER 2009

HYDROGEN SULPHIDE MAX instantaneous maximum in ppb

MST		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 START	HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.	
DAY																													
1		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	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	0	0	0	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	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
6		0	1	0	0	0	0	0	1	1	1	1	C	C	C	C	C	0	0	0	0	0	0	0	0	0	1	0.3	24
7		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	0.0	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	0.3	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	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	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	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	0	0	0	0	0	0	0	0.0	24
24		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	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	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
26		0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	24
27		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	0.1	23
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	22
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	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	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	0.2	24
HOURLY MAX		0	1	1	1	1	0	1	1	1	1	1	0	1	5	0	1	0	1	1	1	1	1	1	1	0			
HOURLY AVG		0.0	0.0	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.2	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0			

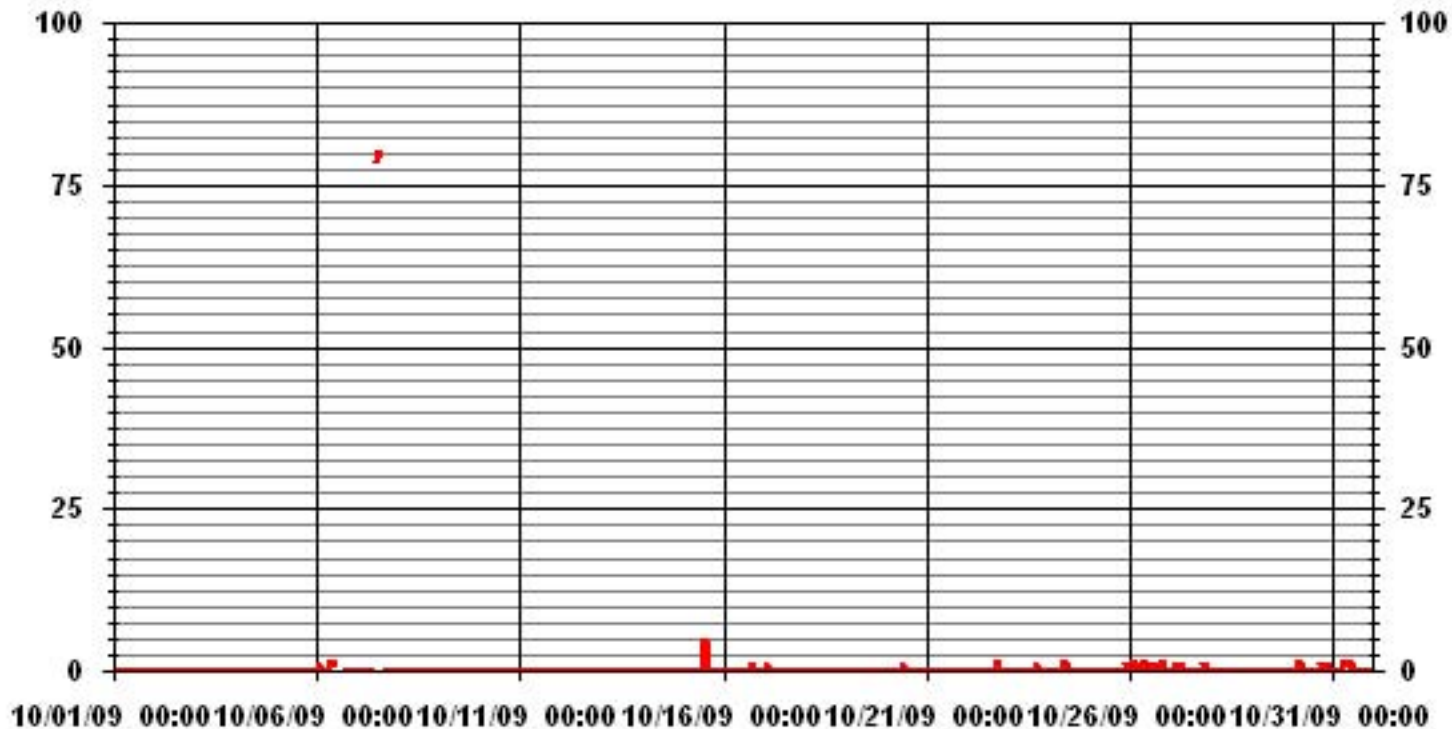
STATUS FLAG CODES

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

MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:	35				
MAXIMUM INSTANTANEOUS VALUE:	5	PPB	@ HOUR(S)	13	ON DAY(S) 15
IZS CALIBRATION TIME:	32	HRS	OPERATIONAL TIME:	741	HRS
MONTHLY CALIBRATION TIME:	10	HRS			
STANDARD DEVIATION:	0.29				

01 Hour Averages



LICA30
H2S_ / WDR Joint Frequency Distribution (Percent)

October 2009

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	7.56	6.84	7.13	4.99	4.42	6.41	10.69	5.13	3.99	8.84	5.84	3.13	3.13	4.42	6.41	10.98	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	7.56	6.84	7.13	4.99	4.42	6.41	10.69	5.13	3.99	8.84	5.84	3.13	3.13	4.42	6.41	10.98	

Calm : .00 %

Total # Operational Hours : 701

Distribution By Samples

	Direction																
Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 3	53	48	50	35	31	45	75	36	28	62	41	22	22	31	45	77	701
< 10																	
< 50																	
>= 50																	
Totals	53	48	50	35	31	45	75	36	28	62	41	22	22	31	45	77	

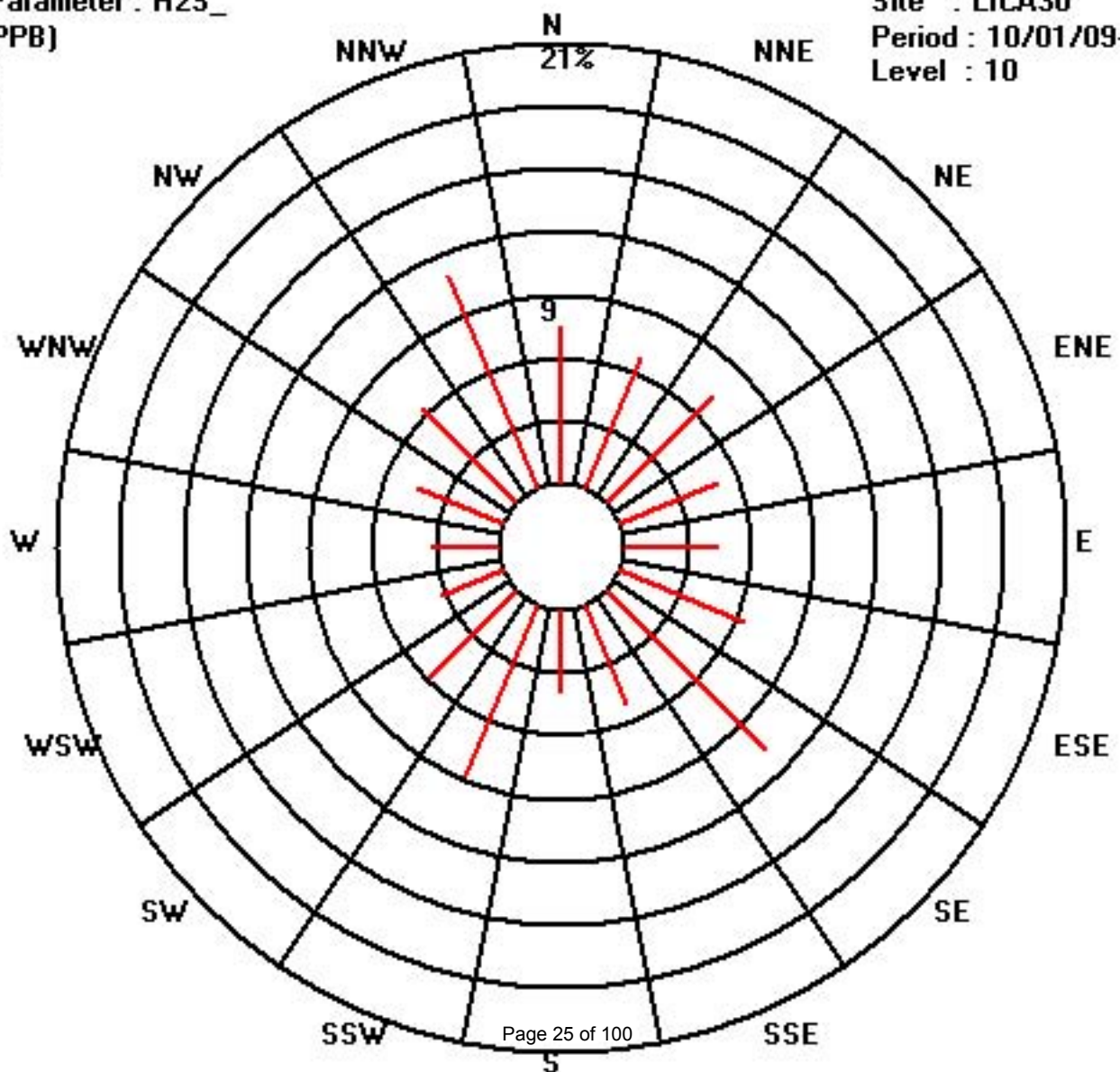
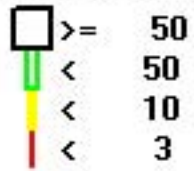
Calm : .00 %

Total # Operational Hours : 701

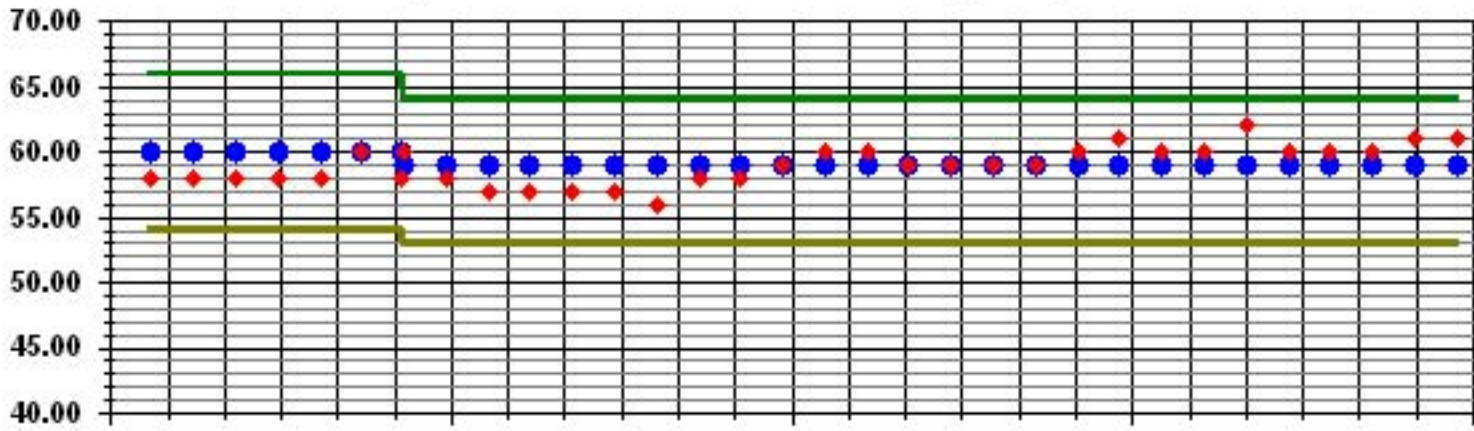
Class Limits (PPB)

Period : 10/01/09-10/31/09

Level : 10



Calibration Graph for Site: LICA30 Parameter: H2S_ Sequence: H2S Phase: SPAll



◆ Cal Value
 ◆ Exp Value
 — Exp Value +10%
 — Exp Value -10%

Total Hydrocarbons

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION -MASKWA

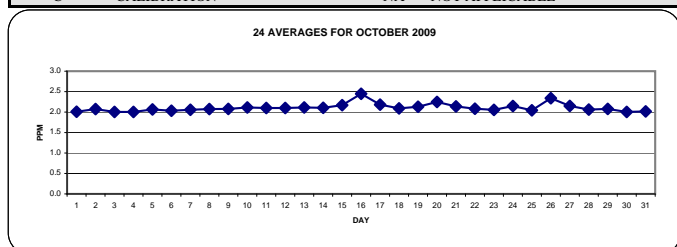
OCTOBER 2009

TOTAL HYDROCARBONS hourly averages in ppm

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

STATUS FLAG CODES

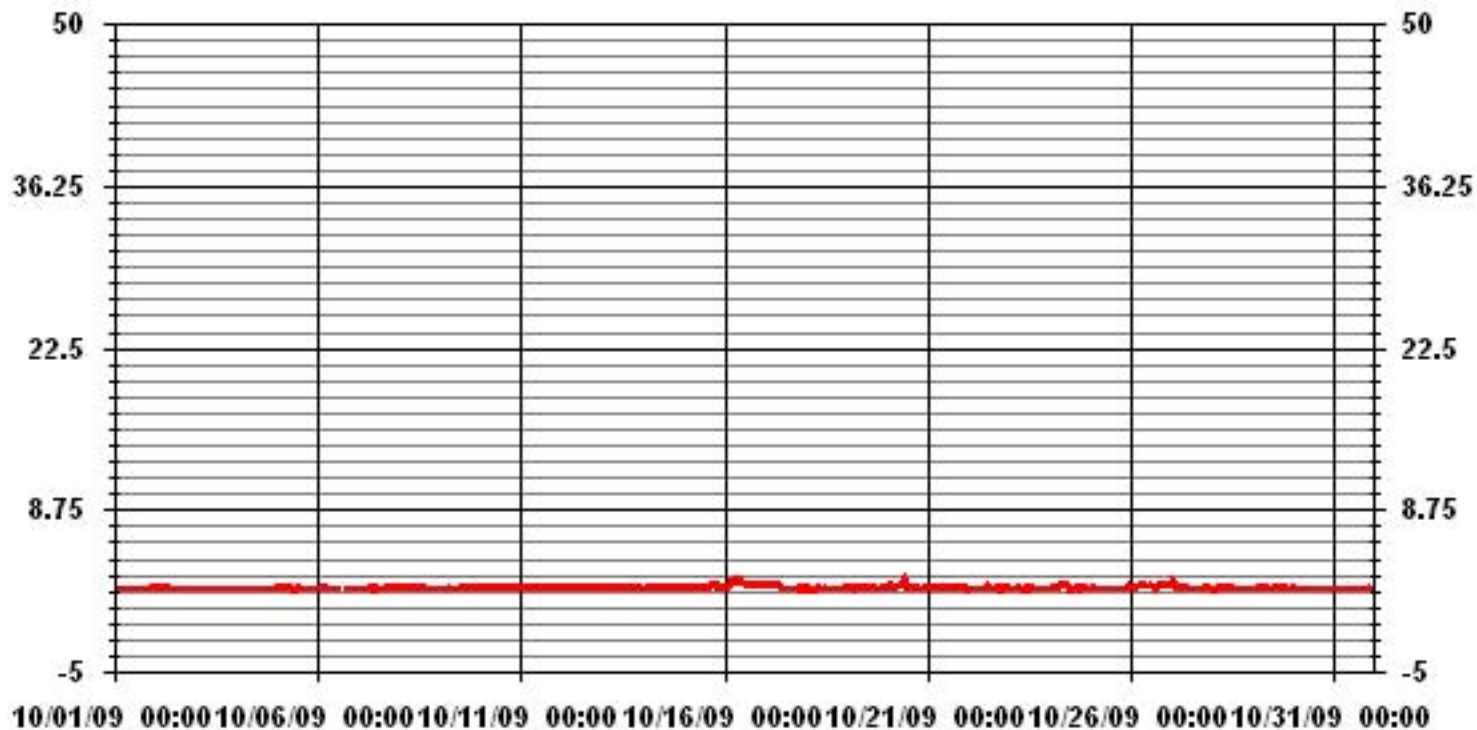
S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	- MAINTENANCE
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE



MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:	706
MAXIMUM 1-HR AVERAGE:	2.9 PPM @ HOUR(S) 6,8 ON DAY(S) 16
MAXIMUM 24-HR AVERAGE:	2.4 PPM ON DAY(S) 16
	VAR- VARIOUS
IZS CALIBRATION TIME:	32 HRS
MONTHLY CALIBRATION TIME:	5 HRS
STANDARD DEVIATION:	0.13
OPERATIONAL TIME:	743 HRS
AMD OPERATION UPTIME:	99.9 %
MONTHLY AVERAGE:	2.11 PPM

01 Hour Averages



— LICA30 THC PPM

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - MASKWA

OCTOBER 2009

TOTAL HYDROCARBONS MAX instantaneous maximum in ppr

MST		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			
DAY	HOURLY MAX	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	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.		
1		2	2.2	2	2	2.3	2.2	2.2	2.2	2.1	2	2	2	2	2.3	2.1	2	2	2	2	2	2.2	2.1	IZS	2.2	2.3	2.1	24		
2		2.4	2.3	2.5	2.4	2.2	2.4	2.4	2.2	2.3	2.1	2.1	2	2	2	2	2	2.2	2.3	2.2	2	2	IZS	2	2.4	2.5	2.2	24		
3		2.3	2.1	2.1	2	2	2	2.3	2.2	2.2	2	2	2	2	2.3	2	2	2	2.4	2.5	2	IZS	2.6	2.1	2.1	2.6	2.1	24		
4		2	2	2.1	2.3	2.1	2.1	2.1	2.1	2.1	2.1	2.3	2.4	2	2.1	2	2.4	2	2	2.1	IZS	2.2	2.3	2.1	2.5	2.5	2.1	24		
5		2.4	2.1	2.1	2.1	2.2	2.3	2.2	2.2	2.1	2.1	2.3	2.1	2.7	2.1	2.1	2	2.4	2	IZS	2.2	2.2	2.2	2	2	2.7	2.2	24		
6		2	2.2	2.5	2.4	2.6	2.7	2.1	2.1	2	2.3	2.1	C	C	C	C	C	C	IZS	2.1	2.3	2.3	2.4	2	2.2	2.7	2.3	24		
7		2.2	2	2	2	2.1	2.1	2.1	2.1	2.1	2.1	2.3	2.2	2.1	2.1	2.1	2.1	IZS	2.1	2.3	2.2	2.4	2.3	2.3	2.3	2.4	2.2	24		
8		2.7	2.5	2.6	2.5	2.1	2.1	2.1	2.1	2.1	2.1	2.7	2.4	2.1	2.1	2.1	IZS	2.1	2.1	2.1	2.1	2.7	2.1	2.2	2.2	2.7	2.3	24		
9		2.1	2.2	2.2	2.2	2.2	2.9	2.7	2.8	2.9	2.3	2.2	2.4	2.4	2.4	IZS	2.6	2.3	2.3	2.1	2.6	2.1	2.3	2.1	2.1	2.9	2.4	24		
10		2.4	2.6	2.5	2.2	2.3	2.2	2.4	2.1	2.2	2.1	2.5	2.1	2.4	IZS	2.1	2.2	2.2	2.2	2.1	2.2	2.5	2.6	2.2	2.6	2.6	2.3	24		
11		2.3	2.4	2.8	2.3	2.1	2.1	2.1	2.3	2.5	2.4	2.1	2.4	IZS	2.1	2.1	2.1	2.4	2.4	2.3	2.1	2.1	2.3	2.1	2.5	2.8	2.3	24		
12		2.4	2.2	2.2	2.2	2.2	2.2	2.1	2.2	2.1	2.1	2.5	IZS	2.1	2.5	2.1	2.1	2.5	2.3	2.1	2.1	2.1	2.4	2.1	2.3	2.5	2.2	24		
13		2.1	2.1	2.2	2.2	2.1	2.1	2.1	2.4	2.4	2.2	IZS	2.2	2.2	2.2	2.2	2.4	2.1	2.6	2.1	2.1	2.3	2.6	2.1	2.1	2.6	2.2	24		
14		2.4	2.4	2.2	2.1	2.4	2.1	2.6	2.3	2.2	IZS	2.2	2.2	2.2	2.2	2.4	2.2	2.6	2.2	2.1	2.1	2.3	2.4	2.3	2.4	2.6	2.3	24		
15		2.1	2.5	2.1	2.1	2.1	2.1	2.3	2.4	IZS	2.4	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	2.4	2.3	2.5	2.3	24	
16		2.4	2.6	2.4	2.6	3	2.8	3	IZS	3.1	2.9	2.7	2.7	2.8	2.5	2.5	2.4	2.3	2.5	2.4	2.7	2.4	2.6	2.4	2.5	3.1	2.6	24		
17		2.6	2.4	2.7	2.5	2.5	2.4	IZS	2.7	2.6	2.5	2.5	2.1	2.2	2.1	2	2.1	2	2.2	2.3	2.1	2.1	2.4	2.3	2.5	2.7	2.3	24		
18		2.3	2.5	2.8	2.3	2.1	IZS	2.3	2.4	2.5	2.4	2.1	2.1	2.3	2.1	2.5	2	2	2	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.8	2.2	24	
19		2.2	2.2	2.3	2.3	IZS	2.2	2.6	2.5	2.4	2.2	2.1	2.3	2.4	2.1	2.2	2.4	2.3	2.1	2.1	2.3	2.3	2.2	2.2	2.3	2.6	2.3	24		
20		2.7	2.6	2.3	IZS	2.3	2.4	2.3	2.6	2.4	3	3	2.9	2.2	2.2	2.1	2.2	2.3	2.4	2.3	2.4	2.3	2.2	2.2	2.3	3	2.4	24		
21		2.4	2.2	IZS	2.1	2.1	2.1	2.3	2.5	2.1	2.4	2.5	2.3	2.2	2.2	2.2	2.2	2.4	2.2	2.3	2.2	2.2	2.3	2.3	2.1	2.5	2.3	24		
22		2.3	IZS	2.1	2.1	2.1	2	2	2.3	2	2.2	2.9	3	2.3	2.2	2.4	2.2	2.5	2.3	2.3	2.2	2.1	2.2	2.3	2.2	3	2.3	24		
23		IZS	2.1	2.1	2.1	2.2	2.5	2.5	2.2	2.2	2.2	2.1	2.1	2.1	2.3	2.2	2.4	2.5	2.3	2.1	2	2.4	2	2.1	IZS	2.5	2.2	24		
24		2.5	2.1	2.1	2.5	2.2	2.3	2.9	2.4	2.5	2.6	2.9	2.8	2	2.1	2.2	2.4	2.3	2.2	2.2	2.4	2.3	2.5	IZS	2.1	2.9	2.4	24		
25		2.2	2.3	2.2	2.2	2	2	2.1	2.3	2.3	2	2.5	2.1	2.2	2.1	2	2	2.3	2.2	2.1	2.1	2.1	IZS	2.5	2.5	2.5	2.2	24		
26		2.3	2.4	2.2	2.2	2.4	2.6	2.6	2.4	2.5	2.4	2.5	2.5	2.4	2.3	2.2	2.4	2.5	2.8	2.9	2.6	IZS	2.6	2.5	2.5	2.9	2.5	24		
27		3.7	2.8	2.6	2.5	2.4	N	2.4	2.5	2.1	2.1	2.1	2.1	2	2	2.2	2	2.2	2.1	2.2	IZS	2.2	2.3	2.2	2.2	3.7	2.3	23		
28		2.3	2.2	2.1	2.1	2.1	2.1	2.2	2.2	2.4	2.2	2.3	2.1	2.1	2.1	2.1	2.3	2	2.4	IZS	2.1	2.4	2.1	2.2	2.1	2.4	2.2	24		
29		2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.4	2.1	2.1	2.1	2.1	2.1	2.4	IZS	2.4	2.4	2.1	2.1	2	2.1	2.1	2.4	2.2	24		
30		2.1	2.1	2	2.1	2	2	2	2	2	2	2.3	2.4	2	2.3	2.2	2	2.5	IZS	2	2.2	2	2.2	2.1	2.1	2.3	2.5	2.1	24	
31		2	2	2	2.1	2	2.3	2	2.2	2	2	2.1	2.2	2	2.1	2.2	IZS	2.1	2.2	2	2.1	2.4	2.3	2.2	2.3	2.4	2.1	24		
HOURLY MAX		4	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3				
HOURLY AVG		2.3	2.3	2.3	2.2	2.2	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.2	2.2	2.2	2.2	2.3	2.2	2.2	2.2	2.3	2.3	2.2	2.3	2.2	2.3			

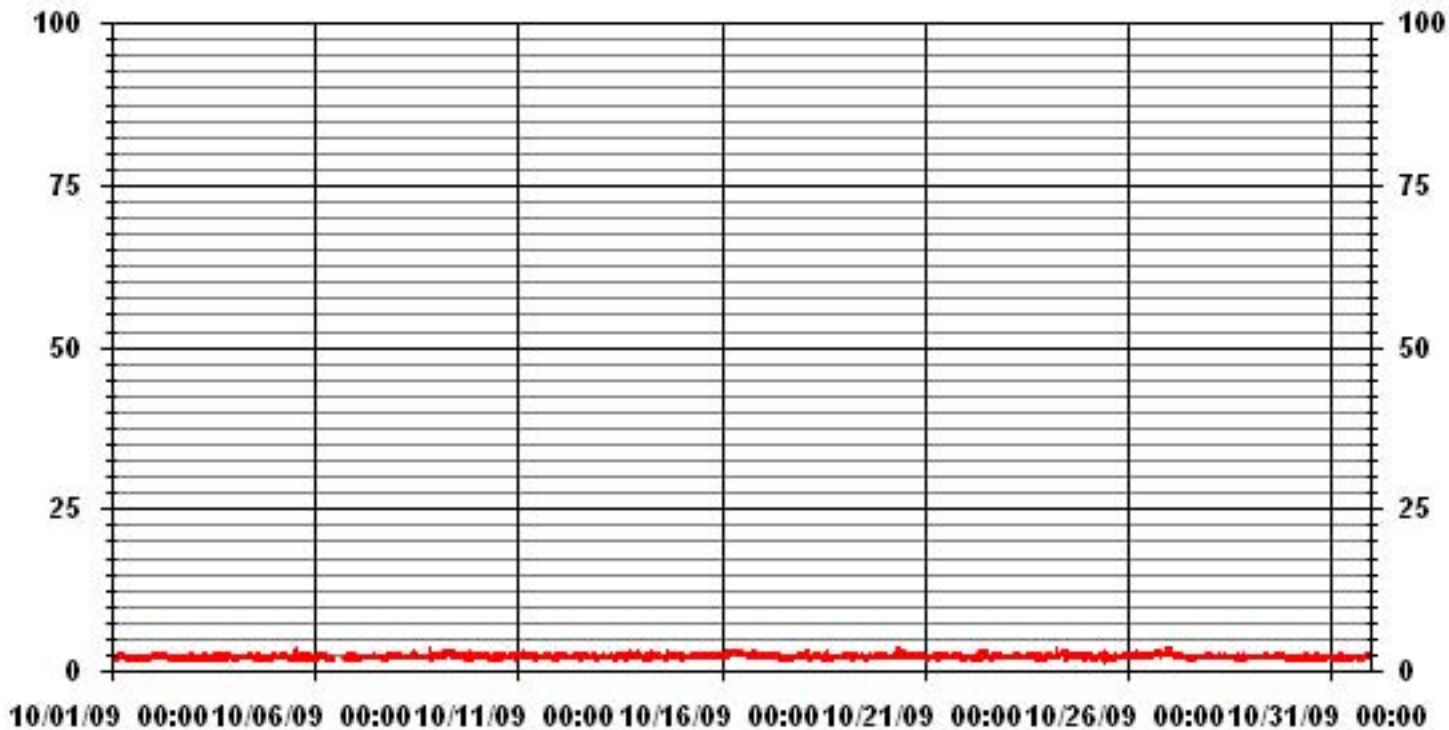
STATUS FLAG CODES

S - OUT OF SERVICE	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:	705
MAXIMUM INSTANTANEOUS VALUE:	3.7 PPM @ HOUR(S) 0 ON DAY(S) 27
IZS CALIBRATION TIME:	32 HRS
MONTHLY CALIBRATION TIME:	6 HRS
STANDARD DEVIATION:	0.21
OPERATIONAL TIME:	743 HRS

01 Hour Averages



— LICA30 THCMAX PPM

LICA30
 THC / WDR Joint Frequency Distribution (Percent)

October 2009

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	7.50	6.94	7.22	4.95	4.39	6.37	10.62	5.09	3.96	8.78	5.80	3.11	3.11	4.39	6.37	11.33	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	7.50	6.94	7.22	4.95	4.39	6.37	10.62	5.09	3.96	8.78	5.80	3.11	3.11	4.39	6.37	11.33	

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	53	49	51	35	31	45	75	36	28	62	41	22	22	31	45	80	706
< 10.0																	
< 50.0																	
>= 50.0																	
Totals	53	49	51	35	31	45	75	36	28	62	41	22	22	31	45	80	

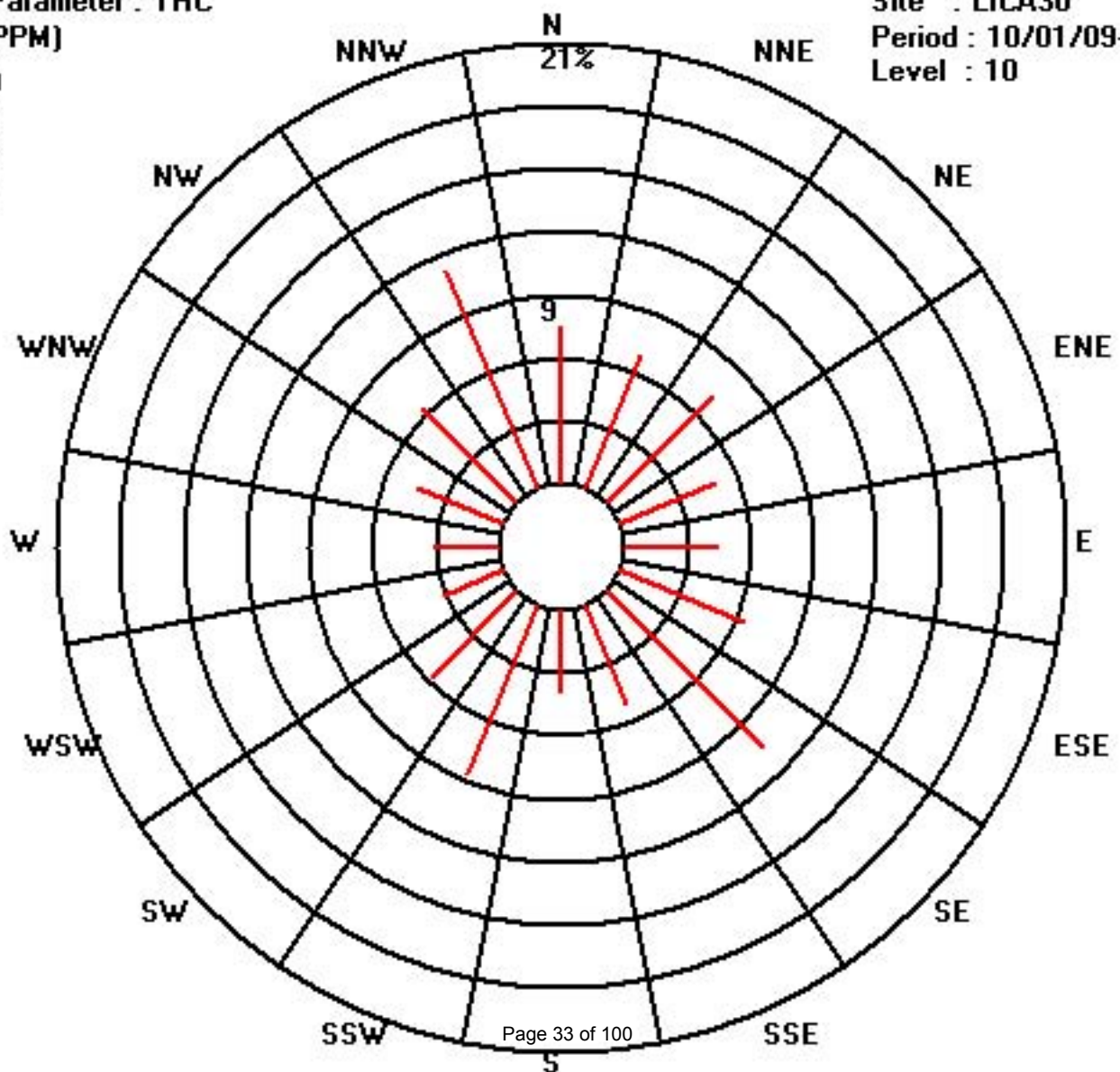
Calm : .00 %

Total # Operational Hours : 706

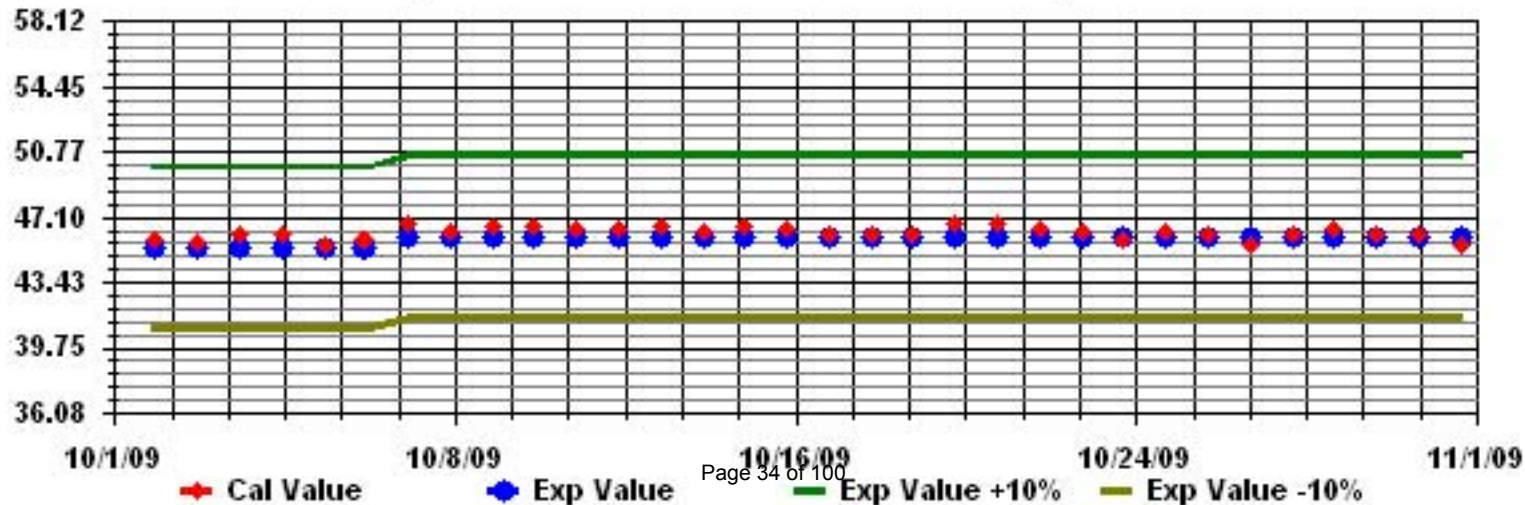
Class Limits (PPM)

Period : 10/01/09-10/31/09

Level : 10



Calibration Graph for Site: LICA30 Parameter: THC Sequence: THC Phase: SPAll



Nitrogen Dioxide

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - MASKWA

OCTOBER 2009

NITROGEN DIOXIDE hourly averages in ppb

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR			
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.		
DAY																													
1	0	0	0	1	2	3	3	1	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0.6	24
2	0	0	1	1	1	3	3	3	3	3	0	0	0	0	1	0	1	1	0	0	0	0	0	0	0	3	0.9	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	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.1	24	
5	0	0	0	1	1	1	0	4	2	4	2	1	1	1	1	1	1	1	0	0	0	0	0	0	0	4	1.3	24	
6	3	2	2	3	4	6	5	4	7	6	4	5	3	2	1	2	4	0	0	0	0	0	0	0	1	7	3.0	24	
7	1	1	1	1	2	1	0	0	C	C	C	C	C	C	C	1	0	0	1	4	2	2	3	2	4	1.4	24		
8	2	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	3	1	4	0.9	24
9	0	1	0	1	7	13	11	10	3	2	2	1	5	5	0	0	0	1	0	1	0	0	0	1	0	13	2.9	24	
10	1	6	9	3	7	4	1	1	1	1	2	1	1	0	0	0	0	0	0	0	0	0	0	0	1	9	2.4	24	
11	3	2	2	1	1	0	1	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	3	0.5	24	
12	0	0	1	1	1	1	0	1	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1	0.3	24	
13	0	0	0	0	0	0	1	4	4	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	2.6	24
14	1	8	3	0	0	0	2	6	7	0	4	3	3	3	5	4	5	4	2	0	0	0	0	0	0	0	8	2.6	24
15	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	2.0	3.0	24
16	1	1	2	2	4	5	6	0	0	0	4	4	5	6	6	6	6	5	7	7	6	5	4	4	7	7	4.5	24	
17	3	9	6	5	6	8	0	9	10	5	0	0	0	1	1	1	1	2	1	1	1	1	2	2	10	3.3	24		
18	1	2	3	2	1	0	8	15	13	9	5	5	3	1	1	1	1	1	3	1	1	1	1	1	15	3.5	24		
19	1	1	1	1	0	0	2	2	3	4	2	2	2	2	1	1	5	1	1	0	0	1	3	2	5	1.7	24		
20	1	2	2	0	1	1	2	5	5	5	9	8	6	1	2	2	3	2	1	1	1	0	0	0	9	2.6	24		
21	0	0	0	0	0	0	1	1	0	2	3	1	1	1	1	1	1	0	1	4	4	2	5	2	5	1.3	24		
22	0	0	0	0	0	0	1	1	1	2	1	1	2	1	1	1	1	5	3	1	2	5	2	2	5	1.4	24		
23	0	0	0	0	0	0	1	1	1	2	1	1	2	1	1	1	1	5	3	1	2	5	2	2	5	1.4	24		
24	0	1	2	2	1	2	4	4	4	4	5	3	0	0	1	6	5	8	6	6	7	10	0	8	10	3.9	24		
25	4	6	5	1	1	0	0	2	1	0	0	1	1	1	1	1	1	2	1	1	1	2	1	2	6	1.5	24		
26	2	2	1	1	2	2	2	2	6	6	4	3	3	2	4	5	9	6	4	3	0	0	0	0	2	2	9	3.3	24
27	2	2	4	6	5	0	8	6	4	2	1	1	1	0	0	0	4	1	4	0	0	0	0	0	8	3.0	23		
28	6	3	0	3	1	2	2	2	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	6	1.0	22		
29	0	0	0	0	0	0	0	2	1	1	1	0	1	1	1	1	1	0	0	0	0	0	0	0	8	1.1	24		
30	7	1	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	2	0	7	0.7	24	
31	0	0	0	4	6	1	2	6	3	4	5	4	3	4	3	0	0	0	0	0	0	0	0	0	6	2.5	24		
HOURLY MAX	7	9	9	6	7	13	11	15	13	9	9	8	15	20	6	6	9	8	7	7	7	10	5	8					
HOURLY AVG	1.3	1.7	1.5	1.4	1.9	2.0	2.4	3.2	3.0	2.6	2.2	1.9	2.2	2.0	1.5	1.6	2.1	1.6	1.7	1.4	1.8	1.7	1.5	1.7					

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

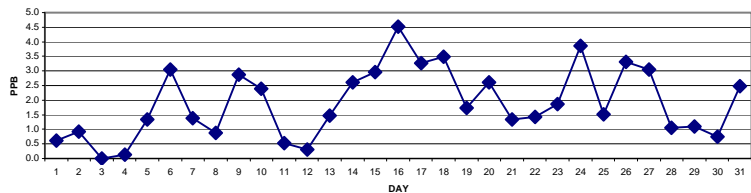
OBJECTIVE LIMIT:

ALBERTA ENVIRONMENT:	1-HR	212	PPB	24-HR	106	PPB
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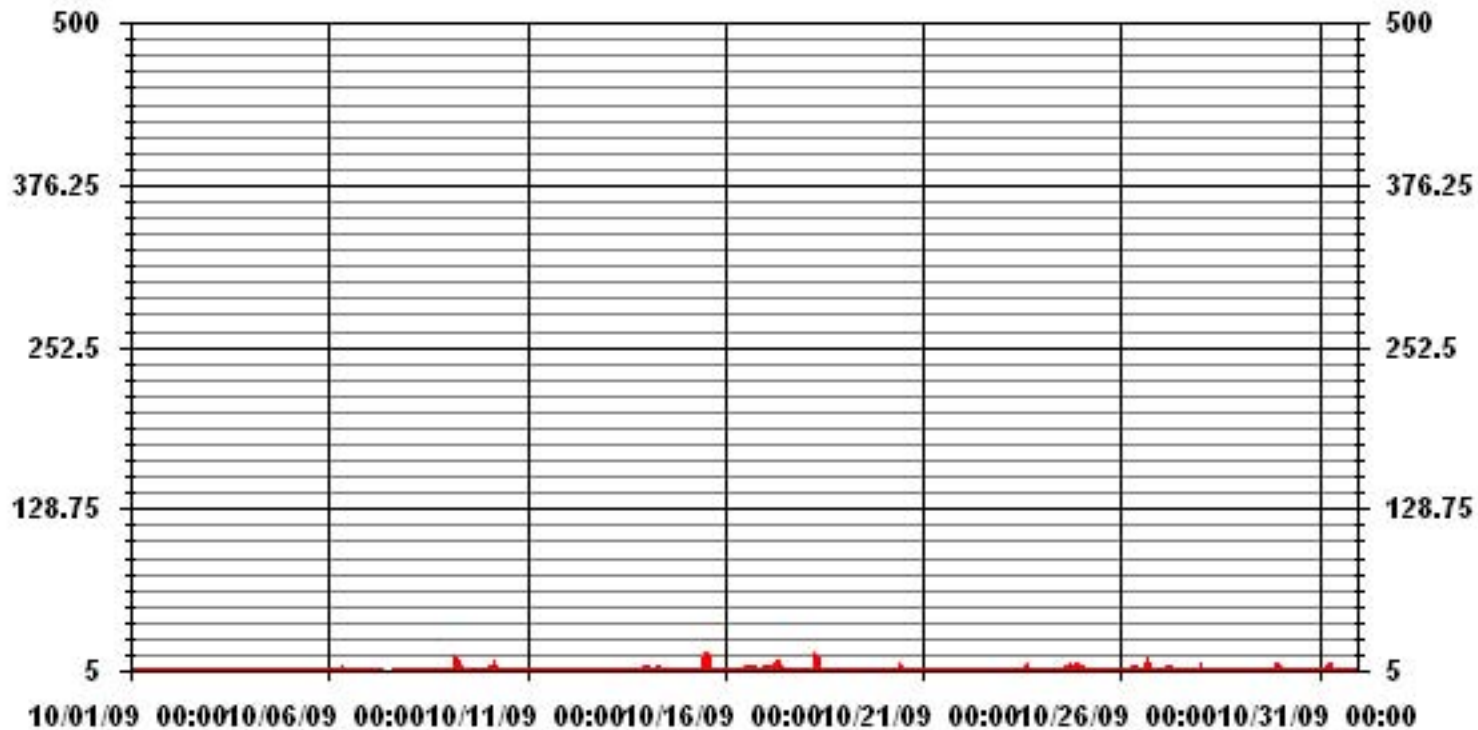
MONTHLY SUMMARY

NUMBER OF 1-HR EXCEEDENCES:	0		
NUMBER OF 24-HR EXCEEDENCES:	0		
NUMBER OF NON-ZERO READINGS:	482		
MAXIMUM 1-HR AVERAGE:	20 PPB @ HOUR(S) 13 ON DAY(S) 15		
MAXIMUM 24-HR AVERAGE:	4.5 PPB ON DAY(S) 16		
IZS CALIBRATION TIME:	32 HRS	OPERATIONAL TIME:	741 HRS
MONTHLY CALIBRATION TIME:	7 HRS	AMD OPERATION UPTIME:	99.6 %
STANDARD DEVIATION:	2.37	MONTHLY AVERAGE:	1.90 PPB

24 HOUR AVERAGES FOR OCTOBER 2009



01 Hour Averages



— LICA30 NO2_ PPB

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - MASKWA

OCTOBER 2009

NITROGEN DIOXIDE MAX instantaneous maximum in ppb

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR		
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.	
DAY																												
1	0	0	1	2	2	9	6	3	4	3	5	3	3	2	3	1	1	0	0	0	0	0	0	IZS	0	9	2.1	24
2	1	1	2	1	1	7	4	4	5	6	1	1	0	11	12	1	5	4	0	0	0	0	IZS	0	0	12	2.9	24
3	0	1	1	1	1	0	0	2	1	1	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	2	0.3	24	
4	0	0	0	0	0	1	2	1	0	0	0	0	0	0	0	0	0	0	0	IZS	1	1	2	1	2	0.4	24	
5	1	1	1	2	2	1	3	9	5	6	3	2	2	2	2	2	2	IZS	3	3	3	3	3	3	9	2.7	24	
6	3	3	3	4	5	8	8	15	50	45	28	7	4	3	2	4	4	IZS	3	3	3	3	2	3	50	9.3	24	
7	3	2	2	2	2	1	1	C	C	C	C	C	C	C	C	IZS	5	IZS	1	6	11	11	5	4	3	11	3.8	24
8	4	1	1	1	1	1	1	1	1	2	2	2	2	2	1	IZS	2	3	2	1	14	1	7	3	14	2.4	24	
9	1	6	2	2	16	16	15	17	13	8	6	4	11	12	IZS	7	2	7	1	4	0	0	1	2	17	6.7	24	
10	3	16	16	7	13	8	1	1	1	2	2	2	1	IZS	1	2	4	3	3	3	4	3	2	3	16	4.4	24	
11	4	3	2	2	1	1	3	2	1	1	1	1	IZS	0	0	1	3	2	1	1	1	0	1	0	4	1.4	24	
12	1	2	2	1	1	1	1	1	1	1	1	1	IZS	0	1	0	3	3	0	1	1	1	1	1	3	1.1	24	
13	1	1	1	1	1	1	1	9	8	7	IZS	6	5	4	4	4	4	1	3	2	7	9	2	3	9	3.7	24	
14	5	10	12	3	1	2	5	9	10	IZS	7	5	6	5	7	8	8	6	3	2	1	1	1	1	12	5.1	24	
15	1	0	1	1	1	1	2	2	IZS	3	6	6	253	244	4	4	3	3	3	3	2	2	2	8	253	24.1	24	
16	2	2	2	3	7	8	8	IZS	6	6	5	5	6	7	7	7	7	7	8	9	7	6	5	4	9	5.8	24	
17	4	11	8	7	9	11	IZS	12	13	10	1	1	3	2	2	1	3	5	2	2	2	2	3	3	13	5.1	24	
18	1	3	5	3	5	IZS	16	19	14	14	6	6	6	3	4	4	3	2	4	2	1	1	1	1	19	5.4	24	
19	1	2	1	6	IZS	3	5	5	6	16	6	3	11	4	3	1	26	3	2	1	1	1	4	3	26	5.0	24	
20	3	2	3	IZS	1	4	4	7	7	10	11	10	10	2	5	4	6	3	1	1	1	1	1	1	11	4.3	24	
21	1	1	IZS	1	0	1	3	3	1	3	4	3	2	2	1	4	3	1	3	7	7	3	9	6	9	3.0	24	
22	1	IZS	1	1	1	2	3	2	2	3	2	2	15	2	7	2	2	12	10	1	4	7	5	6	15	4.0	24	
23	IZS	4	1	1	1	5	9	5	3	4	4	3	4	33	59	3	3	3	5	1	1	1	1	IZS	59	7.0	24	
24	1	2	3	4	2	3	5	5	6	5	8	8	1	1	8	8	7	11	9	9	10	13	IZS	12	13	6.1	24	
25	7	13	16	4	3	1	2	4	3	1	2	2	2	2	1	1	1	2	2	2	2	IZS	3	4	16	3.5	24	
26	3	2	2	2	5	2	3	5	10	10	6	6	4	3	7	8	14	7	5	4	IZS	3	3	3	14	5.1	24	
27	2	3	7	8	7	N	11	8	5	4	1	1	2	1	1	2	11	4	7	IZS	12	5	6	6	12	5.2	23	
28	9	10	1	7	2	3	3	3	3	11	2	M	M	1	1	0	0	0	IZS	1	1	1	0	1	11	2.9	22	
29	0	1	1	1	1	1	2	3	2	1	1	1	2	2	1	1	1	IZS	1	1	2	3	6	12	12	2.0	24	
30	10	4	1	4	2	1	1	1	1	1	1	1	1	1	1	1	IZS	2	2	1	1	6	7	1	10	2.3	24	
31	1	2	1	9	9	3	5	8	6	5	8	8	12	8	6	IZS	5	1	2	2	1	3	3	3	12	4.8	24	
HOURLY MAX	10	16	16	9	16	16	19	50	45	28	10	253	244	59	8	26	12	10	11	14	13	9	12					
HOURLY AVG	2.5	3.6	3.3	3.0	3.4	3.7	4.4	5.6	6.5	6.5	4.5	3.5	13.1	12.4	5.2	3.1	4.6	3.3	3.1	2.7	3.5	2.9	2.9	3.2				

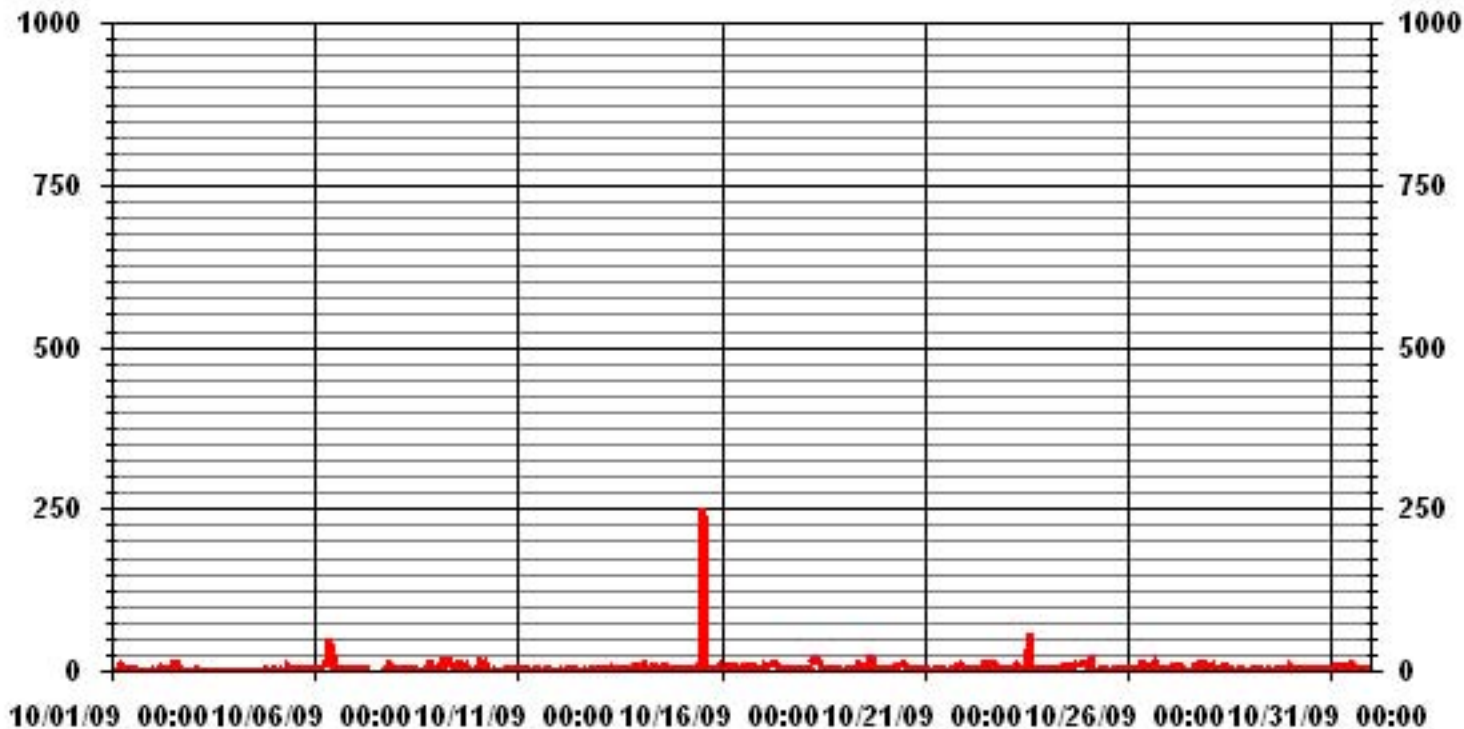
STATUS FLAG CODES

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:	640					
MAXIMUM INSTANTANEOUS VALUE:	253	PPB	@ HOUR(S)	12	ON DAY(S)	15
IZS CALIBRATION TIME:	32	HRS	OPERATIONAL TIME:	741	HRS	
MONTHLY CALIBRATION TIME:	7	HRS				
STANDARD DEVIATION	13.95					

01 Hour Averages



— LICA30 IIO2MAX PPB

LICA30
NO2_ / WDR Joint Frequency Distribution (Percent)

October 2009

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	8.11	6.83	7.12	4.98	4.41	6.41	10.68	5.12	3.98	8.83	5.84	3.13	3.13	4.41	6.41	10.54	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	8.11	6.83	7.12	4.98	4.41	6.41	10.68	5.12	3.98	8.83	5.84	3.13	3.13	4.41	6.41	10.54	

Calm : .00 %

Total # Operational Hours : 702

Distribution By Samples

	Direction																
Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 50	57	48	50	35	31	45	75	36	28	62	41	22	22	31	45	74	702
< 110																	
< 210																	
>= 210																	
Totals	57	48	50	35	31	45	75	36	28	62	41	22	22	31	45	74	

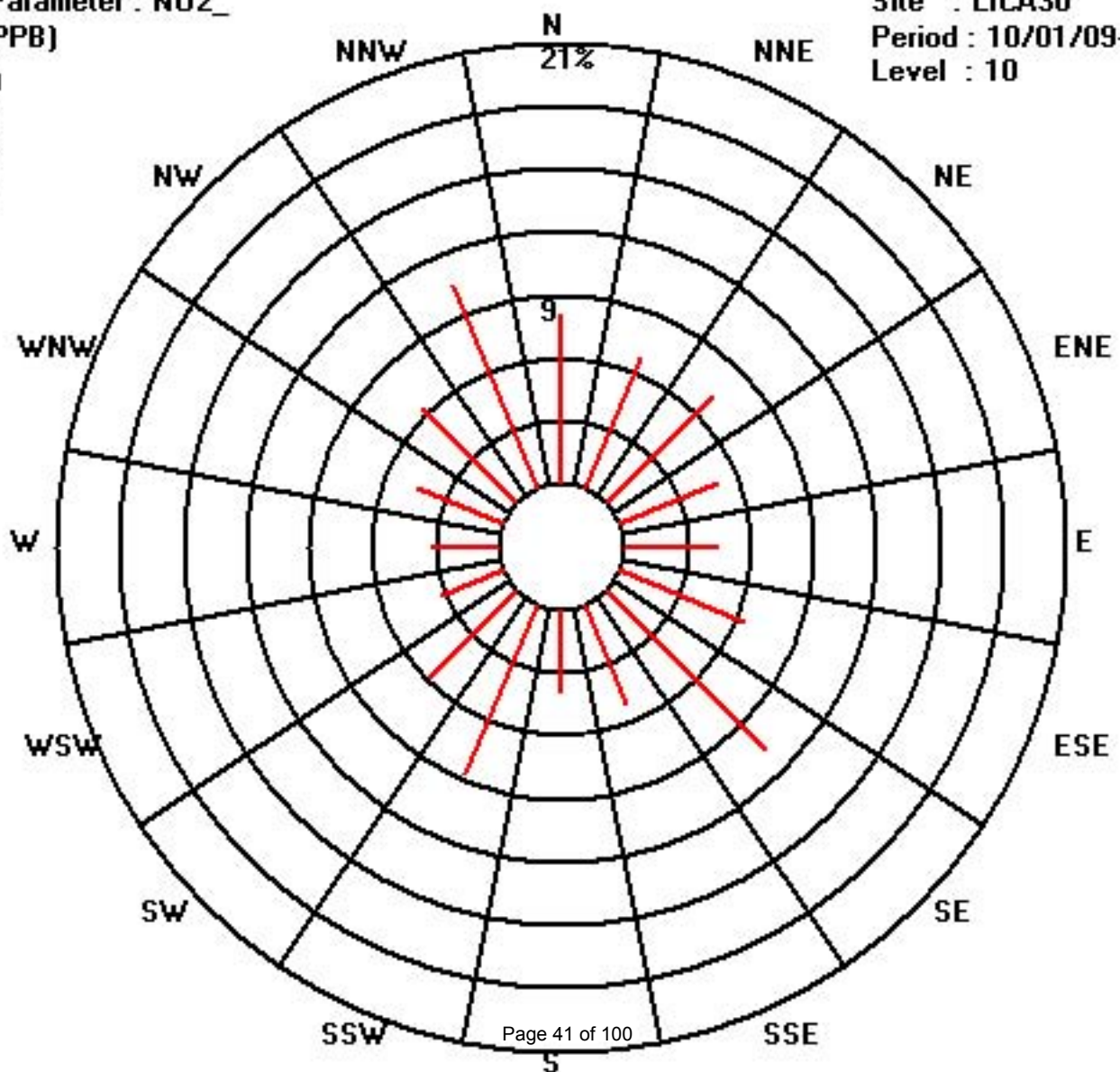
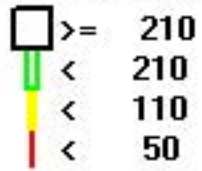
Calm : .00 %

Total # Operational Hours : 702

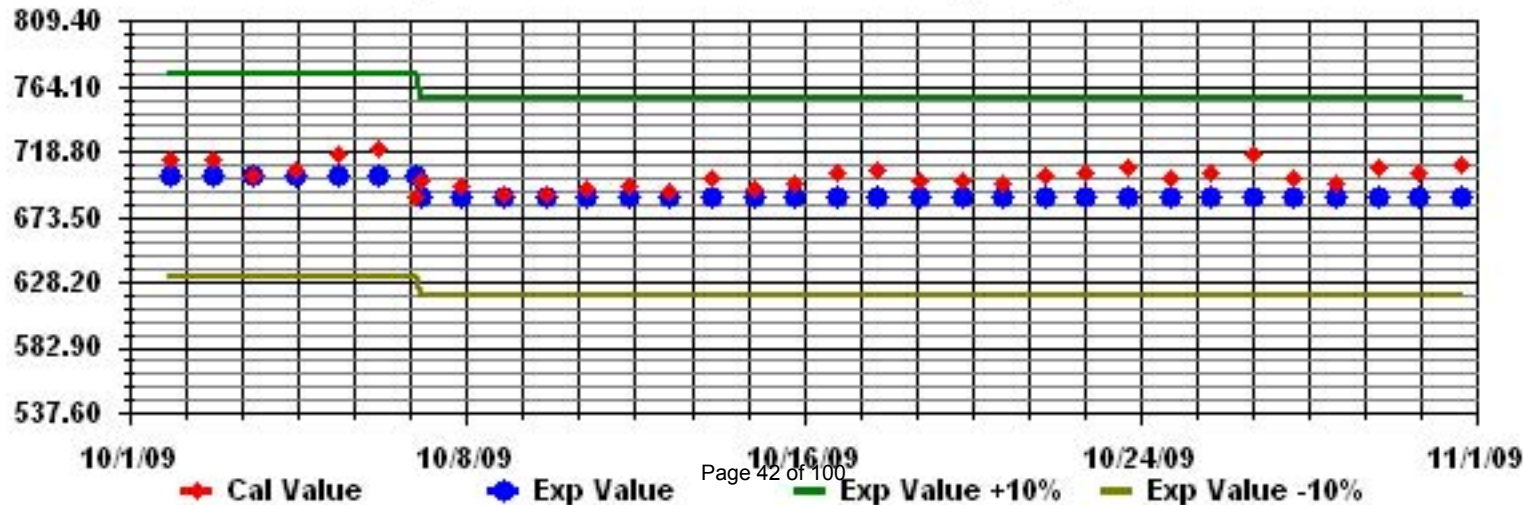
Class Limits (PPB)

Period : 10/01/09-10/31/09

Level : 10



Calibration Graph for Site: LICA30 Parameter: NO2_ Sequence: NO2 Phase: SPAN



Nitric Oxide

LAKELAND INDUSTRY & COMMUNITY ASSOICATION - MASKWA

OCTOBER 2009

NITRIC OXIDE hourly averages in ppb

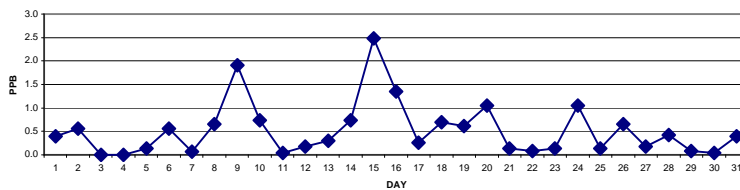
MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY 24-HOUR					
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.			
DAY																														
1	0	0	0	0	0	2	0	1	3	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0.4	24	
2	0	0	0	0	0	1	1	5	4	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0.6	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	0.0	24	
4	0	0	0	0	0	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	0	0	0	0	0	0	0	2	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0.1	24	
6	0	0	0	0	0	0	0	1	5	3	1	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0.6	24	
7	0	0	0	0	0	0	0	0	C	C	C	C	C	C	C	1	0	0	0	0	0	0	0	0	0	1	0.1	24		
8	0	0	0	0	0	0	0	1	1	0	1	1	1	1	1	1	1	0	0	0	0	2	1	2	1	2	1	2	0.7	24
9	1	1	1	1	4	6	5	7	2	2	2	1	5	4	0	0	0	0	0	0	0	0	0	0	0	0	7	1.9	24	
10	0	2	3	1	3	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0.7	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	1	0.0	24		
12	0	0	0	0	0	1	1	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.2	24	
13	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	2	0.3	24	
14	0	1	1	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0.7	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	40	2.5	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	6	1.3	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	3	0.3	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	3	0.7	24	
19	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	4	0.6	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	10	1.0	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	1	0.1	24		
22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.1	24	
23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0.1	24	
24	0	0	0	0	0	0	0	1	1	2	3	1	1	0	0	0	3	1	1	0	0	3	4	0	0	3	4	1.0	24	
25	1	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.1	24		
26	0	0	0	0	0	0	0	0	0	0	2	3	2	2	2	1	1	1	0	0	0	0	0	0	0	0	3	0.7	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	1	0.2	23	
28	2	1	0	1	0	0	0	1	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0.4	22	
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	2	0.1	24	
30	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	1	0.0	24	
31	0	0	0	0	2	0	0	2	0	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	2	0.4	24	
HOURLY MAX	2	2	3	1	4	6	5	7	5	6	10	7	13	40	3	3	1	1	1	0	3	4	2	3						
HOURLY AVG	0.2	0.2	0.2	0.1	0.3	0.4	0.4	1.0	1.2	1.4	1.2	1.0	1.3	1.9	0.4	0.4	0.2	0.1	0.0	0.0	0.2	0.2	0.1	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

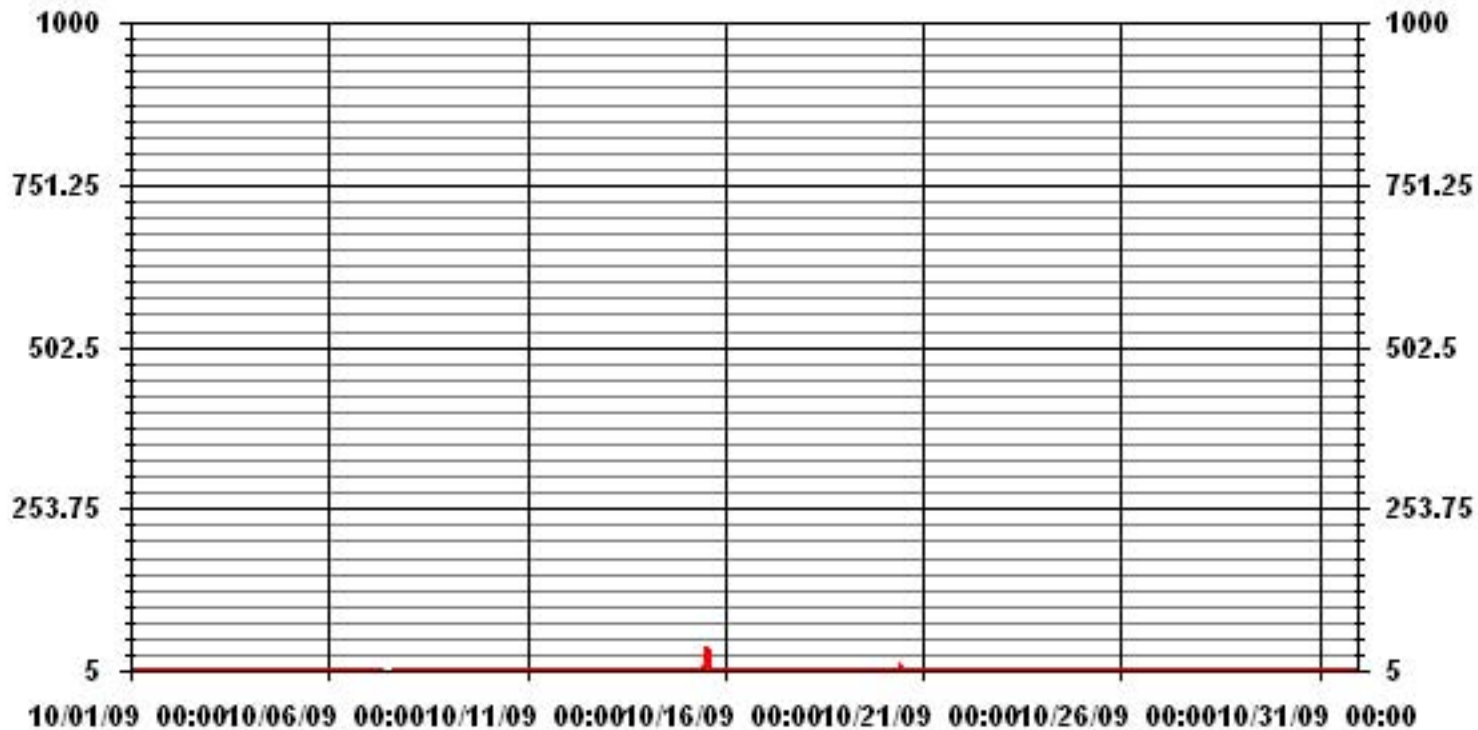
24 HOUR AVERAGES FOR OCTOBER 2009



MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:	172
MAXIMUM 1-HR AVERAGE:	40 PPB @ HOUR(S) 13 ON DAY(S) 15
MAXIMUM 24-HR AVERAGE:	2.5 PPB ON DAY(S) 15
IZS CALIBRATION TIME:	32 HRS
MONTHLY CALIBRATION TIME:	7 HRS
OPERATIONAL TIME:	741 HRS
AMD OPERATION UPTIME:	99.6 %
STANDARD DEVIATION:	1.89
MONTHLY AVERAGE:	0.52 PPB

01 Hour Averages



— LICA30 NO_ PPB

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - MASKWA

OCTOBER 2009

NITRIC OXIDE MAX instantaneous maximum in ppb

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR			
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.		
DAY																													
1	0	0	0	0	0	8	1	4	5	5	8	4	4	1	1	0	0	0	0	0	0	0	0	IZS	0	8	1.8	24	
2	0	0	0	0	0	7	3	8	8	6	1	0	0	4	19	0	1	1	0	0	0	0	IZS	0	0	19	2.5	24	
3	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	1	0.0	24	
4	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	1	0.0	24	
5	0	0	0	0	0	0	0	28	1	3	1	1	1	1	1	1	0	0	IZS	0	0	0	0	0	0	28	1.7	24	
6	0	0	0	0	1	3	5	37	122	80	20	9	2	1	1	0	0	IZS	0	0	0	0	0	0	0	122	12.2	24	
7	0	0	0	0	0	0	0	0	C	C	C	C	C	C	4	IZS	1	0	1	2	0	1	0	1	0	4	0.6	24	
8	1	1	1	1	0	1	1	1	2	1	1	1	1	2	1	IZS	1	1	1	1	7	1	4	1	7	1.4	24		
9	1	3	1	1	8	9	8	14	8	8	5	4	11	10	IZS	5	1	2	1	1	1	1	1	1	1	14	4.6	24	
10	1	6	7	3	6	3	1	1	1	2	2	2	2	1	IZS	1	1	1	1	1	1	1	1	1	1	7	2.0	24	
11	1	1	1	1	1	1	1	1	1	1	1	1	1	1	IZS	1	1	1	1	1	1	1	1	1	1	1	1	1.0	24
12	1	1	1	1	1	1	1	1	1	1	1	1	1	IZS	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	24
13	1	1	1	1	1	1	1	3	2	4	IZS	4	3	3	2	2	1	0	0	0	1	1	1	1	1	4	1.5	24	
14	1	2	3	1	1	1	2	3	4	IZS	5	3	4	3	3	3	2	1	0	0	0	0	0	0	0	5	1.8	24	
15	0	0	0	0	0	0	0	0	0	IZS	2	2	2	176	516	2	2	0	0	0	0	0	0	0	0	516	30.5	24	
16	0	0	0	0	1	3	1	IZS	8	8	6	6	5	5	4	3	1	0	0	0	0	0	0	0	0	8	2.2	24	
17	0	1	0	0	1	2	IZS	4	5	5	0	0	3	1	1	0	0	0	0	0	0	0	0	0	0	5	1.0	24	
18	0	0	0	0	0	IZS	10	7	5	5	4	6	4	1	3	1	0	0	0	0	0	0	0	0	0	10	2.0	24	
19	0	0	0	7	IZS	1	4	4	4	42	6	1	6	1	0	0	28	0	0	0	0	0	0	0	0	42	4.5	24	
20	0	0	0	IZS	1	7	3	4	3	13	15	12	5	1	2	2	1	0	0	0	0	0	0	0	0	15	3.0	24	
21	0	0	IZS	0	0	0	1	0	0	1	1	0	0	0	0	1	0	0	0	1	2	1	3	1	3	0.5	24		
22	1	IZS	0	0	0	0	0	0	0	1	2	3	13	1	17	0	0	7	5	0	0	0	0	0	1	17	2.2	24	
23	IZS	1	1	0	0	2	1	2	1	3	2	1	1	6	72	0	0	1	1	0	0	0	0	0	0	72	4.3	24	
24	1	0	0	0	0	1	3	2	5	5	3	4	0	1	5	5	4	3	2	2	5	6	IZS	7	7	2.8	24		
25	2	4	1	2	0	1	1	4	2	1	2	2	2	1	1	0	1	0	0	0	0	0	IZS	1	1	4	1.3	24	
26	0	1	1	0	0	0	0	5	9	6	4	5	4	2	2	2	4	0	0	0	0	IZS	1	0	0	9	2.0	24	
27	1	1	1	1	0	N	7	2	2	3	1	1	3	1	0	0	3	0	1	IZS	4	1	0	1	7	1.5	23		
28	5	5	0	3	0	4	1	5	2	27	6	M	M	1	1	0	0	0	IZS	1	0	0	0	0	27	2.9	22		
29	0	0	0	2	2	0	0	0	0	1	1	1	1	1	0	0	0	IZS	0	0	0	0	0	1	5	0.7	24		
30	3	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	IZS	1	0	0	0	0	1	1	0	3	0.4	24	
31	0	0	0	3	3	1	1	4	1	1	3	4	7	3	2	IZS	2	0	0	0	0	0	0	0	7	1.5	24		
HOURLY MAX	5	6	7	7	8	9	10	37	122	80	20	12	176	516	72	5	28	7	5	2	7	6	4	7					
HOURLY AVG	0.7	1.0	0.6	0.9	0.9	2.0	1.9	4.8	7.0	8.1	3.6	2.8	9.2	19.6	4.9	1.2	1.8	0.7	0.5	0.3	0.9	0.6	0.6	0.7					

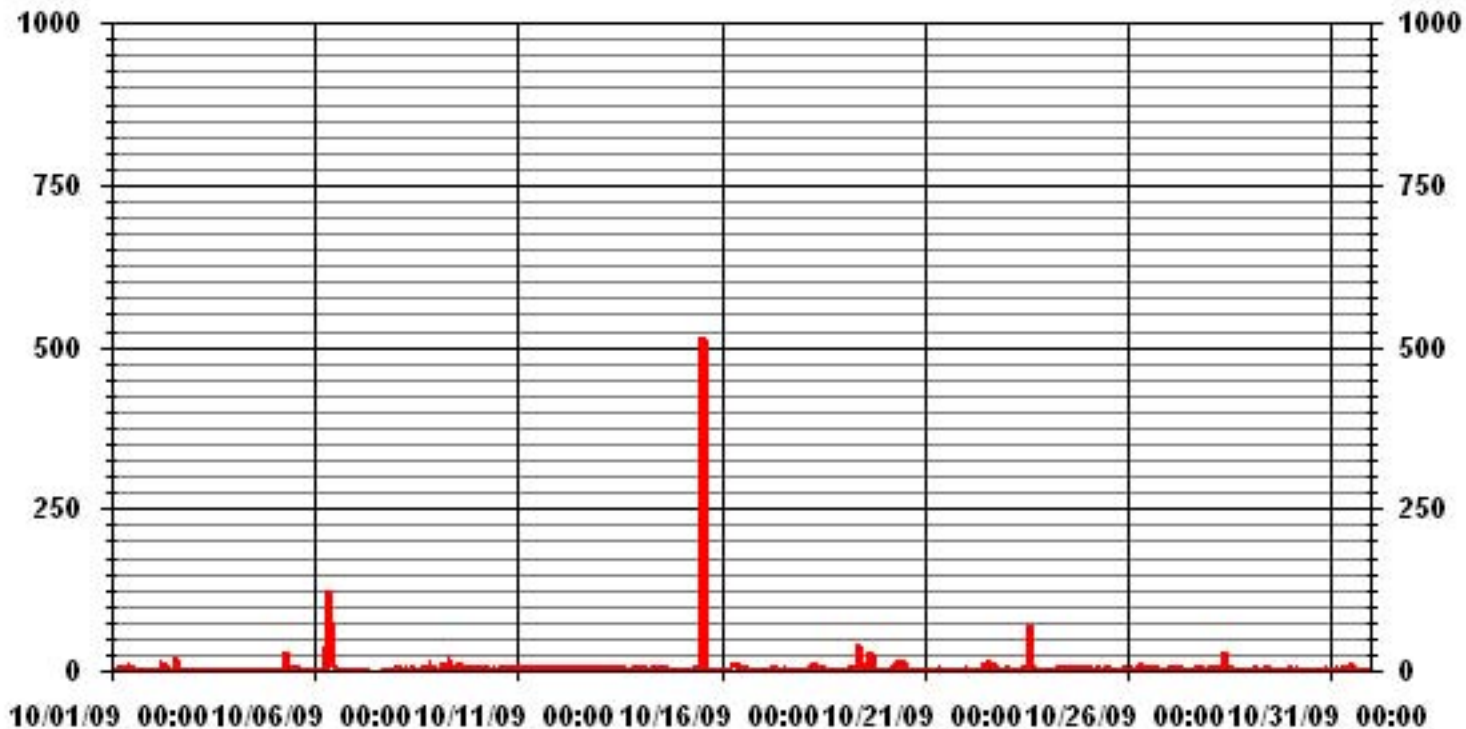
STATUS FLAG CODES

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

MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:	399					
MAXIMUM INSTANTANEOUS VALUE:	516	PPB	@ HOUR(S)	13	ON DAY(S)	15
IZS CALIBRATION TIME:	32	HRS	OPERATIONAL TIME:	741	HRS	
MONTHLY CALIBRATION TIME:	7	HRS				
STANDARD DEVIATION	21.62					

01 Hour Averages



LICA30
 NO_ / WDR Joint Frequency Distribution (Percent)

October 2009

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	8.11	6.83	7.12	4.98	4.41	6.41	10.68	5.12	3.98	8.83	5.84	3.13	3.13	4.41	6.41	10.54	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	8.11	6.83	7.12	4.98	4.41	6.41	10.68	5.12	3.98	8.83	5.84	3.13	3.13	4.41	6.41	10.54	

Calm : .00 %

Total # Operational Hours : 702

Distribution By Samples

	Direction																
Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 50	57	48	50	35	31	45	75	36	28	62	41	22	22	31	45	74	702
< 110																	
< 210																	
>= 210																	
Totals	57	48	50	35	31	45	75	36	28	62	41	22	22	31	45	74	

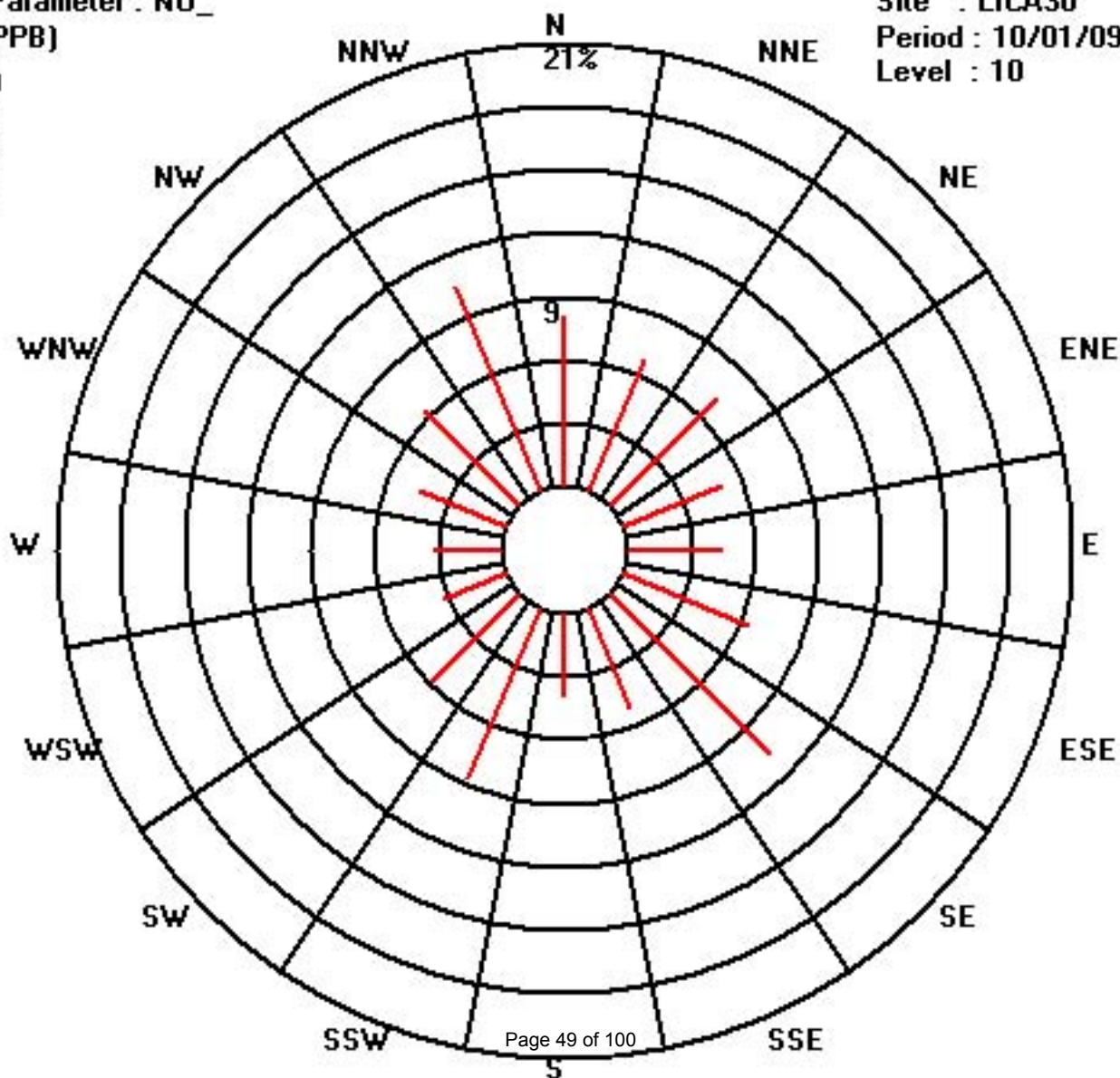
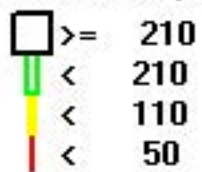
Calm : .00 %

Total # Operational Hours : 702

Class Limits (PPB)

Period : 10/01/09-10/31/09

Level : 10



Oxides of Nitrogen

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - MASKWA
OCTOBER 2009
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	0	0	0	1	2	6	3	3	7	4	3	1	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	7	1.3	24	
2	0	0	1	1	1	4	3	8	7	5	1	0	0	1	1	0	1	1	0	0	0	0	0	0	IZS	0	8	1.5	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	0.0	24	
4	0	0	0	0	0	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	
5	0	0	0	1	1	0	0	7	2	5	3	2	2	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0.0	24
6	2	2	2	3	4	6	6	6	13	10	6	7	4	3	2	2	4	0	0	0	0	0	0	0	0	0	1	13	3.9	24
7	1	1	1	1	1	1	0	0	C	C	C	C	C	C	C	2	0	2	5	3	2	3	2	3	2	5	1.6	24		
8	2	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	1	5	1.0	24
9	0	2	0	1	10	19	15	17	5	4	3	2	10	10	IZS	4	0	1	0	1	0	0	0	1	1	19	4.6	24		
10	1	8	12	4	10	5	0	0	0	2	2	1	1	IZS	1	1	2	2	2	2	3	2	1	1	12	2.7	24			
11	3	2	2	1	1	0	1	1	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	3	0.6	24	
12	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1	0.2	24	
13	0	0	0	0	0	0	1	4	4	5	IZS	4	2	3	3	3	2	0	1	1	4	2	1	2	5	1.8	24			
14	1	9	4	0	0	0	2	8	8	IZS	6	5	5	4	7	6	6	5	2	0	0	0	0	0	0	9	3.4	24		
15	0	0	0	0	0	0	1	1	IZS	3	5	4	28	60	3	4	3	3	3	2	2	1	1	5	60	5.6	24			
16	1	1	2	2	4	5	6	IZS	9	11	9	9	10	10	9	8	7	5	7	8	6	5	4	4	11	6.2	24			
17	3	9	6	5	7	8	IZS	11	13	8	1	0	1	1	1	0	1	2	1	1	1	1	2	2	13	3.7	24			
18	1	2	3	2	1	IZS	10	18	16	12	8	9	5	1	1	1	1	3	1	0	1	1	0	1	0	18	4.3	24		
19	1	1	1	2	IZS	2	2	3	5	7	3	3	4	2	1	0	6	1	1	0	0	0	3	2	7	2.2	24			
20	1	2	1	IZS	1	2	3	7	5	8	20	15	8	2	2	2	3	1	1	1	0	0	0	0	20	3.7	24			
21	0	0	IZS	0	0	0	1	1	0	3	4	2	1	1	0	1	1	0	1	5	5	2	6	3	6	1.6	24			
22	0	IZS	0	0	0	0	1	1	1	2	2	2	2	2	2	1	2	7	5	1	2	5	2	2	7	1.8	24			
23	IZS	1	0	1	1	3	5	3	2	3	2	2	3	6	8	2	2	1	2	1	0	0	0	0	IZS	8	2.2	24		
24	1	1	2	2	1	2	5	6	7	7	7	4	0	0	2	9	6	9	7	7	10	14	IZS	12	14	5.3	24			
25	5	8	5	1	1	0	0	3	1	0	1	2	2	1	1	0	1	1	1	1	2	IZS	1	2	8	1.7	24			
26	2	2	1	1	2	2	2	2	9	9	7	6	5	3	5	6	10	6	4	3	IZS	3	2	2	10	4.1	24			
27	2	2	5	7	5	N	10	6	6	3	1	1	1	0	0	0	4	1	4	IZS	8	3	5	2	10	3.5	23			
28	9	5	1	4	1	2	2	3	2	4	3	M	M	1	0	0	0	0	0	0	0	0	0	0	9	1.8	22			
29	0	0	0	0	0	0	0	2	1	1	1	0	1	2	1	1	1	0	0	0	0	0	0	0	10	1.2	24			
30	9	1	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	0	9	0.8	24		
31	0	0	0	5	8	1	2	8	3	4	6	4	5	5	4	IZS	2	0	1	1	1	2	2	2	8	2.9	24			
HOURLY MAX	9	9	12	7	10	19	15	18	16	12	20	15	28	60	9	9	10	9	7	8	10	14	6	12						
HOURLY AVG	1.5	2.0	1.7	1.6	2.1	2.3	2.7	4.3	4.4	4.2	3.6	3.1	3.6	4.1	1.9	1.9	2.4	1.7	1.8	1.6	2.0	1.7	1.6	1.9						

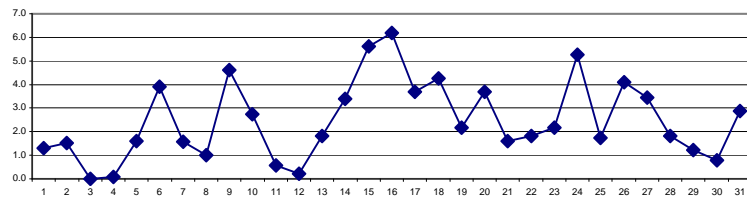
STATUS FLAG CODES

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

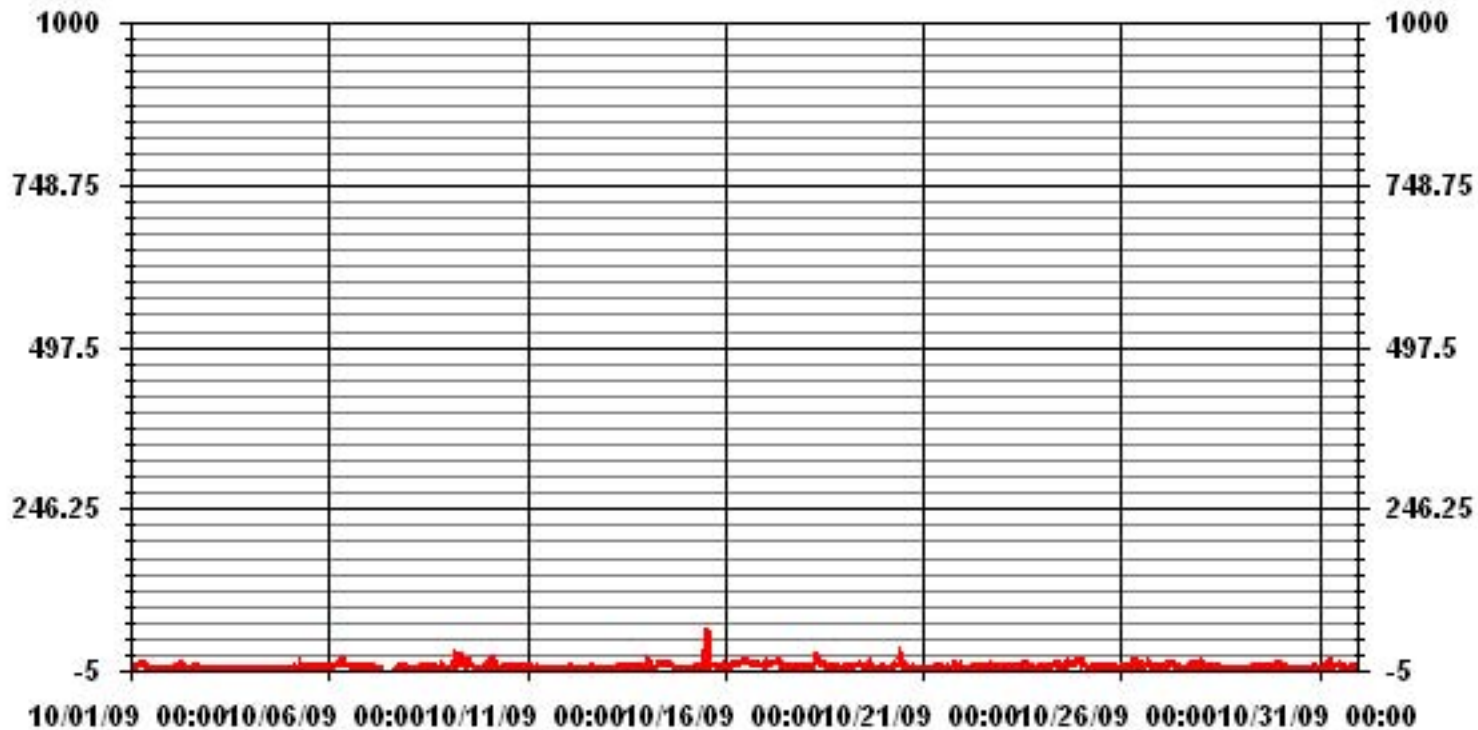
MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:	481					
MAXIMUM 1-HR AVERAGE:	60	PPB	@ HOUR(S)	13	ON DAY(S)	15
MAXIMUM 24-HR AVERAGE:	6.2	PPB			ON DAY(S)	16
IZS CALIBRATION TIME:	32	HRS	OPERATIONAL TIME:	741	HRS	
MONTHLY CALIBRATION TIME:	7	HRS	AMD OPERATION UPTIME:	99.6	%	
STANDARD DEVIATION:	3.90		MONTHLY AVERAGE:	2.49	PPB	

24 HOUR AVERAGES FOR OCTOBER 2009



01 Hour Averages



— LICA30 NOX_ PPB

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - MASKWA

OCTOBER 2009

OXIDES OF NITROGEN MAX instantaneous maximum in ppb

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR		
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.	
DAY																												
1	0	0	1	2	2	17	7	7	9	8	14	8	8	4	4	1	0	0	0	0	0	0	0	IZS	0	17	4.0	24
2	1	1	2	1	1	14	7	12	12	12	1	1	0	14	26	1	6	6	0	0	0	IZS	0	0	26	5.1	24	
3	0	1	1	1	1	0	0	2	0	1	1	1	0	0	0	0	0	0	0	0	IZS	0	0	0	2	0.4	24	
4	0	0	0	0	0	1	3	1	0	0	0	0	0	0	0	0	0	0	0	IZS	1	1	1	1	3	0.4	24	
5	0	0	1	2	2	1	3	37	6	9	4	3	3	2	3	2	2	IZS	IZS	3	3	3	2	3	37	4.2	24	
6	3	3	3	4	5	10	11	47	166	122	47	17	5	3	3	4	5	IZS	IZS	3	3	3	2	2	166	20.6	24	
7	3	2	2	2	2	2	0	1	C	C	C	C	C	C	C	IZS	IZS	1	7	13	13	5	4	3	13	4.3	24	
8	4	2	1	1	1	2	1	1	3	2	3	2	2	2	2	IZS	IZS	3	3	2	1	20	1	10	4	20	3.2	24
9	1	8	2	3	23	24	22	30	20	15	10	6	21	21	IZS	12	3	9	1	5	0	0	1	2	30	10.4	24	
10	3	19	22	8	18	10	2	2	1	2	3	2	2	IZS	2	3	4	3	4	3	4	3	2	3	22	5.4	24	
11	4	3	2	2	1	1	3	2	1	1	1	0	IZS	1	1	2	3	3	1	1	1	0	0	1	4	1.5	24	
12	0	2	2	1	1	1	1	1	1	1	1	IZS	1	1	1	3	4	0	1	1	1	1	1	1	4	1.2	24	
13	0	1	1	1	1	1	1	11	9	11	IZS	9	7	7	6	6	5	1	3	2	8	10	2	3	11	4.6	24	
14	5	12	14	4	1	1	6	11	13	IZS	12	9	9	7	10	11	10	7	4	2	1	1	1	1	14	6.6	24	
15	1	1	1	1	1	1	2	2	IZS	4	8	9	381	725	6	6	4	3	4	3	3	2	2	8	725	51.2	24	
16	3	2	3	3	8	11	9	IZS	14	14	11	10	12	13	11	10	8	7	8	9	7	6	5	4	14	8.2	24	
17	4	11	8	7	10	13	IZS	16	19	15	1	1	6	2	3	1	3	5	2	2	2	2	3	3	19	6.0	24	
18	1	3	5	3	5	IZS	26	26	19	19	9	12	9	4	7	5	3	2	4	2	1	1	1	1	26	7.3	24	
19	1	2	1	13	IZS	3	8	8	9	58	12	4	16	5	3	1	54	3	2	1	1	1	4	3	58	9.3	24	
20	2	2	2	IZS	2	10	6	11	10	24	27	21	13	3	5	5	6	2	1	1	1	1	1	1	27	6.8	24	
21	1	1	IZS	1	1	1	4	3	1	5	5	3	2	2	1	4	4	1	3	8	9	4	12	7	12	3.6	24	
22	1	IZS	1	1	1	2	2	1	2	3	4	5	27	4	22	2	2	18	16	1	5	7	5	7	27	6.0	24	
23	IZS	5	1	1	1	6	9	6	4	7	6	4	4	38	112	4	3	3	6	1	1	1	1	IZS	112	10.2	24	
24	1	2	3	4	2	4	8	7	11	10	10	11	1	2	13	13	10	13	11	10	14	19	IZS	19	19	8.6	24	
25	10	17	17	6	4	2	2	8	5	1	3	3	3	3	2	1	1	2	2	2	2	IZS	3	5	17	4.5	24	
26	3	2	2	2	5	2	3	10	19	16	9	11	8	5	9	10	18	7	5	4	IZS	4	3	3	19	7.0	24	
27	3	3	8	9	7	N	16	8	7	6	2	2	4	2	1	2	14	5	9	IZS	16	5	7	7	16	6.5	23	
28	14	15	1	10	2	6	3	7	4	32	9	M	M	2	1	0	0	0	IZS	1	1	1	0	0	32	5.2	22	
29	0	0	0	3	3	0	3	3	2	2	1	1	2	3	2	2	2	IZS	2	1	2	3	7	16	16	2.6	24	
30	12	5	1	4	2	1	1	1	1	1	1	1	0	1	1	0	IZS	2	2	1	1	7	7	1	12	2.3	24	
31	2	2	1	11	13	3	6	12	6	6	11	12	18	10	8	IZS	7	1	2	2	1	3	3	3	18	6.2	24	
HOURLY MAX	14	19	22	13	23	24	26	47	166	122	47	21	381	725	112	13	54	18	16	13	20	19	12	19				
HOURLY AVG	2.8	4.2	3.6	3.7	4.2	5.2	5.8	9.8	12.9	14.0	7.8	6.0	20.1	30.6	9.1	4.1	6.3	3.8	3.6	2.9	4.2	3.3	3.1	3.7				

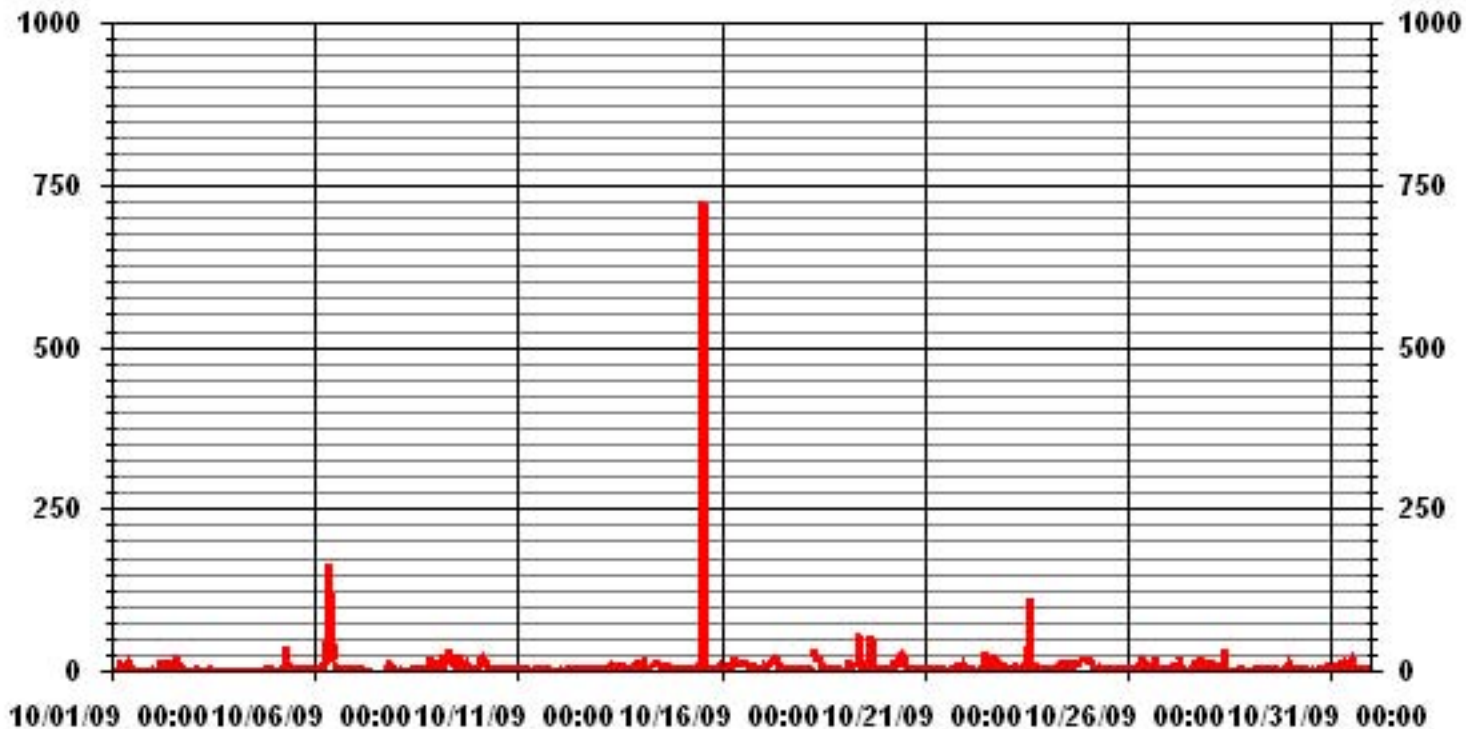
STATUS FLAG CODES

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

MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:	634					
MAXIMUM INSTANTANEOUS VALUE:	725	PPB	@ HOUR(S)	13	ON DAY(S)	15
IZS CALIBRATION TIME:	32	HRS	OPERATIONAL TIME:	741	HRS	
MONTHLY CALIBRATION TIME:	7	HRS				
STANDARD DEVIATION	32.42					

01 Hour Averages



— LICA30 NOXMAX PPB

LICA30
NOX_ / WDR Joint Frequency Distribution (Percent)

October 2009

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	8.11	6.83	7.12	4.98	4.41	6.41	10.68	5.12	3.98	8.68	5.84	3.13	3.13	4.41	6.41	10.54	99.85
< 110	.00	.00	.00	.00	.00	.00	.00	.00	.00	.14	.00	.00	.00	.00	.00	.00	.14
< 210	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
>= 210	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
Totals	8.11	6.83	7.12	4.98	4.41	6.41	10.68	5.12	3.98	8.83	5.84	3.13	3.13	4.41	6.41	10.54	

Calm : .00 %

Total # Operational Hours : 702

Distribution By Samples

	Direction																
Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 50	57	48	50	35	31	45	75	36	28	61	41	22	22	31	45	74	701
< 110										1							1
< 210																	
>= 210																	
Totals	57	48	50	35	31	45	75	36	28	62	41	22	22	31	45	74	

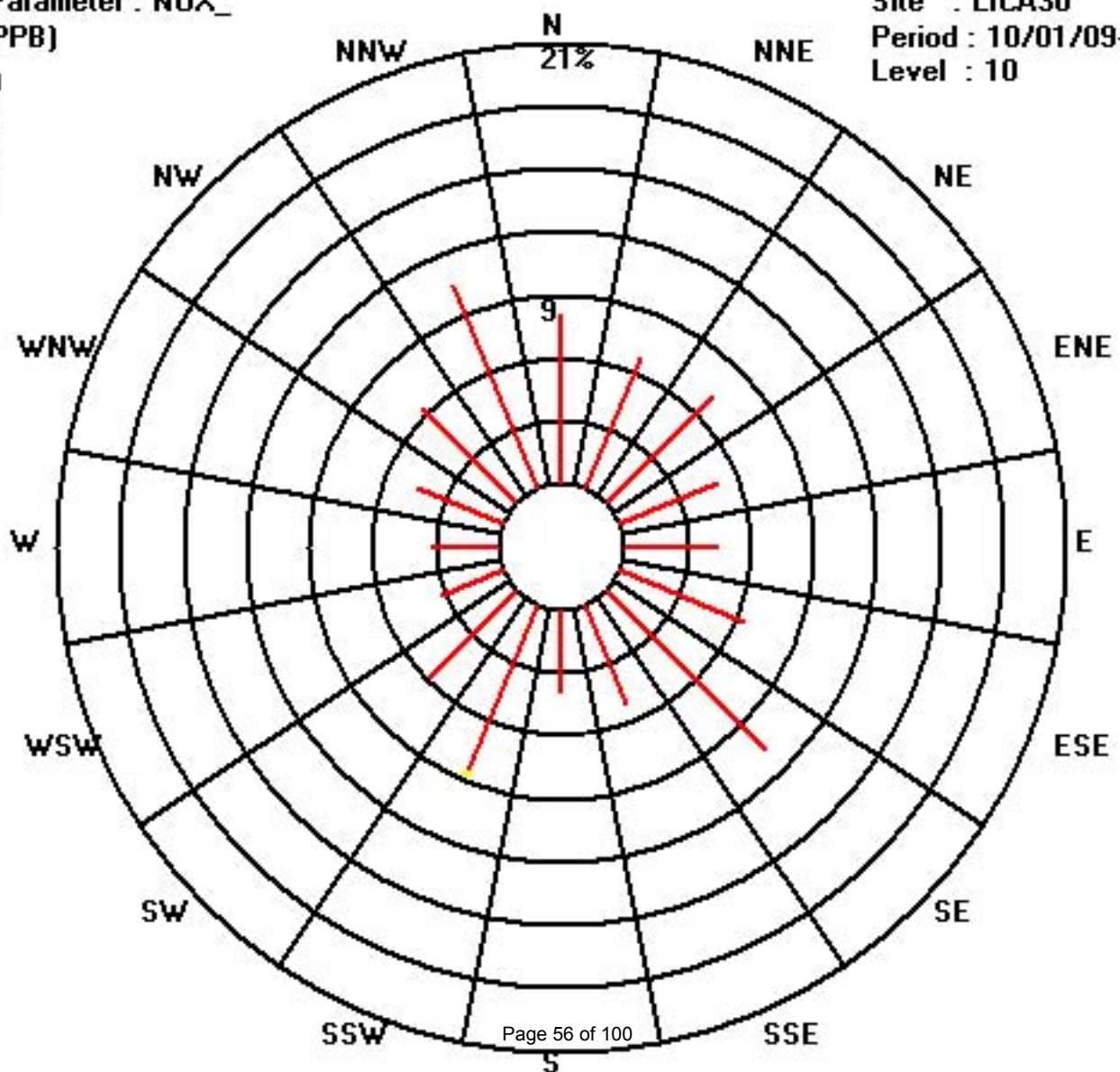
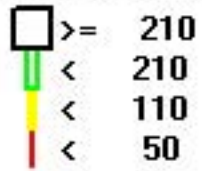
Calm : .00 %

Total # Operational Hours : 702

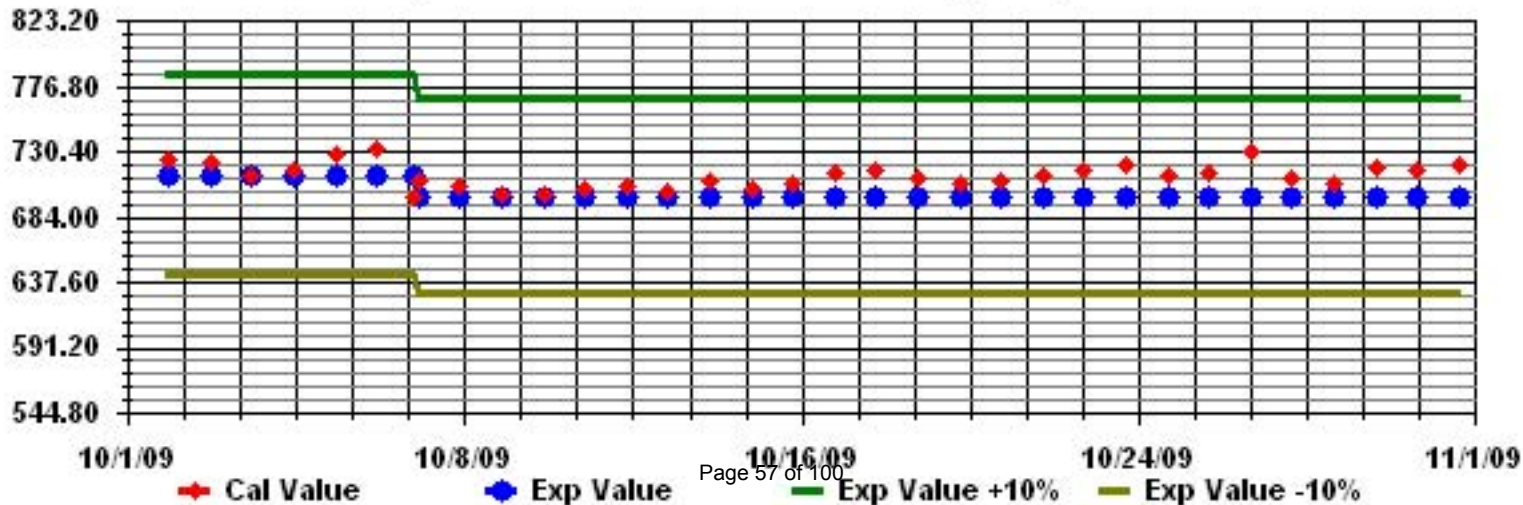
Class Limits (PPB)

Period : 10/01/09-10/31/09

Level : 10



Calibration Graph for Site: LICA30 Parameter: NOX_ Sequence: NO2 Phase: SPAN



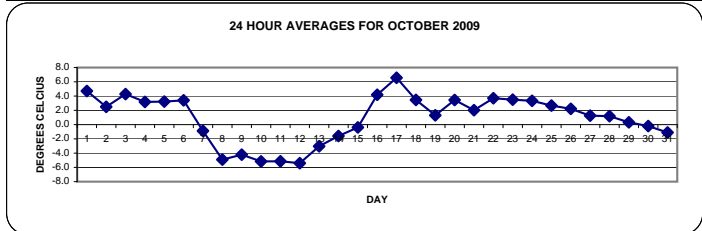
Temperature

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - MASKWA
OCTOBER 2009
AMBIENT TEMPERATURE hourly averages (Degrees C)

MST		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	0:00	DAILY MAX.	24-HOUR AVG.	RDGS.
DAY	HOURLY MAX	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	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				
1	3.5	3.1	3.2	3.4	2.4	1.9	2.2	1.9	3.3	6.8	8.9	10	11	11.1	10.2	9.9	8.8	7.6	4.1	2.8	1.1	-0.4	-1.6	-2.2	11.1	4.7	24		
2	-2.1	-2.5	-3	-2.8	-3	-3.1	-3.4	-2	2.1	2.6	6.7	9.6	10.1	11.4	11.2	10.9	9.5	6.8	3.4	1.4	-0.4	-0.9	-1.3	-1.3	11.4	2.5	24		
3	-1.8	-0.4	1.4	2.3	3.1	3.2	3.4	4.1	5	5.6	6.1	5.8	5.8	6.1	6.2	6	6	5.7	5.4	5	4.9	4.8	4.3	4.7	6.2	4.3	24		
4	4.7	4	3.3	2.8	1.9	2.2	2.2	2.6	2.7	3.4	5.1	5.8	6.2	5.8	6	5.6	5.1	3.9	1	1.6	-0.3	-1	0.5	1.3	6.2	3.2	24		
5	1.3	1	0.9	0.8	0.8	0.5	-0.8	0.3	2.2	3.3	3.7	4.5	4.9	5.5	5.3	6	5.9	4.7	3.9	4.5	4.5	4.4	4.7	4.7	6.0	3.2	24		
6	4.7	4.6	4.1	3.8	3.9	3.3	2.7	2.9	3.7	4.3	4.9	5.7	5.8	4.8	4.2	2.8	2.4	2.4	2.2	1.9	1.7	1.7	1.6	1.5	5.8	3.4	24		
7	0.8	0.1	-0.2	-0.5	-0.5	-0.5	-0.4	-0.3	0.5	0.5	0.5	0.5	0.7	0.8	0.7	0.8	-0.4	-1.5	-2.4	-3.2	-3.3	-3.8	-4.2	-4.9	0.8	-0.9	24		
8	-3.9	-4.1	-4.6	-4.6	-4.8	-5.7	-5.9	-5.5	-4.9	-4.4	-4	-4.2	-3.2	-2.5	-3.6	-4.6	-5.3	-5.5	-6	-6	-6.2	-6.2	-6	-6.2	-2.5	-4.9	24		
9	-6.2	-6.3	-6.6	-7	-6.9	-6.8	-6.9	-6.6	-5.2	-3.7	-2.3	-2.3	-1.7	-1.8	-1.5	-1.7	-2.4	-2.7	-3.2	-3.4	-3.7	-3.9	-4.1	-4.3	-1.5	-4.2	24		
10	-5.3	-6	-6.4	-6.2	-6.4	-6.3	-6.4	-5.5	-4.9	-4.4	-4	-3.3	-3.4	-3.7	-4	-4.3	-4.9	-5.4	-5.2	-5.2	-5.4	-5.4	-5.5	-5.5	-3.3	-5.2	24		
11	-5.7	-5.8	-6.1	-6.2	-6.4	-7	-8.7	-8.3	-5.4	-3.8	-2.9	-3.4	-2.8	-2.9	-3.3	-3.2	-4	-4.6	-4.9	-5	-5.3	-5.7	-5.9	-6.2	-2.8	-5.1	24		
12	-6.5	-7.2	-8.3	-8.3	-7.5	-7.8	-7.3	-6.8	-6.1	-5.4	-3.6	-2.7	-2.4	-3.3	-3.2	-3.9	-4.5	-4.8	-5.2	-5.4	-4.9	-4.9	-4.9	-4.9	-2.4	-5.4	24		
13	-5	-5.7	-6.8	-5.8	-5.4	-5.2	-5.1	-4.8	-3.9	-2.6	-2	-1.3	-0.9	0.6	0.1	0	-1.5	-2.2	-2.3	-2.3	-2.4	-2.6	-2.9	-3	0.6	-3.0	24		
14	-3.3	-3.7	-3.6	-3.4	-3.2	-3.2	-3.2	-2.8	-2.6	-2	-1.1	-0.4	0	0.3	0.3	0.2	0	-0.4	-0.4	-0.4	-1	-1.3	-1.6	-1.6	0.3	-1.6	24		
15	-1.7	-1.6	-1.6	-2.1	-2	-1.9	-2	-1.9	-0.2	-0.3	-0.1	0.7	0.8	0.9	0.8	0.9	0.8	0.5	0.1	0.1	0.4	0	-0.1	0	0.9	-0.4	24		
16	-0.1	0.1	0	0	0	-1.3	-1.5	-1.3	0.5	3.1	4.6	6.9	8.1	10.2	11.4	10.4	8.2	7	6.3	6.1	5.4	5.4	5.2	5.7	11.4	4.2	24		
17	3.8	3.6	3.1	1.4	2.6	3.4	3.1	3	5.7	9.5	12.5	12.2	12.9	13.9	14.5	13.3	10.4	8	6.8	5.5	3.6	1.8	1.1	1.9	14.5	6.6	24		
18	1.7	2.1	2.5	2.3	2.7	2.5	2.6	2.4	3.2	4.8	7	8.6	9.4	10.5	10.2	10	7.5	4.6	0.5	-1.2	-2	-2.2	-2.9	-3.7	10.5	3.5	24		
19	-3.9	-3.8	-3.4	-3.5	-3.9	-4	-3.8	-3.3	-0.8	1	5	5	5.9	7.3	7.2	5.2	4.3	3.3	2.8	3	3	2.9	2.9	2.8	7.3	1.3	24		
20	2.6	2.5	2.3	2.1	2.1	1.8	1.6	2.3	2.9	3.6	5.2	7.8	6.9	7.7	7.2	6.2	5.9	4.6	3.5	3.4	1.5	-0.9	-0.4	0.4	7.8	3.5	24		
21	0.9	1.3	1.3	1.2	1.1	1.1	0.6	0.7	1.5	2.2	2.9	3	2.8	3.1	3.2	3.3	1.6	0.5	1	2.5	2.9	3.2	3.3	3.4	3.4	2.0	24		
22	3.4	3.2	3.2	3.3	3.2	3.3	3.3	3.2	3.3	3.5	4.2	4.3	4.7	4.4	4.4	4.3	4	4	3.8	3.7	3.6	3.4	3.5	3.5	4.7	3.7	24		
23	3.3	3	3.1	3.2	3.1	3	2.9	2.6	2.7	2.7	3	3.7	4.2	4.7	4.5	4.4	4.2	3.7	3.4	3.5	3.8	3.8	3.8	3.7	4.7	3.5	24		
24	3.2	3.2	3	2.6	2.6	2.4	2.1	2.4	3	3.7	4.4	4.9	5.2	4.9	4.8	4.5	3.4	3.1	2.9	2.8	2.9	2.9	2.7	2.5	5.2	3.3	24		
25	2.4	2	1.1	0.3	-0.2	-0.5	-0.7	-1.3	2.2	4.7	6.8	7.3	7.7	8.1	8.3	7.9	6	4	2.5	1.3	0.3	-1.3	-2	-2.9	8.3	2.7	24		
26	-2.6	-1.5	-1	-0.1	0.3	0.4	0.3	-0.1	0.1	1.8	4.4	5.3	7.3	9.3	10.7	8.9	5.2	2.5	-0.1	0.3	0.7	0.6	0.2	0.2	10.7	2.2	24		
27	-1.6	-2.5	-0.9	-0.4	-1.8	N	-1.6	-0.8	0.8	1.9	2.4	2.9	2.8	3	3.4	3.7	3.4	2.9	2.6	2.4	2.1	1.6	1.3	1.2	3.7	1.3	23		
28	1.1	1	0.8	0.9	0.8	0.8	0.5	0.5	1	1.5	2.1	2.7	2.7	1.9	2	1.5	1.2	0.8	0.7	0.6	0.5	0.5	0.2	2.7	1.2	24			
29	0.1	0	0	0	0.1	0	-0.1	-0.2	0	0.4	0.7	1	1.2	1.4	1	0.8	0.5	0.3	0.2	0.2	0.1	0	0	0	1.4	0.3	24		
30	0.1	0	0	0.1	0.1	-0.2	-0.4	-0.6	-0.8	-0.6	0	0.2	0.3	0.2	0.6	0.3	0	-0.2	-0.6	-0.5	-0.6	-0.7	-0.8	-0.9	0.6	-0.2	24		
31	-1.3	-1.2	-1.3	-1.5	-1.4	-1.6	-1.9	-1.7	-1.6	-1.5	-1.1	-0.8	-0.6	-0.7	-0.6	-0.5	-1	-1.1	-1.1	-1.2	-0.9	-0.6	-0.3	-1	-0.3	-1.1	24		
HOURLY MAX	4.7	4.6	4.1	3.8	3.9	3.4	3.4	4.1	5.7	9.5	12.5	12.2	12.9	13.9	14.5	13.3	10.4	8.0	6.8	6.1	5.4	5.4	5.2	5.7					
HOURLY AVG	-0.4	-0.6	-0.7	-0.7	-0.7	-0.8	-1.1	-0.8	0.3	1.3	2.6	3.2	3.6	4.0	4.0	3.6	2.6	1.7	0.8	0.6	0.2	-0.2	-0.3	-0.4					

STATUS FLAG CODES

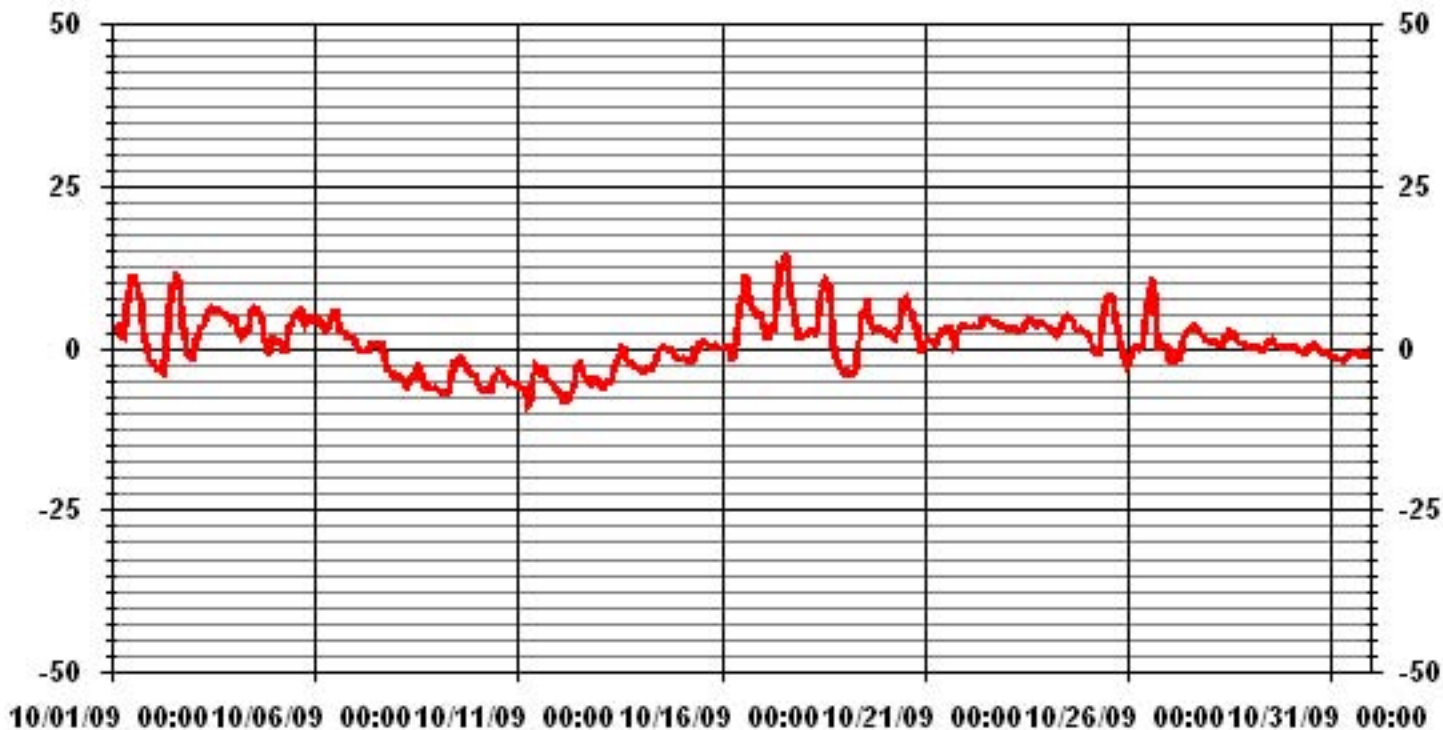
S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	- MAINTENANCE
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE



MONTHLY SUMMARY

MINIMUM 1-HR AVERAGE:	-8.7 °C	@ HOUR(S)	6	ON DAY(S)	11
MAXIMUM 1-HR AVERAGE:	14.5 °C	@ HOUR(S)	14	ON DAY(S)	17
MAXIMUM 24-HR AVERAGE:	6.6 °C			ON DAY(S)	17
CALIBRATION TIME:	0	HRS		OPERATIONAL TIME:	743 HRS
STANDARD DEVIATION:	4.10			AMD OPERATION UPTIME:	99.9 %
				MONTHLY AVERAGE:	0.91 °C

01 Hour Averages



Precipitation

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - MASKWA
OCTOBER 2009
PRECIPITATION hourly averages (mm)

MST		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	23:00	DAILY MAX.	DAILY TOTAL	RDGS.
DAY	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	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					
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	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	0.0	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	0.0	24	
4	0	0.2	0.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3	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	0.0	24	
6	0	0	0	0	0	0.3	0.4	0.1	0.1	0	0.5	1	0.8	2.1	1.4	2.8	0.9	0.3	0.1	0.1	0.1	0	0	0	0	2.8	11.0	24	
7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.1	0	0	0	0	0	0	0	0	0	0.1	0.2	24	
8	0	0.1	0.2	0.3	0.1	0	0	0	0	0.1	0	0	0	0	0.1	0.1	0.5	0.3	0	0	0	0	0	0	0	0	0.5	1.8	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	0.0	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	0.0	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	0.0	24	
12	0	0	0	0	0	0	0	0.1	0	0.1	0	0	0	0	0.1	0	0.1	0	0	0	0	0	0	0	0	0.1	0.1	0.5	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	0.0	24
14	0	0	0	0	0	0	0.1	0	0.2	0	0.1	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0	0.1	0.2	0.6	24
15	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	0.1	0.1	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	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	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	0.0	24
19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0	0	0	0	0	0	0	0.5	0.5	0.9	24
20	0.3	0.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.6	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	0.0	24
22	0	0	0	0.4	0.4	0.1	0.4	0.5	0.4	0.6	0.3	0.2	0.1	0.1	0	0.1	0	0	0	0	0	0	0	0	0	0.6	3.6	24	
23	0	0	0	0	0	0	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
24	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3	0	0	0	0.1	0.1	0.1	0.2	0.1	0.3	0.1	0	0	0.3	1.5	24	
25	0	0	0	0	0	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	0	0	0	0	0	0	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	N	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	23
28	0	0	0	0	0	0	0	0.2	0.5	0.1	0.1	0	0.1	0.3	0	0	0	0	0	0	0	0	0	0	0	0	0.5	1.3	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	0.1	0.5	0.1	0.5	0.7	24
30	0.5	0.6	0.2	0.2	0.1	0	0	0	0	0	0	0	0	0	0	0.3	0.5	0.2	0	0	0	0	0	0	0	0	0.6	2.6	24
31	0	0	0.2	0.2	0.1	0.3	1	0.3	0.9	0.8	0.2	0.6	1.6	0	0.7	0.1	0	0	0	0	0	0	0	0	0	1.6	7.0	24	
HOURLY MAX	0.5	0.6	0.2	0.4	0.4	0.3	1.0	0.5	0.9	0.8	0.5	1.0	1.6	2.1	1.4	2.8	0.9	0.5	0.2	0.2	0.1	0.3	0.5	0.5					

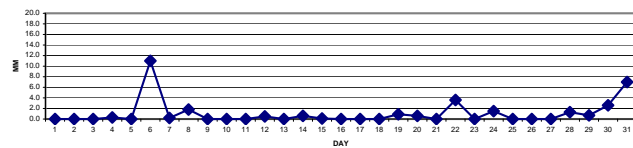
STATUS FLAG CODES

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

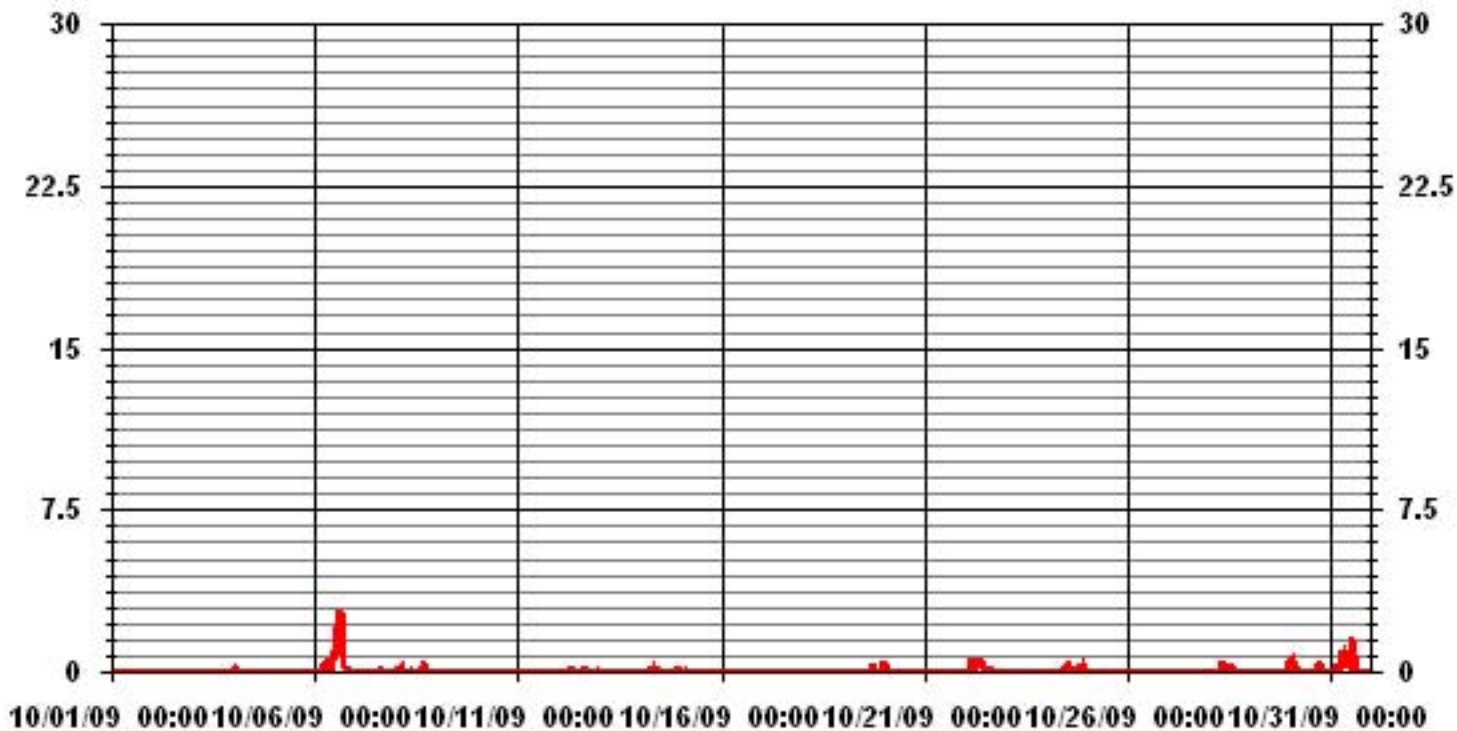
MONTHLY SUMMARY

MAXIMUM 1-HR AVERAGE:	2.8	MM	HOUR(S)	15	ON DAY(S)	6
MAXIMUM DAILY TOTAL	11.0	MM			ON DAY(S)	6
MONTHLY TOTAL	32.7	MM				
CALIBRATION TIME:	0	HRS	OPERATIONAL TIME:	743	HRS	
STANDARD DEVIATION:	0.19		AMD OPERATION UPTIME:	99.9	%	
			MONTHLY AVERAGE:	0.04	MM	

DAILY TOTALS FOR OCTOBER 2009



01 Hour Averages



Relative Humidity

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - MASKWA

OCTOBER 2009

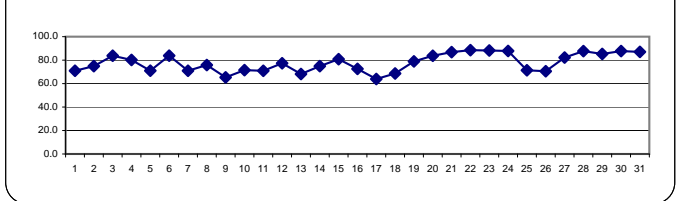
RELATIVE HUMIDITY hourly averages (%)

MST		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 START	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		83	85	85	85	87	89	88	87	81	68	59	53	46	42	39	41	48	53	65	72	79	87	90	91	91	91	71.0	24
2		90	90	90	90	90	90	90	90	81	79	67	53	46	40	39	40	46	63	77	85	89	90	91	91	91	91	74.9	24
3		91	91	90	88	85	84	84	82	79	79	79	81	82	80	79	81	82	84	84	85	84	85	86	85	91	91	83.8	24
4		85	86	89	88	89	87	85	85	87	85	76	70	65	65	66	69	72	82	82	87	90	86	83	90	90	80.2	24	
5		83	84	85	84	82	81	84	81	71	65	66	63	63	60	63	61	61	66	68	67	67	68	66	65	85	71.0	24	
6		66	66	68	68	70	81	87	90	90	89	88	88	90	89	89	89	90	90	89	89	89	87	86	83	90	83.8	24	
7		84	81	77	76	74	72	74	71	65	63	64	62	61	67	65	61	72	75	75	72	67	71	74	80	84	71.0	24	
8		74	80	85	86	85	84	83	80	77	72	67	64	57	54	70	76	82	84	84	83	80	74	70	69	86	75.8	24	
9		66	65	66	68	69	71	72	71	68	65	60	61	61	62	59	64	68	66	65	65	64	63	62	66	72	65.3	24	
10		68	72	72	71	73	74	75	75	72	70	69	69	65	66	63	65	66	73	79	78	77	77	74	73	79	71.5	24	
11		76	77	77	77	76	75	79	79	69	60	54	55	54	54	57	60	68	72	75	79	80	81	84	84	84	70.9	24	
12		84	84	84	84	84	83	84	83	81	78	71	63	60	72	66	75	78	80	80	79	72	73	78	80	84	77.3	24	
13		80	81	85	85	84	84	84	83	79	73	68	62	54	51	51	54	57	58	58	61	63	64	66	86	85	68.2	24	
14		66	70	74	77	76	78	81	81	81	79	76	74	71	70	69	67	67	70	70	71	78	82	84	85	85	74.9	24	
15		85	84	84	86	86	86	85	85	79	80	80	77	76	76	77	78	80	82	81	78	80	80	78	86	80	80.8	24	
16		78	77	78	79	80	85	87	88	81	73	69	63	59	53	50	53	62	68	72	74	77	78	79	78	88	72.5	24	
17		84	86	87	89	87	82	81	79	68	54	40	42	39	36	34	37	45	52	56	61	68	74	77	76	89	63.9	24	
18		76	76	75	78	75	77	76	77	74	69	61	57	55	49	45	45	48	51	66	74	81	85	88	89	89	68.6	24	
19		89	89	89	89	89	89	88	88	83	79	62	61	58	54	55	65	70	82	87	85	84	84	87	88	89	78.9	24	
20		89	90	89	89	90	90	91	90	89	88	83	73	74	67	64	70	75	80	85	84	87	90	91	91	91	83.7	24	
21		90	90	89	90	91	91	91	91	90	88	84	82	79	76	75	81	87	89	89	88	88	88	86	91	86.8	24		
22		87	88	89	90	91	91	91	90	90	89	87	87	87	88	88	88	89	88	87	87	87	88	88	89	91	88.5	24	
23		89	90	89	89	89	90	89	89	89	90	89	87	85	83	84	85	86	89	90	90	89	89	89	89	90	88.2	24	
24		89	90	90	91	91	91	92	91	89	87	86	86	86	85	81	80	85	88	88	89	88	88	88	88	92	87.8	24	
25		87	87	89	89	87	86	87	89	78	69	61	59	55	52	48	47	50	56	62	65	68	76	81	85	89	71.4	24	
26		85	80	82	80	73	71	72	74	75	69	59	57	51	47	44	49	61	71	81	81	81	82	84	84	85	70.5	24	
27		88	90	90	87	89	N	90	89	87	84	82	79	79	78	73	71	70	74	77	78	80	83	86	87	90	82.2	23	
28		88	88	88	88	88	87	88	89	88	86	86	84	84	87	88	87	88	88	89	89	89	89	89	89	89	89	87.7	24
29		89	89	90	89	89	89	89	89	86	84	83	81	81	80	81	81	81	82	83	83	84	86	88	89	90	85.3	24	
30		89	90	90	90	90	90	90	89	88	87	86	85	85	86	84	86	88	89	89	88	88	88	86	84	90	87.7	24	
31		82	83	84	87	88	87	88	88	87	86	85	85	86	87	87	86	87	87	87	87	89	90	91	91	91	91	87.0	24
HOURLY MAX		91	91	90	91	91	91	92	91	91	90	89	88	90	89	89	89	90	90	90	90	90	91	91	91	91	91		
HOURLY AVG		82.6	83.2	83.8	84.1	83.8	83.8	84.7	84.3	80.7	77.1	72.6	69.8	67.6	66.4	65.5	67.1	70.8	74.7	78.1	79.1	80.0	81.6	82.4	82.6				

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

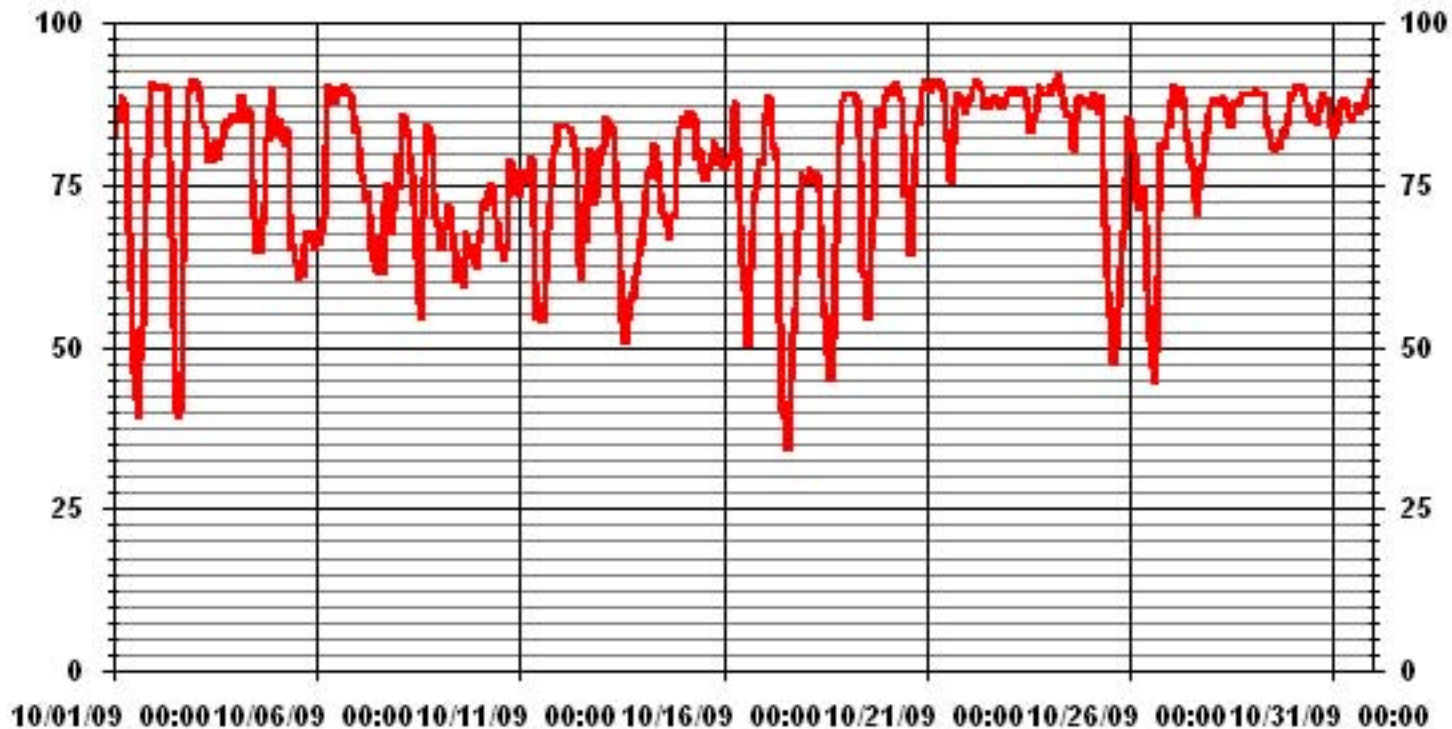
24 HOUR AVERAGES FOR OCTOBER 2009



MONTHLY SUMMARY

MAXIMUM 1-HR AVERAGE:	92 %	@ HOUR(S)	6	ON DAY(S)	24
MAXIMUM 24-HR AVERAGE:	88.5 %			ON DAY(S)	22
				VAR-VARIOUS	
CALIBRATION TIME:	0 HRS	OPERATIONAL TIME:	743 HRS		
		AMD OPERATION UPTIME:	99.9 %		
STANDARD DEVIATION:	12.15	MONTHLY AVERAGE:	77.77 %		

01 Hour Averages



Barometric Pressure

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - MASKWA

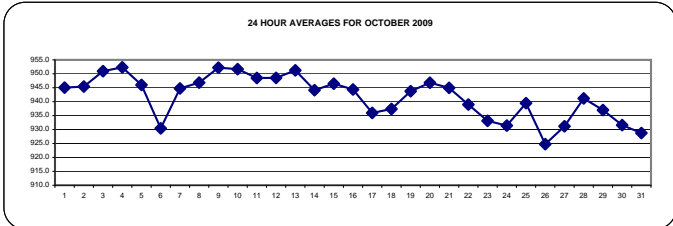
OCTOBER 2009

BAROMETRIC PRESSURE hourly averages (millibar)

MST		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	0:00	DAILY	24-HOUR	
HOUR START	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		944	944	944	945	945	945	945	946	946	947	947	946	946	945	945	945	945	945	944	945	944	944	944	944	944	947	945.0	24
2		944	944	944	944	944	944	944	944	945	946	946	946	946	946	946	946	946	946	946	946	946	947	947	947	947	947	945.4	24
3		948	948	949	949	949	949	950	950	950	951	951	951	951	952	952	952	952	952	952	952	953	953	953	953	953	953	951.0	24
4		953	953	953	953	953	953	953	953	953	953	953	953	953	952	952	952	952	952	951	952	951	951	951	951	951	953	952.3	24
5		951	951	950	951	950	950	950	950	950	949	949	948	948	947	946	945	944	942	941	941	940	938	937	936	936	951	946.0	24
6		935	934	932	931	930	929	928	926	925	925	925	924	925	925	927	929	930	932	933	935	936	937	938	939	939	939	930.4	24
7		940	941	942	943	943	944	944	945	945	946	946	946	946	946	946	946	946	946	946	946	946	946	945	946	944.8	946	944.8	24
8		945	945	944	944	944	944	944	944	945	945	946	946	946	947	947	948	949	949	950	950	950	950	951	951	951	951	946.8	24
9		951	951	951	951	951	952	952	952	952	953	953	953	952	952	952	952	952	952	953	953	953	953	953	953	953	953	952.2	24
10		952	952	952	952	952	952	952	952	952	952	952	952	952	951	952	952	951	951	951	951	951	951	951	951	951	952	951.7	24
11		951	950	950	950	950	950	949	949	949	950	949	949	949	948	948	947	947	947	947	947	947	947	947	947	947	951	948.5	24
12		947	947	947	947	947	947	948	948	948	948	949	949	949	949	949	949	949	949	949	949	950	950	950	951	951	951	948.5	24
13		951	951	951	951	951	952	952	952	953	953	953	953	952	952	951	951	951	951	951	950	950	950	949	949	949	953	951.3	24
14		948	947	946	945	945	944	944	944	944	944	944	943	943	943	943	943	943	943	943	944	944	944	944	944	944	948	944.1	24
15		944	944	945	945	945	946	946	946	946	946	947	947	947	947	947	947	947	947	947	948	948	948	948	948	948	948	946.5	24
16		948	948	948	948	948	948	948	947	948	948	947	947	946	945	945	944	942	941	940	939	938	938	937	937	948	948	944.4	24
17		936	937	936	936	936	937	937	937	937	938	938	938	937	937	937	936	936	935	934	934	934	934	933	933	938	936.0	24	
18		932	933	933	933	933	934	934	935	936	936	937	938	939	939	940	940	940	940	940	940	941	941	941	942	942	942	937.4	24
19		942	942	942	943	943	943	943	943	943	944	944	945	944	944	944	944	944	944	944	945	945	945	945	945	945	945	943.8	24
20		945	945	945	945	945	946	946	946	946	947	947	947	947	947	948	948	948	948	948	948	948	948	948	948	948	948	946.8	24
21		948	948	948	947	947	947	947	947	946	946	946	946	946	945	944	943	943	943	943	942	942	941	941	941	948	945.0	24	
22		941	940	940	939	939	939	939	939	939	939	939	939	939	939	938	938	939	939	939	939	939	938	938	939	938	941	939.0	24
23		938	938	937	937	937	936	936	935	935	935	934	933	933	932	932	931	931	930	930	930	929	929	929	928	938	933.1	24	
24		928	928	928	928	928	928	928	928	929	929	930	930	931	931	932	933	933	934	935	935	936	937	937	938	938	931.4	24	
25		939	939	940	940	940	941	941	941	941	942	943	943	943	942	941	941	939	938	937	937	936	935	934	933	943	939.5	24	
26		932	930	929	929	928	927	926	926	925	925	925	925	924	923	923	922	922	921	921	922	922	922	922	932	924.8	24		
27		922	922	923	924	925	N	926	928	929	930	931	931	932	933	933	934	935	936	936	937	937	937	937	938	938	938	931.2	23
28		938	939	939	939	940	940	940	941	941	941	942	942	938	938	938	942	942	943	943	943	943	944	944	944	944	941.2	24	
29		944	943	943	943	943	943	942	942	941	941	941	941	939	938	936	935	935	933	932	931	930	929	929	944	944	937.0	24	
30		927	928	928	928	929	930	931	931	932	932	933	933	933	933	933	934	933	934	933	933	933	933	933	932	934	931.6	24	
31		931	931	931	930	929	929	928	926	926	926	926	926	926	926	927	928	928	929	930	931	931	931	932	932	932	928.8	24	
HOURLY MAX		953	953	953	953	953	953	953	953	953	953	953	953	953	952	952	952	952	952	953	953	953	953	953	953	953			
HOURLY AVG		942	942	942	942	942	942	942	942	942	942	942	942	942	942	942	942	942	942	942	942	942	942	942	942	942			

STATUS FLAG CODES

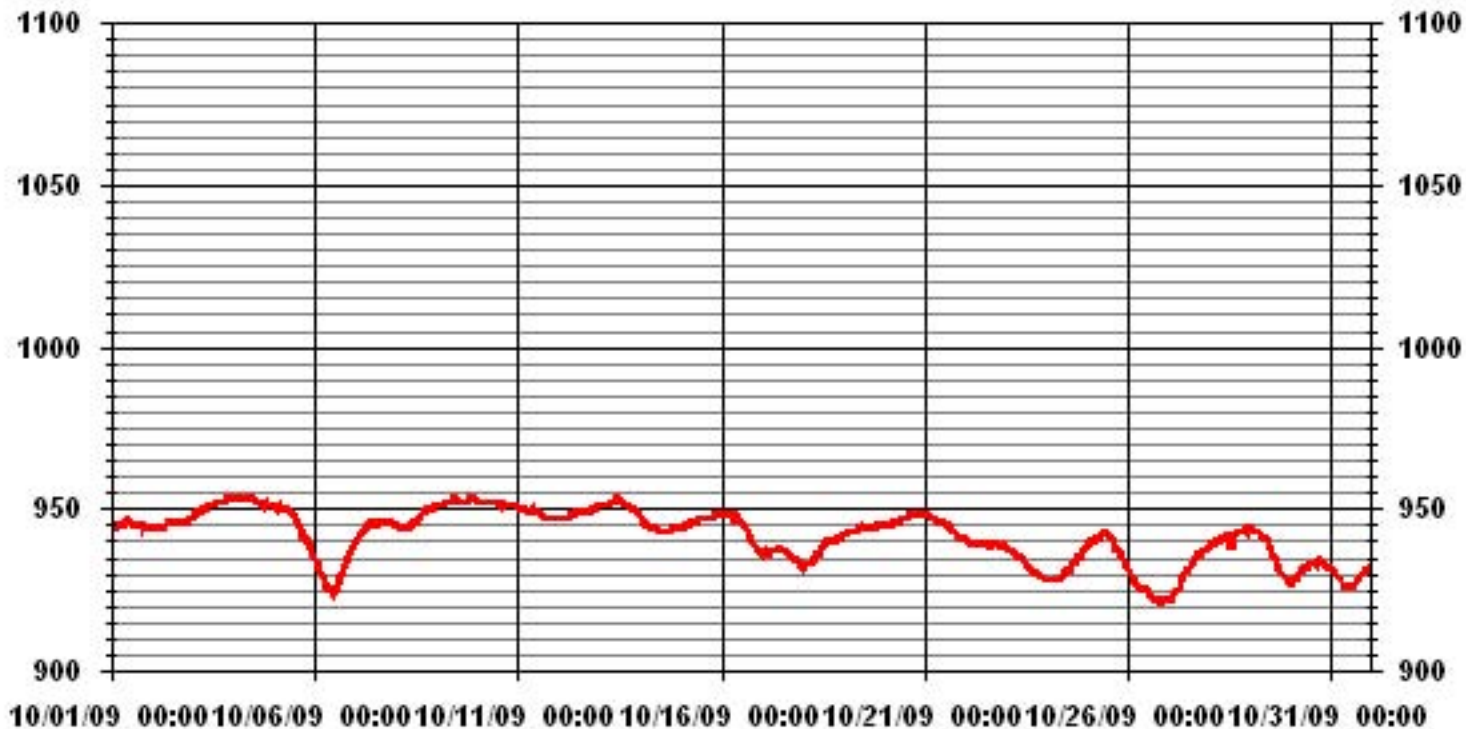
S	- OUT OF SERVICE	I/ZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	- MAINTENANCE
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE



MONTHLY SUMMARY

MAXIMUM 1-HR AVERAGE:	953	INHG	@ HOUR(S)	VAR	ON DAY(S)	3,4
MAXIMUM 24-HR AVERAGE:	952.3	INHG			ON DAY(S)	4
					VAR-VARIOUS	
CALIBRATION TIME:	0	HRS	OPERATIONAL TIME:	743	HRS	
			AMD OPERATION UPTIME:	99.9	%	
STANDARD DEVIATION:	8.07		MONTHLY AVERAGE:	942	MB	

01 Hour Averages



Vector Wind Speed

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - MASKWA

OCTOBER 2009

WIND SPEED hourly averages (km/hr)

MST		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		
HOURLY MAX	HOURLY AVG	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	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		5.5	3.9	3.8	4.2	2.6	4.1	4.1	2.4	3.3	5.1	5.9	6.1	7.5	8.2	9.1	7.3	5.3	3.5	1.6	1.6	2	0.5	1.5	1.6	9.1	3.7	24	
2		0.3	1.1	0.3	0.8	1.1	0.7	0.6	0.5	1.6	4.4	4.4	4.3	6.2	4.7	5.8	7	6.4	3.7	3.1	1.8	1.9	3.1	1.8	0.6	7	1.9	24	
3		1.1	3.2	3.2	4.7	4.5	5.9	5.4	8.4	9.6	12.1	12.7	11.7	9.3	9.4	11.1	10.2	10.3	9.9	9.9	9.7	8.5	7	6	6.9	12.7	7.8	24	
4		6.1	8.6	5.6	7.9	5.2	7.2	7.5	7.3	8.8	7.6	10.2	9.2	11.2	9.1	7.9	8.6	7.1	4.6	1.9	1.6	1.1	1.4	1.1	2	11.2	6	24	
5		1.5	1.1	0.5	0.7	1.4	1.2	0.5	1.9	2.3	3.1	6.3	5.4	5.5	6.8	6.3	4.8	4.7	3.9	6	6.5	8.4	10.1	9.4	10.8	10.8	3.9	24	
6		10.7	11	12.8	10.6	8	4.6	5.3	6.7	4.9	3.4	3.7	2.3	4.8	9.1	11.2	10.1	9.4	10.5	12	12.5	12.5	13.8	12.8	11.4	13.8	3.1	24	
7		8.4	11.8	10.9	10	9.2	8.4	7.3	9.6	11	10.3	10.1	10.4	9.3	8.6	9.3	9	8.2	6.6	3.1	3.1	3.9	2.2	0.7	1.3	11.8	7.4	24	
8		1.3	3	3	3.4	5.9	5.4	4.9	6	7.5	8.8	10.7	10.2	11.5	10.9	10.3	11.1	10.4	9.1	7.3	8	9	8.4	11.2	12.2	12.2	7.4	24	
9		14.1	12.3	13	11.1	9.7	8.4	8.4	8.4	9.9	9.6	11	11.7	12.3	11.9	12.2	11.4	9.3	9.5	9.5	8.3	9.1	8.3	8.6	8.7	14.1	10.1	24	
10		7.5	7.3	7.7	9.5	9.6	9.6	9.8	8.8	9	9.5	8.1	7.4	7.7	8.4	8.7	7	7.2	5.4	3.1	3.6	4.1	3.3	2.8	3.7	9.8	6.8	24	
11		4.2	3.2	4	2.8	3.9	3.8	3	1.7	5.8	7.3	4.9	6.1	4.2	2	4.9	2.8	2.8	1.4	0.2	1.3	0.6	2	1.9	0.9	7.3	2.6	24	
12		0.4	2.2	2	1.6	2.2	1.7	2.3	2.5	6	4.2	5.4	5.5	3.6	6.2	5.5	5	1.9	2.5	0.6	2	4.9	6.1	5.3	8.1	8.1	2.7	24	
13		9.1	8.7	6	4.7	4	4.5	5	3.4	5.6	6.8	8.5	9.2	8.5	9.1	10	10.5	10.9	7.7	8	8	7.9	9.5	9.4	7.7	10.9	7.3	24	
14		7.6	6.4	8.7	8.9	9.4	9.2	9.2	8.9	9	9.1	9.3	9.7	11	10	10.5	10.9	10.9	7.6	7.6	8.8	7.1	6.1	5.3	5.7	11	8.4	24	
15		5.7	5	5.7	3.5	3.4	5	5.4	3.5	4	5.3	3.4	2.1	3.5	4.8	4	2.9	3.6	2.5	3.4	3.1	2.6	1.8	3.1	2.9	5.7	3	24	
16		2.7	5.1	5.8	5.8	5.6	4.4	5.4	5.8	7.4	7.4	10.3	9.1	8.1	7.8	7.8	8	6.5	9.7	10.3	9.5	7.1	4.6	4.6	6.6	10.3	6.5	24	
17		3.5	6.2	6.1	1.9	8	7.4	8.4	5.4	6.2	6.5	13.3	11.6	9.1	7.2	7.5	6.1	6.3	4.4	2.5	2.1	2.3	1.7	1.9	1.2	13.3	4.8	24	
18		0.4	1.2	0.8	1.9	1.3	2.4	2.6	2.2	2.1	3.2	4.3	6.2	5.7	7.2	5.9	5.2	5.4	3.2	0.2	2.5	4.2	3.2	2.7	1.6	7.2	2	24	
19		0.9	1.4	1.2	0.5	1.5	1	0.4	1.5	1.9	2	6	7.2	5.8	4.4	4.6	4.7	2.2	2.4	1.7	4.5	5.8	6.1	6.9	7.1	7.2	2.6	24	
20		2.3	1.5	1.2	1.3	0.9	0.8	0.4	1.3	1.3	0.9	0	1.7	2.8	3.5	3	3	2.6	1.4	3.2	4.4	2.6	0.4	0.5	0.4	4.4	0.3	24	
21		1.9	2.9	4.6	3.4	4	3.6	0.5	1.9	1.7	3.6	6	6.5	6.4	6.8	7.6	5.5	4.4	3.9	4.9	7.2	8.9	7.1	6.2	5.6	8.9	3.7	24	
22		5.4	6.7	6.2	2.7	2.4	1.8	5.4	4	3.3	2.9	2.4	4.3	5	7.1	6.2	6.9	7.4	7.7	5.1	3.6	2.3	3.4	3.2	3.9	7.7	1.4	24	
23		4.1	3.3	0.4	2.2	2.1	3.7	3	3.3	3.2	3.8	5.7	3.9	4.1	3.1	3.7	2.9	3.1	4.1	3.8	2.8	5	4.9	4.4	4.6	5.7	2.1	24	
24		3.2	3.5	3.4	4.7	2.8	3.7	3.9	4.2	4.8	5.7	6.8	7.6	9.4	10.8	13.2	12.5	10.1	9.4	8	9.5	10	10.8	11.1	10.8	13.2	5.7	24	
25		10.7	9.5	6.2	5.9	6.9	7.7	6	3.4	4.5	5.9	5	7.7	7	8.8	8.9	8.3	6.9	5.7	5	5.1	4.7	4.2	3.2	1.7	10.7	4.7	24	
26		3.1	2.4	2	3	3.2	4	4.6	2.3	1.6	3	3.2	2.7	3.2	1.5	4.4	4.2	5.3	3.4	1	1	1.5	1.2	0.5	0.9	5.3	1	24	
27		0.6	1.6	2.6	2.3	1.3	N	2	3.4	5.4	6.8	6.9	6.9	9.6	7.6	6.6	3.9	6.3	5.3	4.8	5.3	5.1	4.9	2.4	2.8	9.6	4.1	23	
28		3	4	2.9	3.3	2.7	2.6	2.4	2.4	1.4	2.8	2.9	5.4	3.6	3.4	4.6	4.9	3.9	4.3	3.1	2.2	2.1	1.7	1.6	3.4	5.4	2.4	24	
29		3.2	1.7	1.6	1.3	1.1	2.1	2.6	4.2	5.6	5.5	6.6	7	7.9	9.1	8.1	7.1	8.6	8.2	8.3	8.7	9.2	8.7	7.4	7.7	9.2	5.1	24	
30		4.3	3.5	3.7	2.2	2	3.9	3.1	5	4.9	4.6	3.5	2.7	3.1	4.2	3.7	2.2	1.7	1.7	1.6	1.5	0.6	1.8	4	5.8	5.8	2.6	24	
31		5.1	4.9	5.9	7.1	9	9.7	10.7	11.5	11.8	12.3	10.2	10.1	5.9	6.7	6.3	5.3	4.7	3.3	3.2	4	4.7	3.5	4.9	8.2	12.3	6	24	
HOURLY MAX		14.1	12.3	13.0	11.1	9.7	9.7	10.7	11.5	11.8	12.3	13.3	11.7	12.3	11.9	13.2	12.5	10.9	10.5	12.0	12.5	12.5	13.8	12.8	12.2				
HOURLY AVG		4.4	4.8	4.6	4.3	4.4	4.6	4.5	4.6	5.3	5.9	6.7	6.8	6.9	7.0	7.4	6.8	6.3	5.4	4.6	5.0	5.2	4.9	4.7	5.1				

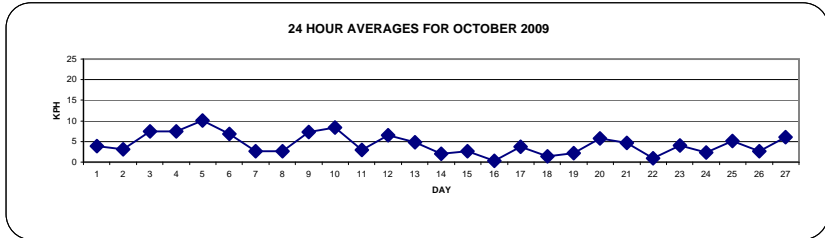
STATUS FLAG CODES

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

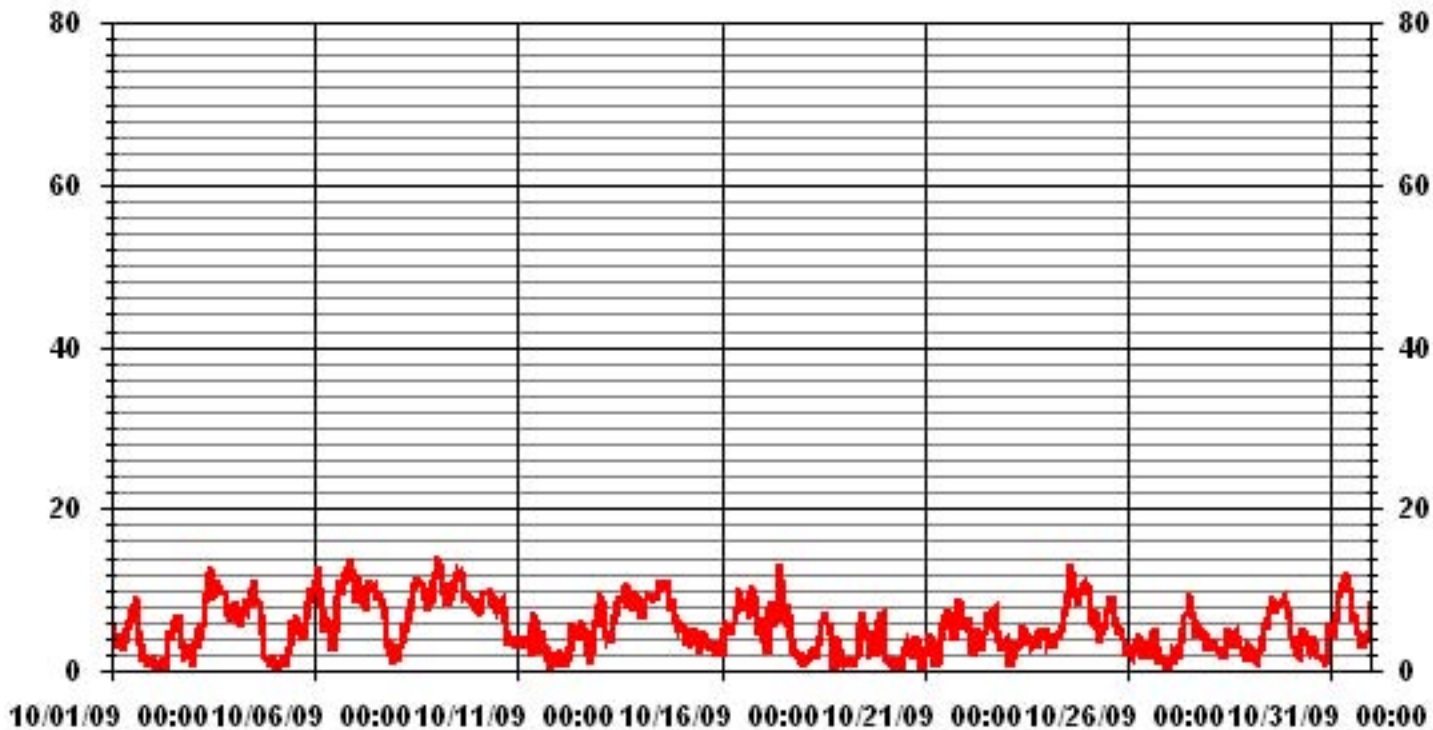
LAST CALIBRATION: November 7, 2007

MONTHLY SUMMARY

MAXIMUM 1-HR AVERAGE:	14.1	KPH	@ HOUR(S)	0	ON DAY(S)	9
MAXIMUM 24-HR AVERAGE:	10.1	KPH			ON DAY(S)	9
CALMS (≤ 0 KPH)	4.30	%	OPERATIONAL TIME:	743	HRS	
MONTHLY CALIBRATION TIME:	0	HRS	AMD OPERATION UPTIME	99.9	%	
STANDARD DEVIATION	3.19		MONTHLY AVERAGE	5.42	KPH	



01 Hour Averages



— LICA30 WSP KPH

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - MASKWA

OCTOBER 2009

VECTOR WIND SPEED MAX instantaneous maximum in km/hr

MST		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 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	MAX.	
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		16.6	10.3	12.8	16.1	10.3	15.3	11.3	6.6	9.1	12.1	17.3	15.6	19.5	22.6	22.2	15.7	13.1	9.9	6.3	7.4	4.5	4.2	3.9	4.8	22.6	
2		3.8	3.8	2.4	3	3.1	3.6	2.5	2	4.8	9.3	11.4	14.5	16.7	16.8	14.6	17.5	16.3	9.3	8.7	5.9	4.2	5.9	4.8	3.3	17.5	
3		3.5	8.1	8.1	11.3	10	10.5	10.9	16.5	19.4	26.6	24.6	25.4	20.6	21.2	24.7	27.9	28.8	23.8	21.9	19.9	21.3	15.5	12.7	14.7	28.8	
4		14.3	20	11.2	18.2	11.2	14.5	17.3	14.6	18	15.6	22	24	22	18.9	21.1	20.8	16	12.6	5.3	5	4.1	7.8	7.4	6.2	24	
5		6.5	3.6	3.8	3.1	5	5.2	9.2	5.4	6.6	9.9	13.1	14.6	16.6	16.1	18	16.3	11.7	8.4	14	13.3	20.3	18.9	21.7	24.1	24.1	
6		23.7	22.4	22.6	19.4	17.6	9.3	9.2	13.7	10.7	8.2	8.6	7.6	14.2	23.5	27.1	24.8	26	28.2	31.6	30.6	29.3	32.5	33.2	28.9	33.2	
7		24.7	34.7	30.9	26.4	23.4	27	17.8	27.1	27.1	30	30	29.8	23.7	26.3	28.4	25	23.9	20.5	15.1	12.6	13.1	8.3	4.1	4	34.7	
8		7.5	6.8	6.1	7.4	18.3	13.3	11.5	14.8	17.4	19.6	29.5	27.9	28.7	28.6	28.9	33.8	36.6	26.1	24.1	22.2	23.4	27	29.4	34.6	36.6	
9		35.8	35	31.7	33.2	27.8	20.7	20.2	21.4	29.5	27.5	30.2	29.2	27.7	33	29.5	29.1	35.6	26.1	25.3	25.1	29.5	24.4	22.9	22.7	35.8	
10		20.2	19.9	19.9	22.6	34.4	25.5	27.4	23.6	23.8	22	21.5	18.8	18.4	21.6	22.7	15.7	17.2	16.9	8.8	10.6	10.9	7.8	7.1	9.9	34.4	
11		11.2	8.5	11	6.3	8.6	7.7	6.1	5.6	14	16.7	17.2	16.1	13.6	8.9	12.4	9.7	8.4	4	2.7	3.3	4.3	4.6	4.3	4.4	17.2	
12		2.7	5.7	4.5	3.6	5	3.5	5.1	8.6	15.7	11.4	12.1	12.5	12.1	13.5	12	17.8	6.6	8.5	4.5	12	11.7	15.8	14.6	20.1	20.1	
13		19.7	21.2	13.9	11.6	10	10.9	11.1	11.3	13.4	17.9	19.4	22.2	22.5	23.2	24	24.3	26.2	17.5	20.2	21.3	21.5	23.6	20.7	19.4	26.2	
14		19.1	14.6	21.5	21.2	22.8	22.5	20.4	21.5	23.5	22.8	22.5	23.5	26.8	24.2	29	27.9	26.2	19.1	22.5	21	16.4	18.5	13.2	12.1	29	
15		14	13.2	12.1	11.3	10.1	13	13.4	9.5	11.9	13.5	8.4	6.3	7.8	9.8	8.4	7.2	8.4	5.9	6.2	6.4	9	4	5.7	5.9	14	
16		6.1	10.8	10.9	10.5	10.4	8.8	9.4	12.5	13.3	16.5	20.4	18.1	14.9	17.5	16	16	15.8	21.7	20.5	20.5	16.5	13.1	16.5	17.7	21.7	
17		8	13.9	12.5	9.4	15.4	14	16.7	12.6	12.2	21	29.7	26.6	20.7	17.2	20.9	14.2	14.9	11.1	7.7	6.2	4.4	4	4.8	4	29.7	
18		4.2	4	3.8	7.3	4.5	5.4	6	5.4	5.8	8.2	10.9	14.3	15.6	19.7	16.5	13.9	13.8	9.9	5.5	5.6	9.3	6.9	6.8	6.6	19.7	
19		5.9	4.4	6	2.7	4.8	3.8	2.2	3.8	5.4	9.2	12.6	14.6	13	11.2	12.8	11.2	8.8	12.4	6.9	11.3	13.1	15.8	15.3	14.9	15.8	
20		8.7	7.1	6.7	5.1	2.7	4.2	2.1	5.3	3.9	3.9	3.8	9.9	9.5	8.3	8.3	10.9	7.9	8.6	6.4	11.7	9.9	3.1	4.1	2.9	11.7	
21		5.5	7.7	8.9	8.2	8.3	9.7	4.6	5.9	7.3	9.9	16	15.8	15.3	16.7	19.4	14.5	10.2	8.6	16.7	17.5	19.2	15.7	15	13.8	19.4	
22		11.8	13.1	16.1	10.3	7.1	5.1	13.6	13.6	7.9	7	6.2	10.9	13	16.6	14.1	16.3	17.2	26.7	18.8	16.6	6.4	11.9	8.9	11.5	26.7	
23		14.3	11.3	4.1	10.7	5.8	7.4	9.6	8.3	10.4	9.3	11.1	9.3	9.1	8.3	8.2	8.7	10	9.8	10.4	7.7	11.6	11.8	10.3	14.4	14.4	
24		11.6	9.4	10.1	11.5	6.5	8.7	9.8	9	10	12	15.6	22.1	31	26.5	27.9	28.2	24.1	23.9	20.7	22.7	26.6	25.9	29.3	30.2	31	
25		26.3	23.2	15.7	14.3	16.3	18.1	17.2	9.1	10	13.6	12.9	15.9	17.5	21.2	20.6	19.1	17.2	10.2	8.8	8.1	8.2	7	9.6	4.2	26.3	
26		6.6	5.9	7	11.5	9.4	12.9	12.2	10.8	6.7	9.4	9.8	9.7	9.9	8.8	11.8	11.7	8.8	7.2	3.4	4.3	4.6	4.6	3.7	2.9	12.9	
27		2.4	4.2	5.8	8.3	4.8	N	6.7	10.9	15.8	19.3	18.5	17.6	23.7	21.9	20.2	15.9	16.9	14.5	12.1	15.6	13.8	11	8.7	8.9	23.7	
28		9.4	9.6	9.5	8.7	7.3	8.2	7.6	8.8	6	7.3	7.9	10.5	9.8	11	9.6	9.6	9.1	8	5.9	4.2	3.8	4.2	4.4	5.8	11	
29		7.3	3.7	3.9	3.3	3.9	6.2	7	9.6	12.1	12.5	13.3	17.3	17.9	18.2	16	15.6	19.1	18.3	20.3	19.8	21.8	20.5	16.1	17	21.8	
30		10.6	9.5	9.5	7.3	6	8.4	8.5	9.9	11.3	8.1	7.3	5.9	6.1	9.4	9.3	5.7	4.7	5.4	5.9	5	3.3	6.7	8.6	14	14	
31		15.7	14.1	11.7	17.1	22.3	20.8	23.5	29.6	27.5	31.8	24.4	24.7	23.5	15.5	13.4	12.4	12.9	7.6	7	8.9	8.8	7.5	11.3	16.4	31.8	
PEAK		35.8	35.0	31.7	33.2	34.4	27.0	27.4	29.6	29.5	31.8	30.2	29.8	31.0	33.0	29.5	33.8	36.6	28.2	31.6	30.6	29.5	32.5	33.2	34.6		

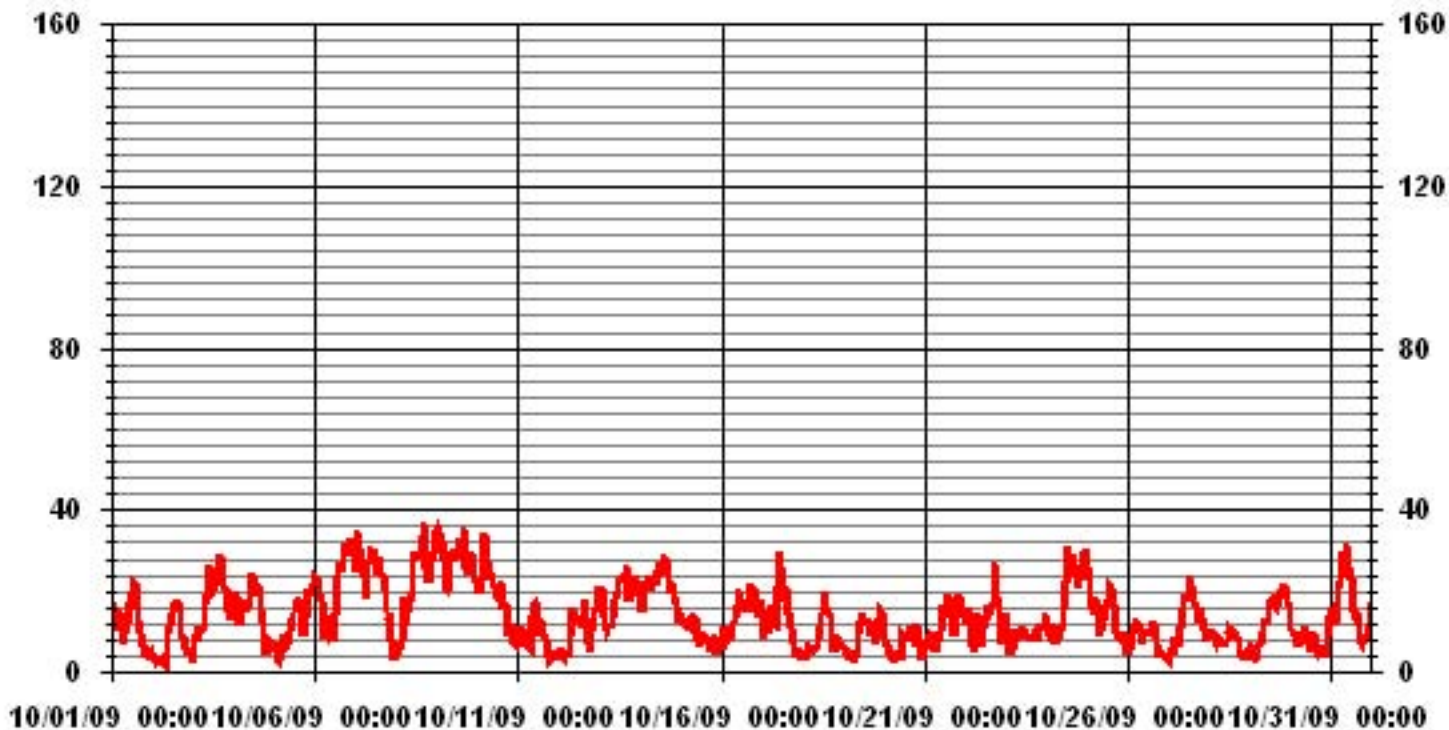
STATUS FLAG CODES

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

MONTHLY SUMMARY

MAXIMUM INSTANTANEOUS READING	36.6	KPH	@ HOUR(S)	16
			ON DAY(S)	8

01 Hour Averages



— LICA30 WSMAX KPH

LICA30
WSP / WDR Joint Frequency Distribution (Percent)

October 2009

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	3.76	4.30	5.92	4.71	3.09	2.55	6.46	2.82	3.23	5.92	3.90	2.42	2.15	1.74	2.82	3.90	59.75
< 12.0	3.90	2.15	1.34	.13	1.61	3.76	4.03	2.28	.67	2.82	1.48	.53	.94	2.01	3.23	6.72	37.68
< 20.0	.26	.26	.00	.00	.00	.13	.00	.00	.00	.13	.00	.00	.00	.40	.53	.67	2.42
< 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	7.94	6.72	7.26	4.84	4.71	6.46	10.49	5.11	3.90	8.88	5.38	2.96	3.09	4.17	6.59	11.30	

Calm : .13 %

Total # Operational Hours : 743

Distribution By Samples

	Direction																
Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 6.0	28	32	44	35	23	19	48	21	24	44	29	18	16	13	21	29	444
< 12.0	29	16	10	1	12	28	30	17	5	21	11	4	7	15	24	50	280
< 20.0	2	2				1				1				3	4	5	18
< 29.0																	
< 39.0																	
>= 39.0																	
Totals	59	50	54	36	35	48	78	38	29	66	40	22	23	31	49	84	

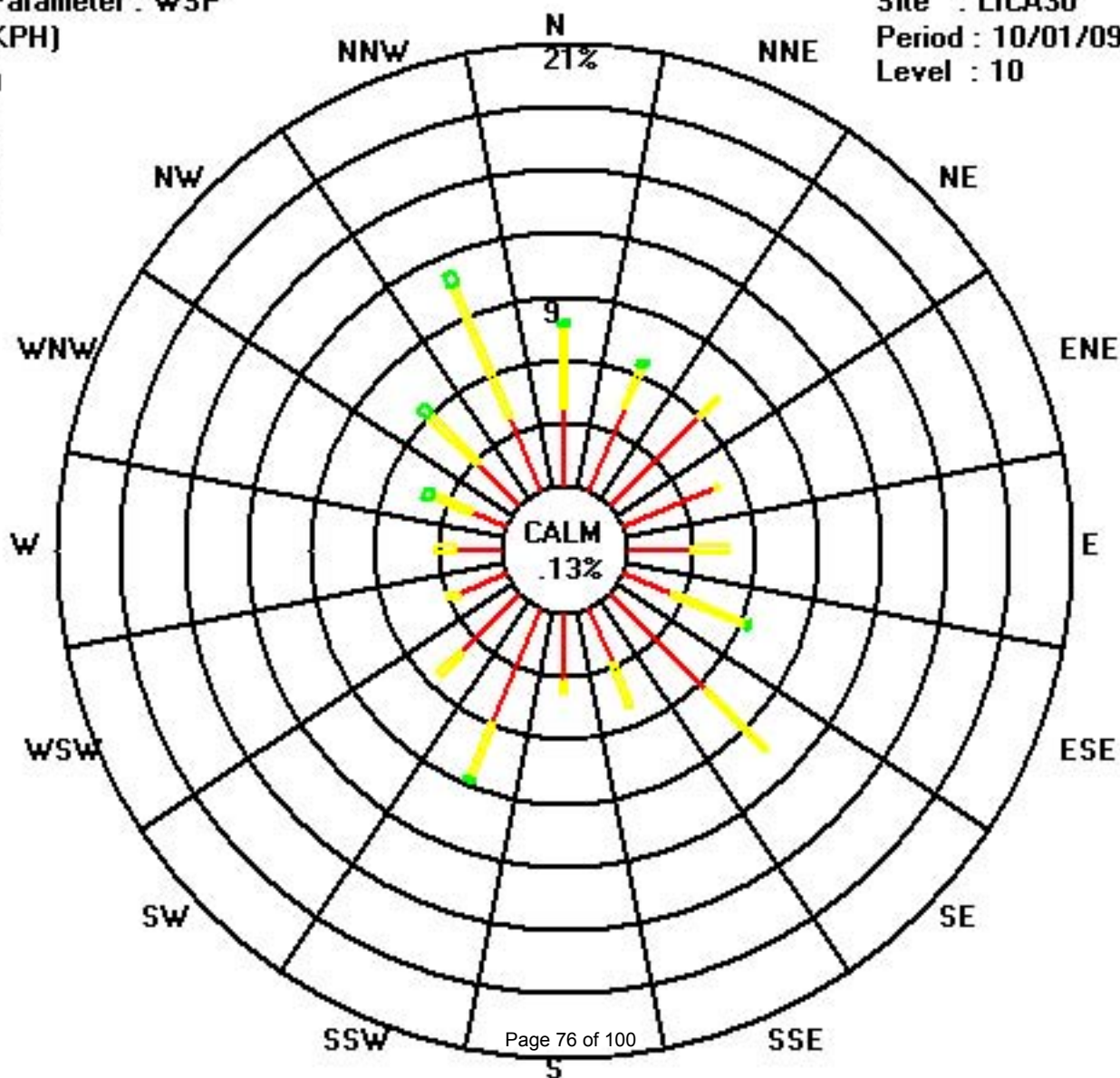
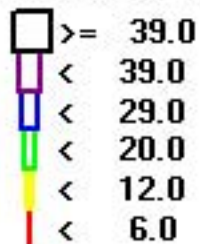
Calm : .13 %

Total # Operational Hours : 743

Class Limits (KPH)

Period : 10/01/09-10/31/09

Level : 10



Vector Wind Direction

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - MASKWA

OCTOBER 2009

WIND DIRECTION hourly averages in degrees

MST		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 START	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.	QUADRANT	RDGS.	
DAY																													
1		340	350	341	349	330	304	354	341	330	350	320	334	332	349	8	9	5	5	28	88	26	337	125	98	350	N	24	
2		142	253	231	196	184	163	179	204	61	37	19	354	17	334	18	27	49	121	81	45	49	61	63	63	36	NE	24	
3		14	18	12	11	5	18	20	22	20	24	26	23	20	11	16	14	14	8	9	6	6	6	4	11	14	NNE	24	
4		11	30	23	31	20	26	28	36	30	39	34	49	37	27	36	37	37	27	21	24	76	78	70	328	31	NNE	24	
5		7	62	258	238	328	339	54	229	217	200	203	219	246	224	242	228	206	183	197	203	202	200	203	201	211	SSW	24	
6		203	202	197	202	205	204	201	196	202	204	232	321	352	7	4	350	345	346	344	346	343	352	353	349	314	NW	24	
7		346	346	347	344	347	346	340	332	347	343	332	348	346	336	345	331	340	329	319	296	323	303	277	234	339	NNW	24	
8		285	3	9	6	24	20	13	11	9	2	2	3	357	352	347	5	346	339	341	330	324	329	321	324	350	N	24	
9		330	326	328	326	319	309	302	305	327	324	330	329	308	317	317	321	328	325	333	332	340	334	346	327	324	NW	24	
10		328	307	318	322	317	324	332	332	338	351	339	349	344	330	358	350	354	348	346	334	340	357	342	350	336	NNW	24	
11		350	357	0	357	20	21	15	17	32	33	42	48	53	68	43	118	70	146	224	220	61	31	35	101	33	NNE	24	
12		71	143	126	66	49	46	41	130	142	138	169	151	123	63	58	88	67	34	57	147	158	149	142	137	117	ESE	24	
13		144	145	142	140	116	125	134	107	92	101	94	113	123	110	113	114	125	131	137	131	121	132	133	127	123	ESE	24	
14		129	110	102	95	96	97	100	104	108	108	102	100	102	102	109	109	113	120	128	132	138	134	126	129	110	ESE	24	
15		132	137	135	136	129	143	150	151	164	176	210	220	209	206	207	222	219	221	202	208	230	222	202	193	177	S	24	
16		158	187	196	196	200	181	185	193	196	205	201	204	198	189	175	164	161	161	165	166	146	160	174	191	181	S	24	
17		196	215	213	220	210	215	213	214	225	256	291	290	282	262	272	242	222	233	245	237	212	188	245	315	243	WSW	24	
18		202	261	150	38	266	272	273	248	270	305	331	317	321	321	334	341	349	353	131	69	50	71	79	75	337	NNW	24	
19		116	155	198	285	202	108	29	93	97	51	150	182	181	147	113	73	358	124	89	142	139	146	157	151	141	SE	24	
20		180	187	142	111	121	195	240	292	253	326	225	235	217	201	248	342	296	2	14	9	17	85	208	3	269	W	24	
21		23	29	35	65	48	61	154	66	43	137	170	155	159	147	139	129	82	97	102	101	102	94	101	88	106	ESE	24	
22		72	80	83	58	79	90	130	139	179	220	264	297	282	281	286	282	286	294	322	339	268	265	257	310	296	WNW	24	
23		316	352	276	239	220	209	227	213	203	190	196	170	153	144	148	120	123	83	113	126	130	131	126	132	157	SSE	24	
24		140	160	160	190	201	220	231	234	224	225	236	275	282	286	291	301	299	294	290	293	304	308	306	312	279	W	24	
25		314	299	280	274	279	283	277	253	262	275	252	227	239	228	226	221	214	202	195	193	196	187	186	53	247	WSW	24	
26		57	62	42	71	126	123	130	164	171	205	209	263	252	252	287	206	187	190	126	48	86	158	129	247	167	SSE	24	
27		140	205	281	329	297	N	325	339	351	330	330	333	320	334	338	342	319	319	302	309	305	290	275	311	320	NW	23	
28		300	341	344	316	337	324	338	328	316	311	342	28	56	44	30	31	44	29	48	70	59	48	61	36	12	NNE	24	
29		47	51	51	53	52	52	71	157	156	156	150	153	147	151	145	138	135	133	133	132	134	125	115	132	51	SE	24	
30		112	91	85	123	76	35	51	46	44	45	47	47	34	45	70	53	95	134	90	87	69	102	134	131	73	ENE	24	
31		129	131	129	119	117	127	123	117	124	122	118	120	131	112	118	121	130	175	202	200	191	210	219	212	134	SE	24	
HOURLY AVG		350	357	347	357	347	346	354	341	351	351	342	354	357	352	358	350	358	353	346	346	343	357	353	350				

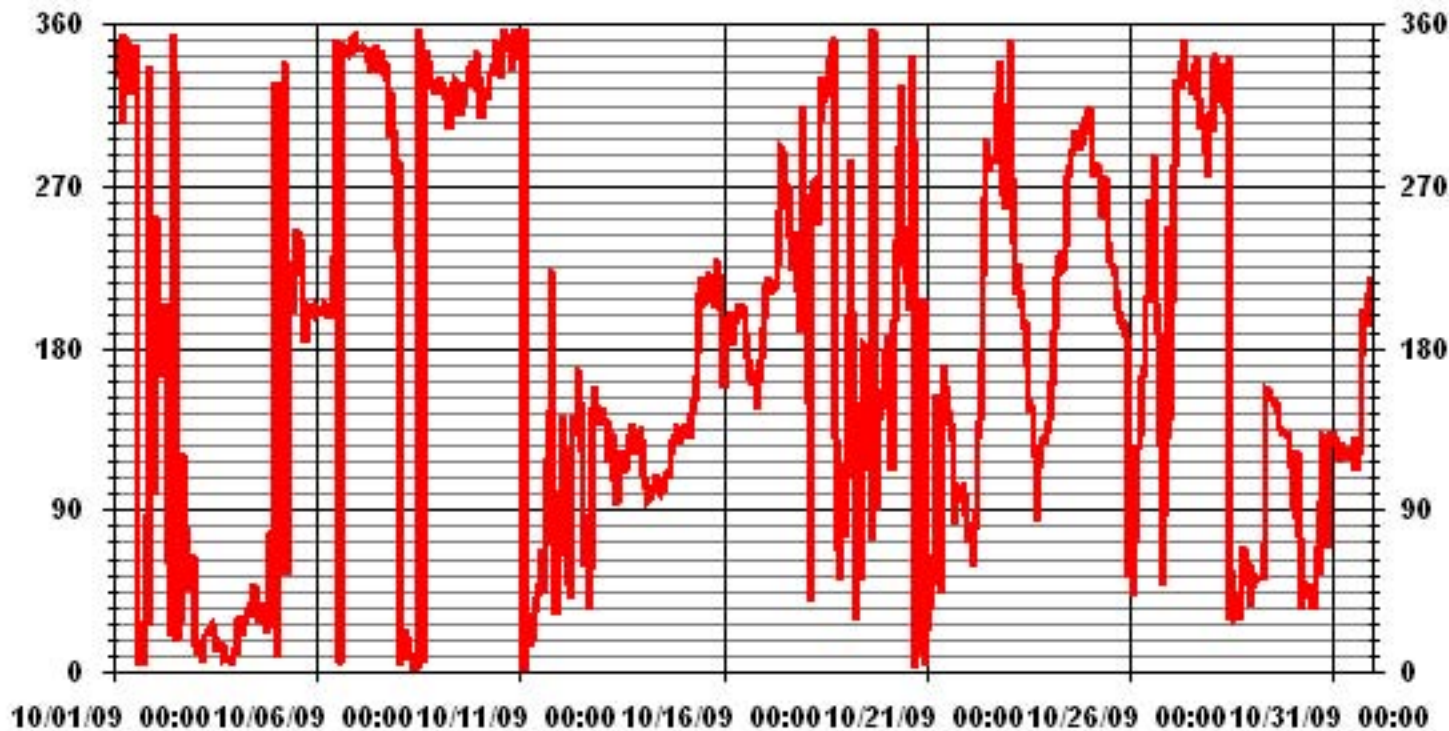
STATUS FLAG CODES

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:	November 7, 2007
DECLINATION :	19 DEGREES FROM MAGNETIC NORTH

MONTHLY CALIBRATION TIME:	0 HRS	OPERATIONAL TIME:	743 HRS
STANDARD DEVIATION	109.74	AMD OPERATION UPTIME	99.9 %
		MONTHLY AVERAGE	13 DEG

01 Hour Averages



— LICA30 WDR DEG

Standard Deviation Wind Direction

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - MASKWA

OCTOBER 2009

STANDARD DEVIATION WIND DIRECTION (STDWDIR) hourly averages in degrees

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	
DAY																									
1	29	27	31	31	39	24	30	37	37	34	35	34	35	31	25	23	20	23	57	27	12	34	31	28	
2	37	18	35	30	19	46	28	31	45	13	43	36	40	48	39	25	17	16	20	52	28	18	30	71	
3	58	15	18	16	23	13	14	14	16	15	15	14	16	17	16	16	18	17	17	18	15	17	20	19	
4	18	15	15	12	12	11	12	13	12	18	18	23	18	19	26	17	20	15	28	42	53	63	61	39	
5	48	50	33	23	44	45	43	18	31	47	19	30	29	25	29	25	19	13	10	13	12	11	13	13	
6	12	12	11	12	15	13	12	13	17	19	21	37	27	16	18	22	24	28	24	21	24	20	22	24	
7	29	22	26	26	26	28	29	27	27	28	28	29	27	29	29	29	28	30	33	32	33	33	34	25	
8	35	32	21	20	17	14	17	16	22	23	21	21	25	24	26	20	26	25	26	29	24	30	24	25	
9	24	27	26	26	24	25	22	22	27	28	27	25	23	23	23	24	27	28	27	28	28	28	27	25	
10	29	21	27	26	27	27	29	28	26	27	31	29	24	28	23	24	25	28	28	29	28	26	32	26	
11	29	31	21	27	18	33	19	52	20	23	45	41	47	67	28	45	42	36	36	29	59	38	36	53	
12	66	21	22	23	19	31	31	25	20	29	27	33	37	33	27	28	35	30	79	44	16	18	19	19	
13	17	17	15	20	25	23	19	33	22	31	25	24	26	30	27	26	19	19	21	27	24	19	19	24	
14	20	23	20	24	21	22	21	22	23	24	26	23	26	25	24	25	25	23	26	24	21	24	25	22	
15	21	20	19	35	24	19	18	26	29	19	26	43	27	19	16	20	19	15	11	15	22	16	10	16	
16	17	15	12	15	14	13	12	13	13	18	14	18	18	24	21	15	16	12	13	15	19	27	29	18	
17	19	18	13	44	12	9	9	10	13	19	17	18	21	28	28	26	18	16	19	24	15	20	22	47	
18	42	32	57	44	23	17	16	18	25	21	31	26	32	30	33	32	28	24	52	25	16	16	18	35	
19	43	36	42	42	27	29	40	33	42	38	22	23	24	38	32	19	61	60	35	16	17	17	15	18	
20	38	39	73	50	38	33	23	27	26	42	79	52	33	34	35	33	25	55	13	19	30	19	39	52	
21	23	34	20	22	20	28	51	33	35	25	20	21	22	21	25	23	18	16	17	19	17	20	24	24	
22	21	19	23	36	24	33	21	27	26	22	27	23	22	22	21	19	17	20	32	34	27	23	21	28	
23	29	32	40	22	16	14	24	18	26	25	18	31	31	44	24	43	40	28	20	27	23	21	22	39	
24	44	21	25	19	18	24	20	16	14	14	17	22	20	19	17	18	19	18	18	19	19	18	18	19	
25	22	17	15	18	18	17	18	12	21	21	23	23	29	24	21	20	12	9	9	9	8	9	30	39	
26	26	29	41	33	27	23	18	32	43	26	27	43	38	64	28	30	8	32	46	29	41	34	46	33	
27	55	22	22	25	34	N	26	30	28	30	30	29	24	30	28	28	28	25	20	22	23	19	26	27	
28	33	20	36	28	31	33	30	29	32	21	35	22	39	29	16	16	19	17	19	21	21	36	49	6	
29	1	0	0	0	0	0	0	9	10	17	18	19	19	17	17	17	18	18	17	17	18	19	18	19	
30	19	25	23	28	37	14	18	17	15	15	21	25	18	14	22	24	35	30	30	30	67	37	18	18	
31	20	21	16	20	19	17	19	20	18	20	18	17	30	18	18	22	27	21	21	16	14	15	16	11	

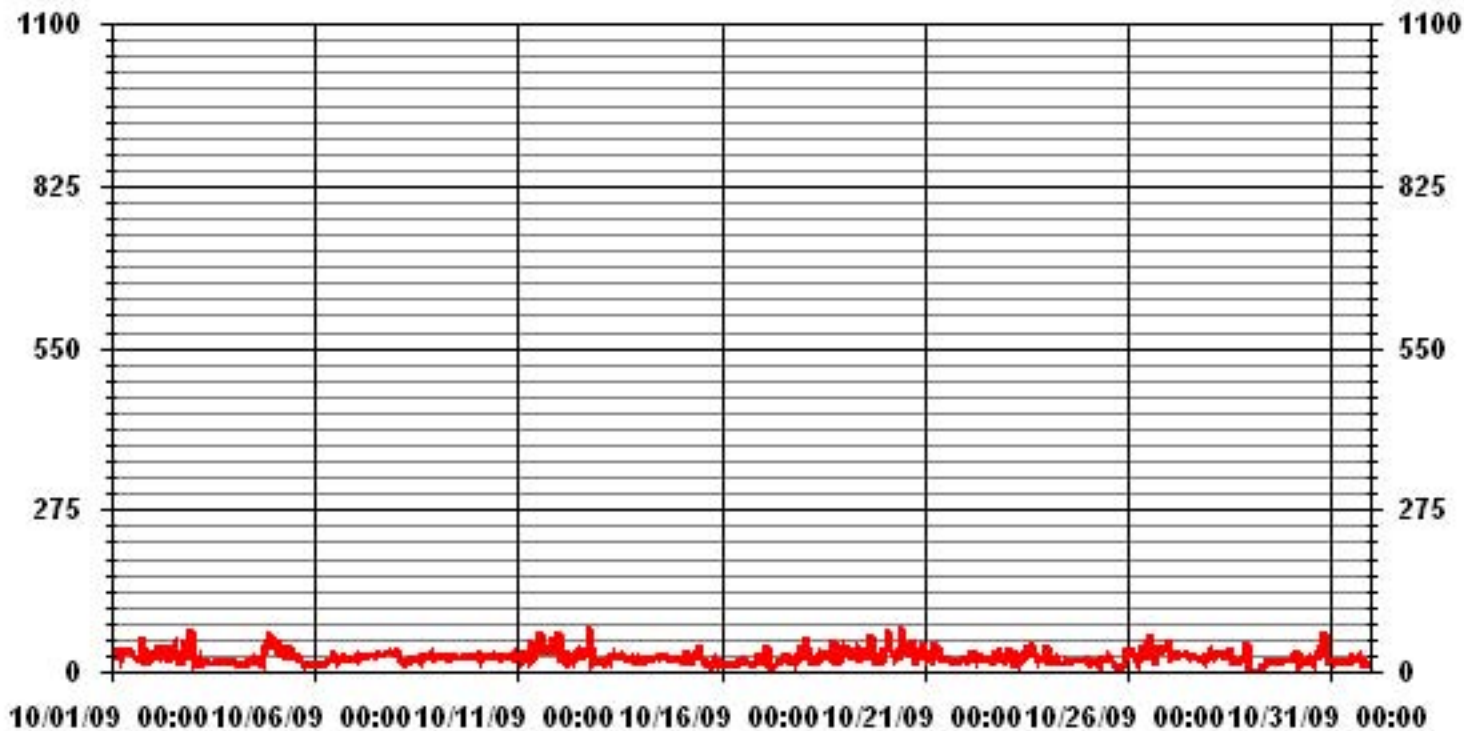
STATUS FLAG CODES

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 7, 2007

CALIBRATION TIME: 0 HRS OPERATIONAL TIME: 743 HRS

01 Hour Averages

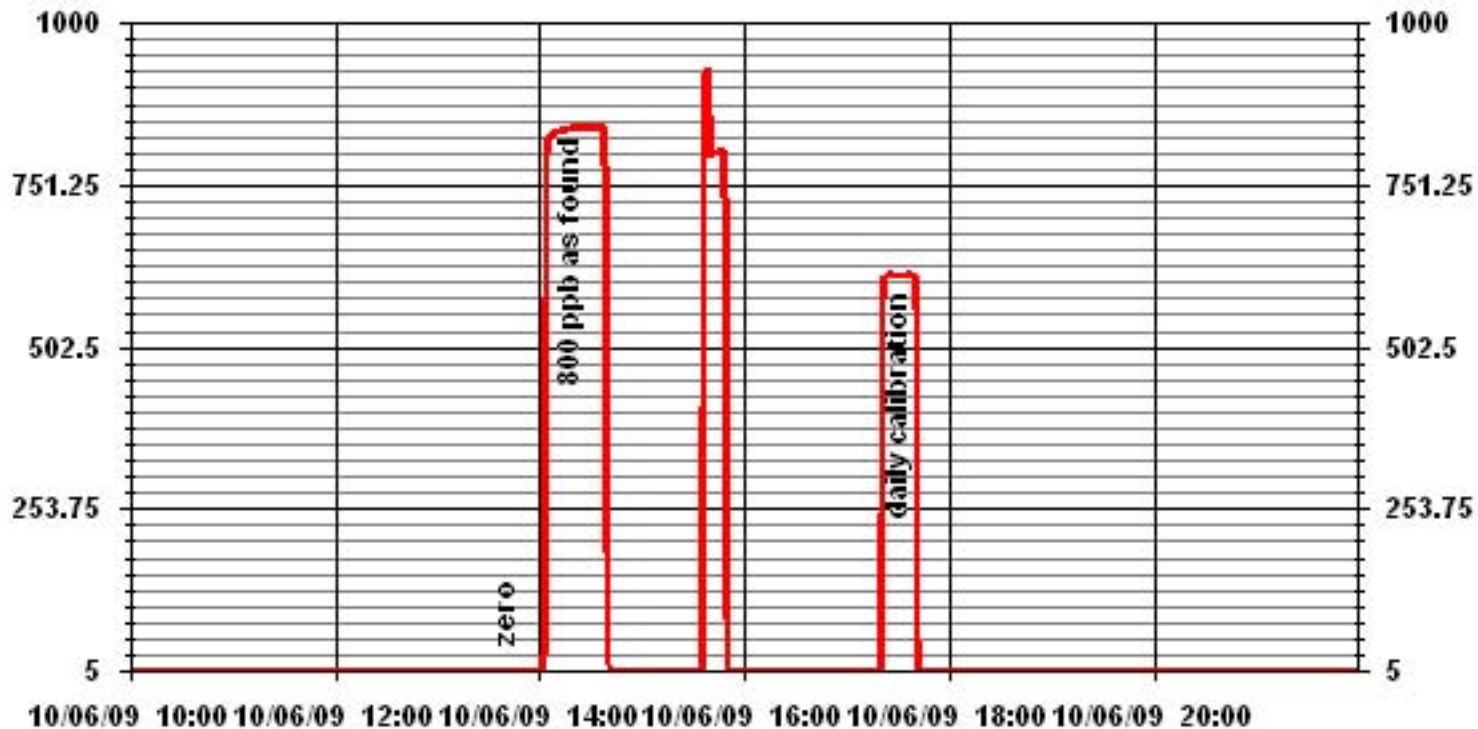


— LICA30 STDWDIR DEG

Calibration Reports

Sulphur Dioxide

01 Minute Averages



SO₂ Calibration Report

Station Information

Calibration Date	October 7, 2009	Previous Calibration	September 14, 2009
Company	Lakeland Industry & Community Association		
Plant / Location	Cold Lake - Maskwa		
Start Time (MST)	8:08	End Time (MST)	14:38
Reason:	Post Repair Calibration		
Barometric Pressure	946 mBar	Station Temperature	25 Deg C
Cal Gas	52.2 ppm	Cal Gas Expiry date	12/19/2010
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:	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 - 1000		ppb		
Sample Flow / Box Temp	615 ccm	35.3 Deg C	615 ccm	34.9	Deg C
HVPS / Lamp Setting	522	3904	522	3908	
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	35	0.926	35	0.926	

Calibration Data

Dilution Flow Rate	Source Gas Flow Rate	Calculated Concentration	Indicated Conc. (DAS)	Correction Factor
4998.0	0	0	0	N/A
4923.0	76.7	801	803	0.9973
4961.0	38.3	400	399	1.0023
4983.0	19.2	200	198	1.0119
4999.0	0	0	-1	N/A
Sum of Least Squares				0.9989
New Correction Factor				0.9973

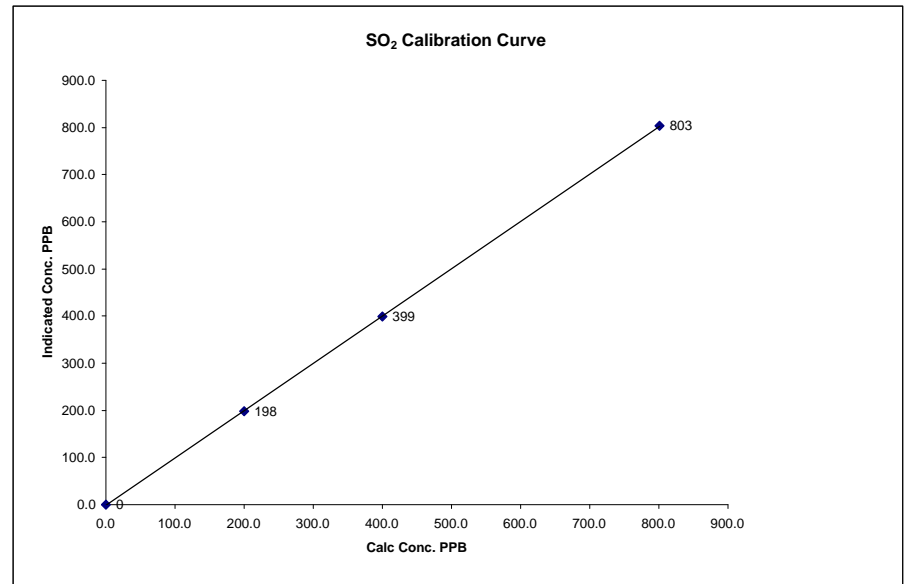
	Before Calibration	After Calibration
Auto Zero	0.2	-0.2
Auto Span	613.0	597.0
Sample Lines Connected		YES
Percent Change from Previous Calibration		0.3%

Calibration Performed by: Shea Beaton

SO₂ Calibration Curve

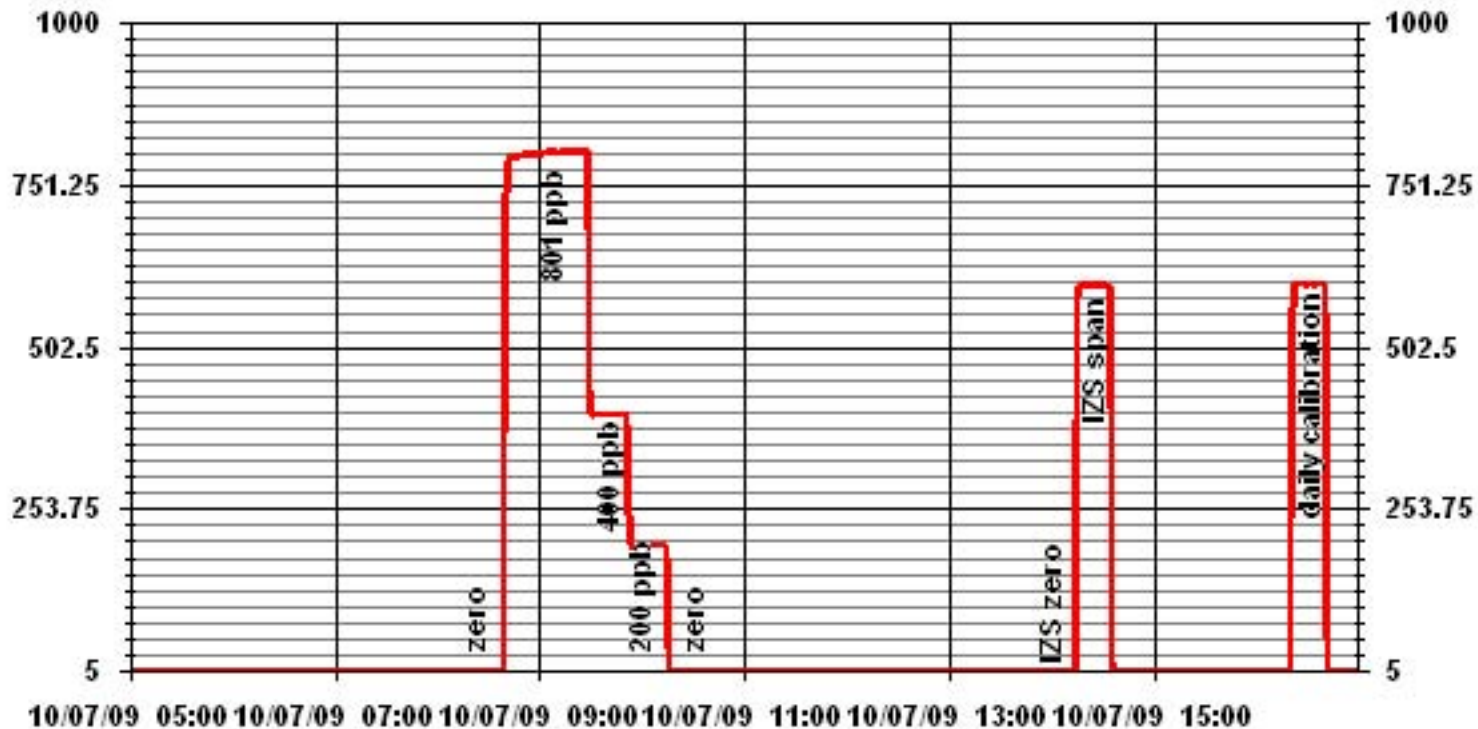
Calibration Date	October 7, 2009
Company	Lakeland Industry & Community Association
Plant / Location	Cold Lake - Maskwa
Start Time (MST)	8:08
End Time (MST)	14:38

Calculated Conc. ppb	Indicated Response ppb	Correction Factor	Correlation Coefficient Slope	(≥ 0.995) (0.85 to 1.15)	0.999983
0	0	n/a	Intercept	(± 3% F.S.)	-1.566357
200	198	1.0119			
400	399	1.0023			
801	803	0.9973			



Notes: Maintenance items performed yesterday. Dilution cal finished at 10:41. Daily cal finished at 14:38.

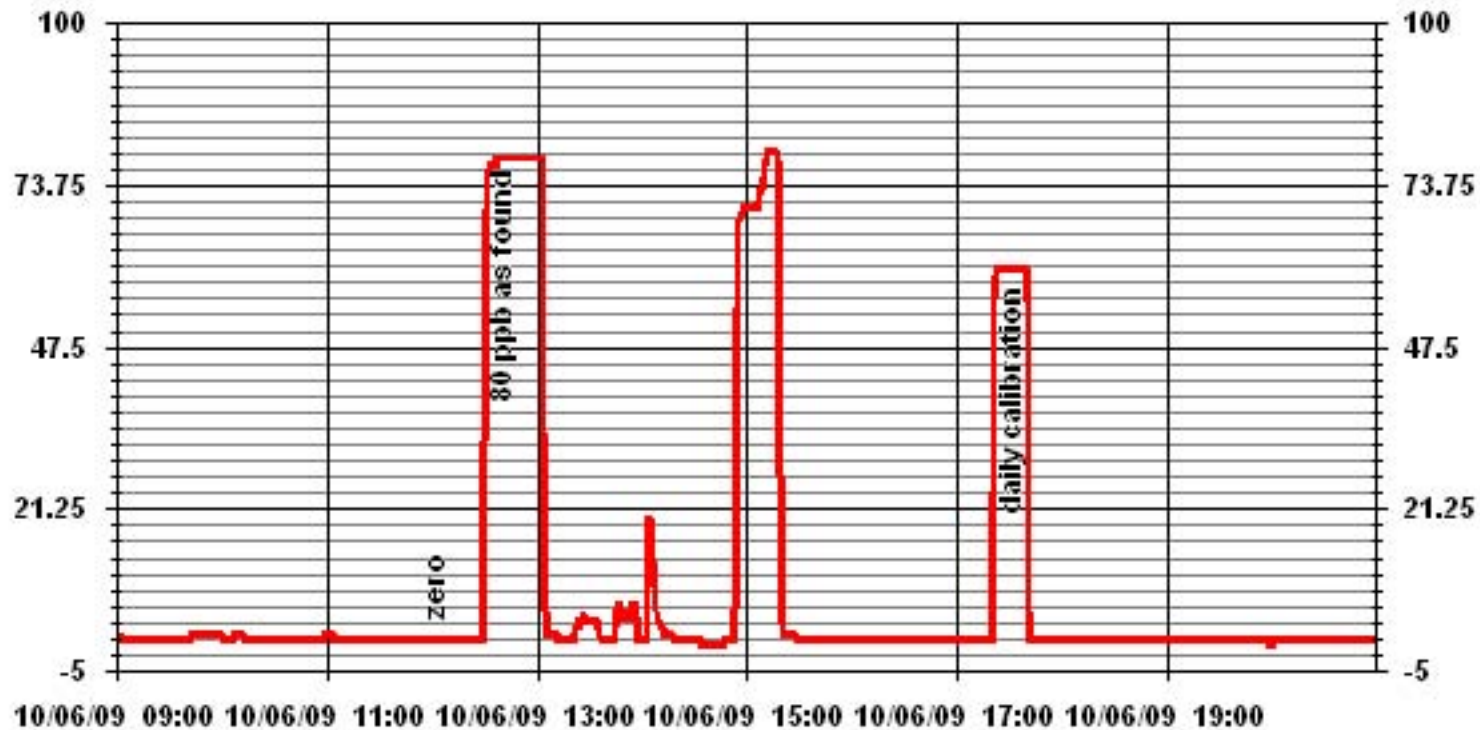
01 Minute Averages



— LICA30 SO2_ PPB

Hydrogen Sulphide

01 Minute Averages



H₂S Calibration Report

Station Information

Calibration Date	October 7, 2009	Previous Calibration	September 14, 2009
Company	Lakelnad Industry & Community Association		
Plant / Location	Cold Lake - Maskwa		
Start Time (MST)	10:41	End Time (MST)	14:38
Reason:	Monthly Calibration		
Barometric Pressure	946 mBar	Station Temperature	25 Deg C
Cal Gas	10.8 ppm	Cal Gas Install date	06/22/2009
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	532 ccm	36.2 Deg C	532 ccm	36.3 Deg C	
HVPS / Lamp Setting	536	2808	536	2808	
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	314.4 Deg C	45 Deg C	
Offset / Slope	25	1.085	23.7	1.095	

Calibration Data

Dilution Flow Rate	Source Gas Flow Rate	Calculated Concentration	Indicated Conc. (DAS)	Correction Factor
4998	0	0	-1	N/A
4962	37	80	77	1.0381
4998	0	0	0	N/A
4962	37	80	80	0.9992
4977	20.9	45	45	1.0036
4986	11.6	25	25	1.0027
4998	0	0	0	N/A
Sum of Least Squares				1.0004
New Correction Factor				0.9992

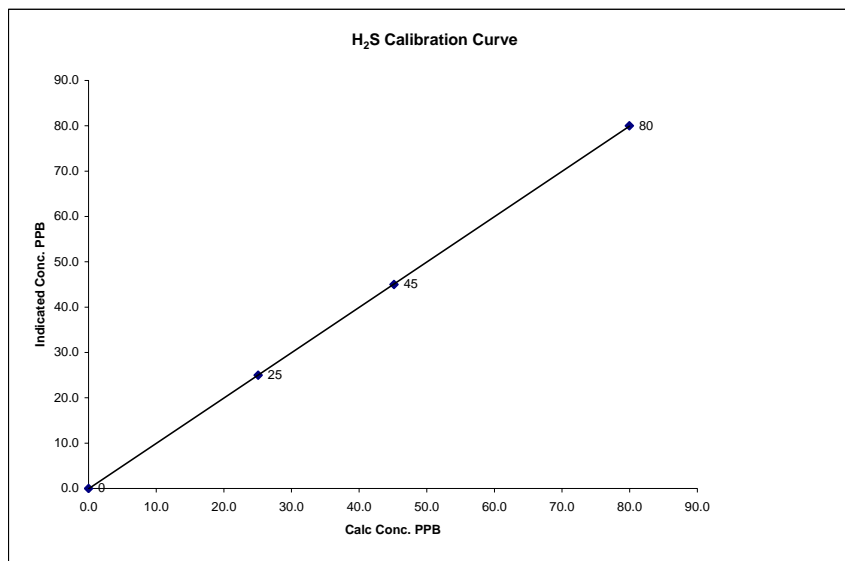
		Before Calibration	After Calibration
Auto Zero		0.0	-0.2
Auto Span		60.0	59.0
Sample Lines Connected			YES
Percent Change from Previous Calibration			-3.7%

Calibration Performed by: Shea Beaton

H₂S Calibration Curve

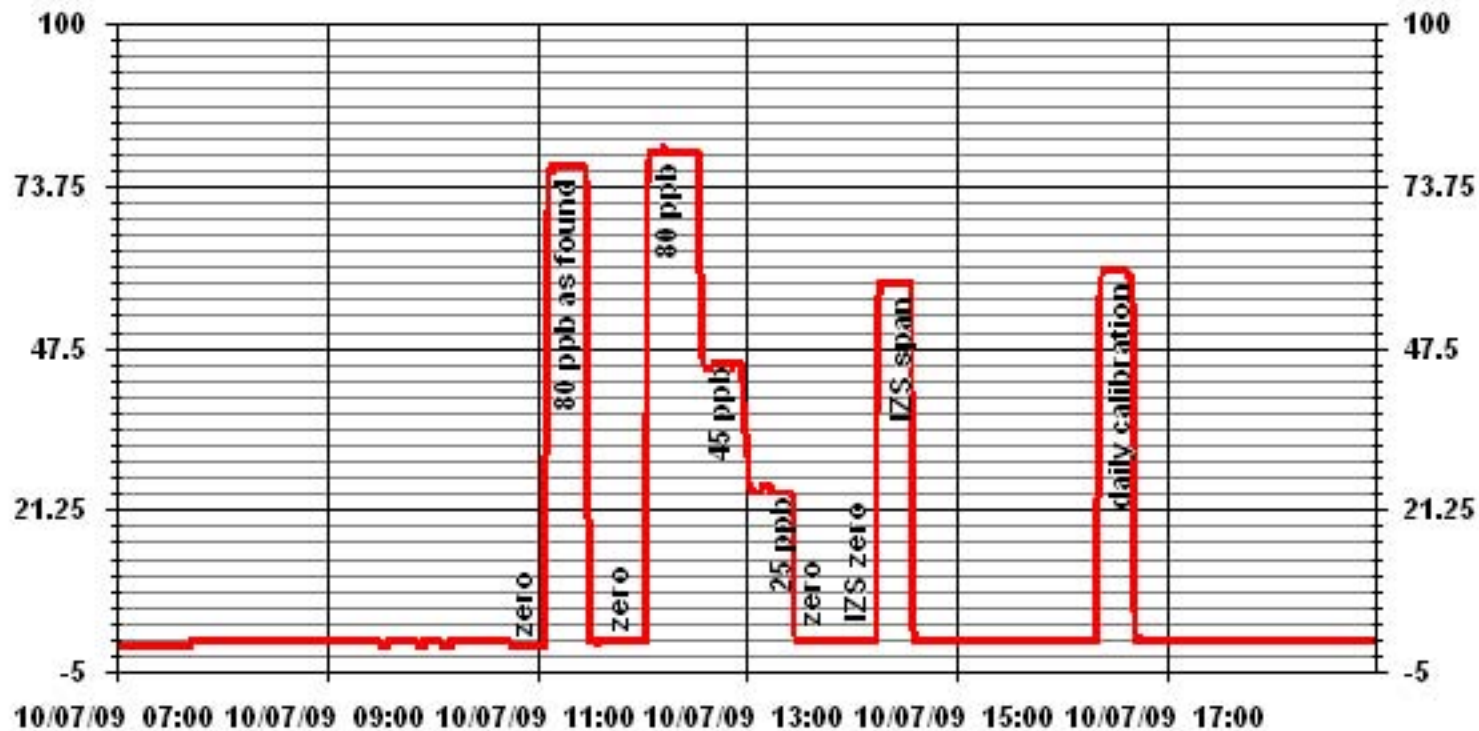
Calibration Date	October 7, 2009
Company	Lakelnad Industry & Community Association
Plant / Location	Cold Lake - Maskwa
Start Time (MST)	10:41
End Time (MST)	14:38

Calculated Conc. ppb	Indicated Response ppb	Correction Factor	Correlation Coefficient Slope	(≥ 0.995) (0.85 to 1.15)	0.999992
0	0	n/a	Intercept	(± 3% F.S.)	-0.067216
25	25	1.0027			
45	45	1.0036			
80	80	0.9992			



Notes: Maintenance Items performed yesterday.

01 Minute Averages



Total Hydrocarbons

THC Calibration Report

Station Information			
Calibration Date:	October 6, 2009	Previous Calibration	September 14, 2009
Company:	Lakeland Industry & Community Association		
Plant / Location:	Cold Lake - Maskwa		
:	(MST) 12:00	End Time	(MST) 16:32
Reason:	Monthly Calibration		
Barometric Pressure:	925 mBar	Station Temperature:	25 Deg C
Calibrator:	API 700	S/N:	831
Cal Gas Concentration:	299 Prop/ 1019 Meth	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
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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
3004	0	0.0	-0.1	N/A
3004	64.9	38.9	38.5	1.0114
3004	0.0	0.0	0.0	N/A
3004	64.9	38.9	39.2	0.9933
3004	35.0	21.2	21.2	1.0003
3004	20.0	12.2	12.0	1.0148
3006	0	0.0	0.0	N/A
Correction Factor:				0.9933

Previous Calibration Correction Factor:	0.9961
Current Correction Factor Before Span Adjust:	0.9933
Percent Change:	0.28%

IZS Calibration Data

	Before Calibration	After Calibration
Auto Zero	0.0	0.0
Auto Span	45.7	46.0
Sample Lines Connected		YES

Cylinder Pressures

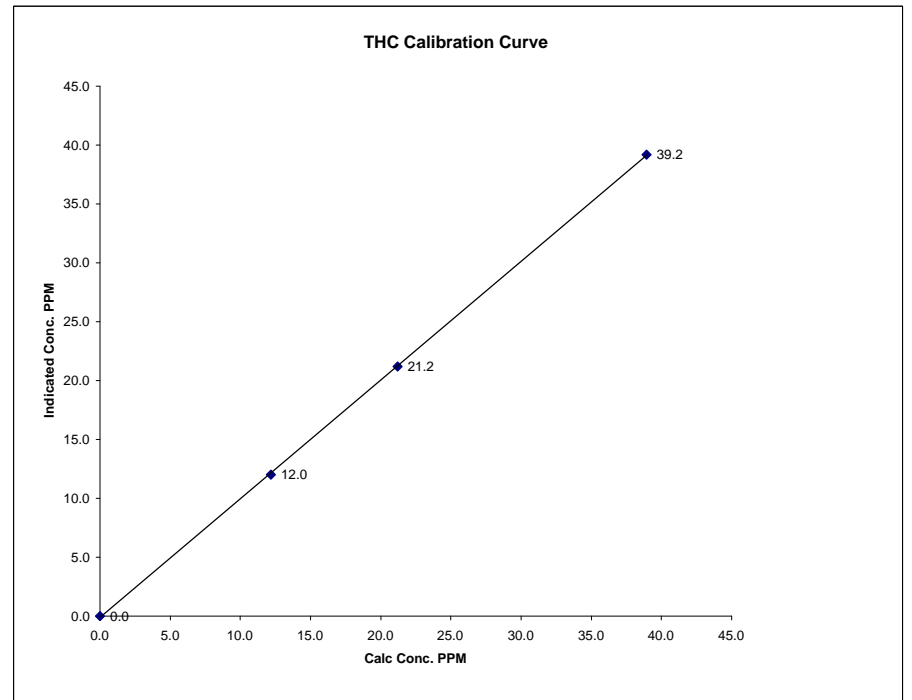
Span	1500	psi
Hydrogen	2000	psi
Zero Air	-	psi

Calibration Performed by: Shea Beaton

THC Calibration Curve

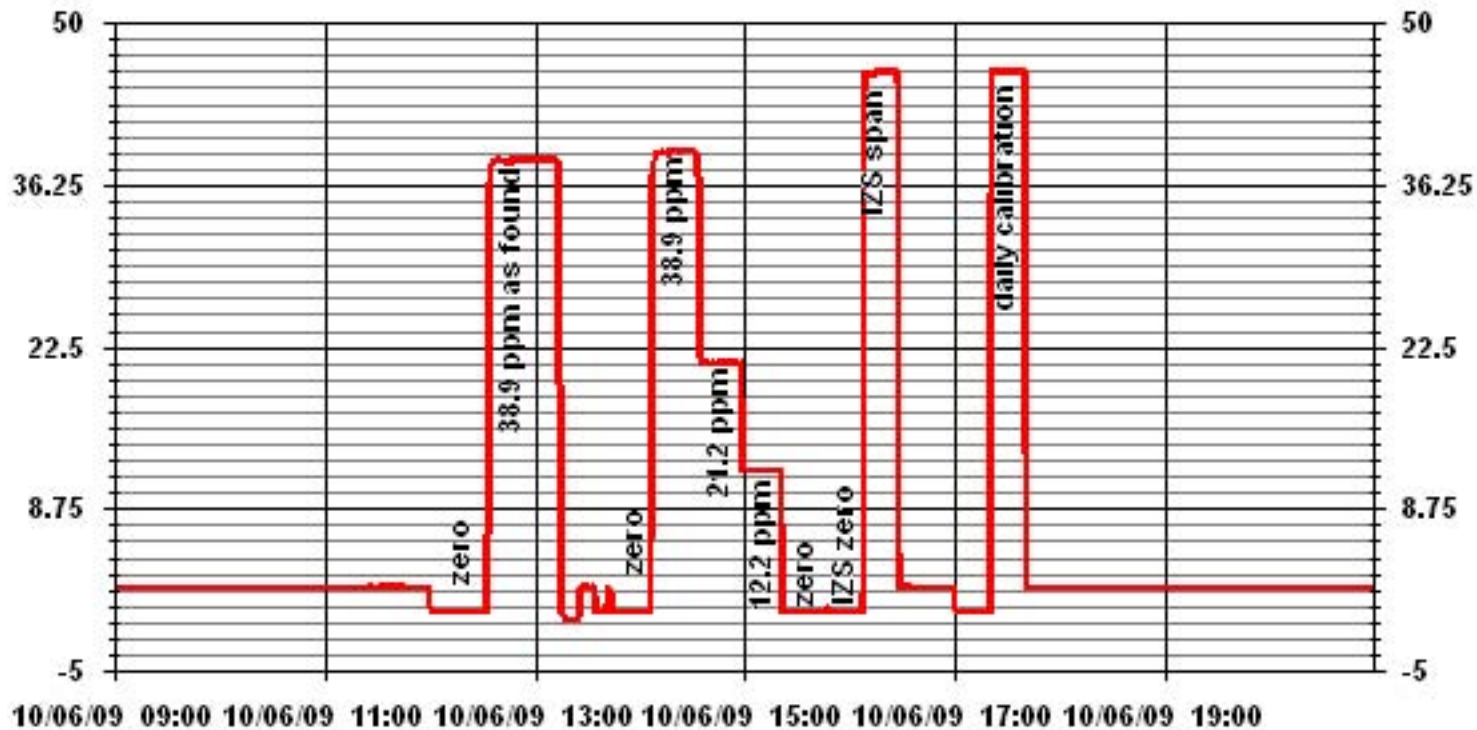
Calibration Date	October 6, 2009		
Company	Lakeland Industry & Community Association		
Plant / Location	Cold Lake - Maskwa		
Start Time (MST)	12:00	End Time (MST)	16:32

Calculated Conc. ppm	Indicated Response ppm	Correction Factor	Correlation Coefficient (≥ 0.995)	Slope (0.85 to 1.15)	Intercept (± 3% F.S.)
0.0	0.0		0.999943	1.008051	-0.125876
12.2	12.0	1.0148			
21.2	21.2	1.0003			
38.9	39.2	0.9933			



Notes:

01 Minute Averages



Nitrogen Dioxide

NOx - NO- NO2 Calibration Report
Station Information

Calibration Date	October 7, 2009	Previous Calibration	September 14, 2009
Company	LICA	Plant/Location	Cold Lake - Maskwa
Start Time (MST)	8:08	End Time (MST)	14:38
Reason:	Monthly Calibration		
Barometric Pressure	946 mBar	Station Temperature	25.0 Deg C
Cal Gas Concentration	NOx 51.8 ppm	NO	51.6 ppm
DAS Output Voltage	0 - 1 Volts	Chart Rec. Output	0 - 1 Volts

Equipment Information

Analyzer Make / Model:	API 200E	S/N :	594	Method:	Chemiluminescent
Calibrator Make / Model:	EnviroNics 2000	S/N:	1991		
DAS Make / Model:	ESC 8832	S/N :	AO 791		
Flow Meter:	EnviroNics 2000	S/N :	1991		

Analyzer Settings

Before Calibration				After Calibration			
Concentration Range	0 - 1000			ppb			
Sample Flow/Conv. Temp	462 ccm	315.7 Deg C		467 ccm	313.8 Deg C		
Ozone Flow / Vacuum	76 ccm	4.2 *Hg-A		77 ccm	4.2 *Hg-A		
HVPS	767 Volts			767 Volts			
Rx/ Temp / PMT Temp	50 Deg C	6.6 Deg C		50 Deg C	6.6 Deg C		
Box Temp / IZS Temp	35.2 Deg C	45 Deg C		35.8 Deg C	45.1 Deg C		
Offset	0.9 NOx	0.6 NO		0.9 NOx	0.6 NO		
Slope	1.172 NOx	1.164 NO		1.149 NOx	1.145 NO		

Gas Phase Titration Calibration Data

Dilution Air Flow Rate	Source Flow Rate	O3 Set Point	Calculated Concentration		Indicated Concentration			Correction Factor	
			NOx	NO	NOx	NO	NO2	NOx	NO
5000.0	0	N/A	0	0	0	0	1	N/A	N/A
4924.0	77.5	N/A	803	800	820	814	6	0.9789	0.9823
4924.0	77.5	N/A	803	800	802	801	1	1.0008	0.9982
4964.0	38.8	N/A	402	400	402	402	1	0.9994	0.9955
4981.0	19.3	N/A	200	199	201	200	1	0.9947	0.9958
5002.0	0	N/A	0	0	0	0	0	N/A	N/A
Converter Efficiency									
4924.0	77.5	N/A	803	800	801	801	0	N/A	
4924.0	77.5	400	803	N/A	799	402	396	99%	
4924.0	77.5	200	803	N/A	800	599	201	100%	
4924.0	77.5	100	803	N/A	800	702	98	99%	
4924.0	77.5	N/A	803	800	802	800	2	N/A	
Correction Factor									
5004.0	0	N/A	0	0	0	1	0	N/A	N/A
Linearity OK? Yes No									
Flows Checked on-site? Yes No									
Sum of Least Squares								1.0003	0.9976
New Correction Factor								1.0008	0.9982
Average Converter Efficiency								99%	

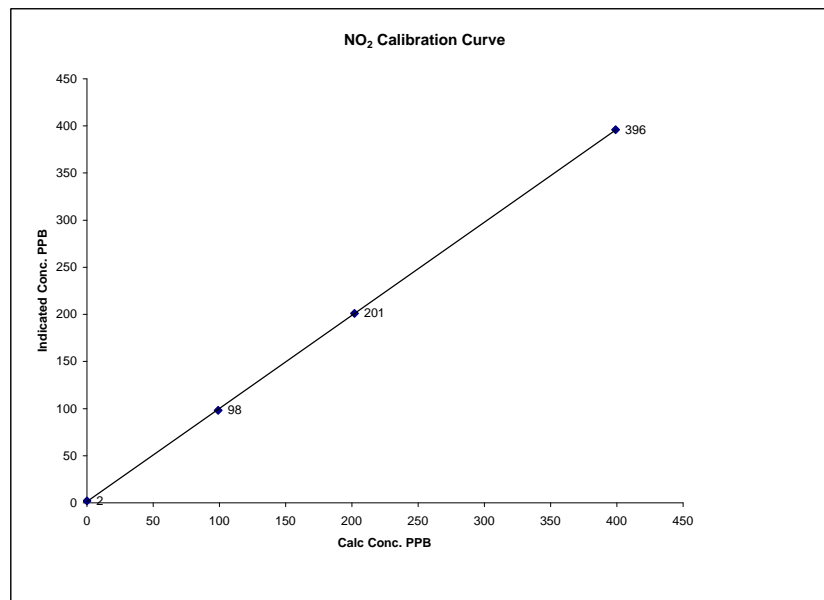
Before Calibration				After Calibration					
Auto Zero	-0.2 NOx	0.0 NO2		0.2 NOx	-0.3 NO2				
Auto Span	733.0 NOx	722.0 NO2		699.0 NOx	688.0 NO2				
Sample Lines Connected								YES	
Percent Change from Previous Calibration								NOx 2.1%	NO 1.7%

Calibration Performed by: Shea Beaton

NO2 Calibration Curve

Calibration Date	October 7, 2009
Company	LICA
Plant / Location	Cold Lake - Maskwa
Start Time (MST)	8:08
End Time (MST)	14:38

Calculated Conc. ppb	Indicated Response ppb	Correction Factor	Correlation Coefficient Slope Intercept	(≥ 0.995) (0.85 to 1.15) (± 3% F.S.)
0	2	N/A		0.999978
99	98	1.0102		0.988855
202	201	1.0050		
399	396	1.0076		1.200324

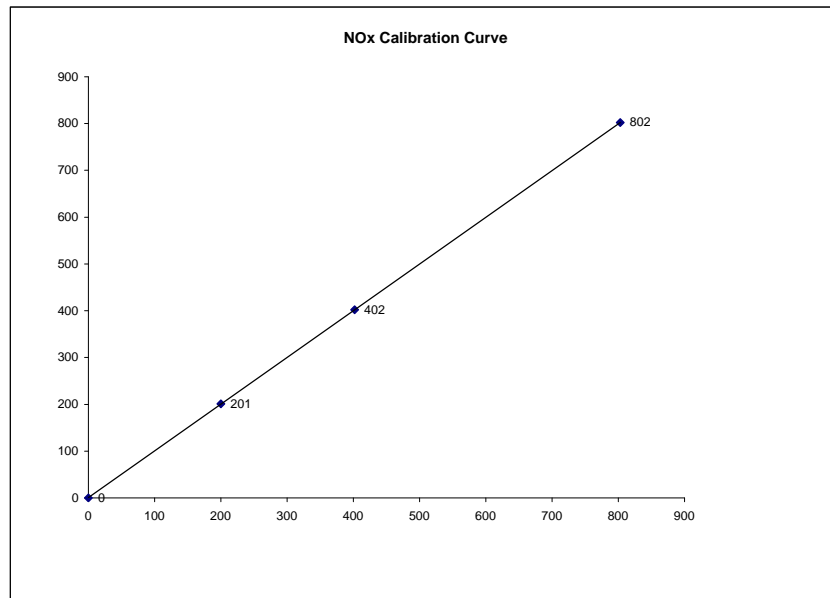


Notes:

NOx Calibration Curve

Calibration Date	October 7, 2009	
Company	LICA	
Plant / Location	Cold Lake - Maskwa	
Start Time (MST)	8:08	End Time (MST) 14:38

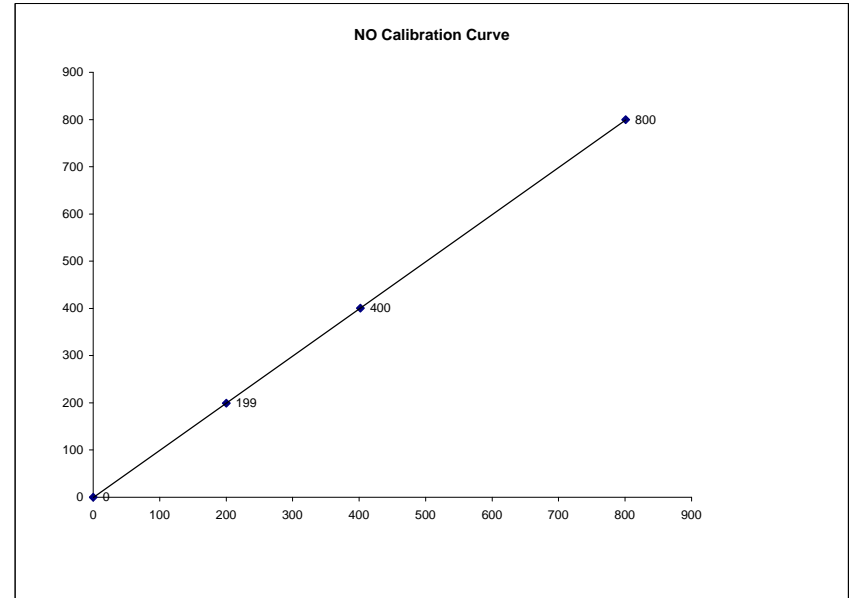
Calculated Conc. ppb	Indicated Response ppb	Correction Factor	Correlation Coefficient	(≥ 0.995)	0.999997
0	0	N/A	Slope	(0.85 to 1.15)	0.998737
200	201	0.9947	Intercept	($\pm 3\%$ F.S.)	0.609020
402	402	0.9994			
803	802	1.0008			



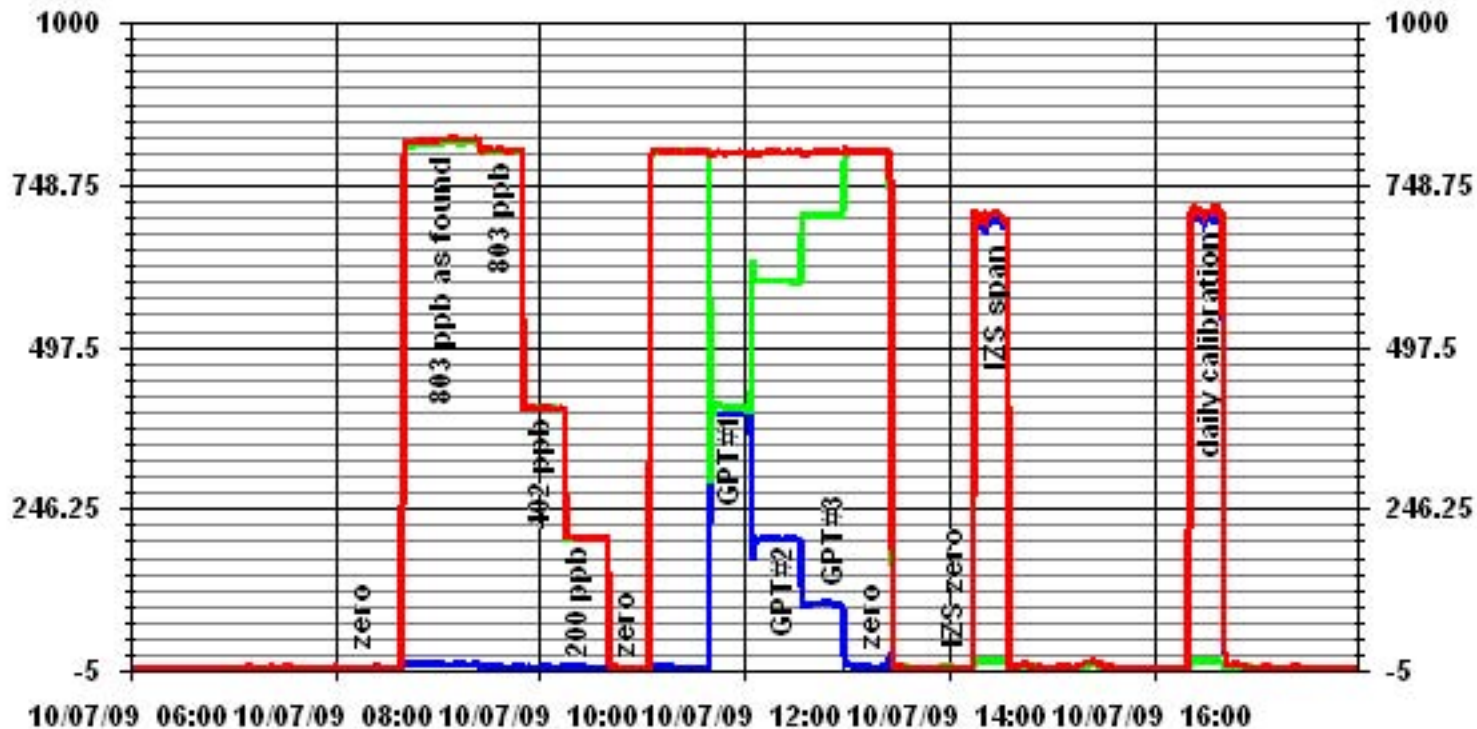
NO Calibration Curve

Calibration Date	October 7, 2009	
Company	LICA	
Plant / Location	Cold Lake - Maskwa	
Start Time (MST)	8:08	End Time (MST) 14:38

Calculated Conc. ppb	Indicated Response ppb	Correction Factor	Correlation Coefficient	(≥ 0.995)	0.999998
0	0	N/A	Slope	(0.85 to 1.15)	1.001752
199	200	0.9958	Intercept	($\pm 3\%$ F.S.)	0.408162
400	402	0.9955			
800	801	0.9982			



01 Minute Averages



— LICA30 NOX_ PPB
 — LICA30 NO_ PPB
 — LICA30 NO2_ PPB

Lakeland Industry & Community Association

St. Lina Monitoring Site
Ambient Air Monitoring
Data Report
For
October 2009

Prepared By:



November 9, 2009

Lakeland Industry & Community Association

St. Lina

Ambient Air Monitoring

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Introduction

The following Ambient Air Monitoring report was prepared for:

Mr. Mike Bisaga

Lakeland Industry & Community Association

Box 8237

5107W – 50 Street

Bonnyville, Alberta

T9N 2J5

Monitoring Location: St. Lina

Data Period: October 2009

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 Analytics 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 – ST. LINA

Continuous Ambient Monitoring – October 2009

LICA ST. LINA SITE						MAXIMUM VALUES							OPERATIONAL TIME (PERCENT)
						OBJECTIVES					1-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	0.02	2	16	13, 15	14.3, 14.7	179(S), 163(SSE)	0.3	16	99.9
H2S (PPB)	10	3	0	0	0.03	1	6, 26	VAR	VAR	VAR	0.8	26	99.9
THC (PPM)	-	-	-	-	2.08	3.0	23, 24	VAR	VAR	VAR	2.5	23	99.9
NOx (PPB)	-	-	-	-	1.06	12	23	10	3.6	120(ESE)	5.8	23	99.9
NO (PPB)	-	-	-	-	0.17	6	16	10	12.7	185(S)	1.6	23	99.9
NO ₂ (PPB)	212	106	0	0	1.15	8	23	VAR	VAR	VAR	5.0	23	99.9
VECTOR WS (KPH)	-	-	-	-	10.13	24.0	6	19	-	332(NNW)	15.7	14	99.9
VECTOR WD (DEGREES)	-	-	-	-	331(NNW)	-	-	-	-	-	-	-	99.9

VAR-VARI96.5OUS

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

No operational issue was observed during this month. One hour of data is missing on October 27. Data was corrected using daily zero information.

Hydrogen Sulphide (PPB)

- Analyzer make / model - API 101E

No operational issue was observed during this month. The inlet filter was changed before the monthly calibration was started. One hour of data is missing on October 27. Data was corrected using daily zero information.

Total HydroCarbon (PPM)

- Analyzer make / model –TECO 51C

No operational issue was observed during this month. The FID flows were optimized following the as found point on October 14th. The inlet filter was changed before the monthly calibration was started. One hour of data is missing on October 27. Data was corrected using daily zero information.

General Monthly Summary

AQM STATION – LICA – St. Lina

Nitrogen Dioxide (PPB)

- Analyzer make / model - API 200E

No operational issue was observed during this month. The inlet filter was changed before the monthly calibration was started. One hour of data is missing on October 27. Data was corrected using daily zero information.

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

- System make / model – Met 50.5

The wind system is reported as vector wind speed and vector wind direction.

One hour of data is missing on October 27.

Datalogger

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

The station is connected to a modem to allow for daily polling of the station.

Two hours of data were invalidated due to a power failure event on October 3rd.

Trailer

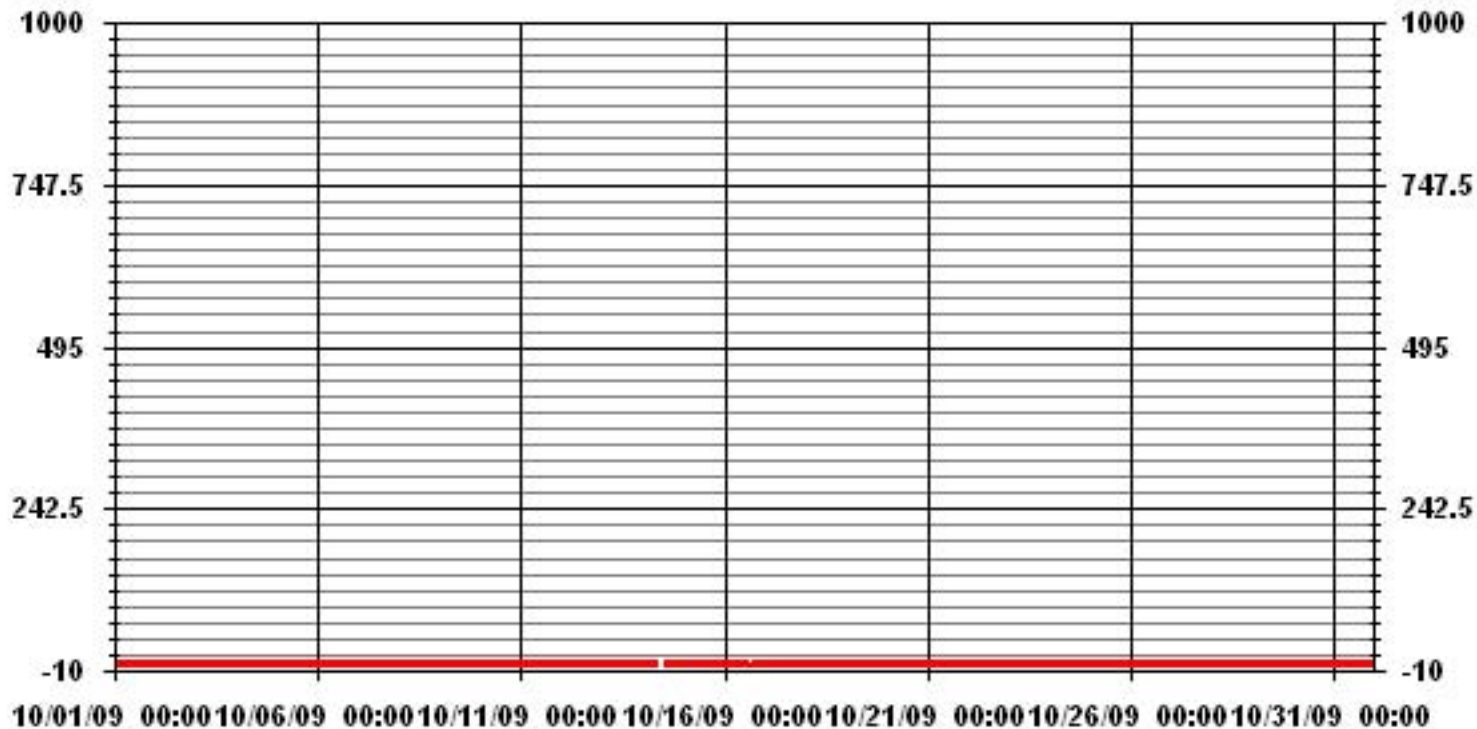
No issued was discovered. The Manifold and inlets were cleaned on October 14th.

Continuous Monitoring

Monthly Summaries, Graphs & Wind Roses

Sulphur Dioxide

01 Hour Averages



— LICA31 SO2_ PPB

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION -ST. LINA

OCTOBER 2009

SULPHUR DIOXIDE MAX instantaneous maximum in ppt

MST		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	24:00	DAILY	24-HOUR	RDGS.																									
		1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	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.																											
DAY																																																						
1		0	IZS	0	0	0	0	0	0	1	0	1	1	1	1	1	1	1	1	1	0	0	0	1	0	1	0	1	0.5	24																								
2		IZS	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	IZS	1	0.8	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	IZS	0	0.0	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	24																											
5		0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	1	1	IZS	1	1	1	1	1	0.3	24																										
6		1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	2	1	IZS	1	1	1	1	1	2	1.1	24																										
7		1	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	1	0	1	0.2	24																										
8		0	0	1	1	1	1	0	0	1	1	2	1	1	0	0	0	0	0	IZS	0	0	0	0	0	0	2	0.4	24																									
9		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																										
10		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	1	1	1	0.1	24																										
11		1	1	1	1	0	0	1	0	0	1	1	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	1	0.3	24																									
12		0	1	0	0	0	1	0	0	1	0	1	1	0	IZS	0	0	0	0	0	0	0	0	0	0	0	1	0.2	24																									
13		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	0.0	24																									
14		0	0	1	1	1	1	1	1	C	C	C	C	C	C	C	0	0	0	0	0	0	0	0	0	0	1	0.4	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	IZS	0	2	3	2	3	3	1	1	1	1	0	0	0	0	0	3	0.7	24																									
17		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	0.0	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	0.0	24																									
19		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	0.0	24																									
20		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	0.0	24																									
21		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	0.0	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	0.0	24																									
23		0	0	IZS	0	0	0	0	0	1	1	1	1	0	1	1	0	0	0	0	0	0	0	0	1	1	1	0.3	24																									
24		1	IZS	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.1	24																									
25		IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	1	0	0	0	0	0	IZS	1	0.1	24																									
26		1	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	IZS	1	0.7	24																									
27		1	1	0	0	1	N	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0.1	23																										
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	1	1	1	1	1	0	0	IZS	0	1	1	1	1	1	0.3	24																									
30		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	1	0.0	24																									
31		0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	IZS	0	0	0	0	0	0	1	0.1	24																									
HOURLY MAX		1	1	1	1	1	1	1	1	2	1	2	2	3	2	3	3	1	2	1	1	1	1	1	1	1	1																											
HOURLY AVG		0.2	0.2	0.1	0.1	0.2	0.2	0.2	0.1	0.3	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.1	0.1	0.2	0.2	0.2	0.2																												

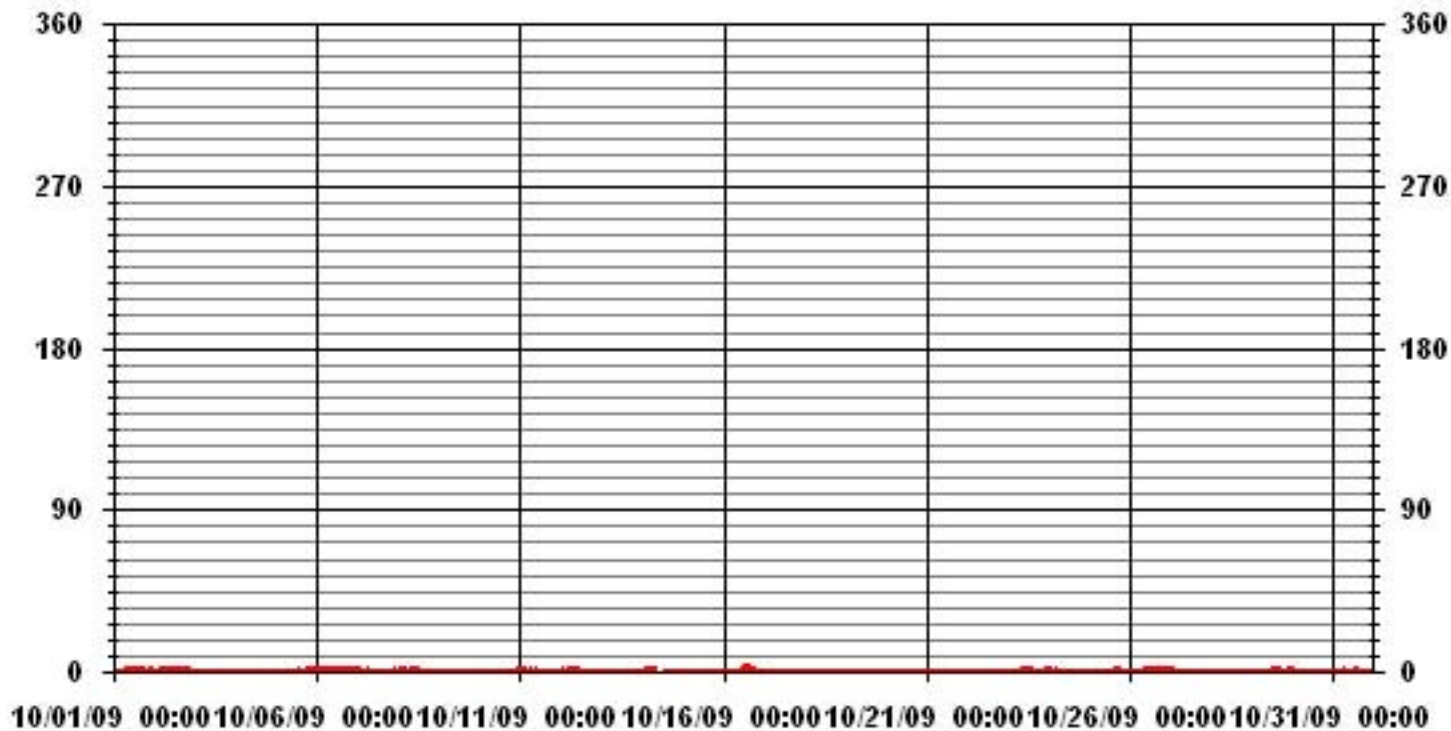
STATUS FLAG CODES

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:	142					
MAXIMUM INSTANTANEOUS VALUE:	3	PPB	@ HOUR(S)	VAR	ON DAY(S)	16
IZS CALIBRATION TIME:	32	HRS		OPERATIONAL TIME:	743	HRS
MONTHLY CALIBRATION TIME:	7	HRS				
STANDARD DEVIATION:	0.46					

01 Hour Averages



— LICA31 SO2MAX PPB

LICA31
 SO2_ / WDR Joint Frequency Distribution (Percent)

October 2009

Distribution By % Of Samples

Logger Id : 31
 Site Name : LICA31
 Parameter : SO2_
 Units : PPB

Wind Parameter : WDR
 Instrument Height : 10 Meters

Limit	Direction																Freq
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
< 20	2.84	6.39	5.39	4.97	10.51	6.67	4.82	2.84	4.54	5.96	3.97	5.82	5.68	8.09	15.19	6.25	100.00
< 60	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
< 110	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
< 170	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
< 340	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
>= 340	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
Totals	2.84	6.39	5.39	4.97	10.51	6.67	4.82	2.84	4.54	5.96	3.97	5.82	5.68	8.09	15.19	6.25	

Calm : .00 %

Total # Operational Hours : 704

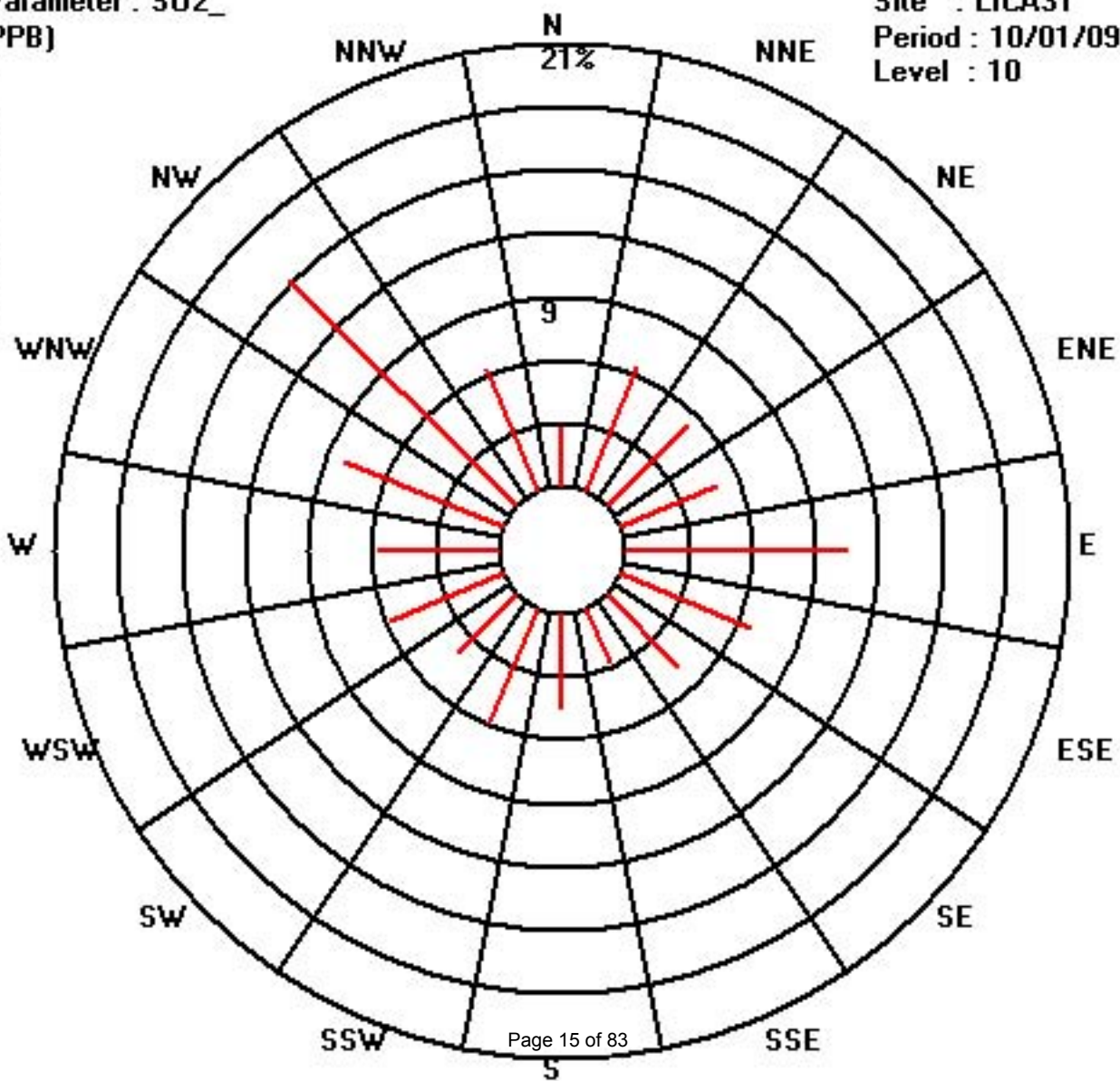
Distribution By Samples

Limit	Direction																Freq
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
< 20	20	45	38	35	74	47	34	20	32	42	28	41	40	57	107	44	704
< 60																	
< 110																	
< 170																	
< 340																	
>= 340																	
Totals	20	45	38	35	74	47	34	20	32	42	28	41	40	57	107	44	

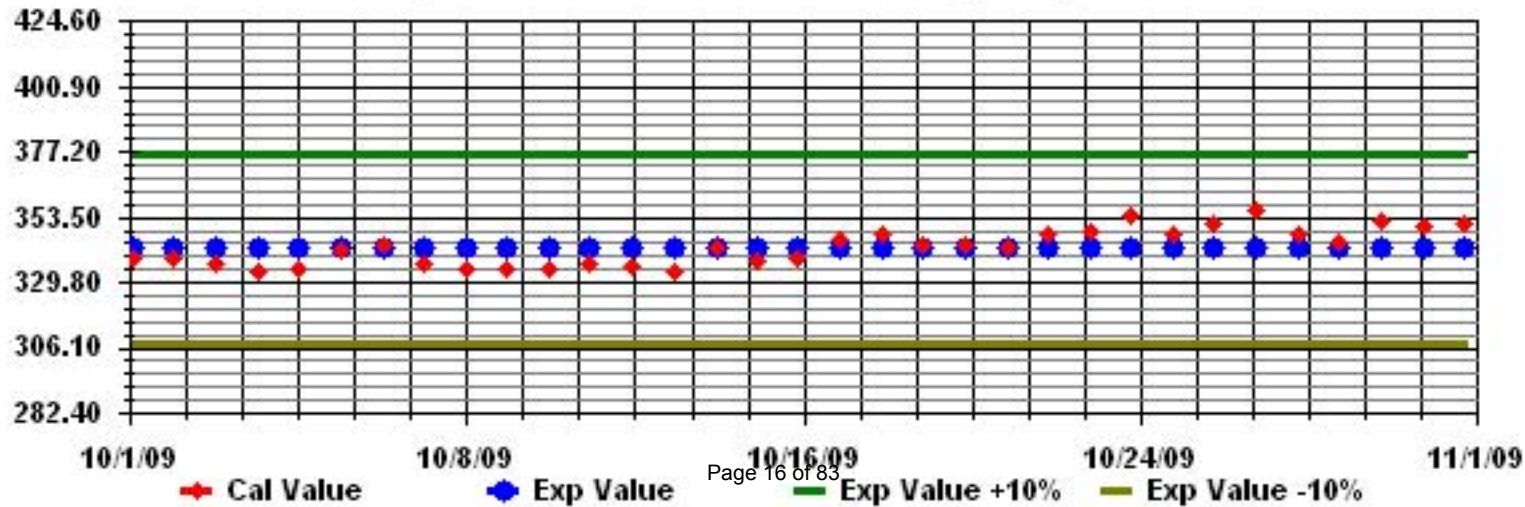
Calm : .00 %

Total # Operational Hours : 704

Class Limits (PPB)



Calibration Graph for Site: LICA31 Parameter: S02_ Sequence: S02 Phase: SPAll



Hydrogen Sulphide

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - ST. LINA

OCTOBER 2009

HYDROGEN SULPHIDE (H₂S) hourly averages in ppb

MST		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	0:00	DAILY 24-HOUR		
DAY	HOURLY MAX	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	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.	
1	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	0.0	24
2	IZS	0	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
3	0	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	
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	0.0	24	
5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0.0	24	
6	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	IZS	0	0	0	0	0	1	0.1	24	
7	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	0.0	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	0.0	24	
9	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	0.0	24	
10	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	0.0	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	0.0	24	
12	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	0.0	24	
13	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	0.0	24	
14	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	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	0.0	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	0.0	24	
17	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	0.0	24	
18	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	0.0	24	
19	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	0.0	24	
20	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	0.0	24	
21	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	0.0	24	
22	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	0.0	24	
23	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	0.0	24	
24	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	0.0	24	
25	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	0.0	24	
26	0	0	0	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	IZS	0	1	0.8	24
27	0	0	0	0	0	N	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0.0	23	
28	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	0.0	24	
29	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	0.0	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	0.0	24	
31	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	0.0	24	
HOURLY MAX		0	0	0	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0			
HOURLY AVG		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	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			

STATUS FLAG CODES

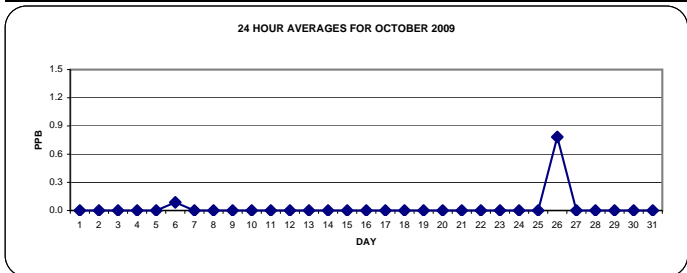
S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	- MAINTENANCE
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE

OBJECTIVE LIMIT:

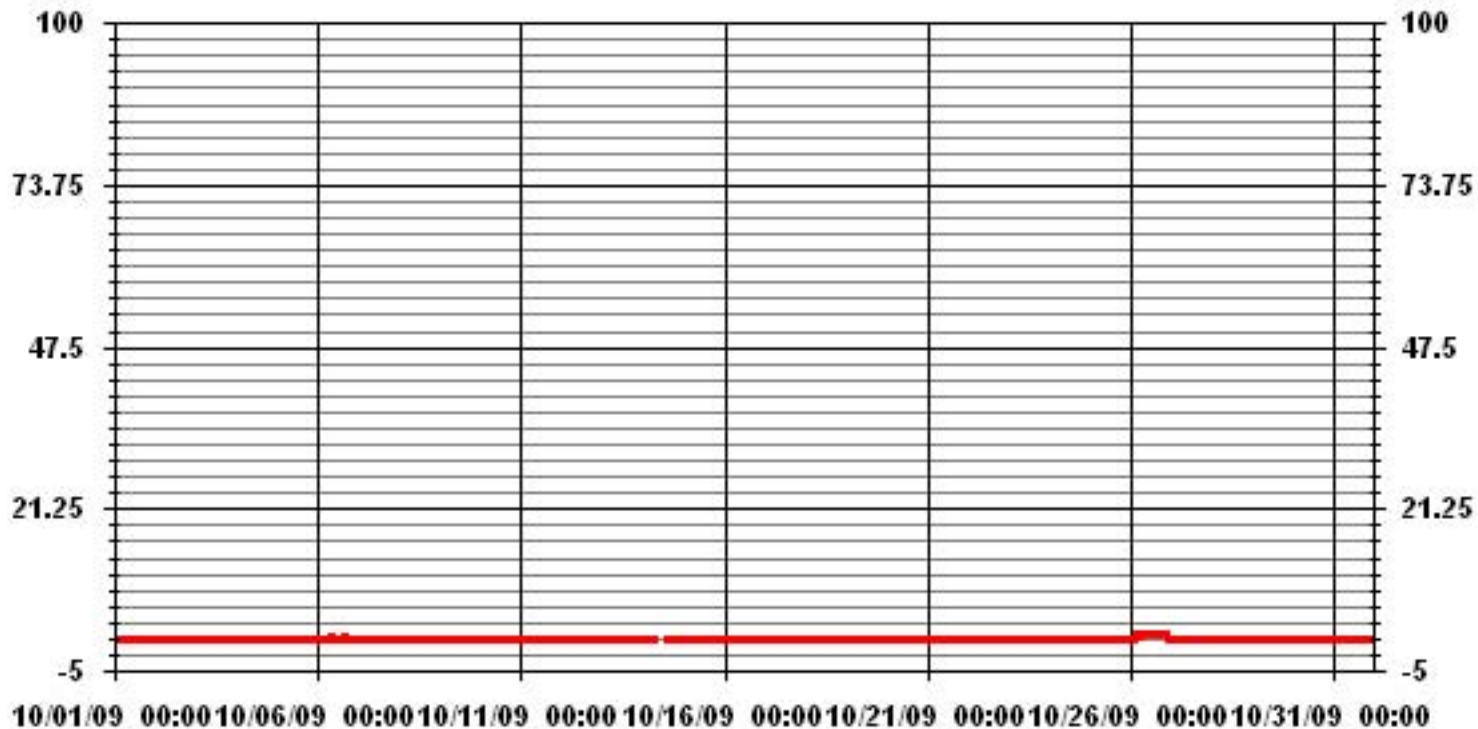
ALBERTA ENVIRONMENT: 1-HR 10 PPB 24-HR 3 PPB

MONTHLY SUMMARY

NUMBER OF 1-HR EXCEEDENCES:	0
NUMBER OF 24-HR EXCEEDENCES:	0
NUMBER OF NON-ZERO READINGS:	20
MAXIMUM 1-HR AVERAGE:	1 PPB @ HOUR(S) VAR ON DAY(S) 6, 26
MAXIMUM 24-HR AVERAGE:	0.8 PPB VAR-VARIOUS ON DAY(S) 26
IZS CALIBRATION TIME:	32 HRS
MONTHLY CALIBRATION TIME:	7 HRS
OPERATIONAL TIME:	743 HRS
AMD OPERATION UPTIME:	99.9 %
STANDARD DEVIATION:	0.17
MONTHLY AVERAGE:	0.03 PPB



01 Hour Averages



— LICA31 H2S_ PPB

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION -ST.LINA

OCTOBER 2009

HYDROGEN SULPHIDE MAX instantaneous maximum in ppb

MST		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	23:00	DAILY	24-HOUR		
		1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	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	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	0.0	24	
2		IZS	0	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	
3		0	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		
4		0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	IZS	0	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	0.0	24	
6		0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	0	0	IZS	0	0	0	0	0	1	0.5	24	
7		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	0.0	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	0.0	24	
9		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	0.0	24	
10		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	0.0	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	0.0	24	
12		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	0.0	24	
13		0	0	0	1	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
14		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	0.0	24	
15		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	0.0	24	
16		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	0.0	24	
17		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	0.0	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	0.0	24	
19		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	0.0	24	
20		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	0.0	24	
21		0	0	1	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	
22		0	0	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
23		0	3	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0.1	24	
24		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	0.0	24	
25		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	0.0	24	
26		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	IZS	0	1	1.0	24
27		0	0	0	0	0	N	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0.0	23	
28		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	1	0.0	24	
29		0	0	0	0	0	0	0	0	0	0	1	1	0	1	1	0	1	1	1	IZS	0	0	0	0	0	1	0.3	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	0.0	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	0.0	24	
HOURLY MAX		1	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1				
HOURLY AVG		0.0	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0				

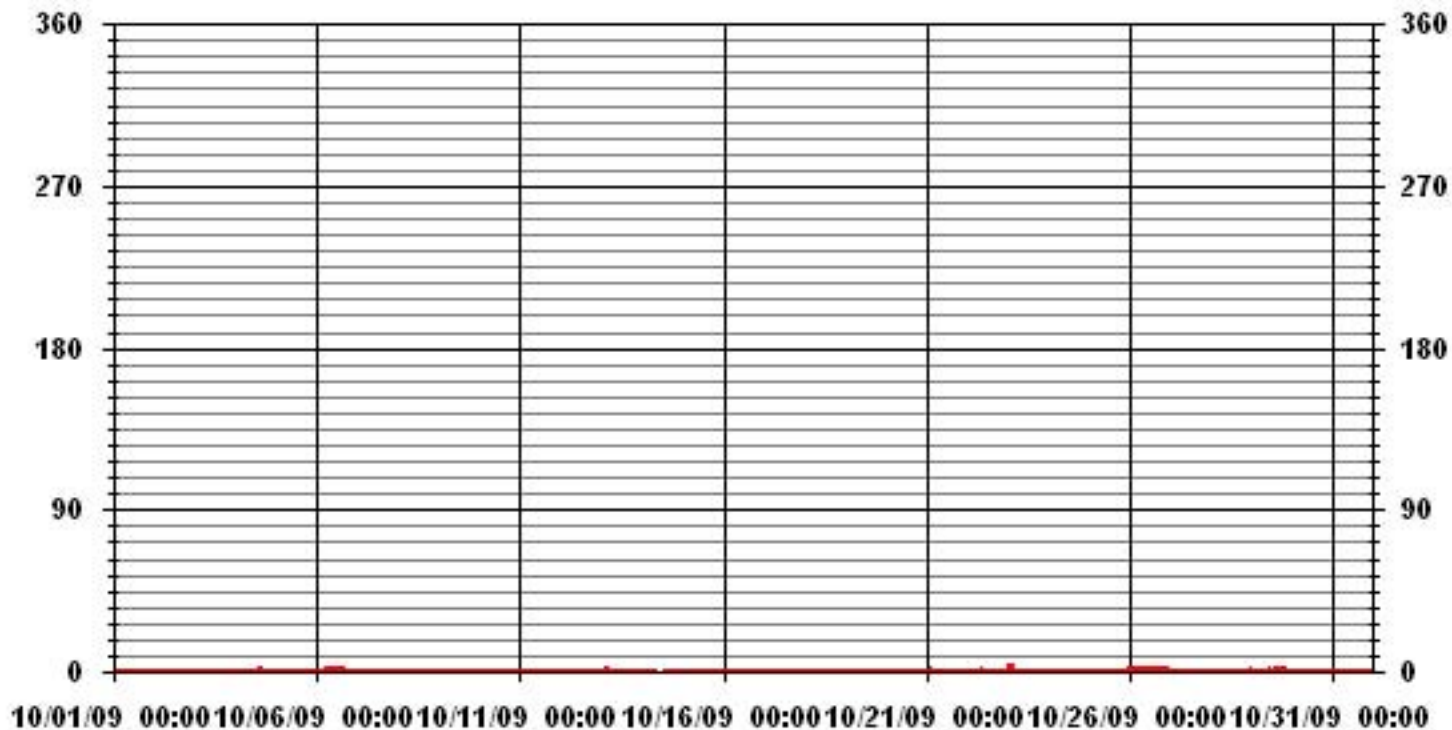
STATUS FLAG CODES

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:	47					
MAXIMUM INSTANTANEOUS VALUE:	3	PPB	@ HOUR(S)	1	ON DAY(S)	23
IZS CALIBRATION TIME:	32	HRS	OPERATIONAL TIME:	743	HRS	
MONTHLY CALIBRATION TIME:	7	HRS				
STANDARD DEVIATION:	0.27					

01 Hour Averages



— LICA31 H2S MAX PPB

LICA31
H2S_ / WDR Joint Frequency Distribution (Percent)

October 2009

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	2.84	6.39	5.39	4.97	10.51	6.67	4.82	2.84	4.54	5.96	3.97	5.82	5.68	8.09	15.19	6.25	100.00
< 10	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
< 50	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
>= 50	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
Totals	2.84	6.39	5.39	4.97	10.51	6.67	4.82	2.84	4.54	5.96	3.97	5.82	5.68	8.09	15.19	6.25	

Calm : .00 %

Total # Operational Hours : 704

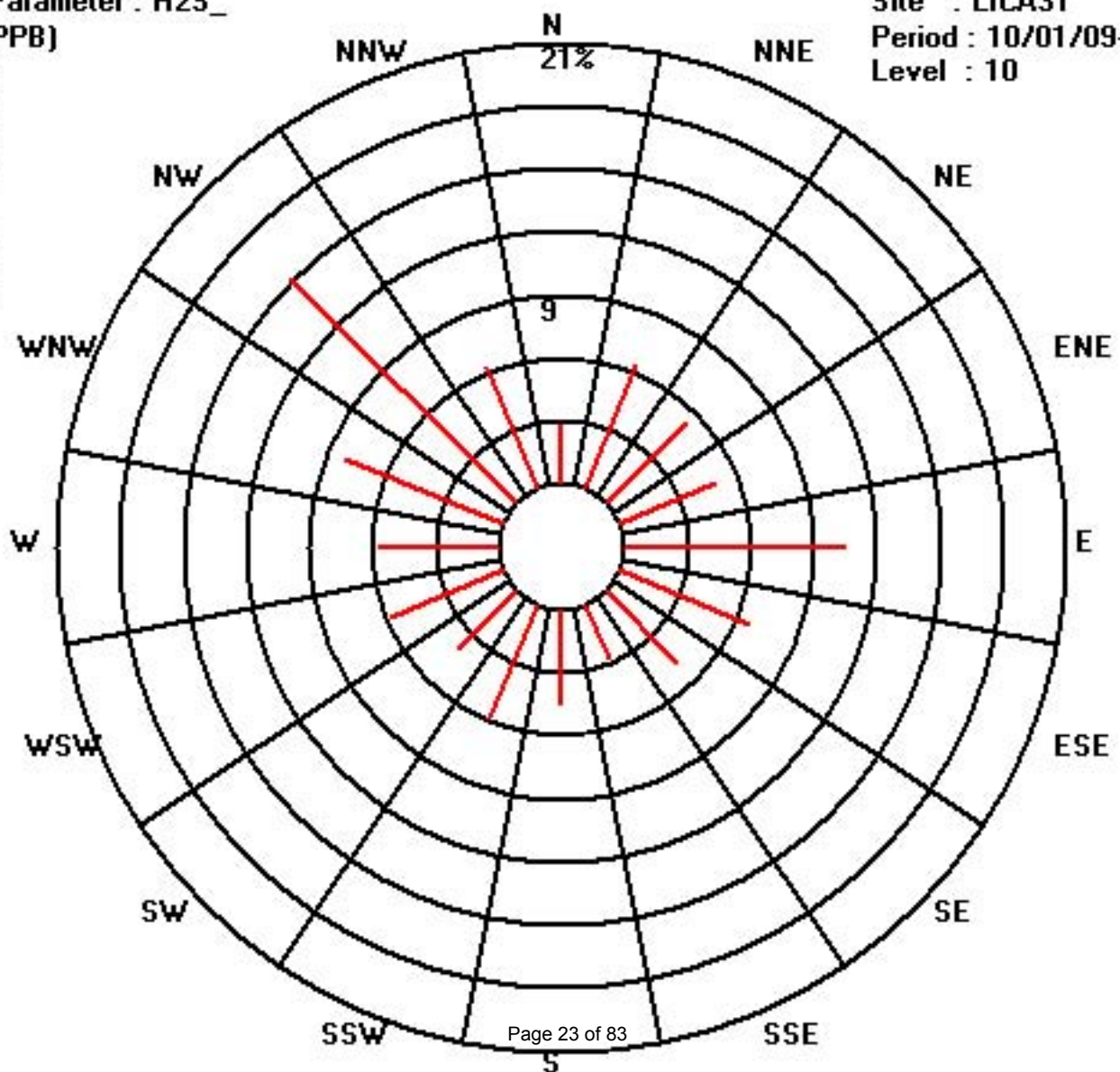
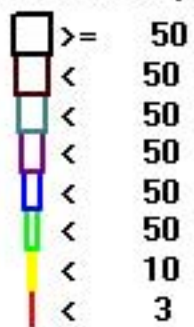
Distribution By Samples

	Direction																
Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 3	20	45	38	35	74	47	34	20	32	42	28	41	40	57	107	44	704
< 10																	
< 50																	
>= 50																	
Totals	20	45	38	35	74	47	34	20	32	42	28	41	40	57	107	44	

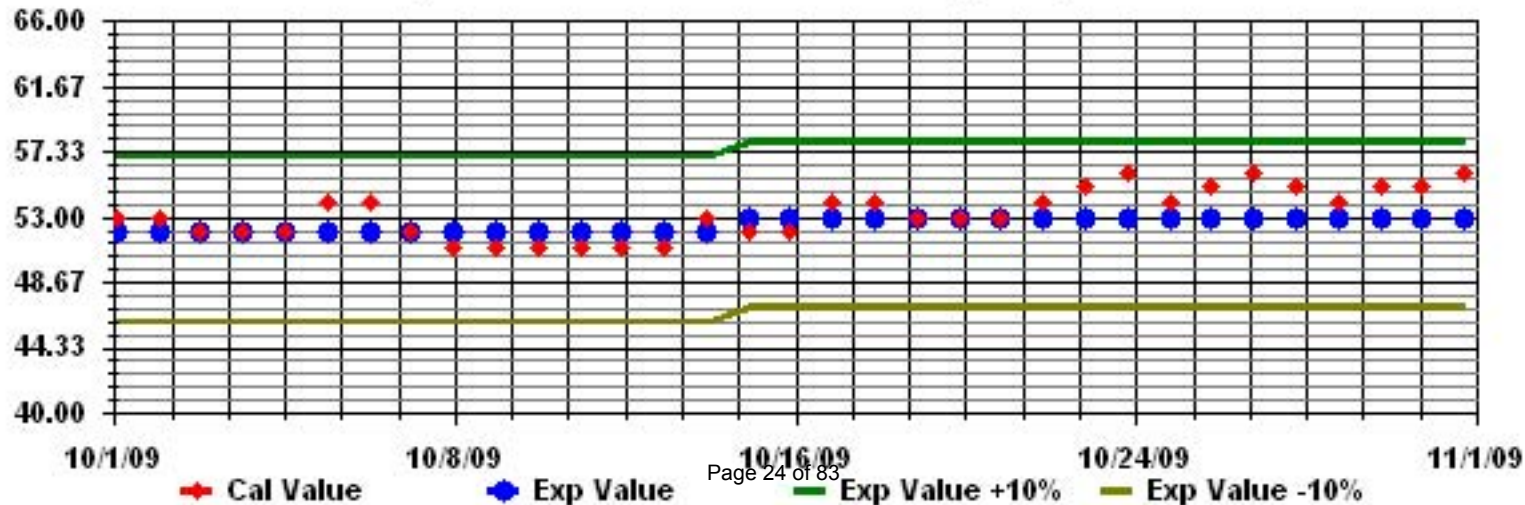
Calm : .00 %

Total # Operational Hours : 704

Class Limits (PPB)



Calibration Graph for Site: LICA31 Parameter: H2S_ Sequence: H2S Phase: SPAll



Total Hydrocarbons

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION -ST.LINA

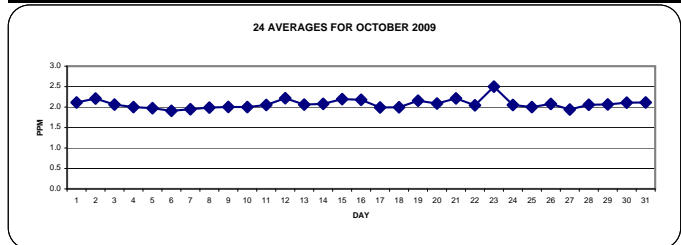
OCTOBER 2009

TOTAL HYDROCARBONS hourly averages in ppm

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

STATUS FLAG CODES

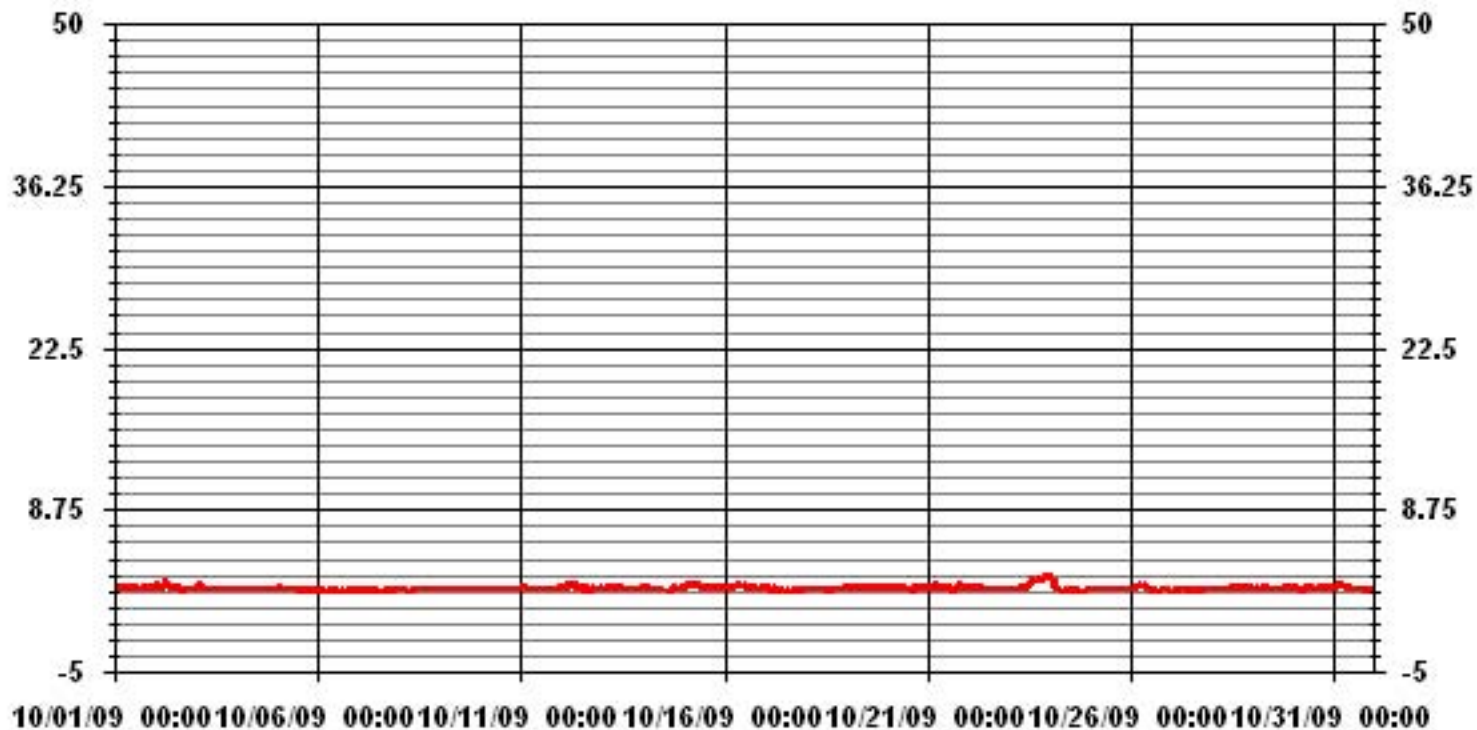
S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	- MAINTENANCE
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE



MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:	705					
MAXIMUM 1-HR AVERAGE:	3.0	PPM	@ HOUR(S)	VAR	ON DAY(S)	23, 24
MAXIMUM 24-HR AVERAGE:	2.5	PPM			ON DAY(S)	23
					VAR- VARIOUS	
IZS CALIBRATION TIME:	33	HRS	OPERATIONAL TIME:	743	HRS	
MONTHLY CALIBRATION TIME:	5	HRS	AMD OPERATION UPTIME:	99.9	%	
STANDARD DEVIATION:	0.16		MONTHLY AVERAGE:	2.08	PPM	

01 Hour Averages



— LICA31 THC PPM

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - ST. LINA

OCTOBER 2009

TOTAL HYDROCARBONS MAX instantaneous maximum in ppr

MST		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		
HOURLY MAX	HOURLY AVG.	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	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	IZS	2.4	2.4	2.3	2.8	2.5	2.5	2.3	2.3	2.3	2.2	2.3	2.4	2.1	2.1	2.1	2.1	4.5	2.1	2.2	2.3	2.2	2.3	4.5	2.4	24	
2		IZS	2.4	2.8	2.3	2.6	2.7	2.7	2.8	2.9	2.4	2.3	2.2	2.4	M	C	C	1.9	2	2	2	2	2.1	IZS	2.9	2.4	23		
3		2.5	2.4	2.4	2.4	2.4	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	IZS	2	2.5	2.1	24	
4		2	2	2	2	2	2	2	2	2	2	2.1	2.1	2	2	2	2	2	2	2.3	2	2	IZS	2	2	2.3	2.0	24	
5		2	5.8	2.8	2	2	2.5	3.6	2.2	2	2	2	2	2	2	2	2	2	2	2	2	IZS	1.9	2	1.9	5.8	2.3	24	
6		2	1.9	1.9	2	2	2	2	2	2	2	2.1	2.1	2	1.9	1.9	2	2	2	1.9	IZS	1.9	2	1.9	2	2.1	2.0	24	
7		2	1.9	1.9	1.9	1.9	2	2	2	2	2	2	2	2.4	2.3	2	2.1	2	2	2	IZS	3.1	2	2	2	2	3.1	2.1	24
8		2.7	2.3	2	2	2	2	2	2	2	2	2	2	2	2	2.1	2	2	IZS	2.1	2.3	2.4	2.2	2.2	2.1	2.7	2.1	24	
9		2.1	2.1	2.1	2.2	2.1	2.2	2.3	2.2	2.1	2.2	2.2	2.1	2.1	2.2	2.2	2.2	IZS	2.2	2.3	2.8	2.4	2.7	2.3	2.1	2.8	2.2	24	
10		2.2	2.1	2.3	2.1	2.2	2.1	2.1	2.2	2.2	2.2	2.1	2.2	2.2	2	2	IZS	2.3	2.2	2	2.4	2.1	2	2	2	2.4	2.1	24	
11		2.4	3.4	4.7	3.6	2.3	2	2	2	2.1	2.2	2.2	2.3	2.1	2.5	IZS	2.3	2.3	2.3	2.8	2.7	2.4	2	2.9	3	4.7	2.5	24	
12		2.7	2.6	2.8	2.4	2.5	2.6	2.6	2.6	2.4	2.4	2.4	2.3	2.3	IZS	2.2	2.3	2.4	2.1	2.3	2.3	2.5	2.7	2.6	2.4	2.8	2.5	24	
13		2.6	2.4	2.4	2.3	2.3	2.4	2.5	2.3	2.4	2.3	2.3	2.2	IZS	2.1	2	2.1	2.2	2.2	2.3	2.1	2.1	2.1	2.3	2.5	2.6	2.3	24	
14		2.3	2.6	2.7	2.6	2.5	2.3	2.3	2.2	2.2	2.2	IZS	C	C	C	C	2.7	2.5	2.6	2.7	2.4	2.2	2.2	2.2	2.7	2.4	2.4	24	
15		2.5	2.8	2.8	2.9	2.7	2.5	2.3	2.3	2.3	2.3	IZS	2.2	2.2	2.2	2.4	2.1	2.1	2.2	2.2	2.1	2.1	2.1	2.2	2.2	2.9	2.3	24	
16		2.2	2.2	2.2	2.3	2.3	2.3	2.3	2.4	2.5	IZS	2.4	2.4	2.3	2.3	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.5	2.2	24
17		2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	IZS	2	2	2	2	2	1.9	2.1	2	2	2	2	2	2	2.1	2	2.1	2.1	2.0	24
18		2	2	2	2.1	2.1	2	3.1	IZS	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2.1	2.3	3.1	2.1	24
19		2.8	2.7	2.9	2.8	2.2	2.3	IZS	2.3	2.2	2.1	2.1	2.1	2.1	2.2	2.2	2.3	2.3	3.5	2.1	2.1	2.1	2.1	2.1	2.1	2.1	3.5	2.3	24
20		2.1	2.1	2.2	2.1	2.1	IZS	2.1	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	2.2	2.1	2.2	2.1	24
21		2.2	2.1	2.2	2.5	IZS	2.3	2.3	2.3	2.3	2.3	2.2	2.3	2.2	2.2	2.1	2.4	2.7	2.6	2.7	2.7	2.6	2.6	2.6	2.6	2.7	2.4	2.4	24
22		2.8	2.4	2.3	IZS	2.4	2.9	2.5	2.4	2.2	2.1	2.1	2.1	2	2	2	2	2	2	2	2	2.1	2	2	2	2.9	2.2	2.4	24
23		2.1	2.1	IZS	2	2	2.2	2.2	2.3	2.3	2.3	2.7	2.7	2.7	3.2	3.1	3.3	3	3.2	3.1	3.6	3.5	3.6	3.1	3	3.6	2.8	2.4	24
24		3	IZS	2.9	2.8	2.3	2.2	2.1	2	2	1.9	1.9	1.9	1.9	1.9	1.9	2	1.9	2	2	2	2	2	2	2	3	2.1	24	
25		IZS	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	IZS	2	2.0	24
26		2	2.2	2.4	4.3	3.1	2.4	2.4	2.3	2.3	2.2	2.1	2	2	2	1.9	1.9	2.4	2	2	2	2	2	2	IZS	2	4.3	2.3	24
27		2	2	2	2	2	N	2	2	2	2	2	2	2	2	2	2	2	2	2.1	2.1	2	IZS	2.1	2.1	2.1	2.0	23	
28		2.1	2.1	2.1	2.1	2.1	2.1	2.1	2	2.2	2.1	2.2	2.2	2.1	2.2	2.3	2.2	2.2	2.3	2.2	2.2	IZS	2.2	2.2	2.1	2.3	2.2	2.4	24
29		2.1	2.1	2.4	2.4	2.2	2.1	2.1	2.3	2.6	2.3	2.1	2	2	2	2	2	2	2	2	IZS	2.1	2.2	2.2	2.3	2.6	2.2	2.4	24
30		2.4	2.7	2.5	2.6	2.1	2.1	2.1	2.3	2.4	2.4	2.3	2.4	2.3	2.3	2.2	2.7	2.5	2.4	IZS	2.3	2.4	2.6	2.2	2.2	2.7	2.4	2.4	24
31		2.2	2.3	2.3	2.4	2.4	2.4	2.4	2.2	2.2	2.1	2.1	2.1	2	2.1	2.2	2.1	2	IZS	2	2.1	2.1	2	2	2	2.4	2.2	2.4	24
HOURLY MAX		3	6	5	4	3	3	4	3	3	2	3	3	3	3	3	3	3	4	5	4	4	4	3	3				
HOURLY AVG		2.3	2.4	2.4	2.4	2.2	2.3	2.3	2.2	2.2	2.1	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.2	2.3	2.3	2.2	2.2	2.2	2.2				

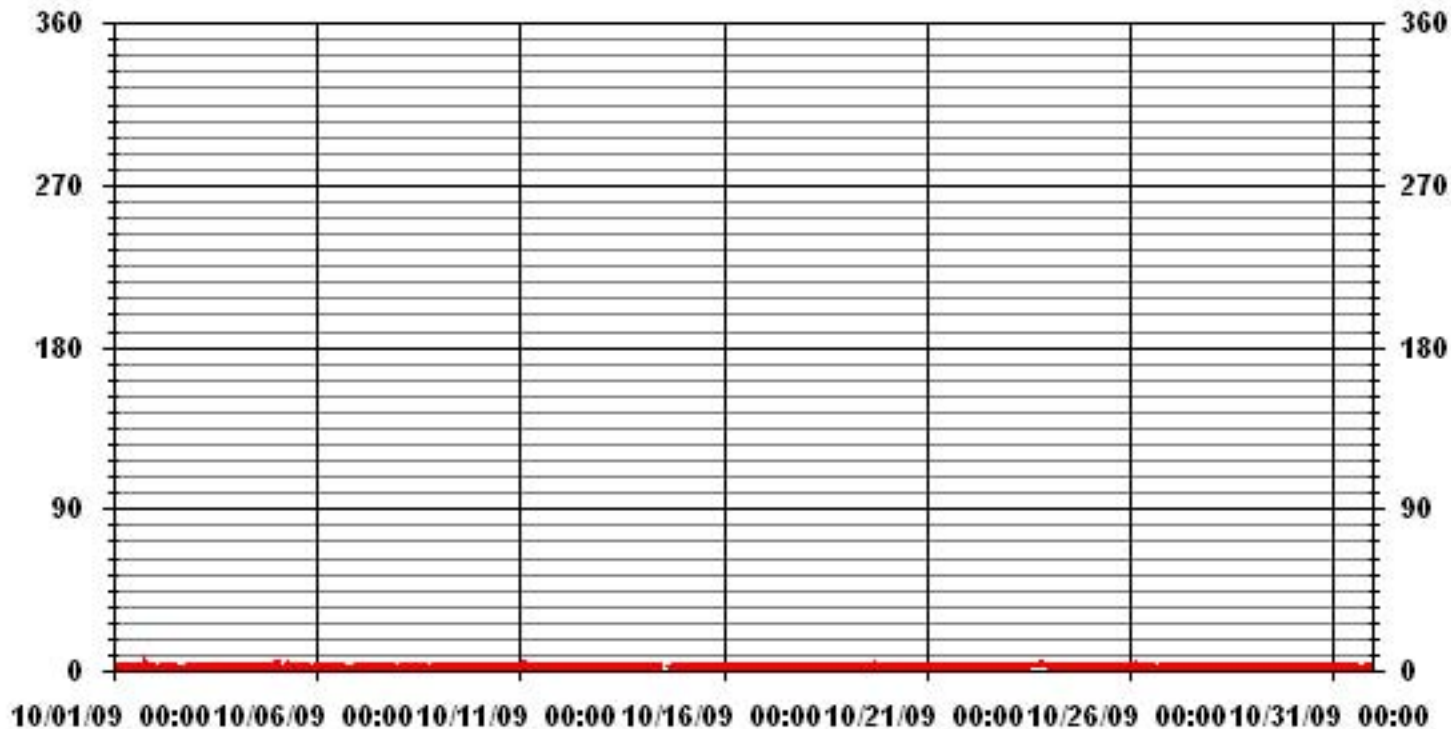
STATUS FLAG CODES

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:	703					
MAXIMUM INSTANTANEOUS VALUE:	5.8	PPM	@ HOUR(S)	1	ON DAY(S)	5
IZS CALIBRATION TIME:	33	HRS	OPERATIONAL TIME:	742 HRS		
MONTHLY CALIBRATION TIME:	6	HRS				
STANDARD DEVIATION:	0.35					

01 Hour Averages



— LICA31 THCMAX PPM

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - ST. LINA

OCTOBER 2009

SULPHUR DIOXIDE (SO₂) 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	RDGS.
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	MAX.	AVG.		
DAY																											
1	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
2	IZS	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	1	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	IZS	0	0.0	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	24	
5	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
6	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	1	0	0	0	IZS	0	0	0	0	1	0.2	24
7	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
8	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
9	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
10	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
11	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
12	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
13	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
14	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	0.0	24
15	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
16	0	0	0	0	0	0	0	0	0	IZS	0	1	2	1	1	2	0	0	0	0	0	0	0	0	2	0.3	24
17	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
18	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
19	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
20	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
21	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
22	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
23	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
24	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
25	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
26	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
27	0	0	0	0	0	N	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0.0	23
28	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
29	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
30	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
31	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
HOURLY MAX	0	0	0	0	0	0	0	1	1	1	0	1	2	1	1	2	1	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	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			

STATUS FLAG CODES

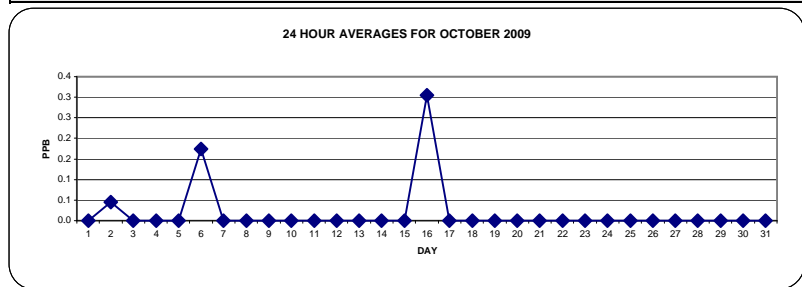
S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	- MAINTENANCE
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE

OBJECTIVE LIMIT:

ALBERTA ENVIRONMENT:	1-HR	172	PPB	24-HR	57	PPB
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MONTHLY SUMMARY

NUMBER OF 1-HR EXCEEDENCES:	0					
NUMBER OF 24-HR EXCEEDENCES:	0					
NUMBER OF NON-ZERO READINGS:	10					
MAXIMUM 1-HR AVERAGE:	2	PPB	@ HOUR(S)	13, 15	ON DAY(S)	16
MAXIMUM 24-HR AVERAGE:	0.3	PPB			ON DAY(S)	16
IZS CALIBRATION TIME:	32	HRS	OPERATIONAL TIME:	743	HRS	
MONTHLY CALIBRATION TIME:	7	HRS	AMD OPERATION UPTIME:	99.9	%	
STANDARD DEVIATION:	0.15		MONTHLY AVERAGE:	0.02	PPB	



LICA31
 THC / WDR Joint Frequency Distribution (Percent)

October 2009

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	2.69	6.38	5.39	4.96	10.78	6.66	4.68	2.69	4.39	5.81	3.97	5.81	5.67	8.08	15.17	6.24	99.43
< 10.0	.00	.00	.00	.00	.00	.00	.14	.14	.14	.14	.00	.00	.00	.00	.00	.00	.56
< 50.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
>= 50.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
Totals	2.69	6.38	5.39	4.96	10.78	6.66	4.82	2.83	4.53	5.95	3.97	5.81	5.67	8.08	15.17	6.24	

Calm : .00 %

Total # Operational Hours : 705

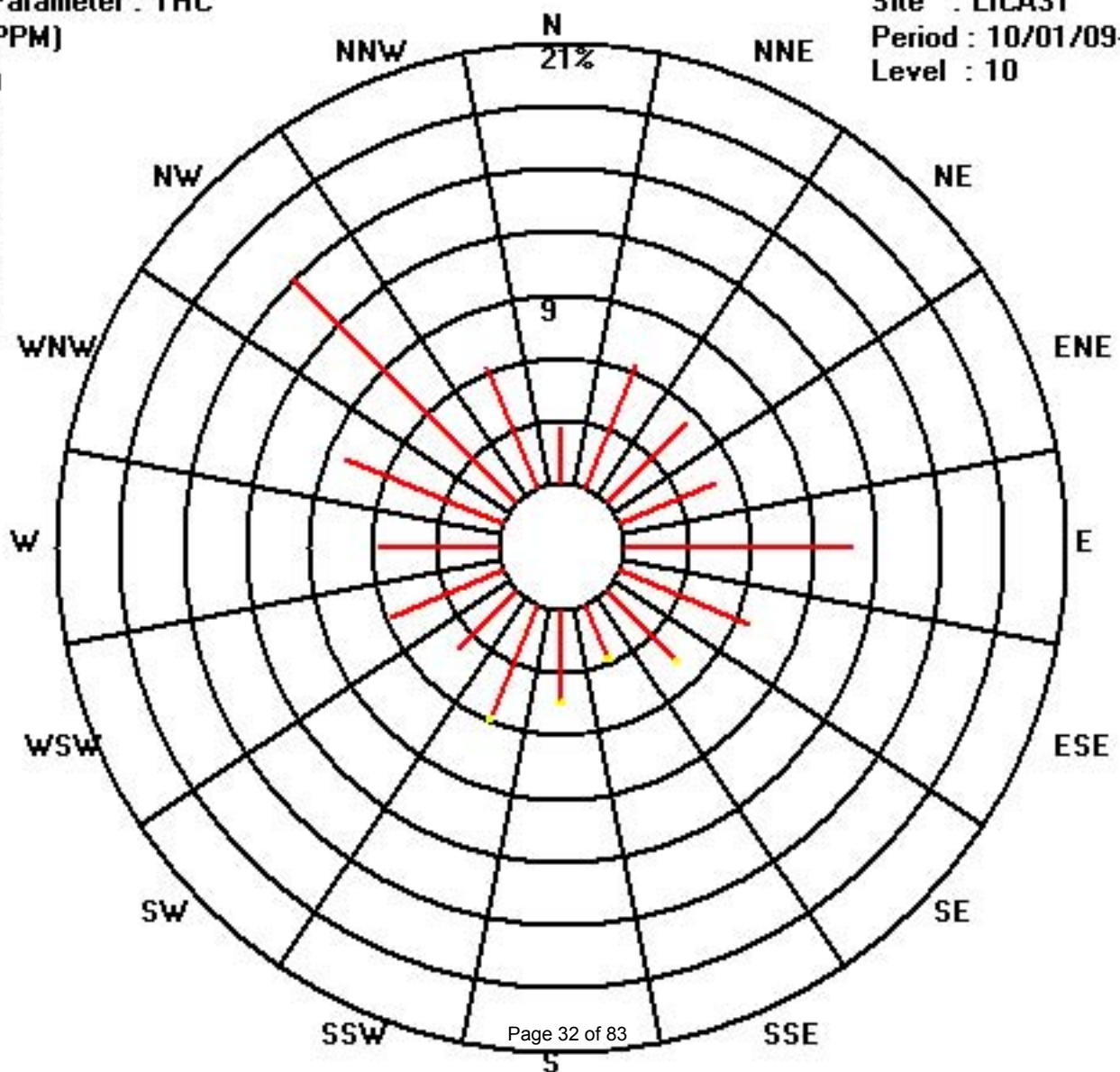
Distribution By Samples

	Direction																
Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 3.0	19	45	38	35	76	47	33	19	31	41	28	41	40	57	107	44	701
< 10.0							1	1	1	1							4
< 50.0																	
>= 50.0																	
Totals	19	45	38	35	76	47	34	20	32	42	28	41	40	57	107	44	

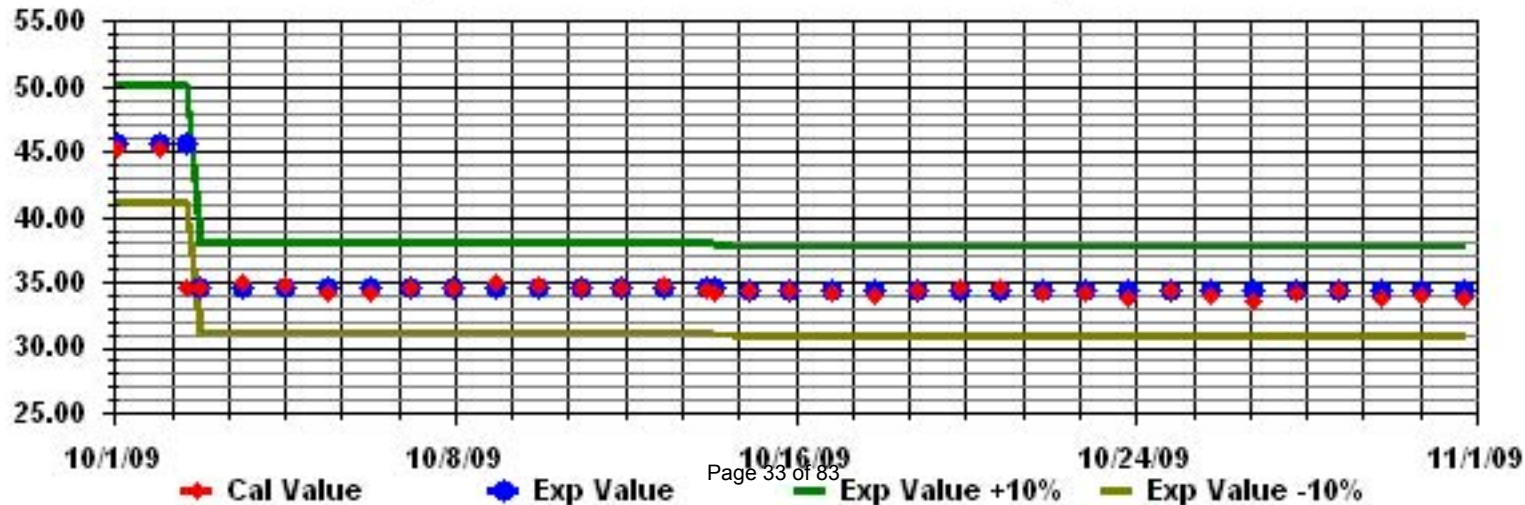
Calm : .00 %

Total # Operational Hours : 705

Class Limits (PPM)



Calibration Graph for Site: LICA31 Parameter: THC Sequence: THC Phase: SPAll



Nitrogen Dioxide

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - ST. LINA

OCTOBER 2009

NITROGEN DIOXIDE hourly averages in ppb

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY MAX.	24-HOUR AVG.	RDGS.	
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	1	IZS	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	4	2	3	4	1.3	24	
2	IZS	2	3	2	2	6	7	5	3	2	1	1	1	1	1	1	1	1	1	1	2	2	4	IZS	7	2.3	24	
3	5	5	5	5	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	IZS	0	5	1.7	24
4	0	0	0	0	0	0	1	1	1	1	1	1	1	0	0	1	1	1	1	1	1	1	IZS	1	1	1	0.7	24
5	2	2	1	1	1	1	1	1	1	2	1	1	1	1	1	1	2	2	2	2	IZS	2	2	3	3	1.4	24	
6	3	3	3	3	3	4	4	4	4	4	2	2	1	1	2	2	6	3	1	IZS	0	0	1	0	6	2.4	24	
7	1	1	0	0	0	0	0	0	0	0	1	0	1	1	1	1	1	1	IZS	0	1	1	1	2	2	0.6	24	
8	2	2	1	1	1	1	1	1	1	1	1	0	1	0	0	0	0	IZS	0	0	0	1	1	1	2	0.7	24	
9	0	1	0	0	1	1	1	1	1	1	1	1	1	1	0	IZS	0	0	0	0	0	0	0	1	1	0.6	24	
10	1	0	0	0	0	0	0	1	1	1	1	1	1	0	1	IZS	0	0	0	1	1	1	1	1	1	0.6	24	
11	1	1	2	1	1	1	1	1	2	1	1	1	1	1	IZS	1	1	1	1	1	1	1	1	1	2	1.1	24	
12	1	1	1	2	2	3	3	3	2	2	2	1	1	IZS	0	1	1	1	1	1	1	1	2	1	3	1.5	24	
13	1	1	1	1	1	1	1	1	1	1	1	1	IZS	0	1	1	1	1	1	1	1	1	1	1	1	1.0	24	
14	1	1	1	1	1	1	1	1	C	C	C	C	C	C	C	C	1	1	2	2	2	2	2	2	2	1.3	24	
15	2	2	2	2	2	2	2	2	3	3	IZS	0	0	0	0	0	0	1	0	1	1	1	1	1	3	1.2	24	
16	2	2	3	4	5	4	5	5	4	IZS	3	4	5	4	3	3	3	3	3	1	1	1	2	2	5	3.1	24	
17	2	3	3	2	1	2	1	1	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	3	0.7	24	
18	0	0	0	0	0	0	0	IZS	1	1	1	1	1	0	0	0	0	0	0	2	1	0	1	3	0.5	24		
19	3	2	2	2	1	1	IZS	0	0	0	0	0	0	0	1	1	1	1	1	1	0	0	0	3	0.7	24		
20	0	0	0	0	0	IZS	0	1	1	1	1	1	1	0	1	0	0	0	0	1	0	0	0	1	0.3	24		
21	0	0	1	1	IZS	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	0	0	1	0.3	24		
22	0	0	0	IZS	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	3	0.2	24		
23	2	1	IZS	2	2	5	8	8	8	7	7	6	5	5	4	5	5	5	5	5	6	5	4	4	8	5.0	24	
24	4	IZS	4	6	6	5	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	1.2	24	
25	IZS	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	1	0	1	2	1	2	1	IZS	2	0.4	24
26	0	0	0	1	1	1	1	1	1	2	1	1	1	0	0	1	3	3	2	2	2	1	IZS	0	3	1.0	24	
27	1	1	1	1	1	N	1	1	1	0	0	0	0	0	0	0	0	1	0	0	0	0	IZS	0	0	0.4	23	
28	0	0	0	0	0	0	1	1	0	0	0	1	1	1	1	1	1	1	1	1	IZS	0	0	0	1	0.5	24	
29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	1	2	2	2	0.2	24	
30	2	1	1	2	2	1	1	1	1	1	2	2	1	1	1	1	1	1	1	IZS	0	0	1	1	2	1.1	24	
31	1	1	1	2	2	2	2	1	1	1	1	1	1	1	1	2	IZS	2	3	3	2	1	1	3	1.5	24		
HOURLY MAX	5	5	5	6	6	6	8	8	8	7	7	6	5	5	4	5	6	5	5	5	6	5	4	4				
HOURLY AVG	1.3	1.1	1.2	1.4	1.3	1.5	1.6	1.5	1.3	1.2	1.1	1.0	1.0	0.7	0.8	0.8	1.0	1.1	1.0	1.1	1.0	1.1	1.1	1.2				

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

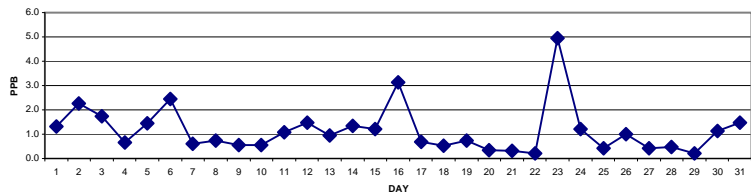
OBJECTIVE LIMIT:

ALBERTA ENVIRONMENT:	1-HR	212	PPB	24-HR	106	PPB
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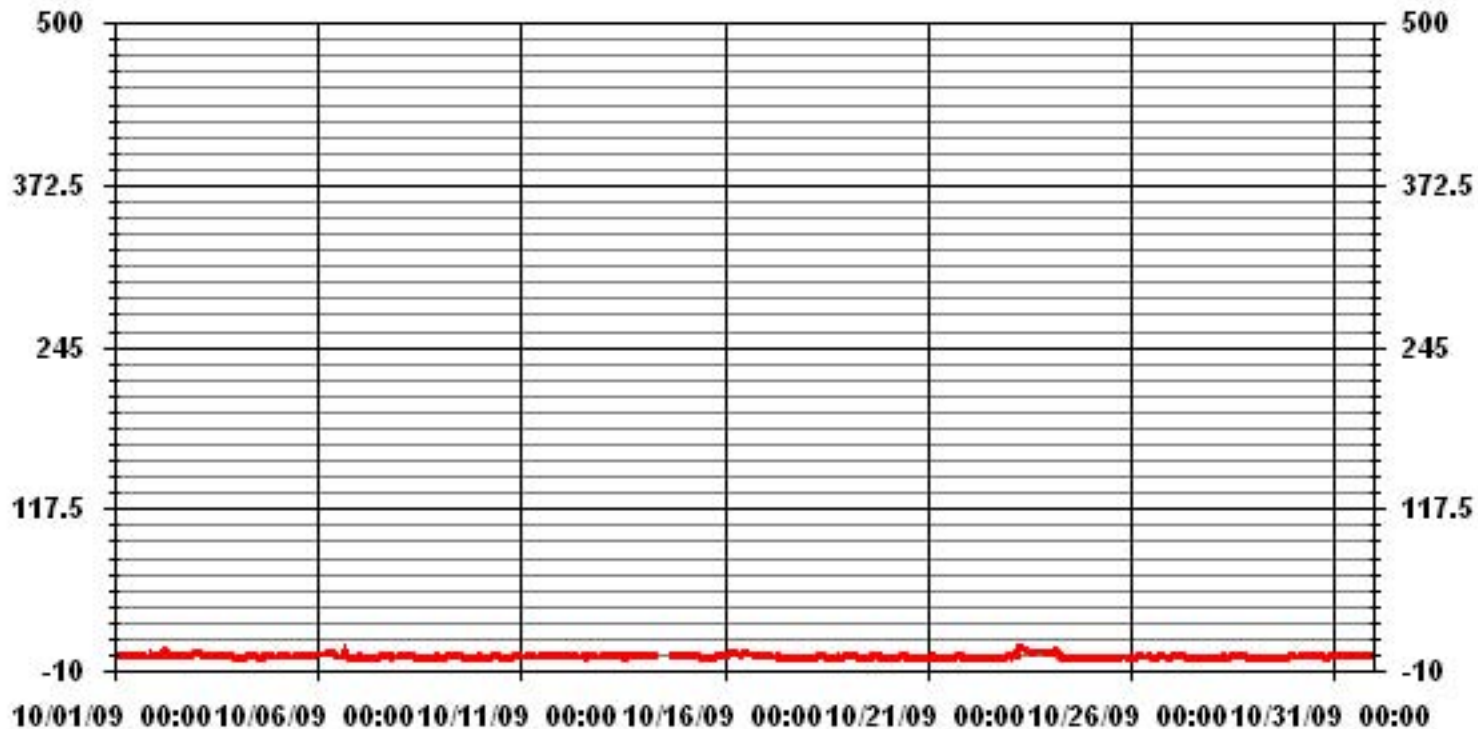
MONTHLY SUMMARY

NUMBER OF 1-HR EXCEEDENCES:	0		
NUMBER OF 24-HR EXCEEDENCES:	0		
NUMBER OF NON-ZERO READINGS:	468		
MAXIMUM 1-HR AVERAGE:	8 PPB @ HOUR(S) VAR ON DAY(S) 23		
MAXIMUM 24-HR AVERAGE:	5.0 PPB ON DAY(S) 23		
IZS CALIBRATION TIME:	32 HRS	OPERATIONAL TIME:	743 HRS
MONTHLY CALIBRATION TIME:	9 HRS	AMD OPERATION UPTIME:	99.9 %
STANDARD DEVIATION:	1.35	MONTHLY AVERAGE:	1.15 PPB

24 HOUR AVERAGES FOR OCTOBER 2009



01 Hour Averages



— LICA31 NO2_ PPB

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - ST. LINA

OCTOBER 2009

NITROGEN DIOXIDE MAX instantaneous maximum in ppb

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR		
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.	
DAY																												
1	2	IZS	2	2	2	2	2	2	2	2	1	1	1	1	1	1	1	2	1	2	3	6	4	4	6	2.0	24	
2	IZS	4	6	4	3	8	8	7	4	3	2	2	2	1	1	1	1	1	2	2	3	3	6	IZS	8	3.4	24	
3	6	6	6	7	6	2	1	1	2	1	1	1	2	1	1	1	1	1	1	1	1	2	IZS	1	7	2.3	24	
4	1	1	1	1	1	1	1	1	1	2	2	1	1	1	1	1	1	2	2	2	2	IZS	2	2	2	1.3	24	
5	3	2	2	2	2	2	2	2	2	3	2	2	1	2	2	1	2	2	3	3	IZS	2	3	3	3	2.2	24	
6	3	4	4	4	4	4	5	5	5	5	3	3	2	2	2	6	7	5	2	IZS	1	1	1	1	7	3.4	24	
7	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	IZS	2	2	2	2	3	3	1.3	24	
8	3	2	2	2	1	1	1	1	1	2	1	1	1	1	1	1	1	IZS	1	1	1	1	1	1	1	3	1.3	24
9	1	1	1	1	1	1	1	1	2	1	2	1	1	1	1	1	IZS	1	1	1	1	1	1	1	2	1.1	24	
10	1	1	1	1	1	1	1	1	2	1	2	1	1	1	2	IZS	0	1	1	2	1	1	2	2	2	1.2	24	
11	2	2	2	2	2	2	2	2	2	3	2	2	2	2	IZS	2	1	2	2	1	2	2	2	2	3	2.0	24	
12	2	2	2	3	3	3	4	3	3	3	3	3	2	2	IZS	1	1	1	1	2	1	2	2	2	4	2.1	24	
13	2	2	2	1	2	2	2	2	2	2	2	2	IZS	1	2	1	1	2	2	2	2	2	2	1	2	1.8	24	
14	2	1	1	2	1	1	1	1	C	C	C	C	C	C	C	C	C	2	2	2	2	3	3	3	3	1.8	24	
15	3	3	3	3	3	3	3	3	3	5	IZS	1	1	1	1	1	1	4	1	2	2	1	2	1	5	2.2	24	
16	4	3	4	5	6	5	6	6	5	IZS	4	5	6	6	4	5	4	4	4	2	2	2	3	2	6	4.2	24	
17	3	4	4	3	2	3	3	10	IZS	1	1	0	14	0	0	20	14	16	2	1	1	2	1	1	20	4.6	24	
18	1	1	1	1	1	1	1	IZS	1	1	0	1	0	0	0	1	0	1	0	3	1	0	1	3	3	0.9	24	
19	3	2	2	2	1	1	IZS	1	2	2	2	2	2	2	2	4	2	4	2	2	3	2	2	2	4	2.1	24	
20	1	2	2	2	2	IZS	2	1	2	2	2	2	2	1	1	2	3	1	2	1	1	1	0	1	3	1.6	24	
21	1	1	1	2	IZS	1	1	1	4	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	4	1.2	24	
22	1	1	2	IZS	1	1	1	1	2	1	1	1	1	0	1	1	0	1	0	0	1	2	3	4	4	1.2	24	
23	3	3	IZS	3	3	15	9	10	10	9	9	8	6	5	5	6	6	6	6	6	6	6	5	5	15	6.5	24	
24	5	IZS	5	7	7	7	4	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	1.6	24	
25	IZS	0	0	0	0	0	0	0	1	0	0	0	0	1	3	2	1	1	2	4	2	3	2	IZS	4	1.0	24	
26	1	0	1	1	1	2	2	3	2	11	2	2	1	1	0	1	2	6	5	3	4	3	IZS	2	11	2.4	24	
27	2	1	2	2	2	N	2	2	2	1	1	1	5	0	1	1	1	4	1	1	1	IZS	1	1	5	1.6	23	
28	1	1	1	1	1	1	1	2	1	1	2	2	2	2	2	2	2	2	2	2	IZS	1	1	1	2	1.5	24	
29	1	0	0	0	0	0	0	1	2	1	1	1	1	1	0	0	0	0	0	IZS	2	2	2	3	3	0.8	24	
30	2	2	2	3	3	2	2	2	2	2	3	3	1	1	1	1	2	1	IZS	1	1	2	2	2	3	1.9	24	
31	2	2	2	2	2	2	2	2	2	2	2	2	2	2	3	3	2	IZS	3	3	3	3	2	1	3	2.2	24	
HOURLY MAX	6	6	6	7	7	15	9	10	10	11	9	8	14	6	5	20	14	16	6	6	6	6	6	5				
HOURLY AVG	2.2	1.9	2.2	2.3	2.2	2.6	2.4	2.5	2.4	2.4	1.9	1.7	2.1	1.4	1.4	2.4	2.0	2.6	1.8	1.9	1.8	2.0	2.0	2.0				

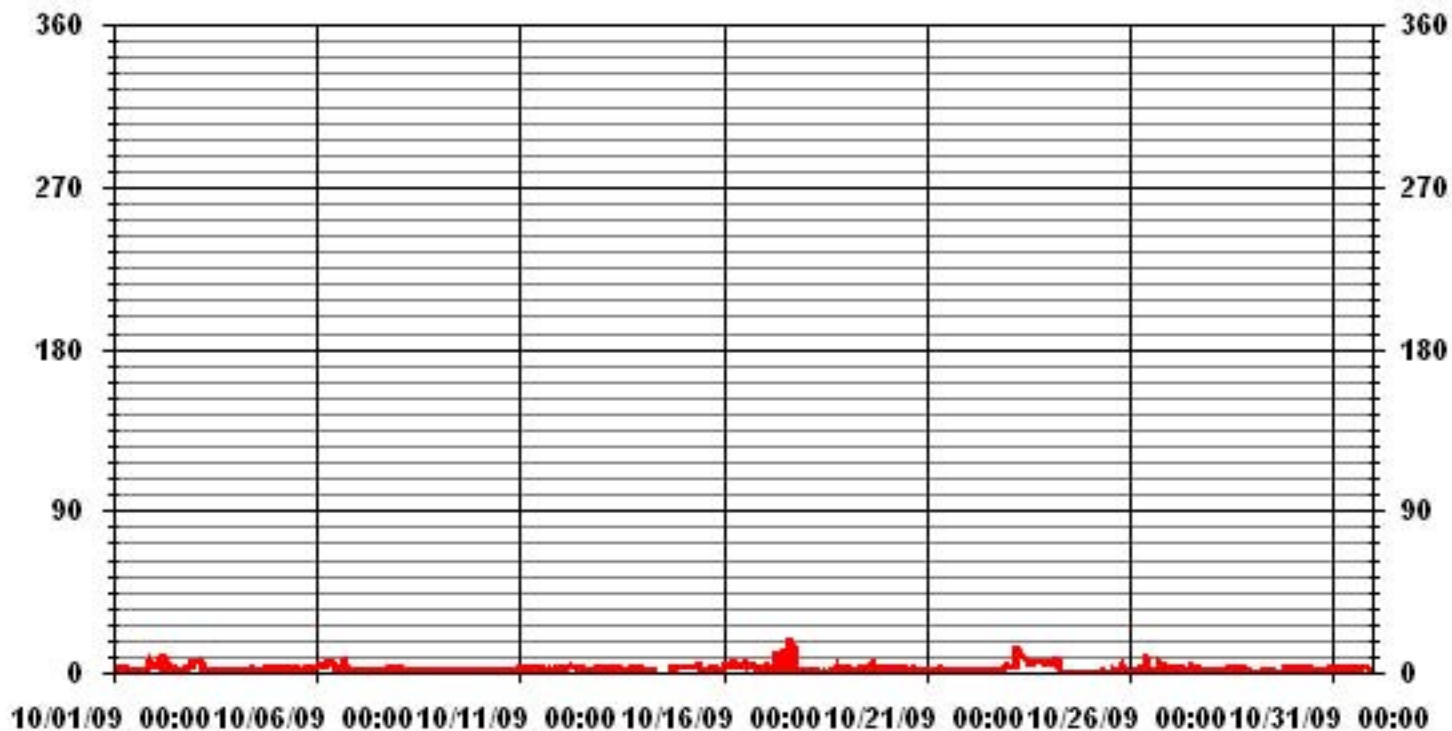
STATUS FLAG CODES

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

MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:	645					
MAXIMUM INSTANTANEOUS VALUE:	20	PPB	@ HOUR(S)	15	ON DAY(S)	17
IZS CALIBRATION TIME:	32	HRS	OPERATIONAL TIME:	743	HRS	
MONTHLY CALIBRATION TIME:	9	HRS				
STANDARD DEVIATION	2.01					

01 Hour Averages



— LICA31 NO2MAX PPB

LICA31
 NO2_ / WDR Joint Frequency Distribution (Percent)

October 2009

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	2.84	6.41	5.41	4.98	10.25	6.69	4.84	2.84	4.55	5.98	3.98	5.84	5.69	8.11	15.24	6.26	100.00
< 110	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
< 210	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
>= 210	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
Totals	2.84	6.41	5.41	4.98	10.25	6.69	4.84	2.84	4.55	5.98	3.98	5.84	5.69	8.11	15.24	6.26	

Calm : .00 %

Total # Operational Hours : 702

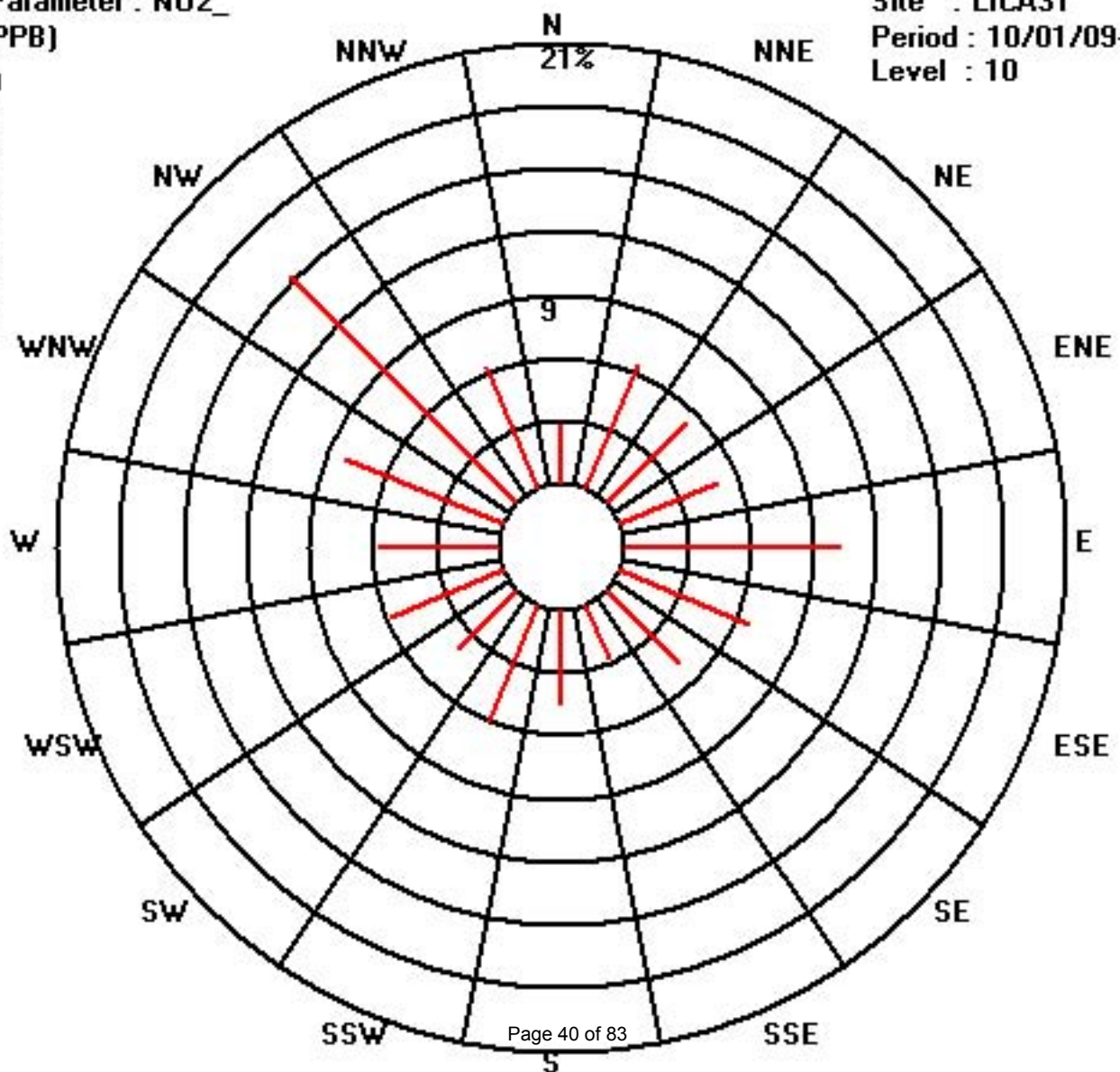
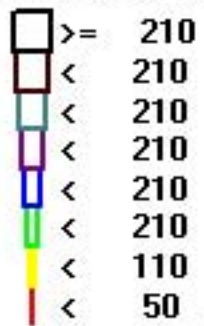
Distribution By Samples

	Direction																
Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 50	20	45	38	35	72	47	34	20	32	42	28	41	40	57	107	44	702
< 110																	
< 210																	
>= 210																	
Totals	20	45	38	35	72	47	34	20	32	42	28	41	40	57	107	44	

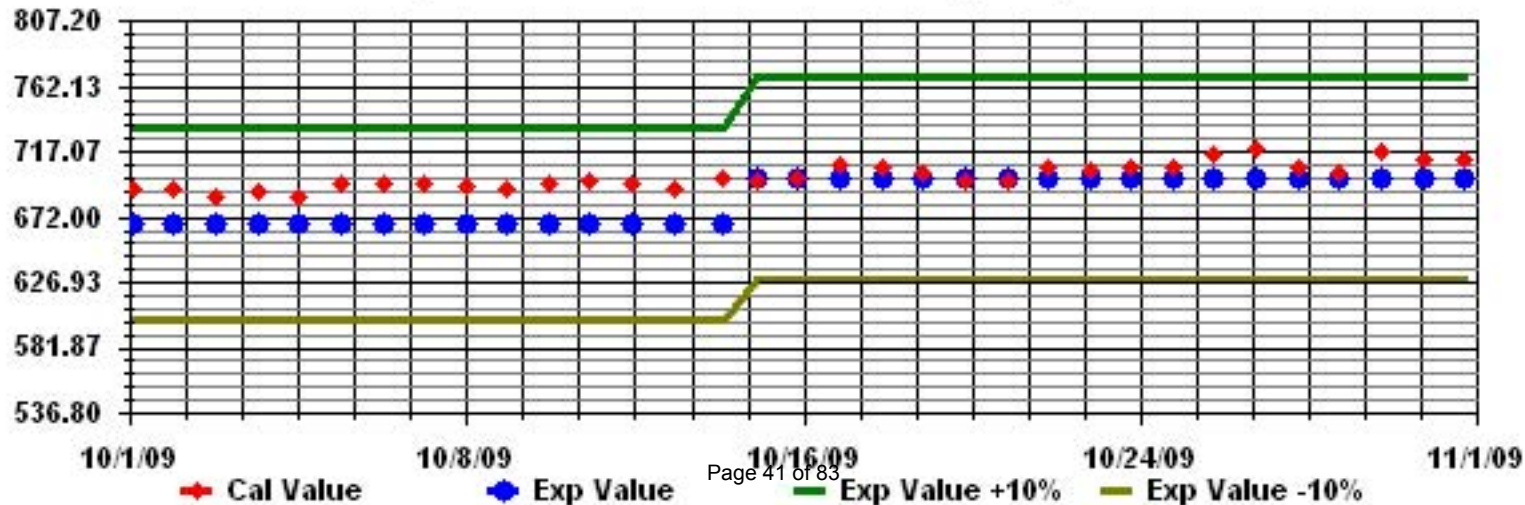
Calm : .00 %

Total # Operational Hours : 702

Class Limits (PPB)



Calibration Graph for Site: LICA31 Parameter: NO2_ Sequence: NO2 Phase: SPAN



Nitric Oxide

LAKELAND INDUSTRY & COMMUNITY ASSOICATION - ST. LINA

OCTOBER 2009

NITRIC OXIDE hourly averages in ppb

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY 24-HOUR			
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.	
DAY																												
1	0	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	0.0	24
2	IZS	0	0	0	0	0	0	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	2	0.2	24
3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	1	0.0	24
4	0	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	1	0	0	1	0.0	24
6	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	IZS	1	0	0	0	0	1	0.1	24
7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	1	0	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	IZS	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	IZS	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	IZS	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	IZS	1	0	0	0	0	0	0	0	0	0	1	0.0	24
12	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	0.0	24
13	0	0	0	0	0	0	0	0	0	0	0	0	IZS	1	0	0	0	0	0	0	0	0	0	0	0	1	0.0	24
14	0	0	0	0	0	0	0	0	C	C	C	C	C	C	C	C	C	0	0	0	0	0	0	0	1	1	0.1	24
15	0	0	0	0	0	0	0	0	0	1	IZS	1	1	1	1	0	0	0	0	0	0	0	0	0	0	1	0.2	24
16	0	0	0	0	0	0	1	2	5	IZS	6	5	5	4	2	1	0	0	0	0	0	0	0	0	6	1.3	24	
17	0	0	0	0	0	0	0	0	IZS	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.1	24
18	0	0	0	0	0	0	0	IZS	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.1	24
19	0	0	0	0	0	0	IZS	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.1	24
20	0	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
21	0	0	0	0	IZS	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.0	24
22	0	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
23	0	0	IZS	1	0	1	0	1	4	5	5	5	4	3	3	3	1	0	0	0	0	0	0	0	5	1.6	24	
24	0	IZS	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.0	24	
25	IZS	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0.1	24	
26	1	0	0	0	0	0	0	0	1	2	2	2	1	0	0	0	0	0	0	0	0	0	0	0	1	2	0.4	24
27	0	0	0	0	0	N	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.0	23	
28	0	0	0	0	0	0	0	0	1	0	0	1	1	0	1	0	0	0	0	0	0	IZS	1	0	0	1	0.2	24
29	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	IZS	1	0	0	0	1	0.1	24
30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	1	0	0	0	0	1	0.0	24
31	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	IZS	1	0	0	0	0	0	1	0.1	24	
HOURLY MAX	1	1	1	1	1	1	1	2	5	5	6	5	5	4	3	3	1	0	1	1	1	1	1	1				
HOURLY AVG	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.5	0.4	0.5	0.5	0.4	0.3	0.3	0.2	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.1				

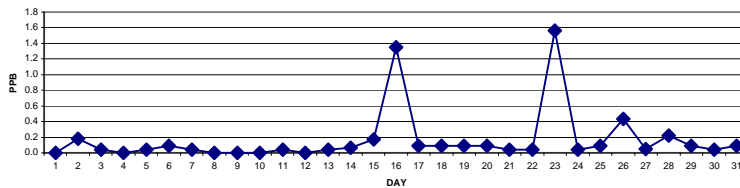
STATUS FLAG CODES

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

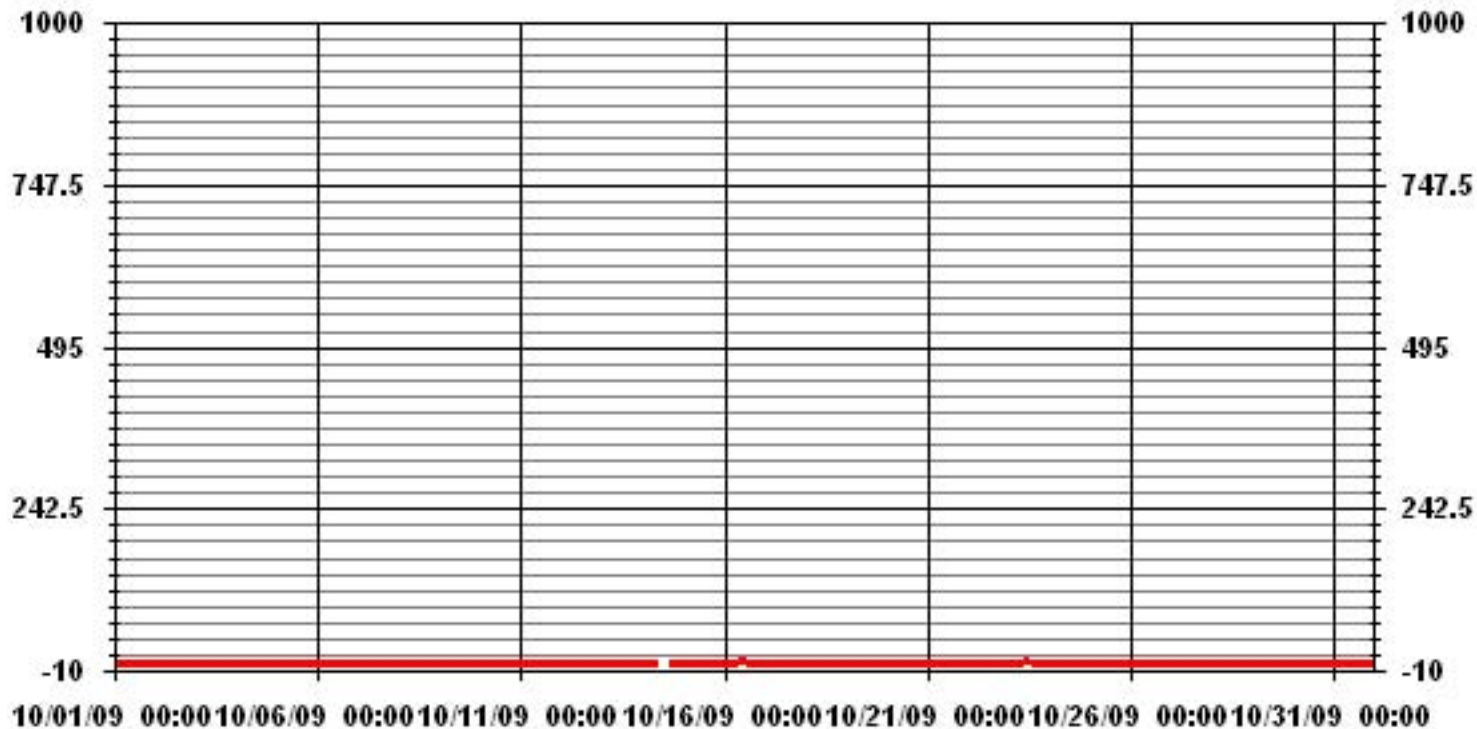
MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:	67					
MAXIMUM 1-HR AVERAGE:	6	PPB	@ HOUR(S)	10	ON DAY(S)	16
MAXIMUM 24-HR AVERAGE:	1.6	PPB			ON DAY(S)	23
IZS CALIBRATION TIME:	32	HRS	OPERATIONAL TIME:	743	HRS	
MONTHLY CALIBRATION TIME:	9	HRS	AMD OPERATION UPTIME:	99.9	%	
STANDARD DEVIATION:	0.67		MONTHLY AVERAGE:	0.17	PPB	

24 HOUR AVERAGES FOR OCTOBER 2009



01 Hour Averages



LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - ST. LINA

OCTOBER 2009

NITRIC OXIDE MAX instantaneous maximum in ppb

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	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	IZS	1	0	0	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.2	24	
2	IZS	2	1	0	0	0	1	2	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	2	0.5	24
3	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	2	0.2	24
4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	IZS	1	1	1	1	0.2	24		
5	1	0	0	0	0	0	0	1	0	0	1	1	0	1	2	0	0	0	0	0	IZS	2	1	0	2	0.4	24		
6	0	0	0	0	0	0	1	1	2	1	1	0	0	0	0	1	0	0	0	IZS	2	1	0	0	2	0.4	24		
7	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	IZS	2	2	1	0	0	2	0.3	24		
8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	1	1	1	0	0	0	1	0.1	24		
9	0	0	0	0	0	0	0	1	1	0	1	1	0	0	0	0	IZS	2	1	0	0	0	0	0	2	0.3	24		
10	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	IZS	1	1	1	0	0	0	0	0	1	0.2	24		
11	0	0	0	0	0	0	0	0	0	1	1	0	0	0	IZS	2	1	0	0	0	0	0	0	0	2	0.2	24		
12	0	0	0	0	0	0	0	0	0	0	0	1	0	IZS	1	1	0	0	0	0	0	0	0	0	1	0.1	24		
13	0	0	0	0	0	0	0	0	0	0	0	0	IZS	2	0	0	0	0	0	0	0	0	0	0	2	0.1	24		
14	0	0	0	0	0	0	0	0	C	C	C	C	C	C	C	C	C	0	0	0	0	0	0	0	0	0.0	24		
15	0	0	0	0	0	0	0	0	0	1	IZS	3	1	1	1	3	1	3	1	1	1	1	1	1	1	3	0.9	24	
16	2	1	1	0	1	1	3	4	6	IZS	9	6	7	6	3	2	1	1	1	1	1	1	1	1	0	9	2.6	24	
17	1	0	0	1	1	1	2	12	IZS	3	3	1	4	1	0	23	16	7	1	0	1	0	0	0	23	3.4	24		
18	1	0	0	0	0	1	1	IZS	3	1	1	1	1	1	1	1	0	1	1	1	0	0	0	0	3	0.7	24		
19	1	1	1	1	0	1	IZS	2	1	1	1	1	1	0	1	1	1	1	0	0	0	0	0	0	2	0.7	24		
20	0	1	0	0	0	IZS	3	1	1	1	2	1	2	1	1	1	3	1	0	0	0	0	1	0	3	0.9	24		
21	0	0	0	0	IZS	3	1	1	5	0	0	1	1	0	0	0	0	0	0	0	0	1	0	0	5	0.6	24		
22	0	0	0	IZS	2	1	1	0	1	1	1	1	1	1	1	0	0	1	0	0	1	1	2	1	2	0.7	24		
23	0	1	IZS	2	1	22	2	3	5	6	6	6	6	4	4	3	2	0	1	1	1	1	1	0	22	3.4	24		
24	1	IZS	3	1	1	1	1	1	1	0	1	1	0	0	0	0	0	0	1	1	1	0	0	0	3	0.7	24		
25	IZS	3	1	1	0	0	1	1	1	1	1	1	1	1	2	10	1	0	0	1	0	1	0	IZS	10	1.3	24		
26	2	1	1	0	1	0	2	3	2	28	3	3	2	1	1	1	1	0	1	0	0	1	IZS	2	28	2.4	24		
27	1	1	0	0	0	N	1	1	2	1	1	1	10	0	1	1	3	1	0	0	IZS	2	1	10	1.3	23			
28	1	1	1	1	1	1	2	1	4	2	2	3	2	1	3	3	2	2	1	0	IZS	2	1	1	4	1.7	24		
29	1	1	1	1	1	1	0	1	1	2	1	1	1	1	0	1	0	0	0	IZS	2	1	1	1	2	0.9	24		
30	1	1	1	1	1	1	1	1	0	1	1	1	1	1	0	0	0	0	IZS	2	1	1	1	1	2	0.8	24		
31	1	0	1	0	0	1	1	0	0	1	1	1	1	2	3	3	1	IZS	3	1	1	1	1	1	3	1.1	24		
HOURLY MAX	2	3	3	2	2	22	3	12	6	28	9	6	10	6	4	23	16	7	3	2	2	2	2	2					
HOURLY AVG	0.6	0.5	0.4	0.3	0.3	1.2	0.8	1.3	1.3	1.8	1.3	1.2	1.5	0.9	0.9	1.9	1.2	0.8	0.6	0.4	0.5	0.6	0.5	0.4					

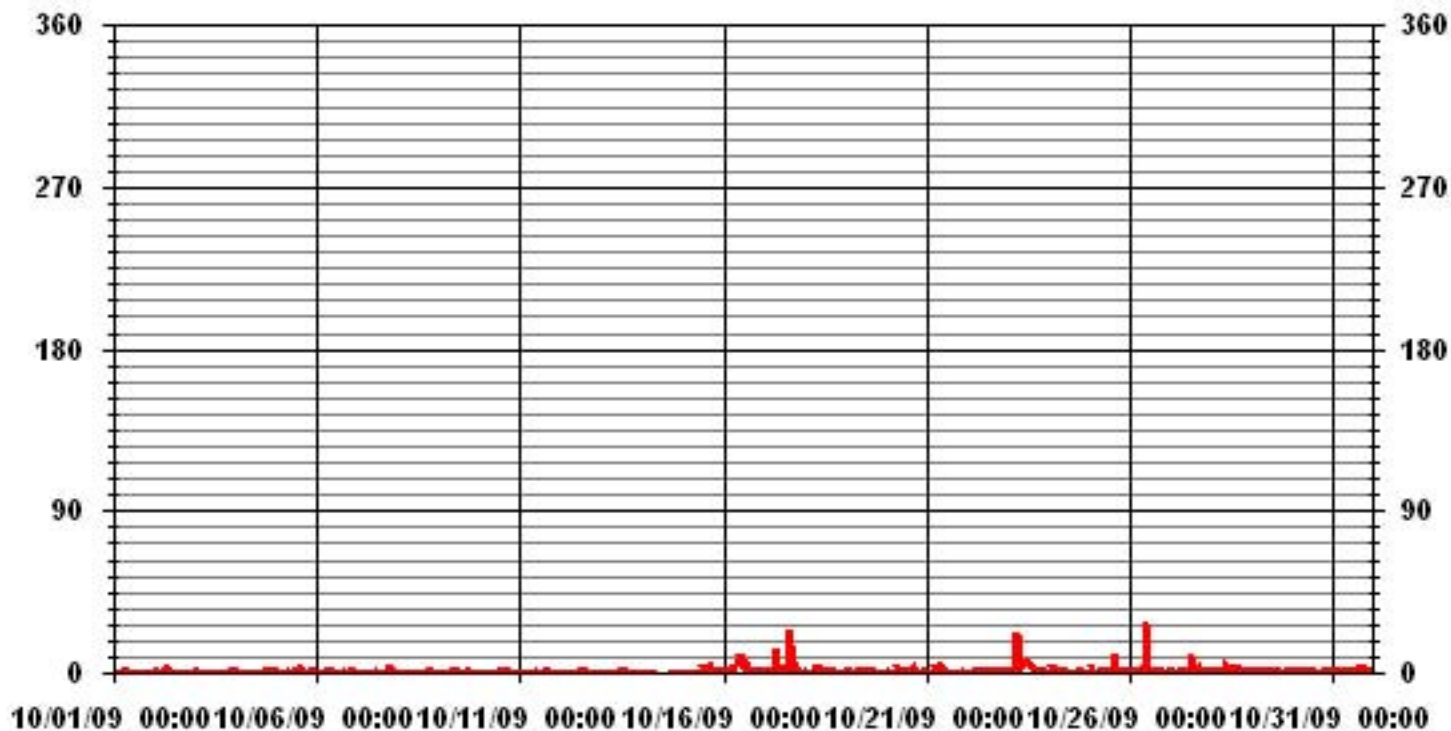
STATUS FLAG CODES

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

MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:	336					
MAXIMUM INSTANTANEOUS VALUE:	28	PPB	@ HOUR(S)	9	ON DAY(S)	26
IZS CALIBRATION TIME:	32	HRS	OPERATIONAL TIME:	743	HRS	
MONTHLY CALIBRATION TIME:	9	HRS				
STANDARD DEVIATION	2.08					

01 Hour Averages



LICA31
 NO_ / WDR Joint Frequency Distribution (Percent)

October 2009

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	2.84	6.41	5.41	4.98	10.25	6.69	4.84	2.84	4.55	5.98	3.98	5.84	5.69	8.11	15.24	6.26	100.00
< 110	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
< 210	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
>= 210	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
Totals	2.84	6.41	5.41	4.98	10.25	6.69	4.84	2.84	4.55	5.98	3.98	5.84	5.69	8.11	15.24	6.26	

Calm : .00 %

Total # Operational Hours : 702

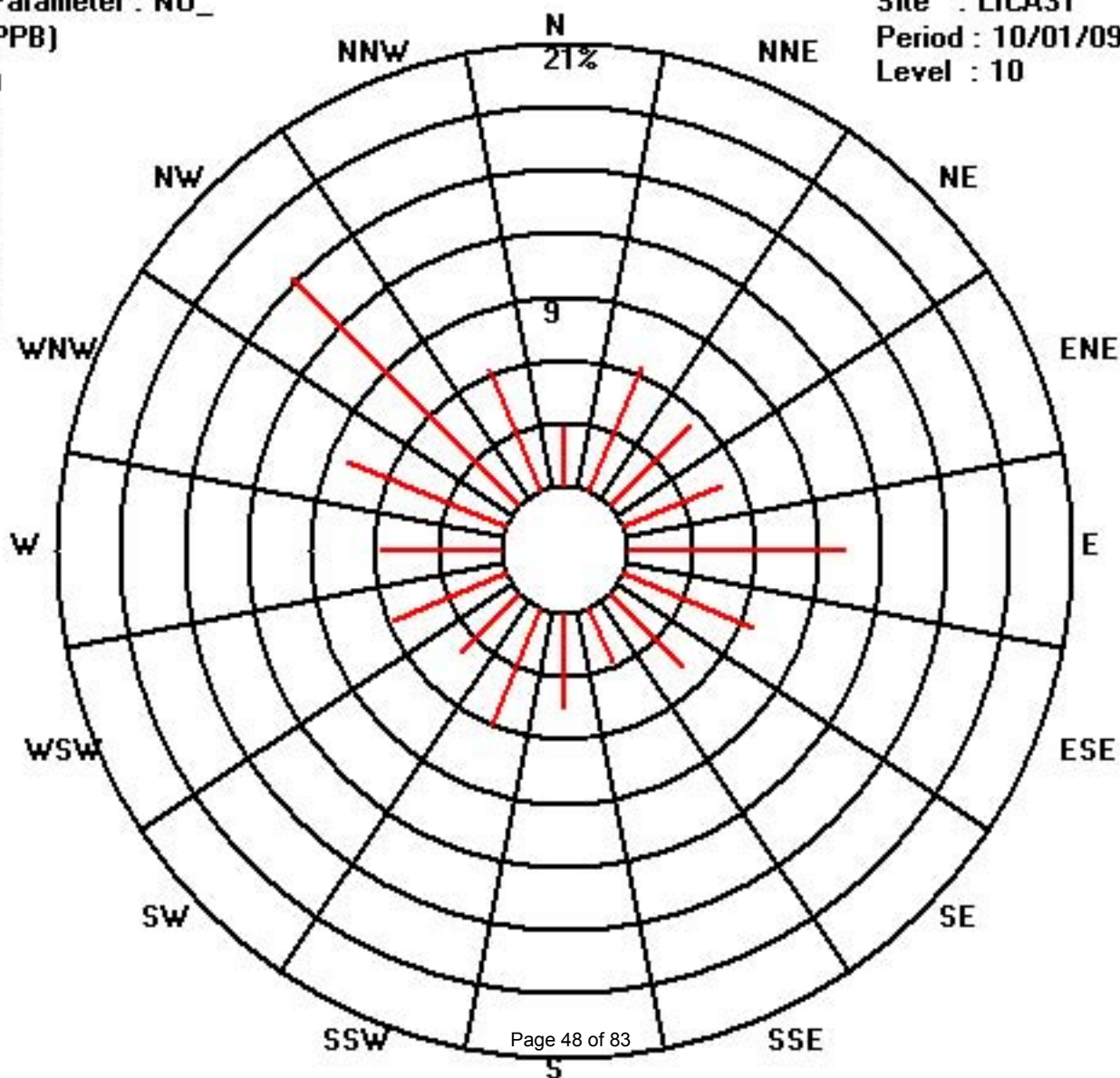
Distribution By Samples

	Direction																
Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 50	20	45	38	35	72	47	34	20	32	42	28	41	40	57	107	44	702
< 110																	
< 210																	
>= 210																	
Totals	20	45	38	35	72	47	34	20	32	42	28	41	40	57	107	44	

Calm : .00 %

Total # Operational Hours : 702

Class Limits (PPB)



Oxides of Nitrogen

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - ST. LINA

OCTOBER 2009

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	0	IZS	1	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	1	4	2	2	4	0.6	24	
2	IZS	3	3	1	1	6	7	7	3	2	1	1	0	0	0	0	0	0	0	1	1	2	3	IZS	7	1.9	24	
3	5	5	4	5	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	5	1.0	24
4	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	1	0	0	IZS	1	1	1	0.2	24
5	1	1	0	0	0	0	0	1	1	1	1	0	0	0	1	0	0	1	1	1	IZS	2	2	2	2	0.7	24	
6	2	2	3	3	3	3	4	4	5	4	2	1	1	1	1	2	6	2	0	IZS	1	0	0	0	6	2.2	24	
7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	1	1	1	0	1	1	0.2	24
8	2	1	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	2	0.2	24
9	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	
10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	1	1	0.0	24
11	1	1	1	1	0	1	1	1	1	2	1	1	0	0	IZS	1	1	1	0	0	0	0	0	0	0	2	0.7	24
12	1	1	1	1	2	2	2	2	2	1	2	1	0	IZS	1	1	0	0	0	0	0	0	1	1	1	2	1.0	24
13	1	1	0	0	0	0	0	1	1	0	0	0	IZS	1	1	0	0	0	0	0	0	0	0	0	0	1	0.3	24
14	0	0	0	0	0	0	0	0	C	C	C	C	C	C	C	C	C	C	0	0	0	0	1	1	1	1	0.2	24
15	1	1	1	1	1	1	1	1	2	2	IZS	1	1	1	0	1	0	1	0	1	0	1	1	1	1	2	0.9	24
16	2	2	2	4	5	4	5	8	10	IZS	10	10	10	8	5	4	3	3	3	1	1	1	2	2	10	4.6	24	
17	2	3	3	2	1	2	1	1	IZS	1	1	0	0	0	1	1	0	0	0	0	0	0	0	0	0	3	0.8	24
18	0	0	0	0	0	0	0	IZS	1	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	2	2	0.2	24
19	2	1	1	1	0	0	IZS	2	2	1	1	1	1	1	1	2	2	2	1	1	2	1	1	1	2	1.2	24	
20	1	1	1	1	1	IZS	1	1	1	2	2	2	1	0	1	0	1	0	0	1	0	0	0	0	2	0.8	24	
21	0	0	0	1	IZS	2	2	1	1	1	1	1	1	1	1	1	1	1	2	2	2	1	1	1	2	1.1	24	
22	0	0	0	IZS	1	0	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	1	3	3	0.4	24	
23	2	1	IZS	2	2	5	7	8	11	11	12	11	9	7	7	6	5	4	4	5	5	4	3	3	12	5.8	24	
24	3	IZS	6	6	7	5	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	1.3	24	
25	IZS	1	0	0	0	0	0	0	1	1	1	1	1	1	2	2	2	1	2	3	2	3	2	IZS	3	1.2	24	
26	2	1	2	2	2	2	2	3	3	5	4	4	3	2	1	1	2	4	5	3	3	2	IZS	1	5	2.6	24	
27	2	1	1	1	1	N	1	1	1	0	0	0	0	0	0	0	0	1	0	0	0	0	IZS	1	0	2	0.5	23
28	0	0	0	0	0	1	1	1	1	1	1	3	2	2	2	1	1	1	1	1	IZS	0	0	0	3	0.9	24	
29	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	IZS	1	1	1	1	1	0.3	24	
30	1	1	0	1	1	0	0	0	0	0	1	1	0	0	0	0	0	0	0	IZS	0	0	0	0	1	0.3	24	
31	0	0	0	0	1	1	0	0	0	0	0	0	0	1	1	1	1	IZS	2	2	2	1	0	0	2	0.6	24	
HOURLY MAX	5	5	6	6	7	6	7	8	11	11	12	11	10	8	7	6	6	4	5	5	5	4	3	3				
HOURLY AVG	1.1	1.0	1.0	1.1	1.1	1.2	1.3	1.5	1.7	1.3	1.5	1.3	1.0	0.9	0.9	0.9	0.9	0.8	0.8	0.9	0.8	0.9	0.8	0.8				

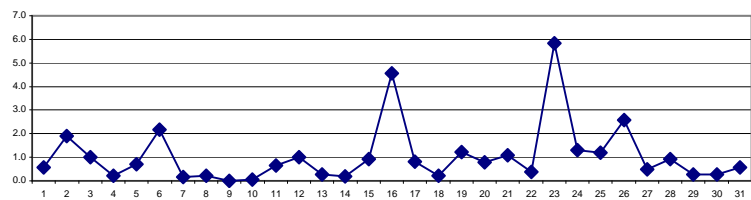
STATUS FLAG CODES

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

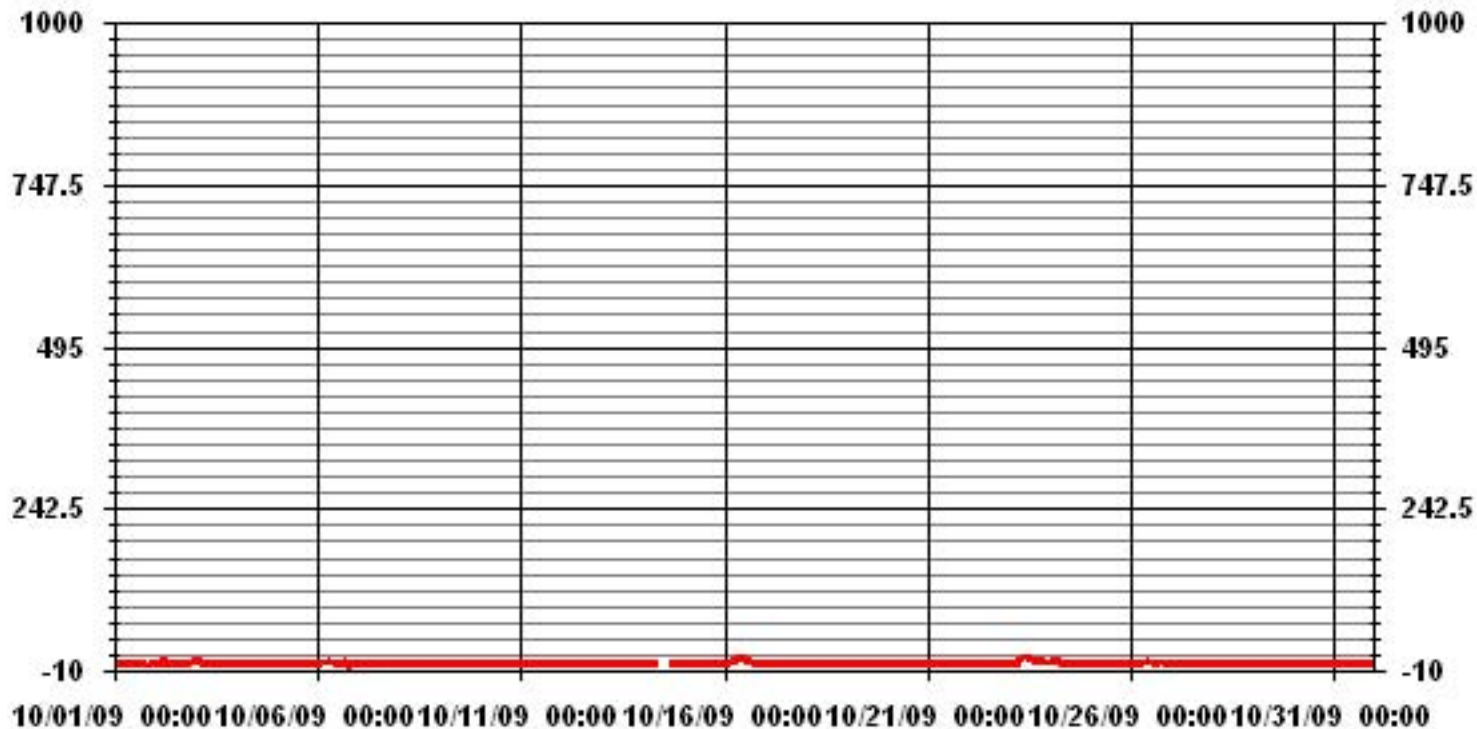
MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:	352					
MAXIMUM 1-HR AVERAGE:	12	PPB	@ HOUR(S)	10	ON DAY(S)	23
MAXIMUM 24-HR AVERAGE:	5.8	PPB			ON DAY(S)	23
IZS CALIBRATION TIME:	32	HRS	OPERATIONAL TIME:	743	HRS	
MONTHLY CALIBRATION TIME:	9	HRS	AMD OPERATION UPTIME:	99.9	%	
STANDARD DEVIATION:	1.76		MONTHLY AVERAGE:	1.06	PPB	

24 HOUR AVERAGES FOR OCTOBER 2009



01 Hour Averages



— LICA31 NOX_ PPB

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - ST. LINA

OCTOBER 2009

OXIDES OF NITROGEN MAX instantaneous maximum in ppb

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR		
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.	
DAY																												
1	1	IZS	2	1	1	3	1	2	2	1	1	1	1	0	0	1	0	1	1	1	2	5	3	3	5	1.5	24	
2	IZS	4	5	3	3	8	8	8	6	3	2	2	1	1	1	0	1	1	1	2	2	2	6	IZS	8	3.2	24	
3	7	6	5	6	5	1	1	1	1	0	0	1	1	0	1	1	1	1	0	0	0	1	IZS	1	7	1.8	24	
4	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	0	1	1	3	2	1	IZS	1	2	3	0.8	24	
5	2	2	1	1	1	1	1	3	2	2	2	2	1	1	4	1	1	2	2	2	IZS	4	3	3	4	1.9	24	
6	3	3	3	3	3	4	5	5	7	5	3	2	1	1	2	6	8	5	1	IZS	2	1	1	1	8	3.3	24	
7	1	1	1	0	0	0	1	0	0	0	1	1	0	0	0	0	1	1	IZS	3	3	2	1	2	3	0.8	24	
8	3	2	1	1	1	1	1	1	1	1	1	1	1	1	0	1	0	1	IZS	1	2	1	0	0	0	3	1.0	24
9	0	0	0	0	1	1	1	2	2	1	1	1	1	1	1	1	IZS	1	1	1	1	1	1	1	2	0.9	24	
10	0	0	0	0	0	1	1	1	1	1	1	1	1	1	2	IZS	1	1	2	2	1	1	1	1	2	0.9	24	
11	1	2	1	1	1	1	1	2	2	2	2	1	1	2	IZS	2	2	1	1	1	1	1	1	1	2	1.3	24	
12	1	1	1	2	2	3	3	3	2	2	2	2	1	IZS	1	1	1	1	1	1	1	1	2	1	3	1.6	24	
13	1	1	1	1	1	1	1	1	1	1	1	1	IZS	1	1	1	1	1	1	1	1	1	1	1	1	1.0	24	
14	1	1	1	1	1	1	1	1	C	C	C	C	C	C	C	C	C	1	1	1	1	1	1	2	2	1.1	24	
15	2	1	1	2	1	2	2	2	5	IZS	5	2	2	1	4	2	7	1	2	2	1	2	1	7	2.3	24		
16	5	3	4	5	5	5	7	9	11	IZS	12	11	11	11	6	6	4	4	4	2	2	2	2	3	12	5.8	24	
17	3	3	4	3	3	3	4	22	IZS	3	3	0	18	0	0	41	28	23	3	0	1	1	1	1	41	7.3	24	
18	1	1	1	1	1	1	1	IZS	4	2	1	1	0	0	0	1	0	1	1	3	1	0	1	3	4	1.1	24	
19	3	2	2	2	1	1	IZS	3	2	2	2	2	2	2	2	4	2	4	2	2	3	2	2	1	4	2.2	24	
20	1	2	1	1	2	IZS	3	2	3	3	3	3	3	1	2	2	5	2	2	1	1	0	0	0	5	1.9	24	
21	0	1	1	2	IZS	4	2	2	10	2	2	2	2	1	1	2	2	2	3	2	2	2	2	2	10	2.2	24	
22	1	2	2	IZS	2	3	2	2	3	3	3	2	2	2	2	1	1	3	1	1	3	2	4	5	5	2.3	24	
23	4	3	IZS	4	3	36	10	11	14	14	15	13	12	9	9	8	7	6	6	6	7	6	5	5	36	9.3	24	
24	5	IZS	8	8	9	8	4	3	1	1	2	2	1	0	0	1	0	1	1	1	1	1	1	0	9	2.6	24	
25	IZS	1	0	0	0	0	0	1	1	1	1	1	0	1	4	12	2	1	2	4	2	3	2	IZS	12	1.8	24	
26	1	1	1	1	2	2	3	5	3	39	5	4	3	2	1	1	2	5	5	3	4	3	IZS	2	39	4.3	24	
27	3	1	1	2	2	N	2	2	3	1	2	1	14	0	1	2	2	7	1	1	1	IZS	2	1	14	2.4	23	
28	1	1	1	1	1	2	3	2	4	3	3	4	3	3	4	5	3	4	2	2	IZS	1	1	1	5	2.4	24	
29	1	0	0	0	0	0	0	2	2	3	1	1	1	1	0	0	0	0	0	IZS	1	1	2	2	3	0.8	24	
30	1	1	1	2	2	1	1	1	1	1	2	3	0	0	0	0	0	0	IZS	1	1	1	1	1	3	1.0	24	
31	1	1	1	1	1	1	1	1	1	1	1	1	1	3	5	5	1	IZS	3	3	3	2	0	0	5	1.7	24	
HOURLY MAX	7	6	8	8	9	36	10	22	14	39	15	13	18	11	9	41	28	23	6	6	7	6	6	5				
HOURLY AVG	1.9	1.6	1.7	1.8	1.8	3.3	2.4	3.4	3.2	3.6	2.6	2.4	3.0	1.7	1.8	3.8	2.7	3.0	1.8	1.9	1.8	1.7	1.7	1.6				

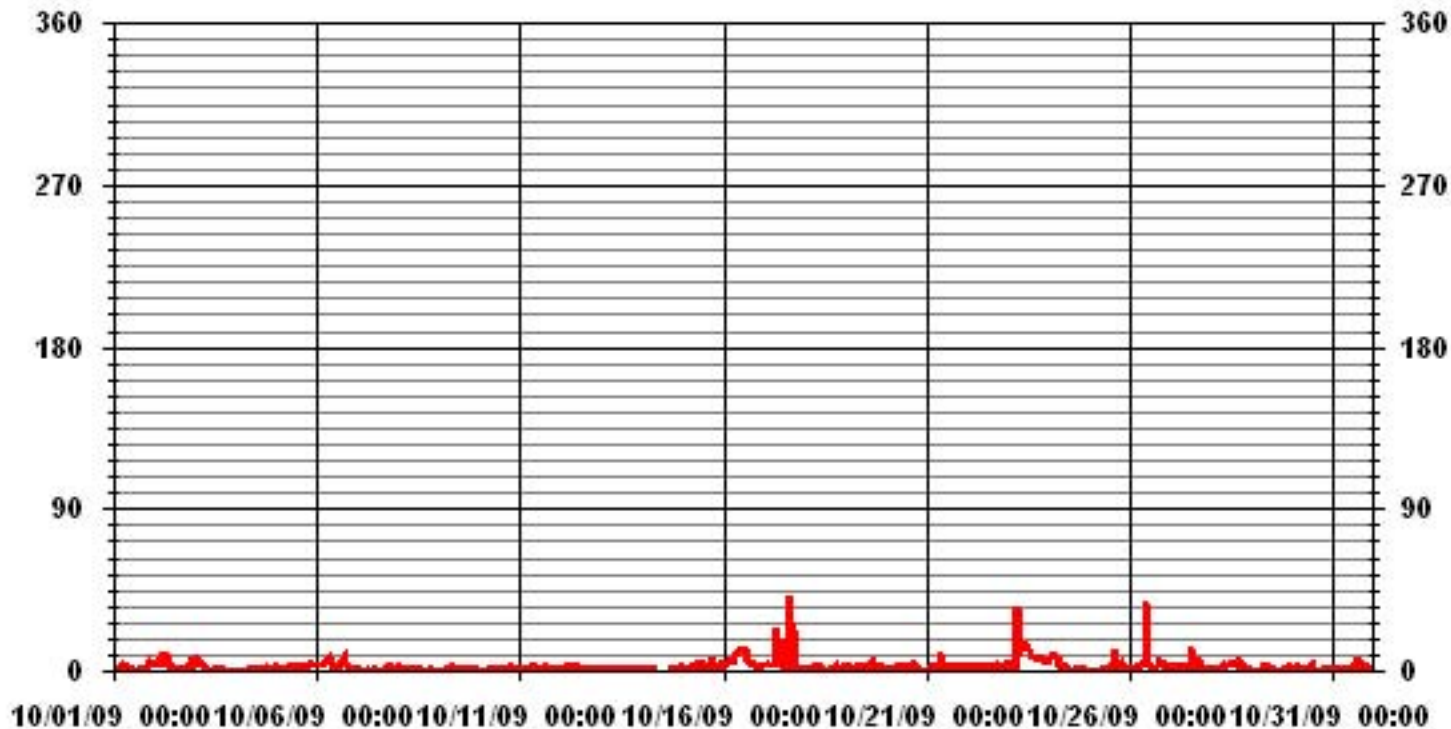
STATUS FLAG CODES

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

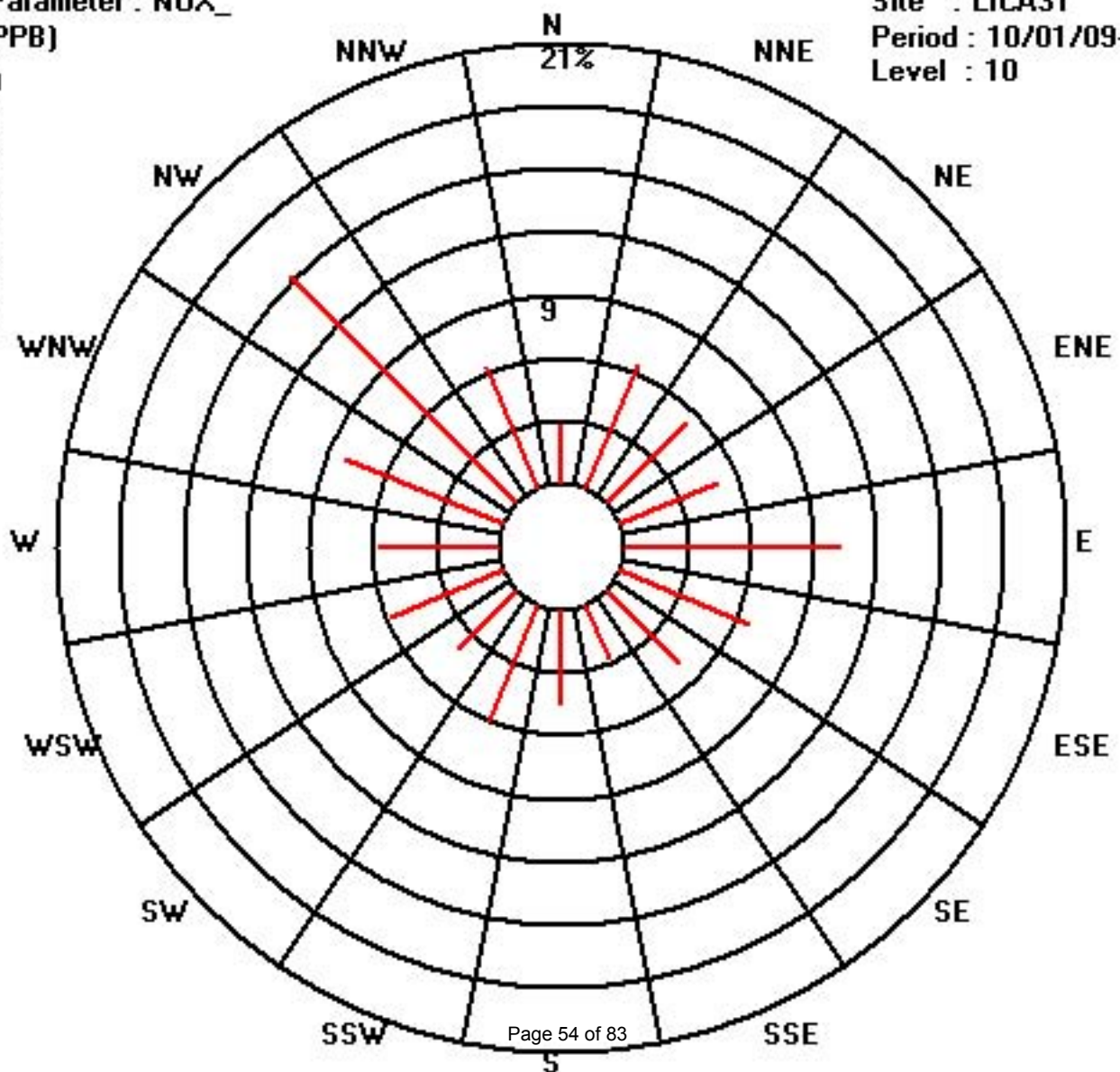
MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:	618
MAXIMUM INSTANTANEOUS VALUE:	41 PPB @ HOUR(S) 15 ON DAY(S) 17
IZS CALIBRATION TIME:	32 HRS
MONTHLY CALIBRATION TIME:	9 HRS
STANDARD DEVIATION	3.62
OPERATIONAL TIME:	743 HRS

01 Hour Averages



Class Limits (PPB)



LICA31
 NOX_ / WDR Joint Frequency Distribution (Percent)

October 2009

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	2.84	6.41	5.41	4.98	10.25	6.69	4.84	2.84	4.55	5.98	3.98	5.84	5.69	8.11	15.24	6.26	100.00
< 110	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
< 210	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
>= 210	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
Totals	2.84	6.41	5.41	4.98	10.25	6.69	4.84	2.84	4.55	5.98	3.98	5.84	5.69	8.11	15.24	6.26	

Calm : .00 %

Total # Operational Hours : 702

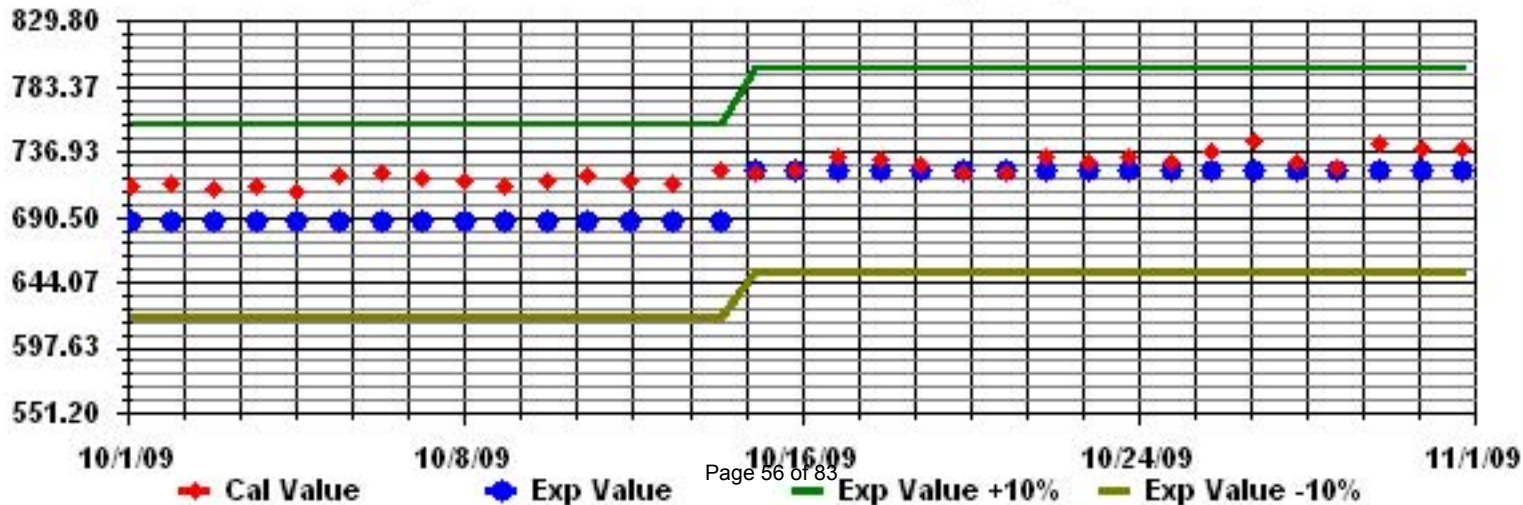
Distribution By Samples

	Direction																
Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 50	20	45	38	35	72	47	34	20	32	42	28	41	40	57	107	44	702
< 110																	
< 210																	
>= 210																	
Totals	20	45	38	35	72	47	34	20	32	42	28	41	40	57	107	44	

Calm : .00 %

Total # Operational Hours : 702

Calibration Graph for Site: LICA31 Parameter: NOX_ Sequence: NO2 Phase: SPAN



Vector Wind Speed

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - ST.LINA

OCTOBER 2009

WIND SPEED hourly averages (km/hr)

MST		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		
HOURLY MAX	HOURLY AVG	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	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		8.5	6.4	8.5	10.1	9.1	7.5	9.5	8.9	4.8	6.1	6.1	8.2	9	8.6	8.9	7.9	6.4	3.1	4.3	7.4	8.3	9.3	8.2	7.4	10.1	4.8	24	
2		4.3	2.8	4.9	2.9	4.9	9	8	6	5.3	4.3	3.3	3.1	3.6	4.4	5.4	4.1	5.5	5.1	5.6	6.3	7.4	8.2	7.9	8	9	4.4	24	
3		7.6	7.8	6.1	6.2	6.6	7.6	8.3	9.6	9.7	10.6	9.9	11.3	9.8	10.3	8.7	9.3	9.4	9.2	9.1	13.1	13.5	12.6	11.5	10.9	13.5	9.3	24	
4		10.4	10.9	11.6	11	11	10	7.4	7.3	7.6	9.2	6.9	7.2	8.5	6	5.7	4.4	6.7	7.1	7	7.1	7	5.8	3.6	4.7	11.6	7	24	
5		3.6	2.3	4.3	3.9	2.9	1.5	0.8	2.3	4	6	10.3	10.6	12.4	14.3	14.6	16.5	16.3	13.1	10.2	15.4	15.3	16.9	17.5	16.5	17.5	8	24	
6		15.9	14.1	11.8	10.2	9.9	8.1	7.9	8.9	10	11.6	9.1	10	12.1	17.2	21.1	21.6	21.7	21.6	23.4	24	21.3	20	19.8	18.5	24	9.2	24	
7		16.6	20.8	18.3	17.2	17.7	15.9	15.4	12.4	13.4	14.2	17.4	16.8	17.4	16.8	17.3	15.9	14.4	9.2	7.2	4.9	6.8	6.5	4.9	5.1	20.8	12.3	24	
8		4.5	5.3	4.9	7.8	6.6	6.1	8	10.3	13.4	13.7	14.7	15.2	15.5	15.4	16	15.9	17	12.8	14.5	10.9	11.9	12.1	13.4	16.1	17	10.2	24	
9		15.2	14.1	14	13.6	16.2	16.8	15.8	18.6	18.8	18.4	20	17.9	17.3	15.6	17.3	17.2	16.9	17.9	14.2	10.4	8.3	9.7	8.7	10.9	20	15	24	
10		11.2	11.3	13	13.1	15.5	14.3	15.3	14.3	15.9	15.5	15.9	14.5	12.9	13.1	12.8	11.8	10.8	11.3	6.5	5	4.4	3.6	5	3.9	15.9	10.8	24	
11		4	3.4	3.7	6.1	3.3	5.5	4.4	5.1	6.7	5.8	3.7	2.7	2.1	3.3	5	5.8	4	4.4	2.1	2.4	4.4	4.8	4.5	4.6	6.7	3	24	
12		5.6	6	6.6	7.2	7.2	6.9	7.2	8.2	9.2	11	11.1	10.9	10.4	10	9.2	11	12.6	11.3	10.6	10.6	8.8	8.8	9.6	10.5	12.6	8.7	24	
13		11	11.2	11.6	12.6	11.6	11.9	12.3	13.3	14.2	14.5	15.5	17.8	18.4	23.1	19.5	19.1	19	16.7	17.7	17.7	18	19	18	16.2	23.1	15.5	24	
14		17.8	17.9	18.4	18.6	19.9	19.2	18.4	19.9	20.2	19	18.2	19.5	18	19.2	18.3	17.5	13.1	9.4	10.6	11	10.3	9.9	9.9	8.4	20.2	15.7	24	
15		7.7	6.2	6.6	6.4	5.9	5.9	5.5	5.8	6.5	6	5.4	5.6	6.5	4.3	5.2	7.2	4.7	4.4	5.5	5.6	5	5.4	4.8	5.5	7.7	3.8	24	
16		5.6	7	7.9	7.7	8.5	8.3	9.8	10.9	10.5	12.3	12.7	12.7	15.6	14.3	14.8	14.7	15.7	13.8	16.5	20.1	18.9	16.6	12.8	12.4	20.1	12	24	
17		10.1	9.1	10.5	10	8.9	8.7	10.5	12.2	10.1	9.3	11	10.4	12	8.1	7	4.3	5	6.5	7.8	7.6	5.3	5.3	3.5	1.1	12.2	7.3	24	
18		6.2	4.6	8.8	7.5	10.3	8.7	4.2	8.8	10.4	9.4	9.1	9.1	7.5	11.2	10.9	10.4	8.5	7.5	7	7.3	7.9	7.9	10	11.2	11.2	6.7	24	
19		11.6	8.6	7.2	7.5	8.1	10	10	8.7	9.5	12.1	11.4	9.4	7.4	6.6	6.7	6.2	5.9	6.2	8.1	8.2	7.2	6.8	9.5	8.7	12.1	7.3	24	
20		6.5	5.6	5.2	6.3	4.7	2.2	2.9	3.5	5.5	3	3	3.7	5.1	9.2	8.8	5.4	4.3	4.1	3.5	6	6.4	6.5	2.3	4	9.2	2.5	24	
21		4.2	4.7	7.4	9.3	9.8	8.1	7.4	9.6	11.6	10.4	12.1	11.3	11.7	12.5	13.5	13.8	11.6	12.3	14.9	14.6	12.5	12.8	11.9	12.4	14.9	9.3	24	
22		11	9.3	8	7.3	6.4	4.9	3.1	1.2	7.9	13.1	13.5	13.2	11.6	11.8	12.6	15.8	9.9	7.5	8.4	7.8	7.3	10.3	9.9	8	15.8	5.1	24	
23		7	4	7.3	7.3	6	6.2	6.7	6.9	5	5.3	3.6	4.3	5.9	6.4	8.3	9.1	10.3	10.4	10.3	7.5	7.9	5.1	6.2	8	10.4	3.5	24	
24		8.4	9.4	9	10.9	11.1	11.2	13.5	13.3	13.5	16.7	17.7	16.2	18.5	21.8	20.1	19.8	17.2	16.5	10.1	9.8	8.1	12.5	13.5	13.2	21.8	12.6	24	
25		14.3	11.3	12.3	12.8	13.1	13.2	11.8	13.1	11.1	14.2	14.4	14.5	17.5	21.2	20.1	18.8	14	10	9.6	12	11.6	11.4	13.2	13	21.2	11	24	
26		9.6	7.8	5.4	3	5.8	5.6	7.4	6.3	7.2	7.9	11	10.1	10	10.4	8.5	7.8	6.7	4.6	4.9	2.6	6.3	8.3	10.7	9.4	11	4.6	24	
27		9.6	9.9	11.9	11.9	12.4	N	12.4	16.9	15.9	16.5	17.6	19.4	17.8	15.2	15	12	11.2	5.9	6	6.7	8	8.1	7.5	8.7	19.4	11.7	23	
28		8.3	8.7	9.5	10.9	9.8	8.6	9	10.2	8	8.4	6.6	8.6	6.6	5.5	4.6	6.8	7.7	5.7	6	6.2	5.8	5.7	4.8	3.7	10.9	7.2	24	
29		5.4	4.3	3	3.4	4.2	5	4.9	1.1	6	8.2	9.7	10.9	15	14.6	15.3	16	15.4	15.7	16.4	17.6	18.9	17.1	15	13.8	18.9	8.3	24	
30		11.5	8.9	9.3	6.7	5.4	5.6	6.2	6.1	4.4	4.4	7.8	9.1	10.4	11.9	9.5	9.3	10.3	9.9	12.2	13.2	11.7	12.4	12.3	14	14	8.7	24	
31		14.1	12.9	15.7	18.4	17.7	19	22.2	17.7	17.7	17.8	14.5	6.2	6	4.7	3.2	6.4	8.1	6.2	8.5	10.1	11.2	12.4	18	20.3	22.2	6.3	24	
HOURLY MAX		17.8	20.8	18.4	18.6	19.9	19.2	22.2	19.9	20.2	19.0	20.0	19.5	18.5	23.1	21.1	21.6	21.7	21.6	23.4	24.0	21.3	20.0	19.8	20.3				
HOURLY AVG		9.3	8.6	9.1	9.3	9.4	9.1	9.2	9.6	10.1	10.8	11.1	11.0	11.4	11.8	11.7	11.7	11.0	9.7	9.6	10.0	9.9	10.1	9.9	10.0				

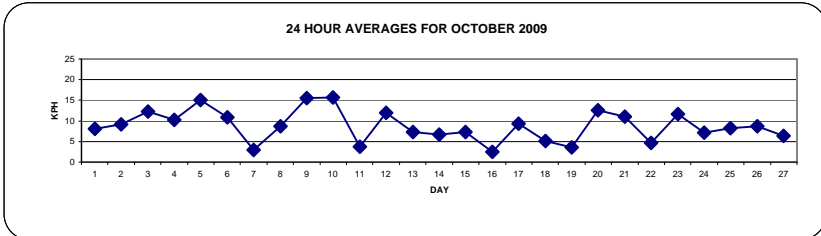
STATUS FLAG CODES

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

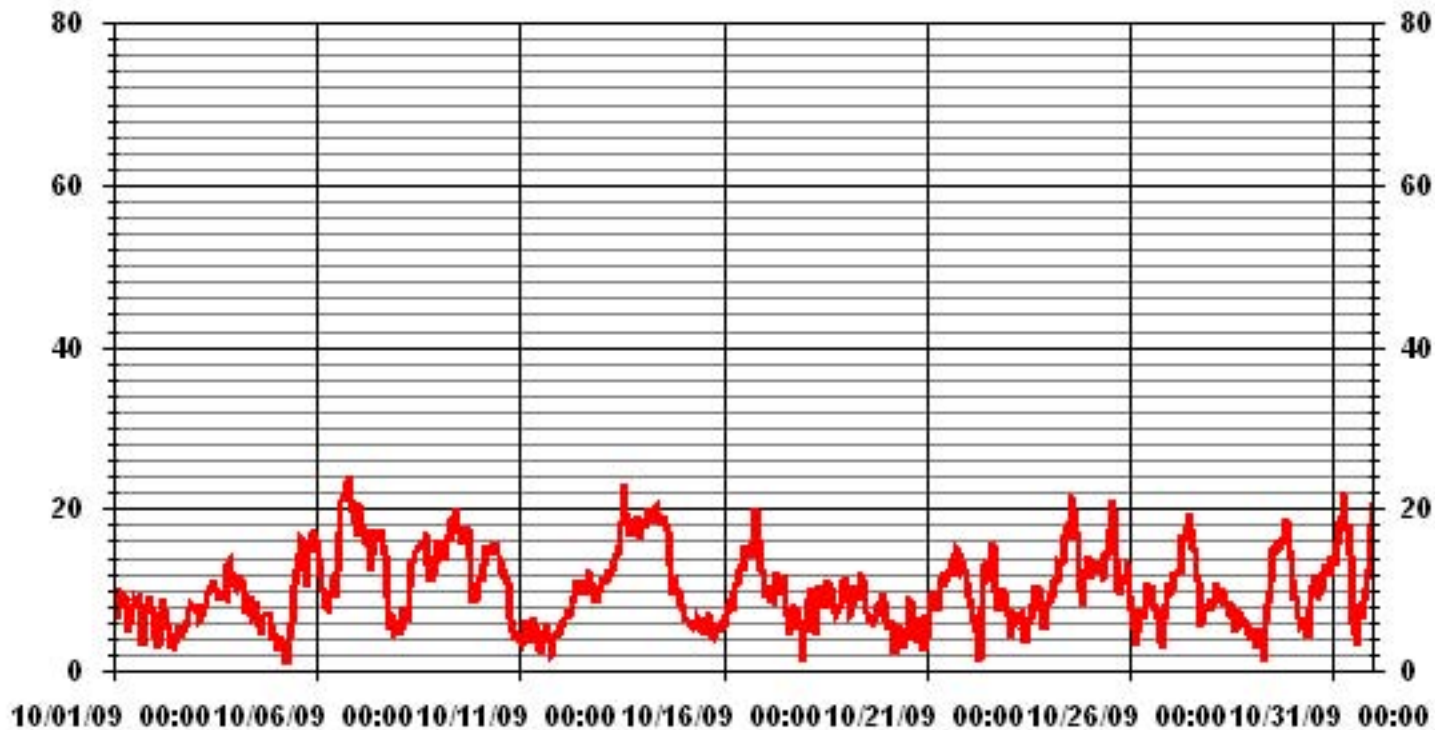
LAST CALIBRATION: November 7, 2007

MONTHLY SUMMARY

MAXIMUM 1-HR AVERAGE:	24.0	KPH	@ HOUR(S)	19	ON DAY(S)	6
MAXIMUM 24-HR AVERAGE:	15.7	KPH			ON DAY(S)	14
CALMS (≤ 0 KPH)	0.13	%	OPERATIONAL TIME:	743	HRS	
MONTHLY CALIBRATION TIME:	0	HRS	AMD OPERATION UPTIME	99.9	%	
STANDARD DEVIATION	4.70		MONTHLY AVERAGE	10.13	KPH	



01 Hour Averages



— LICA31 WSP KPH

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - ST. LINA

OCTOBER 2009

VECTOR WIND SPEED MAX instantaneous maximum in km/hr

MST		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 START	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		18.8	15.1	16.2	25.9	20.3	13.6	19.6	16.8	13.4	14	16.6	22.4	23.9	28.3	34.5	23.9	25.3	7.5	10.6	12.1	12.5	14.5	14.7	9.3	34.5	
2		9.3	6.9	7.5	5.8	12.7	16.8	12.5	10.1	12.5	11.6	11.6	13.6	16.4	18.1	24.7	14.4	15.7	13.4	10.3	8.4	14	12.7	11.6	12.5	24.7	
3		12.1	13.2	12.9	15.1	18.4	24.8	24.4	25.3	28.1	29.6	35.3	38.9	28.3	28.9	26.3	25.5	27.6	26.8	27.2	36.3	37.1	37.4	33.7	38.7	38.9	
4		32.8	36.5	37.8	33.5	27.4	28.3	20.3	19.6	19.9	21.8	21.4	18.3	26.5	18.8	26.3	16.6	17.9	17.3	14.2	15.8	17.9	13.7	8	10.8	37.8	
5		6.7	7.1	8.8	7.5	9.5	4.3	5.8	6	10.1	14.8	20.7	25.3	37.8	29.8	29.8	31.3	34.1	32.5	23.7	33.9	33.7	34.3	35.2	38.7	38.7	
6		38	32.8	26.8	19.2	17.9	19.2	16.5	15.5	17.1	28.9	26.5	30.4	34.3	46	60.3	55.1	51.4	58.1	64.4	63.3	52.2	47.8	54	46.7	64.4	
7		57	70	54.9	46.7	60.9	41.5	65.5	44.1	44	44.9	47.1	41	44.3	56	43.4	40.8	48	25.3	15.3	13.6	15.5	14.2	8	8	70	
8		17.7	17.3	11.9	19.7	16.4	14.9	19.6	28.1	41.1	44.1	46.7	47	49.9	47.8	43.9	42.4	66.1	34.4	37.2	26.4	25.1	25.1	30	36.5	66.1	
9		33.7	30.9	33.5	29.8	39.6	34.6	41.9	42.5	48	44.1	48.8	36.7	45.2	40	36.9	41.5	49.9	41.7	32.4	27	20.5	19.9	20.9	28.5	49.9	
10		32.9	26.6	32.2	31.8	36.9	33.3	32.9	33.7	37.4	32	33.6	28.7	29.4	31.8	30.7	28.9	27.2	26.1	20.1	20.1	17.9	14	14.5	13.6	37.4	
11		18.1	15.3	12.5	14.5	12.5	13.6	12.5	15.1	13.4	12.7	11.9	11.4	12.5	18.4	13.8	12.7	14.2	14	10.6	10.6	9.9	8.2	13	13.6	18.4	
12		13.8	14.9	15.1	12.5	13.8	14	13.8	17.1	19.7	22.5	23.6	23.3	22.8	21.4	20.9	22.5	27.7	21.8	22.7	25.1	15.1	15.8	15.8	18.7	27.7	
13		19	22.7	20.7	22.5	19.8	20.3	21.4	25.3	35.2	38.9	35.2	40	48	52.5	48.6	41.3	48.2	32.8	34.4	39.1	46	44.5	43	34.1	52.5	
14		43	41.4	46.5	44.1	48.4	44.1	43.1	45.8	48.2	48.8	48.8	44.3	45.1	44.7	43.2	41	25.3	19.7	19.8	19.2	17.9	17.9	19.9	17.5	48.8	
15		15.3	13.6	12.9	12.1	12.5	11.2	11.9	11.4	14.7	12.1	12.7	11.9	12.5	10.3	20.7	15.8	12.9	7.8	8.4	13.8	12.5	13.2	12.9	9.8	20.7	
16		9.5	11.9	13.4	16.2	15.5	13.6	19	19.7	21.2	24.2	32.1	28.7	32	32.6	34.3	31.3	33.3	25.7	39.9	42.5	40.2	32.6	27.8	21.6	42.5	
17		13.2	20.2	23.5	34.3	27.6	22.5	20.9	25.5	24.4	24.6	30	28.1	39.7	19.6	11.6	11.6	9.7	18.6	17.3	12.7	10.3	10.1	8.8	8.6	39.7	
18		13.5	11.9	16.6	15.5	18.1	18.8	17.3	18.1	26.1	21.8	17.9	23.7	21.4	22.9	31.1	26.5	27.6	15.1	12.1	13.4	15.3	15.1	18.3	19.9	31.1	
19		21.4	17.5	12.7	13.2	16.8	19.2	19.9	16.8	19.2	20.9	23.5	18.3	17.3	16	14.5	13.6	12.5	13.6	13.8	16.6	14.7	14	18.4	15.7	23.5	
20		13.1	10.8	8.6	9	9.7	5.2	10.6	10.8	10.8	7.5	8.4	11	12.7	23.7	22.5	13.4	8	9.3	13.6	14.7	11.3	8.8	10.6	12.5	23.7	
21		9.7	13.1	12.7	19.2	23.3	18.1	17.1	23.3	23.7	22.8	24.2	22.7	25.7	24.8	27.6	29.1	26.1	20.5	29.4	24.4	26.3	22.5	21.6	21.2	29.4	
22		26.3	16.4	15.1	11.9	11.2	9.5	7.1	4.1	25.5	31.3	30.7	33.4	30.2	31.5	30.2	46.4	26.8	18.8	19	19	12.1	22.2	23.1	20.9	46.4	
23		12.1	10.6	9.9	11.2	8.4	9.7	10.1	11.6	8	11.9	9.7	9.3	11	12	14	15.3	17.7	17.7	19.4	14.7	14.4	11.4	11.6	15.5	19.4	
24		15.1	14.9	17.7	15.3	15.5	25.7	37.2	28.1	37.6	47.1	45.8	42.1	51.2	55.1	56.6	49.9	47.5	49	22	20.9	21.4	32.4	34.5	26.1	56.6	
25		33.9	26.5	28.1	30	35.2	35.2	25.9	33.7	19.6	27.2	30	28.9	40.8	33.9	40.1	32.6	27.2	16.8	14.7	17.9	20.1	18.3	19.6	20.1	40.8	
26		17.5	15.7	15.1	10.4	13.8	12.9	15.1	13.1	11.6	13.4	20.3	25.9	20.9	27.4	23.3	14.6	10.3	8.6	9.7	6.5	9.9	18.6	22	18.1	27.4	
27		19.2	20.5	27.4	26.8	26.7	N	26.8	33.7	36.5	56.2	40.4	48.5	44.9	38.6	30.2	29.6	24	16.2	14.7	15.7	16.2	15.8	14.9	21.4	56.2	
28		19.2	21.8	20.7	23.3	22.7	19.6	19.2	23.1	19.6	17.9	19.4	19.9	20.2	19.6	12.3	15.5	16.2	12.1	10.9	12.1	11	14.5	12.9	14	23.3	
29		14.4	14	13.6	11.9	13.4	15.8	14.9	9.4	14.9	16.8	19	20.7	27.2	30.9	30.2	32.8	33.7	30.2	35	37.2	38.5	36.9	30.5	29.8	38.5	
30		20.1	16	16.8	14.2	11.2	10.8	13	10.3	12.9	11.2	15.5	15.5	19	20.5	17.5	18.4	18.1	19	25.2	26.3	19.2	23.7	24	27	27	
31		28.1	24.4	30.5	36.5	33.3	36.3	42.9	35.2	34.8	36.9	27.2	18.1	15.1	14.9	10.6	12.9	25.9	9.9	13.2	17.1	18.6	29.6	45.4	48	48	
PEAK		57.0	70.0	54.9	46.7	60.9	44.1	65.5	45.8	48.2	56.2	48.8	48.5	51.2	56.0	60.3	55.1	66.1	58.1	64.4	63.3	52.2	47.8	54.0	48.0		

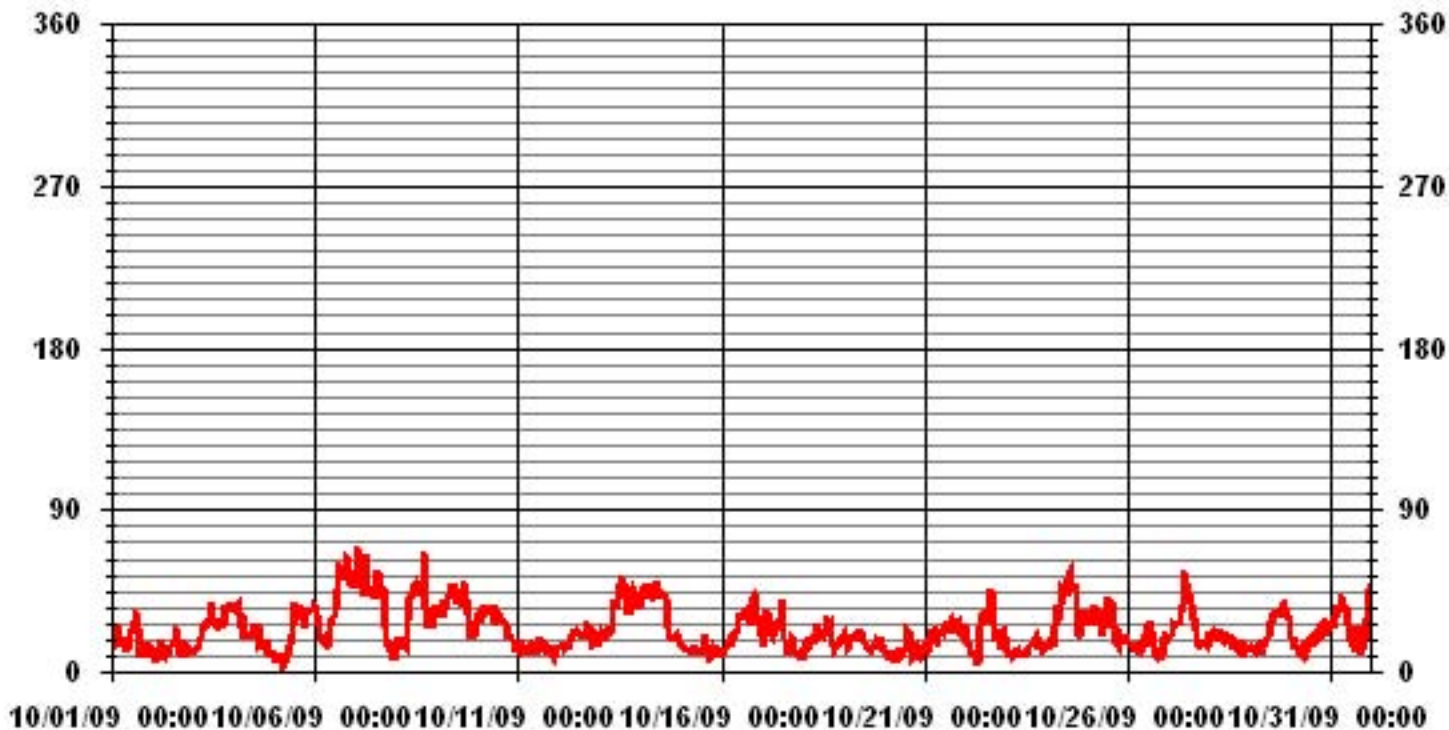
STATUS FLAG CODES

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

MONTHLY SUMMARY

MAXIMUM INSTANTANEOUS READING	70	KPH	@ HOUR(S)	1
			ON DAY(S)	7

01 Hour Averages



— LICA31 WSMAX KPH

LICA31
WSP / WDR Joint Frequency Distribution (Percent)

October 2009

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	.94	2.55	2.28	.94	1.48	.94	.67	.26	1.21	1.74	.94	1.07	.80	.94	2.15	1.21	20.18
< 12.0	1.61	3.09	3.09	3.09	5.11	2.69	2.55	1.48	1.88	2.96	1.74	3.63	3.09	4.17	6.32	1.48	48.04
< 20.0	.26	.53	.00	.80	4.17	3.09	1.34	1.21	1.21	1.21	.94	1.07	1.74	2.55	6.46	2.42	29.07
< 29.0	.00	.00	.00	.00	.26	.13	.00	.00	.13	.00	.26	.13	.00	.26	.13	1.21	2.55
< 39.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
>= 39.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
Totals	2.82	6.19	5.38	4.84	11.03	6.86	4.57	2.96	4.44	5.92	3.90	5.92	5.65	7.94	15.07	6.32	

Calm : .13 %

Total # Operational Hours : 743

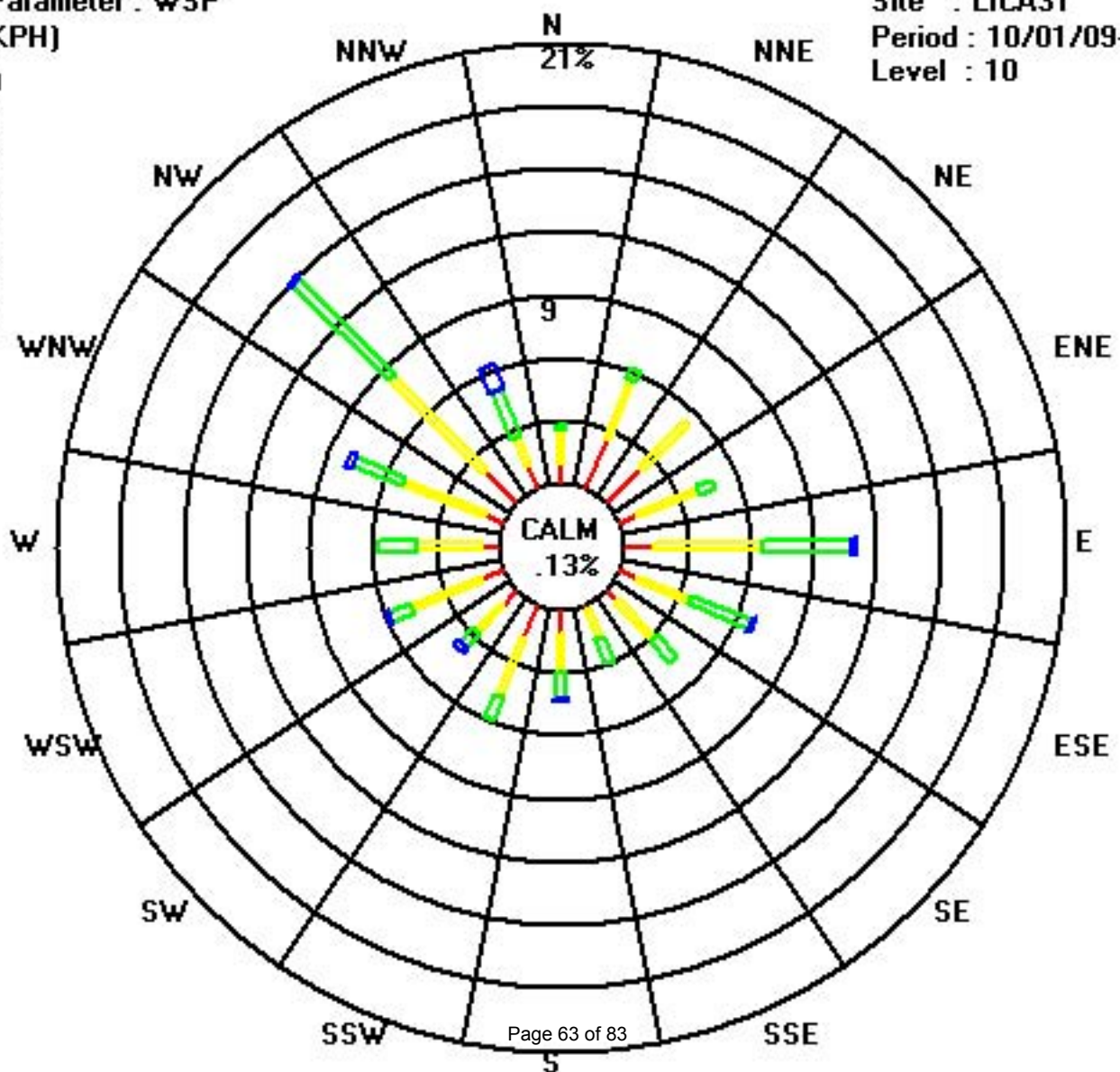
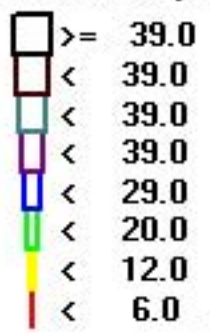
Distribution By Samples

	Direction																
Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 6.0	7	19	17	7	11	7	5	2	9	13	7	8	6	7	16	9	150
< 12.0	12	23	23	23	38	20	19	11	14	22	13	27	23	31	47	11	357
< 20.0	2	4		6	31	23	10	9	9	9	7	8	13	19	48	18	216
< 29.0					2	1			1		2	1		2	1	9	19
< 39.0																	
>= 39.0																	
Totals	21	46	40	36	82	51	34	22	33	44	29	44	42	59	112	47	

Calm : .13 %

Total # Operational Hours : 743

Class Limits (KPH)



Vector Wind Direction

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - ST. LINA

OCTOBER 2009

WIND DIRECTION hourly averages in degrees

MST		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					
HOURLY AVG	HOURLY AVG	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	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.	QUADRANT	RDGS.				
DAY																																
1		313	320	294	289	303	318	295	305	308	299	292	315	313	321	359	352	6	345	23	58	77	72	71	87	333	NNW	24				
2		134	77	108	150	78	63	69	73	101	92	81	47	11	323	18	353	32	30	37	47	49	53	43	39	55	NE	24				
3		40	36	42	36	21	24	24	17	3	16	12	13	12	17	4	5	2	5	4	19	17	16	20	12	16	NNE	24				
4		17	10	12	13	14	25	38	41	44	54	49	48	35	29	22	12	6	336	316	329	344	9	355	36	17	NNE	24				
5		31	34	324	345	356	30	146	208	201	218	232	228	237	239	227	218	217	212	200	202	201	204	203	200	216	SW	24				
6		203	198	199	203	207	209	206	210	219	258	275	289	321	336	346	337	330	329	335	332	329	332	326	325	304	WNW	24				
7		342	340	338	339	336	336	340	332	335	334	318	310	317	322	324	319	333	326	328	300	278	248	227	209	325	NW	24				
8		266	311	18	30	36	16	26	20	21	1	356	346	341	341	333	324	328	313	318	307	299	300	304	308	336	NNW	24				
9		310	305	302	302	303	301	303	302	304	307	312	311	305	306	305	311	318	306	304	311	312	303	309	323	307	NW	24				
10		322	321	316	307	309	317	317	316	319	316	318	313	325	329	330	328	325	324	331	334	327	22	37	25	322	NW	24				
11		7	2	315	311	23	32	38	25	44	52	54	49	45	341	42	61	68	39	109	99	123	128	100	85	46	NE	24				
12		82	79	93	104	102	102	106	121	138	136	140	139	120	103	104	88	95	104	102	98	98	94	96	93	106	ESE	24				
13		90	84	81	81	81	78	77	77	80	83	86	94	102	101	113	104	94	93	103	104	104	105	97	89	93	E	24				
14		82	79	80	79	77	76	78	80	83	83	85	84	84	85	89	94	99	94	89	88	88	94	111	109	85	E	24				
15		101	90	91	99	98	107	125	156	158	181	208	198	208	199	236	231	221	210	207	188	185	182	169	169	166	SSE	24				
16		179	187	185	195	185	191	196	200	196	191	185	181	175	179	172	163	158	153	165	179	183	189	203	216	181	S	24				
17		223	248	278	286	239	211	245	253	242	258	261	276	275	292	241	228	225	262	296	307	283	296	245	302	260	WSW	24				
18		319	305	314	303	301	300	252	271	278	302	312	318	320	310	317	321	344	328	330	341	354	18	54	65	321	NW	24				
19		85	98	94	117	137	172	152	121	141	152	149	146	171	140	123	167	115	128	145	158	212	195	149	175	142	SE	24				
20		183	199	241	219	254	263	289	265	244	233	213	237	273	279	296	307	270	283	333	21	41	34	208	21	271	W	24				
21		38	35	50	71	105	146	132	127	139	140	151	145	131	127	131	133	107	83	82	83	86	80	78	75	106	ESE	24				
22		77	70	62	62	68	71	57	256	272	288	289	284	276	266	259	283	286	277	277	268	255	255	262	257	283	W	24				
23		249	276	239	242	209	204	206	204	179	184	120	101	92	92	78	79	86	85	100	110	104	129	151	172	139	SE	24				
24		207	222	226	247	247	261	259	262	261	267	272	279	283	288	291	287	290	300	300	307	292	300	310	301	277	W	24				
25		296	278	273	272	264	265	258	250	241	248	234	242	233	233	221	217	197	175	184	177	176	166	163	232	232	SW	24				
26		150	133	128	199	118	169	244	206	215	218	239	262	245	247	265	237	249	239	318	344	241	280	314	303	238	SW	24				
27		297	286	293	293	297	N	316	320	324	323	318	321	315	320	315	317	317	307	288	302	287	290	295	308	309	NW	23				
28		314	316	319	320	321	317	323	324	319	320	321	310	332	318	305	313	314	311	311	303	309	319	322	330	317	NW	24				
29		24	17	332	310	13	14	39	203	90	145	167	163	159	146	144	140	130	117	118	122	118	118	106	99	123	ESE	24				
30		92	79	75	69	53	38	43	62	85	72	65	76	76	94	102	82	92	92	88	92	93	108	118	116	86	E	24				
31		122	127	115	110	114	113	117	126	123	123	128	186	158	225	292	258	263	243	234	227	243	258	261	255	154	SSE	24				
HOURLY AVG		342	340	338	345	356	336	340	332	335	334	356	346	341	341	359	353	344	345	335	344	354	332	355	330							

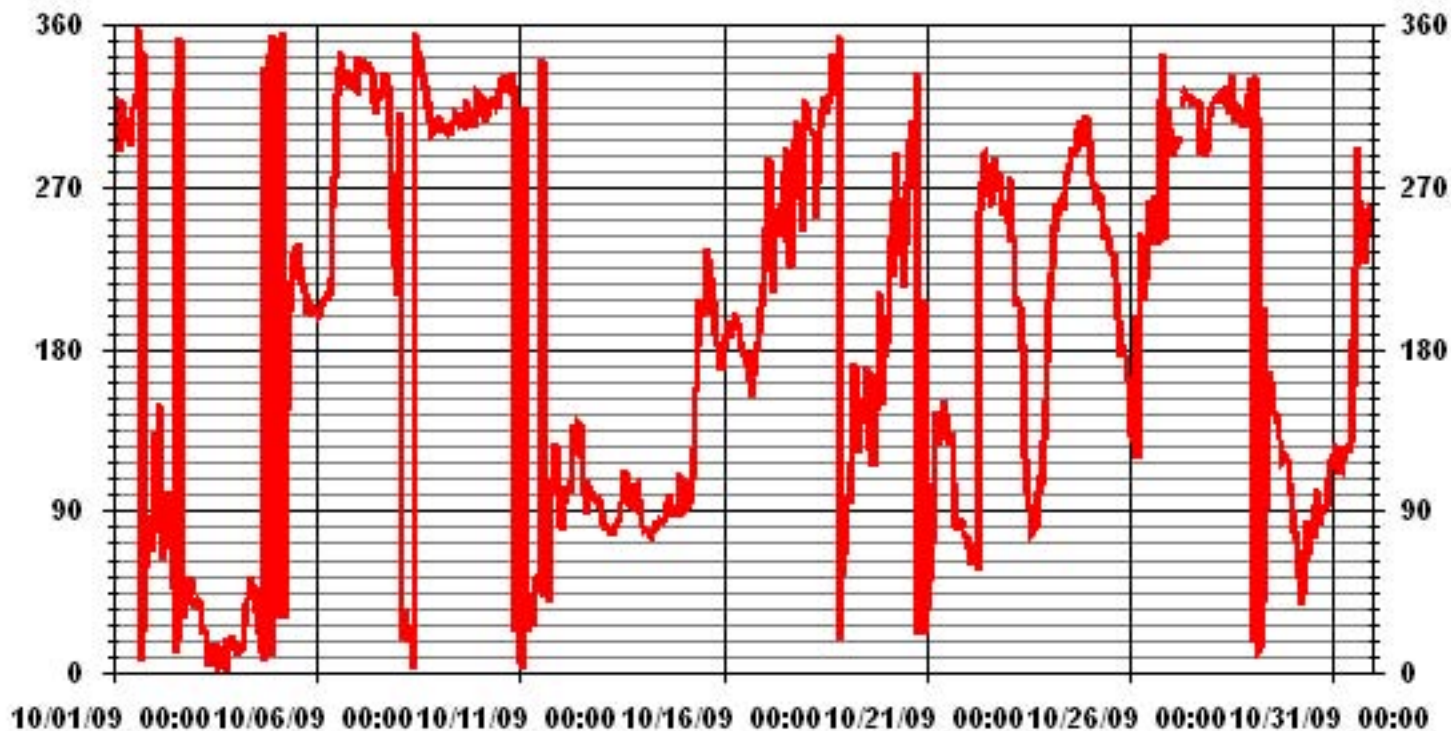
STATUS FLAG CODES

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:	November 7, 2007
DECLINATION :	19 DEGREES FROM MAGNETIC NORTH

MONTHLY CALIBRATION TIME:	0 HRS	OPERATIONAL TIME:	743 HRS
STANDARD DEVIATION	107.08	AMD OPERATION UPTIME	99.9 %
		MONTHLY AVERAGE	331 DEG

01 Hour Averages



— LICA31 WDR DEG

Standard Deviation Wind Direction

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - ST. LINA

OCTOBER 2009

STANDARD DEVIATION WIND DIRECTION (STDWDIR) hourly averages in degrees

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	
DAY																									
1	14	21	11	11	12	10	11	11	19	21	27	27	26	31	23	24	20	21	11	6	6	6	6	4	
2	11	14	12	16	14	11	8	11	18	29	42	52	48	42	37	35	26	11	7	5	6	6	7	7	
3	7	8	11	16	18	17	17	17	20	19	24	20	22	19	21	21	20	25	20	17	18	17	17	18	
4	19	17	18	17	18	17	16	17	16	16	21	22	22	30	27	24	19	17	13	16	19	21	18	15	
5	13	31	11	14	23	33	52	22	19	18	15	20	21	17	17	14	12	13	15	15	15	14	13	14	
6	14	15	13	13	12	12	12	11	11	15	17	17	19	18	17	17	16	17	16	17	17	15	15	15	
7	17	18	22	18	17	17	18	18	22	18	15	16	16	17	18	18	20	14	13	10	6	6	7	10	
8	15	18	17	15	15	17	19	16	17	18	19	21	24	21	20	17	15	14	13	13	13	13	13	13	
9	14	14	13	13	14	14	15	14	15	15	14	14	15	16	16	15	16	14	14	16	16	15	14	15	
10	15	14	13	15	14	14	15	16	15	14	16	15	19	19	18	19	16	15	16	16	15	19	15	14	
11	18	21	11	9	25	11	10	12	13	18	30	39	49	51	21	19	21	14	28	25	9	9	11	9	
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16	10	8	7	10	9	8	10	10	11	13	13	14	13	14	13	12	12	12	11	11	11	11	12	8	
17	5	9	11	21	14	8	6	5	10	12	13	19	17	19	10	10	6	8	10	9	16	9	18	25	
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19	10	10	8	11	12	9	10	10	13	13	17	15	19	22	14	17	8	11	8	12	10	13	13	13	
20	10	10	12	7	12	15	19	21	13	21	22	25	26	19	19	21	14	16	16	9	8	6	42	21	
21	41	16	7	10	13	16	17	13	15	16	16	14	15	15	15	13	12	9	9	9	10	10	9	9	
22	10	10	9	9	9	11	35	29	12	15	16	15	15	14	13	16	14	11	12	8	4	5	5	7	
23	10	12	8	6	7	5	5	8	8	15	20	16	11	11	11	11	10	9	10	11	9	18	11	12	
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30	10	11	11	11	10	11	11	10	16	12	12	10	12	10	12	11	11	10	11	9	9	10	12	12	
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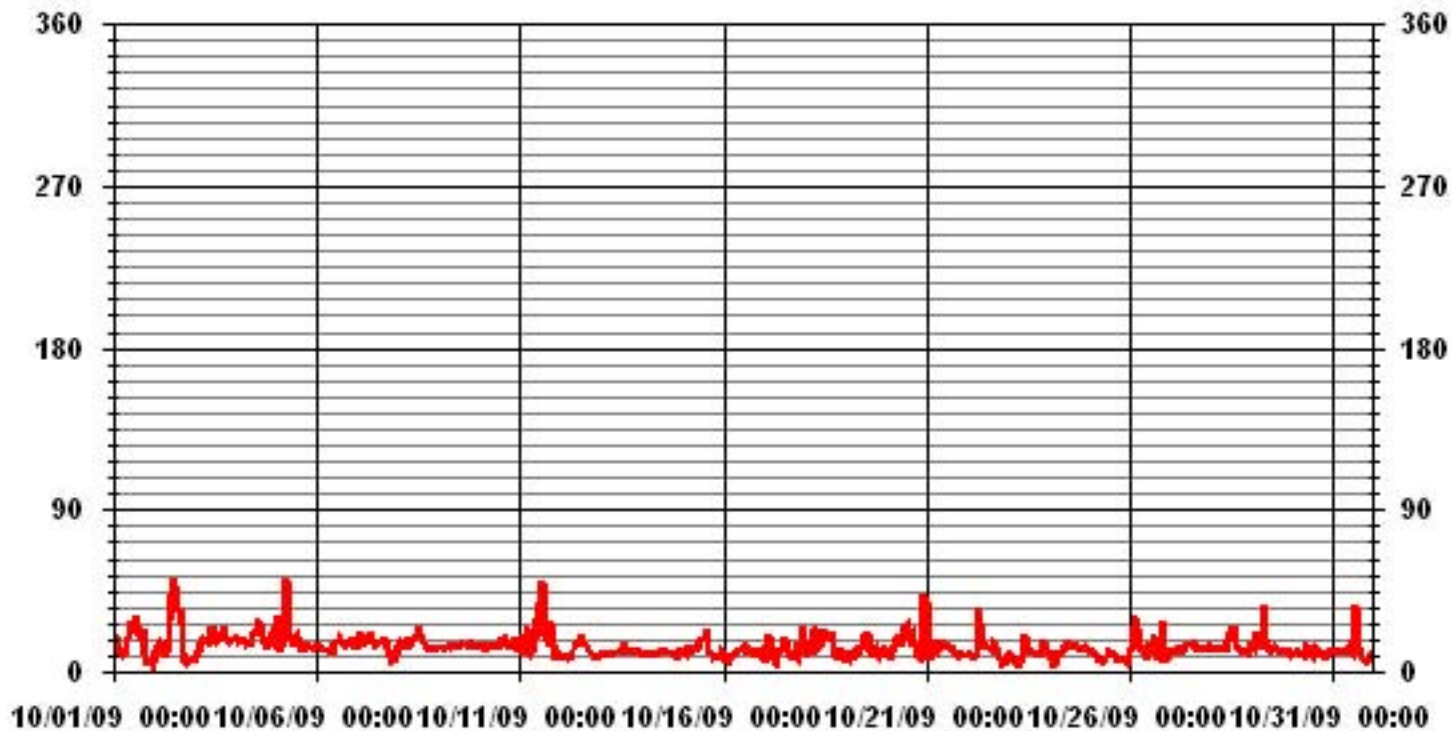
STATUS FLAG CODES

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 7, 2007

CALIBRATION TIME: 0 HRS OPERATIONAL TIME: 743 HRS

01 Hour Averages



— LICA31 STDWDIR DEG

Calibration Reports

Sulphur Dioxide

SO₂ Calibration Report

Station Information

Calibration Date	October 14, 2009	Previous Calibration	September 11, 2009		
Company	LAKELAND INDUSTRY & COMMUNITY ASSOCIATION				
Plant / Location	ST. LINA				
Start Time (MST)	8:30	End Time (MST)	12:53		
Reason:	Monthly Calibration				
Barometric Pressure	-	mmHg	Station Temperature	22	Deg C
Cal Gas	52.2	ppm	Cal Gas Expiry date	12/19/2010	
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:	Enviroics 2000	S/N :	1991	Method:	Dilution
DAS Make / Model:	ESC 8832	S/N :	AO717		
Flow Meter:	Enviroics 2000	S/N :	1991		

Analyzer Settings

Before Calibration		After Calibration	
Concentration Range	0 - 1000	ppb	
Sample Flow / Box Temp	578 ccm 31.3 Deg C	577 ccm 31.2 Deg C	
HVPS / Lamp Setting	529 2584	529 2582	
PMT / RxCell Temp	7.8 Deg C 50 Deg C	7.9 Deg C 50 Deg C	
Converter / IZS Temp	NA Deg C 40 Deg C	NA Deg C 40 Deg C	
Offset / Slope	56.6 1.114	58.5 1.122	

Calibration Data

Dilution Flow Rate	Source Gas Flow Rate	Calculated Concentration	Indicated Conc. (DAS)	Correction Factor
5025.0	0	0	1	N/A
5025.0	0	0	0	N/A
4946.0	77.9	809	803	1.0080
4946.0	77.9	809	808	1.0017
4987.0	38.9	404	406	0.9951
5005.0	19.5	203	201	1.0079
5017.0	0	0	0	N/A
Sum of Least Squares				1.0008
New Correction Factor				1.0017

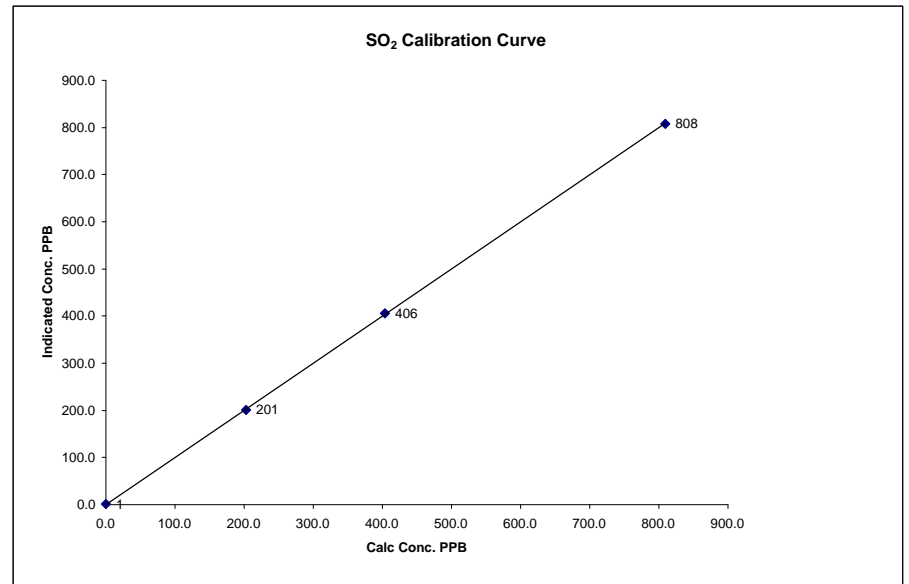
	Before Calibration	After Calibration
Auto Zero	0.3	-0.3
Auto Span	335.0	342.0
Sample Lines Connected		YES
Percent Change from Previous Calibration		-0.9%

Calibration Performed by: Shea Beaton

SO₂ Calibration Curve

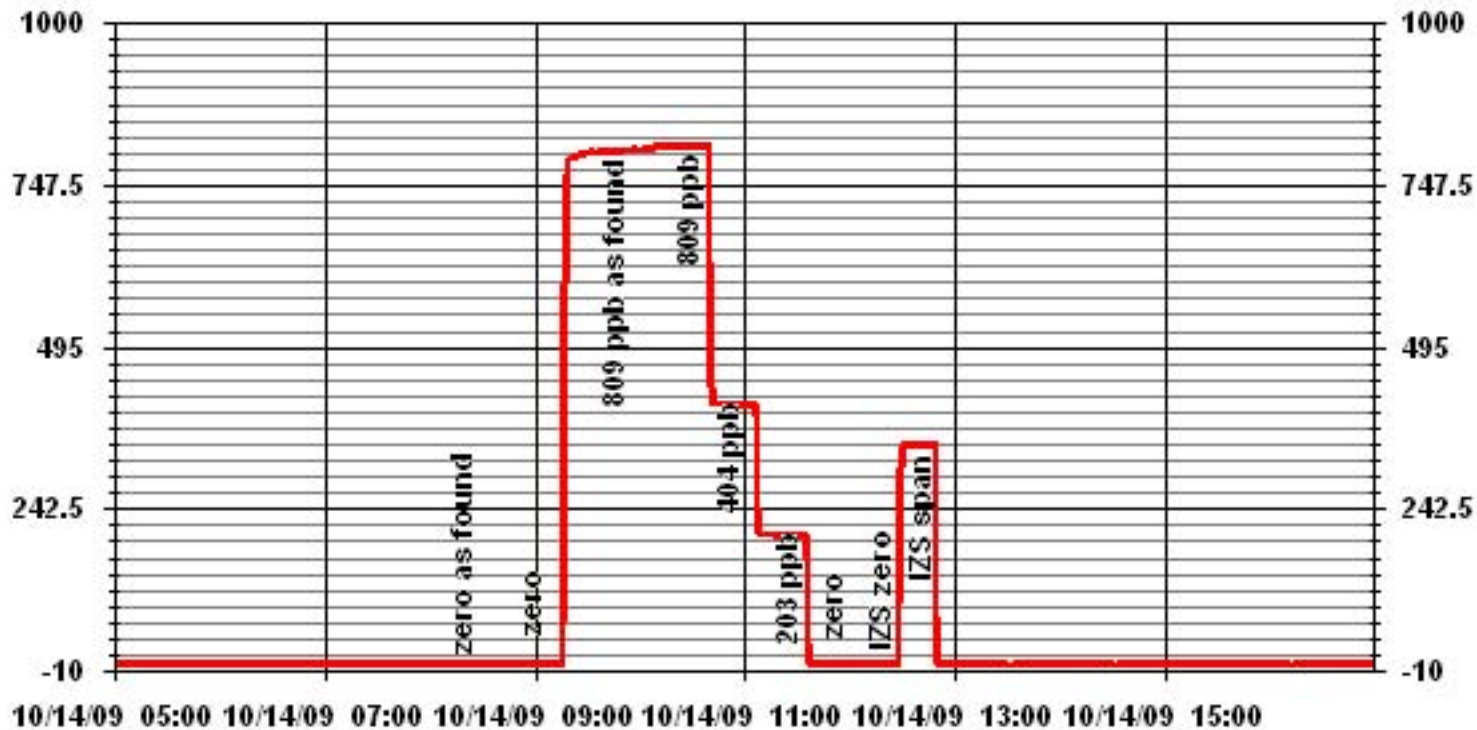
Calibration Date	October 14, 2009
Company	LAKELAND INDUSTRY & COMMUNITY ASSOCIATION
Plant / Location	ST. LINA
Start Time (MST)	8:30
End Time (MST)	12:53

Calculated Conc. ppb	Indicated Response ppb	Correction Factor	Correlation Coefficient Slope	(≥ 0.995)	(0.85 to 1.15)
0	1	n/a	Intercept	($\pm 3\%$ F.S.)	0.643596
203	201	1.0079			0.998170
404	406	0.9951			
809	808	1.0017			0.999977



Notes: Analyzer in maintenance mode following the calibration while the manifold was cleaned.

01 Minute Averages



Hydrogen Sulphide

H₂S Calibration Report

Station Information

Calibration Date	October 14, 2009	Previous Calibration	September 11, 2009		
Company	LAKELAND INDUSTRY & COMMUNITY ASSOCIATION				
Plant / Location	ST.LINA				
Start Time (MST)	8:30	End Time (MST)	12:00		
Reason:	Monthly Calibration				
Barometric Pressure	-	mmHg	Station Temperature	22	Deg C
Cal Gas	10.8	ppm	Cal Gas Expiry date	06/22/2010	
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	546	ccm	33	Deg C	544
HVPS / Lamp Setting	534		2178		534
PMT / RxCell Temp	8.4	Deg C	50	Deg C	8.4
Converter / IZS Temp	314.6	Deg C	45	Deg C	315
Offset / Slope	48.9		0.989		51.3
					1.004

Calibration Data

Dilution Flow Rate	Source Gas Flow Rate	Calculated Concentration	Indicated Conc. (DAS)	Correction Factor
4997	0	0	1	N/A
4997	0	0	0	N/A
4961	37	80	80	0.9994
4976	20.8	45	46	0.9773
4987	11.6	25	26	0.9640
4998	0	0	0	N/A
Sum of Least Squares				0.9919
New Correction Factor				0.9994

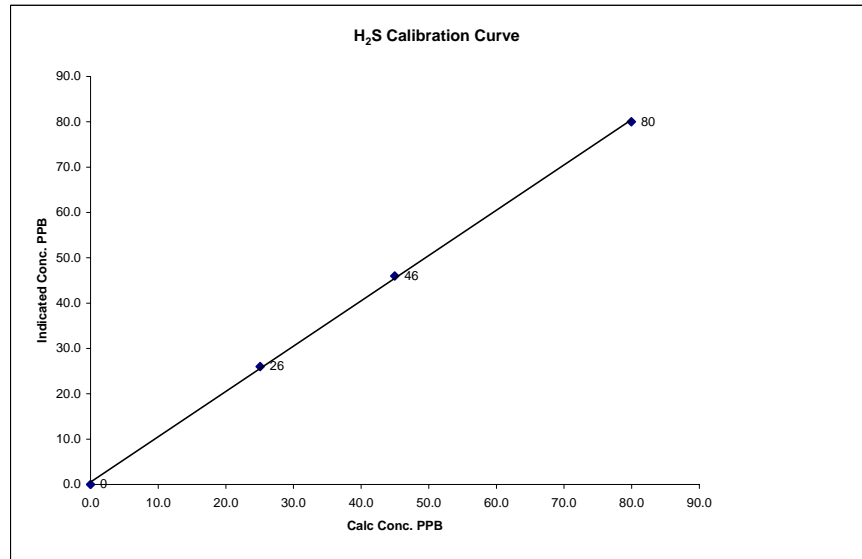
		Before Calibration	After Calibration
Auto Zero		1.2	0.5
Auto Span		52.0	53.0
Sample Lines Connected			YES
Percent Change from Previous Calibration			0.0%

Calibration Performed by: Shea Beaton

H₂S Calibration Curve

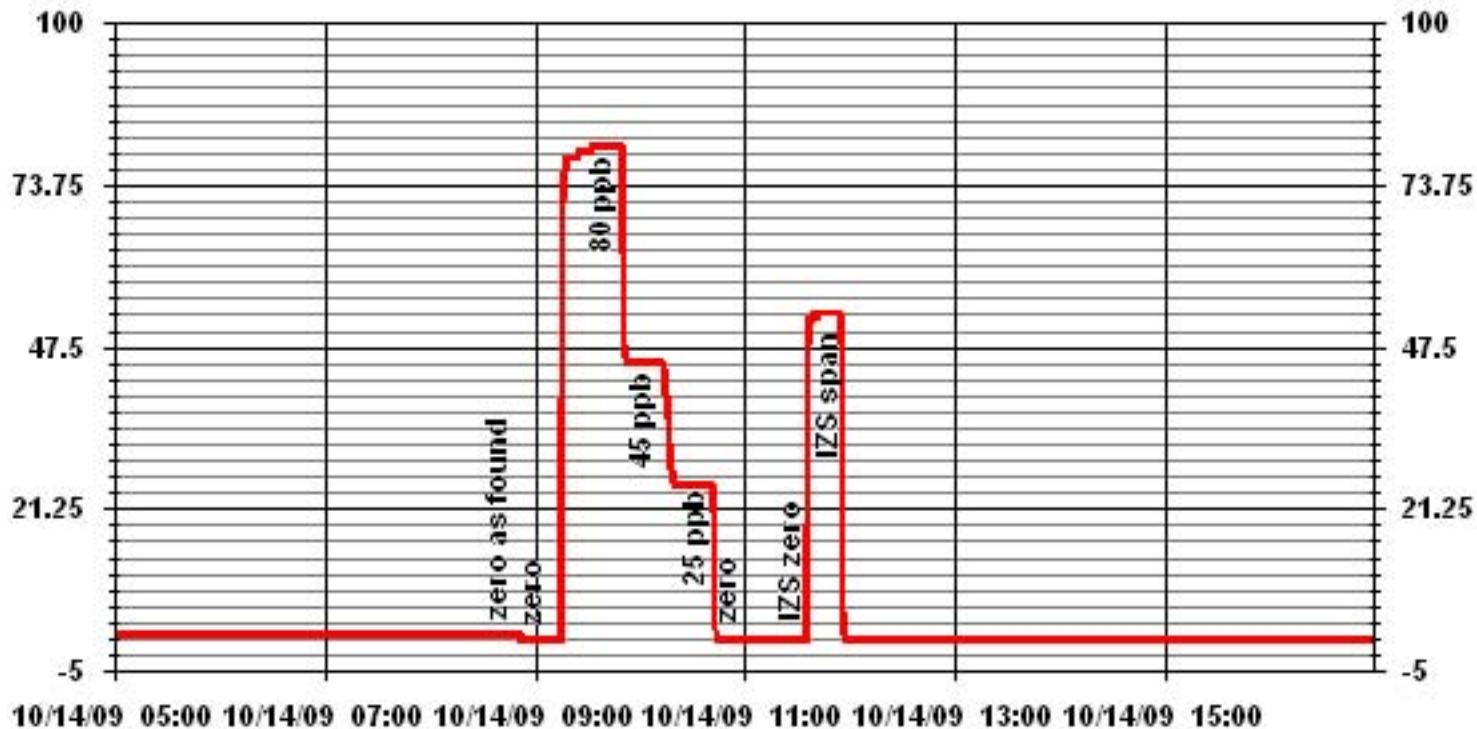
Calibration Date	October 14, 2009
Company	LAKELAND INDUSTRY & COMMUNITY ASSOCIATION
Plant / Location	ST.LINA
Start Time (MST)	8:30
End Time (MST)	12:00

Calculated Conc.	Indicated Response	Correction Factor	Correlation Coefficient	(≥ 0.995)	0.999725
ppb	ppb		Slope	(0.85 to 1.15)	0.999467
0	0	n/a	Intercept	(± 3% F.S.)	0.527031
25	26	0.9640			
45	46	0.9773			
80	80	0.9994			



Notes:

01 Minute Averages



Total Hydrocarbons

THC Calibration Report

Station Information			
Calibration Date:	October 14, 2009	Previous Calibration	September 11, 2009
Company:	LAKELAND INDUSTRY & COMMUNITY ASSOCIATION		
Plant / Location:	ST. LINA		
:	(MST) 11:55	End Time	(MST) 15:55
Reason:	Monthly Calibration		
Barometric Pressure:	708 mmHg	Station Temperature:	23 Deg C
Calibrator:	API 700	S/N:	831
Cal Gas Concentration:	299 Prop/ 1019 Meth	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
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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	8.5	psi
Air Pressure	20	psi	20	psi

Calibration Data

Dilution Flow	Source Gas Flow	Calculated Concentration	Indicated Concentration	Correction Factor
2998	0	0.0	-0.2	N/A
2997	65.0	39.1	39.1	0.9996
2997	0.0	0.0	0.0	N/A
2997	65.0	39.1	39.3	0.9946
3000	35.0	21.2	21.0	1.0111
3000	20.0	12.2	12.0	1.0161
3000	0	0.0	0.0	N/A
Correction Factor:				0.9946

Previous Calibration Correction Factor:	0.9936
Current Correction Factor Before Span Adjust:	0.9946
Percent Change:	-0.10%

IZS Calibration Data

	Before Calibration	After Calibration
Auto Zero	-0.2	0.0
Auto Span	34.4	34.3
Sample Lines Connected		YES

Cylinder Pressures

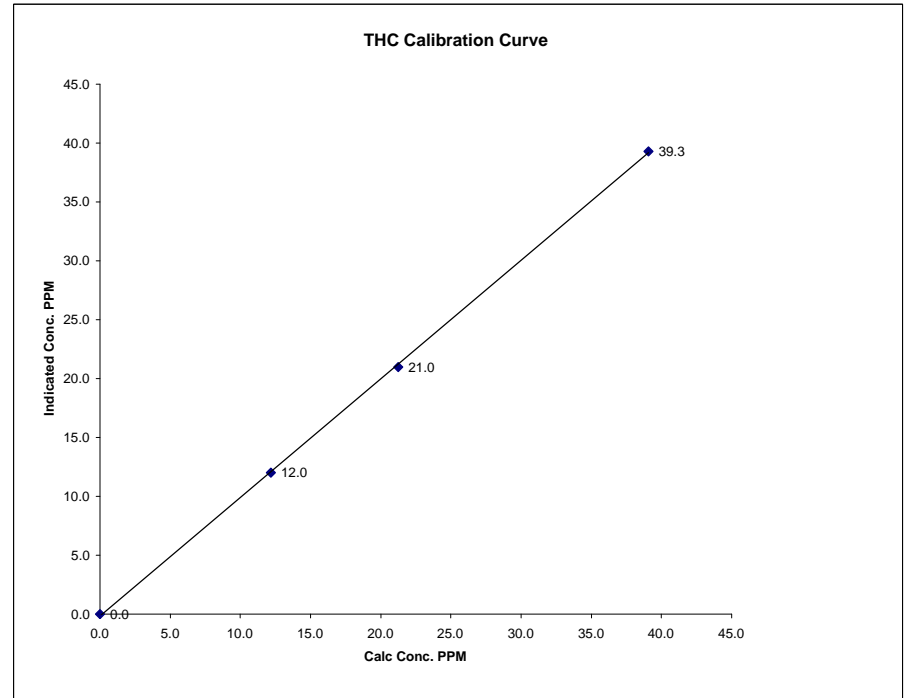
Span	1800	psi	
Hydrogen	1850	psi	
Zero Air	N/A	psi	Unlimited API 701

Calibration Performed by: Shea Beaton

THC Calibration Curve

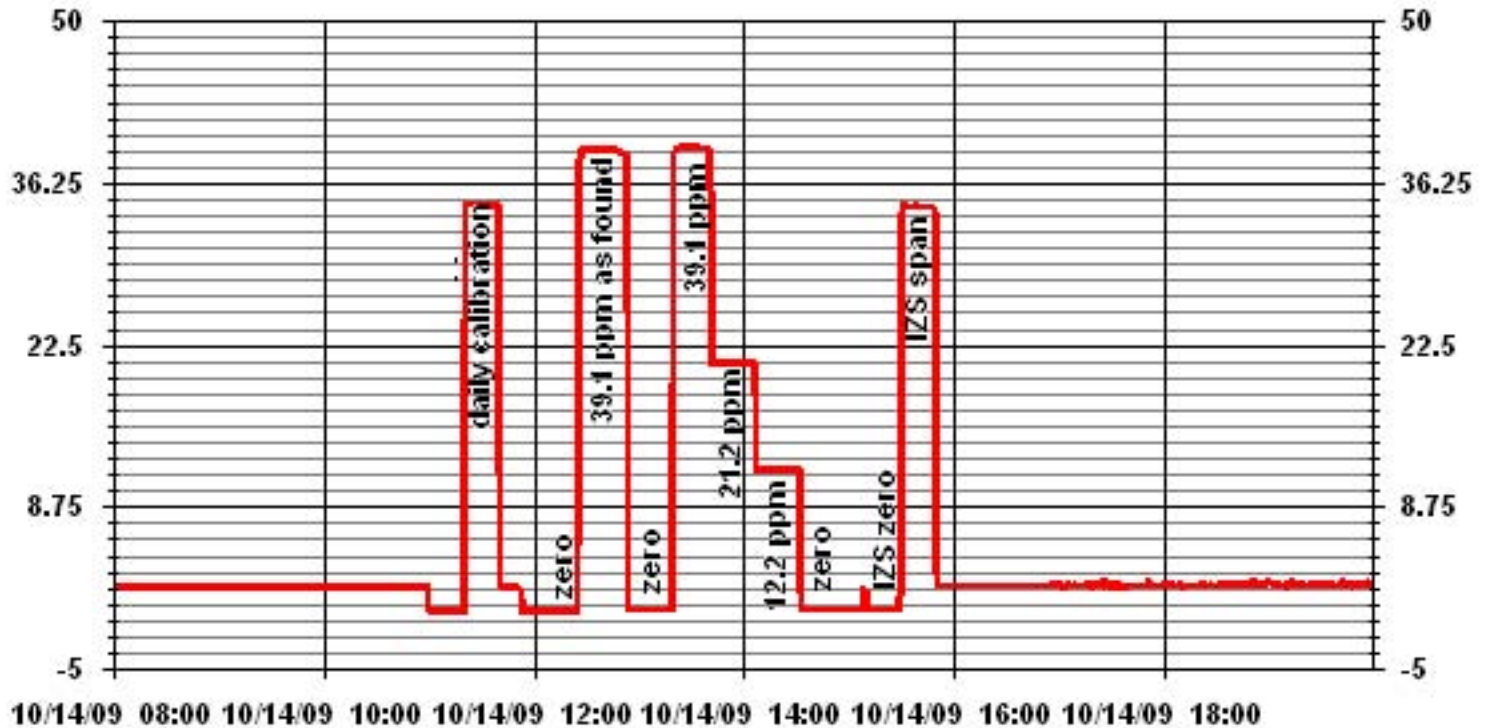
Calibration Date	October 14, 2009		
Company	LAKELAND INDUSTRY & COMMUNITY ASSOCIATION		
Plant / Location	ST. LINA		
Start Time (MST)	11:55	End Time (MST)	15:55

Calculated Conc. ppm	Indicated Response ppm	Correction Factor	Correlation Coefficient (≥ 0.995)	Slope (0.85 to 1.15)	Intercept (± 3% F.S.)
0.0	0.0		0.999882	1.006041	-0.162821
12.2	12.0	1.0161			
21.2	21.0	1.0111			
39.1	39.3	0.9946			



Notes: Flame temp 177.

01 Minute Averages



Nitrogen Dioxide

NOx - NO- NO2 Calibration Report
Station Information

Calibration Date	October 14, 2009	Previous Calibration	September 11, 2009
Company	LICA	Plant/Location	ST. LINA
Start Time (MST)	8:30	End Time (MST)	16:20
Reason:	Monthly Calibration		
Barometric Pressure	708 mmHg	Station Temperature	22.0 Deg C
Cal Gas Concentration	NOx 51.8 ppm	NO	51.6 ppm
DAS Output Voltage	0 - 1 Volts	Cal Gas Expiry date	12/19/2010

Equipment Information

Analyzer Make / Model:	API 200E	S/N :	592	Method:	Chemiluminescent
Calibrator Make / Model:	EnviroNics 2000	S/N:	1991		
DAS Make / Model:	ESC 8832	S/N :	AO717		
Flow Meter:	EnviroNics 2000	S/N :	1991		

Analyzer Settings

Before Calibration		After Calibration	
Concentration Range	0 - 1000 ppb		
Sample Flow/Conv. Temp	453 ccm 316.7 Deg C	453 ccm 315.1 Deg C	
Ozone Flow / Vacuum	73 ccm 3.7 *Hg-A	73 ccm 3.7 *Hg-A	
HVPS	710 Volts	710 Volts	
Rx/ Temp / PMT Temp	50 Deg C 6.9 Deg C	50 Deg C 6.9 Deg C	
Box Temp / IZS Temp	30.5 Deg C 45 Deg C	31.3 Deg C 45.2 Deg C	
Offset	1.6 NOx 1.6 NO	3.7 NOx 0.5 NO	
Slope	1.045 NOx 1.039 NO	1.058 NOx 1.051 NO	

Gas Phase Titration Calibration Data

Dilution Air Flow Rate	Source Flow Rate	O3 Set Point	Calculated Concentration		Indicated Concentration			Correction Factor		
			NOx	NO	NOx	NO	NO2	NOx	NO	
5025	0	N/A	0	0	2	0	3	N/A	N/A	
5025	0	N/A	0	0	0	0	0	N/A	N/A	
4946	77.9	N/A	803	800	794	789	5	1.0116	1.0141	
4946	77.9	N/A	803	800	804	800	4	0.9990	1.0001	
4987	38.9	N/A	401	399	402	402	0	0.9973	0.9935	
5006	19.5	N/A	201	200	202	201	1	0.9950	0.9961	
5017	0	N/A	0	0	-1	1	-2	N/A	N/A	
Converter Efficiency										
4946	77.9	N/A	803	800	804	802	2	N/A		
4945	77.9	400	803	N/A	804	427	376	100%		
4946	77.9	200	803	N/A	805	610	195	101%		
4946	77.9	100	803	N/A	805	710	95	101%		
4935	77.9	N/A	805	802	804	804	0	N/A		
Correction Factor										
5025	0	N/A	0	0	-1	1	-2	N/A	N/A	
Linearity OK? Yes No										
Flows Checked on-site? Yes No										
								Sum of Least Squares	0.9985	0.9987
								New Correction Factor	0.9990	1.0001
								Average Converter Efficiency	100%	

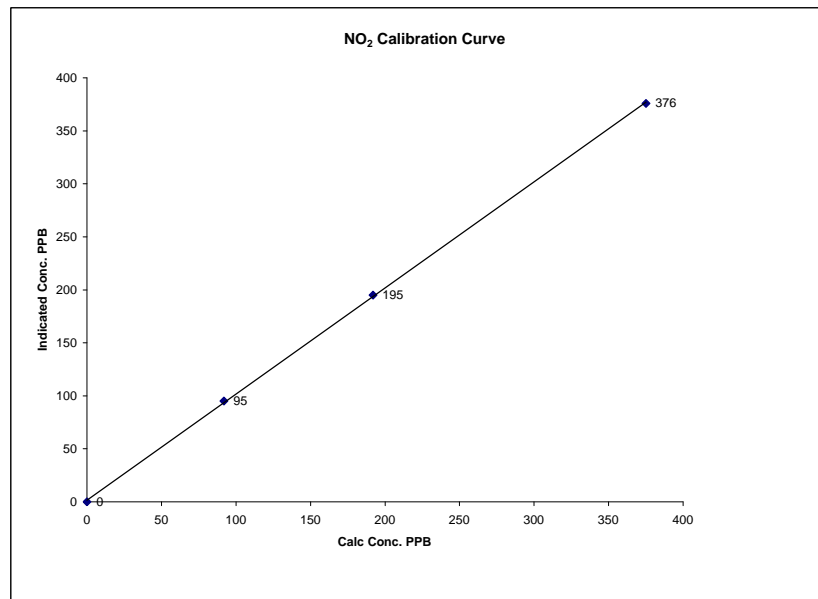
Before Calibration		After Calibration	
Auto Zero	0.0 NOx 0.8 NO2	-1.2 NOx -2.1 NO2	
Auto Span	714.0 NOx 693.0 NO2	724.0 NOx 699.0 NO2	
Sample Lines Connected	YES		
Percent Change from Previous Calibration	NOx -1.1%	NO	-1.5%

Calibration Performed by: Shea Beaton

NO2 Calibration Curve

Calibration Date	October 14, 2009
Company	LICA
Plant / Location	ST. LINA
Start Time (MST)	8:30
End Time (MST)	16:20

Calculated Conc. ppb	Indicated Response ppb	Correction Factor	Correlation Coefficient Slope Intercept	(≥ 0.995) (0.85 to 1.15) (± 3% F.S.)
0	0	N/A		0.999914
92	95	0.9684		1.000953
192	195	0.9846		
375	376	0.9973		1.592984

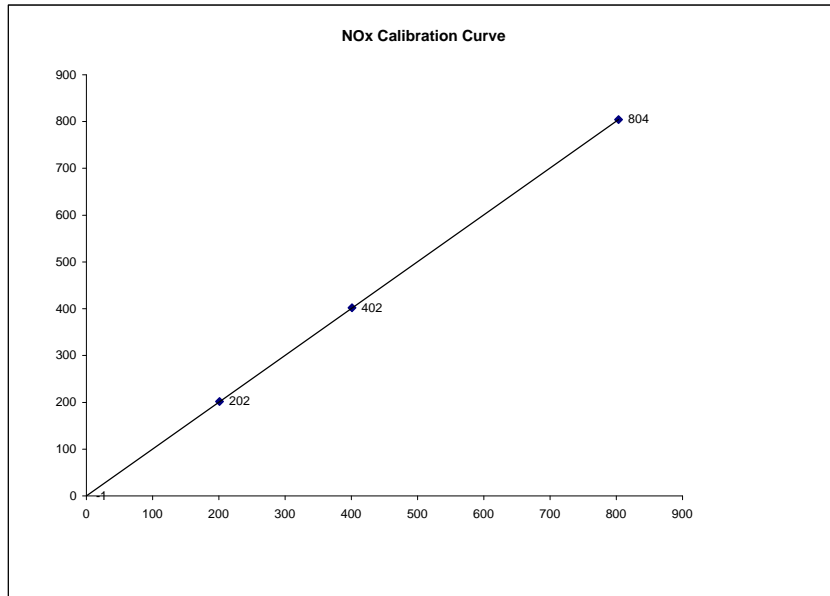


Notes:

NOx Calibration Curve

Calibration Date	October 14, 2009	
Company	LICA	
Plant / Location	ST. LINA	
Start Time (MST)	8:30	End Time (MST) 16:20

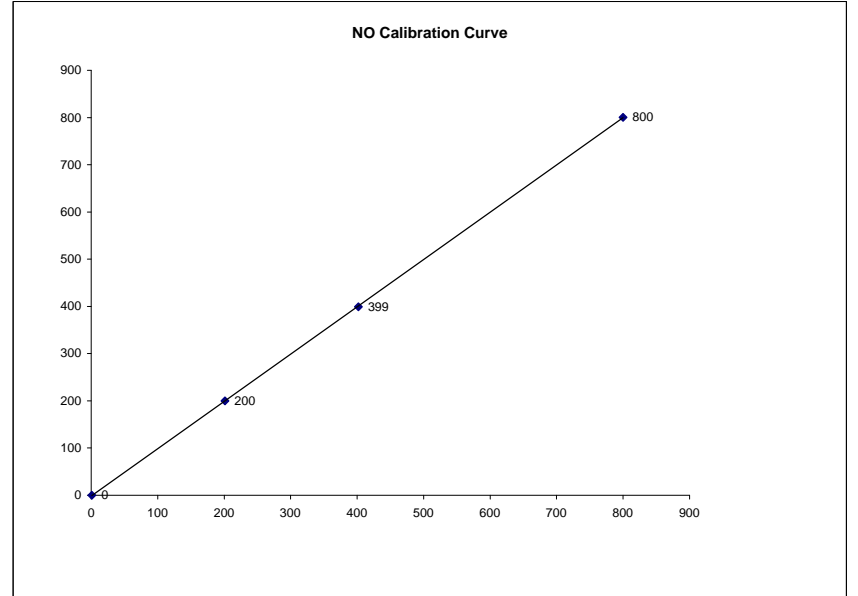
Calculated Conc. ppb	Indicated Response ppb	Correction Factor	Correlation Coefficient	(≥ 0.995)	0.999995
0	-1	N/A	Slope	(0.85 to 1.15)	1.001738
201	202	0.9950	Intercept	($\pm 3\%$ F.S.)	-0.142179
401	402	0.9973			
803	804	0.9990			



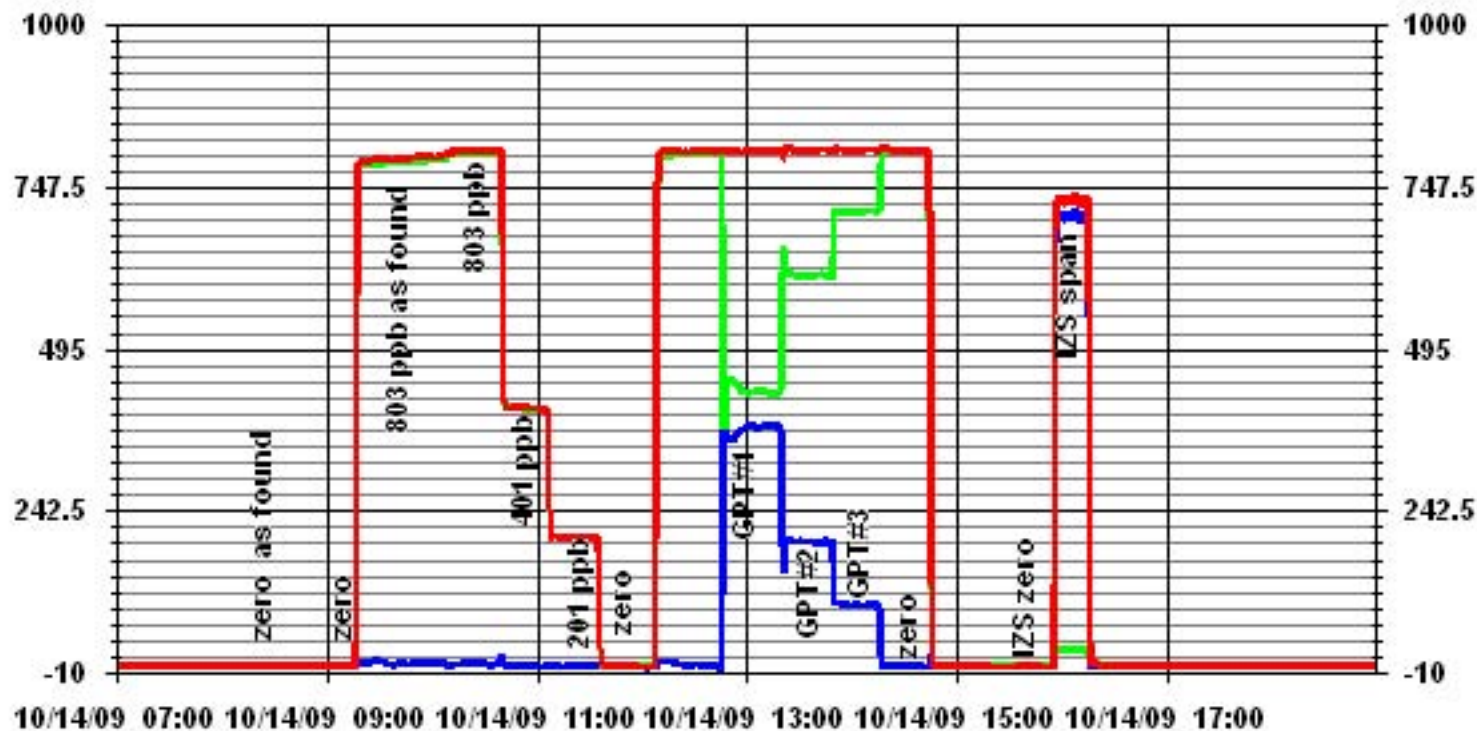
NO Calibration Curve

Calibration Date	October 14, 2009	
Company	LICA	
Plant / Location	ST. LINA	
Start Time (MST)	8:30	End Time (MST) 16:20

Calculated Conc. ppb	Indicated Response ppb	Correction Factor	Correlation Coefficient	(≥ 0.995)	0.999990
0	1	N/A	Slope	(0.85 to 1.15)	0.998903
200	201	0.9961	Intercept	($\pm 3\%$ F.S.)	1.458406
399	402	0.9935			
800	800	1.0001			



01 Minute Averages



— LICA31 NOX_ PPB
 — LICA31 NO_ PPB
 — LICA31 NO2_ PPB

Lakeland Industry & Community Association

Portable / Devon Wellsite 13-16-62-5 W4M Monitoring Site

Ambient Air Monitoring Data Report

For

October 2009

Prepared By:



Driven by Service and Science

November 24, 2009

Lakeland Industry & Community Association Portable / Devon Wellsite 13-16-62-5 W4M Ambient Air Monitoring

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Introduction

The following Ambient Air Monitoring report was prepared for:

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

Monitoring Location: Portable / Devon Wellsite 13-16-62-5 W4M
Data Period: October 2009

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 2009

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION PORTABEL / DEVON WELLSITE 13-16-62-5 W4M SITE						MAXIMUM VALUES							OPERATIONAL TIME (PERCENT)
						OBJECTIVES				EXCEEDENCES		MONTHLY AVERAGE	
PARAMETER	1-HR	24-HR	1-HR	24-HR	READING	DAY	HOUR	WIND SPEED (KPH)	WIND DIRECTION (DEGREES)	READING	DAY		
SO ₂ (PPB)	172	57	0	0	0.03	3	16	VAR	VAR	VAR	0.6	16	100.0
H ₂ S (PPB)	10	3	-	-	0.00	1	26	9, 10	2.2, 3.7	227(SW), 216(SW)	0.1	26	99.7
NO ₂ (PPB)	212	106	0	0	1.61	15	17	18	6	236(SW)	4.9	27	100.0
NO (PPB)	-	-	-	-	0.33	9	27	2	9.1	285(WNW)	1.5	16	100.0
NO _x (PPB)	-	-	-	-	2.31	25	27	2	9.1	285(WNW)	7.6	16	100.0
O ₃ (PPB)	82	-	0	-	16.52	37	17	11, 12	18.5, 17.5	289(WNW), 275(W)	25.6	9	100.0
PM 2.5 (UG/M ³)	-	30	-	0	1.78	31.8	2	18	7.4	82(E)	5.8	8	99.5
VECTOR WS (KPH)	-	-	-	-	10.04	26.3	31	7	-	98(E)	18.6	9	100.0
VECTOR WD (DEGREES)	-	-	-	-	14(NNE)	-	-	-	-	-	-	-	100.0

VAR-VARIOUS

Volatile Organics Data Summary

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - PORTABLE

Xontech Model 910A – September 30, 2009

Maximum reading (ppb)	Volatile Organic
<3.2	Methyl Isobutyl Ketone

Xontech Model 910A – October 06, 2009

Maximum reading (ppb)	Volatile Organic
3.26	2-Propanone

Xontech Model 910A – October 10, 2009

Maximum reading (ppb)	Volatile Organic
<3.2	Methyl Isobutyl Ketone

Xontech Model 910A – October 16, 2009

Maximum reading (ppb)	Volatile Organic
6.2	Ethanol

Xontech Model 910A – October 22, 2009

Maximum reading (ppb)	Volatile Organic
<3.2	Methyl Isobutyl Ketone

Xontech Model 910A – October 28, 2009

Maximum reading (ppb)	Volatile Organic
<3.2	Methyl Isobutyl Ketone

Polycyclic Aromatic Hydrocarbons (PAHs) Data Summary

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - PORTABLE

PUF cartridge – October 04, 2009

Maximum reading (ug)	Semi-Volatile Organic
< 2.0	3-Methylcholanthrene

PUF cartridge – October 10, 2009

Maximum reading (ug)	Semi-Volatile Organic
< 2.0	3-Methylcholanthrene

PUF cartridge – October 16, 2009

Maximum reading (ug)	Semi-Volatile Organic
< 2.0	3-Methylcholanthrene

PUF cartridge – October 22, 2009

Maximum reading (ug)	Semi-Volatile Organic
< 2.0	3-Methylcholanthrene

PUF cartridge – October 28, 2009

Maximum reading (ug)	Semi-Volatile Organic
< 2.0	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

No operational issues observed during the month. An installation calibration was performed on September 29th, and the monthly calibration was performed on October 27th. The UV lamp voltage was adjusted and a factory cal was performed following the as found point on October 26th. 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
- Converter - Internal

No operational issues observed during the month. An installation calibration was performed on September 29th, and the monthly calibration was performed on October 26th. A lamp cal was performed and the PMT gain was adjusted following the as found points on October 26th. The inlet filter was changed before the monthly calibration was started. Data was corrected using daily zero information.

Nitrogen Dioxide (PPB)

- Analyzer make / model – API 200E

No operational issues observed during the month. An installation calibration was performed on September 29th, and the monthly calibration was performed on October 26th. The inlet filter was changed 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 – API 700

No operational issues observed during the month. An installation calibration was performed on September 29th, and the monthly calibration was performed on October 27th. It was noticed that the initial span point took long time to stabilize. Once a stable as found span was complete, the calibration was paused and an auto-leak check was done; the analyzer passed the leak check. Suspect long stabilization time of the as found span point was due to a calibrator issue. The inlet filter was changed before the monthly calibration was started.

Particulate Matter 2.5 (ug/m³)

- Analyzer make / model –TEOM1400A

No operational issues observed during the month. An installation calibration was performed on September 29th. 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. Four hours of PM2.5 data were invalidated and one hour of PM2.5 maximum data was also invalidated as they were below –3.0 ug/m³.

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

- System make / model – RM Young 5103VK

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
- 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

The trailer is located at N54°22'04.4", W110°42'14.6", Elevation 560m asl.

The trailer was installed on September 22nd, and an installation calibration was performed on September 26 and

Air Quality Index (AQI)

The AQI data was adjusted to reflect regular monthly and daily calibrations, maintenance, and downtime. One hour of fair AQI value recorded in October 2009, and it the fair AQI was due to PM2.5. The highest hourly concentration of PM2.5 was 31.8 UG/M3 and an AQI value of 27 on October 2nd, hour 18.

Volatile Organics (VOCs)

The volatile organics were sampled from September 30th to October 28th. The sampler was programmed to run for 24 hours, and, every 6 days per sample cycle.

Polycyclic Aromatic Hydrocarbons (PAHs)

The PAHs were sampled from October 4th to October 29th. The sampler was programmed to run for 24 hours, and, every 6 days per sample cycle.

Continuous Monitoring

Monthly Summaries, Graphs & Wind Roses

Air Quality Index

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION -PORTABLESITE

OCTOBER 2009

AIR QUALITY INDEX (AQI)

MST		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	24:00	DAILY
DAY	PEAK	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	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	
1	4	3	2	-	1	1	1	1	5	5	7	8	10	11	12	-	12	12	11	10	8	6	6	5	12		
2	4	2	2	2	2	1	6	14	5	5	8	10	11	12	-	13	13	10	27	12	19	5	3	4	27		
3	3	3	5	4	4	5	5	5	5	6	7	7	7	-	7	6	6	7	7	6	6	4	4	4	7		
4	4	10	10	9	7	7	8	10	11	11	11	12	-	12	12	12	11	10	8	7	8	7	5	6	12		
5	6	5	4	5	5	4	5	3	6	11	10	-	11	11	12	13	13	12	11	9	10	11	11	10	13		
6	10	10	10	9	8	7	5	4	4	5	-	6	6	6	7	9	8	8	8	7	7	9	10	10	10		
7	10	12	12	11	-	10	11	10	10	-	9	10	10	10	-	13	13	13	12	10	9	8	8	7	13		
8	5	5	5	8	10	10	11	12	-	14	14	14	14	14	14	14	14	14	14	14	13	13	14	14	14	14	
9	14	14	14	13	13	13	12	-	12	12	13	12	12	12	12	13	13	13	14	14	14	14	14	14	14	14	
10	14	14	14	14	14	13	-	13	13	14	13	14	14	13	13	13	13	14	13	12	12	10	10	11	14		
11	11	10	11	11	11	-	11	11	13	14	14	14	14	15	15	15	15	14	13	12	11	11	11	11	15		
12	8	10	9	8	-	9	10	9	11	12	14	14	14	15	15	14	14	14	13	13	12	12	11	10	15		
13	10	9	10	-	10	9	9	9	10	11	12	13	13	14	14	14	14	14	14	14	14	13	13	13	14		
14	13	13	-	12	12	11	11	10	10	10	10	11	11	11	11	11	11	11	10	10	10	10	10	10	13		
15	10	-	10	10	8	8	9	9	9	8	8	9	9	9	9	8	8	8	8	9	8	6	4	4	10		
16	5	4	4	4	4	3	2	7	4	6	7	6	7	9	10	10	10	10	8	8	9	8	7	-	10		
17	5	5	6	4	5	8	9	8	9	12	17	19	19	18	18	16	14	9	7	10	13	7	-	8	19		
18	7	7	7	6	5	5	7	7	8	9	12	13	14	14	14	-	16	15	14	9	8	-	6	8	16		
19	7	9	9	8	5	5	5	5	6	8	10	11	15	16	16	14	12	12	10	10	-	9	8	9	16		
20	9	8	7	6	4	3	3	4	4	7	12	10	11	13	15	14	12	10	10	-	9	8	6	5	15		
21	4	3	4	4	4	6	5	4	7	11	11	11	13	13	13	13	11	10	-	9	8	7	7	7	13		
22	7	7	7	7	7	6	5	5	5	5	5	5	5	6	7	7	7	7	-	4	4	2	2	3	7		
23	6	6	8	9	9	9	9	9	8	6	6	7	7	7	7	7	-	5	5	5	5	5	4	4	9		
24	4	3	3	3	1	5	6	6	6	8	10	11	11	11	10	-	10	10	11	11	11	11	11	11	12	12	
25	11	9	8	9	10	9	9	9	10	10	11	13	14	15	-	16	14	13	12	12	11	8	8	9	16		
26	8	7	7	7	6	6	5	4	4	6	7	-	-	-	11	12	10	7	4	4	4	3	2	2	12		
27	2	3	7	5	6	6	5	-	-	-	-	-	-	-	-	-	-	-	10	9	6	7	8	6	10		
28	6	5	3	4	3	2	2	1	1	2	2	2	2	3	2	3	4	4	3	2	2	4	2	2	6		
29	3	4	3	3	3	3	2	3	3	3	-	5	6	6	6	6	6	5	5	5	5	5	6	6	6		
30	7	7	7	7	6	6	6	6	7	-	8	8	8	9	10	9	9	10	9	10	8	7	8	8	10		
31	7	8	7	7	7	7	8	-	11	12	12	11	10	9	9	9	8	7	6	4	5	4	7	12			
PEAK	14	14	14	14	14	13	12	14	13	14	17	19	19	18	18	16	16	15	27	14	19	14	14	14			

STATUS FLAG CODES NA - NOT APPLICABLE

V - VARIOUS

AQI CLASS	OZONE (O ₃)					PARTICULATE MATTER 2.5 (PM _{2.5})					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%	-	-	-	1	0.1%	27	18	2	0	0.0%	-	-	-	0	0.0%	-	-	-	1	0.1%
GOOD (1-25)	651	87.5%	19	11,12	17	42	5.6%	-	-	-	0	0.0%	-	-	-	0	0.0%	-	-	-	693	93.1%
OVERALL	651	87.5%	-	-	-	43	5.8%	-	-	-	0	0.0%	-	-	-	0	0.0%	-	-	-	694	93.3%
UNAVAILABLE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	50	6.7%

Sulphur Dioxide

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - PORTABLE SITE

OCTOBER 2009

SULPHUR DIOXIDE (SO₂) hourly averages in ppb

MST		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		
DAY	DAY	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	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.	
1	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	0.0	24
2	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	0.0	24
3	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	0.0	24
4	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	0.0	24
5	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	0.0	24
6	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	0.0	24
7	7	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	0.0	24
8	8	0	0	0	0	0	0	0	0	IZS	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0.1	24
9	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	0.0	24
10	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	0.0	24
11	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	0.0	24
12	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	0.0	24
13	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	0.0	24
14	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	0.0	24
15	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	0.0	24
16	16	IZS	0	0	0	0	0	0	0	0	0	1	3	3	3	2	1	1	0	0	0	0	0	0	0	IZS	3	0.6	24
17	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	18	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.1	24
19	19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0.0	24
20	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0.0	24
21	21	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	0.0	24
22	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	0.0	24
23	23	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	0.0	24
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	0.0	24
25	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	0.0	24
26	26	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	0.0	24
27	27	0	0	0	0	0	0	0	C	C	C	C	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
28	28	0	0	0	0	0	0	0	0	0	0	0	0	IZS	1	1	2	0	0	0	0	0	0	0	0	0	2	0.2	24
29	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	0.0	24
30	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	0.0	24
31	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	0.0	24
HOURLY MAX		0	0	0	0	0	0	NA	0	0	0	1	3	3	3	2	1	1	0	0	0	0	0	0	0	0			
HOURLY AVG		0.0	0.0	0.0	0.0	0.0	0.0	NA	0.0	0.0	0.0	0.1	0.2	0.2	0.1	0.1	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

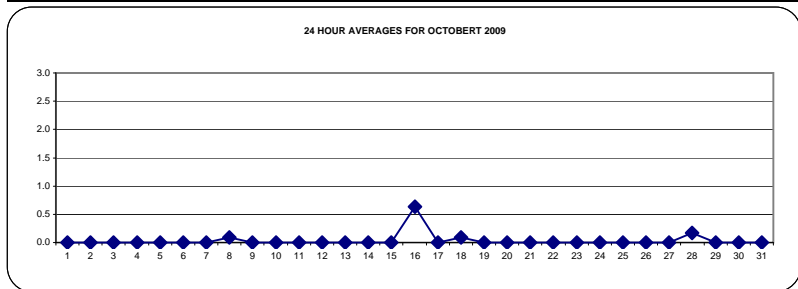
OBJECTIVE LIMIT:

ALBERTA ENVIRONMENT:	1-HR	172	PPB	24-HR	57	PPB
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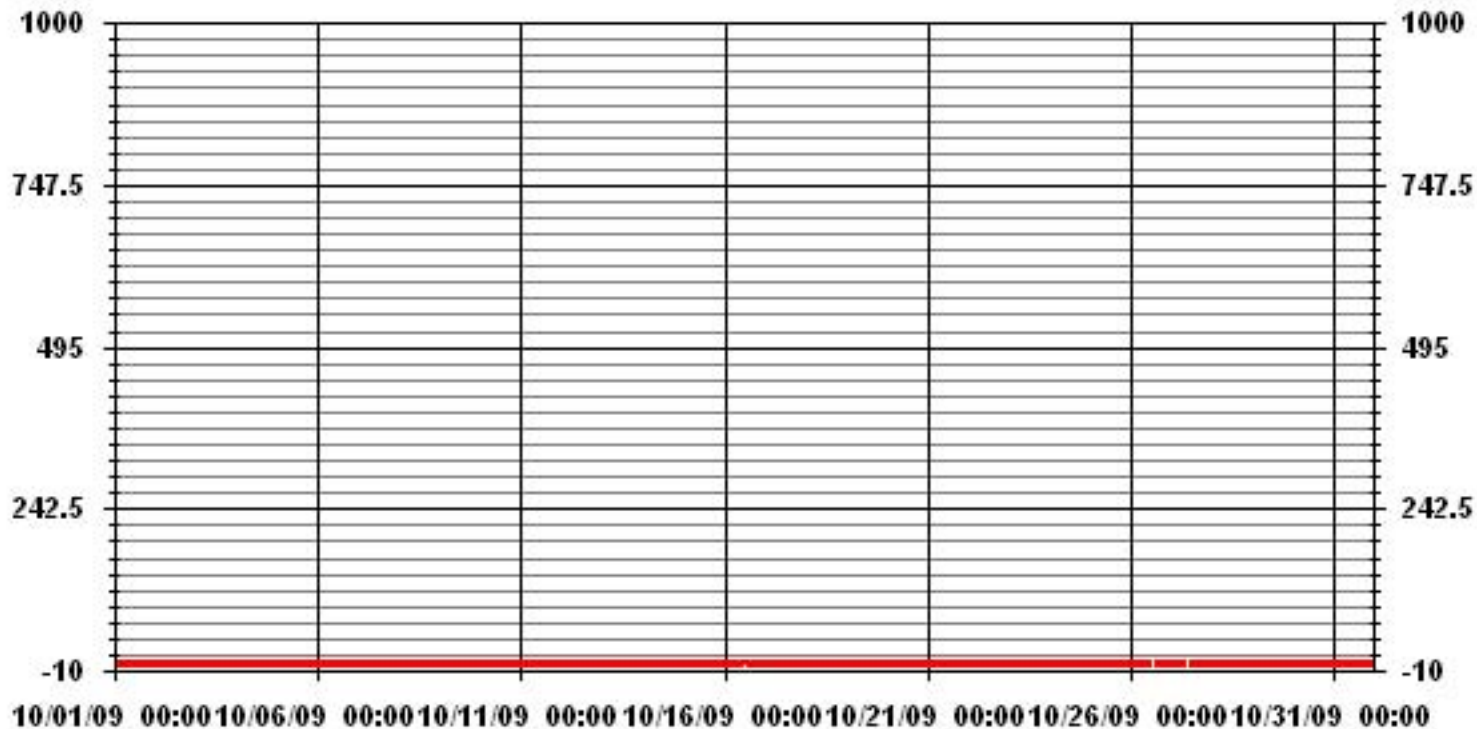
MONTHLY SUMMARY

NUMBER OF 1-HR EXCEEDENCES:	0		
NUMBER OF 24-HR EXCEEDENCES:	0		
NUMBER OF NON-ZERO READINGS:	14		
MAXIMUM 1-HR AVERAGE:	3 PPB @ HOUR(S) VAR ON DAY(S) 16		
MAXIMUM 24-HR AVERAGE:	0.6 PPB ON DAY(S) 16		
IZS CALIBRATION TIME:	31 HRS	OPERATIONAL TIME:	744 HRS
MONTHLY CALIBRATION TIME:	9 HRS	AMD OPERATION UPTIME:	100.0 %
STANDARD DEVIATION:	0.25	MONTHLY AVERAGE:	0.03 PPB

24 HOUR AVERAGES FOR OCTOBER 2009



01 Hour Averages



— LICA33 SO2_ PPB

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION -PORTABLE SITE

OCTOBER 2009

SULPHUR DIOXIDE MAX instantaneous maximum in ppt

MST		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		
DAY	HR	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	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.	
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	24	
2		0	0	0	0	0	0	0	0	0	1	2	0	0	1	IZS	0	0	0	0	0	0	0	0	0	0	2	0.2	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	0.0	24
4		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	0.0	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	1	1	0.0	24	
6		1	1	1	1	1	0	0	0	1	1	IZS	0	1	1	0	0	0	0	0	0	1	1	0	0	1	0.5	24	
7		0	1	2	1	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0.2	24	
8		0	0	0	0	0	0	0	0	IZS	0	1	3	3	1	1	0	0	0	0	0	0	0	0	0	3	0.4	24	
9		0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24	
10		0	0	0	0	0	0	IZS	0	1	1	1	0	0	0	2	1	0	1	1	1	1	0	0	2	0.4	24		
11		0	0	0	0	0	IZS	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	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	4	4	5	4	3	2	1	1	1	1	1	0	0	IZS	5	1.2	24	
17		0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	1	0	1	1	0	1	0	IZS	0	1	0.3	24	
18		0	0	1	1	1	0	0	1	1	1	3	3	1	1	0	1	0	0	0	0	0	0	IZS	0	3	0.7	24	
19		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	IZS	0	0	1	0.1	24	
20		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0.0	24	
21		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0.0	24	
22		0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	IZS	0	1	0	0	0	0	1	0.1	24
23		0	1	1	0	1	1	0	0	0	1	0	1	0	1	1	1	IZS	0	1	1	1	1	1	1	1	1	0.7	24
24		1	1	1	1	1	1	1	1	1	1	1	0	0	1	1	IZS	1	1	1	0	0	0	0	0	1	0.7	24	
25		0	0	0	0	0	0	0	0	0	0	0	0	1	1	IZS	0	1	1	1	0	1	1	1	1	1	1	0.4	24
26		1	1	1	1	0	1	1	1	1	1	1	1	C	C	C	C	C	0	0	0	0	0	0	0	0	1	0.5	24
27		0	0	0	0	0	0	0	C	C	C	C	C	IZS	0	0	1	1	1	1	0	0	1	0	0	1	0.3	24	
28		0	1	0	0	0	0	0	0	0	0	0	0	IZS	2	2	3	2	0	0	0	0	0	0	0	3	0.4	24	
29		0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	1	1	1	1	1	1	1	1	1	1	1	0.4	24
30		1	1	1	1	1	1	1	0	0	IZS	1	1	1	1	1	0	0	0	1	1	1	1	1	1	1	1	0.8	24
31		1	1	1	1	1	1	1	1	IZS	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	24
HOURLY MAX		1	1	2	1	1	1	1	1	1	1	4	4	5	4	3	2	1	1	1	1	1	1	1	1	1			
HOURLY AVG		0.2	0.3	0.3	0.2	0.2	0.2	0.1	0.1	0.2	0.4	0.5	0.5	0.5	0.5	0.4	0.2	0.3	0.3	0.2	0.3	0.2	0.2	0.2					

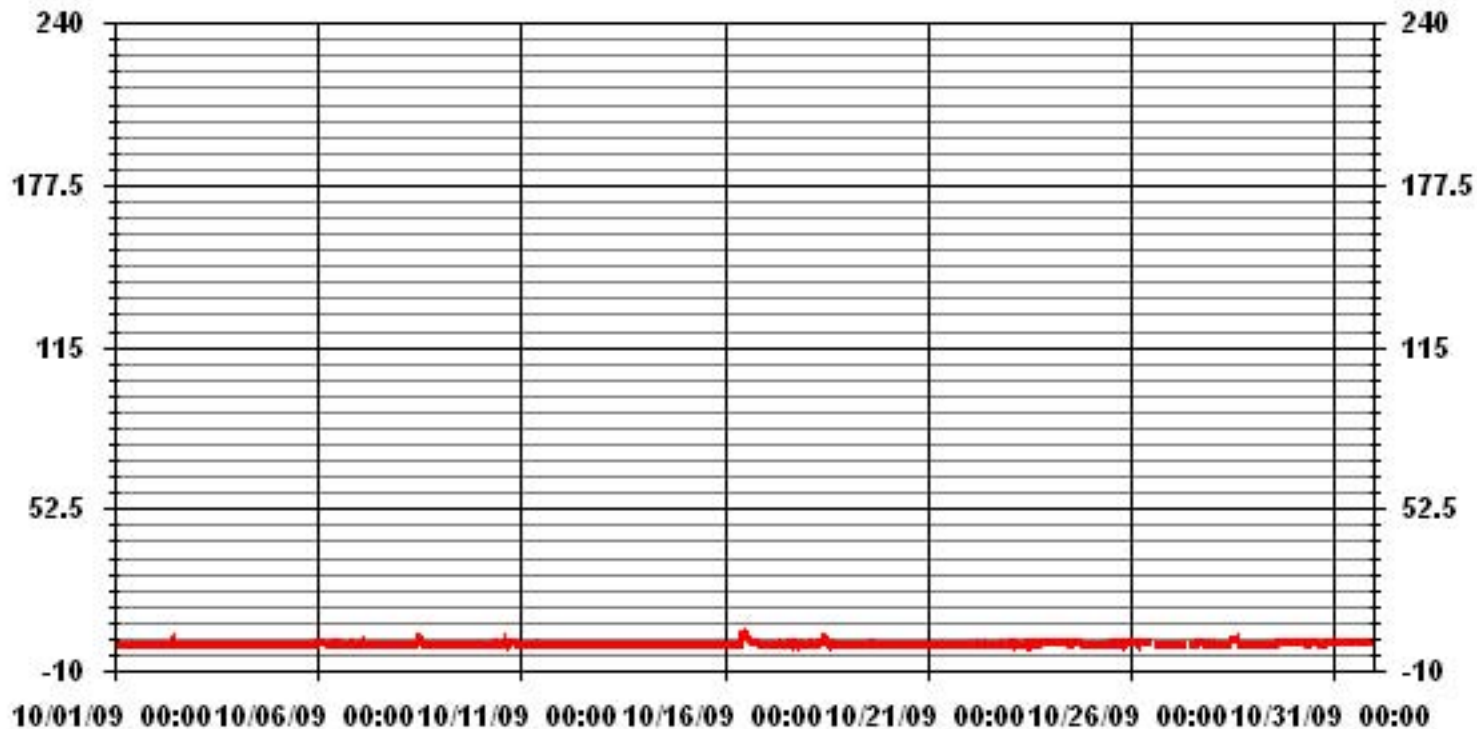
STATUS FLAG CODES

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

MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:	177					
MAXIMUM INSTANTANEOUS VALUE:	5	PPB	@ HOUR(S)	12	ON DAY(S)	16
IZS CALIBRATION TIME:	31	HRS		OPERATIONAL TIME:	744	HRS
MONTHLY CALIBRATION TIME:	10		HRS			
STANDARD DEVIATION:	0.60					

01 Hour Averages



— LICA33 SO2MAX PPB

LICA33
 SO2_ / WDR Joint Frequency Distribution (Percent)

October 2009

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	6.10	2.41	3.12	3.12	19.31	8.94	3.26	4.26	4.54	1.56	3.83	3.97	5.82	10.08	11.22	8.38	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	6.10	2.41	3.12	3.12	19.31	8.94	3.26	4.26	4.54	1.56	3.83	3.97	5.82	10.08	11.22	8.38	

Calm : .00 %

Total # Operational Hours : 704

Distribution By Samples

	Direction																
Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 20	43	17	22	22	136	63	23	30	32	11	27	28	41	71	79	59	704
< 60																	
< 110																	
< 170																	
< 340																	
>= 340																	
Totals	43	17	22	22	136	63	23	30	32	11	27	28	41	71	79	59	

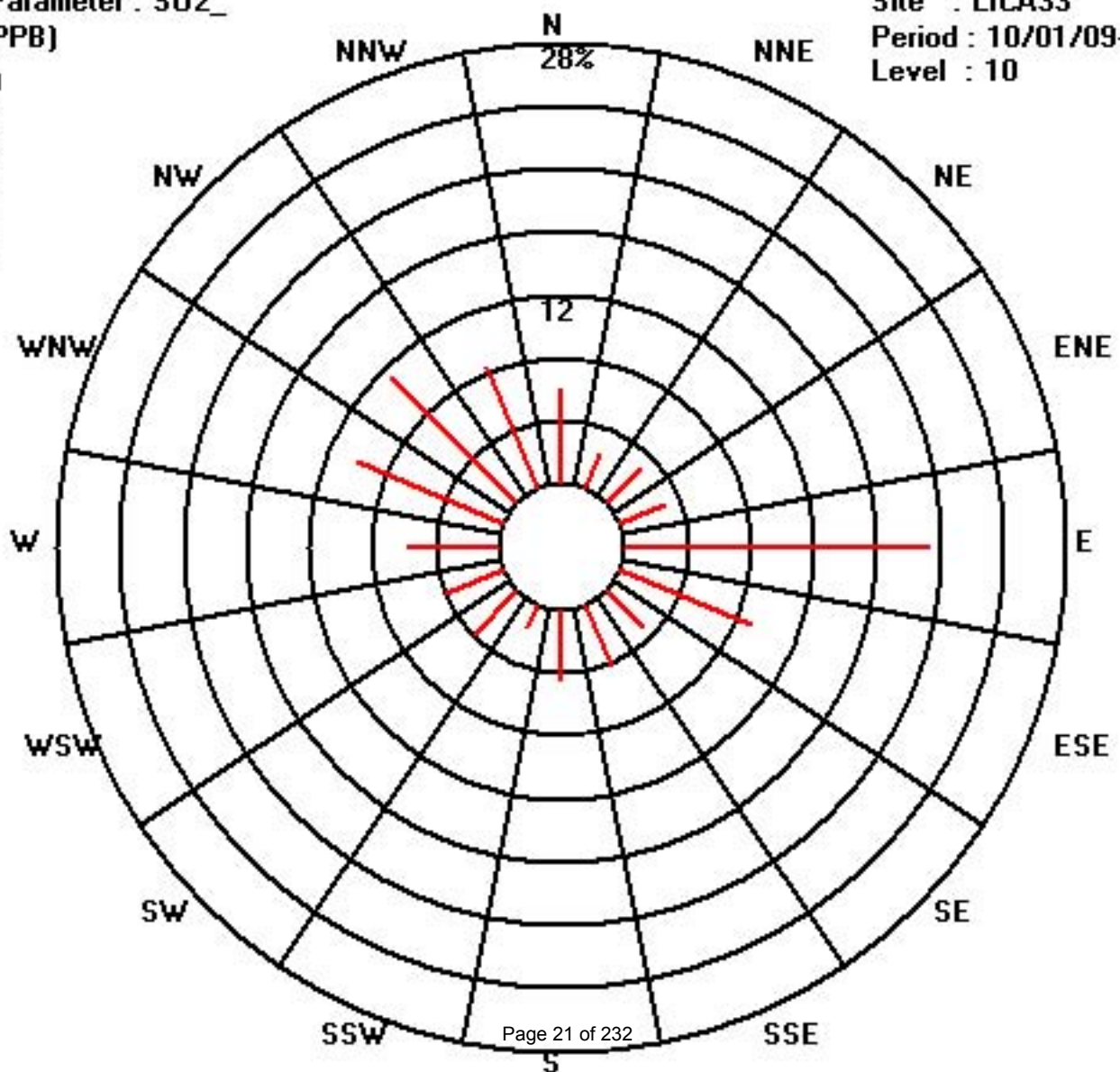
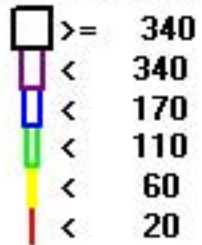
Calm : .00 %

Total # Operational Hours : 704

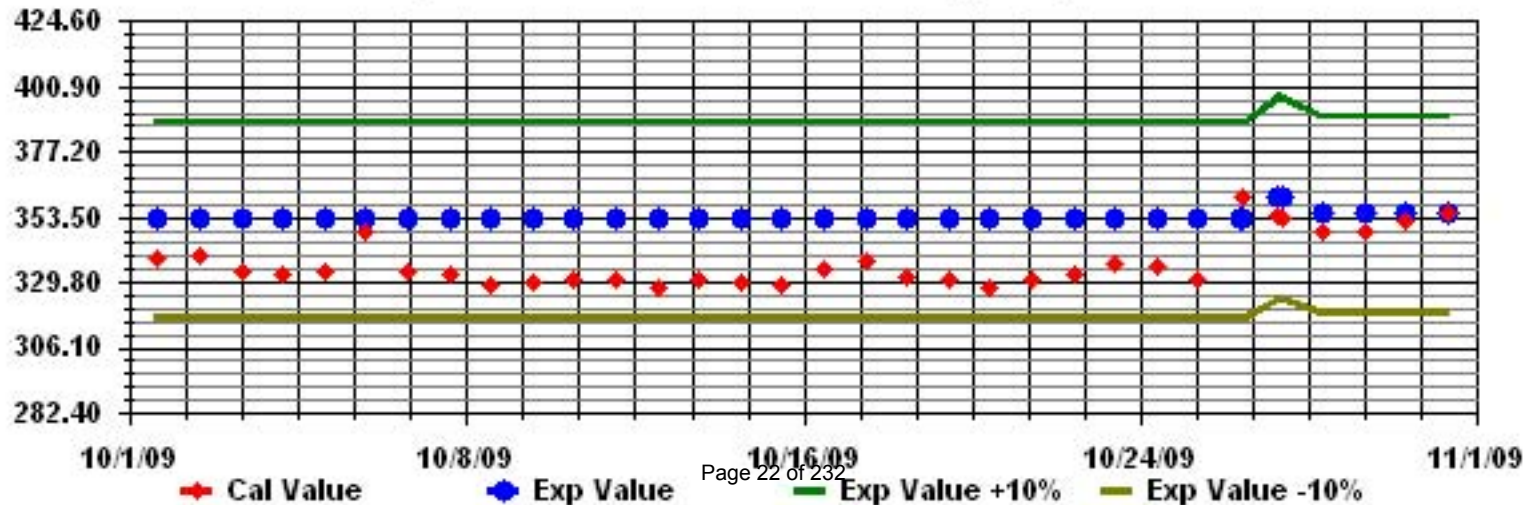
Class Limits (PPB)

Period : 10/01/09-10/31/09

Level : 10



Calibration Graph for Site: LICA33 Parameter: S02_ Sequence: S02 Phase: SPAll



Hydrogen Sulphide

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - PORTABLE SITE

OCTOBER 2009

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 MAX.	24-HOUR AVG.	RDGS.																							
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	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	0.0	24																						
2	0	0	0	0	0	0	0	0	0	0	0	0	M	M	IZS	0	0	0	0	0	0	0	0	0	0	0	0.0	22																						
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	0.0	24																						
4	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	0.0	24																						
5	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	0.0	24																						
6	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24																						
7	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	0.0	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	0.0	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	0.0	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	0.0	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	0.0	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	0.0	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	0.0	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	0.0	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	0.0	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	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	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	IZS	0	0	0.0	24																							
19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0.0	24																						
20	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	0.0	24																						
21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0.0	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	0.0	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	0.0	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	0.0	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	0.0	24																						
26	0	0	0	0	0	0	0	0	0	1	1	C	C	C	C	C	C	C	0	0	0	0	0	0	0	1	0.1	24																						
27	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24																						
28	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24																						
29	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24																						
30	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	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	0.0	24																						
HOURLY MAX	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	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	0.0																									

STATUS FLAG CODES

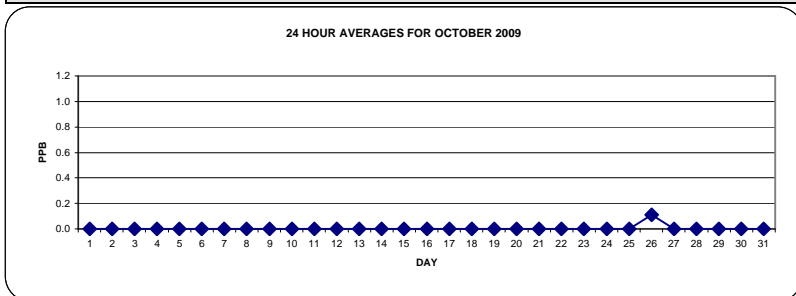
S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	MAINTENANCE
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE

OBJECTIVE LIMIT:

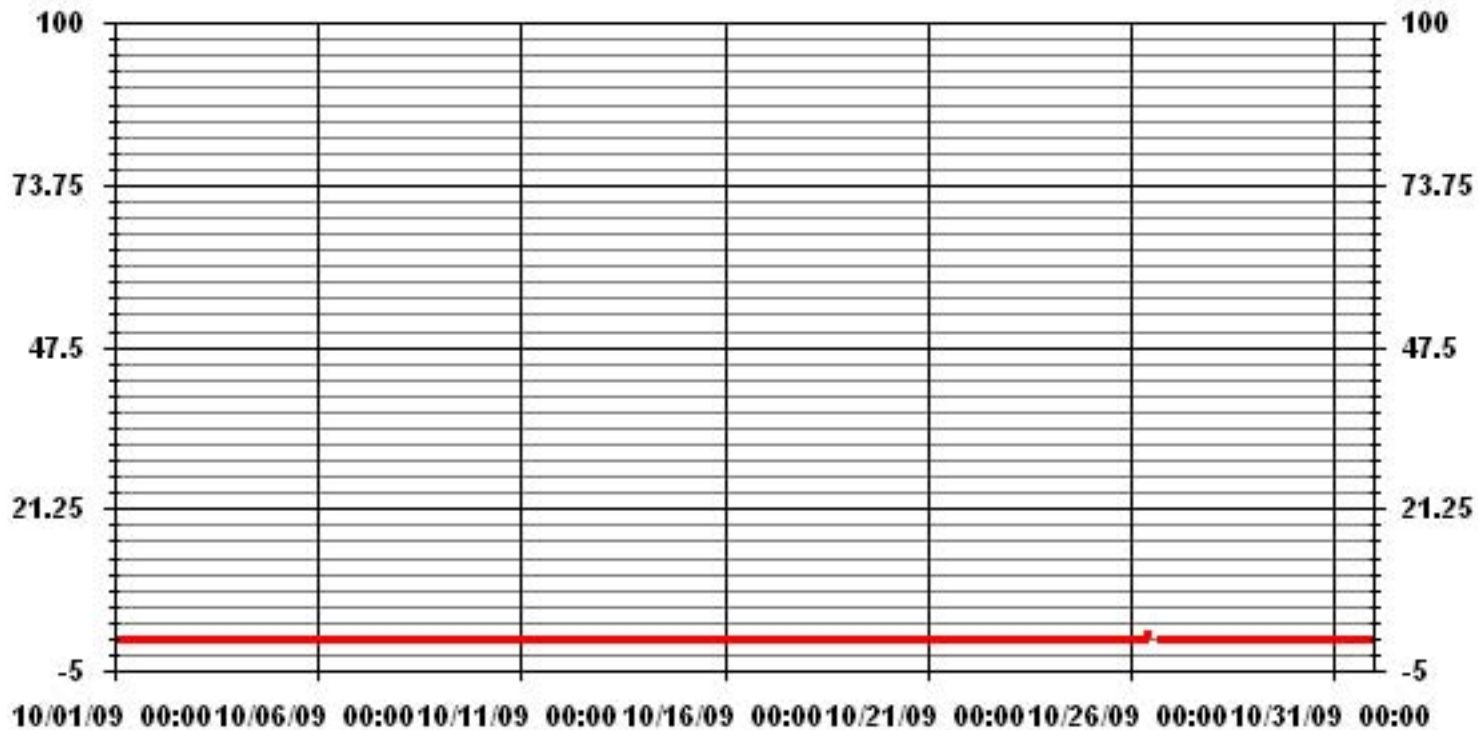
ALBERTA ENVIRONMENT:	1-HR	172	PPB	24-HR	57	PPB
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MONTHLY SUMMARY

NUMBER OF 1-HR EXCEEDENCES:	0					
NUMBER OF 24-HR EXCEEDENCES:	0					
NUMBER OF NON-ZERO READINGS:	2					
MAXIMUM 1-HR AVERAGE:	1	PPB	@ HOUR(S)	9,10	ON DAY(S)	26
MAXIMUM 24-HR AVERAGE:	0.1	PPB			ON DAY(S)	26
				VAR-VARIOUS		
IZS CALIBRATION TIME:	31	HRS	OPERATIONAL TIME:	742	HRS	
MONTHLY CALIBRATION TIME:	6	HRS	AMD OPERATION UPTIME:	99.7	%	
STANDARD DEVIATION:	0.05		MONTHLY AVERAGE:	0.00	PPB	



01 Hour Averages



— LICA33 H2S_ PPB

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - PORTABLE SITE

OCTOBER 2009

HYDROGEN SULPHIDE MAX instantaneous maximum in ppb

MST	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			
DAY	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	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.	
1	0	1	2	5	5	5	4	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	5	1.0	24	
2	0	0	0	0	0	0	0	0	0	0	0	0	M	M	IZS	0	0	0	0	0	0	0	0	0	0	0	0.0	22
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	0.0	24
4	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	0.0	24
5	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	0.0	24
6	0	0	0	0	0	1	1	1	1	1	IZS	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0.3	24
7	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	0.0	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	0.0	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	0.0	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	0.0	24
11	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	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	0.0	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	0.0	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	0.0	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	0.0	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	0	IZS	0	0.0	24
17	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	1	0.0	24
18	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	1	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	0.0	24
20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0.0	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	0.0	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	0.0	24
23	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	IZS	0	0	0	1	0	0	1	1	1	0.2	24
24	0	1	1	1	1	1	1	1	0	1	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	1	0.3	24
25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	1	1	0	0	0	0	1	0.1	24
26	0	0	1	0	1	1	1	1	1	1	C	C	C	C	C	C	C	0	0	0	0	0	0	0	0	1	0.4	24
27	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
28	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	0.0	24
29	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
30	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
31	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	0.0	24
HOURLY MAX	0	1	2	5	5	5	4	1	1	1	0	0	0	1	1	1	0	0	1	1	1	0	0	1				
HOURLY AVG	0.0	0.1	0.1	0.2	0.2	0.3	0.2	0.1	0.1	0.1	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				

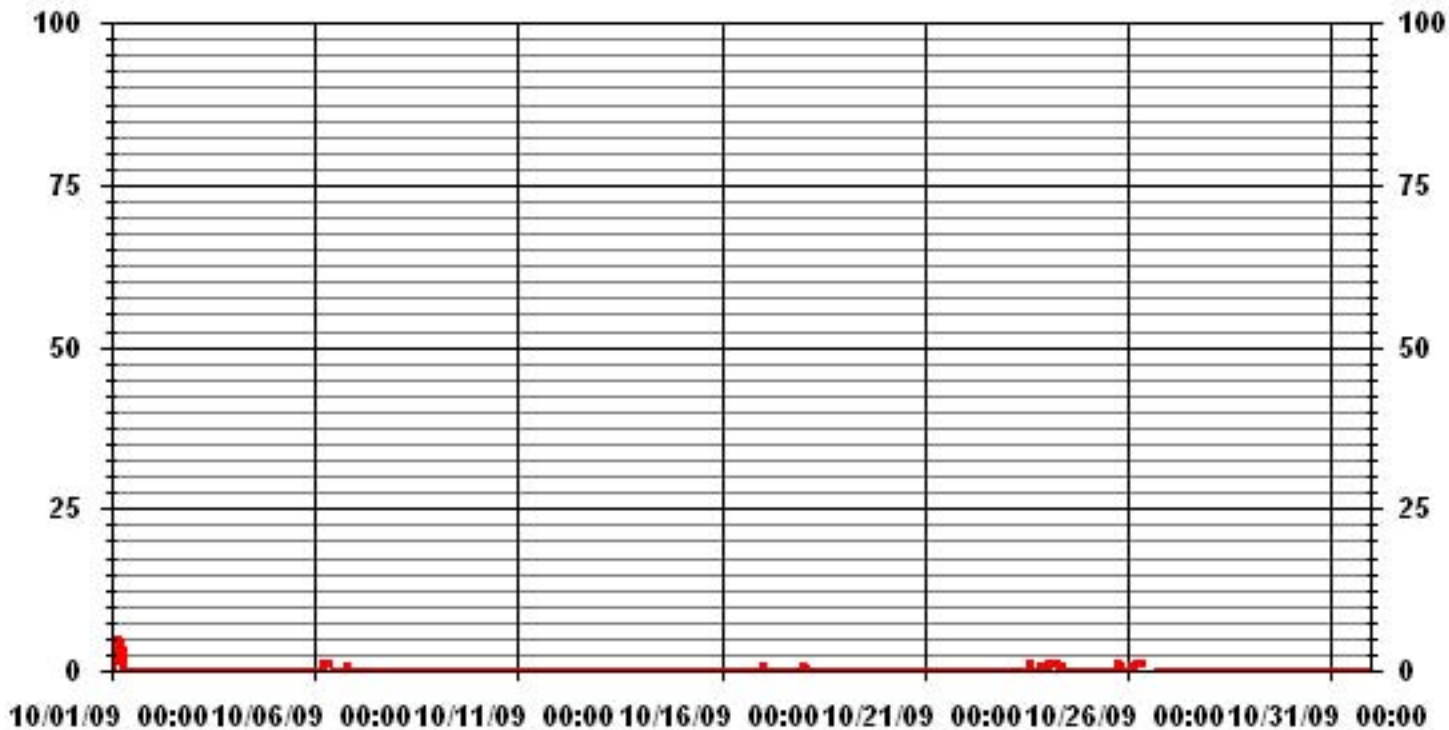
STATUS FLAG CODES

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:	36				
MAXIMUM INSTANTANEOUS VALUE:	5	PPB	@ HOUR(S)	VAR	ON DAY(S) 1
	VAR - VARIOUS				
IZS CALIBRATION TIME:	31	HRS	OPERATIONAL TIME:	742	HRS
MONTHLY CALIBRATION TIME:	7	HRS			
STANDARD DEVIATION:	0.42				

01 Hour Averages



LICA33
H2S_ / WDR Joint Frequency Distribution (Percent)

October 2009

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	5.95	2.41	3.12	3.12	19.29	8.93	3.26	4.25	4.39	1.56	3.82	3.97	5.81	10.21	11.48	8.36	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	5.95	2.41	3.12	3.12	19.29	8.93	3.26	4.25	4.39	1.56	3.82	3.97	5.81	10.21	11.48	8.36	

Calm : .00 %

Total # Operational Hours : 705

Distribution By Samples

	Direction																
Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 3	42	17	22	22	136	63	23	30	31	11	27	28	41	72	81	59	705
< 10																	
< 50																	
>= 50																	
Totals	42	17	22	22	136	63	23	30	31	11	27	28	41	72	81	59	

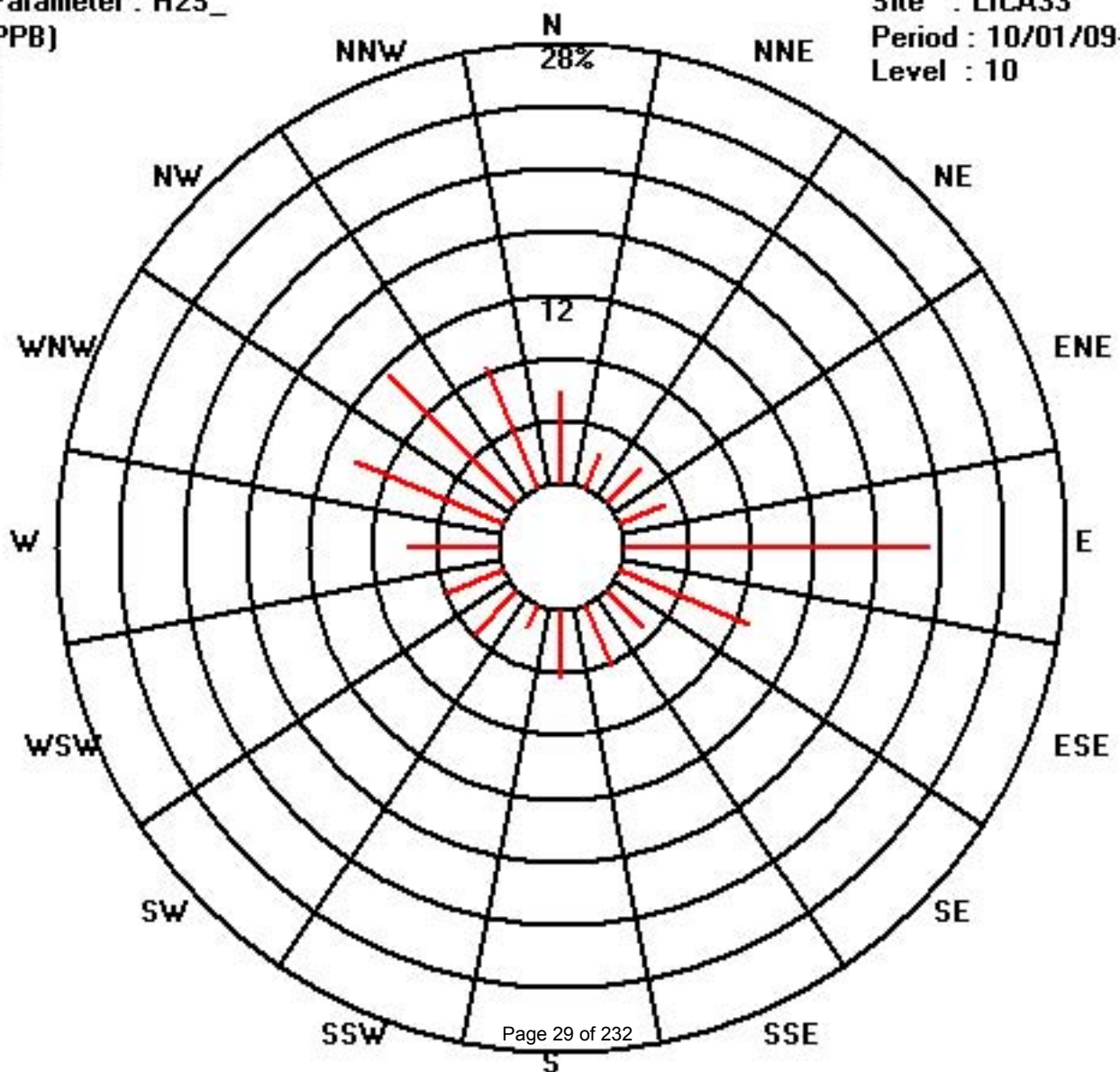
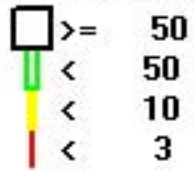
Calm : .00 %

Total # Operational Hours : 705

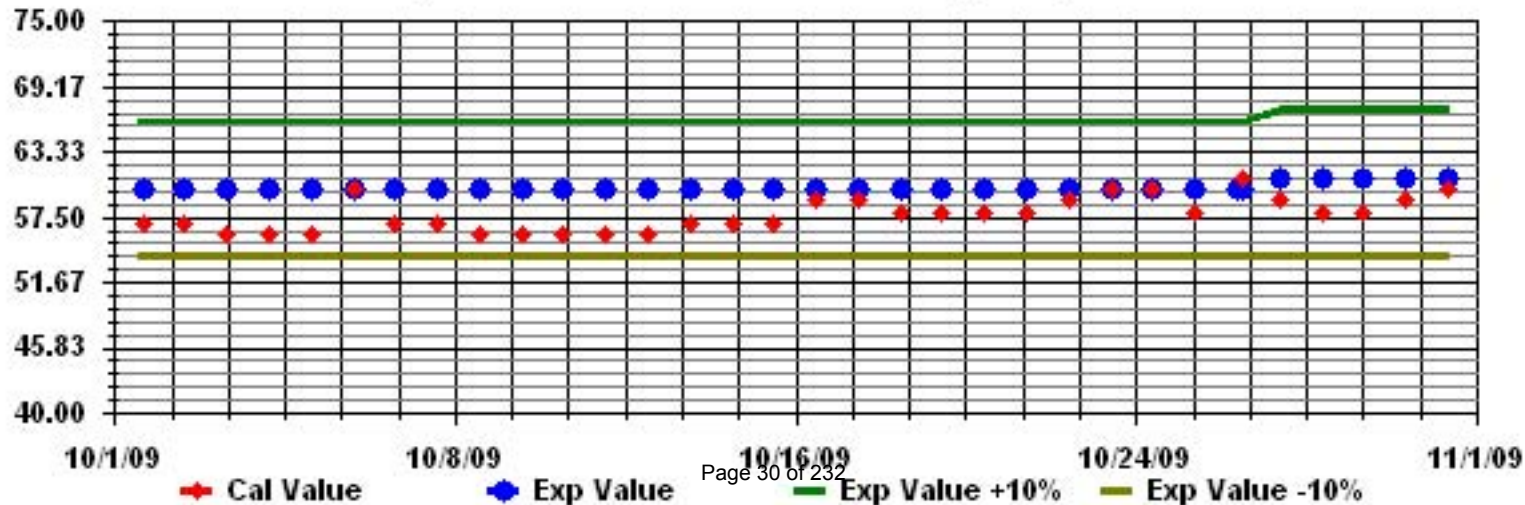
Class Limits (PPB)

Period : 10/01/09-10/31/09

Level : 10



Calibration Graph for Site: LICA33 Parameter: H2S_ Sequence: H2S Phase: SPAll



Particulate Matter 2.5

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - PORTABLE SITE

OCTOBER 2009

PARTICULATE MATTER 2.5 (PM2.5) hourly averages in ug/m³

MST

DAY	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	0:00	DAILY MAX.	24-HOUR AVG.	RDGS.
1	0	0	0	N	2	0	0	5.7	6.5	0.1	0	0	0	0	1.4	3.7	1.2	5.2	4.5	5.3	2.9	1.7	2.3	6.5	1.8	23		
2	1.6	0.9	1.6	2.1	2.1	1.2	7.5	16.3	5.7	5	0.2	0	2.4	1.3	2.9	3.9	3.3	4.1	31.8	14.2	23.2	3	2.3	1.7	31.8	5.8	24	
3	3.3	3.3	5.4	2.8	0	0	0.5	0.7	1.4	1.2	3.1	0.1	1.6	1.8	0	0.6	0.9	1	1	0	0	1.1	0.2	0	5.4	1.3	24	
4	0.2	0	3.4	1.7	0	0.5	0	0.5	2.4	0.1	2.1	0.1	1.5	0	0	0.4	1.1	1.6	1.5	0.5	0	0.3	0	0	3.4	0.7	24	
5	0.3	0	0.3	0.3	0	0	0	3	0	0	1.4	0	5.1	3.6	2.8	1.4	2	2	1.9	2.4	1.1	0	0.4	0.8	5.1	1.2	24	
6	1.4	1.3	0.6	0.2	4.9	3.1	2	2.4	3	4.7	0	5.9	4.5	0.9	0	7.5	5.4	3.3	2.4	0	4.2	1.9	2	5.5	7.5	2.8	24	
7	2.1	0	0.9	1.5	N	2	0	0	0.4	0	0.6	0	3.9	2.2	N	0	0	5.9	0.7	0	0	0.2	0.1	0	5.9	0.9	22	
8	0	0.8	1.2	0.2	0	0	0	0.1	1	0	0.5	1.7	0	0.6	5.7	1.6	2.1	0.5	0	0	0	0	0	0	5.7	0.7	24	
9	0	0	0	0.6	0.7	0.2	0	0.4	0.9	0.9	0	0.3	0	0	0	1	0	0.5	0	0	0	0	0.4	0	1.0	0.2	24	
10	0	0	0	0.2	1.1	0.2	0	0	0	0	0	0.1	0.1	0	0.8	1.9	0.1	0.1	3.5	3.4	3.4	2.9	2.6	0.5	3.5	0.9	24	
11	1.1	1.2	1	0.4	0.9	0.3	0.5	0.4	0	0	0	1.5	0	0	0	0	0.9	1.8	0.6	1	1.1	0.5	0	1.8	0.6	24		
12	0.5	0	0	0.3	0	0	4	2.1	0.8	1	0	0.8	0	0	0	0.7	1	0.9	1.3	1	0.9	0.7	1.1	0.9	4.0	0.8	24	
13	0.4	0.4	0.5	0.6	1.3	1.7	1.1	1.2	1.6	0	0	0	0	0	0	2.1	1.1	1.2	0	0	0.6	2.3	0.9	0.9	2.3	0.7	24	
14	0	0	0	1.2	1	0.5	1.7	1.8	2	2.1	2	1.9	2.5	3.1	2.4	2	2.6	3.5	4.9	3.8	3.3	3.4	3.4	3.4	4.9	2.2	24	
15	3.5	3.4	3.5	2.9	2	5.1	3.8	4.5	4.3	4.4	4.8	5.2	3.7	4.8	5.1	4.2	4.5	2.7	2.6	3.1	4.9	4	5.1	4.7	5.2	4.0	24	
16	5.3	5.6	4.3	4.4	4.4	4.1	2	8.5	5.1	7.4	8.5	7.1	5.5	5.5	5.6	5	5.2	4.3	5	4.3	3.4	3.2	2.5	1.8	8.5	4.9	24	
17	2.3	0.9	1.2	1.7	6.5	0.3	0	2.2	2.8	0	0	0	0	0	0.2	1.3	0	2	3.8	2.6	0.7	2.9	2.9	2.8	6.5	1.5	24	
18	2	3.4	2	1.9	2.7	2.2	2.5	2.3	2.6	1.6	3.2	3.7	2.2	2.5	2.3	N	0	0.6	0.5	1.3	1.4	2.8	3.9	1.9	3.9	2.2	23	
19	0.7	2.2	2.3	2.9	0.4	1.6	3.6	3.7	3.4	2.6	2.7	0.4	0	0	0.8	3.1	4	4.7	3.5	2.7	2.4	1.1	1.7	0.9	4.7	2.1	24	
20	1	1.5	2.1	2.3	2.8	2	1.9	4.2	0	6	14.4	7.1	6.7	0	4.9	0	4	5.5	4.7	5	2.9	0	1.6	1	14.4	3.4	24	
21	0	1.3	4.2	0	5.1	1.6	1.4	2	3.8	1.7	2.5	4.5	0	2.8	0.8	1.8	2.8	2.6	3.2	4.2	2.5	2.2	2.7	0.3	5.1	2.3	24	
22	0.2	0	1.6	1.3	2	1.7	1.6	1.6	2.4	1.2	1.6	0.6	0.1	0.2	1.2	2	2.9	2.8	2.4	0.4	0.2	2.8	3.7	3.1	3.7	1.6	24	
23	3.5	3.1	3	2.3	2.1	2.6	2.2	2.8	4.7	2.5	2.7	2.7	5.7	3.8	3	5.1	1.9	1.6	2	3	4	4.2	4.7	2.8	5.7	3.2	24	
24	1.4	3.7	3.8	3.1	0	5.4	7.4	7.7	7.2	0	2.3	1.6	0	0	0.4	0.5	0	0	0.3	0.4	0	1.2	0.9	0	7.7	2.0	24	
25	0.9	0	0	0	1.5	0.9	1	1.2	2.3	1.6	1.5	0.3	0.2	0.1	0	0	0.1	0	0	1.8	0.6	0	0	1.2	2.3	0.6	24	
26	0	0	0	0.4	0	0	0	0	1.7	0.1	0.7	1.2	1.3	2.3	1.8	1.5	1.1	3.4	2.4	2.5	4.5	3.9	2.1	1.9	4.5	1.4	24	
27	1.9	3.2	8.2	5.8	5.2	2.2	2.3	4.5	3.8	3.3	0.7	C	C	C	2.2	2.9	3.2	1.4	0.4	0.2	0.6	0.4	0	0	8.2	2.5	24	
28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.9	0.3	0.1	0	0	0	0	0	0	0	0.9	0.1	24
29	0	0	0.1	0	0.9	0	0	0	0	0	0	0	0	0	0.3	0.3	0	0.3	0	0.1	0.4	0.4	0.3	0.3	0.9	0.1	24	
30	1.6	1.4	1.8	1.2	3	2.8	2	2.3	2.2	2.7	1.6	2.1	1.2	0	1.5	1.4	1.2	1.9	0.6	1.1	1.6	1.2	1.5	1.2	3.0	1.6	24	
31	0	0	0	0	0	0	0	0	0.1	0	1.2	0.9	1.6	0.6	3.2	0.6	1.1	0.9	2.7	1.3	3.7	4.8	0	6.5	6.5	1.2	24	
HOURLY MAX	5	6	8	6	7	5	8	16	7	7	14	7	7	6	6	8	5	6	32	14	23	5	5	7				
HOURLY AVG	1.1	1.2	1.7	1.4	1.8	1.4	1.6	2.6	2.3	1.6	1.9	1.7	1.7	1.2	1.6	1.8	1.8	2.0	2.9	2.1	2.5	1.8	1.6	1.5				

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:

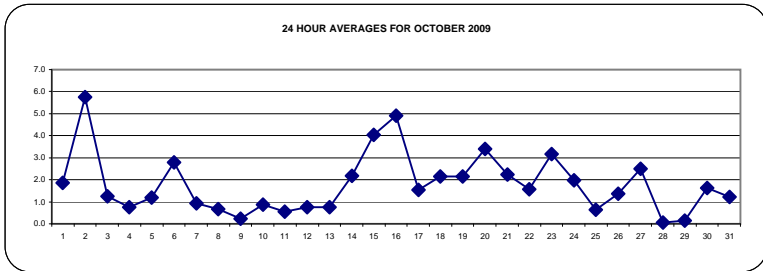
ALBERTA ENVIRONMENT:

1-HR	-	PPB	24-HR	30	PPB
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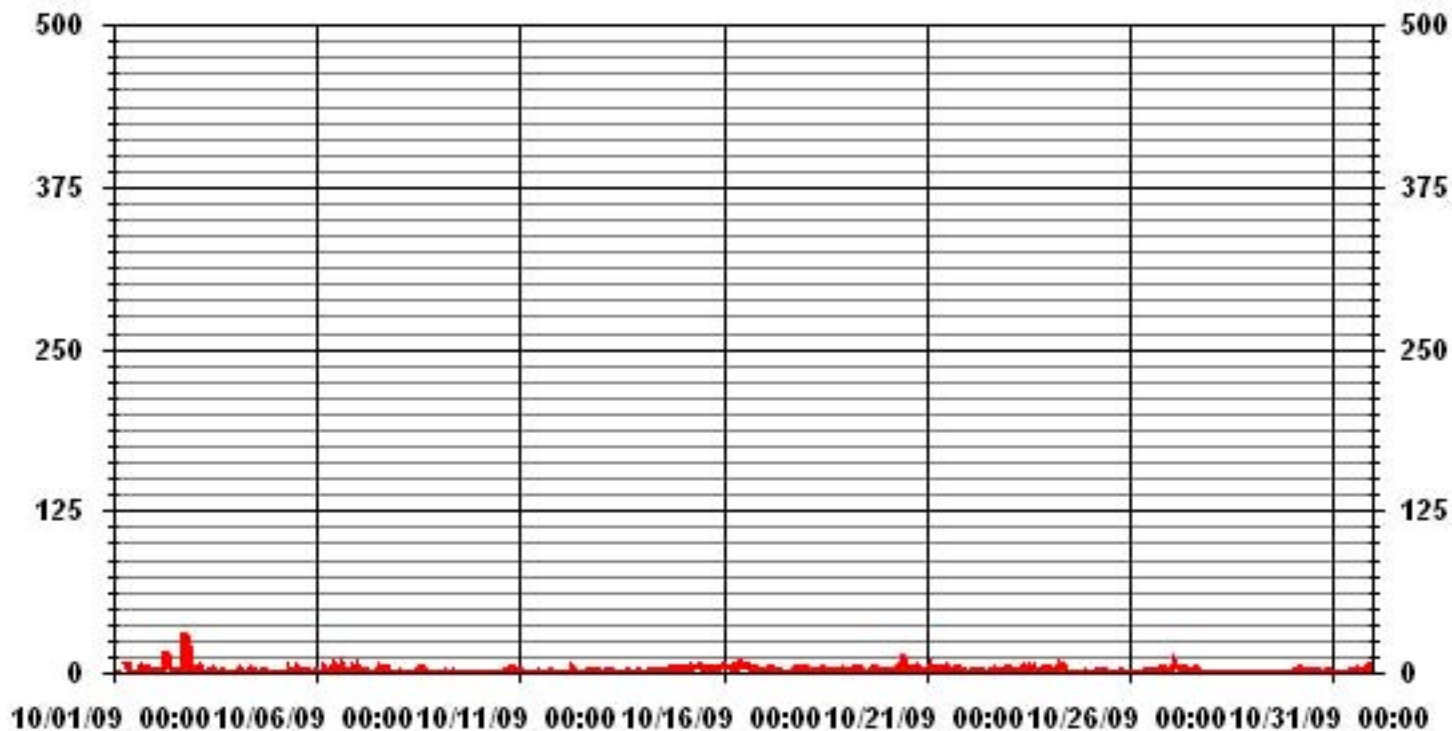
MONTHLY SUMMARY

NUMBER OF 1-HR EXCEEDENCES:	-
NUMBER OF 24-HR EXCEEDENCES:	0 PROPOSED CANADA WIDE GUIDELINE
NUMBER OF NON-ZERO READINGS:	538
MAXIMUM 1-HR AVERAGE:	31.8 UG/M ³ @ HOUR(S) 18 ON DAY(S) 2
MAXIMUM 24-HR AVERAGE:	5.8 UG/M ³ ON DAY(S) 8
IZS CALIBRATION TIME:	0 HRS
MONTHLY CALIBRATION TIME:	3 HRS
STANDARD DEVIATION:	2.39
OPERATIONAL TIME:	740 HRS
AMD OPERATION UPTIME:	99.5 %
MONTHLY AVERAGE:	1.78 UG/M ³

24 HOUR AVERAGES FOR OCTOBER 2009



01 Hour Averages



— LICA33 PM2 UG/M3

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - PORTABLE SITE

OCTOBER 2009

PARTICULATE MATTER 2.5 MAX instantaneous maximum in ug/m³

MST		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 start	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	N	2	0	12.6	14.9	18.9	2.9	2.3	5.4	9.7	6.6	5	6.7	20.5	3.6	8.2	10.4	8.4	10.3	5.4	7.8	20.5	7.0	23	
2		6.6	3.4	3.3	5.9	5.5	5.6	59.3	45.6	9.7	9.8	4.5	3.4	7.6	7.1	7.1	20.5	15.7	14.4	96.9	22.7	51.5	6.5	5.8	4.3	96.9	17.6	24	
3		7.3	7.2	8.5	5.1	1.6	1.4	2.3	3.8	5.3	3.7	6.3	3.9	3.5	6.9	1.6	6.1	5.4	2.9	3.3	2.2	2.6	3.5	2.8	0.9	8.5	4.1	24	
4		2.4	2.5	9.4	3.5	0.1	4	2.2	3	5.6	3	16.2	5.2	9	1.6	2.8	2.6	4.1	3.7	4	3.9	3.2	4.3	1.6	2.3	16.2	4.2	24	
5		1.9	1	3	2.3	0.9	1.8	0.9	8	2.2	2.4	4.4	6.9	13.9	12.7	10.2	9.4	8.8	4.7	6.3	5	3.3	1.7	2.8	3	NA	NA	24	
6		4.4	3.5	3.4	2.2	9.7	7.7	4.5	4.9	4.7	7.5	8.7	11.8	10.9	6.3	5.3	24.3	10.2	11.8	17.7	6.6	11.6	7.8	6.5	21.5	24.3	8.9	24	
7		6.4	6.6	5.6	5.8	7.1	4.5	2.2	6.8	3.9	5.2	5.6	2.3	11.1	23.9	11.8	3.5	3.1	31.6	3.2	3.8	4.9	4.1	4	3	31.6	7.1	24	
8		3.9	6.5	3.3	2.1	0.6	2.2	1.3	2.6	5.1	7.7	9.4	8.2	6.6	9.6	25	15.8	14	9	1.7	0.2	6.2	1.4	2.6	1.3	25	6.1	24	
9		1	2.1	1.6	3.8	3.1	2	1.8	2	3.4	3.7	2.6	4.1	3.1	2.9	1.7	12.3	4.6	6.2	0.7	1.4	1.9	2.4	4.4	4.5	12.3	3.2	24	
10		6.6	2.1	1.7	1.4	4.6	2.9	3	2.6	1.6	2.9	1.9	2.9	3.4	3.1	3.5	5	3.5	4	5.6	5.2	7	5.7	4.7	2.6	7	3.6	24	
11		3.2	3.7	3	2.2	3.5	2.2	2.2	2.4	0.1	1.7	0.4	13.2	1.8	10.3	2.3	3	4	5.3	3	3.3	3.2	2.6	1.6	2.1	13.2	3.3	24	
12		2.3	1.5	0.7	2.2	1.4	2.2	14	4.5	4.1	3.1	3.6	5.2	2.9	6.7	2.6	5	4.3	5.5	4.1	4.9	3.1	2.5	2.9	2.3	14	3.8	24	
13		2.5	2.9	3.1	2.5	2.9	3.3	3.1	3.5	3.2	3	3	1.9	1.5	9.6	13.4	11.6	4.9	4	2.3	2.2	12.4	4.7	2.5	2.4	13.4	4.4	24	
14		2.2	1	2.6	3.9	3.1	2.3	3.5	3.4	3.9	4.4	5.6	4.5	5.3	6.4	5.2	5.5	4.5	5.2	6.3	6.1	5.3	5.1	6.2	5	6.4	4.4	24	
15		5.3	5.2	5	4.9	3.9	7.8	5.8	7.1	7	6.2	6.6	7	6.2	7.8	7.3	6.7	7.4	5.2	5.1	7.1	10.3	10.2	8.4	8.2	10.3	6.7	24	
16		8.1	9	6	6.2	6.9	6.2	9	13.9	15.1	10.7	11.2	9.9	9.5	10.5	9.7	7.2	7.9	7.7	8.7	9.9	7.4	6.6	6.7	8.8	15.1	8.9	24	
17		8.1	5.2	5.6	9.5	12.7	3.5	2.8	4.1	7.1	3.5	5.2	2.3	3.8	5.5	3.4	7.8	7.1	5.5	7.4	8.5	6.3	8.1	9.6	10	12.7	6.4	24	
18		5	7.2	6.6	8	6.1	4.9	5.2	5.1	5.2	4.7	6	6.8	6.9	5	6.2	3.4	4.2	2.8	3.7	7.9	7.1	6.3	7.4	4.3	8	5.7	24	
19		3.6	5.4	5.7	5.3	3.8	3.8	6.5	7.9	6.8	5.2	4.9	4.1	3.1	2.5	4.6	7.1	8.5	8.2	5.7	4.6	5.3	5	3.7	2.9	8.5	5.2	24	
20		3.3	4	3.8	4.4	4.5	3.5	4.1	6.5	7.2	53.3	48.8	10.2	19.4	10.6	17.2	9.1	8.6	8.3	10.6	13.8	9.7	8.4	5.6	7.9	53.3	11.8	24	
21		4.9	8	7	4.7	10.6	3.9	3.6	3.9	8.1	5.6	6.2	7.4	7.8	9.7	5.7	5.8	7	5.5	7.9	6.8	5.1	6.6	6.3	4.7	10.6	6.4	24	
22		13.3	6.6	4.2	3.4	4.1	4.2	3.1	3.5	6.2	3.9	5.2	4.4	5.3	3	4.7	4.9	6.5	6.8	9.7	7.7	3	5.5	7.7	6	13.3	5.5	24	
23		5.2	5.7	5.2	4.5	4.4	5.2	7.7	5.8	8.4	6.5	6.8	11.6	9.7	7.3	7.8	9	6.7	4.1	3.7	4.9	5.7	6.8	7.1	6.3	11.6	6.5	24	
24		6.3	8.8	7.2	7.4	1.4	9.1	13.2	10.1	9.4	6.2	4.4	5.5	2.9	3.3	5.8	5.3	2.5	1.6	2.5	2.8	3.1	4.7	3.9	3.1	13.2	5.4	24	
25		3.1	3	2.6	2.3	3.1	3.5	3.1	3.6	4.1	5	5.5	4	7.9	5.8	5.3	8.1	5.8	4.4	3.5	6.7	4	4	1.3	4	8.1	4.3	24	
26		3.8	3.9	2.4	4.3	3.6	3.5	3.6	3.5	6.3	4.9	3.9	4.6	4.1	6.2	5	6	7.5	11.4	7.7	6.8	7.9	8.1	5.1	8.7	11.4	5.5	24	
27		6.2	6.7	11.3	9.1	7.7	5.1	5.3	8.4	6.2	5.6	C	C	C	C	5.2	5	2.8	2.9	1.6	4.1	2.3	1.4	1.2	11.3	5.2	24		
28		1.4	0.7	0	0.8	1.2	0.8	1.1	1.1	1.1	1.4	0.9	1.6	0.7	3.4	4.4	3.6	2.3	0.5	2.3	2.2	0	1.1	0.6	1.9	4.4	1.5	24	
29		1.3	0.1	1.4	0.2	3.4	1.6	3	2.9	2.3	1.3	0.2	1.6	1.8	2.3	4.3	3.3	1.2	3.5	1.9	1.9	2.2	2.4	2	1.6	4.3	2.0	24	
30		2.9	4	3.9	4.1	5.2	5.8	3.9	5.2	4.3	4.7	3.5	4	4.1	3.6	6	5.8	3.6	4.6	3.2	3	4.6	6.9	6.6	5.4	6.9	4.5	24	
31		3.7	2.4	1.9	0	1.1	0.7	0	3.6	2.6	2.1	4.5	9	9.5	6.3	7.2	4.3	5.2	3.1	5.3	4	5.7	7.6	5.8	11.1	11.1	4.4	24	
HOURLY MAX		13	9	11	10	13	9	59	46	19	53	49	13	19	24	25	24	21	32	97	23	52	10	10	22				
HOURLY AVG		4.5	4.3	4.2	4.2	4.3	3.7	6.6	6.7	5.9	6.4	6.8	5.7	6.4	7.0	6.7	7.7	6.8	6.6	8.5	5.9	7.1	5.1	4.5	4.9				

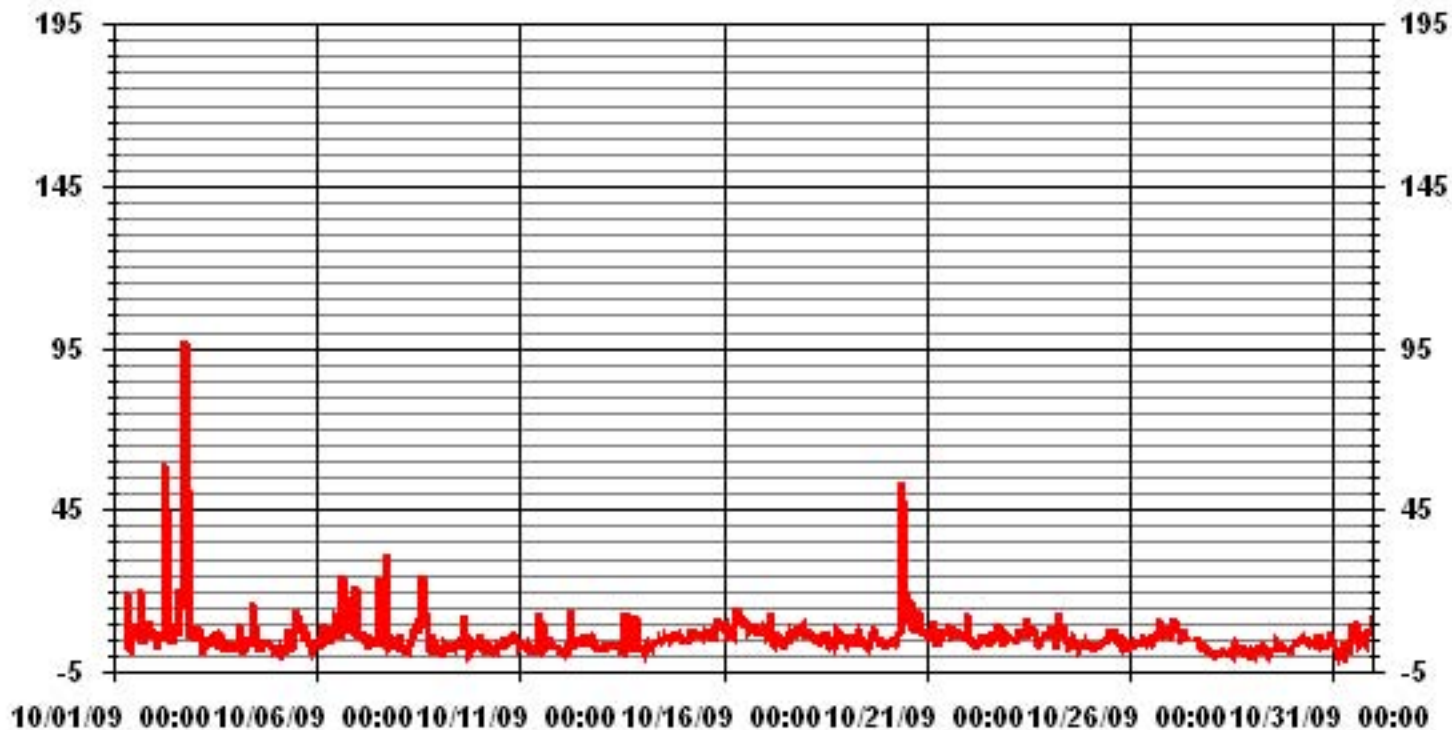
STATUS FLAG CODES

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

NUMBER OF NON-ZERO READINGS:	684				
MAXIMUM INSTANTANEOUS VALUE:	96.9	UG/M ³	@ HOUR(S)	18	ON DAY(S) 2
IZS CALIBRATION TIME:	0	HRS	OPERATIONAL TIME:	743	HRS
MONTHLY CALIBRATION TIME:	5	HRS			
STANDARD DEVIATION	6.43				

01 Hour Averages



— LICA33 PM2MAX UG/M3

LICA33
 PM2 / WDR Joint Frequency Distribution (Percent)

October 2009

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	6.13	2.31	3.13	3.13	19.50	9.00	3.13	4.22	4.36	1.50	4.22	4.09	5.45	9.95	11.18	8.45	99.86
< 60.0	.00	.00	.00	.00	.13	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.13
< 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	6.13	2.31	3.13	3.13	19.64	9.00	3.13	4.22	4.36	1.50	4.22	4.09	5.45	9.95	11.18	8.45	

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	45	17	23	23	143	66	23	31	32	11	31	30	40	73	82	62	732
< 60.0					1												1
< 80.0																	
< 120.0																	
< 240.0																	
>= 240.0																	
Totals	45	17	23	23	144	66	23	31	32	11	31	30	40	73	82	62	

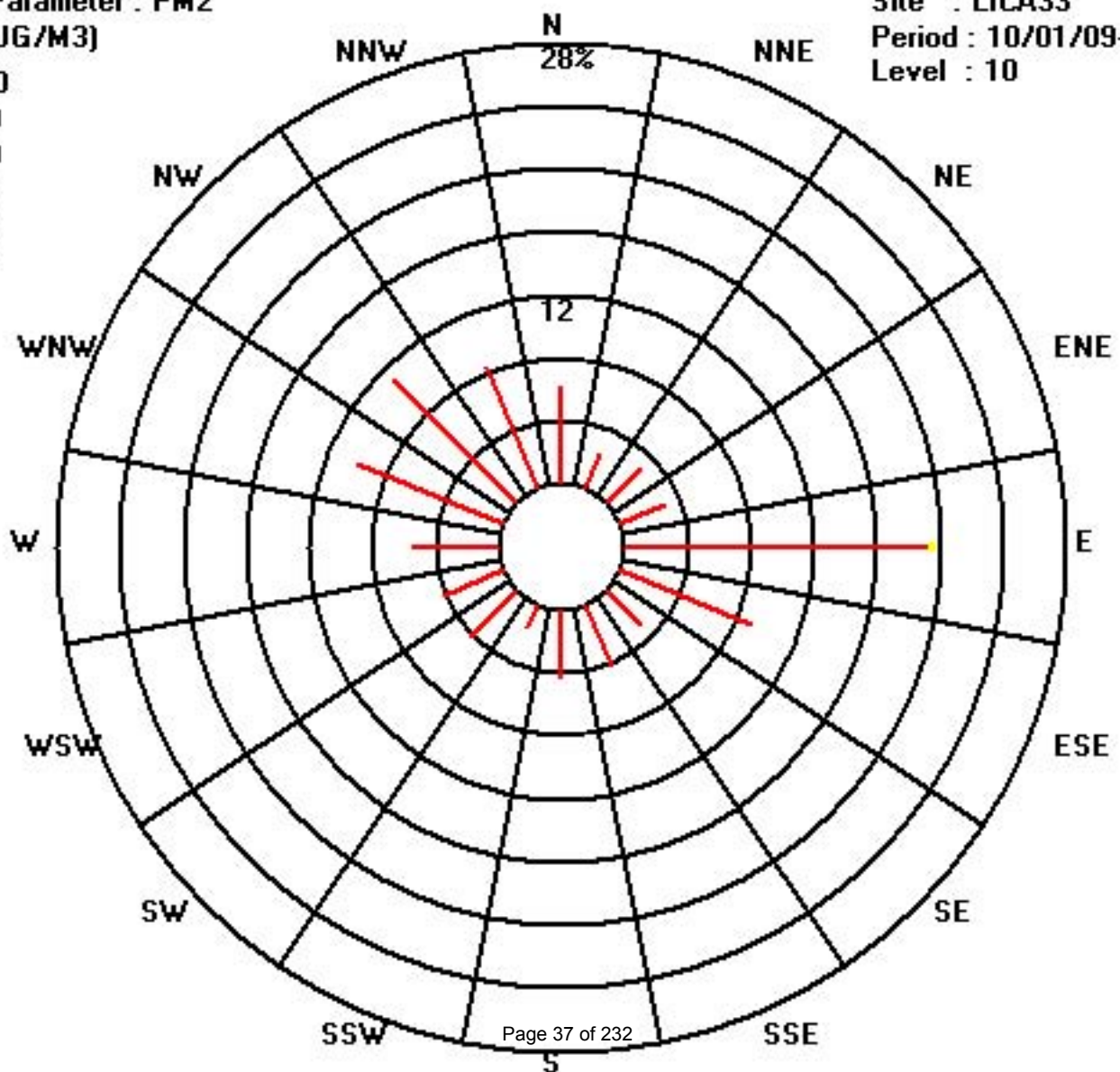
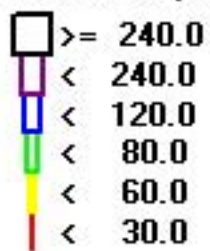
Calm : .00 %

Total # Operational Hours : 733

Class Limits (UG/M3)

Period : 10/01/09-10/31/09

Level : 10



Nitrogen Dioxide

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - PORTABLE SITE

OCTOBER 2009

NITROGEN DIOXIDE hourly averages in ppb

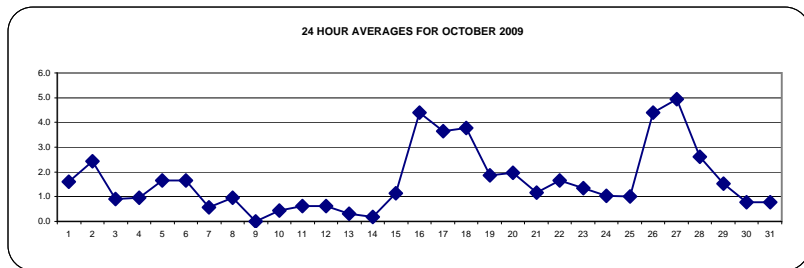
MST		0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR		
DAY	HR	END	END	END	END	END	END	END	END	END	END	END	END	END	END	END	END	END	END	END	END	END	END	END	END	END	MAX.	AVG.	RDGS.
1	1	1	2	4	4	5	4	4	2	1	0	0	0	0	0	0	0	0	0	1	3	2	1	2	5	1.6	24		
2	2	3	4	4	4	4	5	5	5	4	2	0	0	1	IZS	0	0	1	1	2	2	2	3	2	5	2.4	24		
3	3	3	5	3	3	1	1	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	1	0	1	5	0.9	24	
4	1	0	0	0	1	1	1	0	0	0	0	0	0	0	IZS	0	0	0	0	1	3	4	1	2	5	2	5	1.0	24
5	3	3	2	2	3	4	3	2	4	0	1	0	0	0	0	0	0	0	2	4	2	1	1	1	4	1.7	24		
6	1	1	1	2	2	2	4	4	4	3	IZS	2	2	2	1	1	1	1	2	1	1	0	0	0	4	1.7	24		
7	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	1	2	3	3	4	4	0.6	24	
8	5	4	7	2	1	0	2	1	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	1.0	24	
9	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24	
10	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	1	1	1	2	3	2	3	0.4	24	
11	2	3	1	1	1	IZS	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	2	0	0	3	0.6	24	
12	3	1	1	2	IZS	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	3	0.6	24		
13	1	2	1	IZS	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0.3	24	
14	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	1	1	0.2	24	
15	1	IZS	0	1	1	1	1	0	1	1	1	1	1	1	2	2	2	1	1	1	1	1	1	2	2	2	1.1	24	
16	IZS	2	5	4	4	5	6	5	4	3	4	5	5	6	5	5	5	5	5	4	3	3	4	IZS	6	4.4	24		
17	5	4	3	3	3	3	3	3	3	2	1	0	0	0	0	1	3	10	15	7	4	7	IZS	4	15	3.7	24		
18	4	4	4	7	8	9	6	5	4	6	2	1	0	0	0	0	1	1	2	5	5	IZS	8	5	9	3.8	24		
19	2	1	1	2	3	5	3	4	3	3	1	1	0	0	1	2	2	2	2	1	IZS	2	2	2	5	1.9	24		
20	1	1	1	1	3	4	4	2	3	3	2	2	2	1	0	1	1	2	3	IZS	2	2	2	2	4	2.0	24		
21	3	3	3	2	2	1	2	2	2	1	1	1	0	0	0	1	1	1	IZS	1	0	0	0	0	3	1.2	24		
22	1	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	IZS	3	3	6	6	4	4	6	1.7	24		
23	2	1	1	0	0	0	0	1	1	2	2	2	2	2	2	2	IZS	2	2	1	1	1	2	2	2	1.3	24		
24	1	1	1	2	1	3	5	5	3	2	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	5	1.0	24		
25	0	0	1	1	1	1	1	0	0	0	0	0	0	0	0	IZS	0	1	2	3	1	2	3	4	2	4	1.0	24	
26	2	3	4	3	2	3	5	4	3	3	4	2	2	2	IZS	2	2	4	6	6	8	10	7	8	8	10	4.4	24	
27	8	11	15	12	5	5	6	C	C	C	C	C	C	C	0	0	0	1	2	3	6	5	2	3	15	4.9	24		
28	2	3	5	2	2	3	3	4	3	1	1	IZS	2	2	3	3	3	3	2	2	4	2	3	2	5	2.6	24		
29	2	1	2	2	1	2	3	2	2	2	IZS	0	1	1	1	1	2	2	1	1	1	1	2	2	3	1.5	24		
30	1	1	1	0	1	2	2	2	2	IZS	1	1	0	0	0	0	0	0	0	0	1	2	1	0	2	0.8	24		
31	0	0	0	1	0	0	0	0	0	IZS	0	0	0	0	1	1	1	1	1	1	1	3	3	2	2	3	0.8	24	
HOURLY MAX		8	11	15	12	8	9	6	5	5	6	4	5	5	6	5	5	5	10	15	8	10	7	8	8				
HOURLY AVG		1.9	1.9	2.4	2.1	1.9	2.2	2.5	2.0	1.8	1.4	0.9	0.7	0.6	0.7	0.6	0.8	0.9	1.4	1.9	1.8	2.1	2.0	2.1	1.9				

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

OBJECTIVE LIMIT:

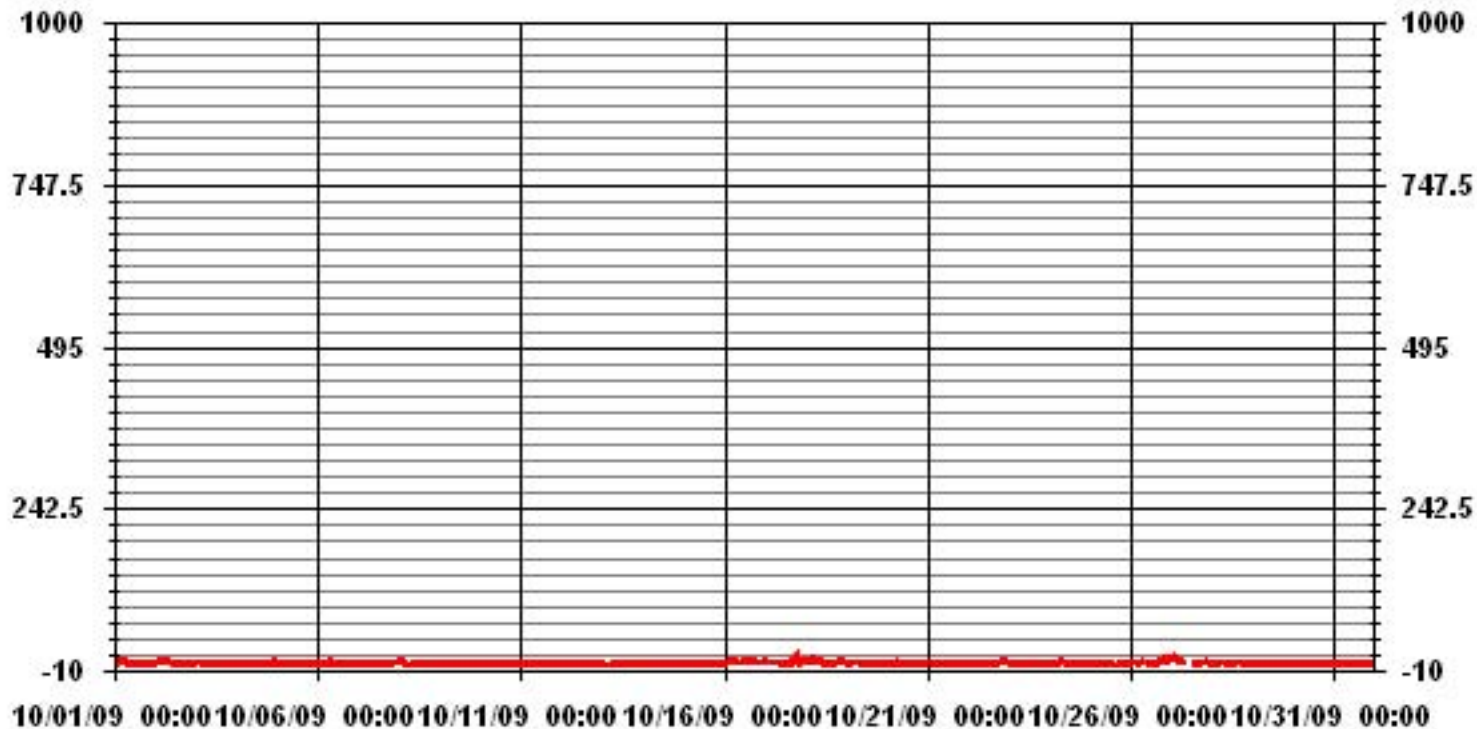
ALBERTA ENVIRONMENT:	1-HR	212	PPB	24-HR	106	PPB
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MONTHLY SUMMARY

NUMBER OF 1-HR EXCEEDENCES:	0					
NUMBER OF 24-HR EXCEEDENCES:	0					
NUMBER OF NON-ZERO READINGS:	444					
MAXIMUM 1-HR AVERAGE:	15	PPB	@ HOUR(S)	18	ON DAY(S)	17
MAXIMUM 24-HR AVERAGE:	4.9	PPB			ON DAY(S)	27
IZS CALIBRATION TIME:	31	HRS	OPERATIONAL TIME:	744	HRS	
MONTHLY CALIBRATION TIME:	7	HRS	AMD OPERATION UPTIME:	100.0	%	
STANDARD DEVIATION:	1.99		MONTHLY AVERAGE:	1.61	PPB	

01 Hour Averages



— LICA33 IIO2_ PPB

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - PORTABLE SITE

OCTOBER 2009

NITROGEN DIOXIDE MAX instantaneous maximum in ppb

MST		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	
DAY	HR	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	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.
1	1	2	3	6	6	6	5	5	4	2	1	0	0	0	0	IZS	0	1	2	3	6	6	2	3	6	2.8	24	
2	3	4	6	6	7	5	14	6	6	6	4	1	1	38	IZS	0	1	3	2	7	4	3	5	3	38	5.9	24	
3	4	4	7	4	6	3	2	1	1	1	1	1	1	IZS	0	1	1	1	1	1	1	2	1	2	7	2.0	24	
4	2	2	0	1	2	3	2	1	1	0	0	0	IZS	0	1	0	1	4	8	14	3	4	8	3	14	2.6	24	
5	5	4	3	3	5	6	4	5	8	1	2	IZS	1	0	0	0	1	1	3	5	3	2	1	2	8	2.8	24	
6	2	2	2	2	3	4	5	5	5	4	IZS	3	3	3	2	2	2	2	2	2	2	1	1	1	5	2.6	24	
7	0	0	1	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	1	2	2	3	5	4	6	6	1.0	24	
8	9	6	10	4	2	2	3	4	IZS	1	1	1	1	0	0	0	0	1	0	1	1	0	0	0	10	2.0	24	
9	0	0	0	0	0	1	1	IZS	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	0.4	24
10	0	0	0	1	1	1	IZS	1	1	0	0	0	0	0	1	0	1	1	2	2	2	3	4	3	4	1.0	24	
11	3	4	3	2	2	IZS	2	3	3	1	0	0	0	0	0	0	1	2	1	1	3	1	1	4	1.4	24		
12	6	2	2	3	IZS	2	1	2	1	0	0	0	0	0	0	0	0	0	1	2	1	2	3	6	1.2	24		
13	3	3	3	IZS	1	1	1	2	1	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	3	0.8	24	
14	1	0	IZS	0	0	0	1	1	1	0	1	0	1	1	1	1	0	1	2	1	1	3	2	2	3	0.9	24	
15	2	IZS	1	1	3	2	1	1	1	2	2	2	2	2	4	12	3	3	2	2	1	2	3	4	12	2.5	24	
16	IZS	4	6	6	5	8	9	6	6	4	6	6	6	6	6	6	6	6	6	5	4	4	5	IZS	9	5.7	24	
17	6	5	4	4	4	4	3	17	14	3	1	1	0	0	1	2	4	16	19	16	7	11	IZS	6	19	6.4	24	
18	6	5	5	8	11	12	9	8	7	8	3	2	1	1	1	0	3	3	4	9	7	IZS	15	14	15	6.2	24	
19	3	2	3	3	4	9	5	7	7	4	2	1	1	1	1	2	3	3	4	2	IZS	4	3	4	9	3.4	24	
20	2	2	2	3	6	9	8	3	4	4	3	3	3	2	1	2	2	3	4	IZS	3	4	3	4	9	3.5	24	
21	6	4	5	3	3	2	3	3	3	2	1	2	1	1	1	1	2	1	IZS	2	1	2	1	1	6	2.2	24	
22	1	1	1	1	1	1	2	3	1	10	2	2	1	15	11	2	2	IZS	4	4	8	9	6	5	15	4.0	24	
23	4	2	2	1	1	1	2	2	2	2	3	3	3	3	3	3	IZS	3	3	3	2	1	5	3	5	2.5	24	
24	1	1	4	3	2	5	7	6	6	3	1	1	0	0	IZS	0	0	0	0	0	0	0	0	0	7	1.8	24	
25	1	1	2	2	1	2	1	1	1	1	1	0	0	0	IZS	1	2	5	5	2	4	5	7	3	7	2.1	24	
26	3	5	8	3	3	6	10	6	4	4	30	2	2	IZS	3	3	6	8	8	11	14	14	11	11	30	7.6	24	
27	11	14	17	15	8	6	8	C	C	C	C	C	C	C	C	2	1	3	3	4	8	7	4	4	17	7.2	24	
28	3	4	6	4	3	5	4	5	4	2	7	IZS	3	3	4	5	5	4	2	4	5	5	6	3	7	4.2	24	
29	3	2	3	2	2	3	4	5	3	3	IZS	1	1	2	2	2	3	3	2	2	3	1	3	3	5	2.5	24	
30	2	1	1	1	2	4	6	7	3	IZS	2	1	1	1	1	1	1	1	1	1	2	3	3	1	7	2.0	24	
31	1	1	1	2	1	0	1	0	IZS	1	0	1	1	2	3	4	2	2	2	2	5	5	3	3	5	1.9	24	
HOURLY MAX	11	14	17	15	11	12	14	17	14	10	30	6	6	38	11	12	6	16	19	16	14	14	15	14				
HOURLY AVG	3.1	2.9	3.7	3.1	3.2	3.8	4.1	4.0	3.5	2.8	2.6	1.2	1.2	2.9	1.7	1.8	1.7	2.7	3.2	3.6	3.5	3.7	3.7	3.3				

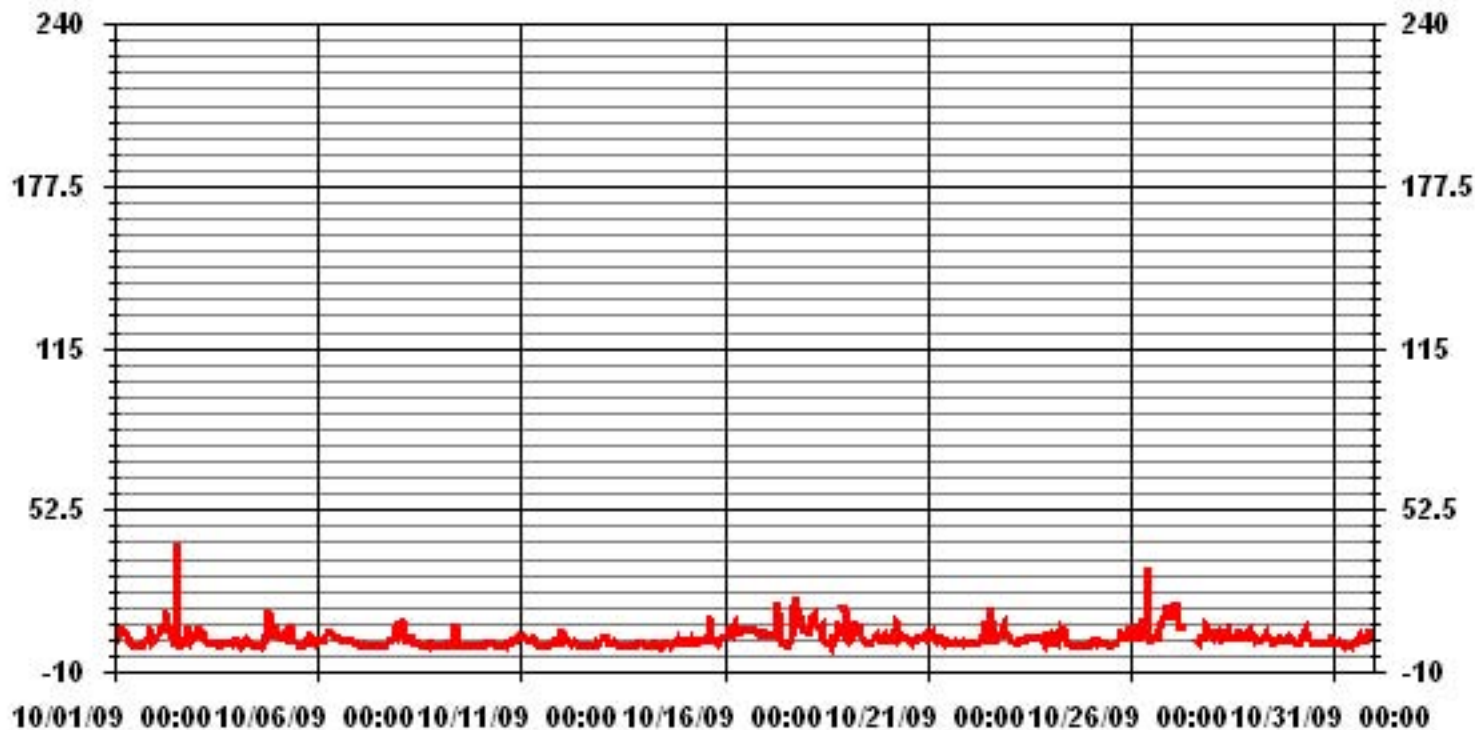
STATUS FLAG CODES

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:	583					
MAXIMUM INSTANTANEOUS VALUE:	38	PPB	@ HOUR(S)	13	ON DAY(S)	2
IZS CALIBRATION TIME:	31	HRS	OPERATIONAL TIME:	744	HRS	
MONTHLY CALIBRATION TIME:	8	HRS				
STANDARD DEVIATION	3.43					

01 Hour Averages



— LICA33 H02MAX PPB

LICA33
 NO2_ / WDR Joint Frequency Distribution (Percent)

October 2009

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	6.09	2.40	3.11	3.11	19.26	8.92	3.25	4.24	4.53	1.55	3.96	4.24	5.80	9.91	11.18	8.35	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	6.09	2.40	3.11	3.11	19.26	8.92	3.25	4.24	4.53	1.55	3.96	4.24	5.80	9.91	11.18	8.35	

Calm : .00 %

Total # Operational Hours : 706

Distribution By Samples

	Direction																
Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 50	43	17	22	22	136	63	23	30	32	11	28	30	41	70	79	59	706
< 110																	
< 210																	
>= 210																	
Totals	43	17	22	22	136	63	23	30	32	11	28	30	41	70	79	59	

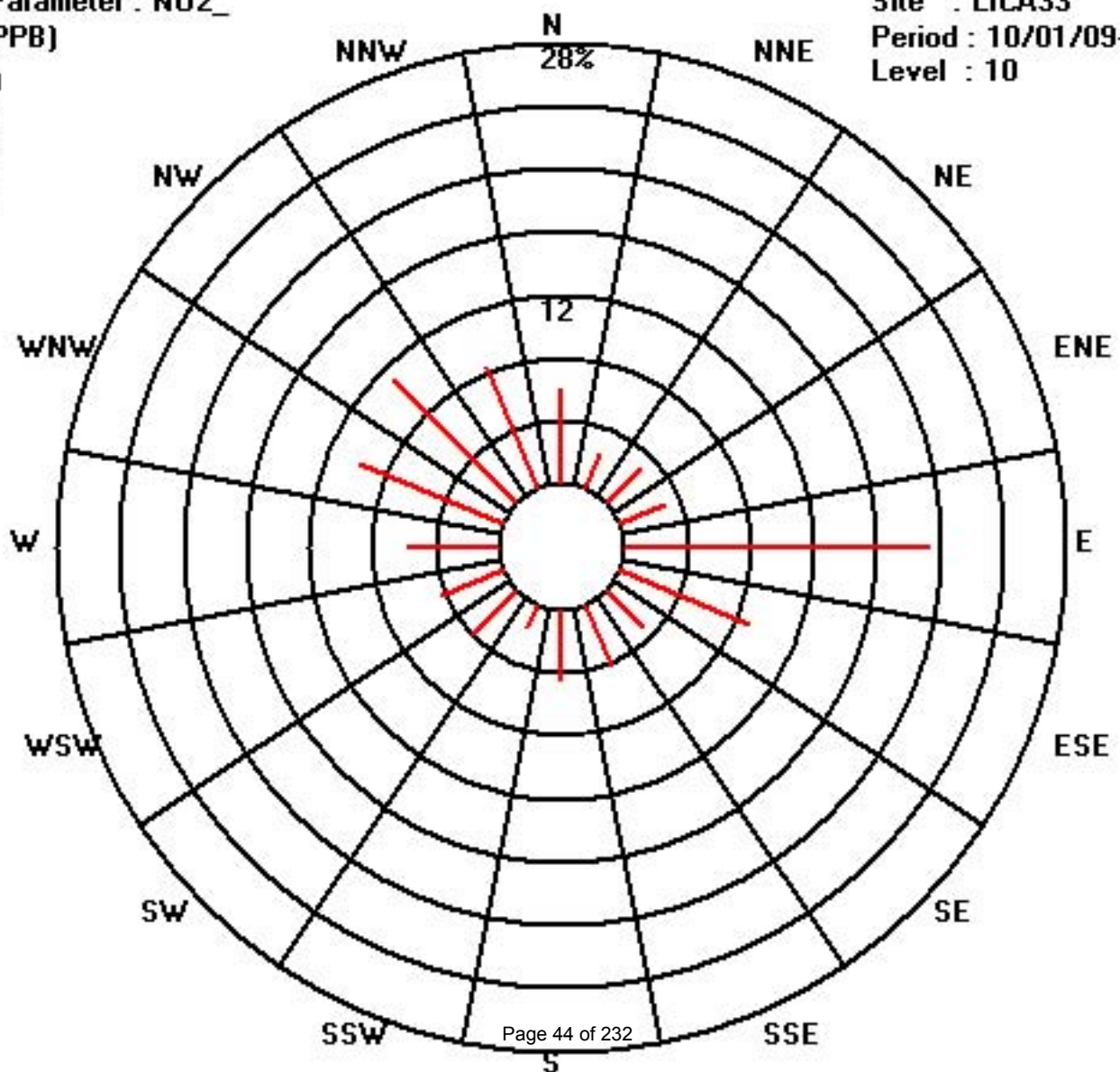
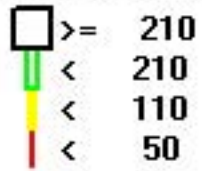
Calm : .00 %

Total # Operational Hours : 706

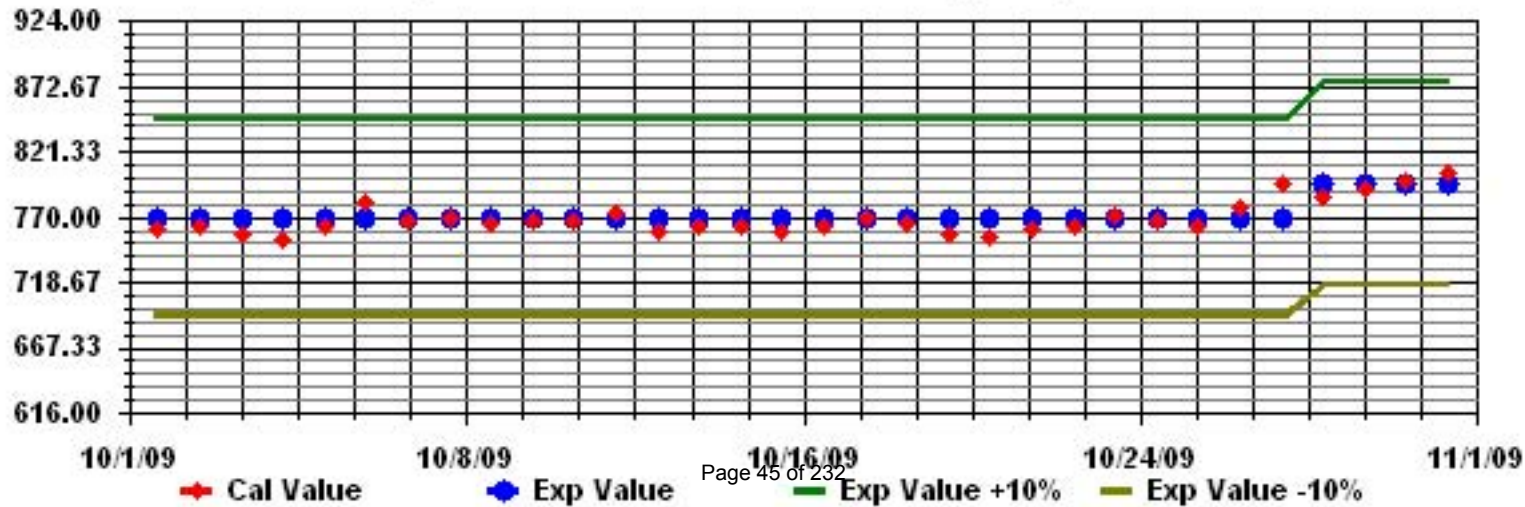
Class Limits (PPB)

Period : 10/01/09-10/31/09

Level : 10



Calibration Graph for Site: LICA33 Parameter: NO2_ Sequence: NO2 Phase: SPAN



Nitric Oxide

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - PORTABLE SITE

OCTOBER 2009

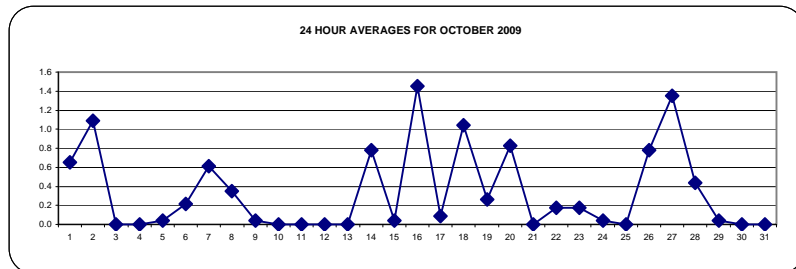
NITRIC OXIDE hourly averages in ppb

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR		
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.	
DAY																												
1	0	0	0	0	0	0	1	6	6	2	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	6	0.7	24
2	0	0	0	0	0	0	3	7	7	6	2	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	7	1.1	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	0.0	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	0.0	24
5	0	0	0	0	0	0	0	1	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.0	24	
6	0	0	0	0	0	0	0	0	1	IZS	1	1	1	1	0	0	0	0	0	0	0	0	0	0	1	0.2	24	
7	0	0	0	0	0	0	0	1	0	IZS	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	0.6	24	
8	1	1	1	1	1	1	1	1	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.3	24	
9	0	0	0	0	0	0	0	IZS	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.0	24	
10	0	0	0	0	0	0	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	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	0	0	1	1	1	0.8	24	
15	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	
16	IZS	0	0	0	0	0	0	2	4	4	5	5	4	2	1	0	0	0	0	0	0	0	0	IZS	5	1.5	24	
17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	IZS	1	1	0.1	24		
18	1	1	1	1	1	1	1	1	1	3	2	1	1	1	1	1	1	1	1	1	1	1	IZS	0	0	3	1.0	24
19	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	IZS	1	1	1	0.3	24	
20	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	IZS	0	0	0	0	1	0.8	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	1	0	0	0	0	0	0	0	IZS	0	0	0	3	0	0	3	0.2	24	
23	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	1	IZS	0	0	0	0	0	0	0	1	0.2	24	
24	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	1	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	1	2	2	1	1	IZS	2	1	1	1	1	1	1	1	1	1	1	1	2	0.8	24
27	2	7	9	2	1	1	1	C	C	C	C	C	C	C	C	0	0	0	0	0	0	0	0	0	0	9	1.4	24
28	0	0	0	0	0	0	0	0	1	1	2	IZS	2	1	2	1	0	0	0	0	0	0	0	0	0	2	0.4	24
29	0	0	0	0	0	0	0	0	0	0	IZS	1	0	0	0	0	0	0	0	0	0	0	0	0	1	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	0.0	24
HOURLY MAX	2	7	9	2	1	1	3	7	7	6	5	5	5	4	2	1	1	1	1	1	1	1	3	1	1			
HOURLY AVG	0.2	0.3	0.4	0.2	0.2	0.2	0.3	0.7	0.9	0.9	0.6	0.5	0.5	0.3	0.4	0.3	0.2	0.2	0.2	0.1	0.1	0.2	0.1	0.2				

STATUS FLAG CODES

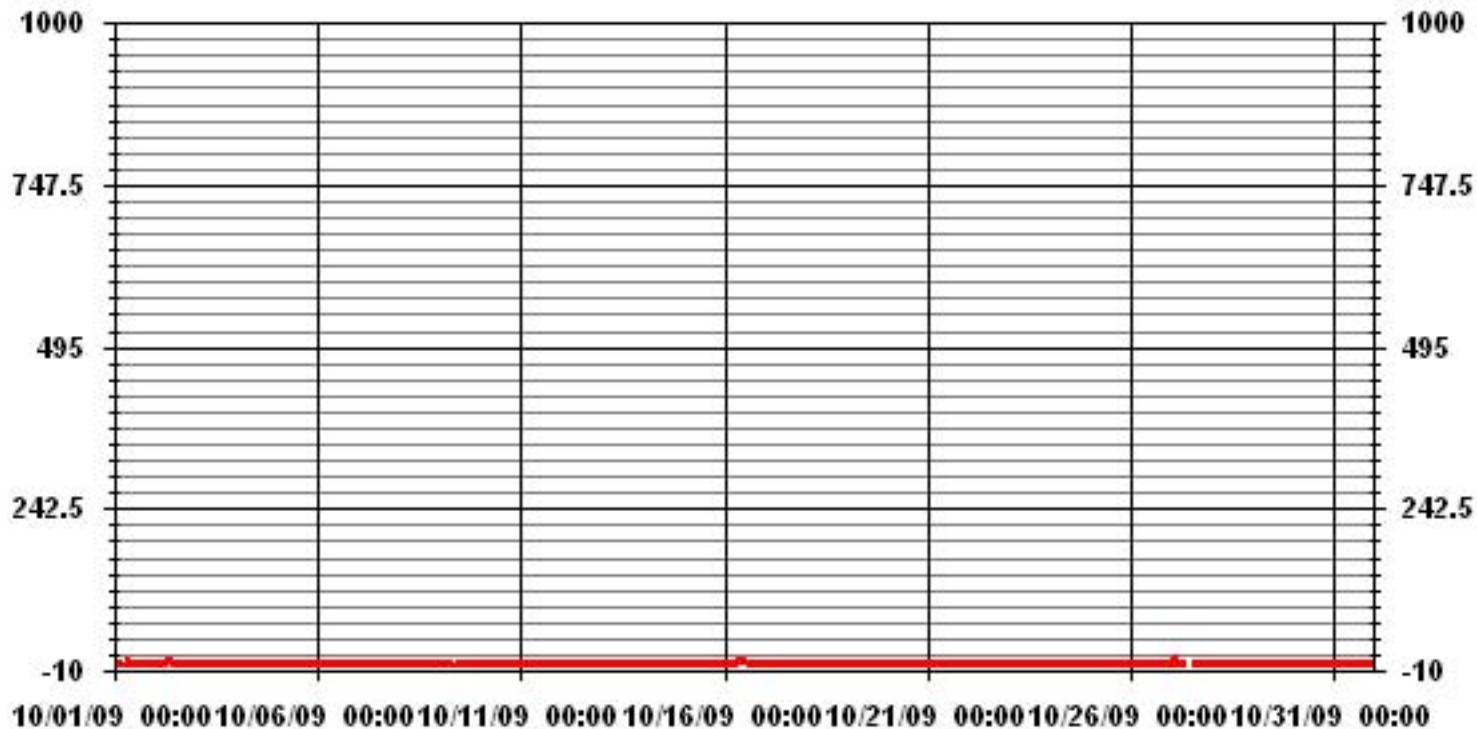
S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	MAINTENANCE
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE



MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:	151					
MAXIMUM 1-HR AVERAGE:	9	PPB	@ HOUR(S)	2	ON DAY(S)	27
MAXIMUM 24-HR AVERAGE:	1.5	PPB			ON DAY(S)	16
IZS CALIBRATION TIME:	31	HRS	OPERATIONAL TIME:	744	HRS	
MONTHLY CALIBRATION TIME:	7	HRS	AMD OPERATION UPTIME:	100.0	%	
STANDARD DEVIATION:	0.91		MONTHLY AVERAGE:	0.33	PPB	

01 Hour Averages



— LICA33 NO_ PPB

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - PORTABLE SITE

OCTOBER 2009

NITRIC OXIDE MAX instantaneous maximum in ppb

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR		
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.	
DAY																												
1	0	0	0	0	0	0	4	7	7	2	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	7	0.9	24	
2	0	0	0	1	1	1	33	9	9	9	4	1	1	18	IZS	1	1	1	1	1	1	1	1	1	33	4.2	24	
3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	IZS	0	0	0	0	0	0	0	0	0	1	0.6	24	
4	0	0	0	0	0	0	0	0	0	0	0	0	IZS	1	0	0	0	0	0	0	0	0	0	0	1	0.0	24	
5	0	0	0	0	0	0	0	1	3	0	0	IZS	1	0	0	0	0	0	0	0	0	0	0	0	3	0.2	24	
6	0	0	0	0	0	0	0	0	1	2	IZS	3	2	1	2	1	1	1	1	1	1	1	1	1	3	0.9	24	
7	1	1	1	1	1	1	1	1	1	IZS	1	1	1	1	1	1	1	2	1	1	1	1	1	1	2	1.0	24	
8	1	1	1	1	1	1	1	1	IZS	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	1	0.6	24	
9	0	0	0	0	0	0	0	IZS	1	8	0	0	1	0	0	0	0	0	0	0	0	0	0	0	8	0.4	24	
10	0	0	0	0	0	0	IZS	1	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0.1	24	
11	0	0	0	0	0	IZS	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.1	24	
12	0	0	0	0	IZS	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	0.2	24	
13	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	
14	0	0	IZS	1	1	1	1	1	1	1	1	1	1	2	2	1	1	1	1	1	1	1	1	1	2	1.0	24	
15	1	IZS	0	0	0	0	0	0	0	1	1	1	1	1	3	10	0	0	0	0	0	0	0	0	10	0.8	24	
16	IZS	1	0	0	0	0	0	5	5	4	5	6	5	5	4	2	1	0	0	0	0	0	0	0	IZS	6	2.0	24
17	1	0	0	0	0	0	0	12	5	1	0	0	0	0	0	0	1	3	1	0	0	IZS	1	12	1.1	24		
18	1	1	1	1	1	1	1	1	2	4	3	2	1	1	1	1	1	1	1	2	2	IZS	2	1	4	1.4	24	
19	0	0	0	0	1	2	0	2	3	1	1	0	0	0	0	0	0	0	0	0	IZS	2	1	1	3	0.7	24	
20	1	1	1	1	1	3	3	1	2	2	2	2	2	2	1	1	2	1	1	IZS	0	0	0	0	3	1.3	24	
21	1	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	1	0.1	24	
22	0	0	0	0	0	0	0	0	0	28	1	1	1	2	2	0	0	IZS	1	0	1	9	1	0	28	2.0	24	
23	0	0	0	0	0	0	0	0	0	1	2	2	2	1	1	1	IZS	0	0	0	0	0	0	0	2	0.4	24	
24	0	0	0	0	0	2	3	2	1	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	3	0.3	24	
25	0	0	0	0	0	0	0	0	0	0	1	0	1	0	IZS	1	0	0	0	0	0	0	0	0	1	0.1	24	
26	0	0	0	0	0	0	0	1	2	3	5	2	2	IZS	3	2	2	1	1	2	2	2	3	3	5	1.6	24	
27	3	11	14	4	1	1	1	C	C	C	C	C	C	C	C	1	0	1	0	0	0	0	0	0	14	2.3	24	
28	0	0	0	0	0	0	1	1	2	2	24	IZS	3	2	3	3	1	1	0	0	0	0	1	0	24	1.9	24	
29	0	0	0	0	0	0	0	0	1	1	IZS	1	1	1	0	0	0	0	0	0	0	0	0	0	1	0.2	24	
30	0	0	0	0	0	0	1	1	1	IZS	1	1	0	0	0	0	0	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	0	0	0	0	0	0	0	0	1	0.1	24	
HOURLY MAX	3	11	14	4	1	3	33	12	9	28	24	6	5	18	4	10	2	2	3	2	2	9	3	3				
HOURLY AVG	0.4	0.6	0.7	0.4	0.3	0.5	1.7	1.7	1.8	2.6	1.9	1.0	1.0	1.4	0.9	0.9	0.4	0.4	0.4	0.3	0.3	0.6	0.4	0.4				

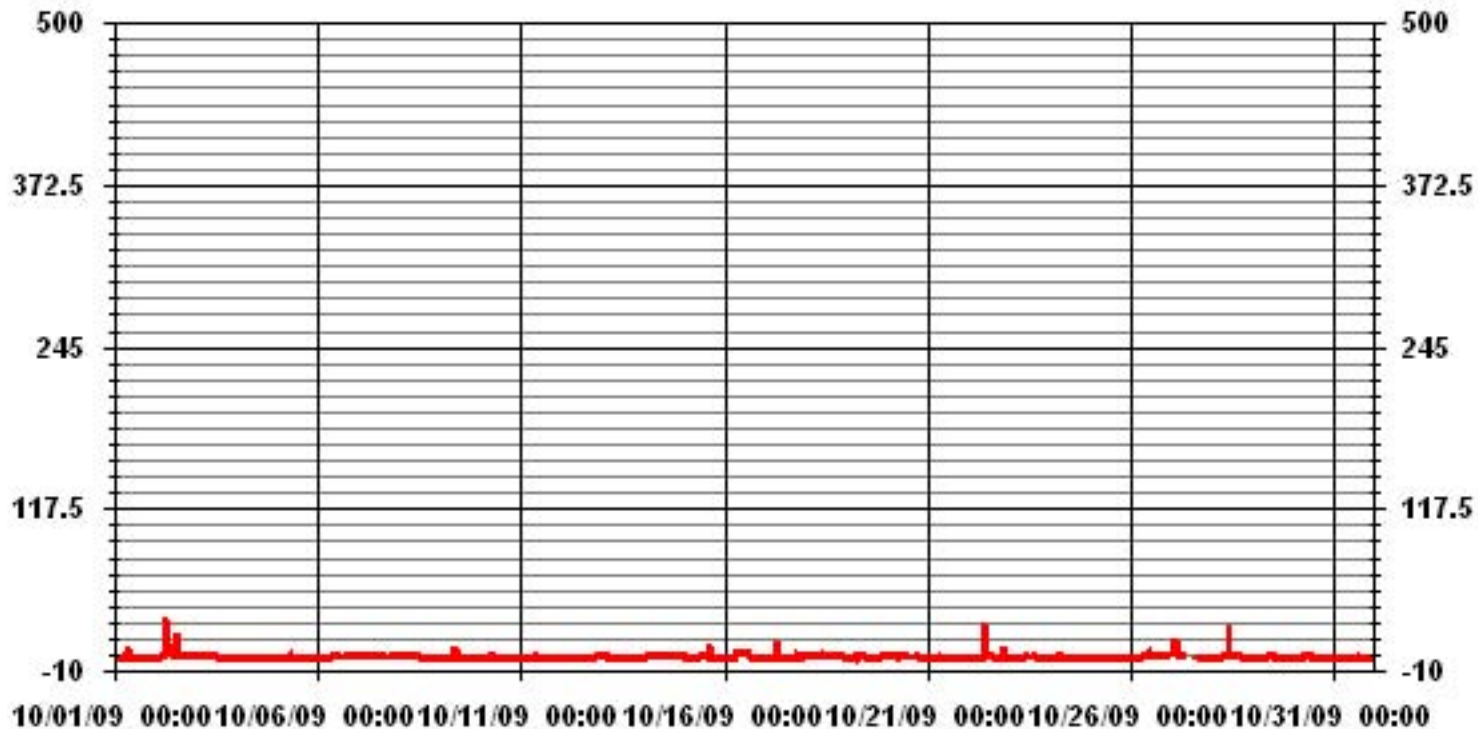
STATUS FLAG CODES

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:	284					
MAXIMUM INSTANTANEOUS VALUE:	33	PPB	@ HOUR(S)	6	ON DAY(S)	2
IZS CALIBRATION TIME:	31	HRS	OPERATIONAL TIME:	744	HRS	
MONTHLY CALIBRATION TIME:	8	HRS				
STANDARD DEVIATION	2.42					

01 Hour Averages



LICA33
 NO_ / WDR Joint Frequency Distribution (Percent)

October 2009

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	6.09	2.40	3.11	3.11	19.26	8.92	3.25	4.24	4.53	1.55	3.96	4.24	5.80	9.91	11.18	8.35	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	6.09	2.40	3.11	3.11	19.26	8.92	3.25	4.24	4.53	1.55	3.96	4.24	5.80	9.91	11.18	8.35	

Calm : .00 %

Total # Operational Hours : 706

Distribution By Samples

	Direction																
Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 50	43	17	22	22	136	63	23	30	32	11	28	30	41	70	79	59	706
< 110																	
< 210																	
>= 210																	
Totals	43	17	22	22	136	63	23	30	32	11	28	30	41	70	79	59	

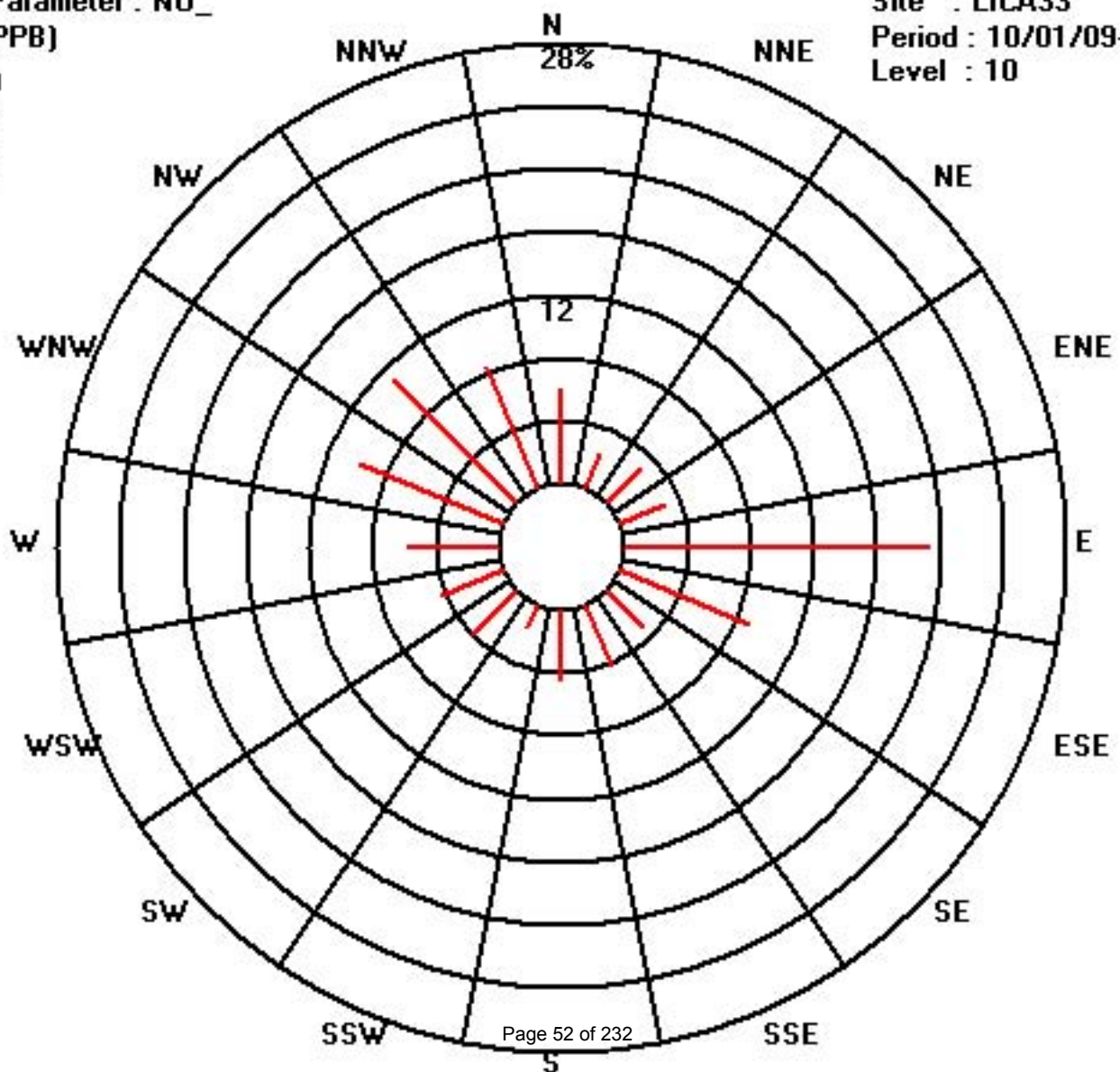
Calm : .00 %

Total # Operational Hours : 706

Class Limits (PPB)

Period : 10/01/09-10/31/09

Level : 10



Oxides of Nitrogen

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - PORTABLE SITE

OCTOBER 2009

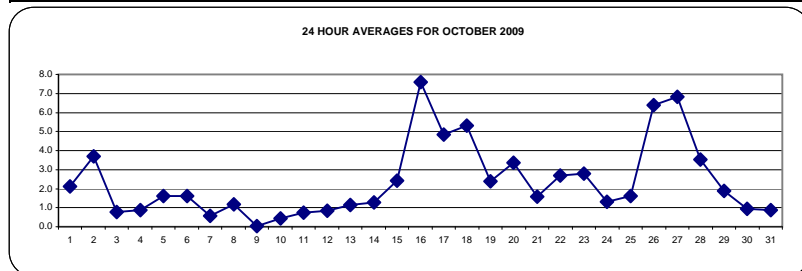
OXIDES OF NITROGEN hourly averages in ppb

MST

DAY	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 MAX.	24-HOUR AVG.	RDGS.
	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	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			
1	0	1	1	3	4	5	5	10	9	4	0	0	0	0	0	IZS	0	0	0	1	2	2	1	1	10	2.1	24
2	2	3	4	4	4	4	9	12	13	12	5	1	0	1	IZS	0	0	1	0	2	2	1	3	2	13	3.7	24
3	2	2	5	3	3	1	1	0	0	0	0	0	0	IZS	0	0	0	0	0	0	1	0	0	5	0.8	24	
4	0	0	0	0	1	1	1	0	0	0	0	0	0	IZS	0	0	0	1	3	4	1	2	5	1	5	0.9	24
5	3	2	1	2	3	4	3	3	6	0	1	IZS	0	0	0	0	0	0	2	3	1	1	1	1	6	1.6	24
6	1	1	1	1	1	2	3	4	5	4	IZS	3	3	2	1	1	1	1	1	1	0	0	0	0	5	1.6	24
7	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	1	2	3	3	4	4	0.6	24
8	6	5	7	2	1	0	2	1	IZS	0	0	1	1	0	0	0	0	0	0	0	1	0	0	0	7	1.2	24
9	0	0	0	0	0	0	0	IZS	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.0	24
10	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	1	1	1	2	3	2	3	0.4	24
11	2	3	1	1	1	IZS	1	2	2	1	0	0	0	0	0	0	0	0	0	0	1	2	0	0	3	0.7	24
12	4	1	1	3	IZS	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	2	4	0.8	24
13	2	3	2	IZS	1	2	2	2	1	1	1	1	0	0	0	0	1	1	1	1	1	1	1	1	3	1.1	24
14	1	1	IZS	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	2	2	1	2	2	2	2	1.3	24
15	2	IZS	2	2	3	2	2	1	2	2	3	3	3	3	3	3	3	2	2	2	2	2	3	4	4	2.4	24
16	IZS	4	6	6	6	7	7	9	10	9	11	12	12	11	9	8	7	7	7	5	5	4	5	IZS	12	7.6	24
17	6	5	4	4	4	4	4	4	5	3	2	1	1	1	1	2	4	11	17	9	5	8	IZS	6	17	4.8	24
18	6	5	6	8	10	11	8	7	6	9	5	3	2	1	1	1	2	2	3	6	7	IZS	8	5	11	5.3	24
19	2	1	1	2	3	5	3	5	5	4	2	2	0	0	1	1	2	2	2	1	IZS	4	3	4	5	2.4	24
20	2	2	3	3	4	6	5	3	5	5	4	4	4	3	2	2	3	3	4	IZS	2	3	2	3	6	3.3	24
21	4	3	3	2	2	1	2	2	3	1	1	1	1	1	1	1	1	1	IZS	1	1	1	1	1	4	1.6	24
22	1	1	1	0	0	1	1	2	1	3	2	2	2	2	1	2	IZS	4	4	8	11	6	5	11	2.7	24	
23	3	3	2	2	2	2	2	3	4	5	5	5	4	4	4	4	IZS	2	2	1	1	2	2	5	2.8	24	
24	1	1	2	2	1	4	6	6	4	2	1	0	0	0	0	IZS	0	0	0	0	0	0	0	6	1.3	24	
25	0	0	1	1	1	2	1	1	0	0	0	0	0	0	IZS	2	2	3	4	3	3	5	3	5	1.6	24	
26	3	4	5	4	4	4	7	6	6	7	7	5	5	IZS	5	5	6	7	7	9	12	9	10	10	12	6.4	24
27	11	19	25	15	6	6	7	C	C	C	C	C	C	C	1	1	1	1	3	3	6	5	3	3	25	6.8	24
28	3	3	5	2	2	3	3	5	5	3	4	IZS	6	4	5	5	4	3	2	2	4	2	4	2	6	3.5	24
29	2	1	2	2	1	2	3	3	3	2	IZS	2	1	2	1	2	2	2	1	2	2	1	2	2	3	1.9	24
30	1	1	1	1	1	2	2	2	2	2	IZS	2	1	1	1	0	0	0	0	0	1	2	1	0	2	1.0	24
31	0	0	0	1	0	0	0	0	IZS	0	0	0	1	1	1	2	1	1	1	1	3	3	2	2	3	0.9	24
HOURLY MAX	11	19	25	15	10	11	9	12	13	12	11	12	12	11	9	8	7	11	17	9	12	11	10	10			
HOURLY AVG	2.3	2.5	3.1	2.6	2.3	2.8	3.1	3.2	3.5	2.8	2.0	1.7	1.7	1.4	1.3	1.4	1.4	1.7	2.3	2.2	2.5	2.6	2.6	2.3			

STATUS FLAG CODES

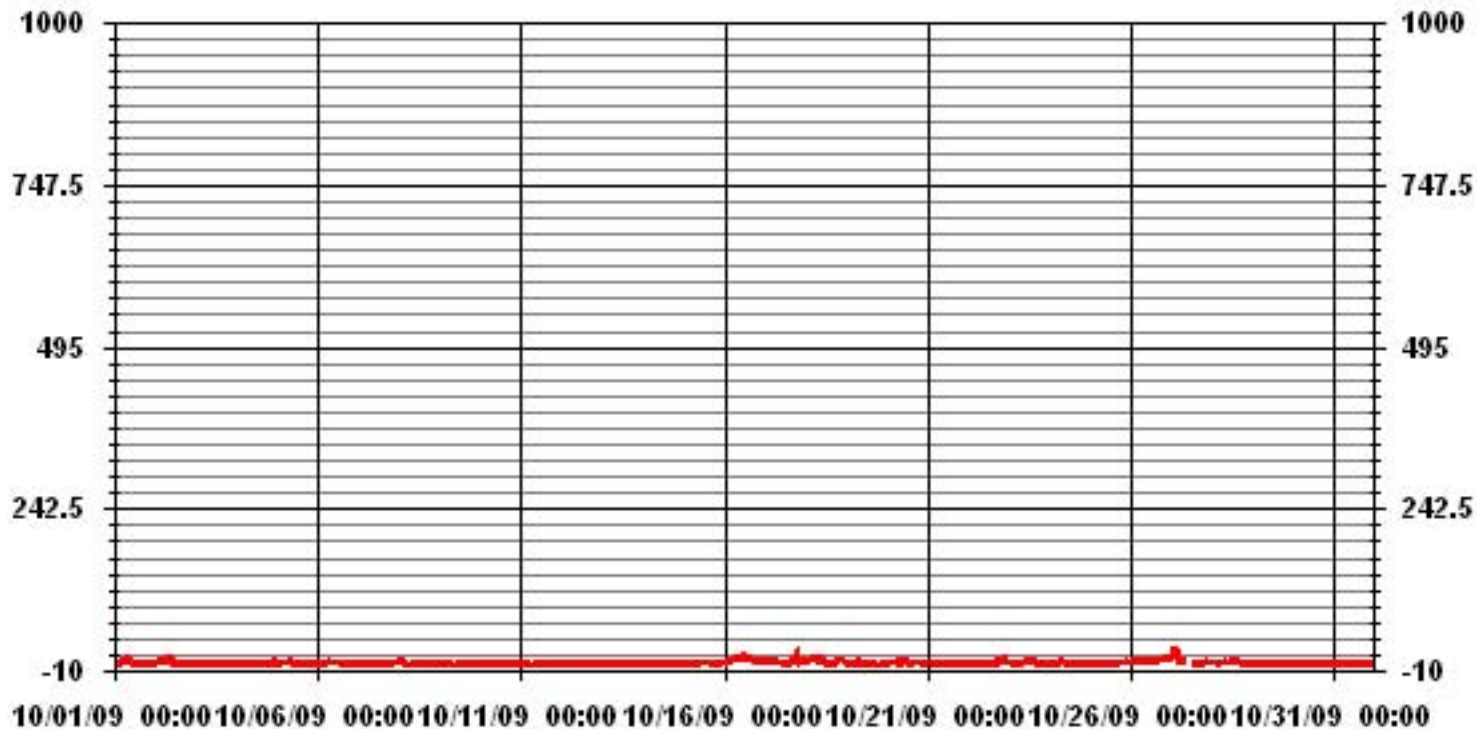
S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	- MAINTENANCE
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE



MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:	515					
MAXIMUM 1-HR AVERAGE:	25	PPB	@ HOUR(S)	2	ON DAY(S)	27
MAXIMUM 24-HR AVERAGE:	7.6	PPB			ON DAY(S)	16
IZS CALIBRATION TIME:	31	HRS	OPERATIONAL TIME:	744	HRS	
MONTHLY CALIBRATION TIME:	7	HRS	AMD OPERATION UPTIME:	100.0	%	
STANDARD DEVIATION:	2.78		MONTHLY AVERAGE:	2.31	PPB	

01 Hour Averages



— LICA33 NOX_ PPB

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - PORTABLE SITE

OCTOBER 2009

OXIDES OF NITROGEN MAX instantaneous maximum in ppb

MST		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	
DAY	HR	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	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.
1	1	1	1	3	5	6	6	10	13	11	6	2	1	1	0	0	IZS	0	1	2	3	6	6	2	3	13	3.9	24
2	3	4	6	6	7	5	46	16	15	15	8	2	1	57	IZS	0	1	4	2	7	4	3	5	3	57	9.6	24	
3	3	4	7	4	6	3	2	1	1	1	1	1	1	1	IZS	1	1	0	1	0	1	0	2	1	2	7	1.9	24
4	2	1	0	1	2	3	2	1	1	0	1	0	IZS	0	1	0	1	4	7	14	3	4	8	3	14	2.6	24	
5	5	4	2	3	5	5	4	6	11	1	2	IZS	1	0	1	1	0	1	3	5	3	1	1	2	11	2.9	24	
6	2	2	2	2	2	3	5	5	6	6	IZS	4	4	3	2	2	2	2	2	2	1	0	0	0	6	2.6	24	
7	0	0	1	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	1	2	2	3	5	4	7	7	1.1	24
8	9	6	10	4	2	2	3	4	IZS	1	1	2	2	1	0	0	0	0	0	1	1	0	1	0	10	2.2	24	
9	0	0	0	0	0	1	1	IZS	1	16	0	0	1	0	0	0	0	1	0	0	0	1	1	1	1	16	1.0	24
10	0	0	0	1	1	1	IZS	2	2	1	1	1	0	0	1	1	1	1	1	2	2	2	3	4	4	4	1.3	24
11	3	4	2	2	2	IZS	2	3	3	2	1	1	1	1	1	1	1	1	1	2	1	2	3	1	1	4	1.8	24
12	6	2	2	3	IZS	3	2	3	1	1	0	0	0	0	0	0	0	1	1	1	3	2	3	3	6	1.6	24	
13	4	4	3	IZS	2	2	2	3	2	2	2	1	1	1	1	1	1	1	1	1	2	2	2	2	4	1.9	24	
14	2	1	IZS	1	1	1	1	2	2	2	2	2	2	3	3	2	2	2	2	2	2	3	4	3	3	4	2.1	24
15	3	IZS	3	2	4	3	2	2	3	3	3	4	3	4	6	24	4	4	3	3	2	3	4	5	24	4.2	24	
16	IZS	5	8	7	6	10	10	13	13	10	12	13	13	13	14	11	9	8	8	8	6	5	5	6	IZS	13	9.0	24
17	7	6	5	5	5	6	5	31	21	5	3	2	2	2	2	4	5	18	21	18	8	12	IZS	8	31	8.7	24	
18	7	6	7	10	12	13	10	10	9	12	6	4	2	2	2	2	4	4	5	12	9	IZS	17	16	17	7.9	24	
19	3	2	3	3	5	11	5	9	10	6	3	3	1	1	1	2	3	3	4	2	IZS	5	4	5	11	4.1	24	
20	3	3	3	5	7	12	12	5	6	6	5	5	5	3	2	3	4	4	5	IZS	3	4	3	4	12	4.9	24	
21	8	4	5	3	3	2	3	4	4	2	1	2	1	1	1	2	2	1	IZS	2	1	2	1	1	8	2.4	24	
22	1	1	1	1	1	1	2	4	2	38	3	2	2	18	14	2	2	IZS	5	6	11	20	9	6	38	6.6	24	
23	5	3	3	2	2	2	3	3	4	5	6	6	5	4	5	5	IZS	3	4	4	2	1	5	3	6	3.7	24	
24	2	1	4	4	2	7	10	8	7	3	2	1	1	0	IZS	1	1	1	1	0	0	0	0	0	10	2.4	24	
25	1	1	2	2	2	2	1	1	1	1	1	1	1	1	IZS	2	3	6	6	3	5	6	8	4	8	2.7	24	
26	4	6	10	5	5	8	12	8	7	9	37	6	6	IZS	7	6	8	9	9	12	17	16	13	14	37	10.2	24	
27	15	25	31	19	9	7	9	C	C	C	C	C	C	C	C	3	2	3	4	5	8	7	4	4	31	9.7	24	
28	3	4	6	4	3	5	5	6	6	5	29	IZS	7	5	6	8	6	5	3	4	6	5	7	3	29	6.1	24	
29	3	2	3	2	2	3	4	5	4	3	IZS	2	2	2	2	3	3	2	2	3	1	3	3	5	2.7	24		
30	2	2	1	1	2	4	7	8	4	IZS	3	2	1	1	1	1	1	1	1	0	2	3	3	1	8	2.3	24	
31	1	0	1	2	1	1	0	0	IZS	0	0	1	2	2	4	5	2	2	2	2	2	5	5	3	3	5	1.9	24
HOURLY MAX	15	25	31	19	12	13	46	31	21	38	37	13	13	57	14	24	8	18	21	18	17	20	17	16				
HOURLY AVG	3.6	3.5	4.5	3.6	3.6	4.4	6.0	6.1	5.6	5.8	4.8	2.5	2.4	4.5	2.7	3.1	2.2	3.2	3.6	4.1	4.0	4.4	4.2	3.8				

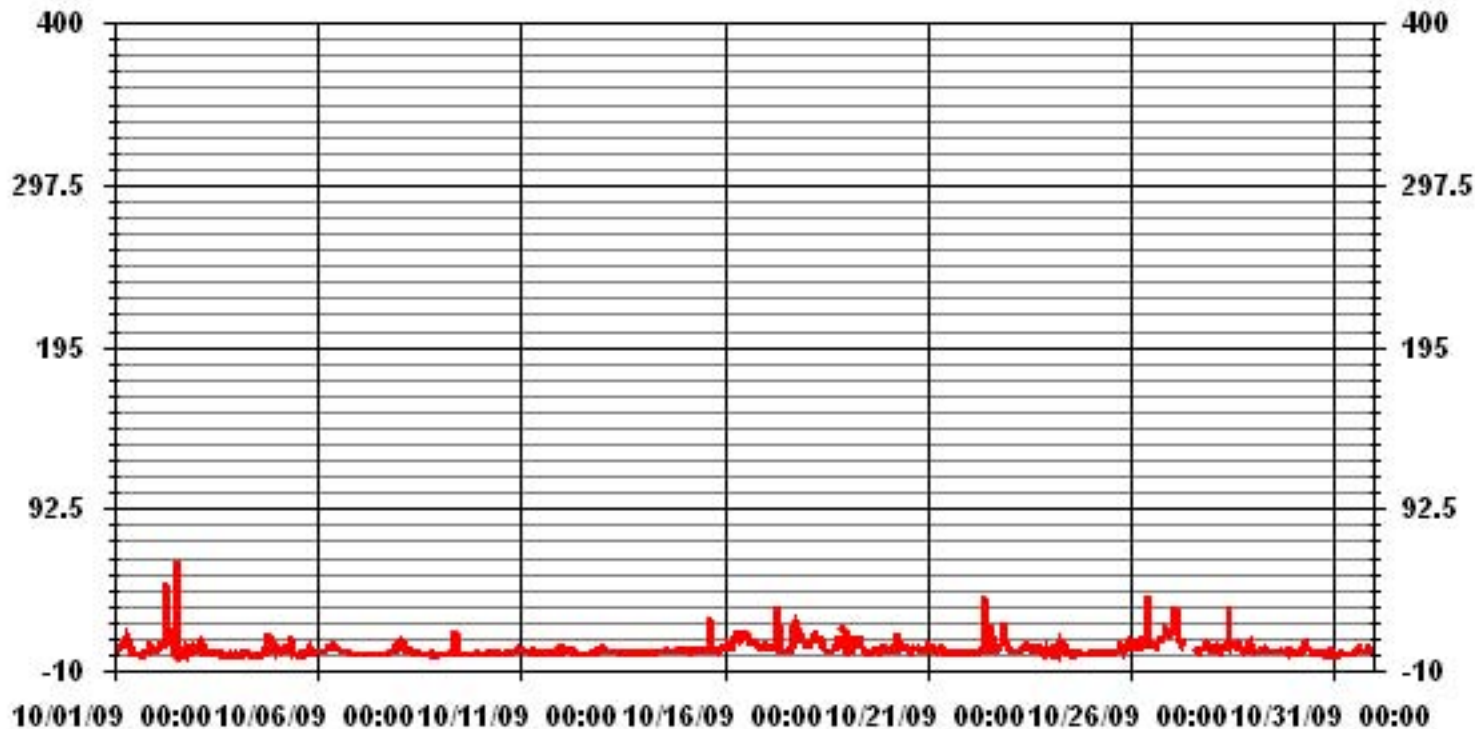
STATUS FLAG CODES

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:	628					
MAXIMUM INSTANTANEOUS VALUE:	57	PPB	@ HOUR(S)	13	ON DAY(S)	2
IZS CALIBRATION TIME:	31	HRS	OPERATIONAL TIME:	744 HRS		
MONTHLY CALIBRATION TIME:	8	HRS				
STANDARD DEVIATION	5.18					

01 Hour Averages



— LICA33 NOxMAX PPB

LICA33
NOX_ / WDR Joint Frequency Distribution (Percent)

October 2009

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	6.09	2.40	3.11	3.11	19.26	8.92	3.25	4.24	4.53	1.55	3.96	4.24	5.80	9.91	11.18	8.35	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	6.09	2.40	3.11	3.11	19.26	8.92	3.25	4.24	4.53	1.55	3.96	4.24	5.80	9.91	11.18	8.35	

Calm : .00 %

Total # Operational Hours : 706

Distribution By Samples

	Direction																
Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 50	43	17	22	22	136	63	23	30	32	11	28	30	41	70	79	59	706
< 110																	
< 210																	
>= 210																	
Totals	43	17	22	22	136	63	23	30	32	11	28	30	41	70	79	59	

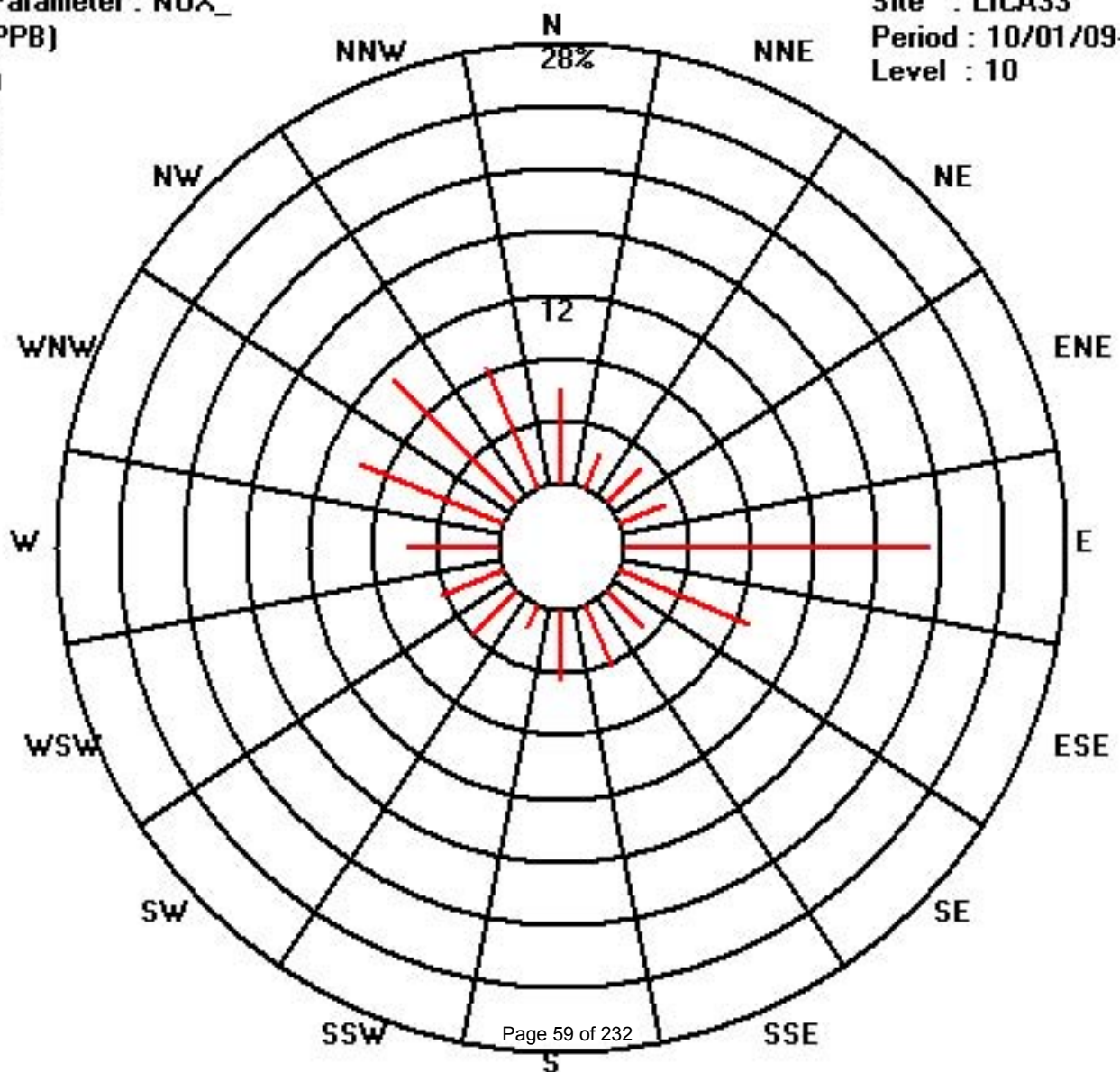
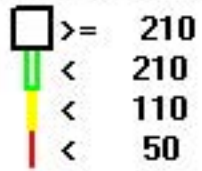
Calm : .00 %

Total # Operational Hours : 706

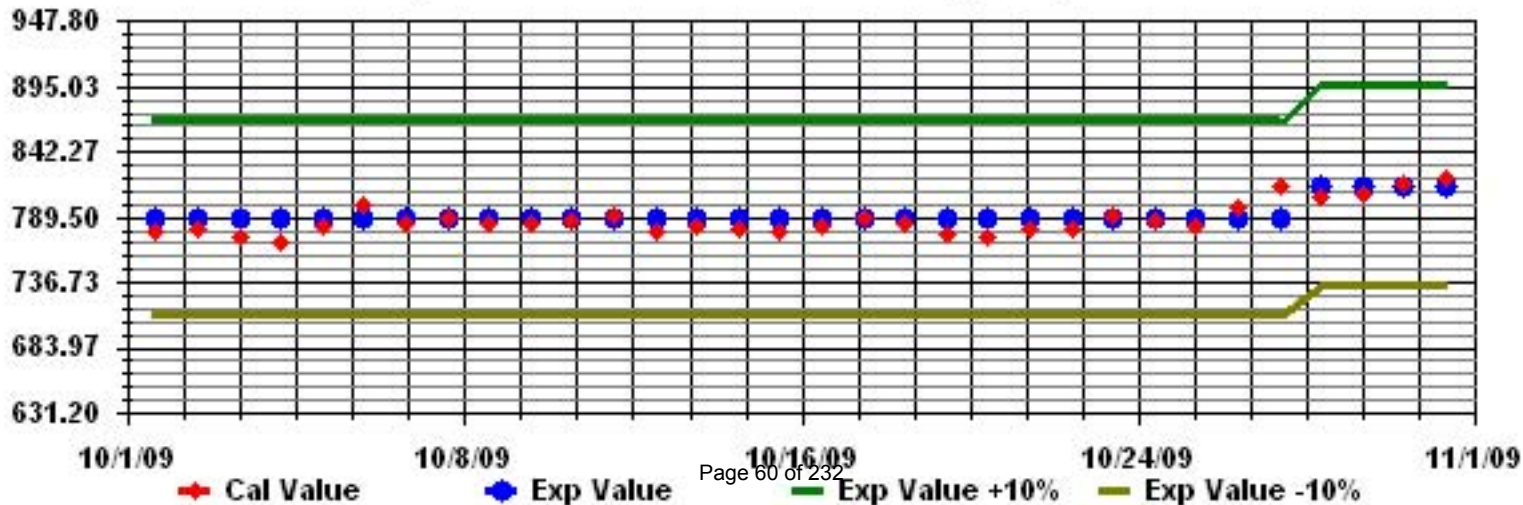
Class Limits (PPB)

Period : 10/01/09-10/31/09

Level : 10



Calibration Graph for Site: LICA33 Parameter: NOX_ Sequence: NO2 Phase: SPAN



Ozone

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - PORTABLE SITE

OCTOBER 2009

OZONE (O₃) hourly averages in ppb

MST

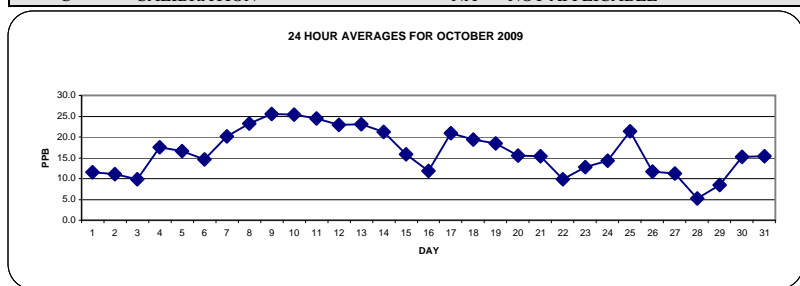
HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	RDGS.	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.		
DAY																												
1	7	5	4	2	1	1	2	2	4	9	14	16	19	21	24	IZS	23	23	21	19	16	12	12	9	24	11.6	24	
2	7	4	3	2	2	2	1	3	6	10	16	19	22	23	IZS	26	25	20	17	13	10	10	6	7	26	11.0	24	
3	5	4	4	7	8	9	9	9	10	12	13	13	14	IZS	13	12	12	13	13	12	11	8	8	8	14	9.9	24	
4	8	20	20	17	14	14	15	20	21	21	22	23	IZS	23	23	23	22	19	15	13	16	13	10	12	23	17.6	24	
5	11	9	8	9	9	8	9	6	11	21	19	IZS	21	22	24	25	26	24	21	18	19	21	21	19	26	16.6	24	
6	19	19	19	18	16	13	10	8	8	9	IZS	11	12	12	14	17	16	15	16	14	14	17	19	20	20	14.6	24	
7	20	23	23	21	20	20	21	20	19	IZS	18	19	19	19	22	25	25	25	23	20	18	15	15	14	25	20.2	24	
8	10	10	9	16	20	19	21	23	IZS	27	27	27	27	27	28	28	27	27	27	26	26	27	27	27	28	23.2	24	
9	27	27	27	26	26	25	24	IZS	23	23	24	25	24	24	24	25	25	26	27	28	28	27	27	27	28	25.6	24	
10	27	27	28	27	27	26	IZS	25	26	27	26	27	27	26	26	26	26	26	27	26	24	23	20	19	21	28	25.4	24
11	21	20	22	22	22	IZS	21	21	26	27	28	28	28	29	29	29	29	27	26	23	22	21	22	21	29	24.5	24	
12	16	19	18	16	IZS	17	19	18	21	23	27	27	28	29	29	28	28	27	26	25	23	23	21	19	29	22.9	24	
13	19	18	19	IZS	19	18	18	17	18	20	22	24	25	26	28	28	28	28	28	27	26	26	25	25	28	23.1	24	
14	25	25	IZS	24	23	21	21	20	20	20	20	20	21	21	21	22	22	22	20	20	21	20	20	20	25	21.3	24	
15	20	IZS	20	19	16	16	17	17	17	16	16	16	18	17	17	17	16	16	16	17	16	12	8	6	20	15.9	24	
16	IZS	7	7	8	8	6	4	3	6	8	10	12	14	17	19	19	19	16	15	18	17	16	13	IZS	19	11.9	24	
17	10	10	11	8	10	15	17	16	18	24	33	37	37	36	35	32	28	18	14	20	25	13	IZS	16	37	21.0	24	
18	14	14	13	12	10	10	14	14	16	17	23	26	27	28	28	31	32	30	27	18	15	IZS	12	16	32	19.4	24	
19	14	17	17	16	9	9	9	9	12	16	19	22	30	31	31	27	23	23	19	19	IZS	18	16	17	31	18.4	24	
20	17	15	14	11	8	6	6	6	7	14	18	20	22	25	29	27	23	20	19	IZS	17	15	11	9	29	15.6	24	
21	7	5	6	7	8	11	9	8	14	21	22	21	26	26	25	25	22	20	IZS	17	15	14	13	13	26	15.4	24	
22	13	14	14	14	13	12	10	9	9	9	10	9	12	14	14	14	IZS	8	7	3	2	4	5	14	9.9	24		
23	11	12	15	18	18	18	18	17	15	12	11	13	14	13	14	13	IZS	10	9	10	10	9	8	7	18	12.8	24	
24	8	6	4	3	2	1	1	4	11	15	19	21	22	21	19	IZS	20	20	21	22	22	22	21	23	23	14.3	24	
25	21	18	16	18	19	18	18	18	19	20	22	25	27	29	IZS	31	28	26	24	24	21	16	16	17	31	21.3	24	
26	16	14	13	14	11	12	9	8	7	11	14	16	18	IZS	22	23	19	13	8	7	5	4	4	1	23	11.7	24	
27	0	0	0	3	11	12	10	11	12	14	20	20	IZS	C	C	C	C	C	19	17	12	14	15	12	20	11.2	24	
28	12	9	6	7	6	4	3	1	2	4	4	IZS	4	6	4	6	7	7	6	4	3	7	4	4	12	5.2	24	
29	5	7	5	5	5	5	4	6	6	6	IZS	10	11	12	12	12	11	10	9	9	10	12	12	12	12	8.5	24	
30	14	14	14	14	12	12	12	12	13	IZS	15	16	16	18	19	18	18	19	18	19	15	14	15	15	19	15.3	24	
31	14	15	14	13	14	14	14	16	IZS	21	23	23	22	20	18	17	17	16	14	11	8	9	8	14	23	15.4	24	
HOURLY MAX	27	27	28	27	27	26	24	25	26	27	33	37	37	36	35	32	32	30	28	28	28	27	27	27				
HOURLY AVG	13.9	13.6	13.1	13.2	12.9	12.5	12.2	12.2	13.7	16.4	19.1	20.2	20.8	21.9	21.8	22.4	21.8	20.2	18.4	17.4	16.2	15.2	14.4	14.5				

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:

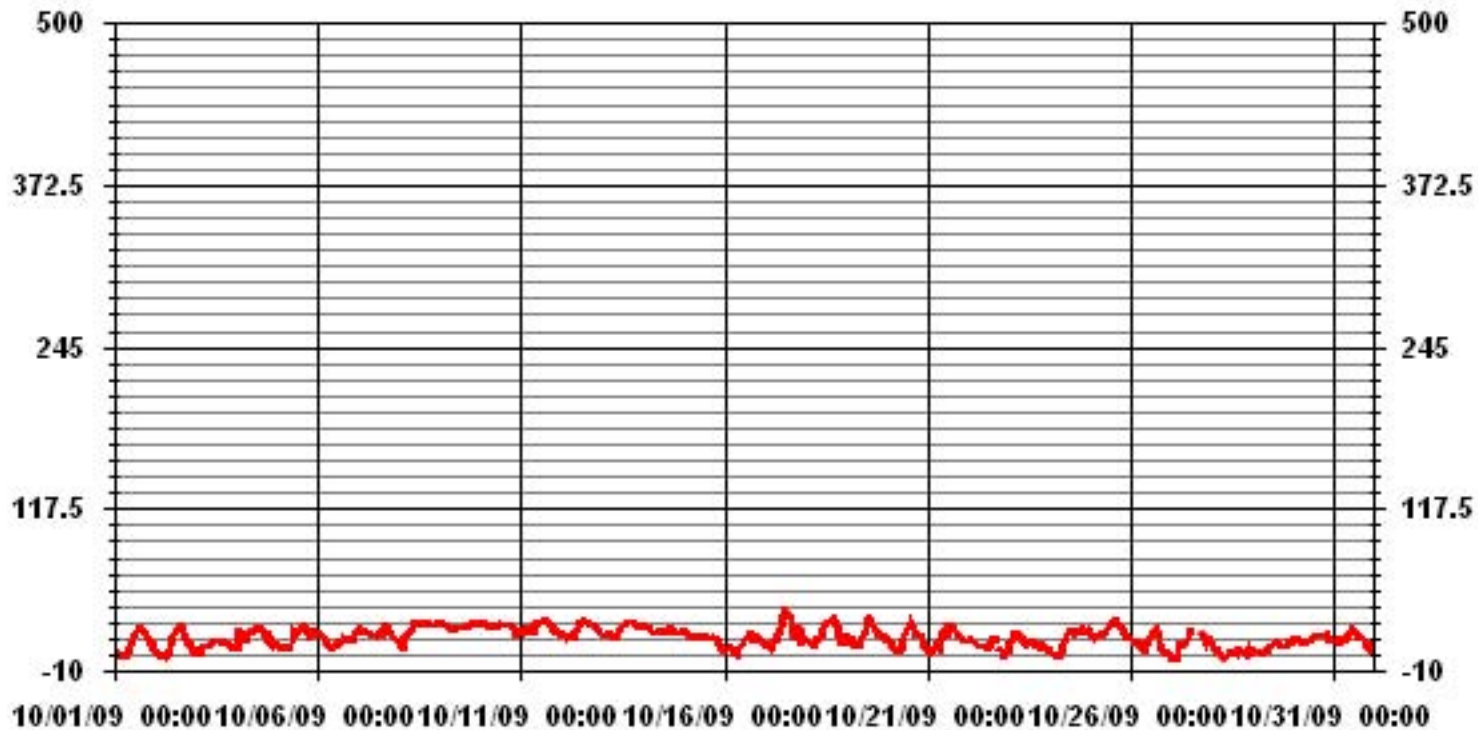
ALBERTA ENVIRONMENT: 1-HR 82 PPB



MONTHLY SUMMARY

NUMBER OF 1-HR EXCEEDENCES:	0
NUMBER OF NON-ZERO READINGS:	704
MAXIMUM 1-HR AVERAGE:	37 PPB @ HOUR(S) 11,12 ON DAY(S) 17
MAXIMUM 24-HR AVERAGE:	25.6 PPB ON DAY(S) 9
	VAR-VARIOUS
IZS CALIBRATION TIME:	32 HRS
MONTHLY CALIBRATION TIME:	5 HRS
STANDARD DEVIATION	7.49
OPERATIONAL TIME:	744 HRS
AMD OPERATION UPTIME	100.0 %
MONTHLY AVERAGE	16.52 PPB

01 Hour Averages



— LICA33_03_ PPB

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - PORTABLE SITE

OCTOBER 2009

OZONE MAX instantaneous maximum in ppb

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR		
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.	
DAY																												
1	7	7	6	4	2	2	2	3	7	12	15	18	20	23	24	IZS	24	24	23	21	18	15	15	12	24	13.2	24	
2	9	6	5	3	4	4	3	5	8	13	19	21	22	25	IZS	27	27	23	18	17	13	12	9	10	27	13.2	24	
3	7	5	7	9	9	11	10	10	12	13	14	14	15	IZS	14	14	13	13	14	14	13	11	9	9	15	11.3	24	
4	10	24	22	20	16	17	19	22	22	23	24	24	IZS	24	24	24	23	22	19	18	18	15	14	14	24	19.9	24	
5	13	11	10	10	10	10	11	8	20	23	21	IZS	22	24	25	27	28	26	23	21	21	22	22	21	28	18.7	24	
6	20	20	20	19	18	14	11	10	9	10	IZS	12	14	14	18	19	18	16	17	15	16	18	20	21	21	16.0	24	
7	22	25	25	22	21	21	22	21	20	IZS	19	20	20	21	26	27	27	26	25	21	21	17	17	17	27	21.9	24	
8	15	15	15	20	21	20	24	24	IZS	29	29	28	28	29	29	28	29	28	28	28	27	27	28	27	29	25.0	24	
9	27	28	27	27	27	26	25	IZS	24	24	25	26	25	24	25	26	27	27	28	29	29	28	29	28	29	26.6	24	
10	28	28	28	28	28	27	IZS	27	27	27	27	27	27	26	27	27	27	28	27	26	24	21	21	23	28	26.3	24	
11	23	22	23	23	23	IZS	22	22	28	28	29	29	29	29	30	29	30	29	29	28	26	23	22	23	30	25.7	24	
12	21	21	19	18	IZS	19	19	21	23	26	28	28	30	30	30	29	29	28	27	27	24	24	23	21	30	24.6	24	
13	20	19	20	IZS	20	19	18	18	19	21	24	25	27	28	29	29	29	29	29	28	27	27	26	27	29	24.3	24	
14	26	26	IZS	25	24	22	22	21	20	20	20	21	22	22	22	23	23	22	21	21	22	21	20	21	26	22.0	24	
15	21	IZS	21	20	19	17	17	18	18	17	18	19	19	18	17	17	17	20	19	19	16	15	7	21	17.7	24		
16	IZS	8	8	8	9	8	5	5	8	10	12	14	16	19	20	20	21	19	17	19	18	17	15	IZS	21	13.5	24	
17	12	12	13	11	13	19	19	18	21	29	37	39	38	37	36	34	31	30	22	28	29	16	IZS	24	39	24.7	24	
18	18	19	17	15	17	13	16	17	17	23	25	27	29	29	29	33	33	32	29	24	21	IZS	18	19	33	22.6	24	
19	16	20	20	19	15	12	11	12	15	20	20	29	31	32	33	29	27	25	23	21	IZS	19	19	19	33	21.2	24	
20	19	17	15	13	10	9	9	8	9	20	21	21	23	31	31	30	25	23	22	IZS	19	17	14	14	31	18.3	24	
21	8	7	7	9	11	14	11	10	21	22	23	24	28	28	27	27	24	22	IZS	20	16	15	14	14	28	17.5	24	
22	14	15	15	15	14	13	11	10	10	10	12	11	11	14	15	15	15	IZS	10	8	6	4	6	8	15	11.4	24	
23	13	14	19	20	19	19	19	18	18	14	12	14	15	14	15	16	IZS	11	10	12	12	10	10	9	20	14.5	24	
24	9	8	6	4	3	4	3	7	13	16	22	22	22	22	21	IZS	21	21	22	23	23	24	22	25	25	15.8	24	
25	23	20	17	19	19	19	19	19	20	22	24	26	30	30	IZS	32	31	29	27	27	25	18	20	18	32	23.2	24	
26	18	17	16	15	14	14	12	10	8	14	17	17	19	IZS	24	24	22	16	14	10	10	7	7	3	24	14.3	24	
27	2	0	1	8	14	13	11	14	14	18	24	22	IZS	C	C	C	C	C	C	19	15	17	18	14	24	13.2	24	
28	15	12	8	8	7	6	5	2	3	5	5	IZS	6	8	5	9	9	8	7	6	5	9	9	6	15	7.1	24	
29	7	9	6	6	8	7	6	9	7	7	IZS	11	13	13	13	13	12	11	10	11	12	13	13	13	13	10.0	24	
30	15	15	15	15	14	13	15	15	16	IZS	16	17	17	19	20	20	20	21	22	22	17	16	16	16	22	17.0	24	
31	15	16	15	14	15	14	15	17	IZS	23	24	24	24	20	20	19	19	17	16	13	10	12	10	22	24	17.1	24	
HOURLY MAX	28	28	28	28	28	27	25	27	28	29	37	39	38	37	36	34	33	32	29	29	29	28	29	28				
HOURLY AVG	15.8	15.5	14.9	14.9	14.8	14.2	13.7	14.0	15.8	18.6	20.9	21.7	22.1	23.4	23.1	23.9	23.4	22.2	20.6	19.8	18.4	17.0	16.7	16.8				

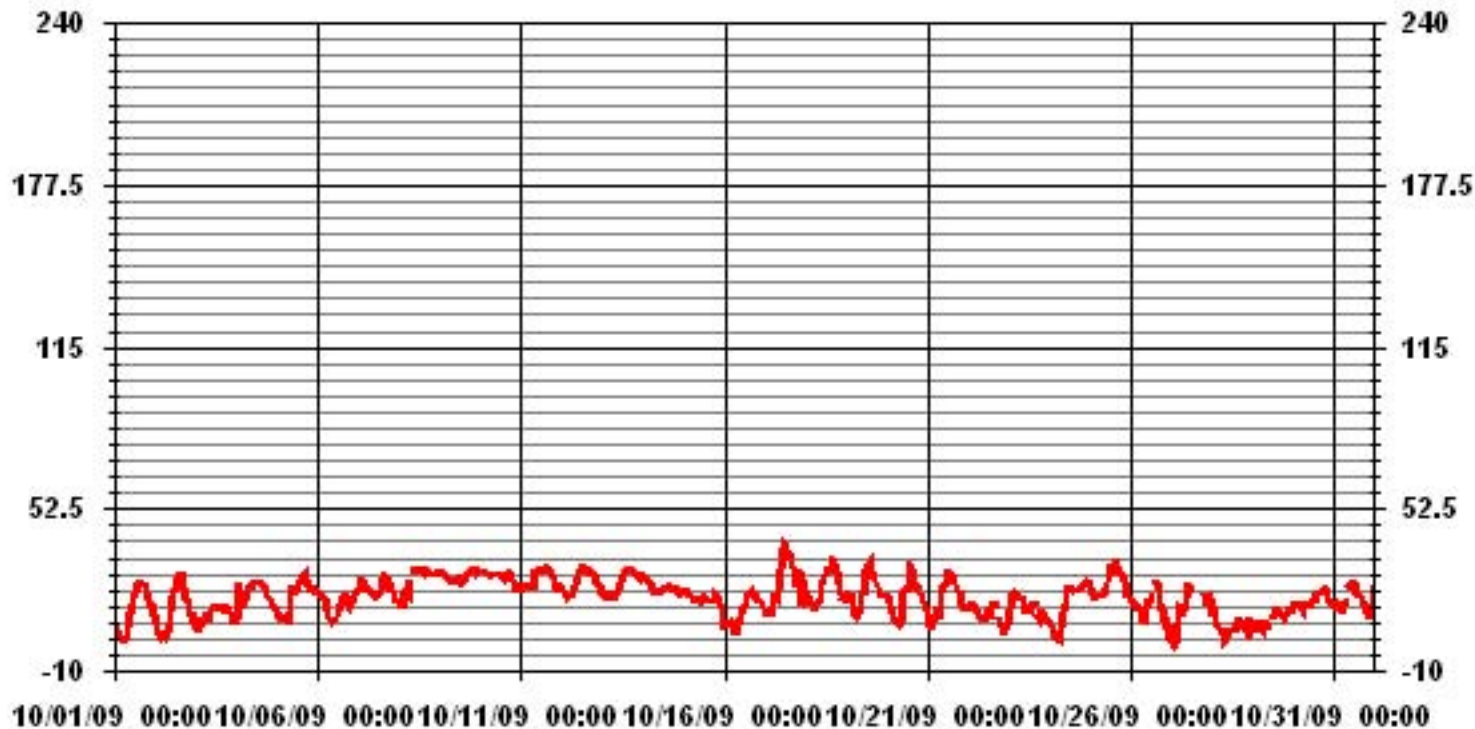
STATUS FLAG CODES

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:	705					
MAXIMUM INSTANTANEOUS VALUE:	39	PPB	@ HOUR(S)	11	ON DAY(S)	17
IZS CALIBRATION TIME:	32	HRS	OPERATIONAL TIME:	744	HRS	
MONTHLY CALIBRATION TIME:	6	HRS				
STANDARD DEVIATION	7.34					

01 Hour Averages



— LICA33 O3MAX PPB

LICA33
 O3_ / WDR Joint Frequency Distribution (Percent)

October 2009

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	6.08	2.40	3.11	3.11	19.23	8.91	3.25	4.24	4.52	1.55	3.96	4.24	5.79	9.75	11.45	8.34	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	6.08	2.40	3.11	3.11	19.23	8.91	3.25	4.24	4.52	1.55	3.96	4.24	5.79	9.75	11.45	8.34	

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	43	17	22	22	136	63	23	30	32	11	28	30	41	69	81	59	707
< 110																	
< 210																	
>= 210																	
Totals	43	17	22	22	136	63	23	30	32	11	28	30	41	69	81	59	

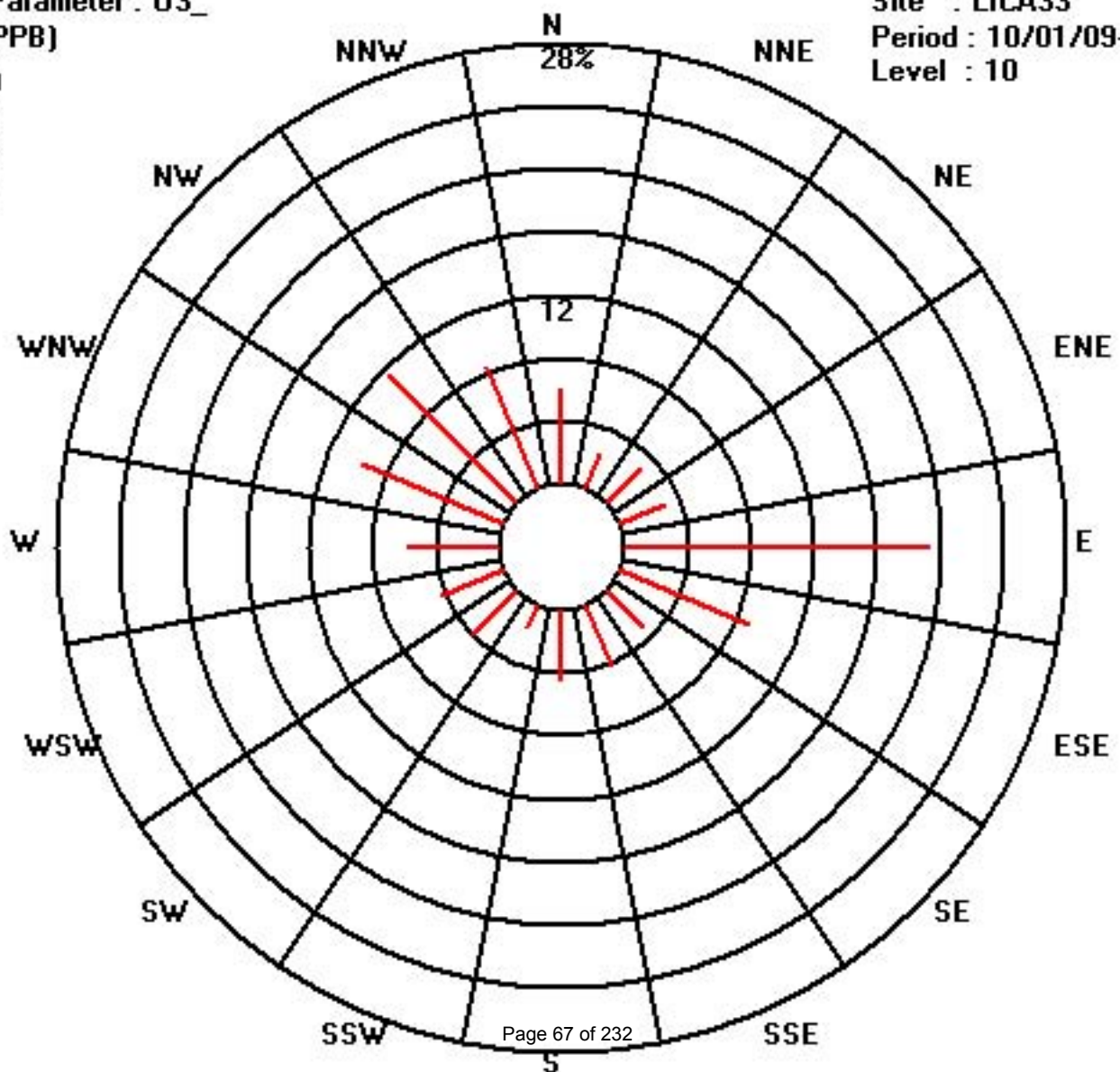
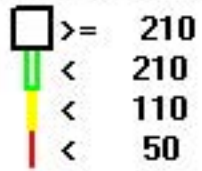
Calm : .00 %

Total # Operational Hours : 707

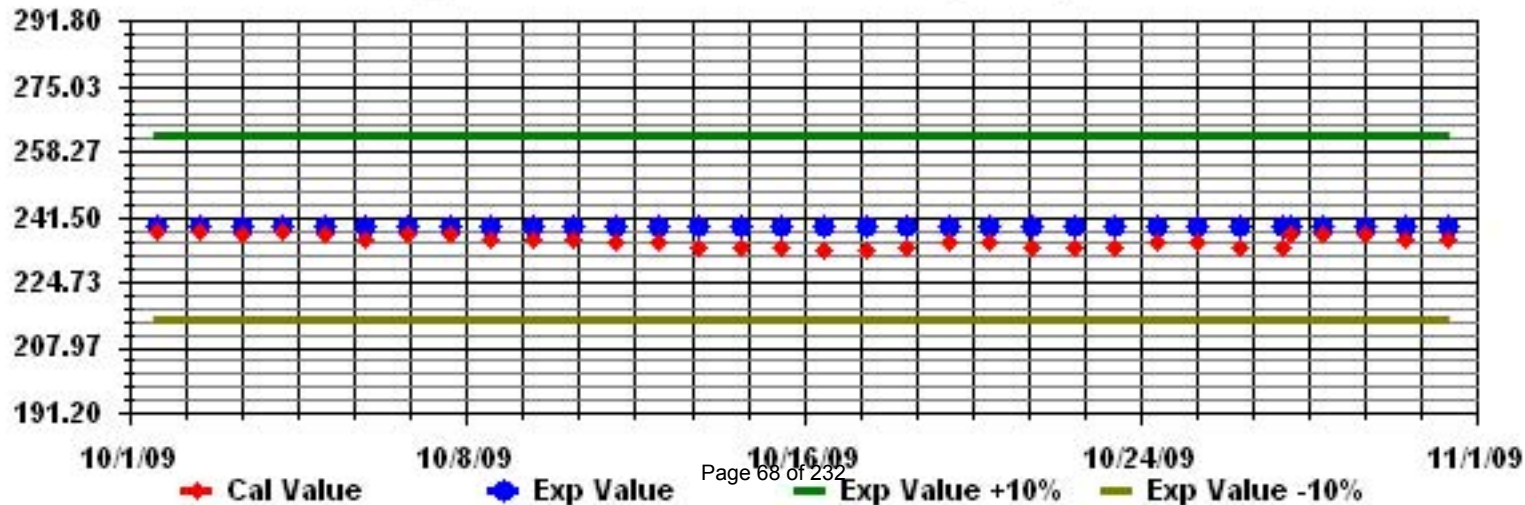
Class Limits (PPB)

Period : 10/01/09-10/31/09

Level : 10



Calibration Graph for Site: LICA33 Parameter: 03_ Sequence: 03 Phase: SPAN



Vector Wind Speed

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - PORTABLE SITE

OCTOBER 2009

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

MST	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 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	0:00	MAX.	AVG.	RDGS.
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					
DAY																												
1	9.3	9.2	6.7	6	8.1	7	6.4	7.7	5.1	8.6	8.9	10	11.8	13.6	14.5	9.2	7.3	8.7	5.8	6.3	10.4	3	1.9	3.9	14.5	6.2	24	
2	5.9	3.9	2.5	2.2	2.3	2.8	4.2	3.7	3	4.2	5.9	4.8	3.7	5.8	6.1	7.2	6.8	9.7	7.4	3.3	3.4	2.8	2.8	3.4	9.7	2.5	24	
3	3	3.5	6.5	6	6	7.1	5.6	6.7	9.5	12.4	13.9	14.6	16.7	15.5	15.6	17.9	15	16.1	15.5	16.6	14.8	11.2	10.2	10.1	17.9	10.9	24	
4	7.9	12.2	11.7	5.4	6.9	8.3	9.1	12.9	13.6	15.4	16.2	15.4	11.4	11.7	13.5	8.9	10	7.3	6.1	4.1	4.8	3.4	5.2	4.2	16.2	8.8	24	
5	4.9	0.9	3.3	4.8	4	3.9	2	1.6	1.5	5.1	6.4	9.2	9.8	9.8	7.5	9.2	14.1	6	6.2	7.4	8.1	8.4	8.2	9.5	14.1	6.3	24	
6	8.9	9.7	9.3	8.3	7.4	6.2	6.2	6.9	6	5.4	5.8	8.9	11	13.3	19.1	19.1	18.8	21.1	25.1	24.1	24.4	22.6	21.6	19.5	25.1	13.7	24	
7	18.9	22.9	22.2	19	17.1	15.4	17.6	19.2	19.3	19.6	16.8	16.8	14.7	15	14.8	15.3	15	13.8	9.1	3.8	5.1	4.7	4.7	3.7	22.9	14.4	24	
8	1.5	1.3	3.5	5.6	6.2	7.9	11.4	11.7	13.3	17	17.9	17.7	18.8	19.1	17.9	17.6	17	12	13.4	13.9	17.4	17.1	19.3	19.1	19.3	13.2	24	
9	20.2	20.5	20.6	19.2	16.1	15.4	17.5	17	19	20.4	20.7	21.6	23.2	23.7	20.8	19.8	20	14.8	18.5	16.6	16.3	14.1	14.9	15.7	23.7	18.6	24	
10	14.7	14.2	15.6	16.4	16.5	16.9	13	13.1	18.6	17.9	15.7	15.7	13.6	14	13.9	11.8	12.4	13.2	9.5	6.6	5.8	6	4.2	4.8	18.6	12.7	24	
11	4.6	5.1	6.1	8.3	6.5	5.8	4.2	4.2	7.9	9.8	7	2.9	5.7	1.8	0.2	1.9	2.5	5.4	5.2	4.8	6.6	7.3	6.1	5.7	9.8	5.2	24	
12	5.3	7.5	7.9	5.9	5.4	5.7	7.5	6.4	11.3	11.6	10.4	8.5	8.2	10.4	13.6	14.5	16.3	13.4	12.4	9.7	10.9	13	13.2	12	16.3	10.0	24	
13	12.7	14	15.3	15.1	16.8	17.1	15.5	15.8	15.3	17.6	19.8	21.5	25.5	24.2	22.6	24.6	21.6	18.2	16.9	17.1	17.7	17.8	17	17.8	25.5	18.2	24	
14	15.9	16.9	18.6	20.5	19.9	20.5	21.8	20	20.7	22	22.9	21.1	24.4	24.5	22.7	24.2	19.5	17.5	14.1	11.9	11.7	11	12.3	10.5	24.5	18.5	24	
15	9.8	11.7	10.6	9.1	7.8	7.2	7.6	6.8	7.1	7	3.8	2.8	6.3	5	6.2	4.2	5.6	4.5	4.1	4.2	2.7	0.6	3	4.7	11.7	5.9	24	
16	4.3	4.5	5.3	4.5	4.2	6.8	4.9	5	5.7	6.2	7.9	9.1	10.1	13.4	13.6	14.1	11.9	15.8	12	12.3	12.5	9.8	6.9	3.9	15.8	8.5	24	
17	5.9	7.7	7.3	4.9	6	9.5	10.9	11	12.6	10.8	15.2	18.5	17.5	14.2	10.6	6.4	3.8	3.1	6	4.6	4.2	1.6	3.6	2.7	18.5	8.3	24	
18	3.2	3	5.1	4.4	5.7	8.5	6.6	8.3	8.1	8.8	11.1	12	11.2	11.2	8	14.6	9.7	5.7	3.7	3.5	1.1	4.3	4.4	6.3	14.6	7.0	24	
19	8.5	3.5	3.5	2.1	4.9	3.1	2.9	4.6	7	7.8	9.9	7	8.9	8.2	6.3	5.8	3.5	10.6	9.6	8.6	6.9	7.6	12.2	18.5	18.5	7.1	24	
20	14.6	7.1	4.5	2.9	3.2	2.1	2.8	2.2	1.2	1	2.4	4.5	1.9	4	2.2	7.6	7.7	5.1	4.5	5.6	5.8	5.5	1.5	4.8	14.6	4.4	24	
21	3.2	1.9	2.1	3.1	4	5	3.7	4.3	7.1	9.1	7.8	6.2	10.3	14.1	16.2	13.9	12.9	8.8	12.9	16.7	18.2	17.6	14.1	14.8	18.2	9.5	24	
22	14	14.6	10.2	9.9	9.7	7.8	6.6	6	4.6	1.8	6.3	11.9	12.8	13.3	11.6	12.2	10.3	5.5	5.8	5.2	4.6	4.7	4.4	2.9	14.6	8.2	24	
23	4.6	5.5	5.2	3.5	1	2.5	5.8	6.8	6.9	5.6	5.9	7.3	4.7	6.2	9.4	10.8	12	11.9	12	12.1	10.5	10	7.4	10	12.1	7.4	24	
24	7.1	4.7	5.4	3.2	0.9	4.7	7.4	8.7	10.8	11.5	13.3	18.3	22.1	21.1	23	20.8	20.8	20.5	22.3	24.2	20.6	22.3	21.2	20.4	24.2	14.8	24	
25	17.7	14.3	13.8	16.4	18.2	17.3	15.8	13.1	11.8	9.4	9.9	12.5	13.7	16.2	18	15.2	8.8	6.1	7.9	5.4	4.8	5.6	5.7	7.1	18.2	11.9	24	
26	8.7	8.2	8.2	7.9	3.8	6.9	3.9	1.7	1.1	2.2	3.7	5.5	1.6	3.1	3.3	3.7	6.1	4.1	3	2.5	2.3	2	0.8	3.4	8.7	4.1	24	
27	4	7.7	9.1	7	9.8	10.9	12.4	10.1	9	14.4	20.6	18.6	21.2	19	15.3	13.6	12.2	10.1	8.8	4.7	5.9	4.6	4.2	5.3	21.2	10.8	24	
28	5.7	6.3	7.1	7.8	7	6.3	6.5	7.1	8	8.7	8.8	6.8	6	3.5	6.5	5.2	4.7	5.5	1	0.9	2.6	1.9	1.1	1.4	8.8	5.3	24	
29	2.7	5.4	5	4.6	2.2	4.2	6.4	8.6	6.5	6.7	12.2	14.2	14.6	15.7	15.5	15	15	13.6	14.6	14.2	16.8	15.2	13.8	17	17.0	10.8	24	
30	16	14	12.3	11.4	9.1	8.7	8.1	7.9	8.4	7.6	8.7	6.8	8.4	13	12.9	14.4	10.4	10.2	9.8	11	8.5	11.1	13.3	17.1	17.1	10.8	24	
31	16.8	16	16	19.1	20.8	19.9	22.6	26.3	19.4	20.6	18.5	16	7.4	12.3	7	8.1	6.4	4.2	1.1	2.4	4.4	3.1	2.9	12.5	26.3	12.7	24	
HOURLY MAX	20.2	22.9	22.2	20.5	20.8	20.5	22.6	26.3	20.7	22.0	22.9	21.6	25.5	24.5	23.0	24.6	21.6	21.1	25.1	24.2	24.4	22.6	21.6	20.4				
HOURLY AVG	9.0	9.0	9.0	8.5	8.3	8.8	8.9	9.2	9.7	10.5	11.4	11.8	12.2	12.8	12.5	12.5	11.6	10.4	9.8	9.2	9.3	8.7	8.5	9.4				

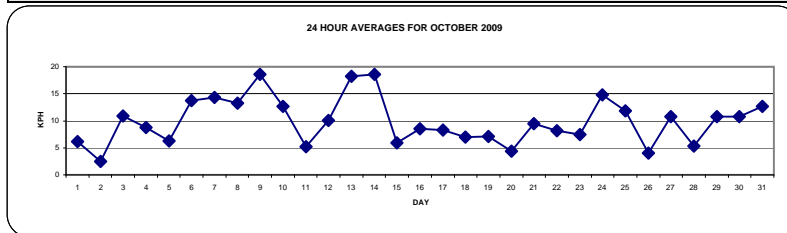
STATUS FLAG CODES

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

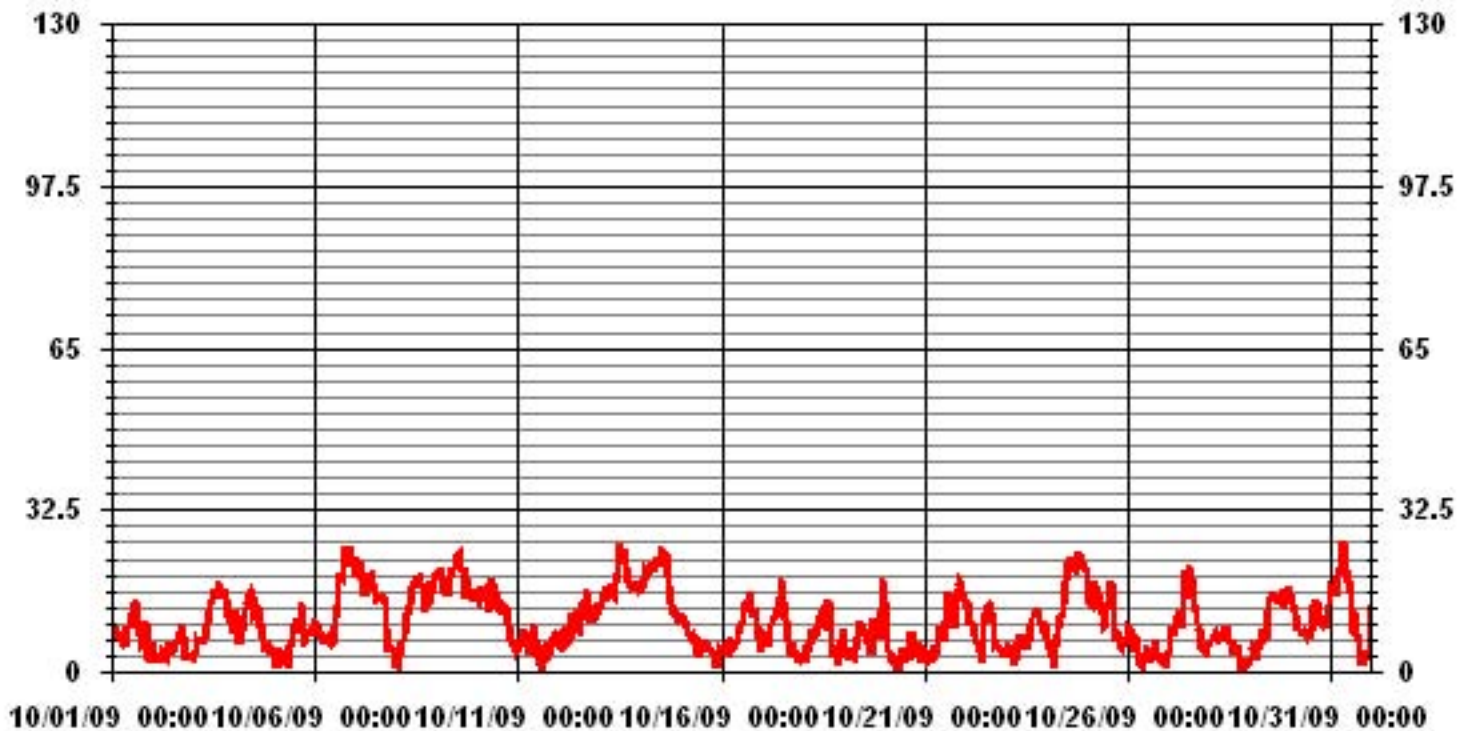
LAST CALIBRATION: September 24, 2009

MONTHLY SUMMARY

MAXIMUM 1-HR AVERAGE:	26.3	KPH	@ HOUR(S)	7	ON DAY(S)	31
MAXIMUM 24-HR AVERAGE:	18.6	KPH			ON DAY(S)	9
CALMS (≤ 1 KPH)	0.13	%				
MONTHLY CALIBRATION TIME:	0	HRS	OPERATIONAL TIME: 744 HRS			
STANDARD DEVIATION:	5.92		AMD OPERATION UPTIME: 100.0 %			
			MONTHLY AVERAGE: 10.04 KPH			



01 Hour Averages



— LICA33 WSP KPH

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - PORTABLE SITE

OCTOBER 2009

VECTOR WIND SPEED MAX instantaneous maximum in km/hr

MST		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 START	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		18.2	14.9	11	10.2	13.8	10.4	14.2	10.8	11.1	15.7	22.5	22.8	29.1	29.7	28.5	20	18.5	16.9	12	14.7	15.1	7.6	6.4	7.9	29.7	
2		9.1	6.7	5.6	6	5.2	5.8	7.4	8.2	7	8.8	15.8	17.9	17	18.9	19.3	18.3	18.4	15.1	12.5	7.1	5.6	5.3	5.2	4.4	19.3	
3		5.4	7.5	10.1	15.1	11.9	12.9	11	13.2	19.4	25.2	24.4	25.3	31.5	26.3	30.7	33.4	29.2	27.8	28.6	33.3	28.3	20.6	19.7	18.2	33.4	
4		16.6	30.6	23.3	10.8	13.1	14.8	20.3	26.3	25.4	29	29.9	27.1	24.9	26.9	26.2	17.9	18.7	13.4	9.6	7.9	9.1	10.8	9.7	15.3	30.6	
5		8.3	4.1	6.3	8.2	7.2	6.1	5.2	4.7	8.2	11.9	16.2	21.7	21.6	28	23.1	22.8	28.1	23.5	15	15.4	19.5	20.8	24.7	23.4	28.1	
6		23.9	20.8	18.9	21.8	17.7	13.7	13.5	14.1	13.5	13.4	13.1	14.6	23.5	32.1	38.6	41.5	42.2	45.8	54.4	49.6	47.7	49.9	42	44.8	54.4	
7		38.8	47.6	52.4	39.7	35.5	31.6	40	38.7	43.4	43.2	33.2	31.7	33.1	33.3	41.4	34.8	32.6	31.4	19.8	6.5	10.6	11.3	8.9	8	52.4	
8		5.1	4.7	8.3	9.3	10.6	14	18.6	21.2	22.6	35.1	33.3	35.8	36.5	42.3	45.2	39.1	50.4	40.1	33.8	29.7	29.4	30.8	45.5	37.6	50.4	
9		41.8	37.4	40.3	38.2	32.8	26.7	33	29.9	32.5	35.8	36	37.2	40.4	40.3	43.5	38.7	40.6	33.5	39.3	33.1	38.2	29.5	30.1	29.2	43.5	
10		29.7	28.1	28.4	35.3	33.4	30.9	23.4	27	38.1	33.6	30.8	28.5	29.8	25	26.9	25.8	24.1	26.1	19	12.1	11.5	11.3	11.3	10.2	38.1	
11		8.9	9.8	11.6	14.5	12	10.8	7.7	7.4	14.7	17.1	18.4	10.1	15.1	10	9.1	7.1	8.5	8.4	7.9	7.4	9.7	11.3	8.3	7.9	18.4	
12		8.7	11.5	12.3	8.9	8.3	9.2	11.4	13.7	16.2	17.3	15.9	14.6	16.8	20.1	21.3	21.8	24.7	20	21.3	14.8	15.8	19.2	20.7	16.3	24.7	
13		20.3	20.4	21.9	22.1	26	27.4	25.1	23.8	22.7	28.2	29.3	33.4	37.3	37.8	40.2	37.9	32.9	29.1	26.4	27.7	28.1	26.8	25.7	27.2	40.2	
14		24.2	25.9	31.1	32	30.7	32.9	34	33.1	33.5	34.5	34.1	33.8	39.6	37.2	33.2	37.1	34.8	26.5	23.1	18	18.2	16.2	18.5	17.3	39.6	
15		14.5	16.1	16.3	13.1	11.4	13	11.4	9.7	11	11.3	7.7	7.6	12.8	11.5	11.1	8.1	10.3	8.9	10.4	9.5	5	3.8	5	6.3	16.3	
16		5.6	7.3	10.2	8.5	10	11	7.6	8.1	11.4	13.7	19.3	21	21.5	24	25.8	25.1	22.7	22.2	18.6	24.4	23.6	20.7	12.9	8.2	25.8	
17		11.2	14.8	13.4	11.5	13.8	17.1	17	16.7	21.2	20.1	31.6	38.4	31.5	27.7	23.3	12.1	7	5.6	8.9	9	7.3	4.3	10.8	9.7	38.4	
18		8.5	6.4	11.1	8.1	12.5	14.2	11.8	12.9	12	19.8	20.7	23.2	25.6	23	20.6	24.5	23.7	9.9	8.7	11.7	15.5	6.6	7.2	8.9	25.6	
19		10.7	6.5	5	4.6	6.8	6.1	6.1	10	12.6	12.8	15.2	15.3	20.3	20.3	13.8	15.7	17.6	18	14.1	13.8	12.8	12.9	54.7	54.8	54.8	
20		39.8	13.9	8.8	6	7.2	4.6	5.4	8.3	4.8	5.6	7.5	11.1	9.9	9.5	10.2	14.3	16.2	8.5	10.7	10.9	9.8	8.9	7.1	8.6	39.8	
21		9.1	8.6	7.9	9.5	11	11.7	6.5	9.4	18.7	21.5	14	12.4	21.3	24.6	24.9	23.1	21	13.1	21.8	28.7	27.5	25.5	23.9	22.3	28.7	
22		19.2	22.1	20.5	15.5	15.1	12.6	10.7	10.2	8.9	4.7	15.5	20.2	23.3	25.4	18.9	20.6	20.2	10	9	8.1	7.1	7.1	8.1	8.8	25.4	
23		9.4	9.6	9.9	9.3	11.6	7.5	11.5	12.9	13.4	10.9	12.1	11.4	10.3	9.9	15.8	16.2	16.3	18.4	17.4	17.9	16.1	14.6	12.6	17.6	18.4	
24		17	7.2	11.4	8.5	4.2	9.8	12.2	14.5	19.7	20.7	29.8	36.2	39.1	35.6	39.2	36.7	36.9	36	37.4	43.3	37	36.3	37.3	36	43.3	
25		28.3	27.1	23.7	25.1	27.8	31.8	27.1	25.7	20.1	21.2	23.1	27.3	30.3	34.8	26.9	18.2	11.9	12.9	12.9	8.2	8.7	7.8	10.7		34.8	
26		12.4	15.8	16.8	14.7	9.9	14.2	7.9	7.6	5.5	5.6	10.2	14.5	7.6	11	11.4	11.8	9.5	6.7	6.9	4.4	5	5.6	8	8.1	16.8	
27		7.1	11	14.7	9.8	15.1	15.2	19.6	20.9	20.4	27.2	36.7	34.1	41.4	32.2	30.8	25.5	21.4	16.3	18.9	7.6	11.3	9.5	8.8	8.7	41.4	
28		8.7	9.5	11.8	11.2	11.2	9.4	9.8	10.9	13.1	14.4	15.4	12.5	11.2	9.2	12.1	9.9	7.7	12	3.6	3.5	6.2	5.2	5.1	3.4	15.4	
29		6.4	8.9	7.7	10.9	6.5	8.9	9.5	14	12.5	12	18.7	21.9	25	27.6	24.5	22.3	21.6	20.7	20.1	20.9	24.1	23	20	25	27.6	
30		23.9	21.7	18.9	17.6	13.6	12.9	11.3	14.6	14.4	11.4	12.4	11.6	13.6	19	19.3	20.4	17	17	18.5	17.3	12.7	18.6	20.8	26.3	26.3	
31		24.3	22.8	24.1	29	30.7	27.9	33.9	40.7	29.5	29.3	27.8	28.1	13.5	19	11.7	15.7	15	7.7	5	5.2	7.7	9.7	11	21.6	40.7	
PEAK		41.8	47.6	52.4	39.7	35.5	32.9	40.0	40.7	43.4	43.2	36.7	38.4	41.4	42.3	45.2	41.5	50.4	45.8	54.4	49.6	47.7	49.9	54.7	54.8		

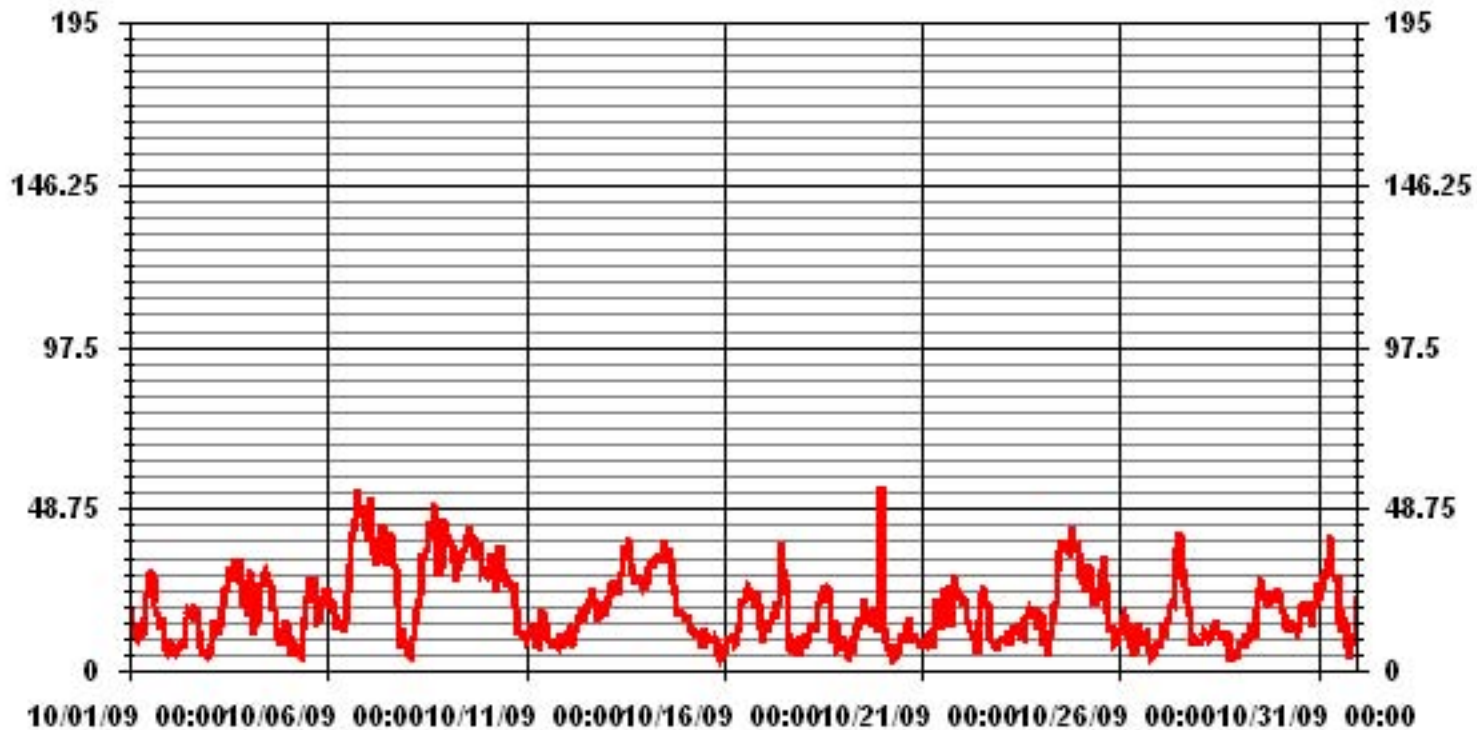
STATUS FLAG CODES

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

MAXIMUM INSTANTANEOUS READING	54.8	KPH	@ HOUR(S)	23
			ON DAY(S)	19

01 Hour Averages



— LICA33 WSMAX KPH

LICA33
WSP / WDR Joint Frequency Distribution (Percent)

October 2009

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	2.55	1.34	1.07	1.47	2.15	2.28	1.61	2.01	1.61	.80	2.01	2.28	2.28	2.15	3.09	2.01	30.77
< 12.0	1.20	.53	1.34	1.34	6.72	4.03	.53	1.34	2.68	.67	1.47	1.20	1.61	3.49	2.01	3.09	33.33
< 20.0	2.41	.40	.67	.26	7.93	2.15	.94	.80	.00	.00	.67	.53	1.74	2.28	5.10	2.68	28.62
< 29.0	.00	.00	.00	.00	2.55	.40	.00	.00	.00	.00	.00	.00	.13	2.55	.94	.67	7.25
< 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	6.18	2.28	3.09	3.09	19.35	8.87	3.09	4.16	4.30	1.47	4.16	4.03	5.77	10.48	11.15	8.46	

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	19	10	8	11	16	17	12	15	12	6	15	17	17	16	23	15	229
< 12.0	9	4	10	10	50	30	4	10	20	5	11	9	12	26	15	23	248
< 20.0	18	3	5	2	59	16	7	6			5	4	13	17	38	20	213
< 29.0					19	3							1	19	7	5	54
< 39.0																	
>= 39.0																	
Totals	46	17	23	23	144	66	23	31	32	11	31	30	43	78	83	63	

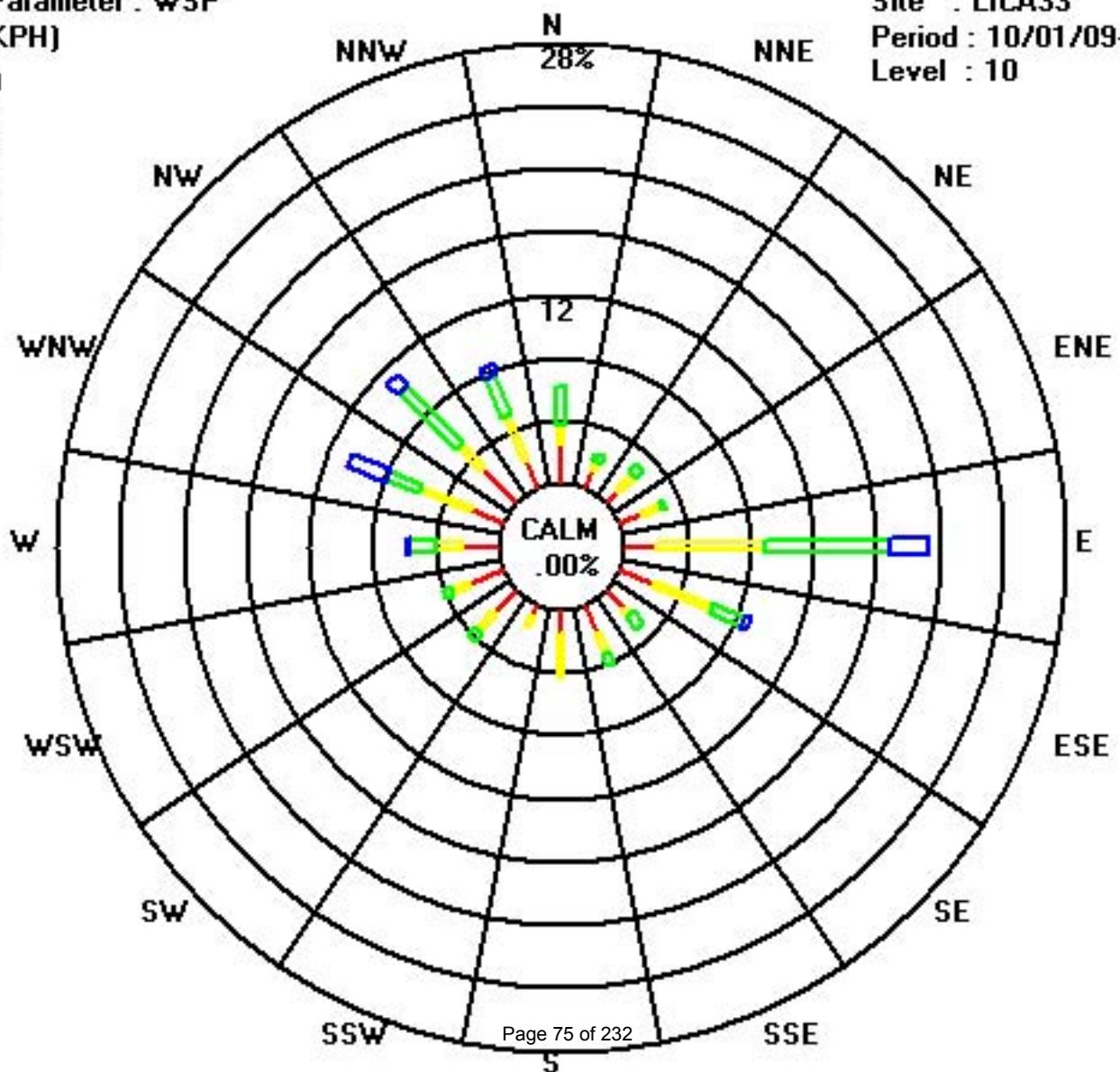
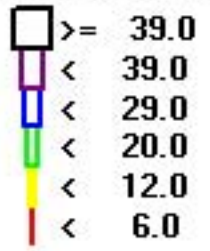
Calm : .00 %

Total # Operational Hours : 744

Class Limits (KPH)

Period : 10/01/09-10/31/09

Level : 10



Vector Wind Direction

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - PORTABLE SITE

OCTOBER 2009

VECTOR WIND DIRECTION (WD) hourly averages in degrees

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	24-HOUR	24-HOUR AVG	24-HOUR QUADRANT	RDGS.	
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.	QUADRANT	RDGS.		
DAY																													
1	307	298	317	294	280	281	280	287	313	340	320	303	323	325	349	339	341	357	357	36	54	56	255	236	323	NW	24		
2	297	310	322	355	36	283	243	266	299	14	71	38	323	352	331	333	35	83	82	68	25	351	348	21	2	N	24		
3	2	347	344	340	326	326	348	340	356	11	11	12	9	0	0	2	0	359	353	357	349	339	340	335	355	N	24		
4	358	55	33	19	4	3	13	29	40	35	47	33	52	38	47	53	52	58	71	28	2	342	9	337	34	NE	24		
5	359	308	297	322	340	315	237	282	172	162	197	226	230	266	272	218	219	201	187	183	184	185	199	187	221	SW	24		
6	190	181	177	188	201	194	183	184	186	218	268	286	308	336	350	337	326	322	323	327	325	328	330	323	311	NW	24		
7	321	330	336	327	332	327	327	326	330	332	320	319	305	326	322	308	308	306	270	264	256	261	244	320	NW	24			
8	272	337	325	3	3	359	1	2	2	355	342	340	352	332	335	332	332	330	325	306	304	301	306	309	332	NNW	24		
9	310	306	307	309	299	296	300	298	300	303	302	303	299	296	301	300	307	316	318	317	318	312	316	312	305	WNW	24		
10	312	310	305	312	313	302	301	311	315	315	321	319	335	337	340	336	345	350	345	334	318	308	331	306	320	NW	24		
11	309	327	336	345	344	350	344	357	35	22	27	9	1	279	322	269	29	64	71	102	120	122	94	76	24	NNE	24		
12	66	79	89	90	88	93	100	87	100	106	108	79	93	107	95	97	112	111	112	102	93	88	94	98	97	E	24		
13	96	95	93	91	94	91	92	90	97	95	104	98	98	103	105	100	102	103	99	97	94	99	93	97	97	E	24		
14	90	85	86	88	88	87	93	95	94	92	89	89	93	93	90	100	101	94	93	93	97	89	91	86	91	E	24		
15	82	92	94	91	95	106	103	110	96	121	146	160	171	183	224	232	236	259	248	206	157	170	126	130	126	SE	24		
16	122	142	169	171	175	179	157	149	151	162	177	175	155	158	156	154	154	138	136	156	154	147	147	161	154	SSE	24		
17	171	224	241	215	222	226	227	227	231	245	279	289	275	262	261	260	253	239	236	257	250	114	228	203	247	WSW	24		
18	226	242	299	273	273	288	276	289	302	317	327	336	329	323	334	350	345	320	330	304	354	83	79	91	320	NW	24		
19	107	111	95	95	43	91	76	49	73	97	106	111	123	133	175	182	109	49	104	107	99	89	118	124	105	ESE	24		
20	115	99	103	80	78	45	23	320	333	302	310	245	264	144	212	286	305	317	300	310	330	354	20	357	349	NNW	24		
21	352	43	155	80	76	105	114	121	164	156	160	154	128	101	100	90	75	76	83	91	96	88	84	86	99	E	24		
22	82	82	82	79	79	84	89	104	119	174	277	281	274	281	280	278	292	291	284	261	230	239	228	271	298	WNW	24		
23	258	239	231	222	166	133	170	134	147	155	131	110	93	110	104	95	88	83	91	96	100	107	82	100	112	ESE	24		
24	94	122	126	117	200	215	247	240	248	245	262	271	278	283	286	290	291	290	292	295	297	292	297	303	282	W	24		
25	293	292	270	276	273	269	266	254	256	255	245	241	240	239	233	232	223	184	176	185	152	147	126	117	248	WSW	24		
26	81	110	77	89	82	92	90	351	95	227	216	286	249	277	253	216	169	142	154	102	82	319	345	282	112	ESE	24		
27	267	292	285	283	293	298	294	307	313	309	301	296	298	300	308	301	297	285	281	314	299	317	305	298	298	WNW	24		
28	294	299	303	298	300	302	298	294	295	300	304	345	327	326	297	331	354	32	272	291	71	77	39	28	313	NW	24		
29	90	112	126	106	199	104	114	117	106	111	112	133	145	147	136	140	118	109	99	97	94	98	92	92	114	ESE	24		
30	86	82	82	85	74	65	73	88	99	75	93	101	85	81	87	91	109	119	126	122	97	91	108	103	92	E	24		
31	105	107	97	96	99	100	98	98	104	100	104	97	100	74	48	67	92	104	154	146	166	191	200	234	101	E	24		
HOURLY AVG	359	347	344	355	344	359	348	357	356	355	342	345	352	352	350	350	354	359	357	357	354	354	348	357					

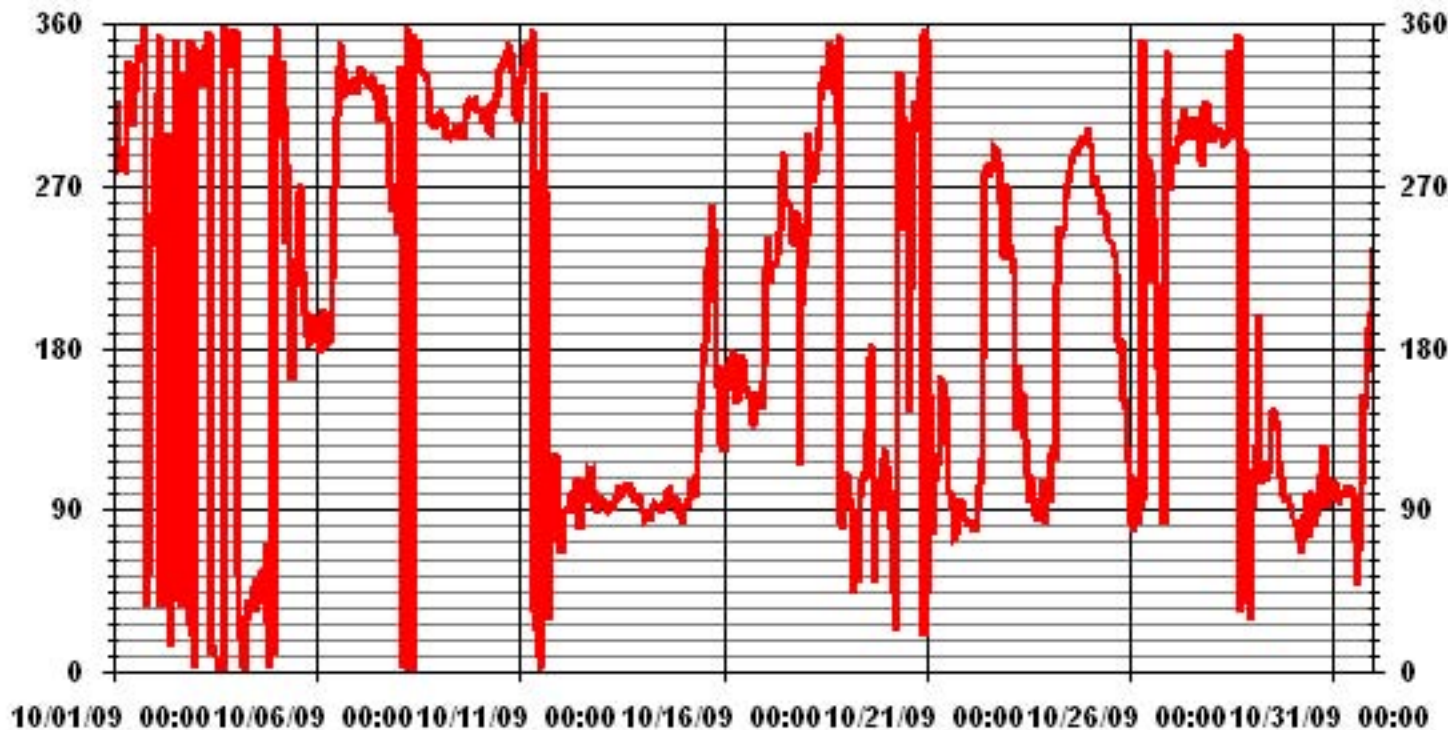
STATUS FLAG CODES

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	107.02	AMD OPERATION UPTIME	100.0 %
		MONTHLY AVERAGE	14 DEG

01 Hour Averages



— LICA33 WDR DEG

Standard Deviation Wind Direction

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - PORTABLE SITE

OCTOBER 2009

STANDARD DEVIATION WIND DIRECTION (STDWDIR) hourly averages in degrees

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00
DAY																								
1	11	8	10	6	5	5	8	4	16	20	22	25	23	20	18	15	18	12	13	13	5	32	16	14
2	6	7	23	16	25	19	7	17	21	19	39	49	66	35	32	32	19	8	5	11	13	9	13	8
3	10	13	9	14	11	13	13	13	13	13	13	13	12	12	14	14	13	14	14	15	14	14	13	14
4	16	12	11	15	10	11	12	10	14	14	14	14	17	16	12	18	12	12	5	9	26	20	12	16
5	13	24	17	8	11	14	11	52	33	23	21	19	23	25	26	20	17	23	19	16	17	17	24	19
6	21	17	12	19	19	19	17	16	20	19	19	12	13	15	14	14	13	13	13	13	13	14	13	13
7	13	14	15	14	15	14	14	14	15	15	16	14	14	15	18	15	13	12	11	10	11	13	13	13
8	23	14	15	9	10	12	12	12	13	14	15	16	16	17	17	15	14	13	13	11	11	10	11	12
9	13	11	11	12	11	10	11	10	11	12	12	13	13	12	12	12	12	13	13	13	13	13	13	13
10	12	12	11	12	12	11	10	13	13	14	15	16	17	17	16	16	13	14	13	12	9	9	17	14
11	11	11	13	12	14	13	10	11	14	15	25	54	25	51	63	39	47	9	6	4	7	6	5	5
12	4	6	6	7	6	6	7	12	8	9	10	14	19	18	11	10	8	7	7	6	6	7	6	5
13	6	6	6	7	7	7	7	7	7	8	8	9	9	9	10	8	8	7	7	7	7	7	7	7
14	7	8	8	8	8	8	8	8	8	8	8	9	8	8	8	8	8	7	7	7	7	7	7	8
15	8	7	7	6	5	6	7	7	9	10	18	32	17	19	15	15	12	15	20	14	40	21	8	4
16	5	10	13	11	13	10	11	10	15	20	21	19	18	16	16	13	13	6	7	14	13	13	12	22
17	12	18	28	17	30	16	7	4	8	16	15	13	13	16	15	12	11	13	8	12	15	24	49	38
18	47	29	18	20	14	10	10	8	9	13	15	16	19	23	24	15	13	10	14	22	48	14	7	5
19	4	14	8	22	8	14	14	15	12	11	11	23	18	22	18	18	41	12	8	6	16	16	9	7
20	7	9	8	20	24	19	25	16	65	29	21	63	28	50	15	11	9	18	20	12	9	40	12	12
21	29	35	33	51	23	12	11	13	17	15	14	20	15	11	9	9	7	6	8	8	7	7	8	8
22	7	8	8	6	7	9	7	8	9	17	19	12	13	12	11	11	8	8	6	10	6	7	10	20
23	15	14	13	26	49	30	15	14	18	17	16	16	26	12	9	11	7	7	7	7	7	7	13	7
24	15	10	11	40	28	17	10	9	12	12	15	14	11	11	10	10	10	10	10	10	10	10	10	11
25	9	8	9	8	8	9	10	9	11	14	15	14	13	14	12	10	11	16	11	17	11	7	7	9
26	9	18	14	13	30	11	12	50	23	27	24	50	47	49	31	19	10	7	18	12	21	27	51	23
27	15	6	5	5	7	6	7	11	14	12	11	11	10	12	12	10	10	7	12	11	16	10	7	12
28	7	6	8	7	9	7	6	7	9	9	12	20	15	30	15	13	11	12	42	15	21	24	31	20
29	27	8	11	20	18	15	7	7	10	8	7	11	13	12	8	9	7	6	6	7	7	7	7	7
30	7	7	7	7	7	8	7	8	16	8	8	9	12	10	11	8	10	7	9	10	5	7	7	7
31	6	7	6	7	7	6	7	7	7	7	7	8	10	7	9	10	12	13	24	11	12	23	21	7

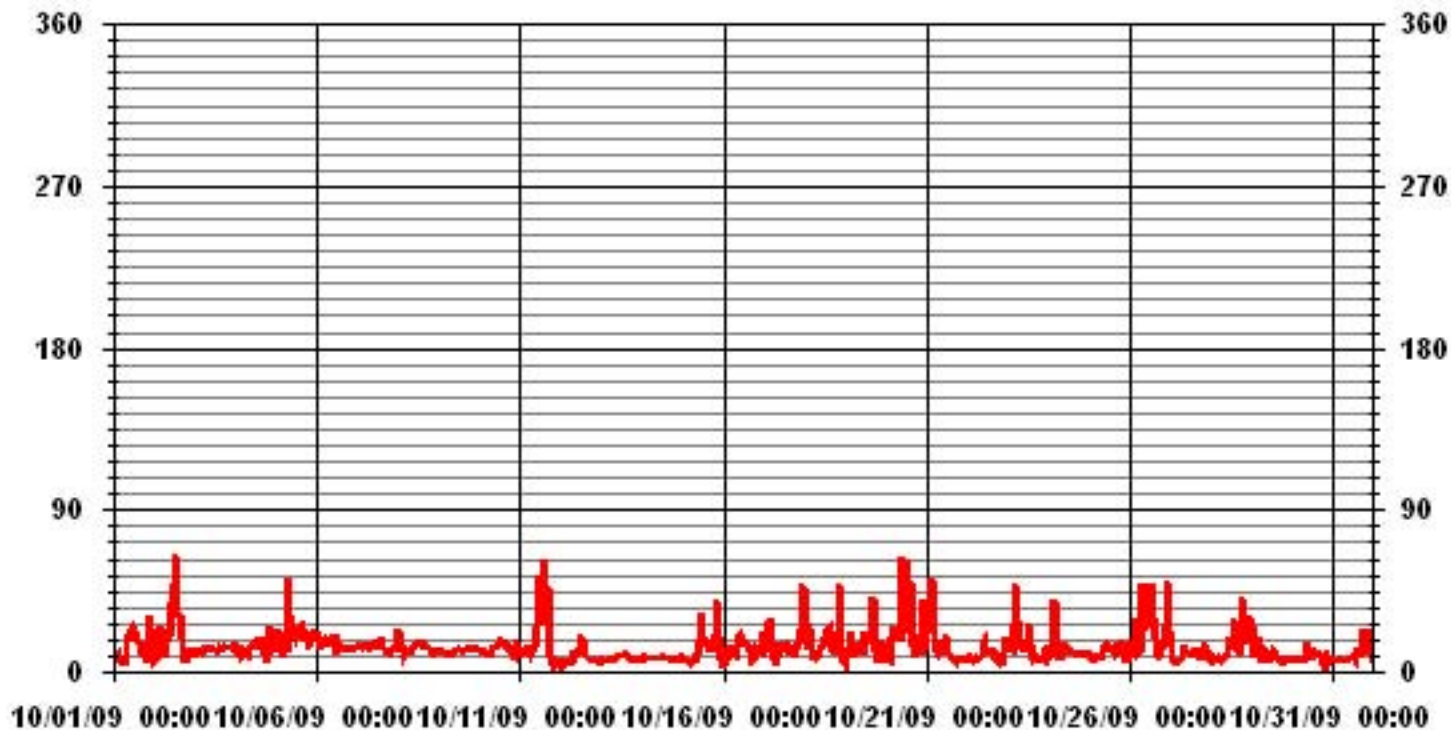
STATUS FLAG CODES

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

LAST CALIBRATION: September 24, 2009

CALIBRATION TIME: 0 HRS OPERATIONAL TIME: 744 HRS

01 Hour Averages

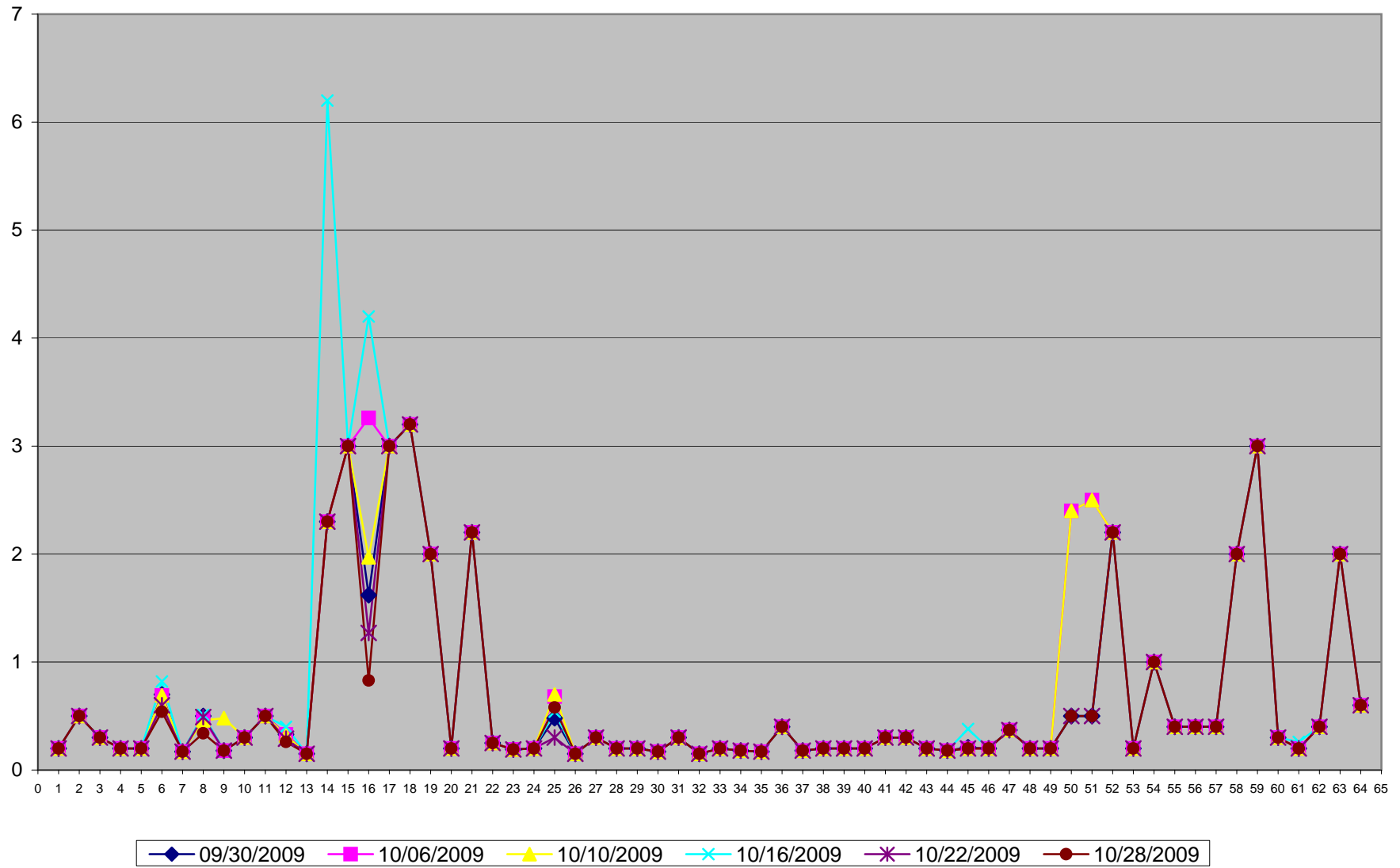


— LICA33 STDWDIR DEG

Volatile Organics

Volatile Organics in ppb

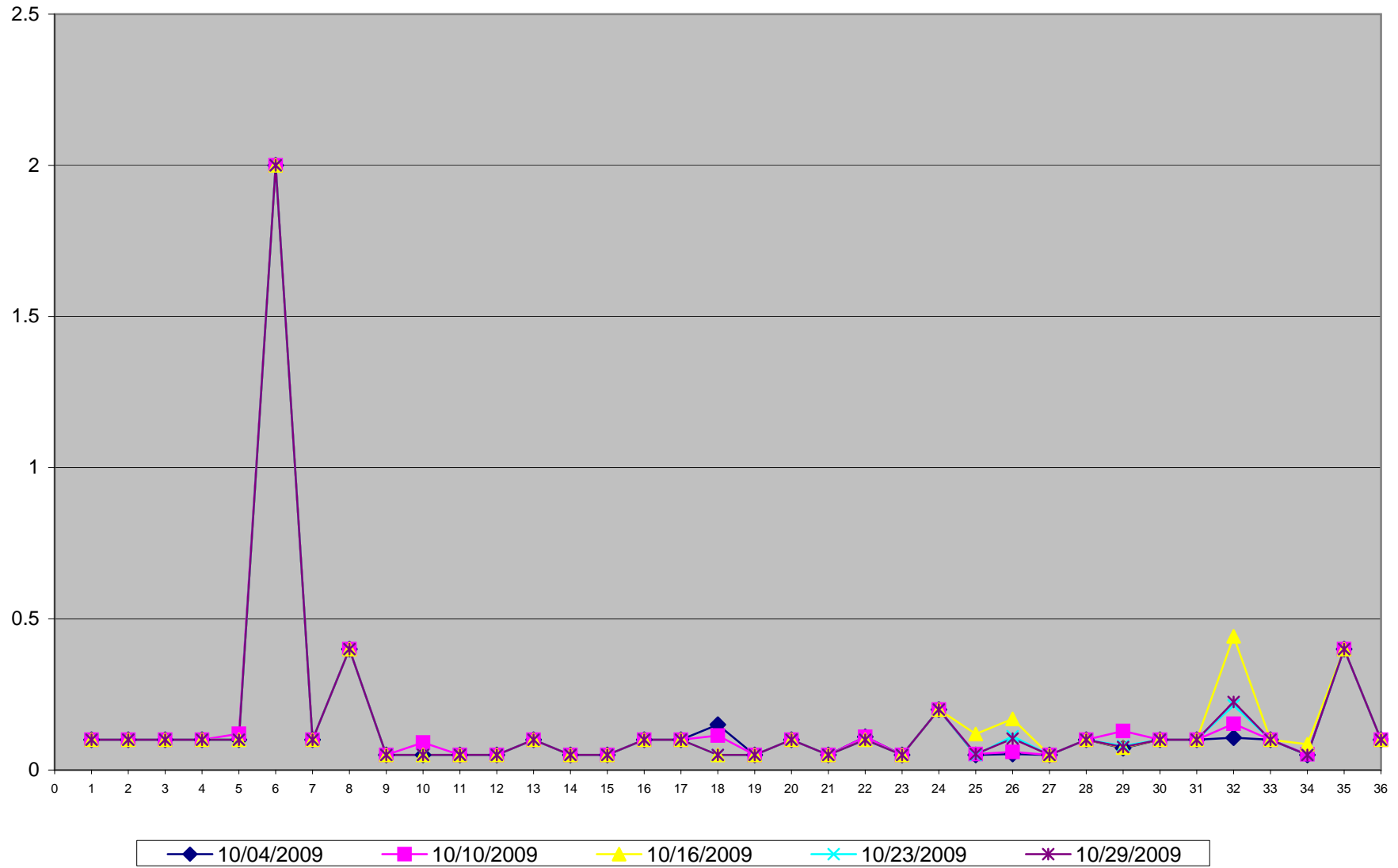
Site: LICA - Portable Site



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	Ethylbenzene
15	2-Propanol	47	p+m-Xylene
16	2-Propanone	48	o-Xylene
17	Methyl 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

PAHs in ug 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,l)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

SO₂ Calibration Report

Station Information

Calibration Date	September 29, 2009		Previous Calibration	-	
Company	Lakeland Community and Industry Association				
Plant / Location	Portable / Devon Wellsite 13-16-62-5 W4M				
Start Time (MST)	11:40	End Time (MST)	15:01		
Reason:	Installation Calibration				
Barometric Pressure	705	mmHg	Station Temperature	23	Deg C
Cal Gas	52.2	ppm	Cal Gas Expiry date	12/19/2010	
DAS Output Voltage	0 - 10		Volts		

Equipment Information

Analyzer Make / Model:	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 - 500		ppb		
Sample Flow / Box Temp	603	ccm	32.2	597	Deg C
HVPS / Lamp Setting	536		3441	536	3430
PMT / RxCell Temp	8.1	Deg C	50.0	8.1	Deg C
Converter / IZS Temp	NA	Deg C	45.0	NA	Deg C
Offset / Slope	39.7		1.027	36.4	1.06

Calibration Data

Dilution Flow Rate	Source Gas Flow Rate	Calculated Concentration	Indicated Conc. (DAS)	Correction Factor
4999	0	0	0	N/A
4924	76.7	801	801	0.9995
4962	38.3	400	399	1.0021
4983	19.1	199	199	1.0016
4998	0	0	0	N/A
Sum of Least Squares				0.2375
New Correction Factor				0.9995

Before Calibration

After Calibration

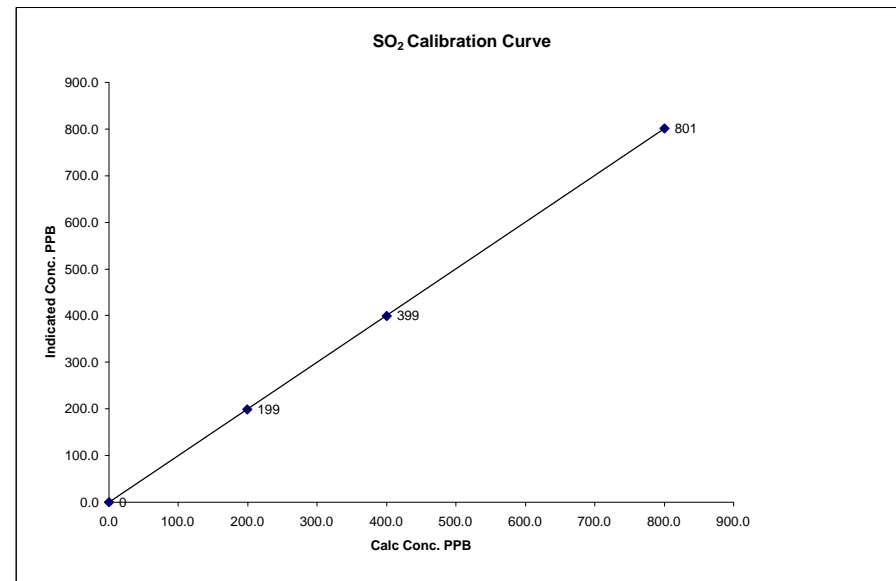
Auto Zero	-	0.1
Auto Span	-	353.0
Sample Lines Connected	YES	
Percent Change from Previous Calibration	-	

Calibration Performed by: Shea Beaton

SO₂ Calibration Curve

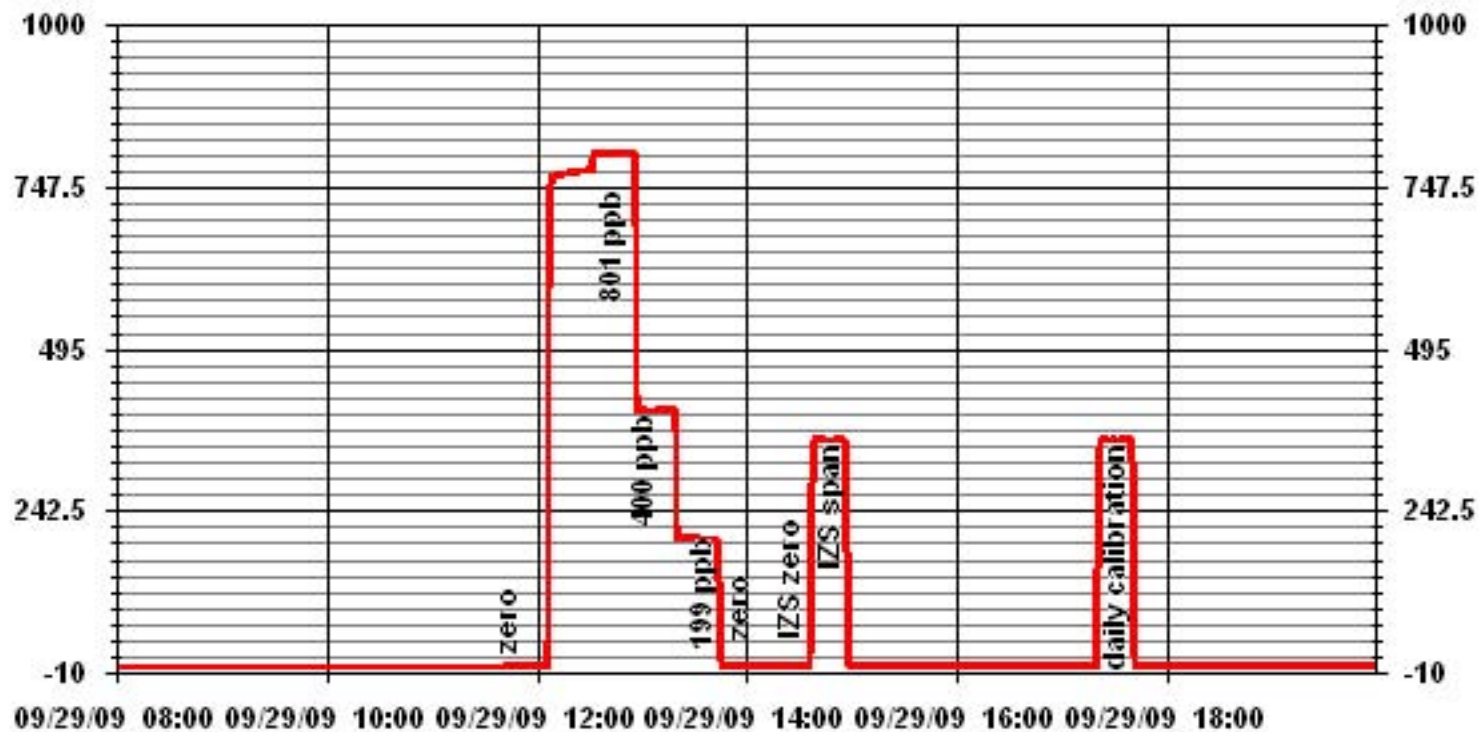
Calibration Date	September 29, 2009	
Company	Lakeland Community and Industry Association	
Plant / Location	Portable / Devon Wellsite 13-16-62-5 W4M	
Start Time (MST)	11:40	End Time (MST) 15:01

Calculated Conc. ppb	Indicated Response ppb	Correction Factor	Correlation Coefficient Slope (≥ 0.995) (0.85 to 1.15)	Intercept (± 3% F.S.)
0	0	n/a	0.999998	1.000488
199	199	1.0016		-0.366687
400	399	1.0021		
801	801	0.9995		



Notes: Prior to this cal, the UV filter was replaced, the internal pump was removed and an external was connected, a lamp cal was done and an analog output cal was performed.

01 Minute Averages



— LICA33 SO2_ PPB

SO₂ Calibration Report

Station Information

Calibration Date	October 26, 2009	Previous Calibration	September 29, 2009
Company	Lakeland Community and Industry Association		
Plant / Location	Portable / Devon Wellsite 13-16-62-5 W4M		
Start Time (MST)	11:13	End Time (MST)	15:55
Reason:	Monthly Calibration		
Barometric Pressure	- mmHg	Station Temperature	23 Deg C
Cal Gas	52.2 ppm	Cal Gas Expiry date	12/19/2010
DAS Output Voltage	0 - 10 Volts		

Equipment Information

Analyzer Make / Model:	API 100E	S/N :	467	Method:	UV absorbtion
Converter Make / Model:	-	S/N :	-		
Calibrator Make / Model:	Enviroics 2000	S/N :	1991	Method:	Dilution
DAS Make / Model:	ESC 8832	S/N :	AO 717		
Flow Meter:	Enviroics 2000	S/N :	1991		

Analyzer Settings

Before Calibration		After Calibration	
Concentration Range	0 - 500 ppb		
Sample Flow / Box Temp	600 ccm, 31.9 Deg C	596 ccm, 33.5 Deg C	
HVPS / Lamp Setting	536, 2786	556, 3406	
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	36.4, 1.06	41.8, 1.007	

Calibration Data

Dilution Flow Rate	Source Gas Flow Rate	Calculated Concentration	Indicated Conc. (DAS)	Correction Factor
4998	0	0	1	N/A
4927	76.6	799	760	1.0515
Sum of Least Squares				#DIV/0!
New Correction Factor				1.0515

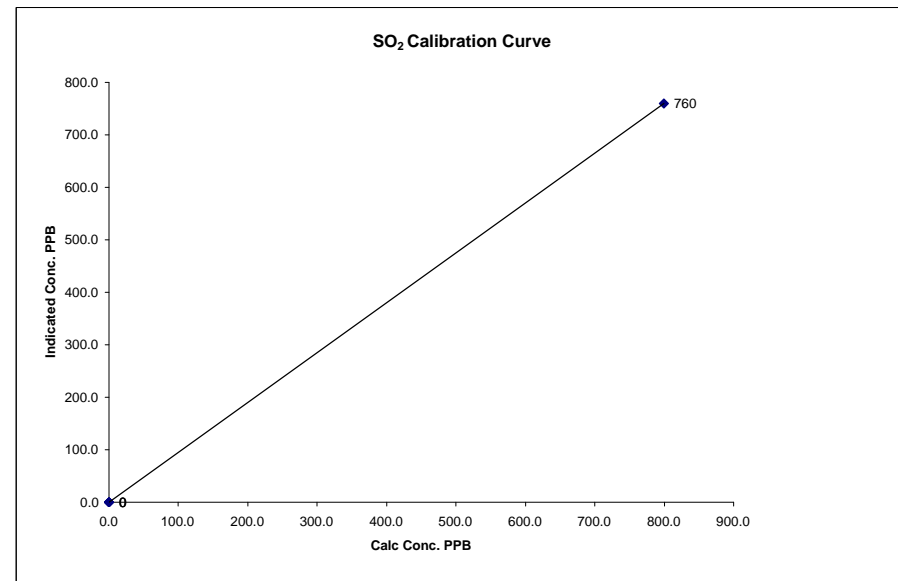
	Before Calibration	After Calibration
Auto Zero	0.2	0.0
Auto Span	332.0	361.0
Sample Lines Connected		YES
Percent Change from Previous Calibration		-4.9%

Calibration Performed by: Shea Beaton

SO₂ Calibration Curve

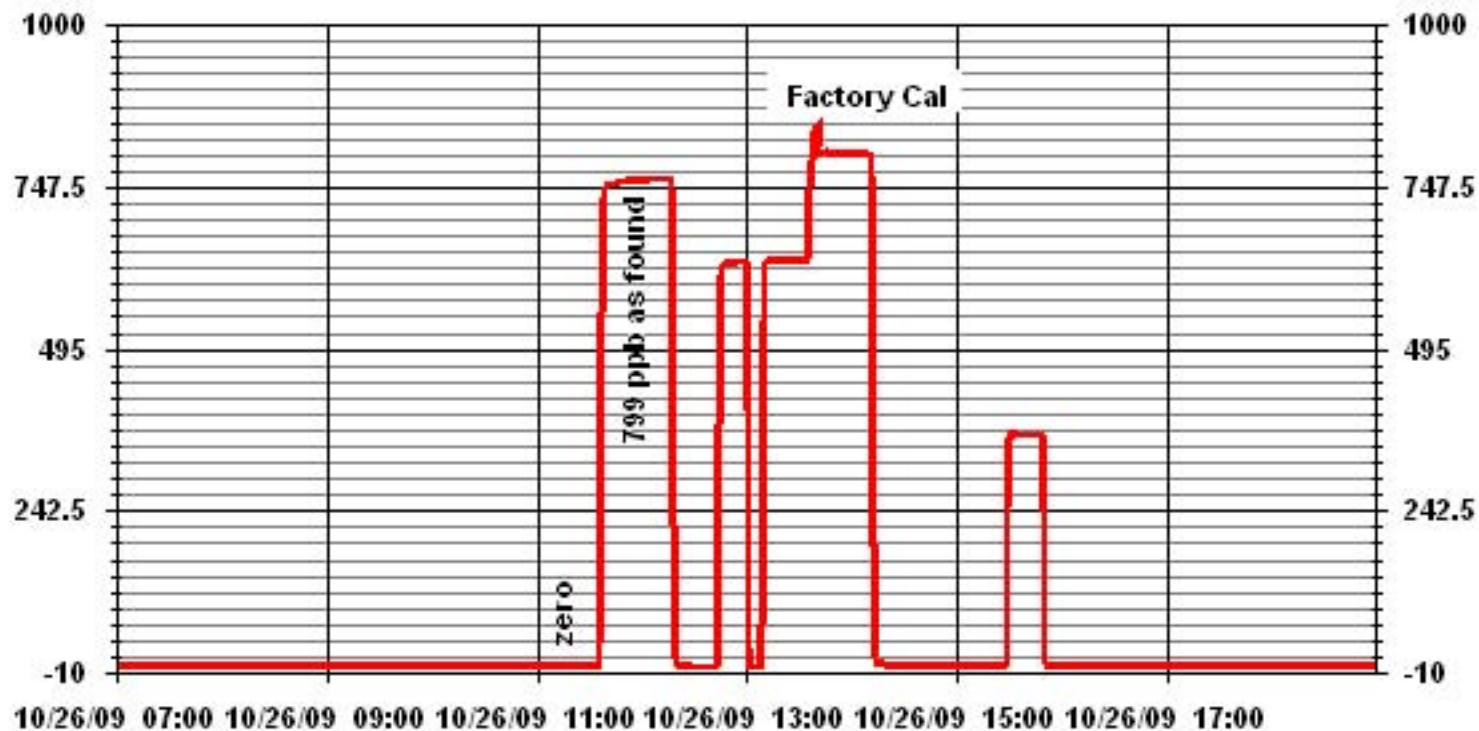
Calibration Date	October 26, 2009
Company	Lakeland Community and Industry Association
Plant / Location	Portable / Devon Wellsite 13-16-62-5 W4M
Start Time (MST)	11:13
End Time (MST)	15:55

Calculated Conc. ppb	Indicated Response ppb	Correction Factor	Correlation Coefficient Slope (≥ 0.995) (0.85 to 1.15)	Intercept (± 3% F.S.)	
0	0	n/a			1.00000
0	0	#DIV/0!			0.951036
0	0	#DIV/0!			0.000000
799	760	1.0515			



Notes: Following the as found points a UV lamp adjustment and Factory cal were performed, the span and offset were adjusted. Ran daily cal program, multi-point to follow tomorrow.

01 Minute Averages



— LICA33 SO2_ PPB

SO₂ Calibration Report

Station Information

Calibration Date	October 27, 2009	Previous Calibration	September 29, 2009
Company	Lakeland Community and Industry Association		
Plant / Location	Portable / Devon Wellsite 13-16-62-5 W4M		
Start Time (MST)	7:00	End Time (MST)	11:07
Reason:	Post Repair Calibration		
Barometric Pressure	- mmHg	Station Temperature	22 Deg C
Cal Gas	52.2 ppm	Cal Gas Expiry date	12/19/2010
DAS Output Voltage	0 - 10 Volts		

Equipment Information

Analyzer Make / Model:	API 100E	S/N :	467	Method:	UV absorbtion
Converter Make / Model:	-	S/N :	-		
Calibrator Make / Model:	EnviroNics 2000	S/N :	1991	Method:	Dilution
DAS Make / Model:	ESC 8832	S/N :	AO 717		
Flow Meter:	EnviroNics 2000	S/N :	1991		

Analyzer Settings

Before Calibration				After Calibration			
Concentration Range	0 - 500			ppb			
Sample Flow / Box Temp	600 ccm	32.1 Deg C		603 ccm	32.5 Deg C		
HVPS / Lamp Setting	536	3392		556	3393		
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	41.8	1.007		40.7	1.011		

Calibration Data

Dilution Flow Rate	Source Gas Flow Rate	Calculated Concentration	Indicated Conc. (DAS)	Correction Factor
4998	0	0	0	N/A
4924	76.6	800	795	1.0058
4998	0	0	0	N/A
4924	76.6	800	800	0.9995
4961	38.3	400	400	0.9998
4982	19.2	200	199	1.0070
4998	0	0	0	N/A
Sum of Least Squares				0.2383
New Correction Factor				0.9995

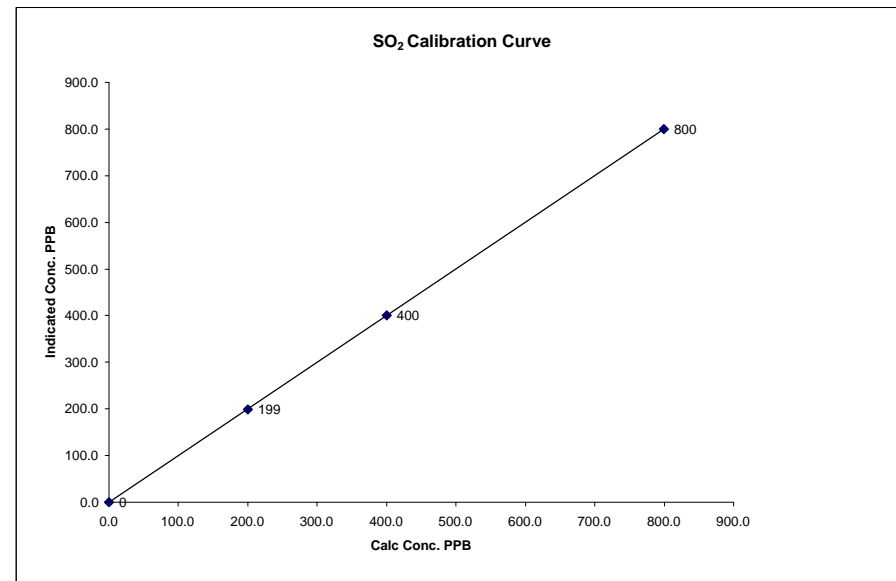
	Before Calibration	After Calibration
Auto Zero	0.0	0.5
Auto Span	361.0	355.0
Sample Lines Connected		YES
Percent Change from Previous Calibration		-0.6%

Calibration Performed by: Shea Beaton

SO₂ Calibration Curve

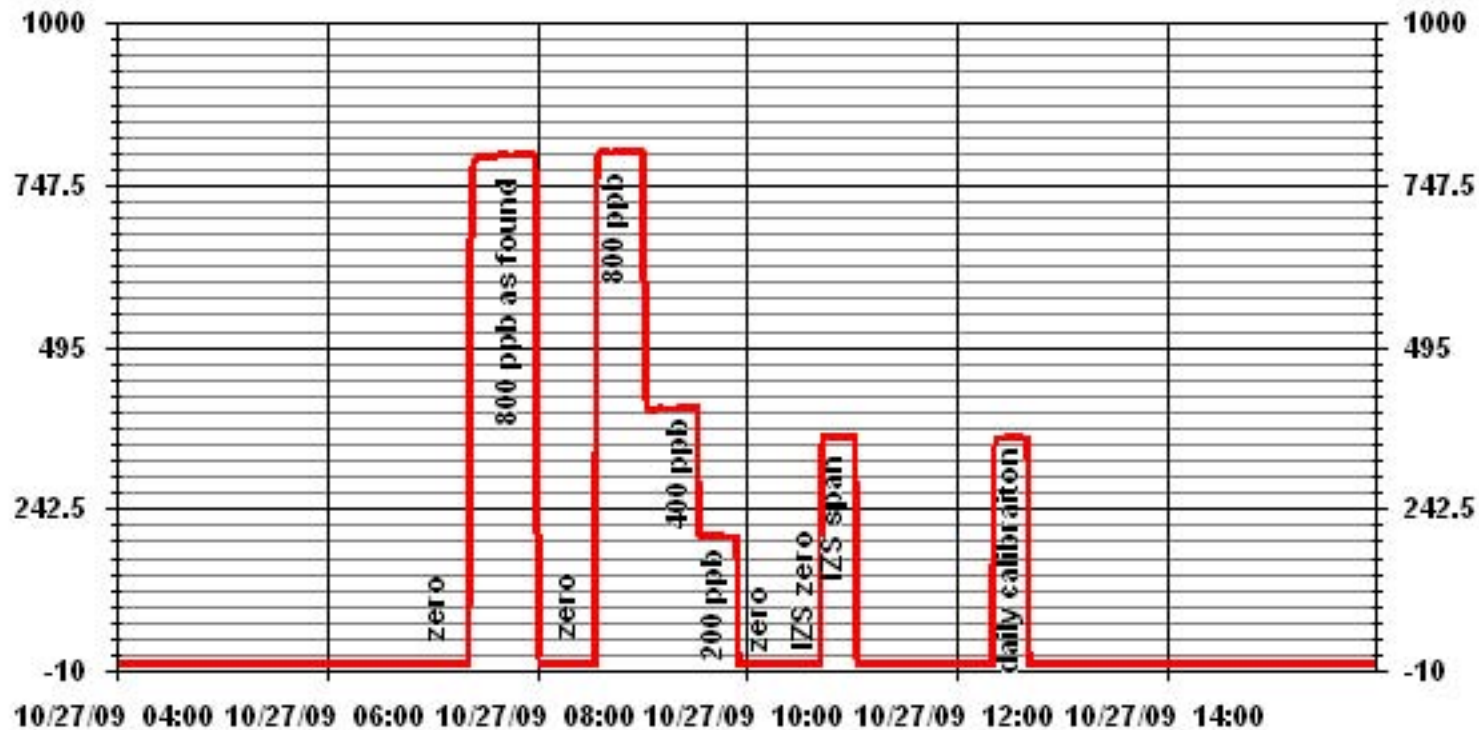
Calibration Date	October 27, 2009
Company	Lakeland Community and Industry Association
Plant / Location	Portable / Devon Wellsite 13-16-62-5 W4M
Start Time (MST)	7:00
End Time (MST)	11:07

Calculated Conc. ppb	Indicated Response ppb	Correction Factor	Correlation Coefficient Slope (≥ 0.995) (0.85 to 1.15)	Intercept (± 3% F.S.)
0	0	n/a	0.999996	1.001116
200	199	1.0070		
400	400	0.9998		
800	800	0.9995		-0.619723



Notes: Yesterday the UV lamp voltage was adjusted and a factory cal was done. The analyzer was allowed to stabilize overnight.

01 Minute Averages



Hydrogen Sulphide

H₂S Calibration Report

Station Information

Calibration Date	September 29, 2009		Previous Calibration	-
Company	LAKELAND INDUSTRY & COMMUNITY ASSOCIATION			
Plant / Location	Portable/ Devon Wellsite 13-16-62-5-W4M			
Start Time (MST)	14:15	End Time (MST)	17:30	
Reason:	Installation Calibration			
Barometric Pressure	705	mmHg	Station Temperature	23 Deg C
Cal Gas	10.8	ppm	Cal Gas Expiry date	06/22/2010
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	555 ccm	30.8	Deg C	549	Deg C
HVPS / Lamp Setting	504	3407		3401	
PMT / RxCell Temp	7.9 Deg C	50	Deg C	7.9	Deg C
Converter / IZS Temp	314.1 Deg C	45	Deg C	315	Deg C
Offset / Slope	38.9	0.985		0.996	

Calibration Data

Dilution Flow Rate	Source Gas Flow Rate	Calculated Concentration	Indicated Conc. (DAS)	Correction Factor
4998	0	0	0	N/A
4961	37	80	80	0.9994
4977	20.8	45	45	0.9988
4988	11.6	25	25	1.0023
4999	0	0	0	N/A
Sum of Least Squares				0.9995
New Correction Factor				0.9994

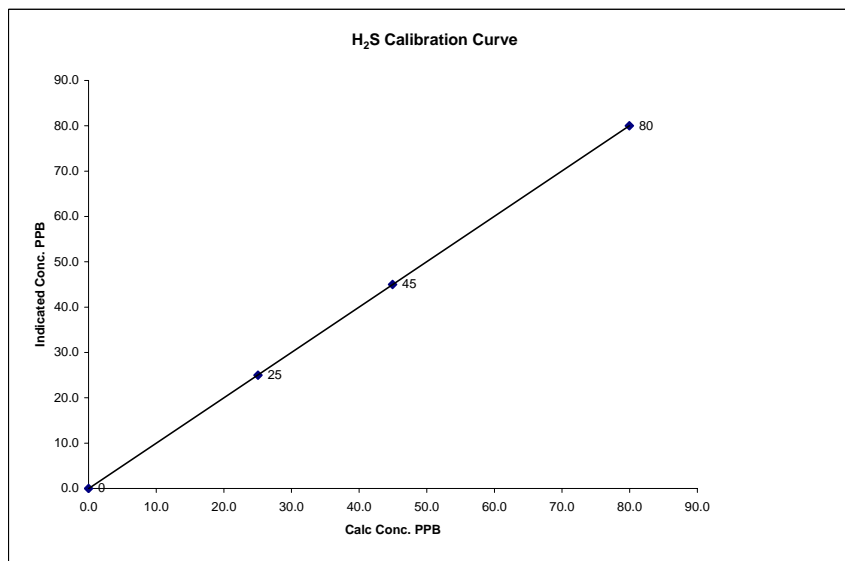
		Before Calibration	After Calibration
Auto Zero		-	0.3
Auto Span		-	60.0
Sample Lines Connected		YES	
Percent Change from Previous Calibration		-	

Calibration Performed by: Shea Beaton

H₂S Calibration Curve

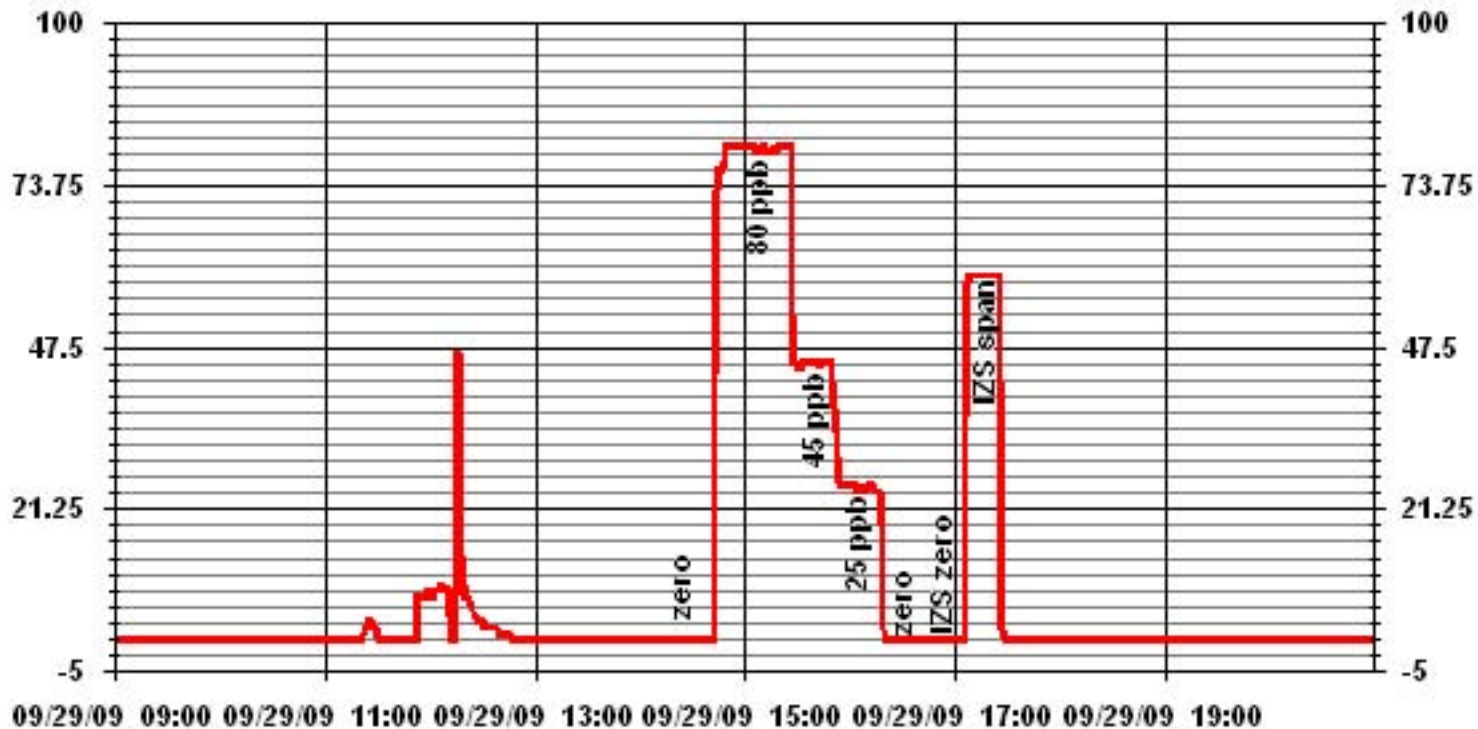
Calibration Date	September 29, 2009	
Company	LAKELAND INDUSTRY & COMMUNITY ASSOCIATION	
Plant / Location	Portable/ Devon Wellsite 13-16-62-5-W4M	
Start Time (MST)	14:15	End Time (MST) 17:30

Calculated Conc. ppb	Indicated Response ppb	Correction Factor	Correlation Coefficient Slope	(≥ 0.995) (0.85 to 1.15)	0.999999
0	0	n/a	Intercept	(± 3% F.S.)	-0.023979
25	25	1.0023			
45	45	0.9988			
80	80	0.9994			



Notes: _____

01 Minute Averages



— LICA33 H2S_ PPB

H₂S Calibration Report

Station Information

Calibration Date	October 26, 2009	Previous Calibration	September 29, 2009
Company	LAKELAND INDUSTRY & COMMUNITY ASSOCIATION		
Plant / Location	Portable/ Devon Wellsite 13-16-62-5-W4M		
Start Time (MST)	11:49	End Time (MST)	16:21
Reason:	Monthly Calibration		
Barometric Pressure	-	mmHg	Station Temperature
Cal Gas	10.8	ppm	Cal Gas Expiry date
DAS Output Voltage	0 - 1	Volts	22 Deg C

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	555 ccm	31.3 Deg C	544	32.8	Deg C
HVPS / Lamp Setting	504	3104	504	3100	
PMT / RxCell Temp	7.9 Deg C	50 Deg C	7.9 Deg C	50 Deg C	
Converter / IZS Temp	315.1 Deg C	45 Deg C	315.8 Deg C	45 Deg C	
Offset / Slope	38.9	0.996	38.1	1.061	

Calibration Data

Dilution Flow Rate	Source Gas Flow Rate	Calculated Concentration	Indicated Conc. (DAS)	Correction Factor
4998	0	0	1	N/A
4961	37	80	80	0.9994
4998	0	0	0	N/A
4961	37	80	80	0.9994
4976	20.9	45	45	1.0038
4989	11.6	25	25	1.0021
4999	0	0	0	N/A
Sum of Least Squares				1.0006
New Correction Factor				0.9994

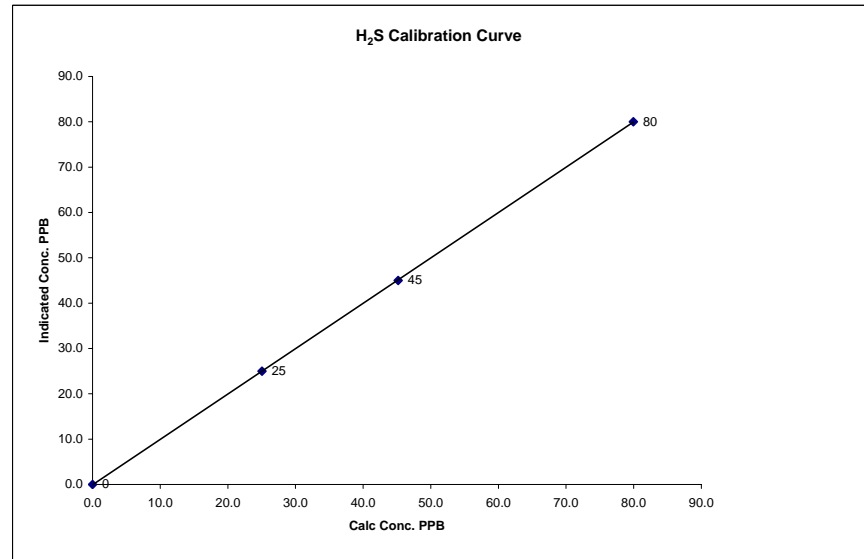
		Before Calibration	After Calibration
Auto Zero		0.5	0.0
Auto Span		58.0	61.0
Sample Lines Connected			YES
Percent Change from Previous Calibration			0.0%

Calibration Performed by: Shea Beaton

H₂S Calibration Curve

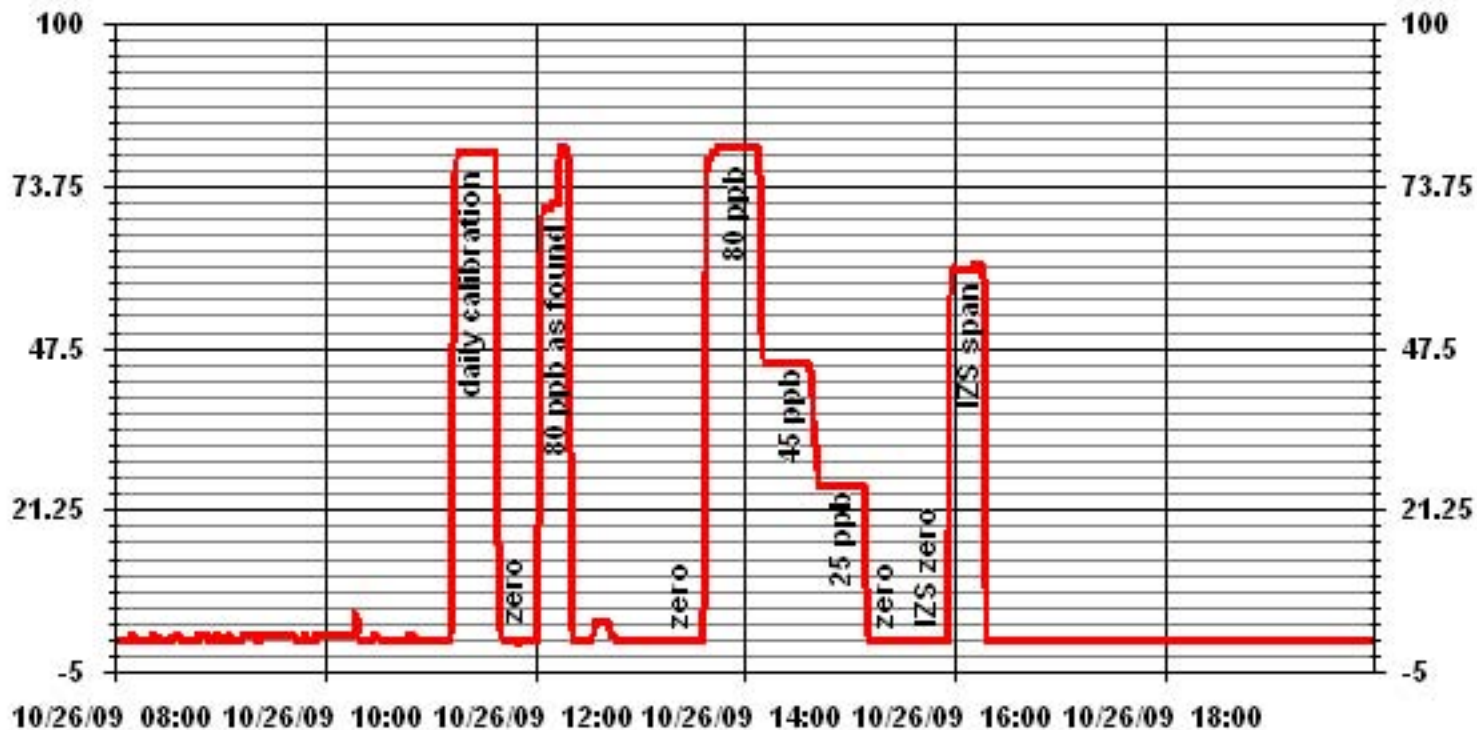
Calibration Date	October 26, 2009
Company	LAKELAND INDUSTRY & COMMUNITY ASSOCIATION
Plant / Location	Portable/ Devon Wellsite 13-16-62-5-W4M
Start Time (MST)	11:49
End Time (MST)	16:21

Calculated Conc. ppb	Indicated Response ppb	Correction Factor	Correlation Coefficient Slope	(≥ 0.995)	(0.85 to 1.15)
0	0	n/a	Intercept		-0.059454
25	25	1.0021		0.999992	
45	45	1.0038		1.000405	
80	80	0.9994			



Notes:

01 Minute Averages



Particulate Matter 2.5

TEOM® Audit

	<u>Station</u>		<u>Audit Transfer Standard</u>
Date:	September 30, 2009	Make/Model:	Bios DC2
Station Name:	Lica Portable	Serial Number:	738
Location:	Devon Wellsite 13-16-62-5 W4M	Cell s/n:	1127
Operator:	LICA	Thermometer s/n:	14-990A

	<u>Sampler</u>		<u>Set-up and current Sampler readings</u>
Make/Model	R+P Series 1400a Teom	F-Main Set Pt (l/min)	3.00
Unit #	NA	F-Aux Set Pt (l/min)	13.67
Control unit s/n	140AB220740001	Filter Load (%)	47%
Transducer s/n	140AB220740001	K _o Factor	13043
Parameter	PM 2.5	Temp (°C)	7.6
		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

Zero flow				
	Pump Off		Pump On (Time to reach set points)	
F-Main (l/min)	0.06		(45-60 Sec)	49
F-Aux (l/min)	0.15		(45-60 Sec)	58
Temperature/Pressure				
Measured Temp (± 1 °C)	7.8	Δ °C	-0.2	
Measured Press (± 1.5% ATM)	0.940	Δ % ATM	-0.4%	
Flow Audit				
Indicated Main/Aux Flow (l/min)	3.00	Δ % from Set-pt	0.0%	-0.1%
Total Flow = Main + Aux (l/min)	16.64	(± 2%)	-0.2%	
Measured Total Flow (l/min)	16.66	(± 2%)		
Measured Main Flow (l/min)	3.06	(± 1.0 l/min. (5.65%))	0.02	
		(± 0.2 l/min. (6.25%))	0.06	
Leak Check				
Main (< 0.15 l/min)	0.02	Actual leakage = Pump On - Pump Off		
Aux (< 0.15 l/min)	0.19	0.02 l/min = 0.08-0.06		
		0.19 l/min = 0.35-0.16		
K_o Factor				
Measured	na			
K _o Difference (± 2.5%)	na			

Start Time: 13:30 **Finish Time:** 15:05

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

Comments: - Teom calibrated prior to audit. Slight leak in bypass flow system in control unit, will repair as soon as parts are available.

Auditor/s: Shea Beaton

Nitrogen Dioxide

NOx - NO- NO₂ Calibration Report

Station Information

Calibration Date	September 29, 2009		Previous Calibration	-	
Company	Lakeland Ind & Comm. Assoc.		Plant/Location	Portable/ 13-16-62-5W4M	
Start Time (MST)	11:49	End Time (MST)	18:01		
Reason:	Installation Calibration				
Barometric Pressure	705 mmHg	Station Temperature	24.0	Deg C	
Cal Gas Concentration	NOx 51.8 ppm	NO	51.6 ppm	Cal Gas Expiry date	12/19/2010
DAS Output Voltage	0 - 1 Volts	Chart Rec. Output	0 - 1 Volts		

Equipment Information

Analyzer Make / Model:	API 200E	S/N :	593	Method:	Chemiluminescent
Calibrator Make / Model:	EnviroNics 2000	S/N:	1991		
DAS Make / Model:	ESC 8832	S/N :	AO717		
Flow Meter:	EnviroNics 2000	S/N :	1991		

Analyzer Settings

		Before Calibration			After Calibration			
Concentration Range	0 - 1000						ppb	
Sample Flow/Conv. Temp	461	ccm	316	Deg C	460	ccm	314	Deg C
Ozone Flow / Vacuum	78	ccm	4.2	mmHg	78	ccm	4.2	mmHg
HVPS	686	Volts			686	Volts		
Rx/ Temp / PMT Temp	50.0	Deg C	6.7	Deg C	50.0	Deg C	6.7	Deg C
Box Temp / IZS Temp	32.4	Deg C	45.0	Deg C	33.0	Deg C	45.0	Deg C
Offset	-0.3	NOx	-3.1	NO	-0.9	NOx	-3.9	NO
Slope	1.012	NOx	1.007	NO	1.049	NOx	1.035	NO

Gas Phase Titration Calibration Data

Dilution Air Flow Rate	Source Flow Rate	O3 Set Point	Calculated Concentration		Indicated Concentration			Correction Factor	
			NOx	NO	NOx	NO	NO ₂	NOx	NO
5010.0	0.0	N/A	0	0	1	0	0	N/A	N/A
4929.0	77.6	N/A	803	800	804	798	5	0.9986	1.0022
4969.0	38.8	N/A	401	400	404	401	3	0.9934	0.9970
4988.0	19.4	N/A	201	200	201	200	0	0.9984	0.9996
5007.0	0.0	N/A	0	0	0	1	0	N/A	N/A
Converter Efficiency									
4931.0	77.6	N/A	803	799	805	798	7	N/A	
4931.0	77.6	400	803	799	800	415	386	99%	
4931.0	77.6	200	803	799	802	605	197	98%	
4931.0	77.6	100	803	799	804	702	102	99%	
4931.0	77.6	N/A	803	799	804	796	7	N/A	
5010.0	0	N/A	0	0	0	1	-1	N/A	N/A

Linearity OK?	Yes	No	Sum of Least Squares	0.9976	1.0011
Flows Checked on-site?	Yes	No	New Correction Factor	0.9986	1.0022
			Average Converter Efficiency	99%	

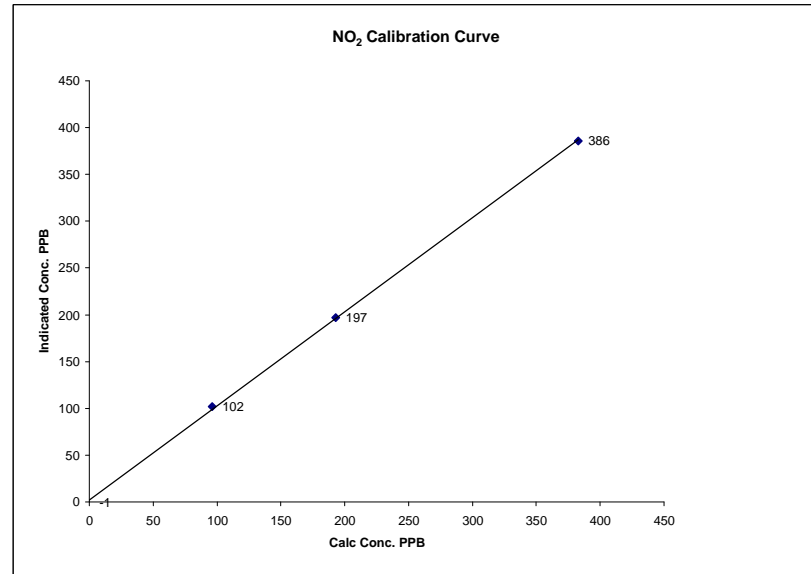
		Before Calibration		After Calibration				
Auto Zero	-	NOx	-	NO ₂	-0.1	NOx	-1.5	NO ₂
Auto Span	-	NOx	-	NO ₂	789.0	NOx	770.0	NO ₂
Sample Lines Connected	YES							
Percent Change from Previous Calibration	NOx		-	NO	-			

Calibration Performed by: Shea Beaton

NO₂ Calibration Curve

Calibration Date	September 29, 2009		
Company	Lakeland Ind & Comm. Assoc.		
Plant / Location	Portable/ 13-16-62-5W4M		
Start Time (MST)	11:49	End Time (MST)	18:01

Calculated Conc.	Indicated Response	Correction Factor	Correlation Coefficient	(≥ 0.995)	0.999715
ppb	ppb		Slope	(0.85 to 1.15)	1.005993
0	-1	N/A	Intercept	(± 3% F.S.)	1.99315
96	102	0.9412			
193	197	0.9797			
383	386	0.9922			

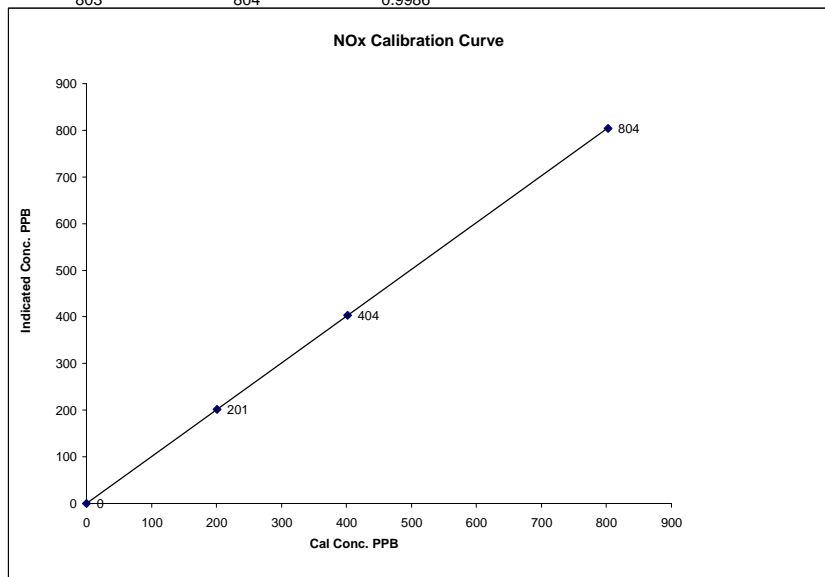


Notes: _____

NOx Calibration Curve

Calibration Date September 29, 2009
 Company Lakeland Ind & Comm. Assoc.
 Plant / Location Portable/ 13-16-62-5W4M
 Start Time (MST) 11:49 End Time (MST) 18:01

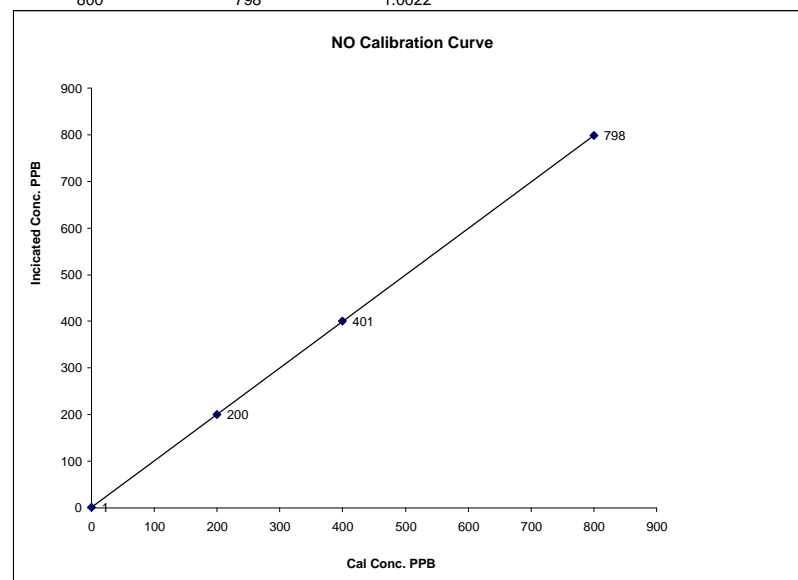
Calculated Conc.	Indicated Response	Correction Factor	Correlation Coefficient	(≥ 0.995)	0.999991
ppb	ppb		Slope	(0.85 to 1.15)	1.001684
0	0	N/A	Intercept	(± 3% F.S.)	0.43225
201	201	0.9984			
401	404	0.9934			
803	804	0.9986			



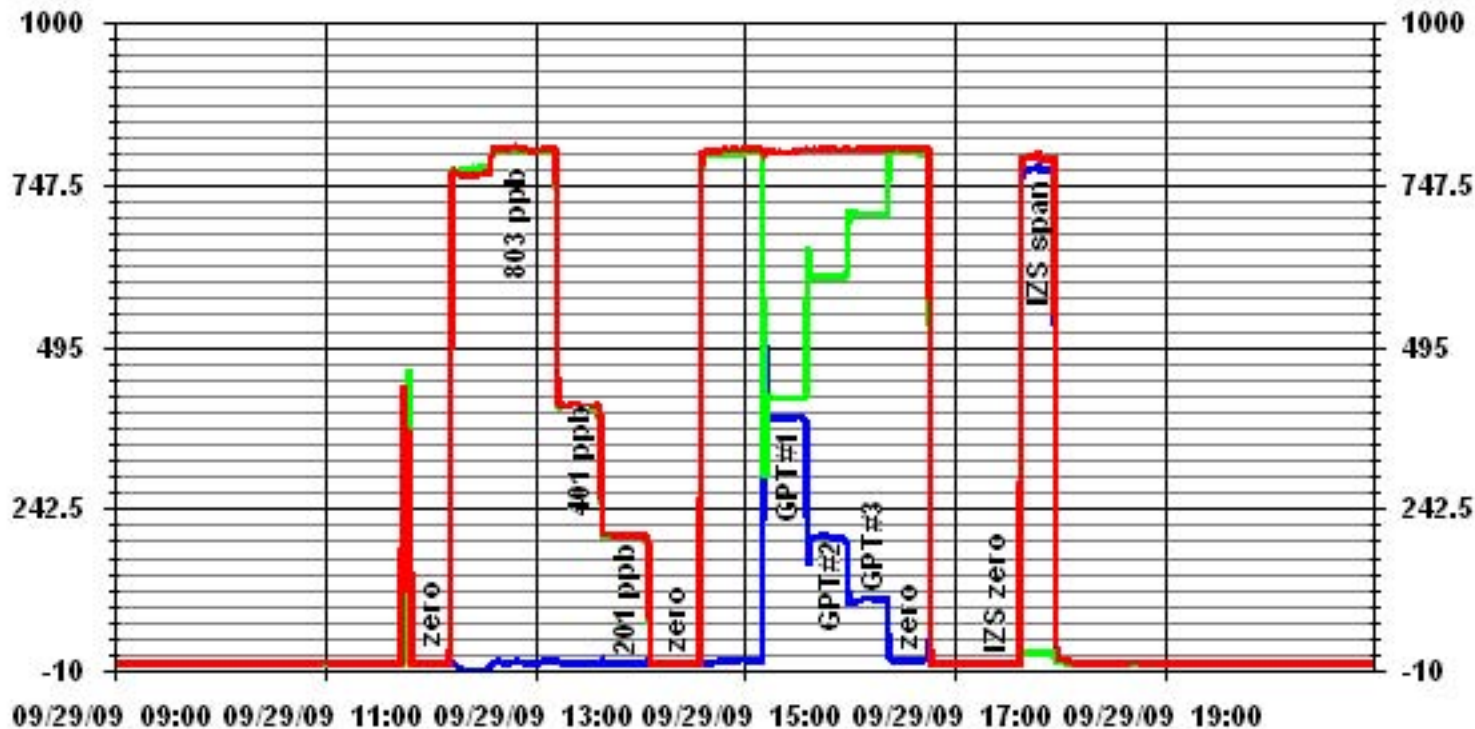
NO Calibration Curve

Calibration Date September 29, 2009
 Company Lakeland Ind & Comm. Assoc.
 Plant / Location Portable/ 13-16-62-5W4M
 Start Time (MST) 11:49 End Time (MST) 18:01

Calculated Conc.	Indicated Response	Correction Factor	Correlation Coefficient	(≥ 0.995)	0.999994
ppb	ppb		Slope	(0.85 to 1.15)	0.996270
0	1	N/A	Intercept	(± 3% F.S.)	4.1902
200	200	0.9996			
400	401	0.9970			
800	798	1.0022			



01 Minute Averages



NOx - NO- NO₂ Calibration Report

Station Information

Calibration Date	October 27, 2009		Previous Calibration	September 29, 2009	
Company	Lakeland Ind & Comm. Assoc.		Plant/Location	Portable/ 13-16-62-5W4M	
Start Time (MST)	7:00		End Time (MST)	13:55	
Reason:	Monthly Calibration				
Barometric Pressure	-	mmHg	Station Temperature	22.0 Deg C	
Cal Gas Concentration	NOx 51.8	ppm	NO 51.6	ppm	Cal Gas Expiry date 12/19/2010
DAS Output Voltage	0 - 1 Volts		Chart Rec. Output	0 - 1 Volts	

Equipment Information

Analyzer Make / Model:	API 200E	S/N :	593	Method:	Chemiluminescent
Calibrator Make / Model:	Enviroincs 2000	S/N:	1991		
DAS Make / Model:	ESC 8832	S/N :	AO717		
Flow Meter:	Enviroincs 2000	S/N :	1991		

Analyzer Settings

		Before Calibration			After Calibration		
Concentration Range		0 - 1000			ppb		
Sample Flow/Conv. Temp	461	ccm	314	Deg C	462	ccm	315 Deg C
Ozone Flow / Vacuum	78	ccm	4.2	mmHg	79	ccm	4.2 mmHg
HVPS	686	Volts			686	Volts	
Rx/ Temp / PMT Temp	50.0	Deg C	6.7	Deg C	50.0	Deg C	6.7 Deg C
Box Temp / IZS Temp	31.6	Deg C	45.2	Deg C	31.5	Deg C	45.1 Deg C
Offset	-0.9	NOx	-3.9	NO	0.7	NOx	0.2 NO
Slope	1.049	NOx	1.035	NO	1.082	NOx	1.071 NO

Gas Phase Titration Calibration Data

Dilution Air Flow Rate	Source Flow Rate	O3 Set Point	Calculated Concentration		Indicated Concentration			Correction Factor	
			NOx	NO	NOx	NO	NO ₂	NOx	NO
4998	0	N/A	0	0	1	2	-1	N/A	N/A
5001.0	0.0	N/A	0	0	0	0	0	N/A	N/A
4925.0	77.5	N/A	802	799	773	774	-1	1.0382	1.0328
4925.0	77.5	N/A	802	799	803	799	3	0.9994	1.0005
4966.0	38.7	N/A	401	399	404	402	2	0.9915	0.9926
4982.0	19.3	N/A	200	199	201	200	1	0.9945	0.9956
5005.0	0.0	N/A	0	0	1	1	0	N/A	N/A
Converter Efficiency									
4925.0	77.5	N/A	802	799	804	800	4	N/A	
4928.0	77.5	400	802	799	800	427	374	99%	
4925.0	77.5	200	802	799	805	612	192	100%	
4925.0	77.5	100	802	799	806	708	98	102%	
4925.0	77.5	N/A	802	799	809	803	5	N/A	
5008.0	0	N/A	0	0	1	1	0	N/A	N/A

Linearity OK?	Yes	No	Sum of Least Squares	0.9976	0.9988
Flows Checked on-site?	Yes	No	New Correction Factor	0.9994	1.0005
			Average Converter Efficiency	100%	

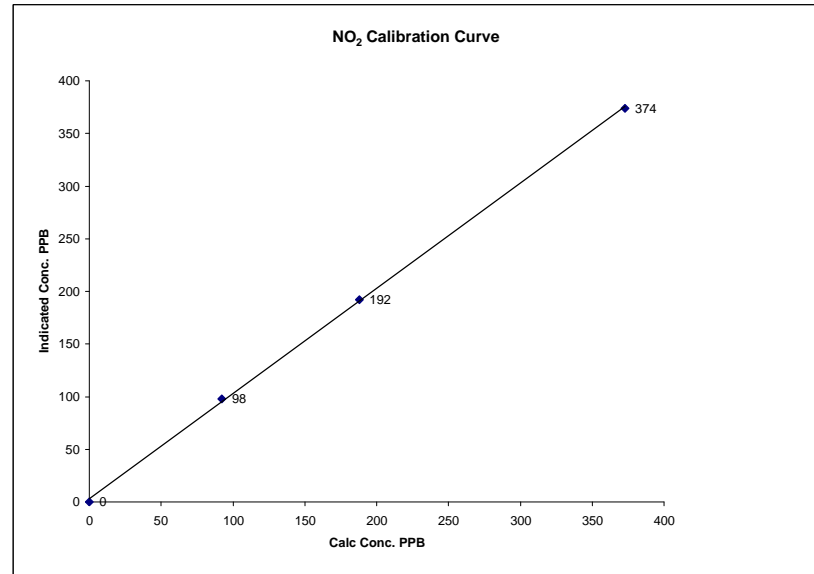
		Before Calibration			After Calibration		
Auto Zero	0.7	NOx	-1.6	NO ₂	-0.2	NOx	-0.7 NO ₂
Auto Span	798.0	NOx	778.0	NO ₂	815.0	NOx	797.0 NO ₂
Sample Lines Connected	YES						
Percent Change from Previous Calibration		NOx	-3.8%	NO		-3.0%	

Calibration Performed by: Shea Beaton

NO₂ Calibration Curve

Calibration Date	October 27, 2009	
Company	Lakeland Ind & Comm. Assoc.	
Plant / Location	Portable/ 13-16-62-5W4M	
Start Time (MST)	7:00	End Time (MST) 13:55

Calculated Conc.	Indicated Response	Correction Factor	Correlation Coefficient	(≥ 0.995)	
ppb	ppb		Slope	(0.85 to 1.15)	0.998444
0	0	N/A	Intercept	(± 3% F.S.)	3.00396
92	98	0.9388			
188	192	0.9792			
373	374	0.9973			

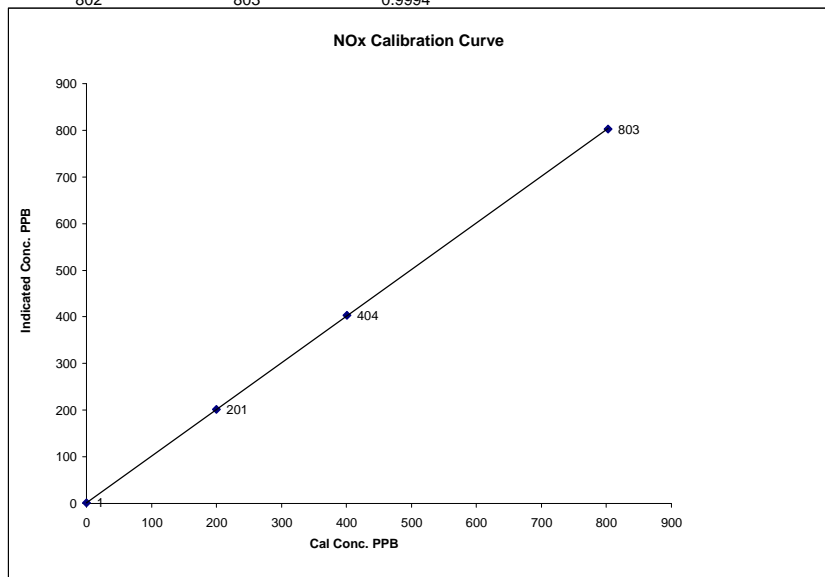


Notes: _____

NOx Calibration Curve

Calibration Date October 27, 2009
 Company Lakeland Ind & Comm. Assoc.
 Plant / Location Portable/ 13-16-62-5W4M
 Start Time (MST) 7:00 End Time (MST) 13:55

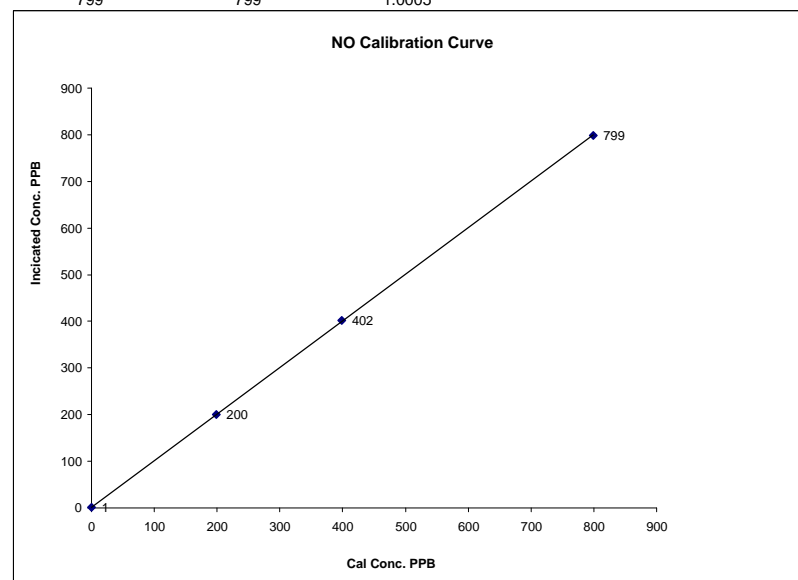
Calculated Conc.	Indicated Response	Correction Factor	Correlation Coefficient	(≥ 0.995)	0.999985
ppb	ppb		Slope	(0.85 to 1.15)	0.999662
0	1	N/A	Intercept	(± 3% F.S.)	1.63111
200	201	0.9945			
401	404	0.9915			
802	803	0.9994			



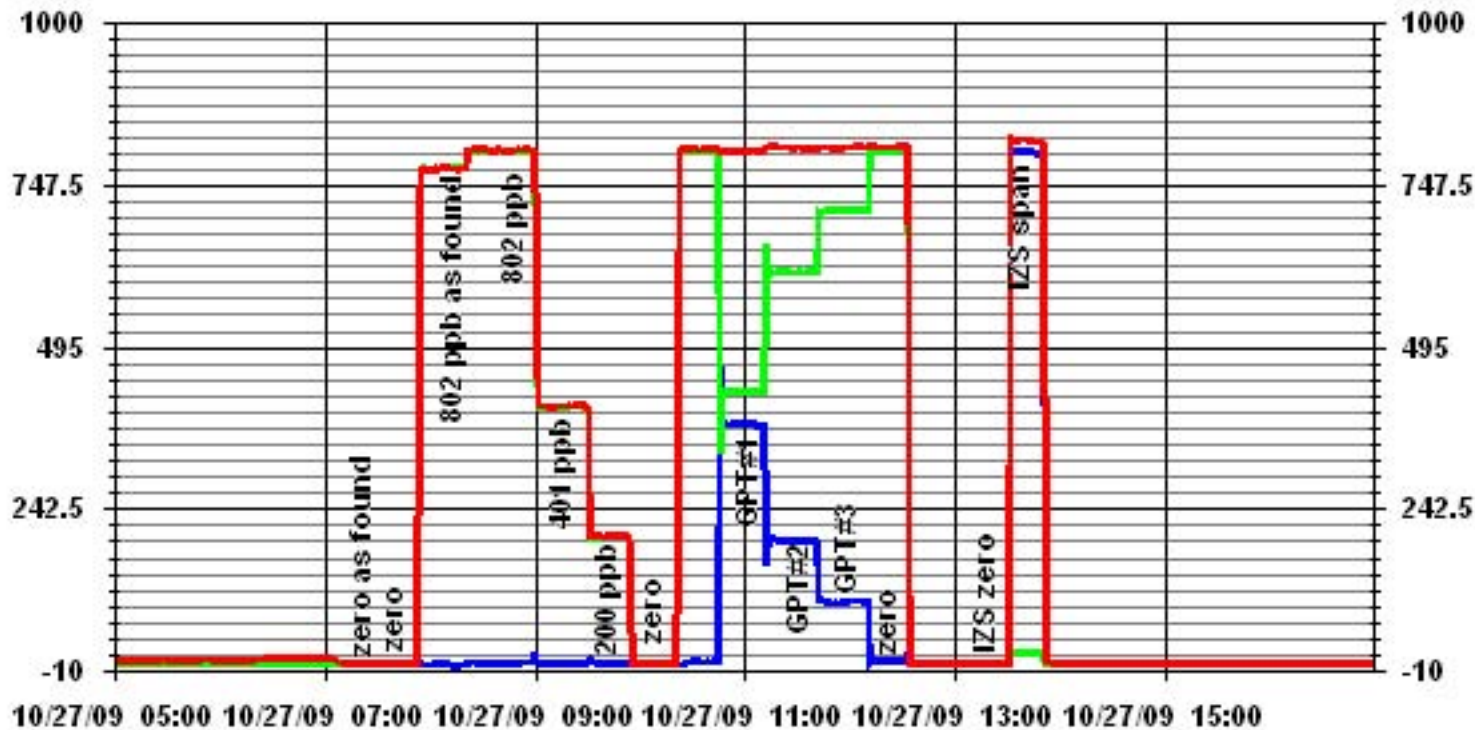
NO Calibration Curve

Calibration Date October 27, 2009
 Company Lakeland Ind & Comm. Assoc.
 Plant / Location Portable/ 13-16-62-5W4M
 Start Time (MST) 7:00 End Time (MST) 13:55

Calculated Conc.	Indicated Response	Correction Factor	Correlation Coefficient	(≥ 0.995)	0.999985
ppb	ppb		Slope	(0.85 to 1.15)	0.996966
0	1	N/A	Intercept	(± 3% F.S.)	6.3707
199	200	0.9956			
399	402	0.9926			
799	799	1.0005			



01 Minute Averages



Ozone

O₃ Calibration Report

Station Information

Calibration Date	September 30, 2009	Previous Calibration	-
Company	Lakeland Industry & Community Association		
Plant / Location	Portable / Devon Wellsite 13-16-62-5 W4M		
Start Time (MST)	10:20	End Time (MST)	14:00
Reason:	Installation Calibration		
Barometric Pressure	712 mm Hg	Station Temperature	25 Deg C
DAS Output Voltage	0 - 10 Volts		

Equipment Information

Analyzer Make / Model:	API 700	S/N :	446	Method:	Photometric
Calibrator Make / Model:	EnviroNics 2000	S/N :	1991	Method:	GPT
DAS Make / Model:	ESC 8832	S/N :	263		

Analyzer Settings

		Before Calibration				After Calibration			
Concentration Range		0 - 500				ppb			
Sample Flow / Box Temp	813 ccm	28.3	Deg C	810	25.8	Deg C			
VAC / PRES	12% IN-HG-A	26.3	IN-HG-A	12%	IN-HG-A	26.2	IN-HG-A		
Sample Temp/ Photo Temp	37.1 Deg C	52	Deg C	34.1	Deg C	52	Deg C		
O3 Gen Temp/Orific Temp	48 Deg C	47.9	Deg C	48.2	Deg C	47.6	Deg C		
Offset/Slop	-3.9	1.022		-3.7		0.958			

Calibration Data

Dilution Flow Rate	Ozone Set Point	Calculated Concentration	Indicated Conc. (DAS)	Correction Factor
4999	0	0	0	N/A
4998	400	383	407	0.9410
4998	400	383	383	1.0000
4998	200	193	193	1.0000
5001	100	96	95	1.0105
5001	0	0	0	N/A
Sum of Least Squares				N/A
New Correction Factor				0.9410

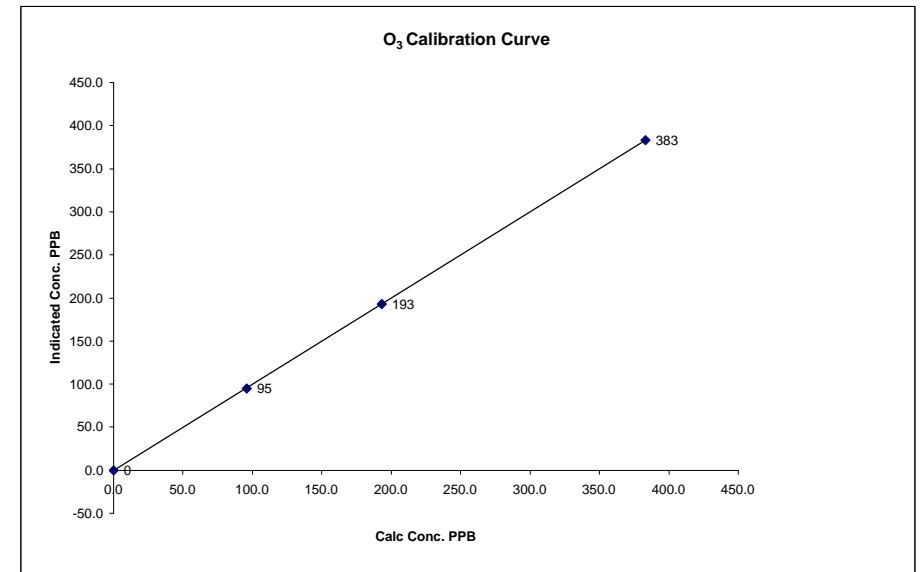
	Before Calibration	After Calibration
Auto Zero	-	0.2
Auto Span	-	239
Sample Lines Connected		YES
Percent Change from Previous Calibration		-

Calibration Performed by: Shea Beaton

O₃ Calibration Curve

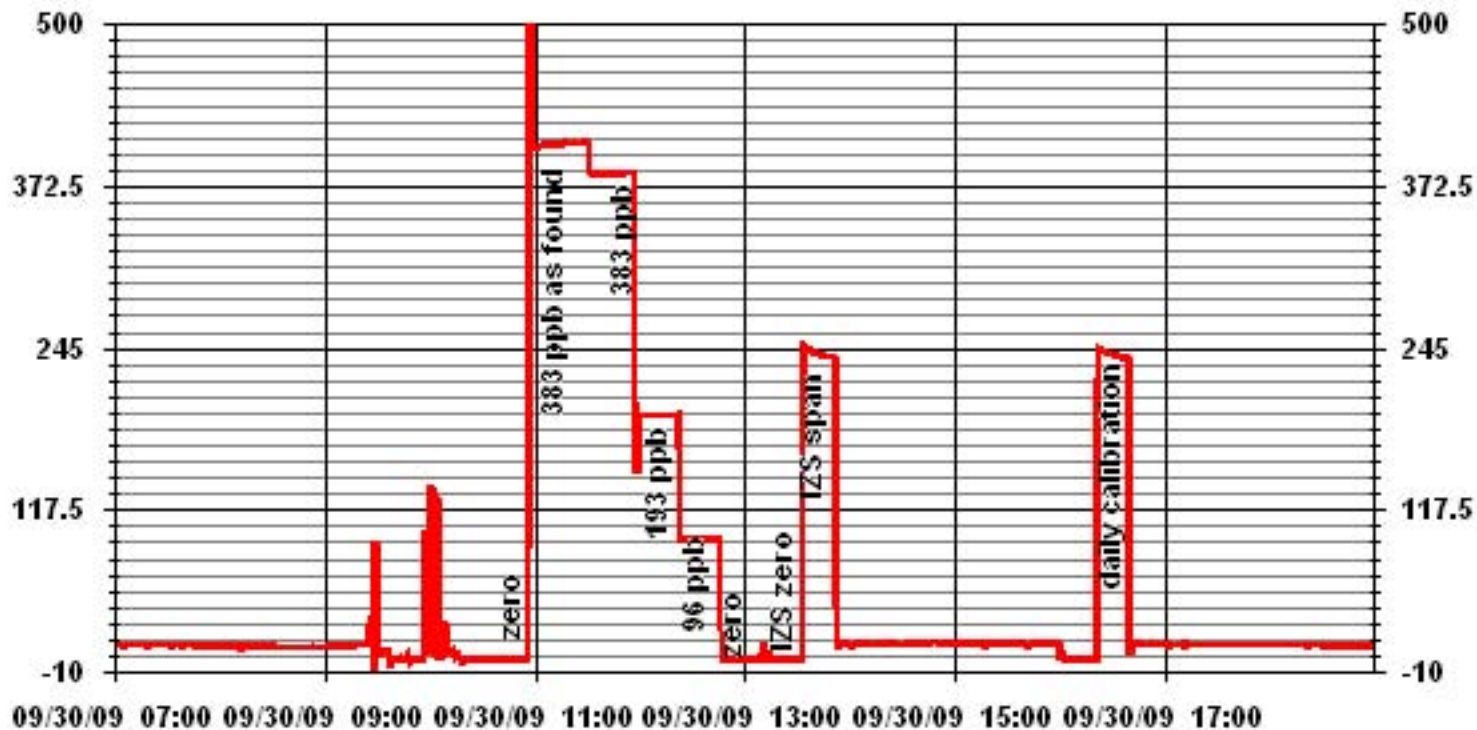
Calibration Date	September 30, 2009
Company	Lakeland Industry & Community Association
Plant / Location	Portable / Devon Wellsite 13-16-62-5 W4M
Start Time (MST)	10:20
End Time (MST)	14:00

Calculated Conc. ppb	Indicated Response ppb	Correction Factor	Correlation Coefficient Slope	(≥ 0.995)	0.999991
0	0	n/a	Intercept	(± 3% F.S.)	-0.400714
96	95	1.0105			
193	193	1.0000			
383	383	1.0000			



Notes: Prior to this cal, the pump diaphragm was changed and an autoleak check was done.

01 Minute Averages



O₃ Calibration Report

Station Information

Calibration Date	October 27, 2009	Previous Calibration	September 30, 2009
Company	Lakeland Industry & Community Association		
Plant / Location	Portable / Devon Wellsite 13-16-62-5 W4M		
Start Time (MST)	13:10	End Time (MST)	18:06
Reason:	Monthly Calibration		
Barometric Pressure	- mm Hg	Station Temperature	23 Deg C
DAS Output Voltage	0 - 10 Volts		

Equipment Information

Analyzer Make / Model:	API 700	S/N :	446	Method:	Photometric
Calibrator Make / Model:	EnviroNics 2000	S/N :	1991	Method:	GPT
DAS Make / Model:	ESC 8832	S/N :	263		

Analyzer Settings

		Before Calibration				After Calibration			
Concentration Range		0 - 500				ppb			
Sample Flow / Box Temp	809 ccm	28.3	Deg C	809	25.8	Deg C			
VAC / PRES	11% IN-HG-A	26	IN-HG-A	11%	IN-HG-A	26.6	IN-HG-A		
Sample Temp/ Photo Temp	35.6 Deg C	52	Deg C	34.7	Deg C	52	Deg C		
O3 Gen Temp/Orific Temp	48.3 Deg C	49.1	Deg C	48.3	Deg C	47.3	Deg C		
Offset/Slop	-3.7	0.958		-3.7		0.969			

Calibration Data

Dilution Flow Rate	Ozone Set Point	Calculated Concentration	Indicated Conc. (DAS)	Correction Factor
5008	0	0	0	N/A
5008	400	373	367	1.0163
5002	0	0	0	N/A
5002	400	373	373	1.0000
4998	200	188	188	1.0000
5001	100	92	92	1.0000
5001	0	0	0	N/A
Sum of Least Squares				N/A
New Correction Factor				1.0000

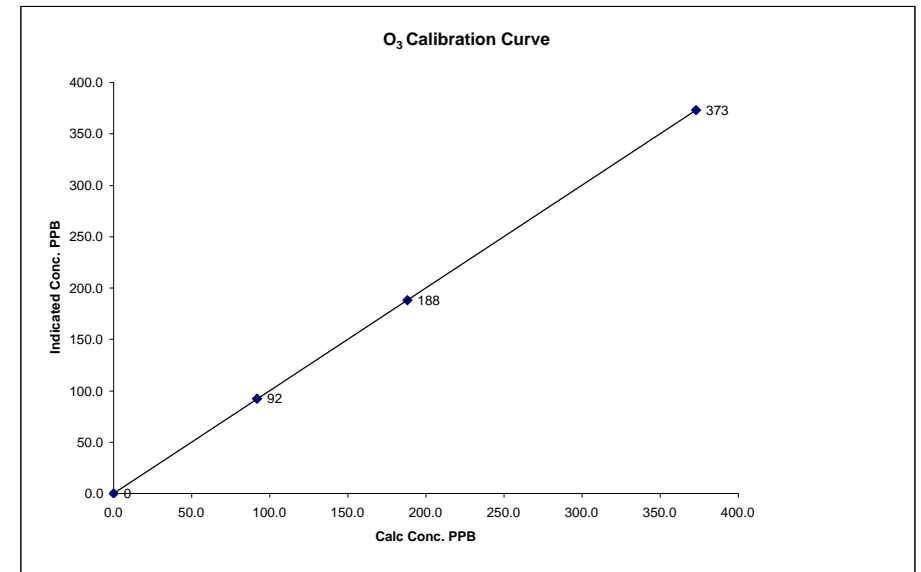
	Before Calibration	After Calibration
Auto Zero	0.1	0.2
Auto Span	235	237
Sample Lines Connected		YES
Percent Change from Previous Calibration		-1.6%

Calibration Performed by: Shea Beaton

O₃ Calibration Curve

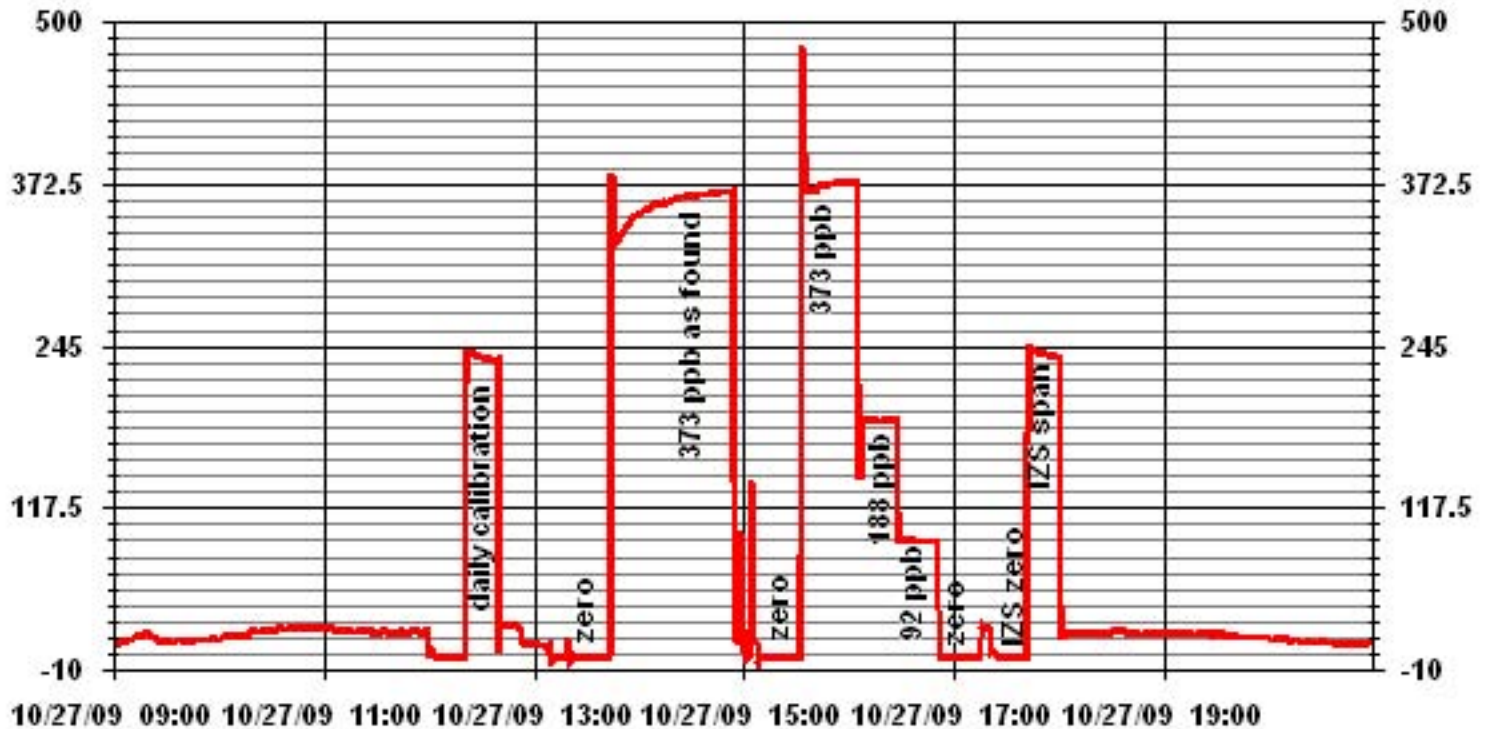
Calibration Date	October 27, 2009
Company	Lakeland Industry & Community Association
Plant / Location	Portable / Devon Wellsite 13-16-62-5 W4M
Start Time (MST)	13:10
End Time (MST)	18:06

Calculated Conc. ppb	Indicated Response ppb	Correction Factor	Correlation Coefficient Slope	(≥ 0.995)	1.000000
0	0	n/a	Intercept	(± 3% F.S.)	0.000000
92	92	1.0000			
188	188	1.0000			
373	373	1.0000			



Notes: Initial span point took a long time to stabilize, daily spans have been ok; suspect a calibrator issue??
Following the A/F points, an auto leak was done-OK.

01 Minute Averages



Volatile Organics Laboratory Analysis



Your C.O.C. #: 5382

Lakeland Industry & Community Assoc.
P.O. Box 8237
Bonnyville, AB
CANADA T9N 2J5

Report Date: 2009/10/28

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: A9D5296
Received: 2009/10/09, 11:46

Sample Matrix: AIR
Samples Received: 2

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Method Reference
Canister Pressure (TO-15)	2	N/A	2009/10/15	BRL SOP-00304	EPA TO-15
Volatile Organics in Air (TO-15) ¶	2	N/A	2009/10/15	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: 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. SCC and CALA have approved this reporting process and electronic report format.

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Total cover pages: 1

Maxxam Job #: A9D5296
 Report Date: 2009/10/28

RESULTS OF ANALYSES OF AIR

Maxxam ID		DZ2799	DZ2800		
Sampling Date		2009/10/04	2009/09/30		
		00:00	00:00		
COC Number		5382	5382		
	Units	LICAVOC/CLS/OCT4,09	LICAVOC/PORT/SEPT30,09	DL	QC Batch
		(7869)	(7914)		

Volatile Organics					
Pressure on Receipt	psig	20	20	N/A	1974802

RDL = Reportable Detection Limit
 QC Batch = Quality Control Batch

Maxxam Job #: A9D5296
 Report Date: 2009/10/28

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		DZ2799				
Sampling Date		2009/10/04				
		00:00				
COC Number		5382				
	Units	LICAVOC/CLS/OCT4,09	DL	ug/m3	DL (ug/m3)	QC Batch
		(7869)				
Volatile Organics						
2,2,4-Trimethylpentane	ppbv	<0.20	0.20	<0.934	0.934	1975647
Carbon Disulfide	ppbv	<0.50	0.50	<1.56	1.56	1975647
Propene	ppbv	<0.30	0.30	<0.516	0.516	1975647
Vinyl Acetate	ppbv	<0.20	0.20	<0.704	0.704	1975647
Vinyl Bromide	ppbv	<0.20	0.20	<0.875	0.875	1975647
Dichlorodifluoromethane (FREON 12)	ppbv	0.70	0.20	3.46	0.989	1975647
1,2-Dichlorotetrafluoroethane	ppbv	<0.17	0.17	<1.19	1.19	1975647
Chloromethane	ppbv	0.50	0.30	1.03	0.620	1975647
Vinyl Chloride	ppbv	<0.18	0.18	<0.460	0.460	1975647
Chloroethane	ppbv	<0.30	0.30	<0.792	0.792	1975647
1,3-Butadiene	ppbv	<0.50	0.50	<1.11	1.11	1975647
Trichlorofluoromethane (FREON 11)	ppbv	0.33	0.20	1.84	1.12	1975647
Trichlorotrifluoroethane	ppbv	<0.15	0.15	<1.15	1.15	1975647
Ethanol	ppbv	<2.3	2.3	<4.33	4.33	1975647
2-propanol	ppbv	<3.0	3.0	<7.37	7.37	1975647
2-Propanone	ppbv	1.62	0.80	3.84	1.90	1975647
Methyl Ethyl Ketone (2-Butanone)	ppbv	<3.0	3.0	<8.85	8.85	1975647
Methyl Isobutyl Ketone	ppbv	<3.2	3.2	<13.1	13.1	1975647
Methyl Butyl Ketone (2-Hexanone)	ppbv	<2.0	2.0	<8.19	8.19	1975647
Methyl t-butyl ether (MTBE)	ppbv	<0.20	0.20	<0.721	0.721	1975647
Ethyl Acetate	ppbv	<2.2	2.2	<7.93	7.93	1975647
1,1-Dichloroethylene	ppbv	<0.25	0.25	<0.991	0.991	1975647
cis-1,2-Dichloroethylene	ppbv	<0.19	0.19	<0.753	0.753	1975647
trans-1,2-Dichloroethylene	ppbv	<0.20	0.20	<0.793	0.793	1975647
Methylene Chloride(Dichloromethane)	ppbv	0.48	0.30	1.68	1.04	1975647
Chloroform	ppbv	<0.15	0.15	<0.732	0.732	1975647
Carbon Tetrachloride	ppbv	<0.30	0.30	<1.89	1.89	1975647
1,1-Dichloroethane	ppbv	<0.20	0.20	<0.809	0.809	1975647
1,2-Dichloroethane	ppbv	<0.20	0.20	<0.809	0.809	1975647
Ethylene Dibromide	ppbv	<0.17	0.17	<1.31	1.31	1975647
1,1,1-Trichloroethane	ppbv	<0.30	0.30	<1.64	1.64	1975647
RDL = Reportable Detection Limit QC Batch = Quality Control Batch						

Maxxam Job #: A9D5296
 Report Date: 2009/10/28

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		DZ2799				
Sampling Date		2009/10/04				
		00:00				
COC Number		5382				
	Units	LICAVOC/CLS/OCT4,09	DL	ug/m3	DL (ug/m3)	QC Batch
		(7869)				
1,1,2-Trichloroethane	ppbv	<0.15	0.15	<0.818	0.818	1975647
1,1,2,2-Tetrachloroethane	ppbv	<0.20	0.20	<1.37	1.37	1975647
cis-1,3-Dichloropropene	ppbv	<0.18	0.18	<0.817	0.817	1975647
trans-1,3-Dichloropropene	ppbv	<0.17	0.17	<0.772	0.772	1975647
1,2-Dichloropropane	ppbv	<0.40	0.40	<1.85	1.85	1975647
Bromomethane	ppbv	<0.18	0.18	<0.699	0.699	1975647
Bromoform	ppbv	<0.20	0.20	<2.07	2.07	1975647
Bromodichloromethane	ppbv	<0.20	0.20	<1.34	1.34	1975647
Dibromochloromethane	ppbv	<0.20	0.20	<1.70	1.70	1975647
Heptane	ppbv	<0.30	0.30	<1.23	1.23	1975647
Trichloroethylene	ppbv	<0.30	0.30	<1.61	1.61	1975647
Tetrachloroethylene	ppbv	<0.20	0.20	<1.36	1.36	1975647
Benzene	ppbv	<0.18	0.18	<0.575	0.575	1975647
Toluene	ppbv	0.21	0.20	0.796	0.753	1975647
Ethylbenzene	ppbv	<0.20	0.20	<0.868	0.868	1975647
p+m-Xylene	ppbv	<0.37	0.37	<1.61	1.61	1975647
o-Xylene	ppbv	<0.20	0.20	<0.868	0.868	1975647
Styrene	ppbv	<0.20	0.20	<0.852	0.852	1975647
1,3,5-Trimethylbenzene	ppbv	<0.50	0.50	<2.46	2.46	1975647
1,2,4-Trimethylbenzene	ppbv	<0.50	0.50	<2.46	2.46	1975647
4-ethyltoluene	ppbv	<2.2	2.2	<10.8	10.8	1975647
Chlorobenzene	ppbv	<0.20	0.20	<0.921	0.921	1975647
Benzyl chloride	ppbv	<1.0	1.0	<5.18	5.18	1975647
1,3-Dichlorobenzene	ppbv	<0.40	0.40	<2.40	2.40	1975647
1,4-Dichlorobenzene	ppbv	<0.40	0.40	<2.40	2.40	1975647
1,2-Dichlorobenzene	ppbv	<0.40	0.40	<2.40	2.40	1975647
1,2,4-Trichlorobenzene	ppbv	<2.0	2.0	<14.8	14.8	1975647
Hexachlorobutadiene	ppbv	<3.0	3.0	<32.0	32.0	1975647
Hexane	ppbv	<0.30	0.30	<1.06	1.06	1975647
Cyclohexane	ppbv	<0.20	0.20	<0.688	0.688	1975647
Tetrahydrofuran	ppbv	<0.40	0.40	<1.18	1.18	1975647
1,4-Dioxane	ppbv	<2.0	2.0	<7.21	7.21	1975647
Xylene (Total)	ppbv	<0.60	0.60	<2.61	2.61	1975647
QC Batch = Quality Control Batch						

Maxxam Job #: A9D5296
 Report Date: 2009/10/28

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		DZ2799				
Sampling Date		2009/10/04 00:00				
COC Number		5382				
	Units	LICAVOC/CLS/OCT4,09 (7869)	DL	ug/m3	DL (ug/m3)	QC Batch

Surrogate Recovery (%)						
Bromochloromethane	%	81		N/A	N/A	1975647
D5-Chlorobenzene	%	82		N/A	N/A	1975647
Difluorobenzene	%	82		N/A	N/A	1975647

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

Maxxam Job #: A9D5296
 Report Date: 2009/10/28

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		DZ2800				
Sampling Date		2009/09/30 00:00				
COC Number		5382				
	Units	LICAVOC/PORT/SEPT30,09 (7914)	DL	ug/m3	DL (ug/m3)	QC Batch

Volatile Organics						
2,2,4-Trimethylpentane	ppbv	<0.20	0.20	<0.934	0.934	1975647
Carbon Disulfide	ppbv	<0.50	0.50	<1.56	1.56	1975647
Propene	ppbv	<0.30	0.30	<0.516	0.516	1975647
Vinyl Acetate	ppbv	<0.20	0.20	<0.704	0.704	1975647
Vinyl Bromide	ppbv	<0.20	0.20	<0.875	0.875	1975647
Dichlorodifluoromethane (FREON 12)	ppbv	0.69	0.20	3.43	0.989	1975647
1,2-Dichlorotetrafluoroethane	ppbv	<0.17	0.17	<1.19	1.19	1975647
Chloromethane	ppbv	0.47	0.30	0.972	0.620	1975647
Vinyl Chloride	ppbv	<0.18	0.18	<0.460	0.460	1975647
Chloroethane	ppbv	<0.30	0.30	<0.792	0.792	1975647
1,3-Butadiene	ppbv	<0.50	0.50	<1.11	1.11	1975647
Trichlorofluoromethane (FREON 11)	ppbv	0.32	0.20	1.82	1.12	1975647
Trichlorotrifluoroethane	ppbv	<0.15	0.15	<1.15	1.15	1975647
Ethanol	ppbv	<2.3	2.3	<4.33	4.33	1975647
2-propanol	ppbv	<3.0	3.0	<7.37	7.37	1975647
2-Propanone	ppbv	2.32	0.80	5.52	1.90	1975647
Methyl Ethyl Ketone (2-Butanone)	ppbv	<3.0	3.0	<8.85	8.85	1975647
Methyl Isobutyl Ketone	ppbv	<3.2	3.2	<13.1	13.1	1975647
Methyl Butyl Ketone (2-Hexanone)	ppbv	<2.0	2.0	<8.19	8.19	1975647
Methyl t-butyl ether (MTBE)	ppbv	<0.20	0.20	<0.721	0.721	1975647
Ethyl Acetate	ppbv	<2.2	2.2	<7.93	7.93	1975647
1,1-Dichloroethylene	ppbv	<0.25	0.25	<0.991	0.991	1975647
cis-1,2-Dichloroethylene	ppbv	<0.19	0.19	<0.753	0.753	1975647
trans-1,2-Dichloroethylene	ppbv	<0.20	0.20	<0.793	0.793	1975647
Methylene Chloride(Dichloromethane)	ppbv	0.45	0.30	1.57	1.04	1975647
Chloroform	ppbv	<0.15	0.15	<0.732	0.732	1975647
Carbon Tetrachloride	ppbv	<0.30	0.30	<1.89	1.89	1975647
1,1-Dichloroethane	ppbv	<0.20	0.20	<0.809	0.809	1975647
1,2-Dichloroethane	ppbv	<0.20	0.20	<0.809	0.809	1975647
Ethylene Dibromide	ppbv	<0.17	0.17	<1.31	1.31	1975647
1,1,1-Trichloroethane	ppbv	<0.30	0.30	<1.64	1.64	1975647
RDL = Reportable Detection Limit QC Batch = Quality Control Batch						

Maxxam Job #: A9D5296
 Report Date: 2009/10/28

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		DZ2800				
Sampling Date		2009/09/30 00:00				
COC Number		5382				
	Units	LICAVOC/PORT/SEPT30,09 (7914)	DL	ug/m3	DL (ug/m3)	QC Batch
1,1,2-Trichloroethane	ppbv	<0.15	0.15	<0.818	0.818	1975647
1,1,2,2-Tetrachloroethane	ppbv	<0.20	0.20	<1.37	1.37	1975647
cis-1,3-Dichloropropene	ppbv	<0.18	0.18	<0.817	0.817	1975647
trans-1,3-Dichloropropene	ppbv	<0.17	0.17	<0.772	0.772	1975647
1,2-Dichloropropane	ppbv	<0.40	0.40	<1.85	1.85	1975647
Bromomethane	ppbv	<0.18	0.18	<0.699	0.699	1975647
Bromoform	ppbv	<0.20	0.20	<2.07	2.07	1975647
Bromodichloromethane	ppbv	<0.20	0.20	<1.34	1.34	1975647
Dibromochloromethane	ppbv	<0.20	0.20	<1.70	1.70	1975647
Heptane	ppbv	<0.30	0.30	<1.23	1.23	1975647
Trichloroethylene	ppbv	<0.30	0.30	<1.61	1.61	1975647
Tetrachloroethylene	ppbv	<0.20	0.20	<1.36	1.36	1975647
Benzene	ppbv	<0.18	0.18	<0.575	0.575	1975647
Toluene	ppbv	<0.20	0.20	<0.753	0.753	1975647
Ethylbenzene	ppbv	<0.20	0.20	<0.868	0.868	1975647
p+m-Xylene	ppbv	<0.37	0.37	<1.61	1.61	1975647
o-Xylene	ppbv	<0.20	0.20	<0.868	0.868	1975647
Styrene	ppbv	<0.20	0.20	<0.852	0.852	1975647
1,3,5-Trimethylbenzene	ppbv	<0.50	0.50	<2.46	2.46	1975647
1,2,4-Trimethylbenzene	ppbv	<0.50	0.50	<2.46	2.46	1975647
4-ethyltoluene	ppbv	<2.2	2.2	<10.8	10.8	1975647
Chlorobenzene	ppbv	<0.20	0.20	<0.921	0.921	1975647
Benzyl chloride	ppbv	<1.0	1.0	<5.18	5.18	1975647
1,3-Dichlorobenzene	ppbv	<0.40	0.40	<2.40	2.40	1975647
1,4-Dichlorobenzene	ppbv	<0.40	0.40	<2.40	2.40	1975647
1,2-Dichlorobenzene	ppbv	<0.40	0.40	<2.40	2.40	1975647
1,2,4-Trichlorobenzene	ppbv	<2.0	2.0	<14.8	14.8	1975647
Hexachlorobutadiene	ppbv	<3.0	3.0	<32.0	32.0	1975647
Hexane	ppbv	<0.30	0.30	<1.06	1.06	1975647
Cyclohexane	ppbv	<0.20	0.20	<0.688	0.688	1975647
Tetrahydrofuran	ppbv	<0.40	0.40	<1.18	1.18	1975647
1,4-Dioxane	ppbv	<2.0	2.0	<7.21	7.21	1975647
Xylene (Total)	ppbv	<0.60	0.60	<2.61	2.61	1975647
QC Batch = Quality Control Batch						

Maxxam Job #: A9D5296
 Report Date: 2009/10/28

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		DZ2800				
Sampling Date		2009/09/30				
		00:00				
COC Number		5382				
	Units	LICAVOC/PORT/SEPT30,09	DL	ug/m3	DL (ug/m3)	QC Batch
		(7914)				

Surrogate Recovery (%)						
Bromochloromethane	%	79		N/A	N/A	1975647
D5-Chlorobenzene	%	80		N/A	N/A	1975647
Difluorobenzene	%	80		N/A	N/A	1975647

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

Maxxam Job #: A9D5296
 Report Date: 2009/10/28

Test Summary

Maxxam ID DZ2799 **Collected** 2009/10/04
Sample ID LICAVOC/CLS/OCT4,09 (7869) **Shipped**
Matrix AIR **Received** 2009/10/09

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Canister Pressure (TO-15)	PRES	1974802	N/A	2009/10/15	LSY
Volatile Organics in Air (TO-15)	GC/MS	1975647	N/A	2009/10/15	LSY

Maxxam ID DZ2800 **Collected** 2009/09/30
Sample ID LICAVOC/PORT/SEPT30,09 (7914) **Shipped**
Matrix AIR **Received** 2009/10/09

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Canister Pressure (TO-15)	PRES	1974802	N/A	2009/10/15	LSY
Volatile Organics in Air (TO-15)	GC/MS	1975647	N/A	2009/10/15	LSY

Maxxam Job #: A9D5296
Report Date: 2009/10/28

GENERAL COMMENTS

Results relate only to the items tested.

Lakeland Industry & Community Assoc.
 Attention:
 Client Project #:
 P.O. #:
 Project name:

Quality Assurance Report
 Maxxam Job Number: GA9D5296

QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
1975647 LSY	Spiked Blank	Bromochloromethane	2009/10/15		99	%	60 - 140
		D5-Chlorobenzene	2009/10/15		100	%	60 - 140
		Difluorobenzene	2009/10/15		100	%	60 - 140
		2,2,4-Trimethylpentane	2009/10/15		103	%	70 - 130
		Carbon Disulfide	2009/10/15		100	%	70 - 130
		Propene	2009/10/15		98	%	70 - 130
		Vinyl Acetate	2009/10/15		96	%	70 - 130
		Vinyl Bromide	2009/10/15		105	%	70 - 130
		Dichlorodifluoromethane (FREON 12)	2009/10/15		99	%	70 - 130
		1,2-Dichlorotetrafluoroethane	2009/10/15		95	%	70 - 130
		Chloromethane	2009/10/15		94	%	70 - 130
		Vinyl Chloride	2009/10/15		96	%	70 - 130
		Chloroethane	2009/10/15		99	%	70 - 130
		1,3-Butadiene	2009/10/15		86	%	70 - 130
		Trichlorofluoromethane (FREON 11)	2009/10/15		101	%	70 - 130
		Trichlorotrifluoroethane	2009/10/15		96	%	70 - 130
		Ethanol	2009/10/15		88	%	70 - 130
		2-propanol	2009/10/15		97	%	70 - 130
		2-Propanone	2009/10/15		97	%	70 - 130
		Methyl Ethyl Ketone (2-Butanone)	2009/10/15		101	%	70 - 130
		Methyl Isobutyl Ketone	2009/10/15		98	%	70 - 130
		Methyl Butyl Ketone (2-Hexanone)	2009/10/15		95	%	70 - 130
		Methyl t-butyl ether (MTBE)	2009/10/15		100	%	70 - 130
		Ethyl Acetate	2009/10/15		100	%	70 - 130
		1,1-Dichloroethylene	2009/10/15		97	%	70 - 130
		cis-1,2-Dichloroethylene	2009/10/15		100	%	70 - 130
		trans-1,2-Dichloroethylene	2009/10/15		98	%	70 - 130
		Methylene Chloride(Dichloromethane)	2009/10/15		88	%	70 - 130
		Chloroform	2009/10/15		97	%	70 - 130
		Carbon Tetrachloride	2009/10/15		104	%	70 - 130
		1,1-Dichloroethane	2009/10/15		98	%	70 - 130
		1,2-Dichloroethane	2009/10/15		97	%	70 - 130
		Ethylene Dibromide	2009/10/15		91	%	70 - 130
		1,1,1-Trichloroethane	2009/10/15		99	%	70 - 130
		1,1,2-Trichloroethane	2009/10/15		94	%	70 - 130
		1,1,2,2-Tetrachloroethane	2009/10/15		89	%	70 - 130
		cis-1,3-Dichloropropene	2009/10/15		95	%	70 - 130
		trans-1,3-Dichloropropene	2009/10/15		91	%	70 - 130
		1,2-Dichloropropane	2009/10/15		94	%	70 - 130
		Bromomethane	2009/10/15		97	%	70 - 130
		Bromoform	2009/10/15		105	%	70 - 130
		Bromodichloromethane	2009/10/15		102	%	70 - 130
		Dibromochloromethane	2009/10/15		105	%	70 - 130
		Heptane	2009/10/15		98	%	70 - 130
		Trichloroethylene	2009/10/15		93	%	70 - 130
		Tetrachloroethylene	2009/10/15		94	%	70 - 130
		Benzene	2009/10/15		94	%	70 - 130
		Toluene	2009/10/15		93	%	70 - 130
		Ethylbenzene	2009/10/15		92	%	70 - 130
		p+m-Xylene	2009/10/15		91	%	70 - 130
		o-Xylene	2009/10/15		91	%	70 - 130
		Styrene	2009/10/15		77	%	70 - 130
		1,3,5-Trimethylbenzene	2009/10/15		87	%	70 - 130
		1,2,4-Trimethylbenzene	2009/10/15		82	%	70 - 130
		4-ethyltoluene	2009/10/15		88	%	70 - 130

Lakeland Industry & Community Assoc.
 Attention:
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Quality Assurance Report (Continued)

Maxxam Job Number: GA9D5296

QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
1975647 LSY	Spiked Blank	Chlorobenzene	2009/10/15		84	%	70 - 130
		Benzyl chloride	2009/10/15		83	%	70 - 130
		1,3-Dichlorobenzene	2009/10/15		77	%	70 - 130
		1,4-Dichlorobenzene	2009/10/15		74	%	70 - 130
		1,2-Dichlorobenzene	2009/10/15		78	%	70 - 130
		1,2,4-Trichlorobenzene	2009/10/15		87	%	70 - 130
		Hexachlorobutadiene	2009/10/15		91	%	70 - 130
		Hexane	2009/10/15		93	%	70 - 130
		Cyclohexane	2009/10/15		98	%	70 - 130
		Tetrahydrofuran	2009/10/15		100	%	70 - 130
		1,4-Dioxane	2009/10/15		97	%	70 - 130
	Method Blank	Bromochloromethane	2009/10/15		95	%	60 - 140
		D5-Chlorobenzene	2009/10/15		95	%	60 - 140
		Difluorobenzene	2009/10/15		96	%	60 - 140
		2,2,4-Trimethylpentane	2009/10/15	ND, RDL=0.20		ppbv	
		Carbon Disulfide	2009/10/15	ND, RDL=0.50		ppbv	
		Propene	2009/10/15	ND, RDL=0.30		ppbv	
		Vinyl Acetate	2009/10/15	ND, RDL=0.20		ppbv	
		Vinyl Bromide	2009/10/15	ND, RDL=0.20		ppbv	
		Dichlorodifluoromethane (FREON 12)	2009/10/15	ND, RDL=0.20		ppbv	
		1,2-Dichlorotetrafluoroethane	2009/10/15	ND, RDL=0.17		ppbv	
		Chloromethane	2009/10/15	ND, RDL=0.30		ppbv	
		Vinyl Chloride	2009/10/15	ND, RDL=0.18		ppbv	
		Chloroethane	2009/10/15	ND, RDL=0.30		ppbv	
		1,3-Butadiene	2009/10/15	ND, RDL=0.50		ppbv	
		Trichlorofluoromethane (FREON 11)	2009/10/15	ND, RDL=0.20		ppbv	
		Trichlorotrifluoroethane	2009/10/15	ND, RDL=0.15		ppbv	
		Ethanol	2009/10/15	ND, RDL=2.3		ppbv	
		2-propanol	2009/10/15	ND, RDL=3.0		ppbv	
		2-Propanone	2009/10/15	ND, RDL=0.80		ppbv	
		Methyl Ethyl Ketone (2-Butanone)	2009/10/15	ND, RDL=3.0		ppbv	
		Methyl Isobutyl Ketone	2009/10/15	ND, RDL=3.2		ppbv	
		Methyl Butyl Ketone (2-Hexanone)	2009/10/15	ND, RDL=2.0		ppbv	
		Methyl t-butyl ether (MTBE)	2009/10/15	ND, RDL=0.20		ppbv	
		Ethyl Acetate	2009/10/15	ND, RDL=2.2		ppbv	
		1,1-Dichloroethylene	2009/10/15	ND, RDL=0.25		ppbv	
		cis-1,2-Dichloroethylene	2009/10/15	ND, RDL=0.19		ppbv	
		trans-1,2-Dichloroethylene	2009/10/15	ND, RDL=0.20		ppbv	
		Methylene Chloride(Dichloromethane)	2009/10/15	0.48, RDL=0.30		ppbv	
		Chloroform	2009/10/15	ND, RDL=0.15		ppbv	
		Carbon Tetrachloride	2009/10/15	ND, RDL=0.30		ppbv	
		1,1-Dichloroethane	2009/10/15	ND, RDL=0.20		ppbv	
		1,2-Dichloroethane	2009/10/15	ND, RDL=0.20		ppbv	
		Ethylene Dibromide	2009/10/15	ND, RDL=0.17		ppbv	
		1,1,1-Trichloroethane	2009/10/15	ND, RDL=0.30		ppbv	
		1,1,2-Trichloroethane	2009/10/15	ND, RDL=0.15		ppbv	
		1,1,2,2-Tetrachloroethane	2009/10/15	ND, RDL=0.20		ppbv	
		cis-1,3-Dichloropropene	2009/10/15	ND, RDL=0.18		ppbv	
		trans-1,3-Dichloropropene	2009/10/15	ND, RDL=0.17		ppbv	
		1,2-Dichloropropane	2009/10/15	ND, RDL=0.40		ppbv	
		Bromomethane	2009/10/15	ND, RDL=0.18		ppbv	
		Bromoform	2009/10/15	ND, RDL=0.20		ppbv	
		Bromodichloromethane	2009/10/15	ND, RDL=0.20		ppbv	
		Dibromochloromethane	2009/10/15	ND, RDL=0.20		ppbv	
		Heptane	2009/10/15	ND, RDL=0.30		ppbv	

Lakeland Industry & Community Assoc.
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Quality Assurance Report (Continued)
 Maxxam Job Number: GA9D5296

QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
1975647 LSY	Method Blank	Trichloroethylene	2009/10/15	ND, RDL=0.30		ppbv	
		Tetrachloroethylene	2009/10/15	ND, RDL=0.20		ppbv	
		Benzene	2009/10/15	ND, RDL=0.18		ppbv	
		Toluene	2009/10/15	ND, RDL=0.20		ppbv	
		Ethylbenzene	2009/10/15	ND, RDL=0.20		ppbv	
		p+m-Xylene	2009/10/15	ND, RDL=0.37		ppbv	
		o-Xylene	2009/10/15	ND, RDL=0.20		ppbv	
		Styrene	2009/10/15	ND, RDL=0.20		ppbv	
		1,3,5-Trimethylbenzene	2009/10/15	ND, RDL=0.50		ppbv	
		1,2,4-Trimethylbenzene	2009/10/15	ND, RDL=0.50		ppbv	
		4-ethyltoluene	2009/10/15	ND, RDL=2.2		ppbv	
		Chlorobenzene	2009/10/15	ND, RDL=0.20		ppbv	
		Benzyl chloride	2009/10/15	ND, RDL=1.0		ppbv	
		1,3-Dichlorobenzene	2009/10/15	ND, RDL=0.40		ppbv	
		1,4-Dichlorobenzene	2009/10/15	ND, RDL=0.40		ppbv	
		1,2-Dichlorobenzene	2009/10/15	ND, RDL=0.40		ppbv	
		1,2,4-Trichlorobenzene	2009/10/15	ND, RDL=2.0		ppbv	
		Hexachlorobutadiene	2009/10/15	ND, RDL=3.0		ppbv	
		Hexane	2009/10/15	ND, RDL=0.30		ppbv	
		Cyclohexane	2009/10/15	ND, RDL=0.20		ppbv	
		Tetrahydrofuran	2009/10/15	ND, RDL=0.40		ppbv	
		1,4-Dioxane	2009/10/15	ND, RDL=2.0		ppbv	
		Xylene (Total)	2009/10/15	ND, RDL=0.60		ppbv	
	RPD - Sample/Sample Dup	2,2,4-Trimethylpentane	2009/10/15	NC		%	25
		Carbon Disulfide	2009/10/15	NC		%	25
		Propene	2009/10/15	NC		%	25
		Vinyl Acetate	2009/10/15	NC		%	25
		Vinyl Bromide	2009/10/15	NC		%	25
		Dichlorodifluoromethane (FREON 12)	2009/10/15	NC		%	25
		1,2-Dichlorotetrafluoroethane	2009/10/15	NC		%	25
		Chloromethane	2009/10/15	NC		%	25
		Vinyl Chloride	2009/10/15	NC		%	25
		Chloroethane	2009/10/15	NC		%	25
		1,3-Butadiene	2009/10/15	NC		%	25
		Trichlorofluoromethane (FREON 11)	2009/10/15	NC		%	25
		Trichlorotrifluoroethane	2009/10/15	NC		%	25
		Ethanol	2009/10/15	1.2		%	25
		2-propanol	2009/10/15	NC		%	25
		2-Propanone	2009/10/15	4.1		%	25
		Methyl Ethyl Ketone (2-Butanone)	2009/10/15	NC		%	25
		Methyl Isobutyl Ketone	2009/10/15	NC		%	25
		Methyl Butyl Ketone (2-Hexanone)	2009/10/15	NC		%	25
		Methyl t-butyl ether (MTBE)	2009/10/15	NC		%	25
		Ethyl Acetate	2009/10/15	NC		%	25
		1,1-Dichloroethylene	2009/10/15	NC		%	25
		cis-1,2-Dichloroethylene	2009/10/15	0.7		%	25
		trans-1,2-Dichloroethylene	2009/10/15	NC		%	25
		Methylene Chloride(Dichloromethane)	2009/10/15	0.6		%	25
		Chloroform	2009/10/15	1.4		%	25
		Carbon Tetrachloride	2009/10/15	NC		%	25
		1,1-Dichloroethane	2009/10/15	NC		%	25
		1,2-Dichloroethane	2009/10/15	NC		%	25
		Ethylene Dibromide	2009/10/15	NC		%	25

Lakeland Industry & Community Assoc.
 Attention:
 Client Project #:
 P.O. #:
 Project name:

Quality Assurance Report (Continued)

Maxxam Job Number: GA9D5296

QA/QC Batch Num Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
1975647 LSY	RPD - Sample/Sample Dup	1,1,1-Trichloroethane	2009/10/15	NC		%	25
		1,1,2-Trichloroethane	2009/10/15	NC		%	25
		1,1,2,2-Tetrachloroethane	2009/10/15	NC		%	25
		cis-1,3-Dichloropropene	2009/10/15	NC		%	25
		trans-1,3-Dichloropropene	2009/10/15	NC		%	25
		1,2-Dichloropropane	2009/10/15	NC		%	25
		Bromomethane	2009/10/15	NC		%	25
		Bromoform	2009/10/15	NC		%	25
		Bromodichloromethane	2009/10/15	NC		%	25
		Dibromochloromethane	2009/10/15	NC		%	25
		Heptane	2009/10/15	NC		%	25
		Trichloroethylene	2009/10/15	0.02		%	25
		Tetrachloroethylene	2009/10/15	0.8		%	25
		Benzene	2009/10/15	NC		%	25
		Toluene	2009/10/15	0.8		%	25
		Ethylbenzene	2009/10/15	NC		%	25
		p+m-Xylene	2009/10/15	0.8		%	25
		o-Xylene	2009/10/15	0.7		%	25
		Styrene	2009/10/15	NC		%	25
		1,3,5-Trimethylbenzene	2009/10/15	NC		%	25
		1,2,4-Trimethylbenzene	2009/10/15	NC		%	25
		4-ethyltoluene	2009/10/15	NC		%	25
		Chlorobenzene	2009/10/15	NC		%	25
		Benzyl chloride	2009/10/15	NC		%	25
		1,3-Dichlorobenzene	2009/10/15	NC		%	25
		1,4-Dichlorobenzene	2009/10/15	NC		%	25
		1,2-Dichlorobenzene	2009/10/15	NC		%	25
		1,2,4-Trichlorobenzene	2009/10/15	NC		%	25
		Hexachlorobutadiene	2009/10/15	NC		%	25
		Hexane	2009/10/15	NC		%	25
		Cyclohexane	2009/10/15	NC		%	25
		Tetrahydrofuran	2009/10/15	NC		%	25
		1,4-Dioxane	2009/10/15	NC		%	25
		Xylene (Total)	2009/10/15	0.8		%	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.



Your C.O.C. #: 5337

Lakeland Industry & Community Assoc.
P.O. Box 8237
Bonnyville, AB
CANADA T9N 2J5

Report Date: 2009/10/28

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: A9D9391
Received: 2009/10/19, 14:12

Sample Matrix: AIR
Samples Received: 1

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Method Reference
Canister Pressure (TO-15)	1	N/A	2009/10/20	BRL SOP-00304	EPA TO-15
Volatile Organics in Air (TO-15) ¶	1	N/A	2009/10/20	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: 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. SCC and CALA have approved this reporting process and electronic report format.

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Total cover pages: 1

Maxxam Job #: A9D9391
 Report Date: 2009/10/28

RESULTS OF ANALYSES OF AIR

Maxxam ID		EB5416		
Sampling Date		2009/10/06		
COC Number		5337		
	Units	LICA VOC/PORT/OCT6,09 (7823)	DL	QC Batch

Volatile Organics				
Pressure on Receipt	psig	20	N/A	1979084

RDL = Reportable Detection Limit
 QC Batch = Quality Control Batch

Maxxam Job #: A9D9391
 Report Date: 2009/10/28

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		EB5416				
Sampling Date		2009/10/06				
COC Number		5337				
	Units	LICA VOC/PORT/OCT6,09 (7823)	DL	ug/m3	DL (ug/m3)	QC Batch

Volatile Organics						
2,2,4-Trimethylpentane	ppbv	<0.20	0.20	<0.934	0.934	1979082
Carbon Disulfide	ppbv	<0.50	0.50	<1.56	1.56	1979082
Propene	ppbv	<0.30	0.30	<0.516	0.516	1979082
Vinyl Acetate	ppbv	<0.20	0.20	<0.704	0.704	1979082
Vinyl Bromide	ppbv	<0.20	0.20	<0.875	0.875	1979082
Dichlorodifluoromethane (FREON 12)	ppbv	0.69	0.20	3.42	0.989	1979082
1,2-Dichlorotetrafluoroethane	ppbv	<0.17	0.17	<1.19	1.19	1979082
Chloromethane	ppbv	0.47	0.30	0.975	0.620	1979082
Vinyl Chloride	ppbv	<0.18	0.18	<0.460	0.460	1979082
Chloroethane	ppbv	<0.30	0.30	<0.792	0.792	1979082
1,3-Butadiene	ppbv	<0.50	0.50	<1.11	1.11	1979082
Trichlorofluoromethane (FREON 11)	ppbv	0.33	0.20	1.83	1.12	1979082
Trichlorotrifluoroethane	ppbv	<0.15	0.15	<1.15	1.15	1979082
Ethanol	ppbv	<2.3	2.3	<4.33	4.33	1979082
2-propanol	ppbv	<3.0	3.0	<7.37	7.37	1979082
2-Propanone	ppbv	3.26	0.80	7.74	1.90	1979082
Methyl Ethyl Ketone (2-Butanone)	ppbv	<3.0	3.0	<8.85	8.85	1979082
Methyl Isobutyl Ketone	ppbv	<3.2	3.2	<13.1	13.1	1979082
Methyl Butyl Ketone (2-Hexanone)	ppbv	<2.0	2.0	<8.19	8.19	1979082
Methyl t-butyl ether (MTBE)	ppbv	<0.20	0.20	<0.721	0.721	1979082
Ethyl Acetate	ppbv	<2.2	2.2	<7.93	7.93	1979082
1,1-Dichloroethylene	ppbv	<0.25	0.25	<0.991	0.991	1979082
cis-1,2-Dichloroethylene	ppbv	<0.19	0.19	<0.753	0.753	1979082
trans-1,2-Dichloroethylene	ppbv	<0.20	0.20	<0.793	0.793	1979082
Methylene Chloride(Dichloromethane)	ppbv	0.68	0.30	2.36	1.04	1979082
Chloroform	ppbv	<0.15	0.15	<0.732	0.732	1979082
Carbon Tetrachloride	ppbv	<0.30	0.30	<1.89	1.89	1979082
1,1-Dichloroethane	ppbv	<0.20	0.20	<0.809	0.809	1979082
1,2-Dichloroethane	ppbv	<0.20	0.20	<0.809	0.809	1979082
Ethylene Dibromide	ppbv	<0.17	0.17	<1.31	1.31	1979082
1,1,1-Trichloroethane	ppbv	<0.30	0.30	<1.64	1.64	1979082

 RDL = Reportable Detection Limit
 QC Batch = Quality Control Batch

Maxxam Job #: A9D9391
 Report Date: 2009/10/28

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		EB5416				
Sampling Date		2009/10/06				
COC Number		5337				
	Units	LICA VOC/PORT/OCT6,09 (7823)	DL	ug/m3	DL (ug/m3)	QC Batch
1,1,2-Trichloroethane	ppbv	<0.15	0.15	<0.818	0.818	1979082
1,1,2,2-Tetrachloroethane	ppbv	<0.20	0.20	<1.37	1.37	1979082
cis-1,3-Dichloropropene	ppbv	<0.18	0.18	<0.817	0.817	1979082
trans-1,3-Dichloropropene	ppbv	<0.17	0.17	<0.772	0.772	1979082
1,2-Dichloropropane	ppbv	<0.40	0.40	<1.85	1.85	1979082
Bromomethane	ppbv	<0.18	0.18	<0.699	0.699	1979082
Bromoform	ppbv	<0.20	0.20	<2.07	2.07	1979082
Bromodichloromethane	ppbv	<0.20	0.20	<1.34	1.34	1979082
Dibromochloromethane	ppbv	<0.20	0.20	<1.70	1.70	1979082
Heptane	ppbv	<0.30	0.30	<1.23	1.23	1979082
Trichloroethylene	ppbv	<0.30	0.30	<1.61	1.61	1979082
Tetrachloroethylene	ppbv	<0.20	0.20	<1.36	1.36	1979082
Benzene	ppbv	<0.18	0.18	<0.575	0.575	1979082
Toluene	ppbv	<0.20	0.20	<0.753	0.753	1979082
Ethylbenzene	ppbv	<0.20	0.20	<0.868	0.868	1979082
p+m-Xylene	ppbv	<0.37	0.37	<1.61	1.61	1979082
o-Xylene	ppbv	<0.20	0.20	<0.868	0.868	1979082
Styrene	ppbv	<0.20	0.20	<0.852	0.852	1979082
1,3,5-Trimethylbenzene	ppbv	<2.4	2.4	<11.8	11.8	1979082
1,2,4-Trimethylbenzene	ppbv	<2.5	2.5	<12.3	12.3	1979082
4-ethyltoluene	ppbv	<2.2	2.2	<10.8	10.8	1979082
Chlorobenzene	ppbv	<0.20	0.20	<0.921	0.921	1979082
Benzyl chloride	ppbv	<1.0	1.0	<5.18	5.18	1979082
1,3-Dichlorobenzene	ppbv	<0.40	0.40	<2.40	2.40	1979082
1,4-Dichlorobenzene	ppbv	<0.40	0.40	<2.40	2.40	1979082
1,2-Dichlorobenzene	ppbv	<0.40	0.40	<2.40	2.40	1979082
1,2,4-Trichlorobenzene	ppbv	<2.0	2.0	<14.8	14.8	1979082
Hexachlorobutadiene	ppbv	<3.0	3.0	<32.0	32.0	1979082
Hexane	ppbv	<0.30	0.30	<1.06	1.06	1979082
Cyclohexane	ppbv	<0.20	0.20	<0.688	0.688	1979082
Tetrahydrofuran	ppbv	<0.40	0.40	<1.18	1.18	1979082
1,4-Dioxane	ppbv	<2.0	2.0	<7.21	7.21	1979082
Xylene (Total)	ppbv	<0.60	0.60	<2.61	2.61	1979082
QC Batch = Quality Control Batch						

Maxxam Job #: A9D9391
 Report Date: 2009/10/28

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		EB5416				
Sampling Date		2009/10/06				
COC Number		5337				
	Units	LICA VOC/PORT/OCT6,09 (7823)	DL	ug/m3	DL (ug/m3)	QC Batch

Surrogate Recovery (%)						
Bromochloromethane	%	80		N/A	N/A	1979082
D5-Chlorobenzene	%	80		N/A	N/A	1979082
Difluorobenzene	%	82		N/A	N/A	1979082

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

Maxxam Job #: A9D9391
 Report Date: 2009/10/28

Test Summary

Maxxam ID EB5416 **Collected** 2009/10/06
Sample ID LICA VOC/PORT/OCT6,09 (7823) **Shipped**
Matrix AIR **Received** 2009/10/19

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Canister Pressure (TO-15)	PRES	1979084	N/A	2009/10/20	VEA
Volatile Organics in Air (TO-15)	GC/MS	1979082	N/A	2009/10/20	VEA

Maxxam ID EB5416 Dup **Collected** 2009/10/06
Sample ID LICA VOC/PORT/OCT6,09 (7823) **Shipped**
Matrix AIR **Received** 2009/10/19

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Volatile Organics in Air (TO-15)	GC/MS	1979082	N/A	2009/10/20	VEA

Maxxam Job #: A9D9391
Report Date: 2009/10/28

GENERAL COMMENTS

Results relate only to the items tested.

Lakeland Industry & Community Assoc.
 Attention:
 Client Project #:
 P.O. #:
 Project name:

Quality Assurance Report
 Maxxam Job Number: GA9D9391

QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
1979082 VEA	Spiked Blank	Bromochloromethane	2009/10/20		109	%	60 - 140
		D5-Chlorobenzene	2009/10/20		107	%	60 - 140
		Difluorobenzene	2009/10/20		111	%	60 - 140
		2,2,4-Trimethylpentane	2009/10/20		100	%	70 - 130
		Carbon Disulfide	2009/10/20		86	%	70 - 130
		Propene	2009/10/20		91	%	70 - 130
		Vinyl Acetate	2009/10/20		88	%	70 - 130
		Vinyl Bromide	2009/10/20		102	%	70 - 130
		Dichlorodifluoromethane (FREON 12)	2009/10/20		85	%	70 - 130
		1,2-Dichlorotetrafluoroethane	2009/10/20		86	%	70 - 130
		Chloromethane	2009/10/20		84	%	70 - 130
		Vinyl Chloride	2009/10/20		88	%	70 - 130
		Chloroethane	2009/10/20		88	%	70 - 130
		1,3-Butadiene	2009/10/20		78	%	70 - 130
		Trichlorofluoromethane (FREON 11)	2009/10/20		86	%	70 - 130
		Trichlorotrifluoroethane	2009/10/20		83	%	70 - 130
		Ethanol	2009/10/20		72	%	70 - 130
		2-propanol	2009/10/20		84	%	70 - 130
		2-Propanone	2009/10/20		111	%	70 - 130
		Methyl Ethyl Ketone (2-Butanone)	2009/10/20		93	%	70 - 130
		Methyl Isobutyl Ketone	2009/10/20		83	%	70 - 130
		Methyl Butyl Ketone (2-Hexanone)	2009/10/20		78	%	70 - 130
		Methyl t-butyl ether (MTBE)	2009/10/20		92	%	70 - 130
		Ethyl Acetate	2009/10/20		92	%	70 - 130
		1,1-Dichloroethylene	2009/10/20		85	%	70 - 130
		cis-1,2-Dichloroethylene	2009/10/20		86	%	70 - 130
		trans-1,2-Dichloroethylene	2009/10/20		91	%	70 - 130
		Methylene Chloride(Dichloromethane)	2009/10/20		73	%	70 - 130
		Chloroform	2009/10/20		83	%	70 - 130
		Carbon Tetrachloride	2009/10/20		88	%	70 - 130
		1,1-Dichloroethane	2009/10/20		84	%	70 - 130
		1,2-Dichloroethane	2009/10/20		84	%	70 - 130
		Ethylene Dibromide	2009/10/20		86	%	70 - 130
		1,1,1-Trichloroethane	2009/10/20		84	%	70 - 130
		1,1,2-Trichloroethane	2009/10/20		83	%	70 - 130
		1,1,2,2-Tetrachloroethane	2009/10/20		82	%	70 - 130
		cis-1,3-Dichloropropene	2009/10/20		89	%	70 - 130
		trans-1,3-Dichloropropene	2009/10/20		94	%	70 - 130
		1,2-Dichloropropane	2009/10/20		81	%	70 - 130
		Bromomethane	2009/10/20		90	%	70 - 130
		Bromoform	2009/10/20		93	%	70 - 130
		Bromodichloromethane	2009/10/20		90	%	70 - 130
		Dibromochloromethane	2009/10/20		93	%	70 - 130
		Heptane	2009/10/20		92	%	70 - 130
		Trichloroethylene	2009/10/20		82	%	70 - 130
		Tetrachloroethylene	2009/10/20		83	%	70 - 130
		Benzene	2009/10/20		84	%	70 - 130
		Toluene	2009/10/20		88	%	70 - 130
		Ethylbenzene	2009/10/20		89	%	70 - 130
		p+m-Xylene	2009/10/20		87	%	70 - 130
		o-Xylene	2009/10/20		85	%	70 - 130
		Styrene	2009/10/20		73	%	70 - 130
		1,3,5-Trimethylbenzene	2009/10/20		82	%	70 - 130
		1,2,4-Trimethylbenzene	2009/10/20		85	%	70 - 130
		4-ethyltoluene	2009/10/20		97	%	70 - 130

Lakeland Industry & Community Assoc.
 Attention:
 Client Project #:
 P.O. #:
 Project name:

Quality Assurance Report (Continued)

Maxxam Job Number: GA9D9391

QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
1979082 VEA	Spiked Blank	Chlorobenzene	2009/10/20		82	%	70 - 130
		Benzyl chloride	2009/10/20		105	%	70 - 130
		1,3-Dichlorobenzene	2009/10/20		88	%	70 - 130
		1,4-Dichlorobenzene	2009/10/20		89	%	70 - 130
		1,2-Dichlorobenzene	2009/10/20		86	%	70 - 130
		1,2,4-Trichlorobenzene	2009/10/20		82	%	70 - 130
		Hexachlorobutadiene	2009/10/20		75	%	70 - 130
		Hexane	2009/10/20		92	%	70 - 130
		Cyclohexane	2009/10/20		91	%	70 - 130
		Tetrahydrofuran	2009/10/20		91	%	70 - 130
		1,4-Dioxane	2009/10/20		89	%	70 - 130
	Method Blank	Bromochloromethane	2009/10/20		79	%	60 - 140
		D5-Chlorobenzene	2009/10/20		81	%	60 - 140
		Difluorobenzene	2009/10/20		84	%	60 - 140
		2,2,4-Trimethylpentane	2009/10/20	ND, RDL=0.20		ppbv	
		Carbon Disulfide	2009/10/20	ND, RDL=0.50		ppbv	
		Propene	2009/10/20	ND, RDL=0.30		ppbv	
		Vinyl Acetate	2009/10/20	ND, RDL=0.20		ppbv	
		Vinyl Bromide	2009/10/20	ND, RDL=0.20		ppbv	
		Dichlorodifluoromethane (FREON 12)	2009/10/20	ND, RDL=0.20		ppbv	
		1,2-Dichlorotetrafluoroethane	2009/10/20	ND, RDL=0.17		ppbv	
		Chloromethane	2009/10/20	ND, RDL=0.30		ppbv	
		Vinyl Chloride	2009/10/20	ND, RDL=0.18		ppbv	
		Chloroethane	2009/10/20	ND, RDL=0.30		ppbv	
		1,3-Butadiene	2009/10/20	ND, RDL=0.50		ppbv	
		Trichlorofluoromethane (FREON 11)	2009/10/20	ND, RDL=0.20		ppbv	
		Trichlorotrifluoroethane	2009/10/20	ND, RDL=0.15		ppbv	
		Ethanol	2009/10/20	ND, RDL=2.3		ppbv	
		2-propanol	2009/10/20	ND, RDL=3.0		ppbv	
		2-Propanone	2009/10/20	ND, RDL=0.80		ppbv	
		Methyl Ethyl Ketone (2-Butanone)	2009/10/20	ND, RDL=3.0		ppbv	
		Methyl Isobutyl Ketone	2009/10/20	ND, RDL=3.2		ppbv	
		Methyl Butyl Ketone (2-Hexanone)	2009/10/20	ND, RDL=2.0		ppbv	
		Methyl t-butyl ether (MTBE)	2009/10/20	ND, RDL=0.20		ppbv	
		Ethyl Acetate	2009/10/20	ND, RDL=2.2		ppbv	
		1,1-Dichloroethylene	2009/10/20	ND, RDL=0.25		ppbv	
		cis-1,2-Dichloroethylene	2009/10/20	ND, RDL=0.19		ppbv	
		trans-1,2-Dichloroethylene	2009/10/20	ND, RDL=0.20		ppbv	
		Methylene Chloride(Dichloromethane)	2009/10/20	0.66, RDL=0.30		ppbv	
		Chloroform	2009/10/20	ND, RDL=0.15		ppbv	
		Carbon Tetrachloride	2009/10/20	ND, RDL=0.30		ppbv	
		1,1-Dichloroethane	2009/10/20	ND, RDL=0.20		ppbv	
		1,2-Dichloroethane	2009/10/20	ND, RDL=0.20		ppbv	
		Ethylene Dibromide	2009/10/20	ND, RDL=0.17		ppbv	
		1,1,1-Trichloroethane	2009/10/20	ND, RDL=0.30		ppbv	
		1,1,2-Trichloroethane	2009/10/20	ND, RDL=0.15		ppbv	
		1,1,2,2-Tetrachloroethane	2009/10/20	ND, RDL=0.20		ppbv	
		cis-1,3-Dichloropropene	2009/10/20	ND, RDL=0.18		ppbv	
		trans-1,3-Dichloropropene	2009/10/20	ND, RDL=0.17		ppbv	
		1,2-Dichloropropane	2009/10/20	ND, RDL=0.40		ppbv	
		Bromomethane	2009/10/20	ND, RDL=0.18		ppbv	
		Bromoform	2009/10/20	ND, RDL=0.20		ppbv	
		Bromodichloromethane	2009/10/20	ND, RDL=0.20		ppbv	
		Dibromochloromethane	2009/10/20	ND, RDL=0.20		ppbv	
		Heptane	2009/10/20	ND, RDL=0.30		ppbv	

Lakeland Industry & Community Assoc.
 Attention:
 Client Project #:
 P.O. #:
 Project name:

Quality Assurance Report (Continued)
 Maxxam Job Number: GA9D9391

QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
1979082 VEA	Method Blank	Trichloroethylene	2009/10/20	ND, RDL=0.30		ppbv	
		Tetrachloroethylene	2009/10/20	ND, RDL=0.20		ppbv	
		Benzene	2009/10/20	ND, RDL=0.18		ppbv	
		Toluene	2009/10/20	ND, RDL=0.20		ppbv	
		Ethylbenzene	2009/10/20	ND, RDL=0.20		ppbv	
		p+m-Xylene	2009/10/20	ND, RDL=0.37		ppbv	
		o-Xylene	2009/10/20	ND, RDL=0.20		ppbv	
		Styrene	2009/10/20	ND, RDL=0.20		ppbv	
		1,3,5-Trimethylbenzene	2009/10/20	ND, RDL=2.4		ppbv	
		1,2,4-Trimethylbenzene	2009/10/20	ND, RDL=2.5		ppbv	
		4-ethyltoluene	2009/10/20	ND, RDL=2.2		ppbv	
		Chlorobenzene	2009/10/20	ND, RDL=0.20		ppbv	
		Benzyl chloride	2009/10/20	ND, RDL=1.0		ppbv	
		1,3-Dichlorobenzene	2009/10/20	ND, RDL=0.40		ppbv	
		1,4-Dichlorobenzene	2009/10/20	ND, RDL=0.40		ppbv	
		1,2-Dichlorobenzene	2009/10/20	ND, RDL=0.40		ppbv	
		1,2,4-Trichlorobenzene	2009/10/20	ND, RDL=2.0		ppbv	
		Hexachlorobutadiene	2009/10/20	ND, RDL=3.0		ppbv	
		Hexane	2009/10/20	ND, RDL=0.30		ppbv	
		Cyclohexane	2009/10/20	ND, RDL=0.20		ppbv	
		Tetrahydrofuran	2009/10/20	ND, RDL=0.40		ppbv	
		1,4-Dioxane	2009/10/20	ND, RDL=2.0		ppbv	
		Xylene (Total)	2009/10/20	ND, RDL=0.60		ppbv	
	RPD - Sample/Sample Dup	2,2,4-Trimethylpentane	2009/10/20	NC		%	25
		Carbon Disulfide	2009/10/20	NC		%	25
		Propene	2009/10/20	NC		%	25
		Vinyl Acetate	2009/10/20	NC		%	25
		Vinyl Bromide	2009/10/20	NC		%	25
		Dichlorodifluoromethane (FREON 12)	2009/10/20	NC		%	25
		1,2-Dichlorotetrafluoroethane	2009/10/20	NC		%	25
		Chloromethane	2009/10/20	NC		%	25
		Vinyl Chloride	2009/10/20	NC		%	25
		Chloroethane	2009/10/20	NC		%	25
		1,3-Butadiene	2009/10/20	NC		%	25
		Trichlorofluoromethane (FREON 11)	2009/10/20	NC		%	25
		Trichlorotrifluoroethane	2009/10/20	NC		%	25
		Ethanol	2009/10/20	NC		%	25
		2-propanol	2009/10/20	NC		%	25
		2-Propanone	2009/10/20	NC		%	25
		Methyl Ethyl Ketone (2-Butanone)	2009/10/20	NC		%	25
		Methyl Isobutyl Ketone	2009/10/20	NC		%	25
		Methyl Butyl Ketone (2-Hexanone)	2009/10/20	NC		%	25
		Methyl t-butyl ether (MTBE)	2009/10/20	NC		%	25
		Ethyl Acetate	2009/10/20	NC		%	25
		1,1-Dichloroethylene	2009/10/20	NC		%	25
		cis-1,2-Dichloroethylene	2009/10/20	NC		%	25
		trans-1,2-Dichloroethylene	2009/10/20	NC		%	25
		Methylene Chloride(Dichloromethane)	2009/10/20	NC		%	25
		Chloroform	2009/10/20	NC		%	25
		Carbon Tetrachloride	2009/10/20	NC		%	25
		1,1-Dichloroethane	2009/10/20	NC		%	25
		1,2-Dichloroethane	2009/10/20	NC		%	25
		Ethylene Dibromide	2009/10/20	NC		%	25

Lakeland Industry & Community Assoc.
 Attention:
 Client Project #:
 P.O. #:
 Project name:

Quality Assurance Report (Continued)
 Maxxam Job Number: GA9D9391

QA/QC Batch Num Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
1979082 VEA	RPD - Sample/Sample Dup	1,1,1-Trichloroethane	2009/10/20	NC		%	25
		1,1,2-Trichloroethane	2009/10/20	NC		%	25
		1,1,2,2-Tetrachloroethane	2009/10/20	NC		%	25
		cis-1,3-Dichloropropene	2009/10/20	NC		%	25
		trans-1,3-Dichloropropene	2009/10/20	NC		%	25
		1,2-Dichloropropane	2009/10/20	NC		%	25
		Bromomethane	2009/10/20	NC		%	25
		Bromoform	2009/10/20	NC		%	25
		Bromodichloromethane	2009/10/20	NC		%	25
		Dibromochloromethane	2009/10/20	NC		%	25
		Heptane	2009/10/20	NC		%	25
		Trichloroethylene	2009/10/20	NC		%	25
		Tetrachloroethylene	2009/10/20	NC		%	25
		Benzene	2009/10/20	NC		%	25
		Toluene	2009/10/20	NC		%	25
		Ethylbenzene	2009/10/20	NC		%	25
		p+m-Xylene	2009/10/20	NC		%	25
		o-Xylene	2009/10/20	NC		%	25
		Styrene	2009/10/20	NC		%	25
		1,3,5-Trimethylbenzene	2009/10/20	NC		%	25
		1,2,4-Trimethylbenzene	2009/10/20	NC		%	25
		4-ethyltoluene	2009/10/20	NC		%	25
		Chlorobenzene	2009/10/20	NC		%	25
		Benzyl chloride	2009/10/20	NC		%	25
		1,3-Dichlorobenzene	2009/10/20	NC		%	25
		1,4-Dichlorobenzene	2009/10/20	NC		%	25
		1,2-Dichlorobenzene	2009/10/20	NC		%	25
		1,2,4-Trichlorobenzene	2009/10/20	NC		%	25
		Hexachlorobutadiene	2009/10/20	NC		%	25
		Hexane	2009/10/20	NC		%	25
		Cyclohexane	2009/10/20	NC		%	25
		Tetrahydrofuran	2009/10/20	NC		%	25
		1,4-Dioxane	2009/10/20	NC		%	25
		Xylene (Total)	2009/10/20	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.



Your C.O.C. #: 0561

Lakeland Industry & Community Assoc.
P.O. Box 8237
Bonnyville, AB
CANADA T9N 2J5

Report Date: 2009/10/28

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: A9D9384
Received: 2009/10/19, 14:02

Sample Matrix: AIR
Samples Received: 2

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Method Reference
Canister Pressure (TO-15)	2	N/A	2009/10/20	BRL SOP-00304	EPA TO-15
Volatile Organics in Air (TO-15) ¶	2	N/A	2009/10/20	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: Theresa.Stephenson@MaxxamAnalytics.com
Phone# (905) 817-5763

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Total cover pages: 1

Maxxam Job #: A9D9384
 Report Date: 2009/10/28

RESULTS OF ANALYSES OF AIR

Maxxam ID		EB5371	EB5372		
Sampling Date		2009/10/10	2009/10/10		
COC Number		0561	0561		
	Units	LICAVOC/CLS/OCT10,09 (7827)	LICAVOC/PORT/OCT10,09 (7821)	DL	QC Batch

Volatile Organics					
Pressure on Receipt	psig	20	20	N/A	1979084

RDL = Reportable Detection Limit
 QC Batch = Quality Control Batch

Maxxam Job #: A9D9384
 Report Date: 2009/10/28

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		EB5371				
Sampling Date		2009/10/10				
COC Number		0561				
	Units	LICAVOC/CLS/OCT10,09 (7827)	DL	ug/m3	DL (ug/m3)	QC Batch

Volatile Organics						
2,2,4-Trimethylpentane	ppbv	<0.20	0.20	<0.934	0.934	1979082
Carbon Disulfide	ppbv	<0.50	0.50	<1.56	1.56	1979082
Propene	ppbv	<0.30	0.30	<0.516	0.516	1979082
Vinyl Acetate	ppbv	<0.20	0.20	<0.704	0.704	1979082
Vinyl Bromide	ppbv	<0.20	0.20	<0.875	0.875	1979082
Dichlorodifluoromethane (FREON 12)	ppbv	0.66	0.20	3.24	0.989	1979082
1,2-Dichlorotetrafluoroethane	ppbv	<0.17	0.17	<1.19	1.19	1979082
Chloromethane	ppbv	0.50	0.30	1.04	0.620	1979082
Vinyl Chloride	ppbv	<0.18	0.18	<0.460	0.460	1979082
Chloroethane	ppbv	<0.30	0.30	<0.792	0.792	1979082
1,3-Butadiene	ppbv	<0.50	0.50	<1.11	1.11	1979082
Trichlorofluoromethane (FREON 11)	ppbv	0.32	0.20	1.78	1.12	1979082
Trichlorotrifluoroethane	ppbv	<0.15	0.15	<1.15	1.15	1979082
Ethanol	ppbv	<2.3	2.3	<4.33	4.33	1979082
2-propanol	ppbv	<3.0	3.0	<7.37	7.37	1979082
2-Propanone	ppbv	1.54	0.80	3.65	1.90	1979082
Methyl Ethyl Ketone (2-Butanone)	ppbv	<3.0	3.0	<8.85	8.85	1979082
Methyl Isobutyl Ketone	ppbv	<3.2	3.2	<13.1	13.1	1979082
Methyl Butyl Ketone (2-Hexanone)	ppbv	<2.0	2.0	<8.19	8.19	1979082
Methyl t-butyl ether (MTBE)	ppbv	<0.20	0.20	<0.721	0.721	1979082
Ethyl Acetate	ppbv	<2.2	2.2	<7.93	7.93	1979082
1,1-Dichloroethylene	ppbv	<0.25	0.25	<0.991	0.991	1979082
cis-1,2-Dichloroethylene	ppbv	<0.19	0.19	<0.753	0.753	1979082
trans-1,2-Dichloroethylene	ppbv	<0.20	0.20	<0.793	0.793	1979082
Methylene Chloride(Dichloromethane)	ppbv	0.64	0.30	2.21	1.04	1979082
Chloroform	ppbv	<0.15	0.15	<0.732	0.732	1979082
Carbon Tetrachloride	ppbv	<0.30	0.30	<1.89	1.89	1979082
1,1-Dichloroethane	ppbv	<0.20	0.20	<0.809	0.809	1979082
1,2-Dichloroethane	ppbv	<0.20	0.20	<0.809	0.809	1979082
Ethylene Dibromide	ppbv	<0.17	0.17	<1.31	1.31	1979082
1,1,1-Trichloroethane	ppbv	<0.30	0.30	<1.64	1.64	1979082
1,1,2-Trichloroethane	ppbv	<0.15	0.15	<0.818	0.818	1979082

 RDL = Reportable Detection Limit
 QC Batch = Quality Control Batch

Maxxam Job #: A9D9384
 Report Date: 2009/10/28

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		EB5371				
Sampling Date		2009/10/10				
COC Number		0561				
	Units	LICAVOC/CLS/OCT10,09 (7827)	DL	ug/m3	DL (ug/m3)	QC Batch
1,1,2,2-Tetrachloroethane	ppbv	<0.20	0.20	<1.37	1.37	1979082
cis-1,3-Dichloropropene	ppbv	<0.18	0.18	<0.817	0.817	1979082
trans-1,3-Dichloropropene	ppbv	<0.17	0.17	<0.772	0.772	1979082
1,2-Dichloropropane	ppbv	<0.40	0.40	<1.85	1.85	1979082
Bromomethane	ppbv	<0.18	0.18	<0.699	0.699	1979082
Bromoform	ppbv	<0.20	0.20	<2.07	2.07	1979082
Bromodichloromethane	ppbv	<0.20	0.20	<1.34	1.34	1979082
Dibromochloromethane	ppbv	<0.20	0.20	<1.70	1.70	1979082
Heptane	ppbv	<0.30	0.30	<1.23	1.23	1979082
Trichloroethylene	ppbv	<0.30	0.30	<1.61	1.61	1979082
Tetrachloroethylene	ppbv	<0.20	0.20	<1.36	1.36	1979082
Benzene	ppbv	<0.18	0.18	<0.575	0.575	1979082
Toluene	ppbv	<0.20	0.20	<0.753	0.753	1979082
Ethylbenzene	ppbv	<0.20	0.20	<0.868	0.868	1979082
p+m-Xylene	ppbv	<0.37	0.37	<1.61	1.61	1979082
o-Xylene	ppbv	<0.20	0.20	<0.868	0.868	1979082
Styrene	ppbv	<0.20	0.20	<0.852	0.852	1979082
1,3,5-Trimethylbenzene	ppbv	<2.4	2.4	<11.8	11.8	1979082
1,2,4-Trimethylbenzene	ppbv	<2.5	2.5	<12.3	12.3	1979082
4-ethyltoluene	ppbv	<2.2	2.2	<10.8	10.8	1979082
Chlorobenzene	ppbv	<0.20	0.20	<0.921	0.921	1979082
Benzyl chloride	ppbv	<1.0	1.0	<5.18	5.18	1979082
1,3-Dichlorobenzene	ppbv	<0.40	0.40	<2.40	2.40	1979082
1,4-Dichlorobenzene	ppbv	<0.40	0.40	<2.40	2.40	1979082
1,2-Dichlorobenzene	ppbv	<0.40	0.40	<2.40	2.40	1979082
1,2,4-Trichlorobenzene	ppbv	<2.0	2.0	<14.8	14.8	1979082
Hexachlorobutadiene	ppbv	<3.0	3.0	<32.0	32.0	1979082
Hexane	ppbv	<0.30	0.30	<1.06	1.06	1979082
Cyclohexane	ppbv	<0.20	0.20	<0.688	0.688	1979082
Tetrahydrofuran	ppbv	<0.40	0.40	<1.18	1.18	1979082
1,4-Dioxane	ppbv	<2.0	2.0	<7.21	7.21	1979082
Xylene (Total)	ppbv	<0.60	0.60	<2.61	2.61	1979082
Surrogate Recovery (%)						
Bromochloromethane	%	81		N/A	N/A	1979082
N/A = Not Applicable QC Batch = Quality Control Batch						

Maxxam Job #: A9D9384
 Report Date: 2009/10/28

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		EB5371				
Sampling Date		2009/10/10				
COC Number		0561				
	Units	LICAVOC/CLS/OCT10,09 (7827)	DL	ug/m3	DL (ug/m3)	QC Batch

D5-Chlorobenzene	%	80		N/A	N/A	1979082
Difluorobenzene	%	82		N/A	N/A	1979082

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

Maxxam Job #: A9D9384
 Report Date: 2009/10/28

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		EB5372				
Sampling Date		2009/10/10				
COC Number		0561				
	Units	LICAVOC/PORT/OCT10,09 (7821)	DL	ug/m3	DL (ug/m3)	QC Batch

Volatile Organics						
2,2,4-Trimethylpentane	ppbv	<0.20	0.20	<0.934	0.934	1979082
Carbon Disulfide	ppbv	<0.50	0.50	<1.56	1.56	1979082
Propene	ppbv	<0.30	0.30	<0.516	0.516	1979082
Vinyl Acetate	ppbv	<0.20	0.20	<0.704	0.704	1979082
Vinyl Bromide	ppbv	<0.20	0.20	<0.875	0.875	1979082
Dichlorodifluoromethane (FREON 12)	ppbv	0.69	0.20	3.41	0.989	1979082
1,2-Dichlorotetrafluoroethane	ppbv	<0.17	0.17	<1.19	1.19	1979082
Chloromethane	ppbv	0.46	0.30	0.960	0.620	1979082
Vinyl Chloride	ppbv	<0.18	0.18	<0.460	0.460	1979082
Chloroethane	ppbv	<0.30	0.30	<0.792	0.792	1979082
1,3-Butadiene	ppbv	<0.50	0.50	<1.11	1.11	1979082
Trichlorofluoromethane (FREON 11)	ppbv	0.32	0.20	1.79	1.12	1979082
Trichlorotrifluoroethane	ppbv	<0.15	0.15	<1.15	1.15	1979082
Ethanol	ppbv	<2.3	2.3	<4.33	4.33	1979082
2-propanol	ppbv	<3.0	3.0	<7.37	7.37	1979082
2-Propanone	ppbv	1.97	0.80	4.69	1.90	1979082
Methyl Ethyl Ketone (2-Butanone)	ppbv	<3.0	3.0	<8.85	8.85	1979082
Methyl Isobutyl Ketone	ppbv	<3.2	3.2	<13.1	13.1	1979082
Methyl Butyl Ketone (2-Hexanone)	ppbv	<2.0	2.0	<8.19	8.19	1979082
Methyl t-butyl ether (MTBE)	ppbv	<0.20	0.20	<0.721	0.721	1979082
Ethyl Acetate	ppbv	<2.2	2.2	<7.93	7.93	1979082
1,1-Dichloroethylene	ppbv	<0.25	0.25	<0.991	0.991	1979082
cis-1,2-Dichloroethylene	ppbv	<0.19	0.19	<0.753	0.753	1979082
trans-1,2-Dichloroethylene	ppbv	<0.20	0.20	<0.793	0.793	1979082
Methylene Chloride(Dichloromethane)	ppbv	0.70	0.30	2.42	1.04	1979082
Chloroform	ppbv	<0.15	0.15	<0.732	0.732	1979082
Carbon Tetrachloride	ppbv	<0.30	0.30	<1.89	1.89	1979082
1,1-Dichloroethane	ppbv	<0.20	0.20	<0.809	0.809	1979082
1,2-Dichloroethane	ppbv	<0.20	0.20	<0.809	0.809	1979082
Ethylene Dibromide	ppbv	<0.17	0.17	<1.31	1.31	1979082
1,1,1-Trichloroethane	ppbv	<0.30	0.30	<1.64	1.64	1979082
1,1,2-Trichloroethane	ppbv	<0.15	0.15	<0.818	0.818	1979082

 RDL = Reportable Detection Limit
 QC Batch = Quality Control Batch

Maxxam Job #: A9D9384
 Report Date: 2009/10/28

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		EB5372				
Sampling Date		2009/10/10				
COC Number		0561				
	Units	LICAVOC/PORT/OCT10,09 (7821)	DL	ug/m3	DL (ug/m3)	QC Batch
1,1,2,2-Tetrachloroethane	ppbv	<0.20	0.20	<1.37	1.37	1979082
cis-1,3-Dichloropropene	ppbv	<0.18	0.18	<0.817	0.817	1979082
trans-1,3-Dichloropropene	ppbv	<0.17	0.17	<0.772	0.772	1979082
1,2-Dichloropropane	ppbv	<0.40	0.40	<1.85	1.85	1979082
Bromomethane	ppbv	<0.18	0.18	<0.699	0.699	1979082
Bromoform	ppbv	<0.20	0.20	<2.07	2.07	1979082
Bromodichloromethane	ppbv	<0.20	0.20	<1.34	1.34	1979082
Dibromochloromethane	ppbv	<0.20	0.20	<1.70	1.70	1979082
Heptane	ppbv	<0.30	0.30	<1.23	1.23	1979082
Trichloroethylene	ppbv	<0.30	0.30	<1.61	1.61	1979082
Tetrachloroethylene	ppbv	<0.20	0.20	<1.36	1.36	1979082
Benzene	ppbv	<0.18	0.18	<0.575	0.575	1979082
Toluene	ppbv	<0.20	0.20	<0.753	0.753	1979082
Ethylbenzene	ppbv	<0.20	0.20	<0.868	0.868	1979082
p+m-Xylene	ppbv	<0.37	0.37	<1.61	1.61	1979082
o-Xylene	ppbv	<0.20	0.20	<0.868	0.868	1979082
Styrene	ppbv	<0.20	0.20	<0.852	0.852	1979082
1,3,5-Trimethylbenzene	ppbv	<2.4	2.4	<11.8	11.8	1979082
1,2,4-Trimethylbenzene	ppbv	<2.5	2.5	<12.3	12.3	1979082
4-ethyltoluene	ppbv	<2.2	2.2	<10.8	10.8	1979082
Chlorobenzene	ppbv	<0.20	0.20	<0.921	0.921	1979082
Benzyl chloride	ppbv	<1.0	1.0	<5.18	5.18	1979082
1,3-Dichlorobenzene	ppbv	<0.40	0.40	<2.40	2.40	1979082
1,4-Dichlorobenzene	ppbv	<0.40	0.40	<2.40	2.40	1979082
1,2-Dichlorobenzene	ppbv	<0.40	0.40	<2.40	2.40	1979082
1,2,4-Trichlorobenzene	ppbv	<2.0	2.0	<14.8	14.8	1979082
Hexachlorobutadiene	ppbv	<3.0	3.0	<32.0	32.0	1979082
Hexane	ppbv	<0.30	0.30	<1.06	1.06	1979082
Cyclohexane	ppbv	<0.20	0.20	<0.688	0.688	1979082
Tetrahydrofuran	ppbv	<0.40	0.40	<1.18	1.18	1979082
1,4-Dioxane	ppbv	<2.0	2.0	<7.21	7.21	1979082
Xylene (Total)	ppbv	<0.60	0.60	<2.61	2.61	1979082
Surrogate Recovery (%)						
Bromochloromethane	%	83		N/A	N/A	1979082
N/A = Not Applicable QC Batch = Quality Control Batch						

Maxxam Job #: A9D9384
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VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		EB5372				
Sampling Date		2009/10/10				
COC Number		0561				
	Units	LICAVOC/PORT/OCT10,09 (7821)	DL	ug/m3	DL (ug/m3)	QC Batch

D5-Chlorobenzene	%	81		N/A	N/A	1979082
Difluorobenzene	%	83		N/A	N/A	1979082

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

Maxxam Job #: A9D9384
 Report Date: 2009/10/28

Test Summary

Maxxam ID EB5371 **Collected** 2009/10/10
Sample ID LICAVOC/CLS/OCT10,09 (7827) **Shipped**
Matrix AIR **Received** 2009/10/19

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Canister Pressure (TO-15)	PRES	1979084	N/A	2009/10/20	VEA
Volatile Organics in Air (TO-15)	GC/MS	1979082	N/A	2009/10/20	VEA

Maxxam ID EB5372 **Collected** 2009/10/10
Sample ID LICAVOC/PORT/OCT10,09 (7821) **Shipped**
Matrix AIR **Received** 2009/10/19

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Canister Pressure (TO-15)	PRES	1979084	N/A	2009/10/20	VEA
Volatile Organics in Air (TO-15)	GC/MS	1979082	N/A	2009/10/20	VEA

Maxxam Job #: A9D9384
Report Date: 2009/10/28

GENERAL COMMENTS

Results relate only to the items tested.

Lakeland Industry & Community Assoc.
 Attention:
 Client Project #:
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Quality Assurance Report
 Maxxam Job Number: GA9D9384

QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
1979082 VEA	Spiked Blank	Bromochloromethane	2009/10/20		109	%	60 - 140
		D5-Chlorobenzene	2009/10/20		107	%	60 - 140
		Difluorobenzene	2009/10/20		111	%	60 - 140
		2,2,4-Trimethylpentane	2009/10/20		100	%	70 - 130
		Carbon Disulfide	2009/10/20		86	%	70 - 130
		Propene	2009/10/20		91	%	70 - 130
		Vinyl Acetate	2009/10/20		88	%	70 - 130
		Vinyl Bromide	2009/10/20		102	%	70 - 130
		Dichlorodifluoromethane (FREON 12)	2009/10/20		85	%	70 - 130
		1,2-Dichlorotetrafluoroethane	2009/10/20		86	%	70 - 130
		Chloromethane	2009/10/20		84	%	70 - 130
		Vinyl Chloride	2009/10/20		88	%	70 - 130
		Chloroethane	2009/10/20		88	%	70 - 130
		1,3-Butadiene	2009/10/20		78	%	70 - 130
		Trichlorofluoromethane (FREON 11)	2009/10/20		86	%	70 - 130
		Trichlorotrifluoroethane	2009/10/20		83	%	70 - 130
		Ethanol	2009/10/20		72	%	70 - 130
		2-propanol	2009/10/20		84	%	70 - 130
		2-Propanone	2009/10/20		111	%	70 - 130
		Methyl Ethyl Ketone (2-Butanone)	2009/10/20		93	%	70 - 130
		Methyl Isobutyl Ketone	2009/10/20		83	%	70 - 130
		Methyl Butyl Ketone (2-Hexanone)	2009/10/20		78	%	70 - 130
		Methyl t-butyl ether (MTBE)	2009/10/20		92	%	70 - 130
		Ethyl Acetate	2009/10/20		92	%	70 - 130
		1,1-Dichloroethylene	2009/10/20		85	%	70 - 130
		cis-1,2-Dichloroethylene	2009/10/20		86	%	70 - 130
		trans-1,2-Dichloroethylene	2009/10/20		91	%	70 - 130
		Methylene Chloride(Dichloromethane)	2009/10/20		73	%	70 - 130
		Chloroform	2009/10/20		83	%	70 - 130
		Carbon Tetrachloride	2009/10/20		88	%	70 - 130
		1,1-Dichloroethane	2009/10/20		84	%	70 - 130
		1,2-Dichloroethane	2009/10/20		84	%	70 - 130
		Ethylene Dibromide	2009/10/20		86	%	70 - 130
		1,1,1-Trichloroethane	2009/10/20		84	%	70 - 130
		1,1,2-Trichloroethane	2009/10/20		83	%	70 - 130
		1,1,2,2-Tetrachloroethane	2009/10/20		82	%	70 - 130
		cis-1,3-Dichloropropene	2009/10/20		89	%	70 - 130
		trans-1,3-Dichloropropene	2009/10/20		94	%	70 - 130
		1,2-Dichloropropane	2009/10/20		81	%	70 - 130
		Bromomethane	2009/10/20		90	%	70 - 130
		Bromoform	2009/10/20		93	%	70 - 130
		Bromodichloromethane	2009/10/20		90	%	70 - 130
		Dibromochloromethane	2009/10/20		93	%	70 - 130
		Heptane	2009/10/20		92	%	70 - 130
		Trichloroethylene	2009/10/20		82	%	70 - 130
		Tetrachloroethylene	2009/10/20		83	%	70 - 130
		Benzene	2009/10/20		84	%	70 - 130
		Toluene	2009/10/20		88	%	70 - 130
		Ethylbenzene	2009/10/20		89	%	70 - 130
		p+m-Xylene	2009/10/20		87	%	70 - 130
		o-Xylene	2009/10/20		85	%	70 - 130
		Styrene	2009/10/20		73	%	70 - 130
		1,3,5-Trimethylbenzene	2009/10/20		82	%	70 - 130
		1,2,4-Trimethylbenzene	2009/10/20		85	%	70 - 130
		4-ethyltoluene	2009/10/20		97	%	70 - 130

Lakeland Industry & Community Assoc.
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Quality Assurance Report (Continued)

Maxxam Job Number: GA9D9384

QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits	
1979082 VEA	Spiked Blank	Chlorobenzene	2009/10/20		82	%	70 - 130	
		Benzyl chloride	2009/10/20		105	%	70 - 130	
1,3-Dichlorobenzene		2009/10/20		88	%	70 - 130		
1,4-Dichlorobenzene		2009/10/20		89	%	70 - 130		
1,2-Dichlorobenzene		2009/10/20		86	%	70 - 130		
1,2,4-Trichlorobenzene		2009/10/20		82	%	70 - 130		
Hexachlorobutadiene		2009/10/20		75	%	70 - 130		
Hexane		2009/10/20		92	%	70 - 130		
Cyclohexane		2009/10/20		91	%	70 - 130		
Tetrahydrofuran		2009/10/20		91	%	70 - 130		
Method Blank	Method Blank	1,4-Dioxane	2009/10/20		89	%	70 - 130	
		Bromochloromethane	2009/10/20		79	%	60 - 140	
		D5-Chlorobenzene	2009/10/20		81	%	60 - 140	
		Difluorobenzene	2009/10/20		84	%	60 - 140	
		2,2,4-Trimethylpentane	2009/10/20	ND, RDL=0.20			ppbv	
		Carbon Disulfide	2009/10/20	ND, RDL=0.50			ppbv	
		Propene	2009/10/20	ND, RDL=0.30			ppbv	
		Vinyl Acetate	2009/10/20	ND, RDL=0.20			ppbv	
		Vinyl Bromide	2009/10/20	ND, RDL=0.20			ppbv	
		Dichlorodifluoromethane (FREON 12)	2009/10/20	ND, RDL=0.20			ppbv	
		1,2-Dichlorotetrafluoroethane	2009/10/20	ND, RDL=0.17			ppbv	
		Chloromethane	2009/10/20	ND, RDL=0.30			ppbv	
		Vinyl Chloride	2009/10/20	ND, RDL=0.18			ppbv	
		Chloroethane	2009/10/20	ND, RDL=0.30			ppbv	
		1,3-Butadiene	2009/10/20	ND, RDL=0.50			ppbv	
		Trichlorofluoromethane (FREON 11)	2009/10/20	ND, RDL=0.20			ppbv	
		Trichlorotrifluoroethane	2009/10/20	ND, RDL=0.15			ppbv	
		Ethanol	2009/10/20	ND, RDL=2.3			ppbv	
		2-propanol	2009/10/20	ND, RDL=3.0			ppbv	
		2-Propanone	2009/10/20	ND, RDL=0.80			ppbv	
		Methyl Ethyl Ketone (2-Butanone)	2009/10/20	ND, RDL=3.0			ppbv	
		Methyl Isobutyl Ketone	2009/10/20	ND, RDL=3.2			ppbv	
		Methyl Butyl Ketone (2-Hexanone)	2009/10/20	ND, RDL=2.0			ppbv	
		Methyl t-butyl ether (MTBE)	2009/10/20	ND, RDL=0.20			ppbv	
		Ethyl Acetate	2009/10/20	ND, RDL=2.2			ppbv	
		1,1-Dichloroethylene	2009/10/20	ND, RDL=0.25			ppbv	
		cis-1,2-Dichloroethylene	2009/10/20	ND, RDL=0.19			ppbv	
		trans-1,2-Dichloroethylene	2009/10/20	ND, RDL=0.20			ppbv	
		Methylene Chloride(Dichloromethane)	2009/10/20	0.66, RDL=0.30			ppbv	
		Chloroform	2009/10/20	ND, RDL=0.15			ppbv	
		Carbon Tetrachloride	2009/10/20	ND, RDL=0.30			ppbv	
		1,1-Dichloroethane	2009/10/20	ND, RDL=0.20			ppbv	
		1,2-Dichloroethane	2009/10/20	ND, RDL=0.20			ppbv	
		Ethylene Dibromide	2009/10/20	ND, RDL=0.17			ppbv	
		1,1,1-Trichloroethane	2009/10/20	ND, RDL=0.30			ppbv	
		1,1,2-Trichloroethane	2009/10/20	ND, RDL=0.15			ppbv	
		1,1,2,2-Tetrachloroethane	2009/10/20	ND, RDL=0.20			ppbv	
		cis-1,3-Dichloropropene	2009/10/20	ND, RDL=0.18			ppbv	
trans-1,3-Dichloropropene	2009/10/20	ND, RDL=0.17			ppbv			
1,2-Dichloropropane	2009/10/20	ND, RDL=0.40			ppbv			
Bromomethane	2009/10/20	ND, RDL=0.18			ppbv			
Bromoform	2009/10/20	ND, RDL=0.20			ppbv			
Bromodichloromethane	2009/10/20	ND, RDL=0.20			ppbv			
Dibromochloromethane	2009/10/20	ND, RDL=0.20			ppbv			
Heptane	2009/10/20	ND, RDL=0.30			ppbv			

Lakeland Industry & Community Assoc.
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Quality Assurance Report (Continued)

Maxxam Job Number: GA9D9384

QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
1979082 VEA	Method Blank	Trichloroethylene	2009/10/20	ND, RDL=0.30		ppbv	
		Tetrachloroethylene	2009/10/20	ND, RDL=0.20		ppbv	
		Benzene	2009/10/20	ND, RDL=0.18		ppbv	
		Toluene	2009/10/20	ND, RDL=0.20		ppbv	
		Ethylbenzene	2009/10/20	ND, RDL=0.20		ppbv	
		p+m-Xylene	2009/10/20	ND, RDL=0.37		ppbv	
		o-Xylene	2009/10/20	ND, RDL=0.20		ppbv	
		Styrene	2009/10/20	ND, RDL=0.20		ppbv	
		1,3,5-Trimethylbenzene	2009/10/20	ND, RDL=2.4		ppbv	
		1,2,4-Trimethylbenzene	2009/10/20	ND, RDL=2.5		ppbv	
		4-ethyltoluene	2009/10/20	ND, RDL=2.2		ppbv	
		Chlorobenzene	2009/10/20	ND, RDL=0.20		ppbv	
		Benzyl chloride	2009/10/20	ND, RDL=1.0		ppbv	
		1,3-Dichlorobenzene	2009/10/20	ND, RDL=0.40		ppbv	
		1,4-Dichlorobenzene	2009/10/20	ND, RDL=0.40		ppbv	
		1,2-Dichlorobenzene	2009/10/20	ND, RDL=0.40		ppbv	
		1,2,4-Trichlorobenzene	2009/10/20	ND, RDL=2.0		ppbv	
		Hexachlorobutadiene	2009/10/20	ND, RDL=3.0		ppbv	
		Hexane	2009/10/20	ND, RDL=0.30		ppbv	
		Cyclohexane	2009/10/20	ND, RDL=0.20		ppbv	
		Tetrahydrofuran	2009/10/20	ND, RDL=0.40		ppbv	
		1,4-Dioxane	2009/10/20	ND, RDL=2.0		ppbv	
		Xylene (Total)	2009/10/20	ND, RDL=0.60		ppbv	
	RPD - Sample/Sample Dup	2,2,4-Trimethylpentane	2009/10/20	NC		%	25
		Carbon Disulfide	2009/10/20	NC		%	25
		Propene	2009/10/20	NC		%	25
		Vinyl Acetate	2009/10/20	NC		%	25
		Vinyl Bromide	2009/10/20	NC		%	25
		Dichlorodifluoromethane (FREON 12)	2009/10/20	NC		%	25
		1,2-Dichlorotetrafluoroethane	2009/10/20	NC		%	25
		Chloromethane	2009/10/20	NC		%	25
		Vinyl Chloride	2009/10/20	NC		%	25
		Chloroethane	2009/10/20	NC		%	25
		1,3-Butadiene	2009/10/20	NC		%	25
		Trichlorofluoromethane (FREON 11)	2009/10/20	NC		%	25
		Trichlorotrifluoroethane	2009/10/20	NC		%	25
		Ethanol	2009/10/20	NC		%	25
		2-propanol	2009/10/20	NC		%	25
		2-Propanone	2009/10/20	NC		%	25
		Methyl Ethyl Ketone (2-Butanone)	2009/10/20	NC		%	25
		Methyl Isobutyl Ketone	2009/10/20	NC		%	25
		Methyl Butyl Ketone (2-Hexanone)	2009/10/20	NC		%	25
		Methyl t-butyl ether (MTBE)	2009/10/20	NC		%	25
		Ethyl Acetate	2009/10/20	NC		%	25
		1,1-Dichloroethylene	2009/10/20	NC		%	25
		cis-1,2-Dichloroethylene	2009/10/20	NC		%	25
		trans-1,2-Dichloroethylene	2009/10/20	NC		%	25
		Methylene Chloride(Dichloromethane)	2009/10/20	NC		%	25
		Chloroform	2009/10/20	NC		%	25
		Carbon Tetrachloride	2009/10/20	NC		%	25
		1,1-Dichloroethane	2009/10/20	NC		%	25
		1,2-Dichloroethane	2009/10/20	NC		%	25
		Ethylene Dibromide	2009/10/20	NC		%	25

Lakeland Industry & Community Assoc.
 Attention:
 Client Project #:
 P.O. #:
 Project name:

Quality Assurance Report (Continued)

Maxxam Job Number: GA9D9384

QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
1979082 VEA	RPD - Sample/Sample Dup	1,1,1-Trichloroethane	2009/10/20	NC		%	25
		1,1,2-Trichloroethane	2009/10/20	NC		%	25
		1,1,2,2-Tetrachloroethane	2009/10/20	NC		%	25
		cis-1,3-Dichloropropene	2009/10/20	NC		%	25
		trans-1,3-Dichloropropene	2009/10/20	NC		%	25
		1,2-Dichloropropane	2009/10/20	NC		%	25
		Bromomethane	2009/10/20	NC		%	25
		Bromoform	2009/10/20	NC		%	25
		Bromodichloromethane	2009/10/20	NC		%	25
		Dibromochloromethane	2009/10/20	NC		%	25
		Heptane	2009/10/20	NC		%	25
		Trichloroethylene	2009/10/20	NC		%	25
		Tetrachloroethylene	2009/10/20	NC		%	25
		Benzene	2009/10/20	NC		%	25
		Toluene	2009/10/20	NC		%	25
		Ethylbenzene	2009/10/20	NC		%	25
		p+m-Xylene	2009/10/20	NC		%	25
		o-Xylene	2009/10/20	NC		%	25
		Styrene	2009/10/20	NC		%	25
		1,3,5-Trimethylbenzene	2009/10/20	NC		%	25
		1,2,4-Trimethylbenzene	2009/10/20	NC		%	25
		4-ethyltoluene	2009/10/20	NC		%	25
		Chlorobenzene	2009/10/20	NC		%	25
		Benzyl chloride	2009/10/20	NC		%	25
		1,3-Dichlorobenzene	2009/10/20	NC		%	25
		1,4-Dichlorobenzene	2009/10/20	NC		%	25
		1,2-Dichlorobenzene	2009/10/20	NC		%	25
		1,2,4-Trichlorobenzene	2009/10/20	NC		%	25
		Hexachlorobutadiene	2009/10/20	NC		%	25
		Hexane	2009/10/20	NC		%	25
		Cyclohexane	2009/10/20	NC		%	25
		Tetrahydrofuran	2009/10/20	NC		%	25
		1,4-Dioxane	2009/10/20	NC		%	25
		Xylene (Total)	2009/10/20	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.



Your C.O.C. #: 5415

Lakeland Industry & Community Assoc.
P.O. Box 8237
Bonnyville, AB
CANADA T9N 2J5

Report Date: 2009/11/02

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: A9E1758
Received: 2009/10/22, 13:58

Sample Matrix: AIR
Samples Received: 2

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Method Reference
Canister Pressure (TO-15)	2	N/A	2009/10/26	BRL SOP-00304	EPA TO-15
Volatile Organics in Air (TO-15) ¶	2	N/A	2009/10/26	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: 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. SCC and CALA have approved this reporting process and electronic report format.

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Total cover pages: 1

Maxxam Job #: A9E1758
 Report Date: 2009/11/02

RESULTS OF ANALYSES OF AIR

Maxxam ID		EC6197	EC6198		
Sampling Date		2009/10/16	2009/10/16		
COC Number		5415	5415		
	Units	LICA	LICA	DL	QC Batch
		VOC/CLS/OCT16,09	VOC/PORT/OCT16/09		
		S2210	7844		
Volatile Organics					
Pressure on Receipt	psig	19	19	N/A	1985490
RDL = Reportable Detection Limit QC Batch = Quality Control Batch					

Maxxam Job #: A9E1758
 Report Date: 2009/11/02

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		EC6197				
Sampling Date		2009/10/16				
COC Number		5415				
	Units	LICA VOC/CLS/OCT16,09 S2210	DL	ug/m3	DL (ug/m3)	QC Batch

Volatile Organics						
2,2,4-Trimethylpentane	ppbv	<0.20	0.20	<0.934	0.934	1985505
Carbon Disulfide	ppbv	1.23	0.50	3.82	1.56	1985505
Propene	ppbv	<0.30	0.30	<0.516	0.516	1985505
Vinyl Acetate	ppbv	<0.20	0.20	<0.704	0.704	1985505
Vinyl Bromide	ppbv	<0.20	0.20	<0.875	0.875	1985505
Dichlorodifluoromethane (FREON 12)	ppbv	0.75	0.20	3.71	0.989	1985505
1,2-Dichlorotetrafluoroethane	ppbv	<0.17	0.17	<1.19	1.19	1985505
Chloromethane	ppbv	0.47	0.30	0.978	0.620	1985505
Vinyl Chloride	ppbv	<0.18	0.18	<0.460	0.460	1985505
Chloroethane	ppbv	<0.30	0.30	<0.792	0.792	1985505
1,3-Butadiene	ppbv	<0.50	0.50	<1.11	1.11	1985505
Trichlorofluoromethane (FREON 11)	ppbv	0.35	0.20	1.98	1.12	1985505
Trichlorotrifluoroethane	ppbv	<0.15	0.15	<1.15	1.15	1985505
Ethanol	ppbv	2.8	2.3	5.27	4.33	1985505
2-propanol	ppbv	<3.0	3.0	<7.37	7.37	1985505
2-Propanone	ppbv	1.82	0.80	4.33	1.90	1985505
Methyl Ethyl Ketone (2-Butanone)	ppbv	<3.0	3.0	<8.85	8.85	1985505
Methyl Isobutyl Ketone	ppbv	<3.2	3.2	<13.1	13.1	1985505
Methyl Butyl Ketone (2-Hexanone)	ppbv	<2.0	2.0	<8.19	8.19	1985505
Methyl t-butyl ether (MTBE)	ppbv	<0.20	0.20	<0.721	0.721	1985505
Ethyl Acetate	ppbv	<2.2	2.2	<7.93	7.93	1985505
1,1-Dichloroethylene	ppbv	<0.25	0.25	<0.991	0.991	1985505
cis-1,2-Dichloroethylene	ppbv	<0.19	0.19	<0.753	0.753	1985505
trans-1,2-Dichloroethylene	ppbv	<0.20	0.20	<0.793	0.793	1985505
Methylene Chloride(Dichloromethane)	ppbv	0.47	0.30	1.64	1.04	1985505
Chloroform	ppbv	<0.15	0.15	<0.732	0.732	1985505
Carbon Tetrachloride	ppbv	<0.30	0.30	<1.89	1.89	1985505
1,1-Dichloroethane	ppbv	<0.20	0.20	<0.809	0.809	1985505
1,2-Dichloroethane	ppbv	<0.20	0.20	<0.809	0.809	1985505
Ethylene Dibromide	ppbv	<0.17	0.17	<1.31	1.31	1985505
1,1,1-Trichloroethane	ppbv	<0.30	0.30	<1.64	1.64	1985505

 RDL = Reportable Detection Limit
 QC Batch = Quality Control Batch

Maxxam Job #: A9E1758
 Report Date: 2009/11/02

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		EC6197				
Sampling Date		2009/10/16				
COC Number		5415				
	Units	LICA VOC/CLS/OCT16,09 S2210	DL	ug/m3	DL (ug/m3)	QC Batch
1,1,2-Trichloroethane	ppbv	<0.15	0.15	<0.818	0.818	1985505
1,1,2,2-Tetrachloroethane	ppbv	<0.20	0.20	<1.37	1.37	1985505
cis-1,3-Dichloropropene	ppbv	<0.18	0.18	<0.817	0.817	1985505
trans-1,3-Dichloropropene	ppbv	<0.17	0.17	<0.772	0.772	1985505
1,2-Dichloropropane	ppbv	<0.40	0.40	<1.85	1.85	1985505
Bromomethane	ppbv	<0.18	0.18	<0.699	0.699	1985505
Bromoform	ppbv	<0.20	0.20	<2.07	2.07	1985505
Bromodichloromethane	ppbv	<0.20	0.20	<1.34	1.34	1985505
Dibromochloromethane	ppbv	<0.20	0.20	<1.70	1.70	1985505
Heptane	ppbv	<0.30	0.30	<1.23	1.23	1985505
Trichloroethylene	ppbv	<0.30	0.30	<1.61	1.61	1985505
Tetrachloroethylene	ppbv	<0.20	0.20	<1.36	1.36	1985505
Benzene	ppbv	<0.18	0.18	<0.575	0.575	1985505
Toluene	ppbv	0.33	0.20	1.23	0.753	1985505
Ethylbenzene	ppbv	<0.20	0.20	<0.868	0.868	1985505
p+m-Xylene	ppbv	<0.37	0.37	<1.61	1.61	1985505
o-Xylene	ppbv	<0.20	0.20	<0.868	0.868	1985505
Styrene	ppbv	<0.20	0.20	<0.852	0.852	1985505
1,3,5-Trimethylbenzene	ppbv	<0.50	0.50	<2.46	2.46	1985505
1,2,4-Trimethylbenzene	ppbv	<0.50	0.50	<2.46	2.46	1985505
4-ethyltoluene	ppbv	<2.2	2.2	<10.8	10.8	1985505
Chlorobenzene	ppbv	<0.20	0.20	<0.921	0.921	1985505
Benzyl chloride	ppbv	<1.0	1.0	<5.18	5.18	1985505
1,3-Dichlorobenzene	ppbv	<0.40	0.40	<2.40	2.40	1985505
1,4-Dichlorobenzene	ppbv	<0.40	0.40	<2.40	2.40	1985505
1,2-Dichlorobenzene	ppbv	<0.40	0.40	<2.40	2.40	1985505
1,2,4-Trichlorobenzene	ppbv	<2.0	2.0	<14.8	14.8	1985505
Hexachlorobutadiene	ppbv	<3.0	3.0	<32.0	32.0	1985505
Hexane	ppbv	<0.30	0.30	<1.06	1.06	1985505
Cyclohexane	ppbv	<0.20	0.20	<0.688	0.688	1985505
Tetrahydrofuran	ppbv	<0.40	0.40	<1.18	1.18	1985505
1,4-Dioxane	ppbv	<2.0	2.0	<7.21	7.21	1985505
Xylene (Total)	ppbv	<0.60	0.60	<2.61	2.61	1985505
QC Batch = Quality Control Batch						

Maxxam Job #: A9E1758
 Report Date: 2009/11/02

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		EC6197				
Sampling Date		2009/10/16				
COC Number		5415				
	Units	LICA	DL	ug/m3	DL (ug/m3)	QC Batch
		VOC/CLS/OCT16,09				
		S2210				

Surrogate Recovery (%)						
Bromochloromethane	%	109		N/A	N/A	1985505
D5-Chlorobenzene	%	102		N/A	N/A	1985505
Difluorobenzene	%	109		N/A	N/A	1985505

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

Maxxam Job #: A9E1758
 Report Date: 2009/11/02

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		EC6198				
Sampling Date		2009/10/16				
COC Number		5415				
	Units	LICA VOC/PORT/OCT16/09 7844	DL	ug/m3	DL (ug/m3)	QC Batch

Volatile Organics						
2,2,4-Trimethylpentane	ppbv	<0.20	0.20	<0.934	0.934	1985505
Carbon Disulfide	ppbv	<0.50	0.50	<1.56	1.56	1985505
Propene	ppbv	<0.30	0.30	<0.516	0.516	1985505
Vinyl Acetate	ppbv	<0.20	0.20	<0.704	0.704	1985505
Vinyl Bromide	ppbv	<0.20	0.20	<0.875	0.875	1985505
Dichlorodifluoromethane (FREON 12)	ppbv	0.82	0.20	4.04	0.989	1985505
1,2-Dichlorotetrafluoroethane	ppbv	<0.17	0.17	<1.19	1.19	1985505
Chloromethane	ppbv	0.51	0.30	1.05	0.620	1985505
Vinyl Chloride	ppbv	<0.18	0.18	<0.460	0.460	1985505
Chloroethane	ppbv	<0.30	0.30	<0.792	0.792	1985505
1,3-Butadiene	ppbv	<0.50	0.50	<1.11	1.11	1985505
Trichlorofluoromethane (FREON 11)	ppbv	0.40	0.20	2.24	1.12	1985505
Trichlorotrifluoroethane	ppbv	<0.15	0.15	<1.15	1.15	1985505
Ethanol	ppbv	6.2	2.3	11.7	4.33	1985505
2-propanol	ppbv	<3.0	3.0	<7.37	7.37	1985505
2-Propanone	ppbv	4.20	0.80	9.97	1.90	1985505
Methyl Ethyl Ketone (2-Butanone)	ppbv	<3.0	3.0	<8.85	8.85	1985505
Methyl Isobutyl Ketone	ppbv	<3.2	3.2	<13.1	13.1	1985505
Methyl Butyl Ketone (2-Hexanone)	ppbv	<2.0	2.0	<8.19	8.19	1985505
Methyl t-butyl ether (MTBE)	ppbv	<0.20	0.20	<0.721	0.721	1985505
Ethyl Acetate	ppbv	<2.2	2.2	<7.93	7.93	1985505
1,1-Dichloroethylene	ppbv	<0.25	0.25	<0.991	0.991	1985505
cis-1,2-Dichloroethylene	ppbv	<0.19	0.19	<0.753	0.753	1985505
trans-1,2-Dichloroethylene	ppbv	<0.20	0.20	<0.793	0.793	1985505
Methylene Chloride(Dichloromethane)	ppbv	0.54	0.30	1.88	1.04	1985505
Chloroform	ppbv	<0.15	0.15	<0.732	0.732	1985505
Carbon Tetrachloride	ppbv	<0.30	0.30	<1.89	1.89	1985505
1,1-Dichloroethane	ppbv	<0.20	0.20	<0.809	0.809	1985505
1,2-Dichloroethane	ppbv	<0.20	0.20	<0.809	0.809	1985505
Ethylene Dibromide	ppbv	<0.17	0.17	<1.31	1.31	1985505
1,1,1-Trichloroethane	ppbv	<0.30	0.30	<1.64	1.64	1985505

 RDL = Reportable Detection Limit
 QC Batch = Quality Control Batch

Maxxam Job #: A9E1758
 Report Date: 2009/11/02

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		EC6198				
Sampling Date		2009/10/16				
COC Number		5415				
	Units	LICA VOC/PORT/OCT16/09 7844	DL	ug/m3	DL (ug/m3)	QC Batch
1,1,2-Trichloroethane	ppbv	<0.15	0.15	<0.818	0.818	1985505
1,1,2,2-Tetrachloroethane	ppbv	<0.20	0.20	<1.37	1.37	1985505
cis-1,3-Dichloropropene	ppbv	<0.18	0.18	<0.817	0.817	1985505
trans-1,3-Dichloropropene	ppbv	<0.17	0.17	<0.772	0.772	1985505
1,2-Dichloropropane	ppbv	<0.40	0.40	<1.85	1.85	1985505
Bromomethane	ppbv	<0.18	0.18	<0.699	0.699	1985505
Bromoform	ppbv	<0.20	0.20	<2.07	2.07	1985505
Bromodichloromethane	ppbv	<0.20	0.20	<1.34	1.34	1985505
Dibromochloromethane	ppbv	<0.20	0.20	<1.70	1.70	1985505
Heptane	ppbv	<0.30	0.30	<1.23	1.23	1985505
Trichloroethylene	ppbv	<0.30	0.30	<1.61	1.61	1985505
Tetrachloroethylene	ppbv	<0.20	0.20	<1.36	1.36	1985505
Benzene	ppbv	<0.18	0.18	<0.575	0.575	1985505
Toluene	ppbv	0.38	0.20	1.44	0.753	1985505
Ethylbenzene	ppbv	<0.20	0.20	<0.868	0.868	1985505
p+m-Xylene	ppbv	<0.37	0.37	<1.61	1.61	1985505
o-Xylene	ppbv	<0.20	0.20	<0.868	0.868	1985505
Styrene	ppbv	<0.20	0.20	<0.852	0.852	1985505
1,3,5-Trimethylbenzene	ppbv	<0.50	0.50	<2.46	2.46	1985505
1,2,4-Trimethylbenzene	ppbv	<0.50	0.50	<2.46	2.46	1985505
4-ethyltoluene	ppbv	<2.2	2.2	<10.8	10.8	1985505
Chlorobenzene	ppbv	<0.20	0.20	<0.921	0.921	1985505
Benzyl chloride	ppbv	<1.0	1.0	<5.18	5.18	1985505
1,3-Dichlorobenzene	ppbv	<0.40	0.40	<2.40	2.40	1985505
1,4-Dichlorobenzene	ppbv	<0.40	0.40	<2.40	2.40	1985505
1,2-Dichlorobenzene	ppbv	<0.40	0.40	<2.40	2.40	1985505
1,2,4-Trichlorobenzene	ppbv	<2.0	2.0	<14.8	14.8	1985505
Hexachlorobutadiene	ppbv	<3.0	3.0	<32.0	32.0	1985505
Hexane	ppbv	<0.30	0.30	<1.06	1.06	1985505
Cyclohexane	ppbv	0.26	0.20	0.886	0.688	1985505
Tetrahydrofuran	ppbv	<0.40	0.40	<1.18	1.18	1985505
1,4-Dioxane	ppbv	<2.0	2.0	<7.21	7.21	1985505
Xylene (Total)	ppbv	<0.60	0.60	<2.61	2.61	1985505
QC Batch = Quality Control Batch						

Maxxam Job #: A9E1758
 Report Date: 2009/11/02

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		EC6198				
Sampling Date		2009/10/16				
COC Number		5415				
	Units	LICA VOC/PORT/OCT16/09 7844	DL	ug/m3	DL (ug/m3)	QC Batch

Surrogate Recovery (%)						
Bromochloromethane	%	94		N/A	N/A	1985505
D5-Chlorobenzene	%	88		N/A	N/A	1985505
Difluorobenzene	%	94		N/A	N/A	1985505

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

Maxxam Job #: A9E1758
 Report Date: 2009/11/02

Test Summary

Maxxam ID EC6197 **Collected** 2009/10/16
Sample ID LICA VOC/CLS/OCT16,09 S2210 **Shipped**
Matrix AIR **Received** 2009/10/22

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Canister Pressure (TO-15)	PRES	1985490	N/A	2009/10/26	LSY
Volatile Organics in Air (TO-15)	GC/MS	1985505	N/A	2009/10/26	LSY

Maxxam ID EC6198 **Collected** 2009/10/16
Sample ID LICA VOC/PORT/OCT16/09 7844 **Shipped**
Matrix AIR **Received** 2009/10/22

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Canister Pressure (TO-15)	PRES	1985490	N/A	2009/10/26	LSY
Volatile Organics in Air (TO-15)	GC/MS	1985505	N/A	2009/10/26	LSY

Maxxam Job #: A9E1758
Report Date: 2009/11/02

GENERAL COMMENTS

Results relate only to the items tested.

Lakeland Industry & Community Assoc.
 Attention:
 Client Project #:
 P.O. #:
 Project name:

Quality Assurance Report
 Maxxam Job Number: GA9E1758

QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
1985505 LSY	Spiked Blank	Bromochloromethane	2009/10/26		114	%	60 - 140
		D5-Chlorobenzene	2009/10/26		112	%	60 - 140
		Difluorobenzene	2009/10/26		115	%	60 - 140
		2,2,4-Trimethylpentane	2009/10/26		86	%	70 - 130
		Carbon Disulfide	2009/10/26		86	%	70 - 130
		Propene	2009/10/26		85	%	70 - 130
		Vinyl Acetate	2009/10/26		93	%	70 - 130
		Vinyl Bromide	2009/10/26		92	%	70 - 130
		Dichlorodifluoromethane (FREON 12)	2009/10/26		101	%	70 - 130
		1,2-Dichlorotetrafluoroethane	2009/10/26		90	%	70 - 130
		Chloromethane	2009/10/26		88	%	70 - 130
		Vinyl Chloride	2009/10/26		83	%	70 - 130
		Chloroethane	2009/10/26		85	%	70 - 130
		1,3-Butadiene	2009/10/26		80	%	70 - 130
		Trichlorofluoromethane (FREON 11)	2009/10/26		109	%	70 - 130
		Trichlorotrifluoroethane	2009/10/26		89	%	70 - 130
		Ethanol	2009/10/26		97	%	70 - 130
		2-propanol	2009/10/26		101	%	70 - 130
		2-Propanone	2009/10/26		91	%	70 - 130
		Methyl Ethyl Ketone (2-Butanone)	2009/10/26		97	%	70 - 130
		Methyl Isobutyl Ketone	2009/10/26		95	%	70 - 130
		Methyl Butyl Ketone (2-Hexanone)	2009/10/26		106	%	70 - 130
		Methyl t-butyl ether (MTBE)	2009/10/26		94	%	70 - 130
		Ethyl Acetate	2009/10/26		99	%	70 - 130
		1,1-Dichloroethylene	2009/10/26		93	%	70 - 130
		cis-1,2-Dichloroethylene	2009/10/26		94	%	70 - 130
		trans-1,2-Dichloroethylene	2009/10/26		91	%	70 - 130
		Methylene Chloride(Dichloromethane)	2009/10/26		82	%	70 - 130
		Chloroform	2009/10/26		96	%	70 - 130
		Carbon Tetrachloride	2009/10/26		112	%	70 - 130
		1,1-Dichloroethane	2009/10/26		91	%	70 - 130
		1,2-Dichloroethane	2009/10/26		105	%	70 - 130
		Ethylene Dibromide	2009/10/26		91	%	70 - 130
		1,1,1-Trichloroethane	2009/10/26		104	%	70 - 130
		1,1,2-Trichloroethane	2009/10/26		88	%	70 - 130
		1,1,2,2-Tetrachloroethane	2009/10/26		85	%	70 - 130
		cis-1,3-Dichloropropene	2009/10/26		91	%	70 - 130
		trans-1,3-Dichloropropene	2009/10/26		97	%	70 - 130
		1,2-Dichloropropane	2009/10/26		84	%	70 - 130
		Bromomethane	2009/10/26		85	%	70 - 130
		Bromoform	2009/10/26		114	%	70 - 130
		Bromodichloromethane	2009/10/26		103	%	70 - 130
		Dibromochloromethane	2009/10/26		109	%	70 - 130
		Heptane	2009/10/26		89	%	70 - 130
		Trichloroethylene	2009/10/26		87	%	70 - 130
		Tetrachloroethylene	2009/10/26		91	%	70 - 130
		Benzene	2009/10/26		84	%	70 - 130
		Toluene	2009/10/26		87	%	70 - 130
		Ethylbenzene	2009/10/26		87	%	70 - 130
		p+m-Xylene	2009/10/26		88	%	70 - 130
		o-Xylene	2009/10/26		88	%	70 - 130
		Styrene	2009/10/26		98	%	70 - 130
		1,3,5-Trimethylbenzene	2009/10/26		88	%	70 - 130
		1,2,4-Trimethylbenzene	2009/10/26		84	%	70 - 130
		4-ethyltoluene	2009/10/26		89	%	70 - 130

Lakeland Industry & Community Assoc.
 Attention:
 Client Project #:
 P.O. #:
 Project name:

Quality Assurance Report (Continued)

Maxxam Job Number: GA9E1758

QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
1985505 LSY	Spiked Blank	Chlorobenzene	2009/10/26		80	%	70 - 130
		Benzyl chloride	2009/10/26		102	%	70 - 130
		1,3-Dichlorobenzene	2009/10/26		83	%	70 - 130
		1,4-Dichlorobenzene	2009/10/26		84	%	70 - 130
		1,2-Dichlorobenzene	2009/10/26		82	%	70 - 130
		1,2,4-Trichlorobenzene	2009/10/26		112	%	70 - 130
		Hexachlorobutadiene	2009/10/26		98	%	70 - 130
		Hexane	2009/10/26		82	%	70 - 130
		Cyclohexane	2009/10/26		85	%	70 - 130
		Tetrahydrofuran	2009/10/26		93	%	70 - 130
		1,4-Dioxane	2009/10/26		95	%	70 - 130
	Method Blank	Bromochloromethane	2009/10/26		76	%	60 - 140
		D5-Chlorobenzene	2009/10/26		72	%	60 - 140
		Difluorobenzene	2009/10/26		75	%	60 - 140
		2,2,4-Trimethylpentane	2009/10/26	ND, RDL=0.20		ppbv	
		Carbon Disulfide	2009/10/26	ND, RDL=0.50		ppbv	
		Propene	2009/10/26	ND, RDL=0.30		ppbv	
		Vinyl Acetate	2009/10/26	ND, RDL=0.20		ppbv	
		Vinyl Bromide	2009/10/26	ND, RDL=0.20		ppbv	
		Dichlorodifluoromethane (FREON 12)	2009/10/26	ND, RDL=0.20		ppbv	
		1,2-Dichlorotetrafluoroethane	2009/10/26	ND, RDL=0.17		ppbv	
		Chloromethane	2009/10/26	ND, RDL=0.30		ppbv	
		Vinyl Chloride	2009/10/26	ND, RDL=0.18		ppbv	
		Chloroethane	2009/10/26	ND, RDL=0.30		ppbv	
		1,3-Butadiene	2009/10/26	ND, RDL=0.50		ppbv	
		Trichlorofluoromethane (FREON 11)	2009/10/26	ND, RDL=0.20		ppbv	
		Trichlorotrifluoroethane	2009/10/26	ND, RDL=0.15		ppbv	
		Ethanol	2009/10/26	ND, RDL=2.3		ppbv	
		2-propanol	2009/10/26	ND, RDL=3.0		ppbv	
		2-Propanone	2009/10/26	ND, RDL=0.80		ppbv	
		Methyl Ethyl Ketone (2-Butanone)	2009/10/26	ND, RDL=3.0		ppbv	
		Methyl Isobutyl Ketone	2009/10/26	ND, RDL=3.2		ppbv	
		Methyl Butyl Ketone (2-Hexanone)	2009/10/26	ND, RDL=2.0		ppbv	
		Methyl t-butyl ether (MTBE)	2009/10/26	ND, RDL=0.20		ppbv	
		Ethyl Acetate	2009/10/26	ND, RDL=2.2		ppbv	
		1,1-Dichloroethylene	2009/10/26	ND, RDL=0.25		ppbv	
		cis-1,2-Dichloroethylene	2009/10/26	ND, RDL=0.19		ppbv	
		trans-1,2-Dichloroethylene	2009/10/26	ND, RDL=0.20		ppbv	
		Methylene Chloride(Dichloromethane)	2009/10/26	0.48, RDL=0.30		ppbv	
		Chloroform	2009/10/26	ND, RDL=0.15		ppbv	
		Carbon Tetrachloride	2009/10/26	ND, RDL=0.30		ppbv	
		1,1-Dichloroethane	2009/10/26	ND, RDL=0.20		ppbv	
		1,2-Dichloroethane	2009/10/26	ND, RDL=0.20		ppbv	
		Ethylene Dibromide	2009/10/26	ND, RDL=0.17		ppbv	
		1,1,1-Trichloroethane	2009/10/26	ND, RDL=0.30		ppbv	
		1,1,2-Trichloroethane	2009/10/26	ND, RDL=0.15		ppbv	
		1,1,2,2-Tetrachloroethane	2009/10/26	ND, RDL=0.20		ppbv	
		cis-1,3-Dichloropropene	2009/10/26	ND, RDL=0.18		ppbv	
		trans-1,3-Dichloropropene	2009/10/26	ND, RDL=0.17		ppbv	
		1,2-Dichloropropane	2009/10/26	ND, RDL=0.40		ppbv	
		Bromomethane	2009/10/26	ND, RDL=0.18		ppbv	
		Bromoform	2009/10/26	ND, RDL=0.20		ppbv	
		Bromodichloromethane	2009/10/26	ND, RDL=0.20		ppbv	
		Dibromochloromethane	2009/10/26	ND, RDL=0.20		ppbv	
		Heptane	2009/10/26	ND, RDL=0.30		ppbv	

Lakeland Industry & Community Assoc.
 Attention:
 Client Project #:
 P.O. #:
 Project name:

Quality Assurance Report (Continued)

Maxxam Job Number: GA9E1758

QA/QC Batch Num Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
1985505 LSY	Method Blank	Trichloroethylene	2009/10/26	ND, RDL=0.30		ppbv	
		Tetrachloroethylene	2009/10/26	ND, RDL=0.20		ppbv	
		Benzene	2009/10/26	ND, RDL=0.18		ppbv	
		Toluene	2009/10/26	ND, RDL=0.20		ppbv	
		Ethylbenzene	2009/10/26	ND, RDL=0.20		ppbv	
		p+m-Xylene	2009/10/26	ND, RDL=0.37		ppbv	
		o-Xylene	2009/10/26	ND, RDL=0.20		ppbv	
		Styrene	2009/10/26	ND, RDL=0.20		ppbv	
		1,3,5-Trimethylbenzene	2009/10/26	ND, RDL=0.50		ppbv	
		1,2,4-Trimethylbenzene	2009/10/26	ND, RDL=0.50		ppbv	
		4-ethyltoluene	2009/10/26	ND, RDL=2.2		ppbv	
		Chlorobenzene	2009/10/26	ND, RDL=0.20		ppbv	
		Benzyl chloride	2009/10/26	ND, RDL=1.0		ppbv	
		1,3-Dichlorobenzene	2009/10/26	ND, RDL=0.40		ppbv	
		1,4-Dichlorobenzene	2009/10/26	ND, RDL=0.40		ppbv	
		1,2-Dichlorobenzene	2009/10/26	ND, RDL=0.40		ppbv	
		1,2,4-Trichlorobenzene	2009/10/26	ND, RDL=2.0		ppbv	
		Hexachlorobutadiene	2009/10/26	ND, RDL=3.0		ppbv	
		Hexane	2009/10/26	ND, RDL=0.30		ppbv	
		Cyclohexane	2009/10/26	ND, RDL=0.20		ppbv	
		Tetrahydrofuran	2009/10/26	ND, RDL=0.40		ppbv	
		1,4-Dioxane	2009/10/26	ND, RDL=2.0		ppbv	
		Xylene (Total)	2009/10/26	ND, RDL=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.



Site Location: COLD LAKE SOUTH 13-16-62-5 W4M
Your C.O.C. #: 5358

Attention: Shea Beaton

Lakeland Industry & Community Assoc.
P.O. Box 8237
Bonnyville, AB
CANADA T9N 2J5

Report Date: 2009/11/06

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: A9E5014

Received: 2009/10/28, 14:39

Sample Matrix: AIR
Samples Received: 2

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Method Reference
Canister Pressure (TO-15)	2	N/A	2009/10/30	BRL SOP-00304	EPA TO-15
Volatile Organics in Air (TO-15) ¶	2	N/A	2009/10/30	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: 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. SCC and CALA have approved this reporting process and electronic report format.

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Total cover pages: 1

Lakeland Industry & Community Assoc.

Maxxam Job #: A9E5014
 Report Date: 2009/11/06

Project name: COLD LAKE SOUTH 13-16-62-5 W4M

RESULTS OF ANALYSES OF AIR

Maxxam ID		EE2019	EE2020		
Sampling Date		2009/10/22	2009/10/22		
COC Number		5358	5358		
	Units	LICA	LICA	DL	QC Batch
		VOC/CLS/OCT22,09-7850	VOC/PORT/OCT22,09-S2297		

Volatile Organics					
Pressure on Receipt	psig	9.0	20	N/A	1995537

RDL = Reportable Detection Limit
 QC Batch = Quality Control Batch

Lakeland Industry & Community Assoc.

Maxxam Job #: A9E5014
Report Date: 2009/11/06

Project name: COLD LAKE SOUTH 13-16-62-5 W4M

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		EE2019				
Sampling Date		2009/10/22				
COC Number		5358				
	Units	LICA	DL	ug/m3	DL (ug/m3)	QC Batch
		VOC/CLS/OCT22,09-7850				

Volatile Organics						
2,2,4-Trimethylpentane	ppbv	<0.20	0.20	<0.934	0.934	1995564
Carbon Disulfide	ppbv	<0.50	0.50	<1.56	1.56	1995564
Propene	ppbv	<0.30	0.30	<0.516	0.516	1995564
Vinyl Acetate	ppbv	<0.20	0.20	<0.704	0.704	1995564
Vinyl Bromide	ppbv	<0.20	0.20	<0.875	0.875	1995564
Dichlorodifluoromethane (FREON 12)	ppbv	0.64	0.20	3.15	0.989	1995564
1,2-Dichlorotetrafluoroethane	ppbv	<0.17	0.17	<1.19	1.19	1995564
Chloromethane	ppbv	0.52	0.30	1.08	0.620	1995564
Vinyl Chloride	ppbv	<0.18	0.18	<0.460	0.460	1995564
Chloroethane	ppbv	<0.30	0.30	<0.792	0.792	1995564
1,3-Butadiene	ppbv	<0.50	0.50	<1.11	1.11	1995564
Trichlorofluoromethane (FREON 11)	ppbv	0.32	0.20	1.82	1.12	1995564
Trichlorotrifluoroethane	ppbv	<0.15	0.15	<1.15	1.15	1995564
Ethanol	ppbv	<2.3	2.3	<4.33	4.33	1995564
2-propanol	ppbv	<3.0	3.0	<7.37	7.37	1995564
2-Propanone	ppbv	1.30	0.80	3.10	1.90	1995564
Methyl Ethyl Ketone (2-Butanone)	ppbv	<3.0	3.0	<8.85	8.85	1995564
Methyl Isobutyl Ketone	ppbv	<3.2	3.2	<13.1	13.1	1995564
Methyl Butyl Ketone (2-Hexanone)	ppbv	<2.0	2.0	<8.19	8.19	1995564
Methyl t-butyl ether (MTBE)	ppbv	<0.20	0.20	<0.721	0.721	1995564
Ethyl Acetate	ppbv	<2.2	2.2	<7.93	7.93	1995564
1,1-Dichloroethylene	ppbv	<0.25	0.25	<0.991	0.991	1995564
cis-1,2-Dichloroethylene	ppbv	<0.19	0.19	<0.753	0.753	1995564
trans-1,2-Dichloroethylene	ppbv	<0.20	0.20	<0.793	0.793	1995564
Methylene Chloride(Dichloromethane)	ppbv	0.36	0.30	1.25	1.04	1995564
Chloroform	ppbv	<0.15	0.15	<0.732	0.732	1995564
Carbon Tetrachloride	ppbv	<0.30	0.30	<1.89	1.89	1995564
1,1-Dichloroethane	ppbv	<0.20	0.20	<0.809	0.809	1995564
1,2-Dichloroethane	ppbv	<0.20	0.20	<0.809	0.809	1995564
Ethylene Dibromide	ppbv	<0.17	0.17	<1.31	1.31	1995564
1,1,1-Trichloroethane	ppbv	<0.30	0.30	<1.64	1.64	1995564
1,1,2-Trichloroethane	ppbv	<0.15	0.15	<0.818	0.818	1995564

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Lakeland Industry & Community Assoc.

 Maxxam Job #: A9E5014
 Report Date: 2009/11/06

Project name: COLD LAKE SOUTH 13-16-62-5 W4M

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		EE2019				
Sampling Date		2009/10/22				
COC Number		5358				
	Units	LICA	DL	ug/m3	DL (ug/m3)	QC Batch
		VOC/CLS/OCT22,09-7850				
1,1,2,2-Tetrachloroethane	ppbv	<0.20	0.20	<1.37	1.37	1995564
cis-1,3-Dichloropropene	ppbv	<0.18	0.18	<0.817	0.817	1995564
trans-1,3-Dichloropropene	ppbv	<0.17	0.17	<0.772	0.772	1995564
1,2-Dichloropropane	ppbv	<0.40	0.40	<1.85	1.85	1995564
Bromomethane	ppbv	<0.18	0.18	<0.699	0.699	1995564
Bromoform	ppbv	<0.20	0.20	<2.07	2.07	1995564
Bromodichloromethane	ppbv	<0.20	0.20	<1.34	1.34	1995564
Dibromochloromethane	ppbv	<0.20	0.20	<1.70	1.70	1995564
Heptane	ppbv	<0.30	0.30	<1.23	1.23	1995564
Trichloroethylene	ppbv	<0.30	0.30	<1.61	1.61	1995564
Tetrachloroethylene	ppbv	<0.20	0.20	<1.36	1.36	1995564
Benzene	ppbv	<0.18	0.18	<0.575	0.575	1995564
Toluene	ppbv	<0.20	0.20	<0.753	0.753	1995564
Ethylbenzene	ppbv	<0.20	0.20	<0.868	0.868	1995564
p+m-Xylene	ppbv	<0.37	0.37	<1.61	1.61	1995564
o-Xylene	ppbv	<0.20	0.20	<0.868	0.868	1995564
Styrene	ppbv	<0.20	0.20	<0.852	0.852	1995564
1,3,5-Trimethylbenzene	ppbv	<0.50	0.50	<2.46	2.46	1995564
1,2,4-Trimethylbenzene	ppbv	<0.50	0.50	<2.46	2.46	1995564
4-ethyltoluene	ppbv	<2.2	2.2	<10.8	10.8	1995564
Chlorobenzene	ppbv	<0.20	0.20	<0.921	0.921	1995564
Benzyl chloride	ppbv	<1.0	1.0	<5.18	5.18	1995564
1,3-Dichlorobenzene	ppbv	<0.40	0.40	<2.40	2.40	1995564
1,4-Dichlorobenzene	ppbv	<0.40	0.40	<2.40	2.40	1995564
1,2-Dichlorobenzene	ppbv	<0.40	0.40	<2.40	2.40	1995564
1,2,4-Trichlorobenzene	ppbv	<2.0	2.0	<14.8	14.8	1995564
Hexachlorobutadiene	ppbv	<3.0	3.0	<32.0	32.0	1995564
Hexane	ppbv	<0.30	0.30	<1.06	1.06	1995564
Cyclohexane	ppbv	<0.20	0.20	<0.688	0.688	1995564
Tetrahydrofuran	ppbv	<0.40	0.40	<1.18	1.18	1995564
1,4-Dioxane	ppbv	<2.0	2.0	<7.21	7.21	1995564
Xylene (Total)	ppbv	<0.60	0.60	<2.61	2.61	1995564
Surrogate Recovery (%)						
Bromochloromethane	%	102		N/A	N/A	1995564
N/A = Not Applicable QC Batch = Quality Control Batch						

Lakeland Industry & Community Assoc.

Maxxam Job #: A9E5014
 Report Date: 2009/11/06

Project name: COLD LAKE SOUTH 13-16-62-5 W4M

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		EE2019				
Sampling Date		2009/10/22				
COC Number		5358				
	Units	LICA	DL	ug/m3	DL (ug/m3)	QC Batch
		VOC/CLS/OCT22,09-7850				

D5-Chlorobenzene	%	95		N/A	N/A	1995564
Difluorobenzene	%	90		N/A	N/A	1995564

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

Lakeland Industry & Community Assoc.

Maxxam Job #: A9E5014
Report Date: 2009/11/06

Project name: COLD LAKE SOUTH 13-16-62-5 W4M

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		EE2020				
Sampling Date		2009/10/22				
COC Number		5358				
	Units	LICA VOC/PORT/OCT22,09 -S2297	DL	ug/m3	DL (ug/m3)	QC Batch

Volatile Organics						
2,2,4-Trimethylpentane	ppbv	<0.20	0.20	<0.934	0.934	1995564
Carbon Disulfide	ppbv	<0.50	0.50	<1.56	1.56	1995564
Propene	ppbv	<0.30	0.30	<0.516	0.516	1995564
Vinyl Acetate	ppbv	<0.20	0.20	<0.704	0.704	1995564
Vinyl Bromide	ppbv	<0.20	0.20	<0.875	0.875	1995564
Dichlorodifluoromethane (FREON 12)	ppbv	0.60	0.20	2.94	0.989	1995564
1,2-Dichlorotetrafluoroethane	ppbv	<0.17	0.17	<1.19	1.19	1995564
Chloromethane	ppbv	0.49	0.30	1.02	0.620	1995564
Vinyl Chloride	ppbv	<0.18	0.18	<0.460	0.460	1995564
Chloroethane	ppbv	<0.30	0.30	<0.792	0.792	1995564
1,3-Butadiene	ppbv	<0.50	0.50	<1.11	1.11	1995564
Trichlorofluoromethane (FREON 11)	ppbv	0.29	0.20	1.63	1.12	1995564
Trichlorotrifluoroethane	ppbv	<0.15	0.15	<1.15	1.15	1995564
Ethanol	ppbv	<2.3	2.3	<4.33	4.33	1995564
2-propanol	ppbv	<3.0	3.0	<7.37	7.37	1995564
2-Propanone	ppbv	1.27	0.80	3.01	1.90	1995564
Methyl Ethyl Ketone (2-Butanone)	ppbv	<3.0	3.0	<8.85	8.85	1995564
Methyl Isobutyl Ketone	ppbv	<3.2	3.2	<13.1	13.1	1995564
Methyl Butyl Ketone (2-Hexanone)	ppbv	<2.0	2.0	<8.19	8.19	1995564
Methyl t-butyl ether (MTBE)	ppbv	<0.20	0.20	<0.721	0.721	1995564
Ethyl Acetate	ppbv	<2.2	2.2	<7.93	7.93	1995564
1,1-Dichloroethylene	ppbv	<0.25	0.25	<0.991	0.991	1995564
cis-1,2-Dichloroethylene	ppbv	<0.19	0.19	<0.753	0.753	1995564
trans-1,2-Dichloroethylene	ppbv	<0.20	0.20	<0.793	0.793	1995564
Methylene Chloride(Dichloromethane)	ppbv	<0.30	0.30	<1.04	1.04	1995564
Chloroform	ppbv	<0.15	0.15	<0.732	0.732	1995564
Carbon Tetrachloride	ppbv	<0.30	0.30	<1.89	1.89	1995564
1,1-Dichloroethane	ppbv	<0.20	0.20	<0.809	0.809	1995564
1,2-Dichloroethane	ppbv	<0.20	0.20	<0.809	0.809	1995564
Ethylene Dibromide	ppbv	<0.17	0.17	<1.31	1.31	1995564
1,1,1-Trichloroethane	ppbv	<0.30	0.30	<1.64	1.64	1995564

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Lakeland Industry & Community Assoc.

Maxxam Job #: A9E5014
Report Date: 2009/11/06

Project name: COLD LAKE SOUTH 13-16-62-5 W4M

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		EE2020				
Sampling Date		2009/10/22				
COC Number		5358				
	Units	LICA VOC/PORT/OCT22,09 -S2297	DL	ug/m3	DL (ug/m3)	QC Batch
1,1,2-Trichloroethane	ppbv	<0.15	0.15	<0.818	0.818	1995564
1,1,2,2-Tetrachloroethane	ppbv	<0.20	0.20	<1.37	1.37	1995564
cis-1,3-Dichloropropene	ppbv	<0.18	0.18	<0.817	0.817	1995564
trans-1,3-Dichloropropene	ppbv	<0.17	0.17	<0.772	0.772	1995564
1,2-Dichloropropane	ppbv	<0.40	0.40	<1.85	1.85	1995564
Bromomethane	ppbv	<0.18	0.18	<0.699	0.699	1995564
Bromoform	ppbv	<0.20	0.20	<2.07	2.07	1995564
Bromodichloromethane	ppbv	<0.20	0.20	<1.34	1.34	1995564
Dibromochloromethane	ppbv	<0.20	0.20	<1.70	1.70	1995564
Heptane	ppbv	<0.30	0.30	<1.23	1.23	1995564
Trichloroethylene	ppbv	<0.30	0.30	<1.61	1.61	1995564
Tetrachloroethylene	ppbv	<0.20	0.20	<1.36	1.36	1995564
Benzene	ppbv	<0.18	0.18	<0.575	0.575	1995564
Toluene	ppbv	<0.20	0.20	<0.753	0.753	1995564
Ethylbenzene	ppbv	<0.20	0.20	<0.868	0.868	1995564
p+m-Xylene	ppbv	<0.37	0.37	<1.61	1.61	1995564
o-Xylene	ppbv	<0.20	0.20	<0.868	0.868	1995564
Styrene	ppbv	<0.20	0.20	<0.852	0.852	1995564
1,3,5-Trimethylbenzene	ppbv	<0.50	0.50	<2.46	2.46	1995564
1,2,4-Trimethylbenzene	ppbv	<0.50	0.50	<2.46	2.46	1995564
4-ethyltoluene	ppbv	<2.2	2.2	<10.8	10.8	1995564
Chlorobenzene	ppbv	<0.20	0.20	<0.921	0.921	1995564
Benzyl chloride	ppbv	<1.0	1.0	<5.18	5.18	1995564
1,3-Dichlorobenzene	ppbv	<0.40	0.40	<2.40	2.40	1995564
1,4-Dichlorobenzene	ppbv	<0.40	0.40	<2.40	2.40	1995564
1,2-Dichlorobenzene	ppbv	<0.40	0.40	<2.40	2.40	1995564
1,2,4-Trichlorobenzene	ppbv	<2.0	2.0	<14.8	14.8	1995564
Hexachlorobutadiene	ppbv	<3.0	3.0	<32.0	32.0	1995564
Hexane	ppbv	<0.30	0.30	<1.06	1.06	1995564
Cyclohexane	ppbv	<0.20	0.20	<0.688	0.688	1995564
Tetrahydrofuran	ppbv	<0.40	0.40	<1.18	1.18	1995564
1,4-Dioxane	ppbv	<2.0	2.0	<7.21	7.21	1995564
Xylene (Total)	ppbv	<0.60	0.60	<2.61	2.61	1995564
QC Batch = Quality Control Batch						

Lakeland Industry & Community Assoc.

Maxxam Job #: A9E5014

Project name: COLD LAKE SOUTH 13-16-62-5 W4M

Report Date: 2009/11/06

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		EE2020				
Sampling Date		2009/10/22				
COC Number		5358				
	Units	LICA VOC/PORT/OCT22,09 -S2297	DL	ug/m3	DL (ug/m3)	QC Batch

Surrogate Recovery (%)						
Bromochloromethane	%	103		N/A	N/A	1995564
D5-Chlorobenzene	%	94		N/A	N/A	1995564
Difluorobenzene	%	89		N/A	N/A	1995564

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

Lakeland Industry & Community Assoc.

Maxxam Job #: A9E5014
 Report Date: 2009/11/06

Project name: COLD LAKE SOUTH 13-16-62-5 W4M

Test Summary

Maxxam ID EE2019 **Collected** 2009/10/22
Sample ID LICA VOC/CLS/OCT22,09-7850 **Shipped**
Matrix AIR **Received** 2009/10/28

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Canister Pressure (TO-15)	PRES	1995537	N/A	2009/10/30	S_S
Volatile Organics in Air (TO-15)	GC/MS	1995564	N/A	2009/10/30	S_S

Maxxam ID EE2020 **Collected** 2009/10/22
Sample ID LICA VOC/PORT/OCT22,09 -S2297 **Shipped**
Matrix AIR **Received** 2009/10/28

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Canister Pressure (TO-15)	PRES	1995537	N/A	2009/10/30	S_S
Volatile Organics in Air (TO-15)	GC/MS	1995564	N/A	2009/10/30	S_S

Maxxam Job #: A9E5014
Report Date: 2009/11/06

Lakeland Industry & Community Assoc.

Project name: COLD LAKE SOUTH 13-16-62-5 W4M

GENERAL COMMENTS

Results relate only to the items tested.

Lakeland Industry & Community Assoc.
 Attention: Shea Beaton
 Client Project #:
 P.O. #:
 Site Location: COLD LAKE SOUTH 13-16-62-5 W4M

Quality Assurance Report
 Maxxam Job Number: GA9E5014

QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
1995564 S_S	Spiked Blank	Bromochloromethane	2009/10/30		99	%	60 - 140
		D5-Chlorobenzene	2009/10/30		102	%	60 - 140
		Difluorobenzene	2009/10/30		103	%	60 - 140
		2,2,4-Trimethylpentane	2009/10/30		96	%	70 - 130
		Carbon Disulfide	2009/10/30		89	%	70 - 130
		Propene	2009/10/30		90	%	70 - 130
		Vinyl Acetate	2009/10/30		101	%	70 - 130
		Vinyl Bromide	2009/10/30		86	%	70 - 130
		Dichlorodifluoromethane (FREON 12)	2009/10/30		84	%	70 - 130
		1,2-Dichlorotetrafluoroethane	2009/10/30		82	%	70 - 130
		Chloromethane	2009/10/30		80	%	70 - 130
		Vinyl Chloride	2009/10/30		83	%	70 - 130
		Chloroethane	2009/10/30		82	%	70 - 130
		1,3-Butadiene	2009/10/30		71	%	70 - 130
		Trichlorofluoromethane (FREON 11)	2009/10/30		84	%	70 - 130
		Trichlorotrifluoroethane	2009/10/30		81	%	70 - 130
		Ethanol	2009/10/30		86	%	70 - 130
		2-propanol	2009/10/30		89	%	70 - 130
		2-Propanone	2009/10/30		92	%	70 - 130
		Methyl Ethyl Ketone (2-Butanone)	2009/10/30		106	%	70 - 130
		Methyl Isobutyl Ketone	2009/10/30		100	%	70 - 130
		Methyl Butyl Ketone (2-Hexanone)	2009/10/30		110	%	70 - 130
		Methyl t-butyl ether (MTBE)	2009/10/30		102	%	70 - 130
		Ethyl Acetate	2009/10/30		100	%	70 - 130
		1,1-Dichloroethylene	2009/10/30		86	%	70 - 130
		cis-1,2-Dichloroethylene	2009/10/30		92	%	70 - 130
		trans-1,2-Dichloroethylene	2009/10/30		95	%	70 - 130
		Methylene Chloride(Dichloromethane)	2009/10/30		80	%	70 - 130
		Chloroform	2009/10/30		82	%	70 - 130
		Carbon Tetrachloride	2009/10/30		87	%	70 - 130
		1,1-Dichloroethane	2009/10/30		87	%	70 - 130
		1,2-Dichloroethane	2009/10/30		87	%	70 - 130
		Ethylene Dibromide	2009/10/30		91	%	70 - 130
		1,1,1-Trichloroethane	2009/10/30		86	%	70 - 130
		1,1,2-Trichloroethane	2009/10/30		85	%	70 - 130
		1,1,2,2-Tetrachloroethane	2009/10/30		84	%	70 - 130
		cis-1,3-Dichloropropene	2009/10/30		96	%	70 - 130
		trans-1,3-Dichloropropene	2009/10/30		107	%	70 - 130
		1,2-Dichloropropane	2009/10/30		86	%	70 - 130
		Bromomethane	2009/10/30		80	%	70 - 130
		Bromoform	2009/10/30		96	%	70 - 130
		Bromodichloromethane	2009/10/30		90	%	70 - 130
		Dibromochloromethane	2009/10/30		95	%	70 - 130
		Heptane	2009/10/30		98	%	70 - 130
		Trichloroethylene	2009/10/30		85	%	70 - 130
		Tetrachloroethylene	2009/10/30		88	%	70 - 130
		Benzene	2009/10/30		93	%	70 - 130
		Toluene	2009/10/30		99	%	70 - 130
		Ethylbenzene	2009/10/30		95	%	70 - 130
		p+m-Xylene	2009/10/30		95	%	70 - 130
		o-Xylene	2009/10/30		96	%	70 - 130
		Styrene	2009/10/30		113	%	70 - 130
		1,3,5-Trimethylbenzene	2009/10/30		97	%	70 - 130
		1,2,4-Trimethylbenzene	2009/10/30		99	%	70 - 130
		4-ethyltoluene	2009/10/30		105	%	70 - 130

Lakeland Industry & Community Assoc.
 Attention: Shea Beaton
 Client Project #:
 P.O. #:
 Site Location: COLD LAKE SOUTH 13-16-62-5 W4M

Quality Assurance Report (Continued)

Maxxam Job Number: GA9E5014

QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
1995564 S_S	Spiked Blank	Chlorobenzene	2009/10/30		83	%	70 - 130
		Benzyl chloride	2009/10/30		99	%	70 - 130
		1,3-Dichlorobenzene	2009/10/30		92	%	70 - 130
		1,4-Dichlorobenzene	2009/10/30		94	%	70 - 130
		1,2-Dichlorobenzene	2009/10/30		91	%	70 - 130
		1,2,4-Trichlorobenzene	2009/10/30		93	%	70 - 130
		Hexachlorobutadiene	2009/10/30		79	%	70 - 130
		Hexane	2009/10/30		98	%	70 - 130
		Cyclohexane	2009/10/30		102	%	70 - 130
		Tetrahydrofuran	2009/10/30		103	%	70 - 130
		1,4-Dioxane	2009/10/30		100	%	70 - 130
	Method Blank	Bromochloromethane	2009/10/30		78	%	60 - 140
		D5-Chlorobenzene	2009/10/30		73	%	60 - 140
		Difluorobenzene	2009/10/30		78	%	60 - 140
		2,2,4-Trimethylpentane	2009/10/30	ND, RDL=0.20		ppbv	
		Carbon Disulfide	2009/10/30	ND, RDL=0.50		ppbv	
		Propene	2009/10/30	ND, RDL=0.30		ppbv	
		Vinyl Acetate	2009/10/30	ND, RDL=0.20		ppbv	
		Vinyl Bromide	2009/10/30	ND, RDL=0.20		ppbv	
		Dichlorodifluoromethane (FREON 12)	2009/10/30	ND, RDL=0.20		ppbv	
		1,2-Dichlorotetrafluoroethane	2009/10/30	ND, RDL=0.17		ppbv	
		Chloromethane	2009/10/30	ND, RDL=0.30		ppbv	
		Vinyl Chloride	2009/10/30	ND, RDL=0.18		ppbv	
		Chloroethane	2009/10/30	ND, RDL=0.30		ppbv	
		1,3-Butadiene	2009/10/30	ND, RDL=0.50		ppbv	
		Trichlorofluoromethane (FREON 11)	2009/10/30	ND, RDL=0.20		ppbv	
		Trichlorotrifluoroethane	2009/10/30	ND, RDL=0.15		ppbv	
		Ethanol	2009/10/30	ND, RDL=2.3		ppbv	
		2-propanol	2009/10/30	ND, RDL=3.0		ppbv	
		2-Propanone	2009/10/30	ND, RDL=0.80		ppbv	
		Methyl Ethyl Ketone (2-Butanone)	2009/10/30	ND, RDL=3.0		ppbv	
		Methyl Isobutyl Ketone	2009/10/30	ND, RDL=3.2		ppbv	
		Methyl Butyl Ketone (2-Hexanone)	2009/10/30	ND, RDL=2.0		ppbv	
		Methyl t-butyl ether (MTBE)	2009/10/30	ND, RDL=0.20		ppbv	
		Ethyl Acetate	2009/10/30	ND, RDL=2.2		ppbv	
		1,1-Dichloroethylene	2009/10/30	ND, RDL=0.25		ppbv	
		cis-1,2-Dichloroethylene	2009/10/30	ND, RDL=0.19		ppbv	
		trans-1,2-Dichloroethylene	2009/10/30	ND, RDL=0.20		ppbv	
		Methylene Chloride(Dichloromethane)	2009/10/30	ND, RDL=0.30		ppbv	
		Chloroform	2009/10/30	ND, RDL=0.15		ppbv	
		Carbon Tetrachloride	2009/10/30	ND, RDL=0.30		ppbv	
		1,1-Dichloroethane	2009/10/30	ND, RDL=0.20		ppbv	
		1,2-Dichloroethane	2009/10/30	ND, RDL=0.20		ppbv	
		Ethylene Dibromide	2009/10/30	ND, RDL=0.17		ppbv	
		1,1,1-Trichloroethane	2009/10/30	ND, RDL=0.30		ppbv	
		1,1,2-Trichloroethane	2009/10/30	ND, RDL=0.15		ppbv	
		1,1,2,2-Tetrachloroethane	2009/10/30	ND, RDL=0.20		ppbv	
		cis-1,3-Dichloropropene	2009/10/30	ND, RDL=0.18		ppbv	
		trans-1,3-Dichloropropene	2009/10/30	ND, RDL=0.17		ppbv	
		1,2-Dichloropropane	2009/10/30	ND, RDL=0.40		ppbv	
		Bromomethane	2009/10/30	ND, RDL=0.18		ppbv	
		Bromoform	2009/10/30	ND, RDL=0.20		ppbv	
		Bromodichloromethane	2009/10/30	ND, RDL=0.20		ppbv	
		Dibromochloromethane	2009/10/30	ND, RDL=0.20		ppbv	
		Heptane	2009/10/30	ND, RDL=0.30		ppbv	

Lakeland Industry & Community Assoc.
 Attention: Shea Beaton
 Client Project #:
 P.O. #:
 Site Location: COLD LAKE SOUTH 13-16-62-5 W4M

Quality Assurance Report (Continued)

Maxxam Job Number: GA9E5014

QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
1995564 S_S	Method Blank	Trichloroethylene	2009/10/30	ND, RDL=0.30		ppbv	
		Tetrachloroethylene	2009/10/30	ND, RDL=0.20		ppbv	
		Benzene	2009/10/30	ND, RDL=0.18		ppbv	
		Toluene	2009/10/30	ND, RDL=0.20		ppbv	
		Ethylbenzene	2009/10/30	ND, RDL=0.20		ppbv	
		p+m-Xylene	2009/10/30	ND, RDL=0.37		ppbv	
		o-Xylene	2009/10/30	ND, RDL=0.20		ppbv	
		Styrene	2009/10/30	ND, RDL=0.20		ppbv	
		1,3,5-Trimethylbenzene	2009/10/30	ND, RDL=0.50		ppbv	
		1,2,4-Trimethylbenzene	2009/10/30	ND, RDL=0.50		ppbv	
		4-ethyltoluene	2009/10/30	ND, RDL=2.2		ppbv	
		Chlorobenzene	2009/10/30	ND, RDL=0.20		ppbv	
		Benzyl chloride	2009/10/30	ND, RDL=1.0		ppbv	
		1,3-Dichlorobenzene	2009/10/30	ND, RDL=0.40		ppbv	
		1,4-Dichlorobenzene	2009/10/30	ND, RDL=0.40		ppbv	
		1,2-Dichlorobenzene	2009/10/30	ND, RDL=0.40		ppbv	
		1,2,4-Trichlorobenzene	2009/10/30	ND, RDL=2.0		ppbv	
		Hexachlorobutadiene	2009/10/30	ND, RDL=3.0		ppbv	
		Hexane	2009/10/30	ND, RDL=0.30		ppbv	
		Cyclohexane	2009/10/30	ND, RDL=0.20		ppbv	
		Tetrahydrofuran	2009/10/30	ND, RDL=0.40		ppbv	
		1,4-Dioxane	2009/10/30	ND, RDL=2.0		ppbv	
		Xylene (Total)	2009/10/30	ND, RDL=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.



Your C.O.C. #: 5416

Attention: Shea Beaton

Lakeland Industry & Community Assoc.
P.O. Box 8237
Bonnyville, AB
CANADA T9N 2J5

Report Date: 2009/11/16

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: A9E9350

Received: 2009/11/05, 13:37

Sample Matrix: AIR
Samples Received: 2

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Method Reference
Canister Pressure (TO-15)	2	N/A	2009/11/06	BRL SOP-00304	EPA TO-15
Volatile Organics in Air (TO-15) ¶	2	N/A	2009/11/06	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: Theresa.Stephenson@MaxxamAnalytics.com
Phone# (905) 817-5763

=====

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Total cover pages: 1

Maxxam Job #: A9E9350
 Report Date: 2009/11/16

RESULTS OF ANALYSES OF AIR

Maxxam ID		EG3852	EG3853		
Sampling Date		2009/10/28	2009/10/28		
COC Number		5416	5416		
	Units	LICAVOC/CLS/OCT28,09 (7793)	LICAVOC/PORT/OCT28/09 (7839)	DL	QC Batch

Volatile Organics					
Pressure on Receipt	psig	19	19	N/A	2004176

RDL = Reportable Detection Limit
 QC Batch = Quality Control Batch

Maxxam Job #: A9E9350
 Report Date: 2009/11/16

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		EG3852				
Sampling Date		2009/10/28				
COC Number		5416				
	Units	LICAVOC/CLS/OCT28,09 (7793)	DL	ug/m3	DL (ug/m3)	QC Batch

Volatile Organics						
2,2,4-Trimethylpentane	ppbv	<0.20	0.20	<0.934	0.934	2004171
Carbon Disulfide	ppbv	<0.50	0.50	<1.56	1.56	2004171
Propene	ppbv	<0.30	0.30	<0.516	0.516	2004171
Vinyl Acetate	ppbv	<0.20	0.20	<0.704	0.704	2004171
Vinyl Bromide	ppbv	<0.20	0.20	<0.875	0.875	2004171
Dichlorodifluoromethane (FREON 12)	ppbv	0.53	0.20	2.61	0.989	2004171
1,2-Dichlorotetrafluoroethane	ppbv	<0.17	0.17	<1.19	1.19	2004171
Chloromethane	ppbv	0.33	0.30	0.687	0.620	2004171
Vinyl Chloride	ppbv	<0.18	0.18	<0.460	0.460	2004171
Chloroethane	ppbv	<0.30	0.30	<0.792	0.792	2004171
1,3-Butadiene	ppbv	<0.50	0.50	<1.11	1.11	2004171
Trichlorofluoromethane (FREON 11)	ppbv	0.25	0.20	1.39	1.12	2004171
Trichlorotrifluoroethane	ppbv	<0.15	0.15	<1.15	1.15	2004171
Ethanol	ppbv	<2.3	2.3	<4.33	4.33	2004171
2-propanol	ppbv	<3.0	3.0	<7.37	7.37	2004171
2-Propanone	ppbv	<0.80	0.80	<1.90	1.90	2004171
Methyl Ethyl Ketone (2-Butanone)	ppbv	<3.0	3.0	<8.85	8.85	2004171
Methyl Isobutyl Ketone	ppbv	<3.2	3.2	<13.1	13.1	2004171
Methyl Butyl Ketone (2-Hexanone)	ppbv	<2.0	2.0	<8.19	8.19	2004171
Methyl t-butyl ether (MTBE)	ppbv	<0.20	0.20	<0.721	0.721	2004171
Ethyl Acetate	ppbv	<2.2	2.2	<7.93	7.93	2004171
1,1-Dichloroethylene	ppbv	<0.25	0.25	<0.991	0.991	2004171
cis-1,2-Dichloroethylene	ppbv	<0.19	0.19	<0.753	0.753	2004171
trans-1,2-Dichloroethylene	ppbv	<0.20	0.20	<0.793	0.793	2004171
Methylene Chloride(Dichloromethane)	ppbv	0.56	0.30	1.96	1.04	2004171
Chloroform	ppbv	<0.15	0.15	<0.732	0.732	2004171
Carbon Tetrachloride	ppbv	<0.30	0.30	<1.89	1.89	2004171
1,1-Dichloroethane	ppbv	<0.20	0.20	<0.809	0.809	2004171
1,2-Dichloroethane	ppbv	<0.20	0.20	<0.809	0.809	2004171
Ethylene Dibromide	ppbv	<0.17	0.17	<1.31	1.31	2004171
1,1,1-Trichloroethane	ppbv	<0.30	0.30	<1.64	1.64	2004171
1,1,2-Trichloroethane	ppbv	<0.15	0.15	<0.818	0.818	2004171

 RDL = Reportable Detection Limit
 QC Batch = Quality Control Batch

Maxxam Job #: A9E9350
 Report Date: 2009/11/16

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		EG3852				
Sampling Date		2009/10/28				
COC Number		5416				
	Units	LICAVOC/CLS/OCT28,09 (7793)	DL	ug/m3	DL (ug/m3)	QC Batch
1,1,2,2-Tetrachloroethane	ppbv	<0.20	0.20	<1.37	1.37	2004171
cis-1,3-Dichloropropene	ppbv	<0.18	0.18	<0.817	0.817	2004171
trans-1,3-Dichloropropene	ppbv	<0.17	0.17	<0.772	0.772	2004171
1,2-Dichloropropane	ppbv	<0.40	0.40	<1.85	1.85	2004171
Bromomethane	ppbv	<0.18	0.18	<0.699	0.699	2004171
Bromoform	ppbv	<0.20	0.20	<2.07	2.07	2004171
Bromodichloromethane	ppbv	<0.20	0.20	<1.34	1.34	2004171
Dibromochloromethane	ppbv	<0.20	0.20	<1.70	1.70	2004171
Heptane	ppbv	<0.30	0.30	<1.23	1.23	2004171
Trichloroethylene	ppbv	<0.30	0.30	<1.61	1.61	2004171
Tetrachloroethylene	ppbv	<0.20	0.20	<1.36	1.36	2004171
Benzene	ppbv	<0.18	0.18	<0.575	0.575	2004171
Toluene	ppbv	<0.20	0.20	<0.753	0.753	2004171
Ethylbenzene	ppbv	<0.20	0.20	<0.868	0.868	2004171
p+m-Xylene	ppbv	<0.37	0.37	<1.61	1.61	2004171
o-Xylene	ppbv	<0.20	0.20	<0.868	0.868	2004171
Styrene	ppbv	<0.20	0.20	<0.852	0.852	2004171
1,3,5-Trimethylbenzene	ppbv	<0.50	0.50	<2.46	2.46	2004171
1,2,4-Trimethylbenzene	ppbv	<0.50	0.50	<2.46	2.46	2004171
4-ethyltoluene	ppbv	<2.2	2.2	<10.8	10.8	2004171
Chlorobenzene	ppbv	<0.20	0.20	<0.921	0.921	2004171
Benzyl chloride	ppbv	<1.0	1.0	<5.18	5.18	2004171
1,3-Dichlorobenzene	ppbv	<0.40	0.40	<2.40	2.40	2004171
1,4-Dichlorobenzene	ppbv	<0.40	0.40	<2.40	2.40	2004171
1,2-Dichlorobenzene	ppbv	<0.40	0.40	<2.40	2.40	2004171
1,2,4-Trichlorobenzene	ppbv	<2.0	2.0	<14.8	14.8	2004171
Hexachlorobutadiene	ppbv	<3.0	3.0	<32.0	32.0	2004171
Hexane	ppbv	<0.30	0.30	<1.06	1.06	2004171
Cyclohexane	ppbv	<0.20	0.20	<0.688	0.688	2004171
Tetrahydrofuran	ppbv	<0.40	0.40	<1.18	1.18	2004171
1,4-Dioxane	ppbv	<2.0	2.0	<7.21	7.21	2004171
Xylene (Total)	ppbv	<0.60	0.60	<2.61	2.61	2004171
Surrogate Recovery (%)						
Bromochloromethane	%	91		N/A	N/A	2004171
N/A = Not Applicable QC Batch = Quality Control Batch						

Maxxam Job #: A9E9350
 Report Date: 2009/11/16

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		EG3852				
Sampling Date		2009/10/28				
COC Number		5416				
	Units	LICAVOC/CLS/OCT28,09 (7793)	DL	ug/m3	DL (ug/m3)	QC Batch

D5-Chlorobenzene	%	88		N/A	N/A	2004171
Difluorobenzene	%	91		N/A	N/A	2004171

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

Maxxam Job #: A9E9350
 Report Date: 2009/11/16

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		EG3853				
Sampling Date		2009/10/28				
COC Number		5416				
	Units	LICAVOC/PORT/OCT28/09 (7839)	DL	ug/m3	DL (ug/m3)	QC Batch

Volatile Organics						
2,2,4-Trimethylpentane	ppbv	<0.20	0.20	<0.934	0.934	2004171
Carbon Disulfide	ppbv	<0.50	0.50	<1.56	1.56	2004171
Propene	ppbv	<0.30	0.30	<0.516	0.516	2004171
Vinyl Acetate	ppbv	<0.20	0.20	<0.704	0.704	2004171
Vinyl Bromide	ppbv	<0.20	0.20	<0.875	0.875	2004171
Dichlorodifluoromethane (FREON 12)	ppbv	0.54	0.20	2.69	0.989	2004171
1,2-Dichlorotetrafluoroethane	ppbv	<0.17	0.17	<1.19	1.19	2004171
Chloromethane	ppbv	0.34	0.30	0.711	0.620	2004171
Vinyl Chloride	ppbv	<0.18	0.18	<0.460	0.460	2004171
Chloroethane	ppbv	<0.30	0.30	<0.792	0.792	2004171
1,3-Butadiene	ppbv	<0.50	0.50	<1.11	1.11	2004171
Trichlorofluoromethane (FREON 11)	ppbv	0.26	0.20	1.46	1.12	2004171
Trichlorotrifluoroethane	ppbv	<0.15	0.15	<1.15	1.15	2004171
Ethanol	ppbv	<2.3	2.3	<4.33	4.33	2004171
2-propanol	ppbv	<3.0	3.0	<7.37	7.37	2004171
2-Propanone	ppbv	0.83	0.80	1.97	1.90	2004171
Methyl Ethyl Ketone (2-Butanone)	ppbv	<3.0	3.0	<8.85	8.85	2004171
Methyl Isobutyl Ketone	ppbv	<3.2	3.2	<13.1	13.1	2004171
Methyl Butyl Ketone (2-Hexanone)	ppbv	<2.0	2.0	<8.19	8.19	2004171
Methyl t-butyl ether (MTBE)	ppbv	<0.20	0.20	<0.721	0.721	2004171
Ethyl Acetate	ppbv	<2.2	2.2	<7.93	7.93	2004171
1,1-Dichloroethylene	ppbv	<0.25	0.25	<0.991	0.991	2004171
cis-1,2-Dichloroethylene	ppbv	<0.19	0.19	<0.753	0.753	2004171
trans-1,2-Dichloroethylene	ppbv	<0.20	0.20	<0.793	0.793	2004171
Methylene Chloride(Dichloromethane)	ppbv	0.58	0.30	2.03	1.04	2004171
Chloroform	ppbv	<0.15	0.15	<0.732	0.732	2004171
Carbon Tetrachloride	ppbv	<0.30	0.30	<1.89	1.89	2004171
1,1-Dichloroethane	ppbv	<0.20	0.20	<0.809	0.809	2004171
1,2-Dichloroethane	ppbv	<0.20	0.20	<0.809	0.809	2004171
Ethylene Dibromide	ppbv	<0.17	0.17	<1.31	1.31	2004171
1,1,1-Trichloroethane	ppbv	<0.30	0.30	<1.64	1.64	2004171
1,1,2-Trichloroethane	ppbv	<0.15	0.15	<0.818	0.818	2004171

 RDL = Reportable Detection Limit
 QC Batch = Quality Control Batch

Maxxam Job #: A9E9350
 Report Date: 2009/11/16

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		EG3853				
Sampling Date		2009/10/28				
COC Number		5416				
	Units	LICAVOC/PORT/OCT28/09 (7839)	DL	ug/m3	DL (ug/m3)	QC Batch
1,1,2,2-Tetrachloroethane	ppbv	<0.20	0.20	<1.37	1.37	2004171
cis-1,3-Dichloropropene	ppbv	<0.18	0.18	<0.817	0.817	2004171
trans-1,3-Dichloropropene	ppbv	<0.17	0.17	<0.772	0.772	2004171
1,2-Dichloropropane	ppbv	<0.40	0.40	<1.85	1.85	2004171
Bromomethane	ppbv	<0.18	0.18	<0.699	0.699	2004171
Bromoform	ppbv	<0.20	0.20	<2.07	2.07	2004171
Bromodichloromethane	ppbv	<0.20	0.20	<1.34	1.34	2004171
Dibromochloromethane	ppbv	<0.20	0.20	<1.70	1.70	2004171
Heptane	ppbv	<0.30	0.30	<1.23	1.23	2004171
Trichloroethylene	ppbv	<0.30	0.30	<1.61	1.61	2004171
Tetrachloroethylene	ppbv	<0.20	0.20	<1.36	1.36	2004171
Benzene	ppbv	<0.18	0.18	<0.575	0.575	2004171
Toluene	ppbv	<0.20	0.20	<0.753	0.753	2004171
Ethylbenzene	ppbv	<0.20	0.20	<0.868	0.868	2004171
p+m-Xylene	ppbv	<0.37	0.37	<1.61	1.61	2004171
o-Xylene	ppbv	<0.20	0.20	<0.868	0.868	2004171
Styrene	ppbv	<0.20	0.20	<0.852	0.852	2004171
1,3,5-Trimethylbenzene	ppbv	<0.50	0.50	<2.46	2.46	2004171
1,2,4-Trimethylbenzene	ppbv	<0.50	0.50	<2.46	2.46	2004171
4-ethyltoluene	ppbv	<2.2	2.2	<10.8	10.8	2004171
Chlorobenzene	ppbv	<0.20	0.20	<0.921	0.921	2004171
Benzyl chloride	ppbv	<1.0	1.0	<5.18	5.18	2004171
1,3-Dichlorobenzene	ppbv	<0.40	0.40	<2.40	2.40	2004171
1,4-Dichlorobenzene	ppbv	<0.40	0.40	<2.40	2.40	2004171
1,2-Dichlorobenzene	ppbv	<0.40	0.40	<2.40	2.40	2004171
1,2,4-Trichlorobenzene	ppbv	<2.0	2.0	<14.8	14.8	2004171
Hexachlorobutadiene	ppbv	<3.0	3.0	<32.0	32.0	2004171
Hexane	ppbv	<0.30	0.30	<1.06	1.06	2004171
Cyclohexane	ppbv	<0.20	0.20	<0.688	0.688	2004171
Tetrahydrofuran	ppbv	<0.40	0.40	<1.18	1.18	2004171
1,4-Dioxane	ppbv	<2.0	2.0	<7.21	7.21	2004171
Xylene (Total)	ppbv	<0.60	0.60	<2.61	2.61	2004171
Surrogate Recovery (%)						
Bromochloromethane	%	77		N/A	N/A	2004171
N/A = Not Applicable QC Batch = Quality Control Batch						

Maxxam Job #: A9E9350
 Report Date: 2009/11/16

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		EG3853				
Sampling Date		2009/10/28				
COC Number		5416				
	Units	LICAVOC/PORT/OCT28/09 (7839)	DL	ug/m3	DL (ug/m3)	QC Batch

D5-Chlorobenzene	%	74		N/A	N/A	2004171
Difluorobenzene	%	76		N/A	N/A	2004171

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

Maxxam Job #: A9E9350
 Report Date: 2009/11/16

Test Summary

Maxxam ID EG3852
Sample ID LICAVOC/CLS/OCT28,09 (7793)
Matrix AIR
Collected 2009/10/28
Shipped
Received 2009/11/05

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Canister Pressure (TO-15)	PRES	2004176	N/A	2009/11/06	MM2
Volatile Organics in Air (TO-15)	GC/MS	2004171	N/A	2009/11/06	MM2

Maxxam ID EG3852 Dup
Sample ID LICAVOC/CLS/OCT28,09 (7793)
Matrix AIR
Collected 2009/10/28
Shipped
Received 2009/11/05

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Volatile Organics in Air (TO-15)	GC/MS	2004171	N/A	2009/11/06	MM2

Maxxam ID EG3853
Sample ID LICAVOC/PORT/OCT28/09 (7839)
Matrix AIR
Collected 2009/10/28
Shipped
Received 2009/11/05

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Canister Pressure (TO-15)	PRES	2004176	N/A	2009/11/06	MM2
Volatile Organics in Air (TO-15)	GC/MS	2004171	N/A	2009/11/06	MM2

Maxxam Job #: A9E9350
Report Date: 2009/11/16

GENERAL COMMENTS

Results relate only to the items tested.

Lakeland Industry & Community Assoc.
 Attention: Shea Beaton
 Client Project #:
 P.O. #:
 Project name:

Quality Assurance Report
 Maxxam Job Number: GA9E9350

QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2004171 MM2	Spiked Blank	Bromochloromethane	2009/11/06		93	%	60 - 140
		D5-Chlorobenzene	2009/11/06		93	%	60 - 140
		Difluorobenzene	2009/11/06		92	%	60 - 140
		2,2,4-Trimethylpentane	2009/11/06		101	%	70 - 130
		Carbon Disulfide	2009/11/06		94	%	70 - 130
		Propene	2009/11/06		91	%	70 - 130
		Vinyl Acetate	2009/11/06		91	%	70 - 130
		Vinyl Bromide	2009/11/06		107	%	70 - 130
		Dichlorodifluoromethane (FREON 12)	2009/11/06		87	%	70 - 130
		1,2-Dichlorotetrafluoroethane	2009/11/06		88	%	70 - 130
		Chloromethane	2009/11/06		86	%	70 - 130
		Vinyl Chloride	2009/11/06		92	%	70 - 130
		Chloroethane	2009/11/06		92	%	70 - 130
		1,3-Butadiene	2009/11/06		80	%	70 - 130
		Trichlorofluoromethane (FREON 11)	2009/11/06		89	%	70 - 130
		Trichlorotrifluoroethane	2009/11/06		89	%	70 - 130
		Ethanol	2009/11/06		73	%	70 - 130
		2-propanol	2009/11/06		83	%	70 - 130
		2-Propanone	2009/11/06		122	%	70 - 130
		Methyl Ethyl Ketone (2-Butanone)	2009/11/06		95	%	70 - 130
		Methyl Isobutyl Ketone	2009/11/06		79	%	70 - 130
		Methyl Butyl Ketone (2-Hexanone)	2009/11/06		70	%	70 - 130
		Methyl t-butyl ether (MTBE)	2009/11/06		98	%	70 - 130
		Ethyl Acetate	2009/11/06		95	%	70 - 130
		1,1-Dichloroethylene	2009/11/06		90	%	70 - 130
		cis-1,2-Dichloroethylene	2009/11/06		90	%	70 - 130
		trans-1,2-Dichloroethylene	2009/11/06		95	%	70 - 130
		Methylene Chloride(Dichloromethane)	2009/11/06		79	%	70 - 130
		Chloroform	2009/11/06		86	%	70 - 130
		Carbon Tetrachloride	2009/11/06		89	%	70 - 130
		1,1-Dichloroethane	2009/11/06		87	%	70 - 130
		1,2-Dichloroethane	2009/11/06		87	%	70 - 130
		Ethylene Dibromide	2009/11/06		87	%	70 - 130
		1,1,1-Trichloroethane	2009/11/06		85	%	70 - 130
		1,1,2-Trichloroethane	2009/11/06		84	%	70 - 130
		1,1,2,2-Tetrachloroethane	2009/11/06		81	%	70 - 130
		cis-1,3-Dichloropropene	2009/11/06		91	%	70 - 130
		trans-1,3-Dichloropropene	2009/11/06		96	%	70 - 130
		1,2-Dichloropropane	2009/11/06		83	%	70 - 130
		Bromomethane	2009/11/06		94	%	70 - 130
		Bromoform	2009/11/06		93	%	70 - 130
		Bromodichloromethane	2009/11/06		91	%	70 - 130
		Dibromochloromethane	2009/11/06		94	%	70 - 130
		Heptane	2009/11/06		92	%	70 - 130
		Trichloroethylene	2009/11/06		83	%	70 - 130
		Tetrachloroethylene	2009/11/06		84	%	70 - 130
		Benzene	2009/11/06		85	%	70 - 130
		Toluene	2009/11/06		89	%	70 - 130
		Ethylbenzene	2009/11/06		89	%	70 - 130
		p+m-Xylene	2009/11/06		86	%	70 - 130
		o-Xylene	2009/11/06		84	%	70 - 130
		Styrene	2009/11/06		61 (1)	%	70 - 130
		1,3,5-Trimethylbenzene	2009/11/06		75	%	70 - 130
		1,2,4-Trimethylbenzene	2009/11/06		80	%	70 - 130
		4-ethyltoluene	2009/11/06		94	%	70 - 130

Lakeland Industry & Community Assoc.
 Attention: Shea Beaton
 Client Project #:
 P.O. #:
 Project name:

Quality Assurance Report (Continued)

Maxxam Job Number: GA9E9350

QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2004171 MM2	Spiked Blank	Chlorobenzene	2009/11/06		82	%	70 - 130
		Benzyl chloride	2009/11/06		103	%	70 - 130
		1,3-Dichlorobenzene	2009/11/06		86	%	70 - 130
		1,4-Dichlorobenzene	2009/11/06		86	%	70 - 130
		1,2-Dichlorobenzene	2009/11/06		83	%	70 - 130
		1,2,4-Trichlorobenzene	2009/11/06		82	%	70 - 130
		Hexachlorobutadiene	2009/11/06		76	%	70 - 130
		Hexane	2009/11/06		96	%	70 - 130
		Cyclohexane	2009/11/06		92	%	70 - 130
		Tetrahydrofuran	2009/11/06		92	%	70 - 130
		1,4-Dioxane	2009/11/06		87	%	70 - 130
	Method Blank	Bromochloromethane	2009/11/06		86	%	60 - 140
		D5-Chlorobenzene	2009/11/06		82	%	60 - 140
		Difluorobenzene	2009/11/06		84	%	60 - 140
		2,2,4-Trimethylpentane	2009/11/06	ND, RDL=0.20		ppbv	
		Carbon Disulfide	2009/11/06	ND, RDL=0.50		ppbv	
		Propene	2009/11/06	ND, RDL=0.30		ppbv	
		Vinyl Acetate	2009/11/06	ND, RDL=0.20		ppbv	
		Vinyl Bromide	2009/11/06	ND, RDL=0.20		ppbv	
		Dichlorodifluoromethane (FREON 12)	2009/11/06	ND, RDL=0.20		ppbv	
		1,2-Dichlorotetrafluoroethane	2009/11/06	ND, RDL=0.17		ppbv	
		Chloromethane	2009/11/06	ND, RDL=0.30		ppbv	
		Vinyl Chloride	2009/11/06	ND, RDL=0.18		ppbv	
		Chloroethane	2009/11/06	ND, RDL=0.30		ppbv	
		1,3-Butadiene	2009/11/06	ND, RDL=0.50		ppbv	
		Trichlorofluoromethane (FREON 11)	2009/11/06	ND, RDL=0.20		ppbv	
		Trichlorotrifluoroethane	2009/11/06	ND, RDL=0.15		ppbv	
		Ethanol	2009/11/06	ND, RDL=2.3		ppbv	
		2-propanol	2009/11/06	ND, RDL=3.0		ppbv	
		2-Propanone	2009/11/06	ND, RDL=0.80		ppbv	
		Methyl Ethyl Ketone (2-Butanone)	2009/11/06	ND, RDL=3.0		ppbv	
		Methyl Isobutyl Ketone	2009/11/06	ND, RDL=3.2		ppbv	
		Methyl Butyl Ketone (2-Hexanone)	2009/11/06	ND, RDL=2.0		ppbv	
		Methyl t-butyl ether (MTBE)	2009/11/06	ND, RDL=0.20		ppbv	
		Ethyl Acetate	2009/11/06	ND, RDL=2.2		ppbv	
		1,1-Dichloroethylene	2009/11/06	ND, RDL=0.25		ppbv	
		cis-1,2-Dichloroethylene	2009/11/06	ND, RDL=0.19		ppbv	
		trans-1,2-Dichloroethylene	2009/11/06	ND, RDL=0.20		ppbv	
		Methylene Chloride(Dichloromethane)	2009/11/06	0.50, RDL=0.30		ppbv	
		Chloroform	2009/11/06	ND, RDL=0.15		ppbv	
		Carbon Tetrachloride	2009/11/06	ND, RDL=0.30		ppbv	
		1,1-Dichloroethane	2009/11/06	ND, RDL=0.20		ppbv	
		1,2-Dichloroethane	2009/11/06	ND, RDL=0.20		ppbv	
		Ethylene Dibromide	2009/11/06	ND, RDL=0.17		ppbv	
		1,1,1-Trichloroethane	2009/11/06	ND, RDL=0.30		ppbv	
		1,1,2-Trichloroethane	2009/11/06	ND, RDL=0.15		ppbv	
		1,1,2,2-Tetrachloroethane	2009/11/06	ND, RDL=0.20		ppbv	
		cis-1,3-Dichloropropene	2009/11/06	ND, RDL=0.18		ppbv	
		trans-1,3-Dichloropropene	2009/11/06	ND, RDL=0.17		ppbv	
		1,2-Dichloropropane	2009/11/06	ND, RDL=0.40		ppbv	
		Bromomethane	2009/11/06	ND, RDL=0.18		ppbv	
		Bromoform	2009/11/06	ND, RDL=0.20		ppbv	
		Bromodichloromethane	2009/11/06	ND, RDL=0.20		ppbv	
		Dibromochloromethane	2009/11/06	ND, RDL=0.20		ppbv	
		Heptane	2009/11/06	ND, RDL=0.30		ppbv	

Lakeland Industry & Community Assoc.
 Attention: Shea Beaton
 Client Project #:
 P.O. #:
 Project name:

Quality Assurance Report (Continued)
 Maxxam Job Number: GA9E9350

QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2004171	MM2	Method Blank					
		Trichloroethylene	2009/11/06	ND, RDL=0.30		ppbv	
		Tetrachloroethylene	2009/11/06	ND, RDL=0.20		ppbv	
		Benzene	2009/11/06	ND, RDL=0.18		ppbv	
		Toluene	2009/11/06	ND, RDL=0.20		ppbv	
		Ethylbenzene	2009/11/06	ND, RDL=0.20		ppbv	
		p+m-Xylene	2009/11/06	ND, RDL=0.37		ppbv	
		o-Xylene	2009/11/06	ND, RDL=0.20		ppbv	
		Styrene	2009/11/06	ND, RDL=0.20		ppbv	
		1,3,5-Trimethylbenzene	2009/11/06	ND, RDL=0.50		ppbv	
		1,2,4-Trimethylbenzene	2009/11/06	ND, RDL=0.50		ppbv	
		4-ethyltoluene	2009/11/06	ND, RDL=2.2		ppbv	
		Chlorobenzene	2009/11/06	ND, RDL=0.20		ppbv	
		Benzyl chloride	2009/11/06	ND, RDL=1.0		ppbv	
		1,3-Dichlorobenzene	2009/11/06	ND, RDL=0.40		ppbv	
		1,4-Dichlorobenzene	2009/11/06	ND, RDL=0.40		ppbv	
		1,2-Dichlorobenzene	2009/11/06	ND, RDL=0.40		ppbv	
		1,2,4-Trichlorobenzene	2009/11/06	ND, RDL=2.0		ppbv	
		Hexachlorobutadiene	2009/11/06	ND, RDL=3.0		ppbv	
		Hexane	2009/11/06	ND, RDL=0.30		ppbv	
		Cyclohexane	2009/11/06	ND, RDL=0.20		ppbv	
		Tetrahydrofuran	2009/11/06	ND, RDL=0.40		ppbv	
		1,4-Dioxane	2009/11/06	ND, RDL=2.0		ppbv	
		Xylene (Total)	2009/11/06	ND, RDL=0.60		ppbv	
	RPD - Sample/Sample Dup						
		2,2,4-Trimethylpentane	2009/11/06	NC		%	25
		Carbon Disulfide	2009/11/06	NC		%	25
		Propene	2009/11/06	NC		%	25
		Vinyl Acetate	2009/11/06	NC		%	25
		Vinyl Bromide	2009/11/06	NC		%	25
		Dichlorodifluoromethane (FREON 12)	2009/11/06	NC		%	25
		1,2-Dichlorotetrafluoroethane	2009/11/06	NC		%	25
		Chloromethane	2009/11/06	NC		%	25
		Vinyl Chloride	2009/11/06	NC		%	25
		Chloroethane	2009/11/06	NC		%	25
		1,3-Butadiene	2009/11/06	NC		%	25
		Trichlorofluoromethane (FREON 11)	2009/11/06	NC		%	25
		Trichlorotrifluoroethane	2009/11/06	NC		%	25
		Ethanol	2009/11/06	NC		%	25
		2-propanol	2009/11/06	NC		%	25
		2-Propanone	2009/11/06	NC		%	25
		Methyl Ethyl Ketone (2-Butanone)	2009/11/06	NC		%	25
		Methyl Isobutyl Ketone	2009/11/06	NC		%	25
		Methyl Butyl Ketone (2-Hexanone)	2009/11/06	NC		%	25
		Methyl t-butyl ether (MTBE)	2009/11/06	NC		%	25
		Ethyl Acetate	2009/11/06	NC		%	25
		1,1-Dichloroethylene	2009/11/06	NC		%	25
		cis-1,2-Dichloroethylene	2009/11/06	NC		%	25
		trans-1,2-Dichloroethylene	2009/11/06	NC		%	25
		Methylene Chloride(Dichloromethane)	2009/11/06	NC		%	25
		Chloroform	2009/11/06	NC		%	25
		Carbon Tetrachloride	2009/11/06	NC		%	25
		1,1-Dichloroethane	2009/11/06	NC		%	25
		1,2-Dichloroethane	2009/11/06	NC		%	25
		Ethylene Dibromide	2009/11/06	NC		%	25

Lakeland Industry & Community Assoc.
 Attention: Shea Beaton
 Client Project #:
 P.O. #:
 Project name:

Quality Assurance Report (Continued)
 Maxxam Job Number: GA9E9350

QA/QC Batch Num Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2004171 MM2	RPD - Sample/Sample Dup	1,1,1-Trichloroethane	2009/11/06	NC		%	25
		1,1,2-Trichloroethane	2009/11/06	NC		%	25
		1,1,2,2-Tetrachloroethane	2009/11/06	NC		%	25
		cis-1,3-Dichloropropene	2009/11/06	NC		%	25
		trans-1,3-Dichloropropene	2009/11/06	NC		%	25
		1,2-Dichloropropane	2009/11/06	NC		%	25
		Bromomethane	2009/11/06	NC		%	25
		Bromoform	2009/11/06	NC		%	25
		Bromodichloromethane	2009/11/06	NC		%	25
		Dibromochloromethane	2009/11/06	NC		%	25
		Heptane	2009/11/06	NC		%	25
		Trichloroethylene	2009/11/06	NC		%	25
		Tetrachloroethylene	2009/11/06	NC		%	25
		Benzene	2009/11/06	NC		%	25
		Toluene	2009/11/06	NC		%	25
		Ethylbenzene	2009/11/06	NC		%	25
		p+m-Xylene	2009/11/06	NC		%	25
		o-Xylene	2009/11/06	NC		%	25
		Styrene	2009/11/06	NC		%	25
		1,3,5-Trimethylbenzene	2009/11/06	NC		%	25
		1,2,4-Trimethylbenzene	2009/11/06	NC		%	25
		4-ethyltoluene	2009/11/06	NC		%	25
		Chlorobenzene	2009/11/06	NC		%	25
		Benzyl chloride	2009/11/06	NC		%	25
		1,3-Dichlorobenzene	2009/11/06	NC		%	25
		1,4-Dichlorobenzene	2009/11/06	NC		%	25
		1,2-Dichlorobenzene	2009/11/06	NC		%	25
		1,2,4-Trichlorobenzene	2009/11/06	NC		%	25
		Hexachlorobutadiene	2009/11/06	NC		%	25
		Hexane	2009/11/06	NC		%	25
		Cyclohexane	2009/11/06	NC		%	25
		Tetrahydrofuran	2009/11/06	NC		%	25
		1,4-Dioxane	2009/11/06	NC		%	25
		Xylene (Total)	2009/11/06	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.
 (1) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.

Polycyclic Aromatic Hydrocarbons Laboratory Analysis



Your C.O.C. #: 1039

Lakeland Industry & Community Assoc.
P.O. Box 8237
Bonnyville, AB
CANADA T9N 2J5

Report Date: 2009/10/20

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: A9D5453
Received: 2009/10/09, 11:41

Sample Matrix: PUF AND FILTER
Samples Received: 2

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Method Reference
PAH's in Air (CARB429mod)	2	2009/10/13	2009/10/15	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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Total cover pages: 1

Maxxam Job #: A9D5453
 Report Date: 2009/10/20

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

Maxxam ID		DZ3471	DZ3473		
Sampling Date		2009/10/04 00:00	2009/10/04 00:00		
COC Number		1039	1039		
	Units	LICA	LICA	DL	QC Batch
		PUF/QFF/CLS/OCT4,09	PUF/QFF/PORT/OCT4,09		

Semivolatile Organics					
1-Methylnaphthalene	ug	<0.10	<0.10	0.10	1971052
1-Methylphenanthrene	ug	<0.10	<0.10	0.10	1971052
2-Chloronaphthalene	ug	<0.10	<0.10	0.10	1971052
2-Methylantracene	ug	<0.10	<0.10	0.10	1971052
2-Methylnaphthalene	ug	<0.10	<0.10	0.10	1971052
3-Methylcholanthrene	ug	<2.0	<2.0	2.0	1971052
7,12-Dimethylbenzo(a)anthracene	ug	<0.10	<0.10	0.10	1971052
9,10-Dimethylantracene	ug	<0.40	<0.40	0.40	1971052
Acenaphthene	ug	<0.050	<0.050	0.050	1971052
Acenaphthylene	ug	0.141	<0.050	0.050	1971052
Anthracene	ug	0.122	<0.050	0.050	1971052
Benzo(a)anthracene	ug	<0.050	<0.050	0.050	1971052
Benzo(a)fluorene	ug	<0.10	<0.10	0.10	1971052
Benzo(a)pyrene	ug	<0.050	<0.050	0.050	1971052
Benzo(b)fluoranthene	ug	0.064	<0.050	0.050	1971052
Benzo(b)fluorene	ug	<0.10	<0.10	0.10	1971052
Benzo(e)pyrene	ug	<0.10	<0.10	0.10	1971052
Benzo(g,h,i)perylene	ug	0.104	0.150	0.050	1971052
Benzo(k)fluoranthene	ug	<0.050	<0.050	0.050	1971052
Biphenyl	ug	<0.10	<0.10	0.10	1971052
Chrysene	ug	0.064	<0.050	0.050	1971052
Coronene	ug	<0.10	0.11	0.10	1971052
Dibenz(a,h)anthracene	ug	<0.050	<0.050	0.050	1971052
Dibenzo(a,e)pyrene	ug	<0.20	<0.20	0.20	1971052
Fluoranthene	ug	0.240	<0.050	0.050	1971052
Fluorene	ug	0.199	0.053	0.050	1971052
Indeno(1,2,3-cd)pyrene	ug	<0.050	<0.050	0.050	1971052
m-Terphenyl	ug	<0.10	<0.10	0.10	1971052
Naphthalene	ug	0.103	<0.072	0.072	1971052
o-Terphenyl	ug	<0.10	<0.10	0.10	1971052
Perylene	ug	<0.10	<0.10	0.10	1971052

RDL = Reportable Detection Limit
 QC Batch = Quality Control Batch

Maxxam Job #: A9D5453
 Report Date: 2009/10/20

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

Maxxam ID		DZ3471	DZ3473		
Sampling Date		2009/10/04 00:00	2009/10/04 00:00		
COC Number		1039	1039		
	Units	LICA	LICA	DL	QC Batch
		PUF/QFF/CLS/OCT4,09	PUF/QFF/PORT/OCT4,09		

Phenanthrene	ug	0.742	0.107	0.050	1971052
p-Terphenyl	ug	<0.10	<0.10	0.10	1971052
Pyrene	ug	0.181	<0.050	0.050	1971052
Quinoline	ug	<0.40	<0.40	0.40	1971052
Tetralin	ug	<0.10	<0.10	0.10	1971052
Surrogate Recovery (%)					
D10-2-Methylnaphthalene	%	87	95		1971052
D10-Fluoranthene	%	113	115		1971052
D10-Fluorene (FS)	%	37 (1)	33 (1)		1971052
D10-Phenanthrene	%	105	110		1971052
D12-Benzo(a)anthracene	%	102	106		1971052
D12-Benzo(a)pyrene	%	108	115		1971052
D12-Benzo(b)fluoranthene	%	112	115		1971052
D12-Benzo(ghi)perylene	%	108	111		1971052
D12-Benzo(k)fluoranthene	%	93	94		1971052
D12-Chrysene	%	103	103		1971052
D12-Indeno(1,2,3-cd)pyrene	%	110	112		1971052
D12-Perylene	%	108	112		1971052
D14-Dibenzo(a,h)anthracene	%	110	112		1971052
D14-Terphenyl (FS)	%	90	91		1971052
D8-Acenaphthylene	%	105	115		1971052
D8-Naphthalene	%	88	97		1971052

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 #: A9D5453
 Report Date: 2009/10/20

Test Summary

Maxxam ID	DZ3471	Collected	2009/10/04
Sample ID	LICA PUF/QFF/CLS/OCT4,09	Shipped	
Matrix	PUF AND FILTER	Received	2009/10/09

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
PAH's in Air (CARB429mod)	GC/MS	1971052	2009/10/13	2009/10/15	WZ

Maxxam ID	DZ3473	Collected	2009/10/04
Sample ID	LICA PUF/QFF/PORT/OCT4,09	Shipped	
Matrix	PUF AND FILTER	Received	2009/10/09

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
PAH's in Air (CARB429mod)	GC/MS	1971052	2009/10/13	2009/10/15	WZ

Maxxam Job #: A9D5453
Report Date: 2009/10/20

GENERAL COMMENTS

PAHMS-F

7,12-Dimethylbenzo(a)anthracene is above 25% RSD in initial calibration. No positives found for this compound.

Pyrene is statistically out of control but within method control at 101% recovery in the spike. Spike dup recovery is in control.

Naphthalene positive found in blank. Samples should be considered to be possibly contaminated to the level found in the blank.

Sample DZ3471-01: PAHMS-F

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

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 it would have a value below the estimated mdl.

Since Triphenylene co-elutes with Chrysene, the maximum possible value for this compound would be 0.064ug, which is the value reported for Chrysene.

Benzo(b)Anthracene elutes after Benzo(a)Anthracene and Chrysene. Searched for ions specific to this compound in the appropriate retention time range with no possible positive detected.

Picene elutes after Dibenzo(a,h) anthracene. Searched for ions specific to this compounds in the appropriate retention time range, possible positive detected, but would fall below the mdl using Dibenzo(a,h) anthracene calibration.

Sample DZ3473-01: PAHMS-F

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

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 Chrysene. 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.

Results relate only to the items tested.

Lakeland Industry & Community Assoc.
 Attention:
 Client Project #:
 P.O. #:
 Project name:

Quality Assurance Report
 Maxxam Job Number: GA9D5453

QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
1971052 WZ	Spiked Blank	D10-2-Methylnaphthalene	2009/10/15		90	%	50 - 150
		D10-Fluoranthene	2009/10/15		119	%	50 - 150
		D10-Phenanthrene	2009/10/15		112	%	50 - 150
		D12-Benzo(a)anthracene	2009/10/15		107	%	50 - 150
		D12-Benzo(a)pyrene	2009/10/15		118	%	50 - 150
		D12-Benzo(b)fluoranthene	2009/10/15		119	%	50 - 150
		D12-Benzo(ghi)perylene	2009/10/15		112	%	50 - 150
		D12-Benzo(k)fluoranthene	2009/10/15		94	%	50 - 150
		D12-Chrysene	2009/10/15		104	%	50 - 150
		D12-Indeno(1,2,3-cd)pyrene	2009/10/15		116	%	50 - 150
		D12-Perylene	2009/10/15		114	%	50 - 150
		D14-Dibenzo(a,h)anthracene	2009/10/15		116	%	50 - 150
		D8-Acenaphthylene	2009/10/15		107	%	50 - 150
		D8-Naphthalene	2009/10/15		93	%	50 - 150
		RPD	Acenaphthene	2009/10/15		3.7	%
	Spiked Blank	Acenaphthene	2009/10/15				50
	RPD	Acenaphthylene	2009/10/15		4.2	%	60 - 130
	Spiked Blank	Acenaphthylene	2009/10/15				50
	RPD	Anthracene	2009/10/15		9.8	%	60 - 130
	Spiked Blank	Anthracene	2009/10/15				50
	RPD	Benzo(a)anthracene	2009/10/15		2.4	%	60 - 130
	Spiked Blank	Benzo(a)anthracene	2009/10/15				50
	RPD	Benzo(a)pyrene	2009/10/15		0.06	%	60 - 130
	Spiked Blank	Benzo(a)pyrene	2009/10/15				50
	RPD	Benzo(b)fluoranthene	2009/10/15		3.8	%	60 - 130
	Spiked Blank	Benzo(b)fluoranthene	2009/10/15				50
	RPD	Benzo(g,h,i)perylene	2009/10/15		8.2	%	60 - 130
	Spiked Blank	Benzo(g,h,i)perylene	2009/10/15				50
	RPD	Benzo(k)fluoranthene	2009/10/15		1.8	%	60 - 130
	Spiked Blank	Benzo(k)fluoranthene	2009/10/15				50
	RPD	Chrysene	2009/10/15		3.1	%	60 - 130
	Spiked Blank	Chrysene	2009/10/15				50
	RPD	Dibenz(a,h)anthracene	2009/10/15		1.5	%	60 - 130
	Spiked Blank	Dibenz(a,h)anthracene	2009/10/15				50
	RPD	Fluoranthene	2009/10/15		14.6	%	60 - 130
	Spiked Blank	Fluoranthene	2009/10/15				50
	RPD	Fluorene	2009/10/15		7.1	%	60 - 130
	Spiked Blank	Fluorene	2009/10/15				50
	RPD	Indeno(1,2,3-cd)pyrene	2009/10/15		1.7	%	60 - 130
	Spiked Blank	Indeno(1,2,3-cd)pyrene	2009/10/15				50
	RPD	Naphthalene	2009/10/15		0.9	%	60 - 130
	Spiked Blank	Naphthalene	2009/10/15				50
	RPD	Phenanthrene	2009/10/15		13.7	%	60 - 130
	Spiked Blank	Phenanthrene	2009/10/15				50
	RPD	Pyrene	2009/10/15		14.0	%	60 - 130
Spiked Blank	Pyrene	2009/10/15				50	
RPD	D10-2-Methylnaphthalene	2009/10/15				50 - 150	
Method Blank	D10-2-Methylnaphthalene	2009/10/15				50 - 150	
	D10-Fluoranthene	2009/10/15				50 - 150	
	D10-Phenanthrene	2009/10/15				50 - 150	
	D12-Benzo(a)anthracene	2009/10/15				50 - 150	
	D12-Benzo(a)pyrene	2009/10/15				50 - 150	
	D12-Benzo(b)fluoranthene	2009/10/15				50 - 150	
	D12-Benzo(ghi)perylene	2009/10/15				50 - 150	
	D12-Benzo(k)fluoranthene	2009/10/15				50 - 150	
	D12-Chrysene	2009/10/15				50 - 150	

Lakeland Industry & Community Assoc.
 Attention:
 Client Project #:
 P.O. #:
 Project name:

Quality Assurance Report (Continued)

Maxxam Job Number: GA9D5453

QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
1971052 WZ	Method Blank	D12-Indeno(1,2,3-cd)pyrene	2009/10/15		108	%	50 - 150
		D12-Perylene	2009/10/15		106	%	50 - 150
		D14-Dibenzo(a,h)anthracene	2009/10/15		108	%	50 - 150
		D8-Acenaphthylene	2009/10/15		101	%	50 - 150
		D8-Naphthalene	2009/10/15		87	%	50 - 150
		1-Methylnaphthalene	2009/10/15	ND, RDL=0.10		ug	
		1-Methylphenanthrene	2009/10/15	ND, RDL=0.10		ug	
		2-Chloronaphthalene	2009/10/15	ND, RDL=0.10		ug	
		2-Methylantracene	2009/10/15	ND, RDL=0.10		ug	
		2-Methylnaphthalene	2009/10/15	ND, RDL=0.10		ug	
		3-Methylcholanthrene	2009/10/15	ND, RDL=2.0		ug	
		7,12-Dimethylbenzo(a)anthracene	2009/10/15	ND, RDL=0.10		ug	
		9,10-Dimethylantracene	2009/10/15	ND, RDL=0.40		ug	
		Acenaphthene	2009/10/15	ND, RDL=0.050		ug	
		Acenaphthylene	2009/10/15	ND, RDL=0.050		ug	
		Anthracene	2009/10/15	ND, RDL=0.050		ug	
		Benzo(a)anthracene	2009/10/15	ND, RDL=0.050		ug	
		Benzo(a)fluorene	2009/10/15	ND, RDL=0.10		ug	
		Benzo(a)pyrene	2009/10/15	ND, RDL=0.050		ug	
		Benzo(b)fluoranthene	2009/10/15	ND, RDL=0.050		ug	
		Benzo(b)fluorene	2009/10/15	ND, RDL=0.10		ug	
		Benzo(e)pyrene	2009/10/15	ND, RDL=0.10		ug	
		Benzo(g,h,i)perylene	2009/10/15	ND, RDL=0.050		ug	
		Benzo(k)fluoranthene	2009/10/15	ND, RDL=0.050		ug	
		Biphenyl	2009/10/15	ND, RDL=0.10		ug	
		Chrysene	2009/10/15	ND, RDL=0.050		ug	
		Coronene	2009/10/15	ND, RDL=0.10		ug	
		Dibenz(a,h)anthracene	2009/10/15	ND, RDL=0.050		ug	
		Dibenzo(a,e)pyrene	2009/10/15	ND, RDL=0.20		ug	
		Fluoranthene	2009/10/15	ND, RDL=0.050		ug	
		Fluorene	2009/10/15	ND, RDL=0.050		ug	
		Indeno(1,2,3-cd)pyrene	2009/10/15	ND, RDL=0.050		ug	
		m-Terphenyl	2009/10/15	ND, RDL=0.10		ug	
		Naphthalene	2009/10/15	0.098, RDL=0.072		ug	
		o-Terphenyl	2009/10/15	ND, RDL=0.10		ug	
		Perylene	2009/10/15	ND, RDL=0.10		ug	
		Phenanthrene	2009/10/15	ND, RDL=0.050		ug	
		p-Terphenyl	2009/10/15	ND, RDL=0.10		ug	
		Pyrene	2009/10/15	ND, RDL=0.050		ug	
		Quinoline	2009/10/15	ND, RDL=0.40		ug	
		Tetralin	2009/10/15	ND, RDL=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.



Your C.O.C. #: 1046

Lakeland Industry & Community Assoc.
P.O. Box 8237
Bonnyville, AB
CANADA T9N 2J5

Report Date: 2009/11/16

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: A9D9562

Received: 2009/10/19, 10:52

Sample Matrix: PUF AND FILTER

Samples Received: 2

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Method Reference
PAH's in Air (CARB429mod)	2	2009/10/21	2009/10/29	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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Total cover pages: 1

Maxxam Job #: A9D9562
 Report Date: 2009/11/16

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

Maxxam ID		EB6266		
Sampling Date		2009/10/10		
COC Number		1046		
	Units	LICA/PUFF/QFF/LCIS/OCT10,09	DL	QC Batch

Semivolatile Organics				
1-Methylnaphthalene	ug	<0.10	0.10	1984034
1-Methylphenanthrene	ug	<0.10	0.10	1984034
2-Chloronaphthalene	ug	<0.10	0.10	1984034
2-Methylantracene	ug	<0.10	0.10	1984034
2-Methylnaphthalene	ug	<0.10	0.10	1984034
3-Methylcholanthrene	ug	<2.0	2.0	1984034
7,12-Dimethylbenzo(a)anthracene	ug	<0.10	0.10	1984034
9,10-Dimethylantracene	ug	<0.40	0.40	1984034
Acenaphthene	ug	<0.050	0.050	1984034
Acenaphthylene	ug	<0.050	0.050	1984034
Anthracene	ug	<0.050	0.050	1984034
Benzo(a)anthracene	ug	<0.050	0.050	1984034
Benzo(a)fluorene	ug	<0.10	0.10	1984034
Benzo(a)pyrene	ug	<0.050	0.050	1984034
Benzo(b)fluoranthene	ug	<0.050	0.050	1984034
Benzo(b)fluorene	ug	<0.10	0.10	1984034
Benzo(e)pyrene	ug	<0.10	0.10	1984034
Benzo(g,h,i)perylene	ug	0.145	0.050	1984034
Benzo(k)fluoranthene	ug	<0.050	0.050	1984034
Biphenyl	ug	<0.10	0.10	1984034
Chrysene	ug	<0.050	0.050	1984034
Coronene	ug	0.15	0.10	1984034
Dibenz(a,h)anthracene	ug	<0.050	0.050	1984034
Dibenzo(a,e)pyrene	ug	<0.20	0.20	1984034
Fluoranthene	ug	<0.050	0.050	1984034
Fluorene	ug	<0.050	0.050	1984034
Indeno(1,2,3-cd)pyrene	ug	<0.050	0.050	1984034
m-Terphenyl	ug	<0.10	0.10	1984034
Naphthalene	ug	0.083	0.072	1984034
o-Terphenyl	ug	<0.10	0.10	1984034
Perylene	ug	<0.10	0.10	1984034
Phenanthrene	ug	0.093	0.050	1984034

RDL = Reportable Detection Limit
 QC Batch = Quality Control Batch

Maxxam Job #: A9D9562
 Report Date: 2009/11/16

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

Maxxam ID		EB6266		
Sampling Date		2009/10/10		
COC Number		1046		
	Units	LICA/PUFF/QFF/LCIS/OCT10,09	DL	QC Batch
p-Terphenyl	ug	<0.10	0.10	1984034
Pyrene	ug	<0.050	0.050	1984034
Quinoline	ug	<0.40	0.40	1984034
Tetralin	ug	<0.10	0.10	1984034
Surrogate Recovery (%)				
D10-2-Methylnaphthalene	%	87		1984034
D10-Fluoranthene	%	105		1984034
D10-Fluorene (FS)	%	54		1984034
D10-Phenanthrene	%	102		1984034
D12-Benzo(a)anthracene	%	112		1984034
D12-Benzo(a)pyrene	%	103		1984034
D12-Benzo(b)fluoranthene	%	108		1984034
D12-Benzo(ghi)perylene	%	102		1984034
D12-Benzo(k)fluoranthene	%	96		1984034
D12-Chrysene	%	94		1984034
D12-Indeno(1,2,3-cd)pyrene	%	102		1984034
D12-Perylene	%	106		1984034
D14-Dibenzo(a,h)anthracene	%	101		1984034
D14-Terphenyl (FS)	%	94		1984034
D8-Acenaphthylene	%	92		1984034
D8-Naphthalene	%	89		1984034
QC Batch = Quality Control Batch				

Maxxam Job #: A9D9562
 Report Date: 2009/11/16

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

Maxxam ID		EB6267		
Sampling Date		2009/10/10		
COC Number		1046		
	Units	LICA/PUFF/QFF/PORT/OCT10,09	DL	QC Batch

Semivolatile Organics				
1-Methylnaphthalene	ug	<0.10	0.10	1984034
1-Methylphenanthrene	ug	<0.10	0.10	1984034
2-Chloronaphthalene	ug	<0.10	0.10	1984034
2-Methylantracene	ug	<0.10	0.10	1984034
2-Methylnaphthalene	ug	0.12	0.10	1984034
3-Methylcholanthrene	ug	<2.0	2.0	1984034
7,12-Dimethylbenzo(a)anthracene	ug	<0.10	0.10	1984034
9,10-Dimethylantracene	ug	<0.40	0.40	1984034
Acenaphthene	ug	<0.050	0.050	1984034
Acenaphthylene	ug	0.091	0.050	1984034
Anthracene	ug	<0.050	0.050	1984034
Benzo(a)anthracene	ug	<0.050	0.050	1984034
Benzo(a)fluorene	ug	<0.10	0.10	1984034
Benzo(a)pyrene	ug	<0.050	0.050	1984034
Benzo(b)fluoranthene	ug	<0.050	0.050	1984034
Benzo(b)fluorene	ug	<0.10	0.10	1984034
Benzo(e)pyrene	ug	<0.10	0.10	1984034
Benzo(g,h,i)perylene	ug	0.114	0.050	1984034
Benzo(k)fluoranthene	ug	<0.050	0.050	1984034
Biphenyl	ug	<0.10	0.10	1984034
Chrysene	ug	<0.050	0.050	1984034
Coronene	ug	0.11	0.10	1984034
Dibenz(a,h)anthracene	ug	<0.050	0.050	1984034
Dibenzo(a,e)pyrene	ug	<0.20	0.20	1984034
Fluoranthene	ug	0.053	0.050	1984034
Fluorene	ug	0.060	0.050	1984034
Indeno(1,2,3-cd)pyrene	ug	<0.050	0.050	1984034
m-Terphenyl	ug	<0.10	0.10	1984034
Naphthalene	ug	0.129	0.072	1984034
o-Terphenyl	ug	<0.10	0.10	1984034
Perylene	ug	<0.10	0.10	1984034
Phenanthrene	ug	0.153	0.050	1984034
RDL = Reportable Detection Limit QC Batch = Quality Control Batch				

Maxxam Job #: A9D9562
 Report Date: 2009/11/16

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

Maxxam ID		EB6267		
Sampling Date		2009/10/10		
COC Number		1046		
	Units	LICA/PUFF/QFF/PORT/OCT10,09	DL	QC Batch
p-Terphenyl	ug	<0.10	0.10	1984034
Pyrene	ug	0.052	0.050	1984034
Quinoline	ug	<0.40	0.40	1984034
Tetralin	ug	<0.10	0.10	1984034
Surrogate Recovery (%)				
D10-2-Methylnaphthalene	%	85		1984034
D10-Fluoranthene	%	103		1984034
D10-Fluorene (FS)	%	56		1984034
D10-Phenanthrene	%	97		1984034
D12-Benzo(a)anthracene	%	108		1984034
D12-Benzo(a)pyrene	%	100		1984034
D12-Benzo(b)fluoranthene	%	109		1984034
D12-Benzo(ghi)perylene	%	102		1984034
D12-Benzo(k)fluoranthene	%	91		1984034
D12-Chrysene	%	99		1984034
D12-Indeno(1,2,3-cd)pyrene	%	103		1984034
D12-Perylene	%	102		1984034
D14-Dibenzo(a,h)anthracene	%	102		1984034
D14-Terphenyl (FS)	%	92		1984034
D8-Acenaphthylene	%	94		1984034
D8-Naphthalene	%	83		1984034
QC Batch = Quality Control Batch				

Maxxam Job #: A9D9562
 Report Date: 2009/11/16

Test Summary

Maxxam ID EB6266 **Collected** 2009/10/10
Sample ID LICA/PUFF/QFF/LCIS/OCT10,09 **Shipped**
Matrix PUF AND FILTER **Received** 2009/10/19

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
PAH's in Air (CARB429mod)	GC/MS	1984034	2009/10/21	2009/10/29	WZ

Maxxam ID EB6267 **Collected** 2009/10/10
Sample ID LICA/PUFF/QFF/PORT/OCT10,09 **Shipped**
Matrix PUF AND FILTER **Received** 2009/10/19

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
PAH's in Air (CARB429mod)	GC/MS	1984034	2009/10/21	2009/10/29	WZ

Maxxam Job #: A9D9562
Report Date: 2009/11/16

GENERAL COMMENTS

PAHMS-F

7,12-Dimethylbenzo(a)anthracene is above 25% RSD in initial calibration. No positives found for this compound.

Naphthalene positive found in blank. Samples should be considered to be possibly contaminated to the level found in the blank.

Sample EB6266-01: PAHMS-F

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 Chrysene. 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.

Sample EB6267-01: PAHMS-F

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 Chrysene. 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.

Results relate only to the items tested.

Lakeland Industry & Community Assoc.
 Attention:
 Client Project #:
 P.O. #:
 Project name:

Quality Assurance Report
 Maxxam Job Number: GA9D9562

QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
1984034 WZ	Spiked Blank	D10-2-Methylnaphthalene	2009/10/29		96	%	50 - 150
		D10-Fluoranthene	2009/10/29		107	%	50 - 150
		D10-Phenanthrene	2009/10/29		105	%	50 - 150
		D12-Benzo(a)anthracene	2009/10/29		111	%	50 - 150
		D12-Benzo(a)pyrene	2009/10/29		106	%	50 - 150
		D12-Benzo(b)fluoranthene	2009/10/29		94	%	50 - 150
		D12-Benzo(ghi)perylene	2009/10/29		104	%	50 - 150
		D12-Benzo(k)fluoranthene	2009/10/29		98	%	50 - 150
		D12-Chrysene	2009/10/29		93	%	50 - 150
		D12-Indeno(1,2,3-cd)pyrene	2009/10/29		105	%	50 - 150
		D12-Perylene	2009/10/29		107	%	50 - 150
		D14-Dibenzo(a,h)anthracene	2009/10/29		103	%	50 - 150
		D8-Acenaphthylene	2009/10/29		100	%	50 - 150
		D8-Naphthalene	2009/10/29		95	%	50 - 150
		RPD	Acenaphthene	2009/10/29		93	%
	RPD	Acenaphthene	2009/10/29	4.0		%	50
	Spiked Blank	Acenaphthylene	2009/10/29		98	%	60 - 130
	RPD	Acenaphthylene	2009/10/29	5.9		%	50
	Spiked Blank	Anthracene	2009/10/29		91	%	60 - 130
	RPD	Anthracene	2009/10/29	0.5		%	50
	Spiked Blank	Benzo(a)anthracene	2009/10/29		95	%	60 - 130
	RPD	Benzo(a)anthracene	2009/10/29	2.2		%	50
	Spiked Blank	Benzo(a)pyrene	2009/10/29		98	%	60 - 130
	RPD	Benzo(a)pyrene	2009/10/29	0.3		%	50
	Spiked Blank	Benzo(b)fluoranthene	2009/10/29		97	%	60 - 130
	RPD	Benzo(b)fluoranthene	2009/10/29	0.2		%	50
	Spiked Blank	Benzo(g,h,i)perylene	2009/10/29		101	%	60 - 130
	RPD	Benzo(g,h,i)perylene	2009/10/29	8.5		%	50
	Spiked Blank	Benzo(k)fluoranthene	2009/10/29		99	%	60 - 130
	RPD	Benzo(k)fluoranthene	2009/10/29	3.5		%	50
	Spiked Blank	Chrysene	2009/10/29		98	%	60 - 130
	RPD	Chrysene	2009/10/29	8.5		%	50
	Spiked Blank	Dibenz(a,h)anthracene	2009/10/29		97	%	60 - 130
	RPD	Dibenz(a,h)anthracene	2009/10/29	1.9		%	50
	Spiked Blank	Fluoranthene	2009/10/29		101	%	60 - 130
	RPD	Fluoranthene	2009/10/29	4.2		%	50
	Spiked Blank	Fluorene	2009/10/29		92	%	60 - 130
	RPD	Fluorene	2009/10/29	2.4		%	50
	Spiked Blank	Indeno(1,2,3-cd)pyrene	2009/10/29		96	%	60 - 130
	RPD	Indeno(1,2,3-cd)pyrene	2009/10/29	3.0		%	50
	Spiked Blank	Naphthalene	2009/10/29		92	%	60 - 130
	RPD	Naphthalene	2009/10/29	8.5		%	50
	Spiked Blank	Phenanthrene	2009/10/29		95	%	60 - 130
	RPD	Phenanthrene	2009/10/29	6.2		%	50
	Spiked Blank	Pyrene	2009/10/29		93	%	60 - 130
RPD	Pyrene	2009/10/29	3.9		%	50	
Method Blank	D10-2-Methylnaphthalene	2009/10/29		88	%	50 - 150	
	D10-Fluoranthene	2009/10/29		110	%	50 - 150	
	D10-Phenanthrene	2009/10/29		105	%	50 - 150	
	D12-Benzo(a)anthracene	2009/10/29		114	%	50 - 150	
	D12-Benzo(a)pyrene	2009/10/29		102	%	50 - 150	
	D12-Benzo(b)fluoranthene	2009/10/29		107	%	50 - 150	
	D12-Benzo(ghi)perylene	2009/10/29		100	%	50 - 150	
	D12-Benzo(k)fluoranthene	2009/10/29		95	%	50 - 150	
	D12-Chrysene	2009/10/29		90	%	50 - 150	

Lakeland Industry & Community Assoc.
 Attention:
 Client Project #:
 P.O. #:
 Project name:

Quality Assurance Report (Continued)
 Maxxam Job Number: GA9D9562

QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
1984034 WZ	Method Blank	D12-Indeno(1,2,3-cd)pyrene	2009/10/29		103	%	50 - 150
		D12-Perylene	2009/10/29		102	%	50 - 150
		D14-Dibenzo(a,h)anthracene	2009/10/29		102	%	50 - 150
		D8-Acenaphthylene	2009/10/29		94	%	50 - 150
		D8-Naphthalene	2009/10/29		88	%	50 - 150
		1-Methylnaphthalene	2009/10/29	ND, RDL=0.10		ug	
		1-Methylphenanthrene	2009/10/29	ND, RDL=0.10		ug	
		2-Chloronaphthalene	2009/10/29	ND, RDL=0.10		ug	
		2-Methylanthracene	2009/10/29	ND, RDL=0.10		ug	
		2-Methylnaphthalene	2009/10/29	ND, RDL=0.10		ug	
		3-Methylcholanthrene	2009/10/29	ND, RDL=2.0		ug	
		7,12-Dimethylbenzo(a)anthracene	2009/10/29	ND, RDL=0.10		ug	
		9,10-Dimethylanthracene	2009/10/29	ND, RDL=0.40		ug	
		Acenaphthene	2009/10/29	ND, RDL=0.050		ug	
		Acenaphthylene	2009/10/29	ND, RDL=0.050		ug	
		Anthracene	2009/10/29	ND, RDL=0.050		ug	
		Benzo(a)anthracene	2009/10/29	ND, RDL=0.050		ug	
		Benzo(a)fluorene	2009/10/29	ND, RDL=0.10		ug	
		Benzo(a)pyrene	2009/10/29	ND, RDL=0.050		ug	
		Benzo(b)fluoranthene	2009/10/29	ND, RDL=0.050		ug	
		Benzo(b)fluorene	2009/10/29	ND, RDL=0.10		ug	
		Benzo(e)pyrene	2009/10/29	ND, RDL=0.10		ug	
		Benzo(g,h,i)perylene	2009/10/29	ND, RDL=0.050		ug	
		Benzo(k)fluoranthene	2009/10/29	ND, RDL=0.050		ug	
		Biphenyl	2009/10/29	ND, RDL=0.10		ug	
		Chrysene	2009/10/29	ND, RDL=0.050		ug	
		Coronene	2009/10/29	ND, RDL=0.10		ug	
		Dibenz(a,h)anthracene	2009/10/29	ND, RDL=0.050		ug	
		Dibenzo(a,e)pyrene	2009/10/29	ND, RDL=0.20		ug	
		Fluoranthene	2009/10/29	ND, RDL=0.050		ug	
		Fluorene	2009/10/29	ND, RDL=0.050		ug	
		Indeno(1,2,3-cd)pyrene	2009/10/29	ND, RDL=0.050		ug	
		m-Terphenyl	2009/10/29	ND, RDL=0.10		ug	
		Naphthalene	2009/10/29	0.100, RDL=0.072		ug	
		o-Terphenyl	2009/10/29	ND, RDL=0.10		ug	
		Perylene	2009/10/29	ND, RDL=0.10		ug	
		Phenanthrene	2009/10/29	ND, RDL=0.050		ug	
		p-Terphenyl	2009/10/29	ND, RDL=0.10		ug	
		Pyrene	2009/10/29	ND, RDL=0.050		ug	
		Quinoline	2009/10/29	ND, RDL=0.40		ug	
		Tetralin	2009/10/29	ND, RDL=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.



Your C.O.C. #: 1045

Attention: Michael Bisaga

Lakeland Industry & Community Assoc.
P.O. Box 8237
Bonnyville, AB
CANADA T9N 2J5

Report Date: 2009/11/16

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: A9E1566

Received: 2009/10/22, 11:37

Sample Matrix: Filter
Samples Received: 2

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Method Reference
PAH's in Air (CARB429mod)	2	2009/10/23	2009/10/29	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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Total cover pages: 1

Maxxam Job #: A9E1566
 Report Date: 2009/11/16

SEMI-VOLATILE ORGANICS BY GC-MS (FILTER)

Maxxam ID		EC5411	EC5412		
Sampling Date		2009/10/16	2009/10/16		
COC Number		1045	1045		
	Units	LICA	LICA	DL	QC Batch
		PUF/CLS/OCT16,09	QFF/PORT/OCT16,09		

Semivolatile Organics					
1-Methylnaphthalene	ug	0.11	<0.10	0.10	1984039
1-Methylphenanthrene	ug	<0.10	<0.10	0.10	1984039
2-Chloronaphthalene	ug	<0.10	<0.10	0.10	1984039
2-Methylantracene	ug	<0.10	<0.10	0.10	1984039
2-Methylnaphthalene	ug	0.23	<0.10	0.10	1984039
3-Methylcholanthrene	ug	<2.0	<2.0	2.0	1984039
7,12-Dimethylbenzo(a)anthracene	ug	<0.10	<0.10	0.10	1984039
9,10-Dimethylantracene	ug	<0.40	<0.40	0.40	1984039
Acenaphthene	ug	<0.050	<0.050	0.050	1984039
Acenaphthylene	ug	<0.050	<0.050	0.050	1984039
Anthracene	ug	<0.050	<0.050	0.050	1984039
Benzo(a)anthracene	ug	<0.050	<0.050	0.050	1984039
Benzo(a)fluorene	ug	<0.10	<0.10	0.10	1984039
Benzo(a)pyrene	ug	<0.050	<0.050	0.050	1984039
Benzo(b)fluoranthene	ug	<0.050	<0.050	0.050	1984039
Benzo(b)fluorene	ug	<0.10	<0.10	0.10	1984039
Benzo(e)pyrene	ug	<0.10	<0.10	0.10	1984039
Benzo(g,h,i)perylene	ug	<0.050	<0.050	0.050	1984039
Benzo(k)fluoranthene	ug	<0.050	<0.050	0.050	1984039
Biphenyl	ug	0.11	<0.10	0.10	1984039
Chrysene	ug	<0.050	<0.050	0.050	1984039
Coronene	ug	<0.10	<0.10	0.10	1984039
Dibenz(a,h)anthracene	ug	<0.050	<0.050	0.050	1984039
Dibenzo(a,e)pyrene	ug	<0.20	<0.20	0.20	1984039
Fluoranthene	ug	0.070	0.119	0.050	1984039
Fluorene	ug	0.159	0.169	0.050	1984039
Indeno(1,2,3-cd)pyrene	ug	<0.050	<0.050	0.050	1984039
m-Terphenyl	ug	<0.10	<0.10	0.10	1984039
Naphthalene	ug	0.197	0.074	0.072	1984039
o-Terphenyl	ug	<0.10	<0.10	0.10	1984039
Perylene	ug	<0.10	<0.10	0.10	1984039
Phenanthrene	ug	0.301	0.442	0.050	1984039
RDL = Reportable Detection Limit QC Batch = Quality Control Batch					

Maxxam Job #: A9E1566
 Report Date: 2009/11/16

SEMI-VOLATILE ORGANICS BY GC-MS (FILTER)

Maxxam ID		EC5411	EC5412		
Sampling Date		2009/10/16	2009/10/16		
COC Number		1045	1045		
	Units	LICA	LICA	DL	QC Batch
		PUF/CLS/OCT16,09	QFF/PORT/OCT16,09		

p-Terphenyl	ug	<0.10	<0.10	0.10	1984039
Pyrene	ug	0.053	0.085	0.050	1984039
Quinoline	ug	<0.40	<0.40	0.40	1984039
Tetralin	ug	<0.10	<0.10	0.10	1984039
Surrogate Recovery (%)					
D10-2-Methylnaphthalene	%	86	91		1984039
D10-Fluoranthene	%	101	118		1984039
D10-Fluorene (FS)	%	19 (1)	29 (1)		1984039
D10-Phenanthrene	%	103	113		1984039
D12-Benzo(a)anthracene	%	91	118		1984039
D12-Benzo(a)pyrene	%	88	90		1984039
D12-Benzo(b)fluoranthene	%	106	100		1984039
D12-Benzo(ghi)perylene	%	100	110		1984039
D12-Benzo(k)fluoranthene	%	93	120		1984039
D12-Chrysene	%	109	102		1984039
D12-Indeno(1,2,3-cd)pyrene	%	101	111		1984039
D12-Perylene	%	94	100		1984039
D14-Dibenzo(a,h)anthracene	%	100	110		1984039
D14-Terphenyl (FS)	%	93	98		1984039
D8-Acenaphthylene	%	91	101		1984039
D8-Naphthalene	%	83	91		1984039

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 #: A9E1566
 Report Date: 2009/11/16

Test Summary

Maxxam ID	EC5411	Collected	2009/10/16
Sample ID	LICA PUF/CLS/OCT16,09	Shipped	
Matrix	Filter	Received	2009/10/22

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
PAH's in Air (CARB429mod)	GC/MS	1984039	2009/10/23	2009/10/29	WZ

Maxxam ID	EC5412	Collected	2009/10/16
Sample ID	LICA QFF/PORT/OCT16,09	Shipped	
Matrix	Filter	Received	2009/10/22

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
PAH's in Air (CARB429mod)	GC/MS	1984039	2009/10/23	2009/10/29	WZ

Maxxam Job #: A9E1566
Report Date: 2009/11/16

GENERAL COMMENTS

PAHMS-F

7,12-Dimethylbenzo(a)anthracene is above 25% RSD in initial calibration. No positives found for this compound.

Pyrene is statistically out of control but in method control at 95.1%, 89.6% recovery in the spike spike:dup.

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

Naphthalene positive found in blank. Samples should be considered to be possibly contaminated to the level found in the blank.

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 Chrysene. 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.

Results relate only to the items tested.

Lakeland Industry & Community Assoc.
 Attention: Michael Bisaga
 Client Project #:
 P.O. #:
 Project name:

Quality Assurance Report
 Maxxam Job Number: GA9E1566

QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits	
1984039 WZ	Spiked Blank	D10-2-Methylnaphthalene	2009/10/29		93	%	50 - 150	
		D10-Fluoranthene	2009/10/29		113	%	50 - 150	
		D10-Phenanthrene	2009/10/29		110	%	50 - 150	
		D12-Benzo(a)anthracene	2009/10/29		118	%	50 - 150	
		D12-Benzo(a)pyrene	2009/10/29		109	%	50 - 150	
		D12-Benzo(b)fluoranthene	2009/10/29		103	%	50 - 150	
		D12-Benzo(ghi)perylene	2009/10/29		104	%	50 - 150	
		D12-Benzo(k)fluoranthene	2009/10/29		104	%	50 - 150	
		D12-Chrysene	2009/10/29		96	%	50 - 150	
		D12-Indeno(1,2,3-cd)pyrene	2009/10/29		108	%	50 - 150	
		D12-Perylene	2009/10/29		105	%	50 - 150	
		D14-Dibenzo(a,h)anthracene	2009/10/29		107	%	50 - 150	
		D8-Acenaphthylene	2009/10/29		106	%	50 - 150	
		D8-Naphthalene	2009/10/29		93	%	50 - 150	
		RPD	Acenaphthene	2009/10/29		11.9	%	60 - 130
	Spiked Blank	Acenaphthylene	2009/10/29			98	%	50
	RPD	Acenaphthylene	2009/10/29		12.6	%	60 - 130	
	Spiked Blank	Anthracene	2009/10/29			97	%	50
	RPD	Anthracene	2009/10/29		12.8	%	60 - 130	
	Spiked Blank	Benzo(a)anthracene	2009/10/29			98	%	50
	RPD	Benzo(a)anthracene	2009/10/29		1.5	%	60 - 130	
	Spiked Blank	Benzo(a)pyrene	2009/10/29			106	%	50
	RPD	Benzo(a)pyrene	2009/10/29		9.6	%	60 - 130	
	Spiked Blank	Benzo(b)fluoranthene	2009/10/29			108	%	50
	RPD	Benzo(b)fluoranthene	2009/10/29		9.2	%	60 - 130	
	Spiked Blank	Benzo(g,h,i)perylene	2009/10/29			98	%	50
	RPD	Benzo(g,h,i)perylene	2009/10/29		9.3	%	60 - 130	
	Spiked Blank	Benzo(k)fluoranthene	2009/10/29			96	%	50
	RPD	Benzo(k)fluoranthene	2009/10/29		3.5	%	60 - 130	
	Spiked Blank	Chrysene	2009/10/29			93	%	50
	RPD	Chrysene	2009/10/29		1.7	%	60 - 130	
	Spiked Blank	Dibenz(a,h)anthracene	2009/10/29			96	%	50
	RPD	Dibenz(a,h)anthracene	2009/10/29		3.6	%	60 - 130	
	Spiked Blank	Fluoranthene	2009/10/29			100	%	50
	RPD	Fluoranthene	2009/10/29		3.6	%	60 - 130	
	Spiked Blank	Fluorene	2009/10/29			91	%	50
	RPD	Fluorene	2009/10/29		7.9	%	60 - 130	
	Spiked Blank	Indeno(1,2,3-cd)pyrene	2009/10/29			94	%	50
	RPD	Indeno(1,2,3-cd)pyrene	2009/10/29		1.6	%	60 - 130	
	Spiked Blank	Naphthalene	2009/10/29			89	%	50
	RPD	Naphthalene	2009/10/29		9.3	%	60 - 130	
	Spiked Blank	Phenanthrene	2009/10/29			98	%	50
	RPD	Phenanthrene	2009/10/29		8.1	%	60 - 130	
	Spiked Blank	Pyrene	2009/10/29			95	%	50
	RPD	Pyrene	2009/10/29		5.9	%	60 - 130	
Method Blank	D10-2-Methylnaphthalene	2009/10/29			89	%	50 - 150	
	D10-Fluoranthene	2009/10/29			110	%	50 - 150	
	D10-Phenanthrene	2009/10/29			106	%	50 - 150	
	D12-Benzo(a)anthracene	2009/10/29			104	%	50 - 150	
	D12-Benzo(a)pyrene	2009/10/29			103	%	50 - 150	
	D12-Benzo(b)fluoranthene	2009/10/29			101	%	50 - 150	
	D12-Benzo(ghi)perylene	2009/10/29			106	%	50 - 150	
	D12-Benzo(k)fluoranthene	2009/10/29			101	%	50 - 150	
	D12-Chrysene	2009/10/29			97	%	50 - 150	

Lakeland Industry & Community Assoc.
 Attention: Michael Bisaga
 Client Project #:
 P.O. #:
 Project name:

Quality Assurance Report (Continued)

Maxxam Job Number: GA9E1566

QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
1984039 WZ	Method Blank	D12-Indeno(1,2,3-cd)pyrene	2009/10/29		109	%	50 - 150
		D12-Perylene	2009/10/29		102	%	50 - 150
		D14-Dibenzo(a,h)anthracene	2009/10/29		109	%	50 - 150
		D8-Acenaphthylene	2009/10/29		93	%	50 - 150
		D8-Naphthalene	2009/10/29		89	%	50 - 150
		1-Methylnaphthalene	2009/10/29	ND, RDL=0.10		ug	
		1-Methylphenanthrene	2009/10/29	ND, RDL=0.10		ug	
		2-Chloronaphthalene	2009/10/29	ND, RDL=0.10		ug	
		2-Methylantracene	2009/10/29	ND, RDL=0.10		ug	
		2-Methylnaphthalene	2009/10/29	ND, RDL=0.10		ug	
		3-Methylcholanthrene	2009/10/29	ND, RDL=2.0		ug	
		7,12-Dimethylbenzo(a)anthracene	2009/10/29	ND, RDL=0.10		ug	
		9,10-Dimethylantracene	2009/10/29	ND, RDL=0.40		ug	
		Acenaphthene	2009/10/29	ND, RDL=0.050		ug	
		Acenaphthylene	2009/10/29	ND, RDL=0.050		ug	
		Anthracene	2009/10/29	ND, RDL=0.050		ug	
		Benzo(a)anthracene	2009/10/29	ND, RDL=0.050		ug	
		Benzo(a)fluorene	2009/10/29	ND, RDL=0.10		ug	
		Benzo(a)pyrene	2009/10/29	ND, RDL=0.050		ug	
		Benzo(b)fluoranthene	2009/10/29	ND, RDL=0.050		ug	
		Benzo(b)fluorene	2009/10/29	ND, RDL=0.10		ug	
		Benzo(e)pyrene	2009/10/29	ND, RDL=0.10		ug	
		Benzo(g,h,i)perylene	2009/10/29	ND, RDL=0.050		ug	
		Benzo(k)fluoranthene	2009/10/29	ND, RDL=0.050		ug	
		Biphenyl	2009/10/29	ND, RDL=0.10		ug	
		Chrysene	2009/10/29	ND, RDL=0.050		ug	
		Coronene	2009/10/29	ND, RDL=0.10		ug	
		Dibenz(a,h)anthracene	2009/10/29	ND, RDL=0.050		ug	
		Dibenzo(a,e)pyrene	2009/10/29	ND, RDL=0.20		ug	
		Fluoranthene	2009/10/29	ND, RDL=0.050		ug	
		Fluorene	2009/10/29	ND, RDL=0.050		ug	
		Indeno(1,2,3-cd)pyrene	2009/10/29	ND, RDL=0.050		ug	
		m-Terphenyl	2009/10/29	ND, RDL=0.10		ug	
		Naphthalene	2009/10/29	0.101, RDL=0.072		ug	
		o-Terphenyl	2009/10/29	ND, RDL=0.10		ug	
		Perylene	2009/10/29	ND, RDL=0.10		ug	
		Phenanthrene	2009/10/29	ND, RDL=0.050		ug	
		p-Terphenyl	2009/10/29	ND, RDL=0.10		ug	
		Pyrene	2009/10/29	ND, RDL=0.050		ug	
		Quinoline	2009/10/29	ND, RDL=0.40		ug	
		Tetralin	2009/10/29	ND, RDL=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.



Your C.O.C. #: 1042

Attention: Michael Bisaga

Lakeland Industry & Community Assoc.
P.O. Box 8237
Bonnyville, AB
CANADA T9N 2J5

Report Date: 2009/11/16

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: A9E5274

Received: 2009/10/28, 09:06

Sample Matrix: Filter
Samples Received: 2

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Method Reference
PAH's in Air (CARB429mod)	2	2009/10/30	2009/11/04	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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Total cover pages: 1

Page 1 of 7

Maxxam Job #: A9E5274
 Report Date: 2009/11/16

SEMI-VOLATILE ORGANICS BY GC-MS (FILTER)

Maxxam ID		EE3120	EE3121		
Sampling Date		2009/10/23	2009/10/23		
		00:00	00:00		
COC Number		1042	1042		
	Units	LICAPUFF/CLS/OCT22,09	LICAQFF/PORT/OCT22,09	DL	QC Batch

Semivolatile Organics					
1-Methylnaphthalene	ug	<0.10	<0.10	0.10	1995746
1-Methylphenanthrene	ug	<0.10	<0.10	0.10	1995746
2-Chloronaphthalene	ug	<0.10	<0.10	0.10	1995746
2-Methylantracene	ug	<0.10	<0.10	0.10	1995746
2-Methylnaphthalene	ug	0.14	<0.10	0.10	1995746
3-Methylcholanthrene	ug	<2.0	<2.0	2.0	1995746
7,12-Dimethylbenzo(a)anthracene	ug	<0.10	<0.10	0.10	1995746
9,10-Dimethylantracene	ug	<0.40	<0.40	0.40	1995746
Acenaphthene	ug	<0.050	<0.050	0.050	1995746
Acenaphthylene	ug	0.071	<0.050	0.050	1995746
Anthracene	ug	<0.050	<0.050	0.050	1995746
Benzo(a)anthracene	ug	<0.050	<0.050	0.050	1995746
Benzo(a)fluorene	ug	<0.10	<0.10	0.10	1995746
Benzo(a)pyrene	ug	<0.050	<0.050	0.050	1995746
Benzo(b)fluoranthene	ug	<0.050	<0.050	0.050	1995746
Benzo(b)fluorene	ug	<0.10	<0.10	0.10	1995746
Benzo(e)pyrene	ug	<0.10	<0.10	0.10	1995746
Benzo(g,h,i)perylene	ug	<0.050	<0.050	0.050	1995746
Benzo(k)fluoranthene	ug	<0.050	<0.050	0.050	1995746
Biphenyl	ug	0.10	<0.10	0.10	1995746
Chrysene	ug	<0.050	<0.050	0.050	1995746
Coronene	ug	<0.10	<0.10	0.10	1995746
Dibenz(a,h)anthracene	ug	<0.050	<0.050	0.050	1995746
Dibenzo(a,e)pyrene	ug	<0.20	<0.20	0.20	1995746
Fluoranthene	ug	0.072	<0.050	0.050	1995746
Fluorene	ug	0.169	0.112	0.050	1995746
Indeno(1,2,3-cd)pyrene	ug	<0.050	<0.050	0.050	1995746
m-Terphenyl	ug	<0.10	<0.10	0.10	1995746
Naphthalene	ug	0.129	0.080	0.072	1995746
o-Terphenyl	ug	<0.10	<0.10	0.10	1995746
Perylene	ug	<0.10	<0.10	0.10	1995746
Phenanthrene	ug	0.338	0.214	0.050	1995746

 RDL = Reportable Detection Limit
 QC Batch = Quality Control Batch

Maxxam Job #: A9E5274
 Report Date: 2009/11/16

SEMI-VOLATILE ORGANICS BY GC-MS (FILTER)

Maxxam ID		EE3120	EE3121		
Sampling Date		2009/10/23	2009/10/23		
		00:00	00:00		
COC Number		1042	1042		
	Units	LICAPUFF/CLS/OCT22,09	LICAQFF/PORT/OCT22,09	DL	QC Batch

p-Terphenyl	ug	<0.10	<0.10	0.10	1995746
Pyrene	ug	0.060	<0.050	0.050	1995746
Quinoline	ug	<0.40	<0.40	0.40	1995746
Tetralin	ug	<0.10	<0.10	0.10	1995746
Surrogate Recovery (%)					
D10-2-Methylnaphthalene	%	92	93		1995746
D10-Fluoranthene	%	109	115		1995746
D10-Fluorene (FS)	%	26 (1)	26 (1)		1995746
D10-Phenanthrene	%	102	107		1995746
D12-Benzo(a)anthracene	%	102	109		1995746
D12-Benzo(a)pyrene	%	103	107		1995746
D12-Benzo(b)fluoranthene	%	98	103		1995746
D12-Benzo(ghi)perylene	%	105	109		1995746
D12-Benzo(k)fluoranthene	%	104	103		1995746
D12-Chrysene	%	100	101		1995746
D12-Indeno(1,2,3-cd)pyrene	%	107	111		1995746
D12-Perylene	%	105	106		1995746
D14-Dibenzo(a,h)anthracene	%	106	110		1995746
D14-Terphenyl (FS)	%	91	93		1995746
D8-Acenaphthylene	%	102	107		1995746
D8-Naphthalene	%	94	93		1995746

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 #: A9E5274
 Report Date: 2009/11/16

Test Summary

Maxxam ID	EE3120	Collected	2009/10/23
Sample ID	LICAPUFF/CLS/OCT22,09	Shipped	
Matrix	Filter	Received	2009/10/28

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
PAH's in Air (CARB429mod)	GC/MS	1995746	2009/10/30	2009/11/04	WZ

Maxxam ID	EE3121	Collected	2009/10/23
Sample ID	LICAPUFF/PORT/OCT22,09	Shipped	
Matrix	Filter	Received	2009/10/28

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
PAH's in Air (CARB429mod)	GC/MS	1995746	2009/10/30	2009/11/04	WZ

Maxxam Job #: A9E5274
Report Date: 2009/11/16

GENERAL COMMENTS

PAHMS-F

7,12-Dimethylbenzo(a)anthracene is above 25% RSD in initial calibration. No positives found for this compounds.

Pyrene is statistically out of control but in method control at 93.1% 96.3% recovery in the Spike ,Spike:dup.

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

Naphthalene positive found in blank. Samples should be considered to be possibly contaminated to the level found in the blank. Benzo(g,h,i)perylene positive found in blank , suspect glassware contaminated.

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 Chrysene. 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.

Results relate only to the items tested.

Lakeland Industry & Community Assoc.
 Attention: Michael Bisaga
 Client Project #:
 P.O. #:
 Project name:

Quality Assurance Report
 Maxxam Job Number: GA9E5274

QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
1995746 WZ	Spiked Blank	D10-2-Methylnaphthalene	2009/11/04		90	%	50 - 150
		D10-Fluoranthene	2009/11/04		108	%	50 - 150
		D10-Phenanthrene	2009/11/04		102	%	50 - 150
		D12-Benzo(a)anthracene	2009/11/04		106	%	50 - 150
		D12-Benzo(a)pyrene	2009/11/04		110	%	50 - 150
		D12-Benzo(b)fluoranthene	2009/11/04		98	%	50 - 150
		D12-Benzo(ghi)perylene	2009/11/04		103	%	50 - 150
		D12-Benzo(k)fluoranthene	2009/11/04		101	%	50 - 150
		D12-Chrysene	2009/11/04		93	%	50 - 150
		D12-Indeno(1,2,3-cd)pyrene	2009/11/04		105	%	50 - 150
		D12-Perylene	2009/11/04		107	%	50 - 150
		D14-Dibenzo(a,h)anthracene	2009/11/04		104	%	50 - 150
		D8-Acenaphthylene	2009/11/04		105	%	50 - 150
		D8-Naphthalene	2009/11/04		91	%	50 - 150
		Acenaphthene	2009/11/04		87	%	60 - 130
	RPD	Acenaphthene	2009/11/04	7.2		%	50
	Spiked Blank	Acenaphthylene	2009/11/04		98	%	60 - 130
	RPD	Acenaphthylene	2009/11/04	9.6		%	50
	Spiked Blank	Anthracene	2009/11/04		89	%	60 - 130
	RPD	Anthracene	2009/11/04	7.5		%	50
	Spiked Blank	Benzo(a)anthracene	2009/11/04		90	%	60 - 130
	RPD	Benzo(a)anthracene	2009/11/04	8.7		%	50
	Spiked Blank	Benzo(a)pyrene	2009/11/04		96	%	60 - 130
	RPD	Benzo(a)pyrene	2009/11/04	3.4		%	50
	Spiked Blank	Benzo(b)fluoranthene	2009/11/04		96	%	60 - 130
	RPD	Benzo(b)fluoranthene	2009/11/04	5.8		%	50
	Spiked Blank	Benzo(g,h,i)perylene	2009/11/04		100	%	60 - 130
	RPD	Benzo(g,h,i)perylene	2009/11/04	0.4		%	50
	Spiked Blank	Benzo(k)fluoranthene	2009/11/04		88	%	60 - 130
	RPD	Benzo(k)fluoranthene	2009/11/04	9.4		%	50
	Spiked Blank	Chrysene	2009/11/04		87	%	60 - 130
	RPD	Chrysene	2009/11/04	7.6		%	50
	Spiked Blank	Dibenz(a,h)anthracene	2009/11/04		94	%	60 - 130
	RPD	Dibenz(a,h)anthracene	2009/11/04	6.7		%	50
	Spiked Blank	Fluoranthene	2009/11/04		103	%	60 - 130
	RPD	Fluoranthene	2009/11/04	1.5		%	50
	Spiked Blank	Fluorene	2009/11/04		88	%	60 - 130
	RPD	Fluorene	2009/11/04	11.2		%	50
	Spiked Blank	Indeno(1,2,3-cd)pyrene	2009/11/04		94	%	60 - 130
	RPD	Indeno(1,2,3-cd)pyrene	2009/11/04	6.4		%	50
Spiked Blank	Naphthalene	2009/11/04		89	%	60 - 130	
RPD	Naphthalene	2009/11/04	8.0		%	50	
Spiked Blank	Phenanthrene	2009/11/04		92	%	60 - 130	
RPD	Phenanthrene	2009/11/04	6.2		%	50	
Spiked Blank	Pyrene	2009/11/04		93	%	60 - 130	
RPD	Pyrene	2009/11/04	3.4		%	50	
Method Blank	D10-2-Methylnaphthalene	2009/11/04		94	%	50 - 150	
	D10-Fluoranthene	2009/11/04		117	%	50 - 150	
	D10-Phenanthrene	2009/11/04		105	%	50 - 150	
	D12-Benzo(a)anthracene	2009/11/04		113	%	50 - 150	
	D12-Benzo(a)pyrene	2009/11/04		109	%	50 - 150	
	D12-Benzo(b)fluoranthene	2009/11/04		105	%	50 - 150	
	D12-Benzo(ghi)perylene	2009/11/04		111	%	50 - 150	
	D12-Benzo(k)fluoranthene	2009/11/04		103	%	50 - 150	
	D12-Chrysene	2009/11/04		101	%	50 - 150	

Lakeland Industry & Community Assoc.
 Attention: Michael Bisaga
 Client Project #:
 P.O. #:
 Project name:

Quality Assurance Report (Continued)

Maxxam Job Number: GA9E5274

QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
1995746 WZ	Method Blank	D12-Indeno(1,2,3-cd)pyrene	2009/11/04		113	%	50 - 150
		D12-Perylene	2009/11/04		109	%	50 - 150
		D14-Dibenzo(a,h)anthracene	2009/11/04		111	%	50 - 150
		D8-Acenaphthylene	2009/11/04		113	%	50 - 150
		D8-Naphthalene	2009/11/04		92	%	50 - 150
		1-Methylnaphthalene	2009/11/04	ND, RDL=0.10		ug	
		1-Methylphenanthrene	2009/11/04	ND, RDL=0.10		ug	
		2-Chloronaphthalene	2009/11/04	ND, RDL=0.10		ug	
		2-Methylanthracene	2009/11/04	ND, RDL=0.10		ug	
		2-Methylnaphthalene	2009/11/04	ND, RDL=0.10		ug	
		3-Methylcholanthrene	2009/11/04	ND, RDL=2.0		ug	
		7,12-Dimethylbenzo(a)anthracene	2009/11/04	ND, RDL=0.10		ug	
		9,10-Dimethylanthracene	2009/11/04	ND, RDL=0.40		ug	
		Acenaphthene	2009/11/04	ND, RDL=0.050		ug	
		Acenaphthylene	2009/11/04	ND, RDL=0.050		ug	
		Anthracene	2009/11/04	ND, RDL=0.050		ug	
		Benzo(a)anthracene	2009/11/04	ND, RDL=0.050		ug	
		Benzo(a)fluorene	2009/11/04	ND, RDL=0.10		ug	
		Benzo(a)pyrene	2009/11/04	ND, RDL=0.050		ug	
		Benzo(b)fluoranthene	2009/11/04	ND, RDL=0.050		ug	
		Benzo(b)fluorene	2009/11/04	ND, RDL=0.10		ug	
		Benzo(e)pyrene	2009/11/04	ND, RDL=0.10		ug	
		Benzo(g,h,i)perylene	2009/11/04	0.119, RDL=0.050		ug	
		Benzo(k)fluoranthene	2009/11/04	ND, RDL=0.050		ug	
		Biphenyl	2009/11/04	ND, RDL=0.10		ug	
		Chrysene	2009/11/04	ND, RDL=0.050		ug	
		Coronene	2009/11/04	ND, RDL=0.10		ug	
		Dibenz(a,h)anthracene	2009/11/04	ND, RDL=0.050		ug	
		Dibenzo(a,e)pyrene	2009/11/04	ND, RDL=0.20		ug	
		Fluoranthene	2009/11/04	ND, RDL=0.050		ug	
		Fluorene	2009/11/04	ND, RDL=0.050		ug	
		Indeno(1,2,3-cd)pyrene	2009/11/04	ND, RDL=0.050		ug	
		m-Terphenyl	2009/11/04	ND, RDL=0.10		ug	
		Naphthalene	2009/11/04	0.076, RDL=0.072		ug	
		o-Terphenyl	2009/11/04	ND, RDL=0.10		ug	
		Perylene	2009/11/04	ND, RDL=0.10		ug	
		Phenanthrene	2009/11/04	ND, RDL=0.050		ug	
		p-Terphenyl	2009/11/04	ND, RDL=0.10		ug	
		Pyrene	2009/11/04	ND, RDL=0.050		ug	
		Quinoline	2009/11/04	ND, RDL=0.40		ug	
		Tetralin	2009/11/04	ND, RDL=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.



Your C.O.C. #: 1048

Attention: Shea Beaton

Lakeland Industry & Community Assoc.
P.O. Box 8237
Bonnyville, AB
CANADA T9N 2J5

Report Date: 2009/11/18

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: A9E9144

Received: 2009/11/05, 09:43

Sample Matrix: PUF AND FILTER

Samples Received: 2

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Method Reference
PAH's in Air (CARB429mod)	2	2009/11/09	2009/11/12	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. SCC and CALA have approved this reporting process and electronic report format.

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Total cover pages: 1

Page 1 of 7

Maxxam Job #: A9E9144
 Report Date: 2009/11/18

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

Maxxam ID		EG2726	EG2727		
Sampling Date		2009/10/29	2009/10/29		
COC Number		1048	1048		
	Units	LICA PUF	LICA PUF	DL	QC Batch
		QFF/CLS/OCT29,09	QFF/PORT/OCT29,09		

Semivolatile Organics					
1-Methylnaphthalene	ug	<0.10	<0.10	0.10	2006187
1-Methylphenanthrene	ug	<0.10	<0.10	0.10	2006187
2-Chloronaphthalene	ug	<0.10	<0.10	0.10	2006187
2-Methylantracene	ug	<0.10	<0.10	0.10	2006187
2-Methylnaphthalene	ug	0.15	<0.10	0.10	2006187
3-Methylcholanthrene	ug	<2.0	<2.0	2.0	2006187
7,12-Dimethylbenzo(a)anthracene	ug	<0.10	<0.10	0.10	2006187
9,10-Dimethylantracene	ug	<0.40	<0.40	0.40	2006187
Acenaphthene	ug	<0.050	<0.050	0.050	2006187
Acenaphthylene	ug	0.064	<0.050	0.050	2006187
Anthracene	ug	<0.050	<0.050	0.050	2006187
Benzo(a)anthracene	ug	<0.050	<0.050	0.050	2006187
Benzo(a)fluorene	ug	<0.10	<0.10	0.10	2006187
Benzo(a)pyrene	ug	<0.050	<0.050	0.050	2006187
Benzo(b)fluoranthene	ug	<0.050	<0.050	0.050	2006187
Benzo(b)fluorene	ug	<0.10	<0.10	0.10	2006187
Benzo(e)pyrene	ug	<0.10	<0.10	0.10	2006187
Benzo(g,h,i)perylene	ug	<0.050	<0.050	0.050	2006187
Benzo(k)fluoranthene	ug	<0.050	<0.050	0.050	2006187
Biphenyl	ug	<0.10	<0.10	0.10	2006187
Chrysene	ug	<0.050	<0.050	0.050	2006187
Coronene	ug	<0.10	<0.10	0.10	2006187
Dibenz(a,h)anthracene	ug	<0.050	<0.050	0.050	2006187
Dibenzo(a,e)pyrene	ug	<0.20	<0.20	0.20	2006187
Fluoranthene	ug	0.079	0.053	0.050	2006187
Fluorene	ug	0.141	0.104	0.050	2006187
Indeno(1,2,3-cd)pyrene	ug	<0.050	<0.050	0.050	2006187
m-Terphenyl	ug	<0.10	<0.10	0.10	2006187
Naphthalene	ug	0.156	0.076	0.072	2006187
o-Terphenyl	ug	<0.10	<0.10	0.10	2006187
Perylene	ug	<0.10	<0.10	0.10	2006187
Phenanthrene	ug	0.340	0.225	0.050	2006187
RDL = Reportable Detection Limit QC Batch = Quality Control Batch					

Maxxam Job #: A9E9144
 Report Date: 2009/11/18

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

Maxxam ID		EG2726	EG2727		
Sampling Date		2009/10/29	2009/10/29		
COC Number		1048	1048		
	Units	LICA PUF QFF/CLS/OCT29,09	LICA PUF QFF/PORT/OCT29,09	DL	QC Batch
p-Terphenyl	ug	<0.10	<0.10	0.10	2006187
Pyrene	ug	0.066	<0.050	0.050	2006187
Quinoline	ug	<0.40	<0.40	0.40	2006187
Tetralin	ug	<0.10	<0.10	0.10	2006187
Surrogate Recovery (%)					
D10-2-Methylnaphthalene	%	91	85		2006187
D10-Fluoranthene	%	113	109		2006187
D10-Fluorene (FS)	%	34 (1)	35 (1)		2006187
D10-Phenanthrene	%	105	102		2006187
D12-Benzo(a)anthracene	%	110	107		2006187
D12-Benzo(a)pyrene	%	105	105		2006187
D12-Benzo(b)fluoranthene	%	105	105		2006187
D12-Benzo(ghi)perylene	%	105	108		2006187
D12-Benzo(k)fluoranthene	%	100	102		2006187
D12-Chrysene	%	105	103		2006187
D12-Indeno(1,2,3-cd)pyrene	%	104	105		2006187
D12-Perylene	%	106	107		2006187
D14-Dibenzo(a,h)anthracene	%	102	104		2006187
D14-Terphenyl (FS)	%	94	94		2006187
D8-Acenaphthylene	%	98	94		2006187
D8-Naphthalene	%	93	86		2006187
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 #: A9E9144
 Report Date: 2009/11/18

Test Summary

Maxxam ID EG2726 **Collected** 2009/10/29
Sample ID LICA PUF QFF/CLS/OCT29,09 **Shipped**
Matrix PUF AND FILTER **Received** 2009/11/05

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
PAH's in Air (CARB429mod)	GC/MS	2006187	2009/11/09	2009/11/12	WZ

Maxxam ID EG2727 **Collected** 2009/10/29
Sample ID LICA PUF QFF/PORT/OCT29,09 **Shipped**
Matrix PUF AND FILTER **Received** 2009/11/05

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
PAH's in Air (CARB429mod)	GC/MS	2006187	2009/11/09	2009/11/12	WZ

Maxxam Job #: A9E9144
Report Date: 2009/11/18

GENERAL COMMENTS

PAHMS-F

7,12-Dimethylbenzo(a)anthracene and 2-Chloronaphthalene are above 25% RSD in initial calibration. No positives found for these 2 compounds.

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

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 Chrysene. 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.

Results relate only to the items tested.

Lakeland Industry & Community Assoc.
 Attention: Shea Beaton
 Client Project #:
 P.O. #:
 Project name:

Quality Assurance Report
 Maxxam Job Number: GA9E9144

QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2006187 WZ	Spiked Blank	D10-2-Methylnaphthalene	2009/11/12		92	%	50 - 150
		D10-Fluoranthene	2009/11/12		103	%	50 - 150
		D10-Phenanthrene	2009/11/12		98	%	50 - 150
		D12-Benzo(a)anthracene	2009/11/12		101	%	50 - 150
		D12-Benzo(a)pyrene	2009/11/12		104	%	50 - 150
		D12-Benzo(b)fluoranthene	2009/11/12		108	%	50 - 150
		D12-Benzo(ghi)perylene	2009/11/12		107	%	50 - 150
		D12-Benzo(k)fluoranthene	2009/11/12		101	%	50 - 150
		D12-Chrysene	2009/11/12		107	%	50 - 150
		D12-Indeno(1,2,3-cd)pyrene	2009/11/12		105	%	50 - 150
		D12-Perylene	2009/11/12		106	%	50 - 150
		D14-Dibenzo(a,h)anthracene	2009/11/12		105	%	50 - 150
		RPD	D8-Acenaphthylene	2009/11/12		96	%
	D8-Naphthalene		2009/11/12		95	%	50 - 150
	Spiked Blank	Acenaphthene	2009/11/12		88	%	60 - 130
		Acenaphthene	2009/11/12	1.7		%	50
	Spiked Blank	Acenaphthylene	2009/11/12		91	%	60 - 130
		Acenaphthylene	2009/11/12	1.6		%	50
	Spiked Blank	Anthracene	2009/11/12		87	%	60 - 130
		Anthracene	2009/11/12	1.5		%	50
	Spiked Blank	Benzo(a)anthracene	2009/11/12		82	%	60 - 130
		Benzo(a)anthracene	2009/11/12	3.5		%	50
	Spiked Blank	Benzo(a)pyrene	2009/11/12		90	%	60 - 130
		Benzo(a)pyrene	2009/11/12	0.4		%	50
	Spiked Blank	Benzo(b)fluoranthene	2009/11/12		85	%	60 - 130
		Benzo(b)fluoranthene	2009/11/12	0.1		%	50
	Spiked Blank	Benzo(g,h,i)perylene	2009/11/12		95	%	60 - 130
		Benzo(g,h,i)perylene	2009/11/12	3.2		%	50
	Spiked Blank	Benzo(k)fluoranthene	2009/11/12		106	%	60 - 130
		Benzo(k)fluoranthene	2009/11/12	1.8		%	50
	Spiked Blank	Chrysene	2009/11/12		102	%	60 - 130
		Chrysene	2009/11/12	5.6		%	50
	Spiked Blank	Dibenz(a,h)anthracene	2009/11/12		94	%	60 - 130
		Dibenz(a,h)anthracene	2009/11/12	2.4		%	50
	Spiked Blank	Fluoranthene	2009/11/12		96	%	60 - 130
		Fluoranthene	2009/11/12	1.3		%	50
	Spiked Blank	Fluorene	2009/11/12		87	%	60 - 130
		Fluorene	2009/11/12	2.4		%	50
	Spiked Blank	Indeno(1,2,3-cd)pyrene	2009/11/12		95	%	60 - 130
		Indeno(1,2,3-cd)pyrene	2009/11/12	1.4		%	50
Spiked Blank	Naphthalene	2009/11/12		87	%	60 - 130	
	Naphthalene	2009/11/12	3.7		%	50	
Spiked Blank	Phenanthrene	2009/11/12		85	%	60 - 130	
	Phenanthrene	2009/11/12	2.8		%	50	
Spiked Blank	Pyrene	2009/11/12		85	%	60 - 130	
	Pyrene	2009/11/12	2.1		%	50	
Method Blank	D10-2-Methylnaphthalene	2009/11/12		88	%	50 - 150	
	D10-Fluoranthene	2009/11/12		106	%	50 - 150	
	D10-Phenanthrene	2009/11/12		94	%	50 - 150	
	D12-Benzo(a)anthracene	2009/11/12		99	%	50 - 150	
	D12-Benzo(a)pyrene	2009/11/12		101	%	50 - 150	
	D12-Benzo(b)fluoranthene	2009/11/12		102	%	50 - 150	
	D12-Benzo(ghi)perylene	2009/11/12		109	%	50 - 150	
	D12-Benzo(k)fluoranthene	2009/11/12		96	%	50 - 150	
	D12-Chrysene	2009/11/12		99	%	50 - 150	

Lakeland Industry & Community Assoc.
 Attention: Shea Beaton
 Client Project #:
 P.O. #:
 Project name:

Quality Assurance Report (Continued)
 Maxxam Job Number: GA9E9144

QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2006187 WZ	Method Blank	D12-Indeno(1,2,3-cd)pyrene	2009/11/12		106	%	50 - 150
		D12-Perylene	2009/11/12		103	%	50 - 150
		D14-Dibenzo(a,h)anthracene	2009/11/12		105	%	50 - 150
		D8-Acenaphthylene	2009/11/12		93	%	50 - 150
		D8-Naphthalene	2009/11/12		88	%	50 - 150
		1-Methylnaphthalene	2009/11/12	ND, RDL=0.10		ug	
		1-Methylphenanthrene	2009/11/12	ND, RDL=0.10		ug	
		2-Chloronaphthalene	2009/11/12	ND, RDL=0.10		ug	
		2-Methylantracene	2009/11/12	ND, RDL=0.10		ug	
		2-Methylnaphthalene	2009/11/12	ND, RDL=0.10		ug	
		3-Methylcholanthrene	2009/11/12	ND, RDL=2.0		ug	
		7,12-Dimethylbenzo(a)anthracene	2009/11/12	ND, RDL=0.10		ug	
		9,10-Dimethylantracene	2009/11/12	ND, RDL=0.40		ug	
		Acenaphthene	2009/11/12	ND, RDL=0.050		ug	
		Acenaphthylene	2009/11/12	ND, RDL=0.050		ug	
		Anthracene	2009/11/12	ND, RDL=0.050		ug	
		Benzo(a)anthracene	2009/11/12	ND, RDL=0.050		ug	
		Benzo(a)fluorene	2009/11/12	ND, RDL=0.10		ug	
		Benzo(a)pyrene	2009/11/12	ND, RDL=0.050		ug	
		Benzo(b)fluoranthene	2009/11/12	ND, RDL=0.050		ug	
		Benzo(b)fluorene	2009/11/12	ND, RDL=0.10		ug	
		Benzo(e)pyrene	2009/11/12	ND, RDL=0.10		ug	
		Benzo(g,h,i)perylene	2009/11/12	ND, RDL=0.050		ug	
		Benzo(k)fluoranthene	2009/11/12	ND, RDL=0.050		ug	
		Biphenyl	2009/11/12	ND, RDL=0.10		ug	
		Chrysene	2009/11/12	ND, RDL=0.050		ug	
		Coronene	2009/11/12	ND, RDL=0.10		ug	
		Dibenz(a,h)anthracene	2009/11/12	ND, RDL=0.050		ug	
		Dibenzo(a,e)pyrene	2009/11/12	ND, RDL=0.20		ug	
		Fluoranthene	2009/11/12	ND, RDL=0.050		ug	
		Fluorene	2009/11/12	ND, RDL=0.050		ug	
		Indeno(1,2,3-cd)pyrene	2009/11/12	ND, RDL=0.050		ug	
		m-Terphenyl	2009/11/12	ND, RDL=0.10		ug	
		Naphthalene	2009/11/12	ND, RDL=0.072		ug	
		o-Terphenyl	2009/11/12	ND, RDL=0.10		ug	
		Perylene	2009/11/12	ND, RDL=0.10		ug	
		Phenanthrene	2009/11/12	ND, RDL=0.050		ug	
		p-Terphenyl	2009/11/12	ND, RDL=0.10		ug	
		Pyrene	2009/11/12	ND, RDL=0.050		ug	
		Quinoline	2009/11/12	ND, RDL=0.40		ug	
		Tetralin	2009/11/12	ND, RDL=0.10		ug	

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.
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